National Integrated ICT Policy
DISCUSSION PAPER
Options Paper

14 November 2014

telecommunications & postal services

Department:
Telecommunications and Postal Services
REPUBLIC OF SOUTH AFRICA

Minister's Foreword

I wish to express my gratitude to the members of the ICT Policy Review Panel for their effort and hard work in developing this Discussion Paper Policy document. On the same breath, I want to acknowledge the active participation and engagement of all South Africans who commented on the Green Paper. It is certainly a mammoth task to develop a paper of this magnitude. It is the first time that South Africa is developing an integrated ICT Policy framework that seeks to move away from the existing silo policies for the telecommunications, broadcasting and postal sectors to provide an overarching policy framework required in the converged ICT environment. I commend the Review Panel for this hard work.

It gives me great pleasure to publish the Discussion Paper today, in the third phase of public engagement on the formulation of policies governing the information and communications sector. This public engagement process commenced with the Framing Paper gazette in April 2013 which solicited input on the *objectives and goals* of policy. This was followed by the Green Paper in January 2014 to reflect the policy implementation successes and challenges and to canvass opinions on the required policy interventions to address these challenges.

The Discussion Paper outlines the policy options and possible policy approaches to achieve objectives and seeks public input on which will best realise these goals. Of critical importance to this policy formulation discourse is the need to develop policy that seeks to improve the availability, accessibility and affordability of ICT services. It is imperative to emphasise that technology is not an end in itself but a tool to realise the constitutional vision of equality and the rights set out in it.

This year, President Jacob Zuma split the old Department of Communications to create a new Ministry of Telecommunications and Postal Services and a new Ministry of Communications. This split was aimed at providing additional resources and a sharpened focus on challenges facing the ICT sector. We need to be aware though that Government and Cabinet act as a single collective. Cabinet will discuss the final recommendations flowing from the consultative process and determine the future policies to govern the ICT sector. Policy development moreover does not happen in one department in isolation from others. The process of finalising this Discussion Paper, for example, has involved many intergovernmental consultations and members of other Departments have contributed to it and actively participated in committees established to guide the process. The Constitution of South Africa establishes a cooperative governance framework and the policy development process adopted is informed by this framework.

I am extending an invitation to all interested parties to read this Discussion Paper and to make written submissions to the Department to register your views on this critical policy making process. Your views have added great value to the process to date.

I Thank You

Dr Siyabonga Cwele, MP

Deputy Minister's Foreword

It has been a long journey since the launch of the ICT Policy Review process in 2012. As political heads of the Department of Telecommunications and Postal Services, we want to acknowledge the work undertaken thus far and thank all members of the public that have contributed to this process.

This Discussion Paper is launched almost 10 days before the International Day for the Elimination of Violence Against Women on 25 November and the start of the 16 Days of Activism on Gender Violence. This reminds us to reflect on the role that the ICT sector can play in addressing such violence and ensuring access by women across the country to communications services. Radio and television are just one way of tackling this. We need further to develop creative strategies to, for example, ensure communications technologies promote easy access for survivors of violence to police and other services, explore the role that social media can play and develop tools to protect women and girls from cyber harassment.

The overwhelming interest and participation in this process to date has been humbling. Written submissions were received on the Framing and Green Papers from a diverse group of stakeholders including government and public entities, operators, community broadcasters, academia, advocacy groups, SMMEs, etc. We are also aware that people did not only respond in writing. Over 2 000 people attended national and provincial consultative workshops.

Many, many individuals also attended these to express their views on the cost to communicate, the accessibility of post offices to the elderly and persons with disabilities and programming available on radio and television. The pertinent issue of mainstreaming gender and disability issues in this process cannot be over emphasised and I want to highlight in particular submissions made in this regard.

A number of representatives from organisations for persons with disabilities, including the National Council for Persons with Physical Disability of South Africa, the National Institute for the Deaf and the South African Association of Audiologists, stressed the importance of ensuring the communications sector is inclusive and representative. Mr Fred Benning from Hear2Day, for example, asked that we ensure the "*equal right to Universal Access to information Systems to all the people of South Africa, including the hearing impaired...*"

Ms Nonhlanhla Tshabalala, in the meanwhile, stressed the importance of addressing gender equity and transformation by putting in place tools and mechanisms to collect gender disaggregated data. She stressed that gender mainstreaming must be used as a "*tool to redress anomalies*".

This evidence of active citizenship has greatly enriched this policy review process. The principle of participatory governance, which lies at the heart of our democracy, is crucial to the realisation of our policy objectives.

Thank you

Prof Hlengiwe Mkhize, MP

Acknowledgements and thanks

Policy development requires thorough consultation with all relevant and affected stakeholders. We have attempted to ensure that the ICT policy review process is transparent and inclusive. This is evident from the overwhelming responses received during the National Integrated ICT Policy Green Paper consultative process. We therefore would like to express our gratitude to the more than 2 000 citizens who participated at both the National Conference and Provincial workshops. Moreover, we sincerely appreciate the organisations and individuals that have forwarded written submissions.

The inputs made by members of the ICT Policy Review Inter-Departmental Working Group have enriched this Discussion Paper. We thank all the officials who dedicated time to this process. Thank you to all the service providers who attended both the Telecommunications and Broadcasting Emerging Technologies Trends workshops. We would not have managed in the time frames set to have developed this Discussion Paper without the dedicated support of the ICT Policy Review Panel members. We thank you for your continued and valuable support.

Lastly, it would be unjust if we do not recognise the overwhelming participation and inputs received from individuals and organisations representing persons with disabilities. ICT disability mainstreaming is a priority for the policy review process.

Have your say!

The deadline for written submissions on this Paper is **15 January 2015.**

Submissions should be sent to Ms Tsholofelo Mooketsi via email (DiscussionPaper@dtps.gov.za), fax (012 427 8016) or post (Private Bag X860, Pretoria 0001). Submissions can also be hand delivered to Block B, iParioli Office park, 1166 Park Street, Hatfield Pretoria. You can contact the ICT Policy Review Project Management Office on 012 420 7701 or 012 420 7738.

Acronyms

3G	Generic name for third-generation network networks or services, for example GSM[1]
4G	Fourth-generation mobile network or service offering both mobility and high bandwidth.
ABC	Australian Broadcasting Corporation
ABSIP	Association of Black Securities and Investment Professionals
ACEIE	African Center of Excellence for Information Ethics
ACT-SA	Association of Community Television – South Africa
ADSL	Asymmetric Digital Subscriber Line
AM	Amplitude Modulation
AU	African Union
BBC	British Broadcasting Corporation
Bit/s	Bits per second
BRICS	Brazil, Russia, India, China and South Africa group of emerging economies
CAGR	Compound annual growth rate
CBC	Canadian Broadcasting Corporation
CIPC	Companies and Intellectual Property Commission (CIPC), previously *CIPRO*
CPA	Consumer Protection Act, No. 68 0f 2008
CRTC	Canadian Radio-television and Telecommunications Commission
DAB	Digital Audio Broadcasting
DBE	Department of Basic Education
DBSA	Development Bank of Southern Africa
DMMA	Digital Media and Marketing Association
DPSA	Department of Public Service and Administration
DNS	Domain Name System
DOC	Department of Communications
DST	Department of Science and Technology
DTH	Digital-to-home
DTI	Department of Trade and Industry
DTPS	Department of Telecommunications and Postal Services
DTT	Digital Terrestrial Television
ECA	Electronic Communications Act, No. 36 of 2005 as amended
ECTA	Electronic Communications and Transactions Act, No. 25 of 2002
EEP	Equity Equivalent Programmes for Multinationals
EPGs	Electronic program guides
EU	European Union
FDI	Foreign Direct Investment
FM	Frequency modulation
FOSS	Free Open Source Software
FPB	Film and Publication Board
FSB	Financial Services Board
FTA	Free-to-air television
FTTH	Fibre–to-the-home
FTTP	Fibre to the Premises
FXI	Freedom of Expression Institute
GATS:	General Agreement on Trade in Services
GDP	Gross Domestic Product

[1] Adapted from ITU Trends in Telecommunication Reform 2013

GHG	Greenhouse gas
GITOC	Government Information Technology Officers Council
GPS	Global positioning system
GSM	Global System for Mobile communications
GSMA	Global System Mobile Association
HDTV	High-definition television
Hz	Hertz
ICANN	Internet Corporation for Assigned Names and Numbers
ICASA	Independent Communications Authority of South Africa
ICT	Information and Communications Technology
IDC	Industrial Development Corporation
IITPSA	Institute of Information Technology Professionals South Africa
iNESI	Ikamva National eSkills Institute
IP	Internet Protocol
IPAP	Industrial Policy Action Plan
IPTV	Internet Protocol Television
ISP	Internet service provider
ISPA	Internet Service Providers Association
ITA	Information Technology Association
ITU	International Telecommunication Union
JINX	Johannesburg Internet Exchange
LAN	Local area network.
LLU	Local loop unbundling
LSM	Living Standards Measure
LTE	Long-term evolution
MDDA	Media Development & Diversity Agency
MICT SETA	Media, Information and Communication Technologies Sector Education and Training Authority
MIOS	Minimum Information Interoperability Standards
MISS	Minimum Information Security Standards
MMA	Media Monitoring Africa
MPDP	Media Policy and Democracy Project
M-PESA	*M-PESA* (M for mobile, pesa is Swahili for money) is a mobile money transfer service
NAB	National Association of Broadcasters
NCAC	National Cybersecurity Advisory Council
NCC	National Consumer Commission
NCRF	National Community Radio Forum
NDP	National Development Plan 2030
NEMISA	National Electronic Media Institute of South Africa
NERSA	National Energy Regulator of South Africa
NGO	Non-Governmental Organisation
NPC	National Planning Commission
ODM	On Digital Media
OECD	Organisation for Economic Co-operation and Development
Ofcom	Office of Communications: The Independent Regulator in the UK
OTT	Over-the-top
PICC	Presidential Infrastructure coordinating Commission
POP	Point of Presence
POPI	Protection of Personal Information Act, No. 4 of 2013

PPF	Progressive Professionals Forum
PPP	Public–Private Partnership
R2K	Right 2 Know Campaign
R&D	Research & Development
RDI	Research, Development and Innovation
RIA	Research ICT Africa
SA	South Africa
SABC	South African Broadcasting Corporation
SACCI	South African Chamber of Commerce and Industry
SACF	South African Communications Forum
SADC	Southern African Development Community
SALGA	South African Local Government Association
SANDA	South African National Deaf Association
SAPO	South African Post Office
SAPS	South African Police Service
SARS	South African Revenue Service
SIPs	Strategic Integrated Projects [consists of 18 strategic integrated projects]
SITA	State Information Technology Agency
SKA	Square Kilometre Array South Africa
SMME	Small Medium and Micro Enterprises
SOC	State Owned Company
SOE	State owned Entity
SOS	SOS: Support Public Broadcasting Coalition
STB	Set-top box
UK	United Kingdom
UPU	Universal Postal Union
USA	United States of America
USAASA	Universal Service and Access Agency of South Africa
USAF	Universal Service and Access Fund
USF	Universal Service Fund
USO	Universal Service Obligation
VoD	Video on Demand
VoIP	Voice over Internet Protocol
VPN	Virtual private network
WAPA	Wireless Access Providers' Association
WASPA	Wireless Application Service Providers' Association
WIPO	World Intellectual Property Organisation
WLL	Wireless local loop
zaDNA	.ZA Domain Name Authority

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1 Introduction to Discussion Paper

> *"By 2030, ICT will underpin the development of a dynamic and connected information society and a vibrant knowledge economy that is more inclusive and prosperous. A seamless information infrastructure will be universally available and accessible and will meet the needs of citizens, business and the public sector, providing access to the creation and consumption of a wide range of converged services required for effective economic and social participation – at a cost and quality at least equal to South Africa's main peers and competitors … ICT will continue to reduce spatial exclusion, enabling seamless participation by the majority in the global ICT system, not simply as users but as content developers and application innovators".*
>
> The National Development Plan: 2030[2]

This vision in the National Development Plan (NDP) adopted by Government in 2012 is in many ways the foundation of the ICT Policy Review Process undertaken by Government. The NDP stated that a "*new policy framework will be needed to realise the vision of a fully connected society*". Government initiated an all-encompassing policy process in 2012 in line with this to review the existing silo Broadcasting, Telecommunications and Postal Services White Papers.

The Policy Review does not happen in isolation from other policy developments such as the National Broadband Policy (South Africa Connect) adopted in 2013. The ICT Policy and new White Paper will reinforce and extend the objectives set in this broadband plan. The policy process also recognises that the environment is changing rapidly and that policy interventions will need to be continuously assessed against the objectives set. It is thus being developed with a 2030 vision but a focus on the next five years.

The release of this Discussion Paper marks the third and penultimate phase in this review.

1.1 Why a new holistic policy?

As indicated in previous papers, new technologies have the potential to further the rights set out in the Constitution. They will change the way citizens communicate and interact with each other and access information, audio and audio-visual content and products and services. Increasing access to broadband, the Internet and Internet Protocol services provides opportunities for South Africa to better implement its socio-economic and cultural development goals and for increased participation by citizens, communities, the private and NGO sectors in determining these goals and policies.

Two key technology trends are changing the way people communicate:

- Convergence of communication and ICTs recognises that the major communication platforms (broadcasting, telecommunications and online) are coming together so that their once separate functions overlap. This means, for example, that people will be able to view and share television content over the Internet on a range of devices. Connected television

[2] The National Planning Commission, National Development Plan: 2030, page 190

sets will also provide access to the Internet – and therefore to not only content but also goods and services.

- The migration to digital terrestrial television will both free up spectrum to enable access to high speed broadband services and facilitate the introduction of many more channels (from both existing and new providers).

At the same time, policy must recognise that the majority of South Africans still rely on traditional mail delivery and broadcasting services, and do not have access to or cannot afford broadband services. According to the 2013 SAARF All Media Products Survey (AMPS), the top three mobile phone activities are: Receive 'Please Call Me' (77,2%), send 'Please Call Me' (65,8%) and send SMS's (65,5%). Policy will need to promote take-up of new technologies and ensure that new and traditional services contribute towards the realisation of the rights set out in the Constitution.

1.2 The process

Cabinet endorsed a review of all existing ICT related policies (Telecommunications, Broadcasting and Postal Services) in 2012. The then Minister of Communications appointed a Policy Review Panel in that year following a call for public nominations. The Panel includes 22 people reflecting a range of different stakeholders and expertise.

The process to date broadly follows the approach identified in guidelines on the implementation of regulatory impact assessments issued by the Presidency in 2012 ("the Guidelines").[3] These state that the basic rationale for regulatory impact assessments is to assist "*policy-makers and decision-makers in the design, implementation and monitoring of improvements for regulatory systems*".

The Guidelines identify four key steps in the assessment process:

- Set clear objectives;
- Understand the problem that needs to be address;
- Look at all options to identify the best ways to achieve the objectives; and
- Ensure that benefits of the policy/regulation exceed the costs (taking account of both direct and indirect impacts).

With the Panel members' assistance, the Minister published for public comment:

- A Framing Paper issued in April 2013 which sought input on what the *objectives and goals* of policy should be. These principles remain largely the same as those set in 1994, though the means to realise these have changed.
- A Green Paper released in January 2014 which reflected on achievements against the original vision, and asked what have been the major impediments to implementation and what *core issues/problems* need to be addressed in future policy, taking into account the new environment.
- This Discussion Paper highlights a range of *options* and possible policy approaches to realise the objectives set and seeks public input on which will best achieve these goals and objectives.

[3] The Presidency, "Guidelines for the Implementation of the Regulatory Impact Analysis/Assessment (RIA) Process in South Africa", 2012

In excess of 70 written submissions were received in response to the Green Paper. In addition, the Minister held a national consultative workshop, and eight provincial workshops – involving all Provinces (see Appendix). Over 2000 people and organisations participated in these. There has also been further engagement with public entities and institutions and sector representative organisations as well as four intergovernmental meetings to actively interact with members across Government.

The ICT Review Panel will consider all submissions and the costs and benefits of particular approaches before developing recommendations to the Minister. The Minister will consider the report from the Panel before developing and submitting a White Paper to Cabinet for its consideration. It is expected that a White Paper will be finalised by the end of the 2014/2015 financial year.

1.3 The vision

The Framing Paper proposed principles which should guide the policy review process. Stakeholders strengthened these through their contributions and these revised principles were again published for comment in the Green Paper. As a result of this additional public engagement the following vision for the ICT policy has been set.

The ICT policy framework and the institutions supporting this must:

- Facilitate and extend the right of all South Africans to freedom of expression.
- Ensure all South Africans have access to a diverse range of creative content, applications and services.
- Extend access by all South Africans to a broad range of information, opinion, news and analysis of relevance to their communities and lives.
- Facilitate access by all South Africans to quality communication infrastructure and services - including postal, analogue and digital services - which enable economic growth, employment and wealth creation.
- Ensure that all South Africans benefit from the ability of the communications sector to facilitate social development and improve the quality of life for individuals and communities.
- Promote innovation and creativity and support platforms, services and programmes that allow users and audiences to celebrate their cultural heritage in the language(s) of their choice (including sign language), to access compelling South African content and create and share content and information.
- Ensure that all South Africans have equal universal access to communication services and infrastructure.
- Ensure access by all sectors of the population, and accessibility of services, devices and infrastructure, so that all South Africans can equally enjoy and benefit from communication services.
- Ensure that communications services reflect, respect and uphold constitutional and community standards and values.
- Safeguard the right of all South Africans to privacy, the protection of personal information.

- Recognise and endorse the responsibility of Government to maximise the overall public benefit derived from the use of public resources and to facilitate access to public information, participation in public processes and efficient delivery of services
- Facilitate innovation, fair competition and equitable treatment of all role players to ensure a range of quality services are available to end-users and audiences.
- Reinforce the right of South African citizens and consumers to maximum transparency in how services are delivered and conditions under which they are delivered.
- Ensure that ICTs recognise and protect the right to an environment that is not harmful to health or well-being.

1.4 What is expected from you now

This Discussion Paper captures the issues, problems and future challenges identified by stakeholders in responses to the Framing Paper and Green Paper. A range of options to address these are put forward for public input. These are based on approaches suggested through the consultation process and in research conducted by the DTPS. Stakeholders are invited to make submissions on which approach they believe will best achieve the objectives above. At times, no specific policy options were proposed. In these instances, targeted questions are asked.

1.5 The structure of the Discussion Paper

The structure recognises the need to regulate the communications sector very differently from the past if policy objectives are to be achieved. As many stakeholders stressed, convergence and technological changes (including the migration to DTT) require a completely new approach to that of the silo regulation of the past. In addition, the Internet is global requiring not only that policy recognises that citizens will be able to access content, applications, services and products from across the world, but that South Africa needs to consider and influence international policies on governance of the communications sector.

The Discussion Paper can be read as a whole, with Chapters dealing with the different issues, or considered as separate Policy Options Papers focusing on specific areas.

Chapter Two: Policy Options – Key Principles and Approaches identifies key principles and issues that affect all ICT related sectors, including core regulatory principles, Green ICT policies and approaches to reinforcing the open Internet.

Chapter Three: Policy Options - Infrastructure and Services focuses on the infrastructure and services necessary to ensure universal access and affordability goals are met. ICT infrastructure, together with the multitude of services that it enables and supports, is the invisible but indispensable basis component for developing the information society and building the knowledge economy. The Chapter also considers the postal sector and related services, and options related to the effective management of an increasingly scarce resource, the radio frequency spectrum.

Chapter Four: Policy Options - The Digital Society considers how to develop and implement a national e-strategy to build the envisaged digital society, incorporating e-government, e-services and

e-commerce strategies, as well as the policies necessary to ensure trust and confidence in new services. Internet governance is also dealt with in this Chapter.

Chapter Five: Policy Options - Audio and Audio-visual Content Services focuses on the new multichannel, multiscreen and multiplatform environment, where audiences will be able to access broadcasting and broadcasting-like content "anywhere, anytime and anyhow" – and more easily share content they have created.

Chapter Six: Policy Options - Industry Growth addresses the strategies necessary to promote growth in the industry. It presents policy options on transformation of the sector, investments, expanding the national system of ICT research, development and innovation, electronics manufacturing, and skills development.

Chapter Seven: Policy Options - Institutional Frameworks assesses which institutions and institutional frameworks are necessary to achieve the policy objectives identified in previous chapters, and how the institutional arrangements can be strengthened to support these.

Although the various issues are presented separately, it is recognised that an integrated policy requires a cross-cutting and holistic perspective. Universal access, skills training and building digital literacy are, for example, crucial to transformation across all sectors. At the same time, compelling content on the broadband platform is essential to driving take-up of broadband.

However, distinct approaches are still necessary at times. The means and policy approaches to ensuring access by persons with disabilities will differ when looking at infrastructure, digital services and broadcasting and broadcasting-like content, for example. Each Policy Options Paper highlights such issues so that a holistic policy approach can be adopted.

1.6 Conclusion

It is recognised that a new policy will have to be people-centred and flexible to adapt to a rapidly changing environment. This cannot be achieved by one government ministry alone. Partnerships and coordination across the public, private and non-governmental sector, with citizens, communities and community organisations, and with South Africa's partners in SADC, AU, the BRICS countries and the world must be forged and strengthened.

It is also essential that indicators and concrete targets are set, together with appropriate monitoring mechanisms, so that delivery can be measured and policy adapted where necessary. This requires that benchmarks, goals and metrics are developed, and that there is continuous assessment of achievements against the policy objectives – including, for example, regular analysis of what new information divides might be developing.

This Discussion Paper does not identify these benchmarks at this stage, but stakeholders are invited to make suggestions on this.

2 Policy Options: Key Principles and Approaches

2.1 Introduction

There are inevitably some principles and approaches that underpin all ICT related sectors and therefore relate to all chapters/policy options papers that follow. These include:

- Regulatory principles
- The approach to facilitating an open Internet and the debate around net neutrality; and
- Green ICTs.

2.2 Regulatory Principles

Since the then Independent Broadcasting Authority was established in 1994, the policy and legislative focus has been on regulating the ICT sector "*in the public interest*". This core approach still guides regulation of the sector and is reflected in the Framing Principles set out in Chapter One. It will remain the primary consideration in all policy-making and regulation.

The following principles and approaches are also key to ensuring the vision and objectives for policy outlined in Chapter One are realised:

- **Distinct roles and responsibilities:** There must be clearly defined roles and responsibilities for Parliament, Government, the ICT regulator and other regulators in order to avoid duplication and forum shopping. Proposals on how to facilitate this and ensure the independence of the regulator are dealt with in Chapter Seven: Policy Options – Institutional Frameworks.

- **Transparency and accountability:** Policy formulation and regulatory interventions should take place in as transparent a manner as possible, with involvement of both direct stakeholders and the general public. Policy-makers and regulators are accountable to the nation, through the appropriate channels. Both transparency and accountability rely on the widest possible public availability of the necessary information and relevant documentation.

- **Consumer Protection:** Policy and regulation place end-users, from the most disadvantaged individual to the largest corporate, at the centre of their activities. Effective protection and empowerment of consumers and end-users, superior quality of service and affordable pricing are therefore key objectives of policy and necessary areas of regulatory intervention, balancing the interests of all stakeholders.

- **Universal Access and Service:** Addressing the ongoing historical legacy of the apartheid digital divide, and ensuring universal, affordable access to and effective adoption and utilisation of ICT infrastructure and services remain central policy and regulatory objectives, requiring specific intervention. The recognition of the possibility of a new information divide is also crucial and the need therefore to mitigate against this.

- **Technology Neutrality:** In an environment dominated by ongoing convergence of infrastructure and services, regulatory interventions should as far as possible be technologically neutral in order to stimulate innovation and facilitate the development of innovative new product and service offerings.

- **Open Access:** Regulatory intervention should wherever possible be based on open access principles to ensure maximised, efficient and fully-leveraged use of available infrastructure and services, through encouraging infrastructure sharing, spectrum re-farming, optimal interconnection, balanced with the need for fair returns on investment.

In line with this, the following overarching regulatory principles will underpin regulation-making:

- Any interventions must be *necessary* to meet clearly defined public interest objectives.
- Any interventions must be *proportionate, consistent and evidence-based* and determined through *public consultation*.
- The policy maker and regulator must consider the *least intrusive mechanism* to achieve the defined public interest goal/s, and will consider, where appropriate, alternative models such as *co-regulation and/or self-regulation.*
- The *regulatory impacts of any action will be assessed* and considered before imposing regulations, rules and/or conditions.
- The policy maker and regulator will act *fairly* and ensure *regulatory parity* in defining markets and deciding on interventions.

There will be ongoing assessment of the impact of policies, rules and regulations in order to, if necessary, amend approaches which are not achieving the identified objectives, address any unforeseen implications of interventions and/or determine if the interventions are still necessary.

2.3 Open Internet

Several submissions to the Green Paper and Framing Paper argued that a net neutrality policy is critical to ensuring fair competition between different content and service providers. Others, however, cautioned that a blanket open Internet policy could inadvertently undermine key objectives, including the promotion of innovation and universal service.

A net neutrality policy would mean that rules are set to ensure that Internet traffic should be "*treated equally, without discrimination, restriction or interference, independent of the sender, receiver, type, content, device, service or application*".[4] Such a policy could also specify that no preferential treatment should be given to any data and include requirements relating to equal charges regardless of user, content, site, platform, or mode of communication.

Stakeholders that proposed a net neutrality policy raised concerns that if the policy framework does not enforce this, broadband providers might act as gatekeepers of content and use their last mile infrastructure to block internet applications, content (websites, services, protocols) and competitors

[4] European Parliament definition of net neutrality included in proposed amendments to the telecommunications package for Europe. These were approved by the Parliament in April 2014 and are due to be discussed by the European Council of Ministers in October 2014. http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+AMD+A7-2014-0190+237-244+DOC+PDF+V0//EN

by, for example, using deep packet inspection to discriminate between over the top content, services or applications. It was argued that this is a particular concern given convergence as, for example, network providers could themselves provide or partner with content services and limit access by audiences to competitors.

The SOS, R2K, Media Monitoring Africa (MMA) and ACT-SA proposed similar approaches to net neutrality in South Africa. They expressed concern that "*access tiering*" would be introduced by broadband providers if a net neutrality policy is not developed. SOS stated that this could result in a "*'fast-lane' for rich and powerful creators, and a 'slow lane' for less powerful users*". It proposes that South Africa follow the Netherlands model for full network neutrality.[5]

M-Net and MultiChoice in a joint submission seemed to adopt a slightly different approach, proposing that such a policy should require broadband providers to be transparent about their network management policies, thus suggesting that fair traffic management should be permitted.[6]

The Wireless Access Providers' Association (WAPA) raised a concern that the lack of any policy and/or regulation in this area could lead to unfair competition between incumbents and smaller players and decrease consumer choice. It said, however, that any net neutrality policy should not "*entirely prohibit*" paid-for placement or prioritisation of certain data traffic as many emerging businesses relied on product differentiation to compete with bigger monopoly players. The focus it said should therefore be on promoting fair competition and particular limitations on monopolies. [7]

The Internet Service Providers' Association (ISPA), however, gave a more guarded response, saying that it welcomed the start of the debate on net neutrality. While the Association did not specifically either support or oppose such a policy, it noted in its submission that it would be necessary to distinguish "*between traffic or network management undertaken by ISPs in order to deliver the quality of service required by their subscribers…. and the prioritisation of a provider's own service over the service of a competitor*". It focused on the need for transparency of traffic management policies and said that providers should be upfront if they limited streaming from any media source. It also said that providers should "*probably be prevented*" from manipulating access to specifically harm a competitor but should not be stopped from providing more choice to customers.[8]

While no respondents explicitly argued against a net neutrality policy, internationally objections to this concept generally centre around the impact this will have on the availability of bandwidth given the amount of content that will be made available and the need therefore to manage traffic during times of congestion to enhance efficiency. Opponents have also stated that on-demand content providers and over-the-top television (OTT TV) consume greater bandwidth and therefore should be charged to upgrade networks they are carried on. Some have stated that there would be no incentive to extend networks if there was no such compensation.

[5] SOS: Support Public Broadcasting Coalition, Green Paper Submission, Paragraph 5.5, page 8
[6] M-Net and MultiChoice, Green Paper Submission, Paragraphs 54-57, Pages 21 & 22
[7] Wireless Applications Providers' Association, Green Paper Submission, pages 10-11
[8] Internet Service Providers Association, Green Paper Submission, Paragraphs 62-67, Pages 13 & 14

A number of jurisdictions have introduced net neutrality policies, including Chile, the European Union, Brazil and the Netherlands. In others such as the UK, laws provide for the regulator to decide whether to introduce requirements on transparency on traffic management to protect the open Internet. The regulator in that country has stated that it has not as yet found reason to intervene, but has retained the right to regulate should self-regulation of quality of service and transparency not be effective. The Office of Communications (Ofcom) has not therefore set anti-discriminatory rules, though it has outlined guidelines on provision of understandable information to users about traffic management policies. Ofcom monitors the sector closely in the meantime.

OPTIONS

The first issue to decide is whether or not there is a need to now develop a net neutrality policy in South Africa. If you propose such a policy is necessary (Option Two), then a range of decisions will have to be taken about the nature of the policy.

Option One: Wait and see

Adopt a "wait and see" approach to the finalisation of rules on net neutrality. The White Paper would make commitments to promoting an open Internet, the need for transparency and minimum quality of service requirements. It would stipulate that specific rules on net neutrality would however only be introduced should monitoring show there is a need to intervene to achieve these objectives. The regulator would be empowered to develop guidelines/rules on transparency of agreements with users and minimum quality of service requirements if necessary. It would further be required to actively monitor and regularly report on whether or not the open Internet is under threat. If necessary, the regulator could introduce more specific net neutrality rules or make recommendations on amendments to legislation/government policy.

Option Two: Introduce a net neutrality policy

If it is decided that a net neutrality policy should be put in place now; there are a number of options to be considered.

- The policy would need to set out **who determines** the rules to be applied. This could be government or the regulator. Some countries have set out broad principles for net neutrality provisions and delegated a regulator to develop specific rules on these (e.g. the UK)[9]. Others, such as the Netherlands, have developed a specific law relating to net neutrality and required regulators to monitor and enforce compliance with these.[10] Brazil recently passed an Internet Bill of Rights.[11]
- Linked to this are decisions on **who enforces** the rules. In many countries, the sector specific regulator handles this. In Australia, however, the competition and consumer protector

[9] Office of Communications, "Ofcom's approach to net neutrality", 24 November 2011, http://stakeholders.ofcom.org.uk/consultations/net-neutrality/statement/

[10] Bits of Freedom, "Translations of key Dutch Internet freedom provisions", 27 June 2011, https://www.bof.nl/2011/06/27/translations-of-key-dutch-internet-freedom-provisions/

[11] Pedro Abromovay, "Brazil's Virtual Statue of Liberty", Project Syndicate, 6 May 2014, http://www.project-syndicate.org/commentary/pedro-abramovay-highlights-the-global-significance-of-the-country-s-new-internet--bill-of-rights-#x00R3PBQ5Dli6DaY.99

authority oversees all telecommunications related competition and access regulation in terms of industry-specific provisions set out in competition legislation.[12]

- **If a net neutrality policy is introduced, who should determine the policy in South Africa and which body should be responsible for monitoring and compliance?**

- There are also different approaches to **which providers** the rules apply to. In the USA, proposals on net neutrality focused only on wired networks, thus excluding mobile access to the internet[13]. In other countries such as Chile and the Netherlands the provisions focus on an open Internet regardless of the means of access to broadband.

- **Which entities should such rules apply to?**

- There are many different approaches to **exceptions** to net neutrality rules. While all net neutrality policies considered stipulate that an ISP may not block any data (except when provided for in law or ordered by a court), some condone discrimination in specified circumstances (*fair discrimination*). Approaches to consider include:
    - **Full neutrality:** Exceptions only to ensure privacy and security (e.g. Chile),[14] or allowances to address congestion, security, spam or to comply with other legislation (e.g. Netherlands).[15] Chile was the first country to amend its legislation to promote net neutrality. In May 2014 its regulator banned zero rating of certain social media sites (Twitter, Facebook and Wikipedia Zero) by mobile companies. Mobile companies were entering into deals with such service providers to allow access by users to their sites for free. The regulator however stated that this was illegal in terms of the country's net neutrality provisions.[16]
    - **Specialised services:** The proposals from the European Parliament adopted in April 2014 state that ISPs and content providers would be entitled to offer what are termed "*specialised services*" with enhanced quality of service to end-users. A specialised service is defined as "*an electronic communications service or any other service that provides the capability to access specific content, applications or services*". The Dutch law in contrast to this does not mention specialised services but rather stipulates that net neutrality rules apply only to services or applications on the Internet – therefore excluding only anything provided over a closed network.[17]
    - **Reasonable traffic management/Fair Discrimination**: Some proponents of net neutrality have argued for allowances for "*reasonable traffic management*" (to, for example, ensure access to emergency services) and said that rules should define what would be regarded as reasonable. Others have argued that broadband

[12] Australia: Competition and Consumer Act (2010), sections 45-47
[13] Original FCC rules were struck down and the concept is still under debate
[14] Openmedia.ca, "Chile: A Leader in Net Neutrality Legislation", https://openmedia.ca/plan/international-comparisons/chile
[15] Bits of Freedom, "Translations of key Dutch Internet freedom provisions", 27 June 2011, https://www.bof.nl/2011/06/27/translations-of-key-dutch-internet-freedom-provisions/
[16] Belen Maty, "Chile to Fine Phone Companies Offering Free Access to Social Networks", PanAm Post 3 June 2014, http://panampost.com/belen-marty/2014/06/03/chile-to-fine-phone-companies-offering-free-access-to-social-networks/
[17] Inge Graef, "Why not 'Go Dutch' and Protect Net Neutrality without Defining Specialised Services?", the London School of Economics, Media Policy Project Blog, http://blogs.lse.ac.uk/mediapolicyproject/2014/04/04/why-not-go-dutch-and-protect-net-neutrality-without-defining-specialised-services/

providers should be allowed to discriminate based on the type of data being transmitted, but that there should be equal treatment for similar applications.[18] In the UK, for example, the regulator, Ofcom, has indicated that network operators can prioritise certain traffic such as high quality IPTV service over other traffic in order to enhance efficiency. Ofcom has however warned that it would consider intervening if the management of traffic resulted in insufficient network capacity for new and innovative services and content.[19]

- Internationally there has also been debate about whether or not policies should **allow for paid-prioritisation of bandwidth** while barring throttling or blocking of data. Proponents argue that the focus should be on ensuring end-users are informed about individual providers traffic management policies so they can make an informed choice about which ISP to use.

- **What limitations, if any, should be set in a South African net neutrality policy? Should it include "fair discrimination" (such as those proposed above) provisions or not?**

Other issues

It has been argued in the US that policies set by the regulator should declare broadband a common carrier/essential service. South African laws currently set out provisions for a common carrier for broadcasting transmission for rules for essential services.

- **Should policy declare broadband a common carrier or essential service?**

2.4 Green ICTs

The ICT industry accounted for 1,9% of the total global Green House Gas (GHG) emissions in 2011 according to the Global e-Sustainability Initiative SMARTer 2020 Report.[20] The industry's GHG emissions will inevitably grow unless mitigated, given rapid growth in ICT penetration as well as increases in processing power. Green Sustainable ICTs – defined as those which produce low levels of carbon emissions - have an important role to play in reducing carbon emissions. Government's National Climate Change Response Policy (2004)[21] emphasises the need for policy implementation across all sectors in order to:

- Effectively manage the inevitable climate change impacts through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capacity; and
- Make a fair contribution to the global effort to stabilise greenhouse gas (GHG) concentrations in the atmosphere at a level that avoids dangerous anthropogenic interference with the climate system, within a time-frame that enables economic, social and environmental development to proceed in a sustainable manner.

[18] Timothy Wu, "Network Neutrality, Broadband Discrimination", Journal of Telecommunications and High Technology Law, Vol 2, page 141, 2003, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=388863

[19] Office of Communications, "Ofcom's approach to net neutrality", 24 November 2011, http://stakeholders.ofcom.org.uk/consultations/net-neutrality/statement/

[20] http://gesi.org/SMARTer2020

[21] This policy is in the process of being updated.

In line with this, an integrated ICT Policy needs to ensure that it specifically considers how to promote Green ICTs.

POLICY ISSUES

The core policy issue is whether to introduce formal or information interventions (or a combination of both) to reduce the GHG emissions by the ICT sector.[22]

Option One: Formal Regulation

The policy would set broad principles, objectives and approaches to this issue and require ICASA to set rules, regulations and licence conditions to address climate change. emissions for electronic network and other relevant licensees. It would also be required to consider potential environmental outcomes in all decision-making.

Option Two: Guidelines and voluntary codes

Non-formal measures can also be used to achieve regulatory objectives. Many such measures are based on voluntary compliance. These measures can take many forms such as:

- Codes of practice and codes of conduct;
- Key Performance Indicators ;
- Targets;
- Voluntary agreements;
- Guidelines;
- Industry labels;
- Best practice information; and
- Public consultation, publication, information and education.

Option Three: A combination of approaches (formal and informal)

- **Should the ICT regulator/s go beyond their current scope to address climate change?**
- **Which option would best enhance Green ICTs?**
- **Should benchmarks and targets be set in policy or regulation against which South Africa's progress could be measured? If so, please propose what benchmarks and/or targets would be appropriate.**

2.5 Conclusion

- **Are there any issues that you believe have been neglected?**
- **Can you suggest any benchmarks and targets which may be incorporated to monitor progress against policies objectives?**

[22] Policy options based on: Young, S. 2010. "ICTs and Climate Change: A Role for Regulators?", 10th Global Symposium for Regulators, "Enabling Tomorrow's Digital World", Dakar, Senegal, 11 November 2010, ITU. 2010. Climate Change, ICTs and Regulation and GSR 2010 Discussion Paper.

3 Policy Options: Infrastructure and services

3.1 Introduction

ICT infrastructure, together with the multitude of services that it enables and supports, is the invisible but indispensable basis component for developing the information society and building the knowledge economy. It is now widely accepted that investment in the growth of ICT infrastructure and services contributes to economic growth and transformation and improvements in the quality of life. Additionally, the deployment of infrastructure and services is essential to reinforce and support social engagement, social inclusion and cultural enrichment. However, such development objectives can only be achieved within an enabling and supportive environment.

Historically, ICT Infrastructure was treated differentially on the basis of its underlying technological basis, with wireline telecommunications (copper and fibre) treated differently from mobile telecommunications, Internet and signal distribution infrastructure. Similarly, fixed telephony services were treated differently from mobile ones, from Internet and value-added network services and from radio and television broadcasting services. Convergence, however, has increasingly created a unified, largely IP-based network, where signals travel over a variety of platforms across an interconnected infrastructure to a range of multi-function end-user devices, and where the range of services is increasingly blurred and more and more integrated.

A simplistic perspective of electronic communications infrastructure is that it comprises a multiplicity of channels which are required to transmit data and information in a range of formats between various points of a network both nationally and internationally. These channels are both fixed (e.g. coaxial, fibre-optic) and wireless (e.g. microwave, satellite). The Internet is recognised worldwide as one of the most important networks which requires appropriate infrastructure to enable social and economic growth. Thus infrastructure-related policy is increasingly focused on how to effectively ensure affordable universal access to this global public network of networks. Infrastructure is thus is the core foundation of an integrated ICT eco-system. Without enabling infrastructure, all other components cannot exist. Policy which governs how a country's infrastructure is developed and managed is therefore fundamental to the supply of services which enable growth.

The 2005 Electronic Communications Act was largely premised on this phenomenon of convergence, and treated infrastructure and services as broad categories of legislation, licensing and regulation, although broadcasting remained distinct. This Discussion Paper recognises that the intervening years have seen ICT infrastructure and services become increasingly integrated and interdependent, forming a complex, highly inter-related environment, and hence they are treated together in the sections that follow (content and the Internet economy and e-services are dealt with in separate chapters/papers because each raises certain specific policy challenges and questions).

3.1.1 Recent policy developments

This chapter/options policy paper must be viewed against recent developments in the policy environment, which include:

- The **National Development Plan** (NDP);
- The National Infrastructure Development Plan (2012) which includes 18 far-reaching **Strategic Integrated Projects (SIPs),** currently being co-ordinated by the Presidential Infrastructure Co-ordinating Committee (PICC). **SIP 15**, which focuses on *Expanding access to communication technology,*[23] is chaired by the Minister of Telecommunications and Postal Services and aims to provide for broadband coverage to all households by 2020.

  The SIP 15 plan also makes a case that, while the private sector will invest in ICT infrastructure for urban and corporate networks, **government will co-invest for township and rural access, as well as for e-government, school and health connectivity**
- **South Africa Connect**[24], adopted by Cabinet in December 2013, is an overarching policy for broadband infrastructure, and adopts an integrated, cross-cutting, but citizen-centric approach to broadband.

  SA Connect provides for a **four-pronged strategy**, with both supply-side and demand-side interventions, to close the gaps between the current relatively poor status of broadband penetration in the country, and the vision of a seamless nationally-pervasive network, which by 2030 will be universally accessible at a cost and quality that meets the needs of citizens, business and the public sector. Important aspects of this strategy which need to borne in mind in consideration of this Chapter/Policy Options Paper, include:
  - The creation of an enabling regulatory and institutional environment that facilitates broadband rollout whilst preserving the broader public interest;
  - The removal of any administrative and regulatory bottlenecks constraining network build-out, and co-ordinating further build to avoid unnecessary duplication, particularly of civil works;
  - Stimulating network build by operators through reducing the associated investment risk, and by ensuring demand;
  - Reducing government's on-going operational expenditure on cost to communicate through upfront capital expenditure;
  - Enabling sharing and co-operation on open access wholesale network build-out and operation through ensuring economies of scale, reducing risk and guaranteeing returns.

These important developments will inform future policy options for the White Paper.

3.1.2 State of the market and market trends

In order to develop appropriate policy for infrastructure and services, it is important to examine the current state of the market and identify some of the market trends.

[23] http://www.gov.za/issues/national-infrastructure-plan/#SI-SIPs

[24] DTPS, "South Africa Connect: Creating Opportunities, Ensuring Inclusion, South Africa's Broadband Policy", 20 November 2013.

The fixed line telecommunications market remains a near monopoly under Telkom with minor inroads from its competitors. Fixed line teledensity grew from 9,2% in 1993 to a high of 12,8% in 2000 under the impetus of Telkom's universal service obligations. Since then the number of Telkom fixed lines in operation has declined from 5,5 million to 3,6 million in 2014, or a teledensity level of 6,7%. The 2011 Census shows that fixed line access remains highly racially skewed: Although overall household penetration was just over 14% in 2011, only about 6% of Black South Africa households had a fixed line phone. The declining trend is expected to continue.

Mobile connection penetration, however, has grown from a zero base in 1993 to 140% in 2014. This does considerably overstate the number of users, as it includes multiple or inactive SIMs, SIMs used for machine-to-machine (M2M), telemetry and 3G data connections for business and consumers. The 2011 Census pegged household penetration at 89%, very much more evenly spread across all racial groups, suggesting continued fixed-to-mobile substitution and an end-user preference for mobile. The market remains highly oligopolistic, with the two major mobile operators together accounting for a market share of almost 75%. As the market is now largely saturated except for the poorest and most remote households, mobile is expected to continue to grow, but at a slower rate than previously. Multiple SIMs for multiple devices will however stimulate some growth.

Internet access has continued to grow since its earliest days in the 1990s, with recent estimates putting unique Internet user penetration at between 22% and 28% in 2012. Growth in the market has increased considerably since 2008, in part at least due to the rise in connectivity through mobile handsets. Census 2011 suggests that just under 9% of households access the Internet primarily from home, whilst the primary form of Internet access for just over 16% of households is via a mobile phone. Again a steep digital divide manifests itself in Internet, with penetration highest in wealthy, urban, White households and lowest in poor, Black, rural ones. It is likely that future growth in Internet user penetration will largely be driven through smartphone and tablet connectivity. The Internet service provider market is highly competitive with providers numbering in the hundreds.

The penetration of personal computers has grown much more slowly, with Census 2011 reflecting just over 20% of households as owning personal computers. There remains a sharp racial and income divide in respect of household computer penetration, with 70% of White households reporting ownership as opposed to 13% of Black households, and with household penetration of computers only exceeding 50% above the R150 000 annual income bracket. This suggests the cost of computers to be a major inhibitor, with prices unaffordable for the vast majority of South Africans. The advent of tablet computers is expected to change this and will probably be a stronger driver with sharp price reductions in these devices likely.

Broadband penetration is a burgeoning market, with an estimated subscriber base of some 8,2 million as at the end of 2012, or an estimated subscriber penetration of just over 15% - although increasing numbers of users enjoy both fixed and wireless broadband access, giving an estimated unique broadband user base of 6,4 million. The overwhelming majority of these subscribers use wireless broadband as their primary form of access, with ADSL remaining relatively stagnant, at a declining market share of just over 10% in 2012. By contrast, wireless broadband penetration continues to grow and is likely to continue to do so. Vodacom is the dominant provider with a

market share of over 60%. Recent trends suggest a growing deployment of fibre-to-the-premises connectivity in both business areas and affluent urban suburbs.

3.1.3 Scope

This Chapter/Policy Options Paper outlines key policy issues and options for the development and provision of ICT infrastructure, including converged electronic communications networks, postal infrastructure and its associated services, to support the delivery of content and integrated services.

Respondents to the Green Paper emphasised the centrality of government in creating an enabling environment to ensure affordable access to the full range of services required for effective participation in a modern economy and society.[25] Some submissions covered matters related to "*true infrastructure competition*",[26] while others focused on the need to differentiate between service-based and infrastructure-based competition.[27] Several stressed that policy must focus on ensuring economic and societal benefits and enabling users to access the broadest range of IT products and services to spur innovation, creativity, efficiency, and competitiveness.[28] Many stressed the need for significant reform of the administration, management and planning of the radio frequency spectrum.[29]

This Chapter/Policy Options Paper thus endeavours to discuss ICT infrastructure and services within the context of an integrated policy framework. Even though the issues are presented independently, the linkages and interdependencies must always be borne in mind. Most importantly, it must be noted that the citizen is the key beneficiary of services and consequently at the heart of the policymaking process.

3.1.4 Key questions

Given the changes that convergence continues to bring to bear on ICT infrastructure and services and the complex environment that is evolving, a number of broad questions need to be taken into consideration in drafting a new and forward-looking White Paper, such as:

- To what extent and in what ways must the current policy and legislative basis for the regulation of ICT infrastructure and services be updated?
- How, in an increasingly converged ICT ecosystem, should policy, law and regulation be framed so as to continue to assist the sector to serve as a key enabler of economic growth, a facilitator of social development and a provider of cultural enrichment?
- How should policy, law and regulation ensure that the needs of the citizen, the user and the consumer remain the centre of attention? This includes the need to explore new ways to ensure that all people have affordable access to the widest possible range of ICT infrastructure and services, and that they are empowered to exploit this access to improve

[25] For example, Research ICT Africa, inter alia.
[26] Fibreco
[27] Cf WAPA and Microsoft.
[28] For example, the ITA and the LINK Centre.
[29] Ranging from the ABT and the R2K, through the South African Chamber of Commerce and Industry and the Ethekwini Municipality, to the SACF, Smile Communications and Telkom, to mention just a few.

the quality of their lives and to promote their economic well-being. It also includes examining how consumer rights can be protected.

- Whether and how postal services can be adapted and modernised to ensure their continued relevance and value, along with how best to leverage the existing postal infrastructure and network to provide an expanded range of goods and services to people?
- New, currently unforeseen or dimly foreseen issues and challenges will continue to arise and evolve in the sector. How should policy, law and regulation be structured so as to keep abreast of this ongoing wave of innovation, to cater for new issues and features as they arise and to manage them in the best interests of the country and its people?

3.2 Postal services

The post office has faced a number of challenges including a disruption of services, labour unrest, intermittent strikes, and failure of good governance. There are a number of reasons for this state of affairs, including weak and ineffective oversight structures, poor management at board and senior management level, the decline of revenues as a result of mail substitution by electronic means and skills shortages. There is currently a government programme to stabilise the post office and ensure the development of a turnaround plan to address the short to medium term challenges. The intervention is currently in progress (November 2014), and is not part of the planning for its long term future, which is the subject of this Discussion Paper.

According to the Organisation for Economic Co-operation and Development (OECD), traditional network industries have been transformed through reforms that have fundamentally changed the way these industries are regulated. The former reliance on state control and regulation has given way to greater reliance on competition and market forces, which has led to a greater focus on efficiency, innovation and meeting the needs of end-users. However, these reforms have largely bypassed the postal sector. The postal sector in most OECD countries, including South Africa, remains dominated by a state-owned vertically-integrated monopoly, still largely protected from the forces of competition.

In the current era the postal services sector is an important component of the economic sector in South Africa, contributing approximately 3,16% to GDP. This includes the courier and express parcel market. Letter post is, however, declining both in terms of volume as well as a percentage of total revenue generated in the sector. The declining trend in letter mail volumes is ascribed to the global recession and electronic substitution effects.

While efforts are being made to bridge the wide digital divide in South Africa, postal services remain important for people and communities who do not have ready access to e-mail or the Internet. It is also crucial to receive and deliver goods. The postal network also serves as a conduit for government to communicate with communities in the most rural parts of the country, as well as communities without access to electronic media. In addition many businesses rely on the postal, courier and express parcel market for daily operations. From a commercial perspective, the sector is required to be of high quality and efficient so that economic activity in the country is supported.

The key considerations influencing a policy review of the postal sector are informed by the changes in the postal market globally, and the particular dynamics of the South African environment. While volumes for basic letter mail services are declining, the demand for parcel services is increasing. This requires a holistic rethink regarding the appropriate approach going forward. Another critical area for consideration is the extent of monopoly protection and the rationale for any such decisions as well as the ability of the industry regulator to play its role in regulating the market.

3.2.1 Future of postal services

Globally the traditional postal service sector is undergoing reform, fuelled in the main by the advent of the digital economy. The proliferation of electronic mail as well as other communication mediums, poses challenges for growth in the postal services market. The critical issue for postal service operators is how to respond to these new technological challenges. Globally there is a trend towards greater corporatisation, commercialisation or privatisation prior to liberalisation of the postal market. The general intention is to create a more efficient governance structure for the postal operator, particularly when it will have to compete with private operators in a liberalised market.

Electronic substitution of traditional mail is accelerating as both consumers and businesses adopt electronic processes across multiple domains. Mail users are shifting from traditional hard copy distribution models to a variety of new ways to digitally communicate, advertise, or transact. The emergence of digital methods of communication has, however, not diminished the role and importance of postal services. The advent of modern networks, and broadband internet in particular, have provided new opportunities for the traditional postal services sector.

The digital revolution presents an opportunity as a *disruptive innovation*[30] to the traditional business of postal services, and as such there is room for out of the box thinking to build new business models, which leverage off a thorough understanding of the evolving needs of citizens. A postal system can help to provide logistical solutions to integrate data flows, physical flows and financial flows.

Respondents to the Green Paper in the main were supportive of the continued mandate of SAPO in terms of ensuring universal service and most proposed that SAPO utilise its extensive network and presence to support the delivery of government services, including e-government, and to provide Internet service to especially far flung rural communities. Suggestions included:

- A focus more on logistics or provision of services (National Treasury);
- Leveraging SAPO infrastructure for government services such as tax filing, small business support, and Internet cafe services (Sumeer Mohanlall);
- Providing Internet services, delivering books and medicine (Progressive Professionals Forum);
- Providing basic internet services through wireless media, e.g. Wi-Fi access in a community (Provincial Treasury- Western Cape Provincial Government);
- Harnessing SAPO broadband infrastructure as the first touch point for government and other services, particularly in remote and rural areas (South African Communications Forum);

[30] A disruptive innovation describes a process by which a product or service transforms an existing market by introducing simplicity, convenience, accessibility, and affordability. (http://www.christenseninstitute.org/key-concepts/)

- Setting aside space and resources for training, airtime distribution, sale of end-user equipment; rolling out Wi-Fi hotspots in rural and semi-rural areas; and supporting cross-departmental rollout of further government services through SAPO's extensive network (Telkom).

Thus in terms of the future

- The postal services will have to consider new products and services that reflect the evolving mandate to bind the nation together in a new world where people are increasingly communicating digitally.
- SAPO will have to continue to be the Universal Postal Services Obligation provider. SAPO would thus continue to establish points of presence with a minimum set of basic services for communities.
- There will have to be a consideration that sector players contribute to a Universal Services Fund. Any member of the postal sector who is deemed to be providing universal services should to be allowed to claim compensation from the Universal Services Fund.
- The postal sector should become government's strategic partner in the delivery of basic services.

The following options relate to SAPO's legal status. Other options dealing with future objectives are presented in subsequent sub-sections.

OPTIONS

Option One: Status quo

The postal sector and SAPO in particular, would continue to function as per the current circumstances. Consideration of this option, must take into account the very recent problems reported in Parliament in terms of the serious financial problems of the SAPO. On the other hand favouring this option will provide for a continuation of the post office's role in ensuring universal service.

Option Two: Service expansion

Necessary policy reforms would be adopted to allow the Post Office to reconfigure its role over and above the core provision of mail service. Based on a thorough market analysis the relevant market for expansion would be defined. This would provide for service expansion such as:

- A focus on logistics in support of industry and within the e-commerce value chain. This may also include, for example, a role in the delivery of books to schools, and medicines in support health care;
- Provision of Internet access facilities for communities, or Wi-Fi zones for underserved areas. The role of the post office in e-government service delivery would be important;
- SAPO becoming a reseller for air-time distribution, bandwidth vouchers, hardware sales and distribution in anticipation of the demand which will be created through broadband rollout.

Option Three: Full or partial privatisation of the Post Office

Postal reform in some countries has included changes from government to private ownership e.g. full privatisation in Germany and Holland and partial privatisation in Kenya and Japan. Privatisation of SAPO would result in a wholly commercially driven agenda with a focus on revenue generation to sustain its operations and make a profit. In this scenario the Post Office would be independent of government control and fully exposed to the market. Careful consideration would have to be given to the impact this would have on universal service. Partial privatisation would have to be based on a careful analysis of which components of the current business structure may be better suited to privatisation.

- **Which of the above are options for a future post office in a digital age? Please motivate the pros and cons of the option you support.**

3.2.2 Market structure and competition

Two of the 1998 White Paper defines the postal market and the principles of introducing competition in the SA postal sector. It identifies which services are to be kept exclusive and which are to be open to competition. It is critical to note that it recognises the benefits of competition; however the policy appears to provide that only once the universal service obligations have been achieved, will the exclusive services be opened to competition. The policy therefore provides that, in order to ensure universal service, a set of reserved services be established, in which the universal service provider receives a degree of monopoly protection.

The monopoly service includes all letter mail, the issuing of stamps and roadside letter box collection as well as street delivery box, address box, phantom box, private box and poste restante delivery. All other services, including parcel and express services, and any future services differing from those defined as reserved, are categorised as non-reserved and are subject to competition and market forces. In the postal sector, barriers to trade usually are in the form of legal monopolies granted to a state-owned incumbent or the legislation around the trade in services for private operators. Countries such as Kenya, Australia, Canada, South Africa and Tanzania have legal monopolies which also serve as trade barriers to those specific market segments, in this case letter mail. The legislation protects the interests of the state-owned incumbent, giving the incumbent an advantage over other competitors.

A modernised and effective competition regime is important for the development of the South African postal market. This would entail regulation of the unreserved market which must be subject to the same regulatory regime as the reserved postal market. Currently, however, there are no obligations and conditions on the unreserved and courier postal operators. It is noted, that although prohibited by law, courier and value added services have encroached into the reserved market. Given the intended policy role of SAPO as government's delivery partner in providing and facilitating crucial services to underdeveloped areas of the country, it is important that its monopoly be retained but in a way that promotes efficiency within the market as well as improves service delivery.

The commercialisation of postal services is an important process of adaptation to make it responsive to market requirements and customer needs in a rapidly changing business environment. The

introduction of regulated competition in the postal market will promote competition and ensure that postal operators compete with each other in providing services efficiently and at acceptable levels of quality and price. The overall objective is to transform postal providers into dynamic market-led and customer-oriented enterprises that satisfy the needs and expectations of users, regardless of their geographic location.

Green Paper respondents who commented on this issue were in favour of the retention of a reserved market to ensure and guarantee universal service. The Progressive Professional Forum, for example, argued that the Post Office is not ready for privatisation, given that South Africa is still a developing economy. Other submissions motivated that the postal sector must be segmented in line with international agreements, based on the Universal Postal Union Strategy. The latter provides for three dimensions, namely, Physical, Electronic, and Financial, with associated conditions and obligations. In addition, there were calls that policy should create an environment that attracts increased investments in the sector and allows the development of postal infrastructure and services that support national development goals. Suggestions were made that policy should examine the allocation of responsibilities to postal operators in a competitive multi-operator environment.

The objective of policy reforms must thus seek to develop empowering provisions to licence unreserved and courier postal operators with conditions and obligations. Overall, the intention must be to transform postal providers into dynamic market-led and customer-oriented enterprises which satisfy the needs and expectations of business, communities and individual citizens.

OPTIONS

Option One: Segmentation of the postal sector

Segmentation of the postal sector in line with the international agreements into a Physical, Electronic, and Financial dimension. This option would require a refinement of the definitions of postal markets and the roles that the various licensees would play in these markets. The scope of competition in postal markets would have to aligned to the segmentation in order to preserve the universal postal service objectives. 'Reserved services' for the exclusive right of the public postal operator should be defined to prevent market creaming.

Option Two: Reduce SAPO's monopoly

SAPO's monopoly over mailbox access would be repealed, as it has three negative economic consequences. Those that propose this option state that this monopoly enables the Post Office to raise the cost of its rivals' deliveries, deters vertical integration into mail delivery by businesses with large numbers of routine mailings to virtually every postal customer on a given route(such as utility companies) and raises the cost to the customer of substituting alternative delivery services because the customer's reliance on the Post Office will require him/her to construct a new receptacle for private express deliveries.
The scope of SAPO's monopoly over the delivery of letters could also be substantially reduced.

Option Three: Safeguard universal service provision

Whilst competition can bring important benefits for many customers, it needs to be fair and not at the expense of universal service. It is thus necessary to provide legislation which makes it explicit that protection of the universal postal service takes precedence over competition.

- **Which is your preferred option?**

3.2.3 National Address System (NAS)

Quality addressing and postcode systems are essential for national infrastructure and the socio-economic development of a country. They also form the cornerstone of efficient postal services, facilitating business exchange and hence contributing to a country's economic growth.[31] In most industrialised countries, a physical address is something that is taken for granted, but in many developing countries, as well as some emerging economies, a significant proportion of the population do not have an address. Without an address, individuals cannot be reached, businesses cannot be identified by potential clients, and public services cannot be delivered properly.[32]

In 2012 the Universal Postal Union (UPU) in its 25th congress in Doha adopted the White Paper on 'Addressing the World - An Address for Everyone'. The White paper emphasises that comprehensive street naming and house numbering provides a basis for communicating and exchanging physical items, while enabling the implementation of national policies for socio-economic development.

Currently, South Africa lacks' an effective NAS able to capably and comprehensively identify streets and individual buildings that could facilitate the delivery of mail and other goods. This has a serious impact on citizens, for example, who require an address in range of different situations, including to be able to open and maintain a bank account. Better address coverage further helps private sector actors to expand their market by identifying and providing access to key customers and facilitating goods and service delivery.

OPTIONS

Option one: Status quo

The first option entails doing nothing, if it is deemed that the current address system regime sufficiently addresses the needs of both the citizenry and industry.

Option Two: Development of a NAS and associated database

This entails the establishment of an effective and reliable NAS for the country and a country NAS Database. Policy would have to empower SAPO to be the custodian of national address rollout and the creation and management of the Address Database.

- **Is the development of a NAS necessary? Which entity should be made the custodian of the database? What provisions would you like to include in a NAS?**

[31] Universal Postal Union, "About Addressing", http://www.upu.int/nc/en/activities/addressing/about-addressing.html
[32] Universal Postal Union, "Addressing the world initiative", http://www.upu.int/en/activities/addressing/addressing-the-world-initiative.html

3.2.4 Universal service and access

Universal service and access policies stress that all South Africans have the right to an effective, efficient and affordable basic postal service regardless of their geographic location or economic status. While there are different approaches to the definition of a universal postal service internationally, most countries have tended to employ the monopoly service provider and reserved market areas as mechanisms for attaining this. The standard rationale for the reserved area is that it allows postal operators to cover the costs of providing a universal service. Postal infrastructure is seen as a "natural monopoly".

The following are some of the emerging trends regarding postal liberalisation and the provision of Universal Service Obligations:

- Competition is emerging although most universal service providers remain dominant in their respective markets.
- New entrants introduce new business models, which give customers better targeted and or lower cost services.
- Large mailers have been the primary beneficiaries to date; with improved quality of service, lower prices, and innovation while consumers and small business have seen limited changes or improvement.
- Universal service providers are making important changes, including aggressive cost reductions, increased pricing flexibility, improved service quality and innovation, and diversified revenue, all in response to or in anticipation of postal liberalisation.

Postal services are considered a public service with an associated expectation of universal service. With the introduction of new entrants and enhancement of competition, national objectives such as universal service goals cannot be left only to the incumbent operators.

The Green Paper asked "*What role should operators in the unreserved segment of the market play in so far as universal service is concerned?"* Respondents mostly suggested that all players in the market should be required to share the 'burden' of universal obligations, and that the implementation of these obligations must be managed in a manner that is not counter-productive or which defeats the ends of competition. The Progressive Professionals Forum said that the distinction between reserved and unreserved services is a clear one in practice and the distinction should be maintained in the future. They also proposed that operators in the unreserved segment should contribute to a fund focused on the rollout of universal services in the postal sector. Telkom suggested that a universal strategy must begin with a delineation of those areas where market forces address the needs of citizens, and those areas where it does not. Accordingly government funding should be ring-fenced to those areas that fall within the universal service market. Telkom also suggested that if accounting separation at SAPO is implemented to ensure that state funding does not compete with private funding, then all those in the unreserved segment (including SAPO) could be required to make contributions to the Universal Service and Access Fund (USAF). The SACF stated that a market analysis study should be undertaken to determine what would be the best measures for the South African market.

OPTIONS

As far as access is concerned, the policy option is to declare postal network (infrastructure) an essential network. Postal operators having access to each other's network can bring real benefits to consumers.

Option One: Revision of scope and extension of obligations

A policy revision would revise the scope of universal postal services in South Africa with a view to extending obligations to market players in the unregulated space. This would be based on the fact that, contrary to its original policy objective which conferred exclusive rights to the incumbent operator (SAPO), couriers and value added services have encroached into SAPO's exclusive markets, resulting in de-facto competition in an area where there should be none. Therefore a mechanism is required which expands obligations to all market players regardless of the market segments in which they operate.

Such a revised policy would introduce provisions requiring all players in the market the 'burden' of universal obligations. This would entail a revision of the scope of the universal service provider (USP) in South Africa, in particular extending this obligation to market players in the unregulated space.

However this would have to be informed by a proper analysis of the current postal market in South Africa, inclusive of the cost of providing such universal service obligations, the incumbent's current position as well as the form that obligations should take. The review should also consider alternative ways of funding universal service.

In order to ensure the provision of universal service, the universal service provider(s) should be given some form of exclusive or monopoly protection in certain aspects of the markets. Furthermore, standards should be set for the universal service provider(s), and conditions imposed through a licence agreement.

- **Does the scope of the USP need to be refined?**
- **Would you agree that obligations must be extended to the unregulated space? Provide reasons.**

Option Two: Establishment of a fund for financing the universal service obligation

The 1998 Postal Policy maintains that provision of universal service obligations should be derived primarily from profits earned on monopoly and non-monopoly activities. It further provides that in order to achieve sustainable profit levels the Minister may in consultation with the Universal Service Provider, set revenue and volume growth targets in licence conditions. However, the monopoly position granted to SAPO has been ineffective as a tool for achieving such obligations. Consequently an alternative means of funding must be considered. The establishment of such a fund however would have to be preceded by a detailed market study, and an assessment of the mechanisms adopted elsewhere (e.g. Sweden, Italy and France).

- **Do you agree that a fund is necessary? Motivate your reasons?**
- **Should you agree that a fund is necessary who should manage the fund?**

3.2.5 Postal Services

3.2.5.1 Definition of postal services

The current definition of postal services is based on traditional postal services. It is therefore proposed that the definition be revised given the expanding and evolving role of postal services in a modern digital era. Revised definitions would have to be based on an assessment of the current and potential market for postal products and services in respect of unmet customer needs. The revised definitions would also consider current and new demands. Examples of new demands could include address management systems, consignment services, direct mail, hybrid mail, electronic transfer of funds, etc. It is proposed that if the definitions are revised these should accommodate the provision of new electronic services and integrated solutions, i.e. activities that are related to, or dependent upon, the postal value chain from an upstream perspective e.g. address database services, targeting services, mail production services, etc., as well as from a downstream perspective e.g. response handling services, fulfilment services, mail room management services, etc.

OPTIONS

Option One: Status quo

The currently legislated definitions of postal services are sufficient and thus no revisions are required.

Option Two: Postal service definitions to be updated to reflect the evolution in service provision

New definitions would be developed to accommodate SAPO's mandate in view of market failure. New definitions would account for the distribution of postal services through modern technological innovation and the application of new technology.

- **Should the postal service definitions be updated? If so what are the key considerations in the definitions, bearing in mind that the definitions provide the scoping of the mandate?**

3.2.5.2 Banking services

The Postbank was established in 1910 as a savings bank. It may not provide loans or overdraft facilities to its customers. It is, however, a member of the multinational financial services organisation, VISA, and participates directly in the National Payments System, PASA. In its 2012 Annual Report, SAPO reported that deposits to the Postbank grew by 6,9% in the year, bringing the total savings under its management to R4 258 million. As at 31 December, 2012, there was an industry total of R151 816 million in 'savings deposits' of which the Postbank deposits represent 2,6%. However, with over six million customers, the Postbank ranks in the top five banks and has a formidable customer base to launch new services and products in the lending, borrowing and investment sectors and thus provide much needed competition in the sector.

The combination of financial services with the postal service predates the modern era. There are examples of other models in which the Postbank is independently situated from postal services.

Although institutionally separate from the postal service, the Postbank currently utilises the postal infrastructure, sharing counter space within post office buildings, mainly in those areas where it is too costly for the Postbank to maintain its own branches.

There were varying views on whether the Postbank should be a stand-alone fully-fledged independent banking institution in responses to the Green Paper. Sumeer Mohanlall, for example, was in support of the Post Bank being a subsidiary of Post Office. The SACF, however, said that financial services are value added services to the business of the Post Office and therefore the DTPS needs to carefully consider whether it is correctly positioned and resourced to provide the stewardship necessary to guide a new bank in this economic climate. They argued that the Postbank should not exist as a subsidiary to SAPO and, that if there is still a demonstrated need for a Postbank, this should rather exist independently of SAPO with a more adequately resourced Ministry. Telkom, on the other hand pointed out that the Postbank provides services to the marginalised sector of the public. They suggested that the Postbank does provide a limited series of banking services and as such should be required to hold a banking licence for the very reason that it serves marginalised communities that require consumer protection.

It is noted that the Postbank has a formidable customer base to launch new services and products in the lending, borrowing and investment environment and thus provide communities it intends servicing much needed financial relief. It is therefore argued that the Postbank must be positioned to facilitate financial transactions on SAPO platforms for individuals without financial accounts.

OPTIONS

Option One: Status quo

No policy amendment would be required. The current process to corporatise the Postbank as a subsidiary of the Post Office would continue. The Post Office would be positioned as a competitor to the commercial banking sector.

Option Two: Establishment of the Postbank as a developmental bank

Policy would extend the mandate of the Postbank to function as a developmental bank. The Postbank would be required to offer services to the unbanked, co-operatives, SMMEs, and other sectors. This would require a special licence that would allow it to function as a developmental bank outside of the commercial banking licensing terms.

- **Which of the above options offer the best possible solution, taking into account the evolution of the postal sector, as well as the needs of citizens who are not in reach of banking services?**

3.2.5.3 Freight and logistics

The postal sector presents its own unique challenges in that it involves not only communications but also transportation and logistics. However current policy frameworks do not include logistics within the sector. Consideration must therefore be given to the development of an appropriate policy and legislative framework recognising that the sector falls both within the communications market and, where physical goods are concerned, within the transportation and logistics markets. It must be noted that postal logistics has a complex transportation network for efficient mail delivery.

Freight and logistics provide an opportunity for a new dimension in the postal business. Logistics may be defined as the process of planning, implementing, and controlling the efficient, effective flow and storage of goods, services, and related information from point of origin to point of consumption for the purpose of conforming to customer requirements. Logistics Post must be able to cater to any demand for moving goods, parcels and consignments in terms of delivery deadline and quality of service, and with appropriate monitoring and tracking ability.

OPTIONS

Option One: status quo

The status quo would remain and the definitions and mandate would not be extended to freight and logistics.

Option Two: Enable an end-to-end logistics service

A policy would be developed providing for the enablement of logistics, transportation management and end-to-end merchandise services to fulfil sector challenges.

- **Do you agree that the Post Office must undertake logistics services?**
- **Is the Post-Office capable of offering such a service, and would this boost the Post-Office's bottom line?**

3.2.5.4 E-commerce

Direct marketing is a booming sector and transactions via the Internet are increasing at a high rate. It is believed that e-commerce will very soon be a leading way of conducting business. This dynamic business environment needs a highly developed supply chain infrastructure, which could involve high costs and a long lead time to set up. Logistics lead to mail consolidation programmes, a volume-leveraged transportation network and proprietary technology tools to help reduce postage and distribution costs while improving delivery reliability and predictability.

The postal sector allows people and businesses to access the world market from where they are while assuring a local focal point even in the most remote areas. The postal sector is in a strong position to support the South African Internet economy. The potential greatest threat to the postal industry, the Internet, has therefore emerged as its greatest opportunity to realise greater value from its core assets and strengthen its role as global provider of services for the facilitation of trade and commerce.

Current policy frameworks which govern the postal service do not however provide for its role in the e-commerce environment. The development of policy to provide for a logistics service, as proposed in the foregoing section will partially address the problem. In addition, further policy enhancements are required to position the postal networks in order to meet demands posed by e-commerce and m-commerce initiatives through the application of ICTs and new technologies in postal products.

Postal service must thus evolve to be enablers of e-commerce and catalyse the growth of this market by creating a seamless cross-border network and service. The sector must extend its service portfolio along the entire e-commerce value chain thus being the main intermediary for the entire business, including financial and information services and solutions. Due to the dramatic changes taking place in global commerce encouraged by the rapid evolution of the Internet and the greater accessibility of ICTs, it is important to develop systems to appreciate the postal network as a non-exclusive, easily-accessible delivery mode.

OPTIONS

Option One: Status quo

There are currently sufficient players to support online and thus there is no room for expansion of the postal service in this area.

Option Two: Support of e-commerce and provision of electronic signatures

Policy provisions must be developed, where it is necessary for the Post Office to become a key institution in support of e-commerce and m-commerce growth, and the delivery of packages. SAPO has achieved successes in the areas of e-commerce, hybrid mail and supporting other institutions' electronic transactions. The SAPO Trust Centre has been fully accredited by the South African Accreditation Authority in terms of section 37 of the Electronic Communications and Transactions (ECT) Act and SAPO can now provide Advanced Electronic Signatures. Safe and secure e-signatures are key for vibrant e-commerce development. SAPO must thus harness this unique position as an accredited service providers offering secure transaction services in the country (e-signature service provider). (*Refer to Chapter Four: Policy Options - Digital Society, for further options regarding electronic signatures)*

- **Do you agree that the postal sector must harness its network's key assets to support e-commerce and m-commerce trade? Explain.**
- **What strategies do you propose for the Post Office to harness its accreditation to provide electronic signatures?**

3.2.6 SAPO Infrastructure

The SAPO holds a 25-year licence and is the only operator licensed to provide services within the reserved area. Any review of infrastructure must therefore take into account its potential to alleviate the infrastructure and service gap. SAPO has developed considerable networked infrastructure to support its services. On the retail side, SAPO infrastructure comprises about 2 497 service points country-wide of which 1 753 are Post Office outlets and 874 are Retail Postal agencies (RPAs). This gives SAPO an extensive and perhaps one of the largest retail footprints in the country, most of which is located in remote areas. The retail network offers services such as mailing, courier, financial as well as agency services including TV licences application and payment, motor vehicle licence renewals, and municipal collections and bill payments, private sector share scheme distribution.

This country-wide network of post offices positions SAPO as a key player in rural connectivity and overall ICT service delivery. Research conducted during the policy review process indicates that

Kenya is one of many countries that has realised the value of its postal network infrastructure and made moves towards commercialising the network. This was done through franchising some of its non-profit generating post offices to private operators giving them access to postal network infrastructure.

Post offices are also seen as potential ICT access points that could offer a broad range of services (including e-services), as well as extension of the broadband network to rural areas that do not have broadband coverage. Post offices are therefore considered as potential points of presence for broadband infrastructure provision, and this potentially places SAPO as a key element in last mile provision. In support of both the retail and logistics segments, SAPO has to date invested heavily, in both IT and broadband infrastructure.

While SAPO's internal process and IT systems appear to be world class, its network is not adequately capacitated to provide access to external parties. This works against the government goal of utilising post offices as public access point for ICT infrastructure, related services and financial inclusion.
The key issue from an infrastructure perspective is how can SAPO's infrastructure contribute to the objects of SA Connect, and broadband for all?

Green Paper respondents made proposals regarding SAPO's infrastructure on two levels. From the perspective of contributing to infrastructure provision the SACF, for example, argued that SAPO should have high capacity broadband networks built for their exclusive use, but with excess capacities made available to other users in open access business arrangements. They cautioned however that SAPO must not become an operator in the broadband space but must stick to its core business. The Treasury of the Western Cape Provincial Government and Telkom proposed that SAPO play a role in last mile access, by providing basic Internet services through wireless media such as Wi-Fi to local communities. Cell-C was also in support of leveraging the post office's infrastructure for the rollout of broadband and suggested that post-offices provide a useful place for peering or interconnection, or for exchanges.

On the second level, respondents proposed that SAPO has a critical role in providing ICT-related services. In the main, respondents proposed that SAPO should provide access to e-Government services. Others extended this and proposed that SAPO's infrastructure be used to extend multi-purpose ICT type services, including training. The ACEIE at the University of Pretoria pointed out that the Green Paper did not mention the Public Information Terminals (PITs) of SAPO. This is a joint venture between the Department and the Post Office to enable citizens to access information on government and educational services and to communicate by e-mail. By implication it is suggested that the success of this project needs to be evaluated, as it may be one of the options for SAPO to provide Internet access points to citizens, with minimal infrastructure requirements.

POLICY OPTIONS

The following policy options are not mutually exclusive.

Option One: SAPO's broadband infrastructure is leveraged to offer broadband services in rural and under-serviced areas.

This could entail the following:

- SAPO broadband infrastructure would be used to deploy last-mile connectivity, with each SAPO branch working with licensees at a local level. This would include the provision that, where feasible, fibre termination points be at post offices.
- SAPO infrastructure, with state funding assistance where necessary, would be increased beyond SAPO needs and the resultant excess capacity would be sub-let to the private sector in open-access low cost strategies to encourage new entrants and innovative entrepreneurs. The terms of utilisation of the SAPO network would be on the basis of infrastructure sharing amongst operators and any other entity wanting to utilise SAPO's infrastructure at a fee agreed to by parties.
- SAPO's infrastructure would be made available for peering or interconnection, or for exchanges.
- SAPO's points of services would be extended to provide Wi-Fi zones within a specified radius of the retail outlet. SAPO could consider partnering with a private player to roll-out Wi-Fi zones, or alternatively investigate how this could become an additional income stream.
- SAPO, however, would not become an operator in the broadband space, but would commit to its core and potentially expanded mandate

- **Do you agree that SAPO's infrastructure could be leveraged as described above? What are the pros and cons of utilising SAPO's infrastructure?**

Option Two: SAPO to provide value-added services over the broadband infrastructure.

Given the existing and the potential expansion of SAPO's network infrastructure, it is potentially ideally placed to provide a host of value-added services to citizens, and especially in rural areas. There was strong support among the Green Paper submissions that the SAPO infrastructure must be leveraged to deliver e-services, including access services. Post offices across the nation, and especially in underserved areas it was argued must become key touch points for government services, especially e-Government. Currently SAPO does provide support for a myriad of government services, such as payment of bills, and licence applications. Given the anticipated escalation of e-government deployment, SAPO is in and ideal position to become an e-government service point. In addition SAPO could also consider other e-services which are of value to communities including, e-banking, e-tax, small business support, online job applications etc.

- **Do you agree that SAPO is in a position to provide the above services? Explain why, and comment on whether expansion into these types of services is warranted in a digital era. Comment also on whether the proposals relate to profitable areas of expansion.**

3.3 Regulating for Converged Networks

The notion of convergence is a current reality, which the EC Act of 2005 has taken note of. It is not possible in the current era for the various types of infrastructure to be planned in isolation from each other or from the services riding on top of them. Technology-neutral regulation therefore becomes necessary, together with a need to review legacy regulation which will defer the benefits of convergence for South Africa.

The realities of a converged market must thus be entrenched in the future White Paper. Regulation needs to evolve to respond to real-world changes associated with convergence, rather than be a barrier to the benefits of those changes. The ICT Green Paper discussed the convergence phenomenon and observed that it will impact on the ICT sector in a significant manner because of:

- Technological convergence which enables previously separate technologies such as telephony, data and video to be transmitted, saved and received using the same devices;
- Platform, application and service convergence as the shift to IP based technologies erodes the traditional boundaries that used to define the underlying infrastructure. The cost of building infrastructure that can deliver all services is declining whereas the speed has increased many folds because of the inherent speed and size of new infrastructure.

The Green Paper observed that convergence is of particular interest to policy makers and regulators as it allows service providers who were licensed in one category to offer services in other categories, thus introducing innovation and reducing the resources that would be needed to expand services.

The objectives which underpin a review of policy in respect of convergence are:

- **Promotion of technology and service neutrality:** This allows for competition that benefits the consumers, lowers the cost of infrastructure roll-out and enables the uptake of new technologies and innovation. It allows service operators to offer multiple services
- **Ensure same treatment of content in all platforms:** Access and distribution of content can be done using different platforms. For this to happen the acquisition, handling, distribution and provision of content should be regulated in an equivalent manner irrespective of the underlying media or platforms
- **Remove bottlenecks and allow for the expansion of the market** through entry of new players and services.

Questions which need to be considered in respect of regulating in a converged environment include:

- How can SA formulate policies and laws that are flexible enough to adapt to the rapidly changing environment?
- What new market structure should replace the current structure – given the need to redefine the market structure taking into consideration that these markets were defined in isolation and distinct ways in the past?
- What are the implications for regulations targeting monopoly pricing and virtual exclusion when convergence encourages integration and use of one platform to deliver integrated services?
- How must policy and regulation deal with like services in situations in which services attract different degrees of regulations depending on their transmission metrics?

The Audio and Audio-Visual Policy Options Paper deals extensively with the specific issues related to the impact of convergence on the broadcasting and audio and audio-visual sectors. It is thus not dealt with here. The remainder of this chapter will focus on specific matters of policy which broadly stem from the imperatives of a modern converged environment. However, before giving

consideration to specifics, it is necessary to consider what policy positions should be included in the White Paper in support of convergence.

OPTIONS

Option One: Unified Technology Neutral Licensing Framework

There would be a unified technology neutral licensing framework to translate technological challenges into opportunities. There would be no distinction between, for example, mobile or fixed services and data or voice services. This option would entail a new legislative approach imposing a detailed convergence framework. This would include effective regulation of those operators which might attempt to use their current market dominance to frustrate the entry of new players in the converged segments where they currently dominate.

Option Two: Shift in the focus of regulation from sector specific regulation towards ex-post competition regulation

The policy would shift the focus of regulation from sector specific regulation or sub-sector specific regulation towards ex-post competition regulation. This approach would shift regulation to competition matters and include increased self-regulation and co-regulation.

Option Three: Maintain the status quo and evolve regulations as and when necessary

The third alternative suggested is that of a regulatory approach through incremental adaptation of rules and regulations to the various converging segments depending on influence, market dominance and effect on the evolution of new services. This is a do-nothing approach that would require the regulator to monitor the situation and evolve regulations as when and if necessary.

- **Based on the above options what should the policy and regulatory approach to the convergence of technologies be? Provide substantiating reasons.**

3.4 Market structure and Competition

3.4.1 Introduction

This section deals with market structure issues, the different market segments and the state of competition in the sector and each market segment. Respondents to the Green Paper indicated a need for a thorough review of the market structure in the ICT sector and for the introduction of measures to promote robust competition in order to release the outcomes envisaged in the NDP, SA Connect and other national policies. The failure to introduce effective competition and the resultant domination of the market/s by a few industry players has been identified as a primary reason for South Africa's failure to expand affordable and quality broadband services in line with its peers.

In the future a competitive market will be increasingly important for the development of converged services and the provision of a wide choice of content, applications and services. Additionally, a competitive market should promote the user's ability to access and distribute information and to run applications and services.

3.4.2 Market Reviews

The regulator is empowered in terms of Section 67 of the EC Act to address market failure where it exists. The Act sets out four distinct steps in this regard:

- Defining the market in question;
- Evaluating the effectiveness of competition within the defined market;
- Concluding whether any particular player has significant market power in the market and if so, is this power detrimental to the public interest; and
- If necessary setting pro-competitive terms and conditions on a licensee with significant market power.

It is envisaged that such market reviews of the extent of competition in the various segments will become increasingly important as the sectors converge. Such market analysis will not only identify potential areas that warrant attention of policy and regulation, but also assess which existing interventions could be set aside.

The information required to complete such reviews are typically intensive and only achieved through initial and periodic collection of data about the market. Various concerns have been raised in this regard. First, there is no single authority that publishes market data on an annual or periodic basis. Second there are no formal process in place to request, collate, analyse and public such market data. Third, there are no commonly agreed set of indicators. Needless to say, this lack of public market data does make it difficult for the regulator to fulfil its mandate with regards to market reviews.

Nevertheless responses from the Green Paper process all noted the failure by the regulator to fully implement the competition provisions of the EC Act. This is seen as one of the reasons for the high cost to communicate, the barriers to market entry for many aspirants and the poor state of competition in the various market segments. Some submissions pointed to the dominance of specific sectors by the established incumbents as pointing to a real need for policy to speak to competition issues as a direct function of the structure of the market. Respondents noted that the regulator had only completed one Competition Inquiry – into termination rates – and that this had resulted in specific conditions being imposed forcing operators to lower their termination rates.

Respondents to the Green Paper were almost unanimous of the need for regular market reviews as a basis for interventions by the regulator to direct the market. They argued that regular market analysis and review should therefore be compulsory. It was also noted that the definitions of relevant markets will change over time as the characteristics of products and services evolve and the possibilities for demand and supply substitution change.

OPTIONS

Option One: Status quo

The status quo would prevail – i.e. the current provisions in the ECA would not be amended but rather the focus would be on adequately resourcing ICASA so that it can fulfil its mandates on promoting fair competition.

Option Two: Compulsory review and publication of data on a regular basis

Policy and legislation would specify that the regulator must regularly publish market review analysis, across *all* identified markets. Policy would set the timeline for the completion of the initial market reviews and these could be updated systematically on an incremental basis prioritising the markets with the most significant impact on consumer pricing. In this regard, it is important that the definition of relevant markets is continuously updated to reflect the ongoing evolution of products and services and associated demand and supply changes. The advantage of this option is that all role players would be aware in advance of the markets to be analysed. This would make planning and budgeting easier.

Option Three: A less intensive form of market review

This option proposes a light form of market review that would dispense with some of the current requirements set out in the law. It is important to note the importance of accurate sector data to supplement such a light market review process. The use of a simplified review process could improve efficiencies with the regulator and ensure that outputs have quicker turn-around times.

Option Four: Market reviews by ICASA and Competition Commission

In this option, the Competition Commission would be given the additional responsibilities of defining the markets, recognising that the regulator has been unable to complete all the steps necessary in the market review process since the introduction of the EC Act and that it has not to date defined all markets. ICASA would still be responsible for conducting the market analysis. In addition the regulator would retain the responsible of monitoring and investigating anti-competitive behaviours in the relevant markets. The advantages of this option are that all markets will be identified and reviewed periodically by the Competition Commission. This is important since the definition of relevant markets will change over time as products and services evolve and the possibilities for demand and supply substitution change.

- **Which of the above option/s are preferable? Substantiate your response.**
- **Please describe any other policy suggestions.**

3.4.3 Understanding the market-gap in support of Universal Service provision

Market structure and competition are critical tools that can be used by government to ensure that all South Africans can access affordable broadband services. The extent of universal access, the gap in the access to services and areas that do not have services will influence the obligations placed on the operators and their monetary contributions to the universal service fund. A clear understanding of the infrastructure and service gap will equally be important in case public funds have to be committed to any plan designed to extend the services to reach all.

Many respondents pointed to the failure of the authorities to provide a concrete picture of the infrastructure and service gaps as indicative of the lack of will to tackle the digital divide in a meaningful manner. The section on Universal Access and Service discusses the definition of universal access, and related matters. This section confines itself to the discussion on how qualitative information will help determine the approaches to the development of the market in order to close the digital divide. These measures will be a function of the extent of the gap to be closed and will be based on the market segments that would not normal deliver on policy aims without any additional interventions.

OPTION: DEVELOPMENT OF INDICATORS

Many respondents pointed to the need for the development of indicators to measure the extent to which access to affordable universal services has been achieved. These indicators could include the type of infrastructure and services available in each of the 240 municipalities, the quality and reliability of the service, the price paid for the service, the number of users and the levels of sharing infrastructure. Respondents to the Green Paper pointed to the institutional gap that may be responsible for the failure to collect such information, noting that the agency charged with reviewing this does not have the powers to force the operators to report to it on these indicators. ICASA is the only entity which can make it compulsory for operators to disclose and provide such information. However work still has to be done to define the indicators so that there is a consistency to the information required. For the success of this option either the regulator is required to collect such information and publish it or more powers must be given to the agency responsible for universal services to force operators to file such information.

- **Please provide your view on how the market gap may be consistently analysed?**
- **Should the regulator assume the responsibility or should the universal service agency uphold its mandate to do so?**
- **What other options are there other than the proposal above?**

3.4.4 Consistent application of competition rules and their enforcement

Respondents to the Green Paper decried the lack of enforcement of competition rules and the time it takes for the regulator to act in cases of infringements that delay access to rival's infrastructure. The local loop unbundling exercise was quoted as a prime example of how, even after the regulator had determined what needed to be done, the development of effective remedial tools took more than five years. This relates to both the consistent applications of the competition regulations as well as the enforcement of decisions taken. The discussion on market analysis provided for regular market reviews and the publication of measures that would be taken if such reviews find that the market is not sufficiently competitive. This section discusses issues that have been identified as warranting consideration in the implementation of the competition framework.

3.4.4.1 Ex-Ante and ex-Post regulation

There is general agreement that as competition takes root in industries, the approach to regulating that particular industry shifts from industry specific regulations towards the application of general competition law. Some respondents to the Green Paper advocated the immediate adoption of this approach, arguing that there is sufficient evidence that competition regulation is adequate to deal with any anti-competitive behaviour prevalent in the market. Other commentators disagreed, arguing that there are pro-competition measures that should be put in place upfront in order to discourage the emergence of anti-competitive tendencies. The question to be answered is whether the broadband market has developed to sufficiently competitive to warrant the relaxation of the *ex-ante* and sector specific regulations? It is noted that there are market segments in which there are still market players with significant market power enabling them to distort competition in both the fixed and wireless broadband services.

OPTIONS: EX-ANTE REGULATIONS

The options focus on the extent to which *ex-ante* regulation is still relevant.
Ex-ante regulation will support coordination of infrastructure rollout; encourage private sector investment; avoids duplication of efforts and promotes general sector efficiencies. Ex-ante regulation will also ensure that the most marginalised communities are prioritised in the license obligations of sector players and the national policies.
The definition of the markets, in this option is a prerequisite. *Ex-ante* regulations would include open access obligations, obligations on accessing the spectrum, the requirements to share infrastructure, structural and functional separation, facilities.

Option One: Status quo

The current provisions in the EC Act would remain in place with no further policy intervention.

Option Two: Ex-ante focused regulation

Current *ex-ante* regulations especially those governing access, interconnection and sharing would be implemented more rigorously. Additional *ex-ante* regulations would be considered, based on the outcome of the broadband value chain analysis currently envisaged by the regulator.

Option Three: Limited ex-ante regulation

In this option, current *ex-ante* regulations would be limited, especially those rules that predate convergence. All existing *ex-ante* regulations would be subject to a cost benefit analysis. In instances where the costs exceed the benefits derived, the regulations would be withdrawn.

- **Which option do you prefer? Explain why.**
- **If regulations need to be tightened, explain which specific areas?**
- **If regulations need to be loosened, explain which specific areas?**
- **What are other options, and why are they preferable?**

3.4.4.2 Consolidation of market activities: Mergers and acquisitions

Mergers and acquisitions are expected as the market begins to consolidate and sector players strive for efficiencies. Numerous consolidation activities are currently underway in the sector. [33] While some see consolidation as necessary in dynamic network infrastructure sectors, others see it as an innovative way to acquire access to scare resources. These developments warrant consideration as to their potential effect on the application of competition rules. Their impact raises the issue of how a consistent approach to market competition is needed. Currently there is no defining policy on mergers and acquisitions. Each case is treated on its merit. This situation results in uncertainty for both the potential investors as well regulators and policy makers

[33] For example, Neotel\Vodacom, MTN\Telkom

It is important to note that in terms of the Competition Act, the Competition Commission has the primary responsibility for all merger approvals. In terms of the EC Act, however, ICASA has the primary responsibility for approving changes in ownership control and in transferring licences. In many instances, joint approvals by the Competition Commission and ICASA are required for mergers to take place.

It remains to be seen what the impact of consolidation will be on competition and overall consumer welfare. What is important is that policy should ensure that mergers and acquisitions do not serve to distort the market by entrenching one dominant play. As such, mergers and acquisitions should be subjected to regulatory and policy oversight to ensure that competition drivers and government objectives are not compromised.

OPTIONS

Option One: Status quo

The current provisions in the ECA would remain. No further policy intervention would be necessary.

Option Two: A more clearly defined role for ICASA

ICASA's mandate for approvals of market consolidation would be made more explicit. In instances requiring approval by the Competition Commission, the competition body would be required to approach ICASA for comments as part of its consultations process.

Option Three: A more clearly defined role for the policymaker

The Minister's role in approvals resulting in market consolidation would be made more explicit. When the Competition Commission and ICASA are confronted with such an application, they would be required in specified instances to consult with their line Ministers. The implications if the respective line Minister disapproves of an application would have to be considered.

- **Is there need for a specific policy on market consolidation on mergers and acquisition in particular? Motivate why?**
- **Is there a clear role for the regulatory in dealing with mergers and acquisitions?**
- **Is there a clear role for the policymaker in dealing with mergers and acquisitions?**

3.4.4.3 Facilities-based and service-based competition regulations

In the electronic communications sector, the debates about the modes of competition centre on the comparison and the determination of the efficacies of facilities-based versus services-based competition. Those who support facilities-based competition claim that in the long term, market equilibrium will be realised when players in the market build their own facilities. Those who support service based competition argue that available facilities, usually of the previous monopoly, should be shared. They argue that competition should be downstream, mainly in the retail market as opposed to the wholesale market.

There were varying views among the Green Paper respondents on this issue, though many (including Telkom, ISPA, Cell C, and the Link Centre) supported the need to introduce *both* facilities-based and

service-based competition to support the escalation of broadband provision across the country. Smile Communications stressed that a hybrid model between facilities-based and service-based competition should be introduced in the short-to-medium term until such time that the market has evolved along the lines required by convergence. In reality the current regime favours both facilities-based and services-based forms of competition.

There was also a strong push that infrastructure-based competition should be introduced in areas that are commercially viable and that service-based competition should be introduced in areas that are economically not viable as market players cannot be expected to compete in these underserved areas. Intel, for example, strongly supported this view. Others though supported smart light-touch regulations promoting facilities-based competition, arguing that where robust facilities-based competition exists, there is less need for regulation. They stated further that regulatory intervention may be appropriate where there is less competition, thereby pushing for the regulator to conduct market analysis and determine the areas that need interventions.

European Commission guidelines may offer some added assistance as they introduce guidelines for state intervention in the provision of broadband access and networks. The concept of *black*, *grey* and *white* areas were used in Europe to distinguish between areas where no infrastructure exists (*white*), areas with only one infrastructure in place (*grey*) and areas where more than one network operator is present (*black*). The Commission is of the view that state aid supporting broadband networks is generally permissible in white areas, but would not be permissible in black areas as state aid would be likely to distort competition. In grey areas, the onus rests on member states to demonstrate that the existing or planned network is not or would not be sufficient to satisfy the needs of the citizens and that there are not less distortive means to reach the stated goals.

OPTIONS

Option One: Status quo

The current provisions remain in place and no further policy intervention would be necessary.

Option Two: Facilities-based competition (FBC)

Regulatory policy would promote multiple sources of facilities-based electronic communications services to the public. FBC would apply to both fixed-line and wireless, unlicensed and licensed providers. It must be noted, that FBC may not be feasible in under-serviced areas.

Option Three: Service-based competition (SBC)

Service-based competition would be introduced where it is not economically viable to compete in infrastructure deployment and where it is necessary to share the risks of building infrastructure. The lack of effective regulation of wholesale markets and the inability to provide incentives to operators to share infrastructure means that wholesale broadband has not been widely accessed, thus affecting the development of service-based competition. Policy would thus consider the merits of a split between wholesale and retail services where significant market power exists and ensure the application of non-discriminatory principles. It is noted that in the EU, service-based competition for broadband access has not been as effective in challenging the incumbents' dominance in local access markets.

This option would have to be complemented by a clear definition of market structure. This would facilitate the development of the appropriate competition remedy in the selected markets.

Option Four: A hybrid approach

In terms of this, there would not be a blanket approach to either FBS or SBC. Instead policy would promote a combination of facility-based and services-based competition *subject to different markets conditions*. This combined approach would be intended to stimulate investment and achieve a healthy balance of competition between incumbents and new entrants.

- **Which of the above options are preferred? Explain why.**
- **Are there any other options which would address the problem? Explain.**
- **Should SA consider guidelines for state aid/intervention and competition forms (infrastructure or facilities) similar to the concept of black, grey and white areas as used in the EU?**

3.4.4.4 Interconnection

The EC Act, recognising that interconnection between competing licensees is a key prerequisite, has substantial provisions dealing with interconnection and its regulation.

ICASA has prescribed regulations to facilitate the conclusion of interconnection agreements.[34] The regulations and interconnection principles contain model terms and condition, including timeframes and procedures for agreements. Subject to these regulations, any licensee can, on request, secure reasonable interconnection with any ECNS licensee, potentially subject to a market threshold determined by ICASA. Interconnection agreements must be filed with the regulator, which is empowered to intervene in respect of interconnection disputes.

Among other things, the regulations require operators to publish interconnection offers, including the location of interconnect facilities, capacity of the facilities, and prices charged. This is to ensure that everyone knows of the interconnection opportunities. The regulations are geared towards transparency in the interconnection engagements between different competitors.

The current regulations do not deal with pricing, the terms of financial arrangements between parties, and requisite levels of service for interconnection. Parties are only required to notify the Authority and file agreements, without ICASA dealing with the terms of the agreements. The bigger operators still have price-setting potential over the smaller competitors who seek to interconnect as the only way of survival.

Interconnection revenues have traditionally been a major revenue stream for mobile operators. Pre 2009, fixed-mobile and mobile-mobile interconnection rates came under increasing scrutiny, and were deemed to be disproportionately high in relation to cost and to have a substantial impact on the cost to communicate. ICASA was pressured to relook at the interconnection rates which were seen to be a competition hindrance and unfair to smaller operators. Following a market study and a disputatious process, the regulator recently issued regulations in this regard, establishing call

[34] ICASA (2010) 'Interconnection Regulations, 2010', Notice 282, Government Gazette No 33101, 9 April 2010.

termination rates along a 'glide path' of progressive reductions, and providing for asymmetric termination pricing.[35] There are, however, currently no rules for data or IP interconnection.

While interconnection regulations are important and have the potential to level the playing field, they are constrained by what the regulator can or cannot do to regulate the financial arrangements between the parties entering into connection agreements. Interconnection regulations cannot be enough without the full implementation of the competition sections of the EC Act, which can impose pro-competitive remedies in case of unfair discrimination or abuse of dominance.

Comments received in respect of interconnection issues concerned whether all providers should be required to offer interconnection or just those with significant market power (Link Centre); the ushering in of the interconnection framework for transit network operators (ABT); the implementation of an asymmetric interconnection regime that should be adapted by the regulator in particular to calls originating from the underserviced areas and remote rural areas (USAASA); and that the points of interconnection of the fixed networks and the mobile networks should be at the same physical location (Telkom).

- **Are the current provisions governing interconnection sufficient?**
- **Should the legislative specifications regarding interconnection be strengthened or amended through imposing additional requirements or removing others (e.g. by providing for the regulator to set interconnection pricing without engaging in a Chapter 10 market study, or by including IP interconnection, or by explicit provision for asymmetry, or in any other way)? Please make specific recommendations.**

3.4.4.5 Roles of State-Owned Companies (SOCs)

Another element for consideration in relation to the market structure is the role of state-owned entities whose activities influence the subsectors to a significant degree. Public owned entities are creatures of policy to the extent that they're designed to enable government and society to achieve policy ends. A review of the market structure is premised on the need to review the entirety of the policy framework given that some of the policy objectives haven't been realised. The roles of SOCs must thus be appropriately considered and delineated so as to assist in meeting objectives such as universal service and access.

[35] ICASA (2014) 'Call Termination Regulations, 2014', Notice 844, Government Gazette No 38042, 30 September 2014.

In the current situation state-owned companies have a significant impact on the country's ICT market structure. For example:

- Telkom and Broadband Infraco are the country's leading long-distance backhaul providers. Together, they own almost 50 000 kilometres of long-distance fibre spanning the entire country and every province. As such, the retail prices that mobile operators charge their subscribers are significantly impacted by Telkom and Broadband Infraco's wholesale pricing.
- Telkom also plays a significant role in the Fibre-to-the-Home / Fibre-to-the-Business market as it owns and controls the country's fixed-line local loop. If the local loop had been unbundled by 2011 as per Ministerial Policy Directions of 2009, the country would possibly have had additional competition, operators, technologies and services in the local loop space. Prices for ADSL or even XDSL, might even be cheaper than they are today.
- Although unsuccessful, Sentech was the first ICT licensee to offer high-speed wireless broadband. Since its launch of MyWireless, a slew of wireless broadband providers have entered the market and gone on to transform the data market, the voice market, the wireless market and the broadband market in the country.
- The utilisation of Broadband Infraco's network has enabled it to reduce the cost of connectivity in the long-distance market by between 60% and 80%. Broadband Infraco has also established Points of Presence in 28 under-serviced areas identified in its I-ECNS licence.

The market structure and levels of competition will impact on the availability of services for universal provision. This demands that measures be taken to aggregate public sector demand and to promote consolidation. The prerequisite for effective direction of both public and private sector players to meet universal service obligations is a thorough understanding of the degree of coverage and access to services by all. The obligations to be imposed on the sector and the role of government funding can only be contextualised within an understanding of a gap that has to be filled and the areas that have to be extended coverage.

Government SOC's currently operating at a national level include Broadband Infraco, Sentech and SITA. Each of these entities has founding legislation that mandates it to meet specific access and services objectives. At present none of these are active in the telecommunications retail market. Sentech has exited the retail market, while Broadband Infraco provides wholesale services. SITA operates a closed network that provides services to government departments. It is important to note that the public funding provided to Infraco, Sentech and SITA excludes the public funding made available to the numerous broadband projects at provincial and local levels of government.

In addition to owning these companies, government also holds shares in public listed entities such as Telkom, Vodacom and MTN. These listed entities compete with SOC's in the marketplace. In one sense, public funding is used to compete with private funding. In another sense government is potentially inherently conflicted. The line Minister is both policymaker and the shareholder representative for the listed entities. Invariably the line Minister should make policy that advances public interest but destroys shareholder value (in affect destroying value in its own shareholding).

The recommendations of the Presidential Review Committee on state-owned entities (SOEs) must be noted in formulating policy options. The following are some highlights from the report:

- The need for clarity on the multiplicity of roles of the state as shareholder, policymaker, regulator and/or operator, among others;
- Recognition that SOEs are critical in attaining the objectives of the developmental state;
- Profit and non-profit objectives of SOEs must be clearly defined
- Government should adopt a policy for mandatory periodic reviews of SOEs
- Government should adopt appropriate funding principles and models
- Government should ensure consolidation of the SOEs into the following groupings:
    - Commercial: Able to maintain and replenish market capitalisation autonomously from the state.
    - Development finance institutions: Able to maintain and replenish market capitalisation autonomously from the state.
    - Statutory corporations: Provide basic and essential services
    - Non-commercial SOEs: Dependent on state funding.

Rationalisation of SOCs is in-line with the National Broadband Policy. The definition of the market structure and the identification of the broadband access gap should guide the review of the mandate of SOEs going forward.

OPTIONS

Option One: Status quo

The current provisions would remain in place.

Option Two: Government sells its stake in listed entities

In this option, government would sell its shareholding in Telkom, Vodacom and MTN. The Minister would cease to be the shareholder representative and government would forego dividends from these entities.

Option Three: Consolidate all SOC's into one national entity

Government would consolidate the ownership structures of Infraco, Sentech, and/or SITA (including the provincial and metro broadband initiatives) into one national entity. This entity would in turn become the basis for open access and networks.

Option Four: Consolidate some public listed entities with some SOC's

In this option, government would consolidate the ownership structures of some public listed entities with some SOC's. The Malaysian model in which the fixed incumbent was tasked with providing universal broadband and access with direct government subsidy for fibre rollout, is a case in point.

- **To what extent do state-owned companies influence market structure and performance?**
- **What measures are necessary to aggregate public sector demand?**
- **What policy measures are required in respect of the role of SOCs in the market?**

- **Should any public entities be consolidated with private entities? What would be the rationale for doing so?**
- **Should a policy measure specifically state that SOC's should not be competing in markets where private entities are already operating?**

3.4.5 Broadband and internet infrastructure

Electronic communication network infrastructure development is an on-going national challenge. The challenges of lack of connectivity and low penetration of especially broadband and Internet infrastructure in the rural areas of South Africa are acute and exacerbate the digital divide. Policy interventions and collective efforts are needed to build the information society and a knowledge economy in South Africa in order to achieve improved socio-economic development.

Broadband services in South Africa are delivered over copper lines, fibre optics, by satellite, and wirelessly. The broadband market structure is characterised by a large number of market players which do not effectively compete against the dominant market players as a result of constrained access to funding or regulated resources. Both the mobile and wireless markets are dominated by vertically integrated players including MTN and Vodacom and to a lesser extent Telkom, Neotel, and Cell C, all of which have invested substantially in the deployment of networks in economically feasible high density population areas.

Previous and current government policies and market interventions by the regulator have failed to promote effective competition, particularly in rural areas which to a large extent remain underserved or unserved.

There are various segments of the broadband infrastructure value chain that policy should consider in order to advance affordable universal service and access. Such infrastructure segments, which serve to influence the structure of the market, include the following elements: International connectivity, domestic backbone, metropolitan networks and last mile access networks.

3.4.5.1 International Infrastructure

International infrastructure is that which provides South Africa with connectivity to the rest of the continent and internationally. This comprises undersea cables and satellite.

3.4.5.1.1.1 Undersea cables

International connectivity is provided via undersea (or submarine) cables. Currently, South Africa is connected to the rest of the world through four submarine cables which provide a combined capacity of 11.5 terabits per second of international connectivity. This capacity is available on a wholesale basis from at least five providers. There are additional undersea cables under construction which will further increase the international capacity. These undersea cables connect South Africa with Europe and Asia, as well as with other African countries through the various landing points on the east and west coast of the continent. In addition, South Africa is connected to neighbouring countries through cross-border networks.

Since the introduction of undersea cable competition in 2009, this segment has displayed effective competition and prices have dropped dramatically which has driven demand for international capacity. Despite this growing demand, there is still considerable capacity available to meet future needs. Given that effective undersea cable competition has been established, the focus should be on interventions to extend the connections between South Africa and the SADC region in order to develop South Africa into a hub of broadband activity in the region.

- **Are there any further policy measures which are needed to ensure that optimal use of undersea cables continues to promote affordable local access?**

3.4.5.1.1.2 Satellite

The South African market has for some years attracted the attention of satellite space segment operators with many satellites being equipped with spot beams covering the Southern African region. The list of companies that own and operate communications satellites serving the local market include Intelsat, Eutelsat, RASCOM, Hellas-Sat, RSSC, AsiaSat, YahSat and Avanti Communications. Services are mostly used by businesses in both metro and rural areas. Services are resold through operators including Telkom, Vodacom, Sentech, MTN Business, QKON and Internet Solutions, plus smaller downstream service providers.

Satellite service is generally regarded as a last resort high cost option if terrestrial technologies cannot economically reach an area not connected to terrestrial networks. However, satellite technology can offer cost-effective solutions where there are no other options. Unlike terrestrial networks, satellites can provide coverage nearly everywhere: Urban and rural, densely or sparsely populated using a single platform.

Satellite-based services are ideal for the delivery of electronic communication services in rural areas where other solutions such as optic fibre and wireless are either infeasible or will take too long to deploy. Extensive satellite capacity is available over South Africa in C-band, Ku-band and Ka-band from numerous commercial satellite operators. Satellite capacity leases are generally available for periods no less than three years. The entire terrestrial broadcasting network is fed via satellite capacity leased from a commercial satellite operator.

Currently there are no locally based satellite operators, and as such there is little control over the costs of satellite connectivity.

OPTIONS

Option One: Status quo

The status quo would be maintained. This involves paying for transponder capacity from foreign satellite operators. The high cost of leasing capacity remains a challenge.

Option Two: South Africa to invest in its own satellite

This would require government to invest in its own satellite so as to provide an alternative connectivity solution for areas that are currently underserved or unserved and that are not suitable for terrestrial connectivity. This would require securing of an orbital slot for South Africa. Other

models of investing in this satellite could be considered, such models include: Collaboration with other sectors to have different payloads on the satellite that could be used for different services, i.e. military, civilian, etc. This would require a consideration of a multi-stakeholder approach.

Option Three: South Africa to find a host for its transponder on either existing or future foreign satellites

This option would entail finding a host for South Africa's transponder on existing or future foreign satellites. This would enable the country to have some form of ownership on the payload.

- **Is satellite connectivity a viable option to address connectivity where terrestrial options are prohibitive?**
- **Which of the following options described above are preferable?**

3.4.5.2 National Backbone Infrastructure

South Africa has made significant investments in the rollout of national broadband backbone networks which entails, the long distance fibre optic links, including regional (rural) district extensions. Backbone connectivity is provided by a number of private and state-owned enterprises. Telkom's backbone network is the most extensive, connecting most cities and towns. This is followed by Broadband Infraco which covers major national routes. These networks are complemented by additional backbone networks on high-demand routes between Johannesburg, Cape Town and Durban (Dark Fibre Africa and FibreCo), and by fibre networks between Johannesburg and East London (FibreCo) and between Pretoria and Musina (Liquid Telecom).

South Africa therefore has an extensive long distance fibre network and approximately 86% of the South African population resides within 10km of access to fibre. A policy framework for the provision of and access to National Backbone infrastructure is a critical step towards attaining universal access to broadband. In particular, policy should take into account the fact that the majority of the current backbone networks are not available on an open access basis. Furthermore, policy should seek to promote the deployment of Points of Presence (PoPs) in all 270 municipalities.

OPTIONS: POINTS OF PRESENCE

Option One: Impose PoPs on licensees

ICASA would incorporate the deployment of PoPs as part of universal service and access obligations.

Option Two: Government investment on PoPs

Rather than rely on the private sector, Government would invest in the rollout of PoPs through public entities such as municipalities, state owned companies, SAPO etc.

- **Do you agree that it is necessary to promote the deployment of Points of Presence (PoPs) in all 270 municipalities? If so please motivate whether this should be achieved through obligations on licensees or whether Government should undertake the responsibility.**

OPTIONS: BACKBONE CONNECTIVITY

Option One: Create a single National Broadband Network (NBN)

This would be unified infrastructure built on open access principles. The single network would comprise fixed and wireless elements from state and privately owned networks. It would offer wholesale services to all licensed service based operators on a transparent and non-discriminatory basis. Considerable obstacles to a successful roll-out of the NBN include:

- Agreement on the ownership structure of the network (role of government vs. mobile operators, relative shareholdings).
- Accommodating the different levels of willingness and capacity to invest that is likely between mobile operators.
- Governance of the entity.
- Setting a suitable return on investment and setting of wholesale pricing.
- Managing and accommodating business risk (e.g. that traffic may be substituted over time by an alternative technology, perhaps operated by one of the shareholders).
- Ensuring the commercial strategies of the co-investing operators are kept confidential; and
- Making optimal commercial decisions on running, developing and expanding the network, without the benefit of a clear retail link to end customers

The Single National Broadband Network could be implemented by means of a joint venture model, i.e. a special-purpose vehicle (SPV) which makes the model scalable and permits alternative investment sources.

The consideration of this option must be informed by the current study being undertaken with regards to market structure and open access, as well as work related to Digital Readiness in terms of the SA Connect policy.

Option Two: Create a new state-owned National Broadband Network Company (NBNCo) to provide rural broadband connectivity

The current access gaps point to the need to intervene in the provision of broadband infrastructure and services where there is market failure, which in the South African context, is mostly rural areas. Policy would be developed to create a new state-owned company focused on providing connectivity to rural areas through network deployment in these unserved and uncompetitive areas. Considerations of this option would include: The definition of the rural areas by the regulator, the viability of creating this new state owned company and its management and operations.

The focus of the NBNCo would be on rolling-out both core and wireless broadband services on an open access basis. Wireless access services could be provided in areas where private operators are not willing to deploy infrastructure and services. In addition the NBNCo could also have a mandate to roll-out PoPs in underserviced areas. This obligation could be negotiated in its licence terms and conditions with ICASA.

Furthermore, in an effort to service Government as an anchor-tenant on its network, NBNCo should pursue collaborative efforts with other SOCs and organs of State to realise seamless procurement of network services for the benefit of critical public service institutions and to avoid unnecessary duplication of broadband infrastructure.

Option Three: Public outsourcing

This option would involve the use of private and public sector assets to increase efficiency and would be heavily dependent on public funding. It would focus on aggregating public demand and maximising the use of public sector funding. Government would award a contract to a private sector firm to construct and operate a broadband network on its behalf. In this option, government would fund the entire network and the infrastructure would remains in government ownership.

Option Four: Allow market forces to provide national broadband infrastructure

Market forces would provide national broadband infrastructure through the multiple fixed and wireless networks of the public and private sectors. This market-led approach would rely on effective regulatory tools and mechanisms to extend the network to reach all South Africans and address gaps and bottlenecks in the rollout of broadband. This would include the restructuring of the market into an open access regime in which all players with significant market power (SMP) would be required to offer services in line with open access principles and to interconnect with other networks.

This would require a more proactive regulator capable of regulating all aspects of the market to vigorously develop and enforce competition regulations where necessary taking into account new open access market regulatory demands. The market would lead roll-out of broadband services with public resources plugging the gaps in areas where the market cannot offer services profitably.

- **Which of the above options provide the best means to ensure backbone connectivity? Please also comment on the specific terms described in each of the options.**
- **What other options are there to provide for backbone connectivity? Please motivate?**

3.4.5.3 Metro Infrastructure aggregation

Most municipal areas have considerable core network infrastructure much of which belongs to Telkom. Some municipalities have built their own municipal fibre networks to serve their needs. The Metro network is a regional network comprising a number of interconnected aggregation/switching sites. Dark Fibre Africa has built nearly 8 000 km of metro ducts and fibre in all major metros and a number of secondary cities providing open access dark fibre on a wholesale basis.

The current metropolitan area networks have limited network infrastructure in townships, highlighting the unequal deployment of infrastructure. Furthermore, there is lack of coordination in the rollout of broadband in metropolitan areas and this has resulted in unnecessary duplication of effort and networks. In addition, there have been challenges in the municipalities' practices in the provision of way leaves and other approvals critical to create an enabling environment for the deployment of broadband. There is therefore a need to coordinate, harmonise and expedite the rollout of broadband at the levels of local, provincial and national government. Moreover, policy must ensure that metro networks are linked to the national broadband network for seamless provision of broadband services.

OPTIONS:

Option One: Development of rapid deployment policy

In line with the EC Amendment Act (2014), the policy would support the development of a rapid deployment policy to cover the activities of various national, provincial and local authorities in dealing with the various permissions that are required to roll-out infrastructure. This policy would facilitate access to rights of ways and way-leaves in order to allow for rapid deployment of infrastructure. It will make provision for streamlining of local planning permissions, particularly in harmonising current legislation with the bylaws of municipalities for rapid deployment.
[NOTE: *There is a more detailed set of options relating to Rapid Deployment further on in this section. See 'Measures to fast track rapid deployment of infrastructure'*]

Option Two: Use of government facilities as sites

This option would use public sites, such as police stations, schools, clinics and government sites, as anchor tenants, thus reducing the required funding from government. The aggregated demand of the public sites would promote the business case for networks, especially in rural areas. This option is consistent with SA Connect's proposal to have Government as an anchor-tenant to aggregate public sector demand. Consider, for example, that SAPO has over 1 200 depots, a large number of which are located in under-serviced communities, and which can serve as PoP sites.
Should this option be favoured, consideration must be given to the constitutionally-defined areas of responsibility of national, provincial and municipal government.

Option Three: Public investments

This policy option could be used as an intervention in areas that are not commercially viable. Government would fund the entire network construction and own the infrastructure. An example of such a model is the City of Cape Town, which has deployed its own fibre network, initially for the purpose of connecting municipal offices but with excess capacity being made available to the market.

- **Which of the above options are preferred modes of aggregating metro and municipal infrastructure? Explain.**
- **What other options may achieve this objective? Explain.**

3.4.5.4 Last mile Infrastructure: Access networks

Research has identified the access network as the largest gap in national broadband infrastructure provision. Broadband access is provided via mobile, fixed wireless, ADSL and, to a very limited scale, satellite and fibre-to-the-premises (FTTP). Mobile coverage is the most extensive, though mobile broadband access is primarily afforded to profitable urban areas and data costs are relatively high. It is critical to extend broadband access in order to provide universal broadband service but this is largely dependent on the assignment of high demand spectrum (700 & 800 MHz) to mobile operators.

In the fixed-line market, Telkom is the sole provider of ADSL connectivity, though it has only 800 000 subscribers. The cost and points of interconnection into the Telkom network remain a challenge for most internet service providers offering internet services over ADSL. Fixed wireless is available in limited areas and fibre to the premises (FTTP) to a very limited extent at a high cost. The high costs

of network deployment are forcing operators to explore measures such as infrastructure sharing in order to reduce costs. Open access policies may provide further opportunities to reduce cost by promoting wholesale access to network infrastructure or services. In this regard policy should promote open access to all platforms, namely fixed and wireless.

The issue of asymmetrical treatment of fixed and mobile broadband and the need for technological neutrality in this regard was raised in Green Paper submissions. It was argued that policy is required to establish a wholesale segment of mobile operations so that mobile operators are required to offer wholesale solutions on their networks in a similar manner to requirements set for the incumbent fixed operator. This implies a form of functional separation of the network and retail activities of the mobile operators in the mobile data services market.

In a converged environment, unbundling the local loop (LLU) should include unbundling of copper, fibre and wireless infrastructure to allow access to other licensees. With regards to LLU, the regulator undertook a rigorous process to obtain public view around implementation of LLU. This process underscored how divided the sector is on LLU, the different forms and whether it would achieve rural connectivity, lower prices and increased competition. Owing to the technical and process complexities associated with the implementation of LLU as well as a requirement to understand what the impact of LLU will be, ICASA decided to do a Regulatory Impact Assessment.

Last mile infrastructure gaps may thus be addressed through policy on open access principles.[36] The regulation of infrastructure sharing and mandating open access on all access platforms, including fixed, wireless and fibre is necessary. The sharing of infrastructure can take place at a number of different levels, viz. civil infrastructure, transmission media and internet protocol level.

OPTIONS

Access network is the segment of the network that connects end-users to the first aggregation point of the metropolitan area network. Based on submissions, three options are proposed:

Option One: the status quo prevails, and ICASA's Regulatory Impact Assessment continues.

Option Two: Advance LLU and make it accessible as an essential facility on non-discriminatory and reasonable terms and with a price control.

Option Three: Mandate open access on all access platforms including fixed, wireless and fibre.

Option Four: The unbundling of the local loop should include bit stream access and other associated IP protocols presently largely controlled by incumbents.

[36] Currently the definition of Open Access has not been decided upon. However, The SA Connect Policy uses the Organisation for Economic Cooperation and Development (OECD) characterisation as a working definition for open access: "Open Access arrangements share some common elements, they refer to wholesale access to network infrastructure or services that is provided effectively on a fair and reasonable terms, for which there is some degree of transparency and non discrimination".

- **Which of the above options or combination of options are best suited to achieve 100% last mile connectivity? Explain.**
- **What other options are there? Motivate your recommendations?**

3.4.6 Measures to fast track Rapid Deployment of Infrastructure

Government must consider how significant non-cash and indirect investments in infrastructure can be made. The role of municipalities is especially important in this regard. The anticipated escalated infrastructure rollout programme provided for in SA Connect and SIP 15 planning, will place a huge load on local government - it is estimated that as many as eight thousand towers may be erected in just a single year.

In responding to the Green Paper, the South African Local Government Association (SALGA) noted that municipalities struggle on several levels with the rollout of broadband networks:

- Uneven IT skills and knowledge across municipal administrations to properly guide and negotiate with service providers;
- Limited national or provincial engagement, consultation and support to municipalities to align and fast track such broadband projects; and
- The lack of transparency concerning the services provided and associated costs by private sector companies.

There was strong support in the Green Paper submissions which encourage fast-tracking guidelines for rapid deployment, and the use of innovative application processes.

OPTIONS

Note, the options below are not mutually exclusive. They may be considered independently of each other, and when coupled they may synergistically promote investment in infrastructure.

Option One: National coordination centre

A **national coordination centre**, working together with the SIP 15 infrastructure team would be established to support rapid deployment and interface with local municipalities to fast track rights of way and way-leave approvals.

Option Two: Measures to fast track Rapid Deployment

The **implementation of a Rapid Deployment Policy**, which would include

- **Standardisation of application and approval processes** for rights of way, way-leaves and servitudes to local municipalities;
- **Digitisation or automation of the application process** to expedite applications and avoid bureaucratic red tape and enable transparency using on-line tracking mechanisms; this could be supported by the development of a national GIS system making it easier to identify available sites;
- **Transparency of data** in terms of the provision of publicly available fibre maps and relevant information on usage of fibre. Currently, according to SALGA's submission, information on where fibre is laid in the ground is not openly available to the public or local government and

there is no legal requirement on those entities that have this data to share it. To ensure a sustainable, open and citizen-oriented implementation of the network roll-out of broadband development plans, the fibre maps and relevant information on usage of fibre needs to be made openly available, and policy provisions introduced to enable this.

Option Three: Indirect Investment

There are also alternative avenues for government to speed up the implementation of infrastructure and to provide indirect investment which may be viewed as a form of co-funding. Measures which are proposed are:

- Funding trench digging via the Public Works Fund to assist with fibre laying;
- Making government high sites available for broadband equipment installation.

Option Four: Provision of short courses and workshops to skill local government officials

The Local Government Sector Education & Training Authority (LGSETA) and the Media, Information and Communication Technologies SETA would jointly assess the skills gap at local government and plan training interventions to capacitate officials to effectively deal with applications relating to infrastructure investment. The private sector could be called on to assist with both the gap assessment and the content of training courses. In the short term, short workshops should be considered to bridge the gap but over the longer term there would be a bigger pool of skilled persons to deal with infrastructure issues at the local level.

- **These options respond to the various issues and problems highlighted in Green Paper submissions. When considered together do the proposed options address the challenges experienced at local government with regards to infrastructure deployment? What amendments or alternative options could be considered?**

3.5 Infrastructure Sharing and Open Access

3.5.1 Introduction

Infrastructure is a fundamental component of the ICT ecosystem as it provides the veins through which all data and information flows. Since the mainstreaming of the Internet in the late 1990s era, a key concern of government has been the provision of an enabling infrastructure to enable the array of social and economic benefits. The SA Connect policy notes the negative impact of the lack of always available, high speed and high quality bandwidth in the country

The Green Paper highlighted the fact the electronic communications environment, like other market segments of the communications sector, is subject to technological changes due to convergence that has enabled different services to be delivered using the same infrastructure and received by the same devices. It pointed out the disruptive and beneficiary effects of convergence and posed questions in relation to the policy and regulatory approaches which need to be reviewed to provide regulatory certainty and a market structure facilitating innovation and the introduction of new services. The following sub-sections provide a synopsis of the responses from the Green Paper submissions, with regards to these influencing factors.

3.5.2 Open Access System

The Green Paper discussed the need for the creation of a policy environment that fosters competition, universal access to services and affordable quality services. It noted that there are many bottlenecks still prevalent in the South African ICT market that frustrate effective competition and render the South African market more expensive than peer countries. It also noted the modest results achieved to date through the use of the competition clauses of the EC Act. One of the major bottlenecks identified related to that of access to critical and essential infrastructure. This issue is also highlighted in the National Broadband Policy (SA Connect) which highlights that access to critical and essential infrastructure will determine the failure or success of achieving published broadband targets. The broadband policy notes the relatively poor level of broadband penetration, and that South Africa has lost its status as 'continental leader' in broadband and Internet in the last two decades. Among various provisions, the broadband policy proposes the creation of "*a fair and competitive environment, particularly enabling service-based competition through the enforcement of the wholesale access regulation to dominant market players' networks and mandatory open access to infrastructure rolled out through public investment*". The Green Paper noted that a predictable and technology neutral competitive environment premised on open access principles can deliver better results.

Objectives of promoting an open access regime include:

- **Creating a clear access regime that is enforceable:** There are operators with significant market power that can leverage access to their infrastructure to maintain dominance and deny market access to competition.
- **Creating a uniform access regime that takes into consideration all technologies and services:** Different operators have been treated differently depending on the technology used. The fixed network has been expected to provide infrastructure access whereas the mobile sector has not been faced with a similar expectation despite the dominant position of the mobile market. This needs urgent attention as the number of licensed and unlicensed operators is increasingly demanding market access.

Many submissions to the Green Paper pointed to the lack of effective regulation of open access as a primary reason for the failure to achieve the public policy ends in the ICT sector. While the majority of submissions favoured open access, there were calls to ensure balance between, on the one hand, allowing providers to recoup investment in broadband infrastructure thus encouraging further such investment, and, on the other, preventing excessive profits and ensuring universal access and service to remote and disadvantaged communities.

The position taken by incumbents towards opening up their networks to competitors was cited as a reason for high costs, slow take-up of broadband services and the prevalent slow speeds. It was observed that the EC Act mentions an open access regime only once and does not provide sufficient details which, in turn, have hampered the work of the regulator to enforce or determine the perimeters of an access regime.

Some submissions pointed to the need to balance the requirements for an open access regime with the reality that more investments are needed in the last mile for connectivity. The need to ensure a

return on investment by those who invest in the last mile was cited as a reason why policy should be balanced and cautious.

The research undertaken during the policy review process also concludes that the last mile fixed access network needed significant investment to connect homes, public facilities and businesses. In addition research indicated that there is a need for the definition of the principles that must characterise the open access system. Further research has been conducted to close this policy gap and options will deal with this aspect.

Many respondents, in supporting an open access regime, also urged for the associated definitions to be fast-tracked. The need for definitions was called for to distinguish between open access on the physical layer, network layer or service layer in order to bring certainty to the market about obligations and expectations when building connectivity services. One of the respondents pointed out that open access at the physical layer is technically and commercially complex and requires extensive collaboration and commercial agreements; open access at the network layer they stated is less complex and already widely done (e.g. JINX); and open access at the service layer will allow high levels of innovation and development, especially in the Over the Top (OTT) services over IP space (e.g. Skype, Facebook, Microsoft Office 365, Netflix).

The SA Connect Policy uses the Organisation for Economic Cooperation and Development (OECD) characterisation as a working definition for open access:

> *"Open Access arrangements share some common elements, they refer to wholesale access to network infrastructure or services that is provided effectively on a fair and reasonable terms, for which there is some degree of transparency and non-discrimination"*

There are other working definitions that could be considered including the definition of the Body of European Regulators for Electronic Communications:

> *'Mandated wholesale access whereby operators are offered effective, transparent and no discriminatory whole-sale access to the subsidized networks"*

In supporting the development of policy to effect an open access regime, an initial founding framework is required in terms of definitions. The foregoing discussion provides two definitions of open access. However research by the DTPS has indicated that there might be a need to go beyond these definitions in order to make the open access regime definitions useful for regulation. In this regard it is proposed that the definition contain elements of operational and technical characteristics in the definition of principles. The operational characteristics should be measurable and should be easily used to determine the extent to which a given service is provided on an open-access basis. Technical characteristics will detail the level at which an operator offers access to its networks. This differentiation could be useful in determining the elements of the network that would require mandatory open-access requirements to avoid duplication and those which would not require mandatory access in order to direct investment to those elements. The following definition is thus proposed:

A network which satisfies all of the following criteria will be considered an open-access network:

- **Offers effective access to the infrastructure.** Effective access will be defined as attainable access easily accessed in reasonable locations using standardised interfaces. The service must be unbundled to a sufficient degree so the access seeker does not have to purchase services it does not need. The quality of service should be suitable to the access seeker's needs and requests for variants of a service should be accommodated where technically feasible.
- **Offers transparent services.** The service pricing, terms and conditions of access to the network must be available to interested parties and the regulator. The billing for services should be transparent and clear. The timeline and processes for procurement, fulfilment, assurance and billing should also be transparent and clear. There should be no cross-subsidisation and operational and financial information should be available to access seekers to demonstrate that services are rendered in a cost effective manner
- **Offers access in a non-discriminatory manner.** The access provider will be required to provide services on a non-discriminatory manner and will not favour services affiliated with its company. This will involve ensuring equivalence of inputs and outputs, the safe guarding of confidential information, the separation of systems and processes and prevention of conflicts of interest among staff.

POLICY OPTIONS

Option One: Status quo

The status quo would prevail. One of the submissions against open access argued that open access regulation is still in the experimental stage and the jury is still out as to whether it is the right policy choice especially in circumstances where large investments are needed for extending data networks.

Option Two: Adopt the principle for open access, but not provide for a definition

The second option is to adopt the principle for open access, but not to provide for a definition upfront. Instead the regulator, should, from time to time, provide definitions for open access, based on prevailing conditions in the environment.

Option Three: Implement an open access regime, as per the current broadband policy

The third option would be to implement an open access regime, as per the current broadband policy. This would entail providing a definition of open access in legislation based on the criteria described above.

- **Which of the three options do you favour? Provide reasons.**
- **Should you support option three, please comment on the criteria.**

3.5.3 Infrastructure Sharing

The principle of infrastructure sharing seeks to promote effective competition, avoid duplication of investment in infrastructure, reduce cost of services and realise universal access objectives. The EC

Act introduced a horizontal licensing regime to promote competition among licensees. Notwithstanding this, the market remains structured among vertically integrated incumbents with multiple licences. These incumbents continue to compete downstream with multiple service providers creating anti-competitive incentives. Such anti-competitive behaviour includes the unavailability of the incumbent's networks at various segments or levels of the network.

In cases where such networks are available through regulation, incumbent operators impose high costs for leasing such facilities. New players therefore resort to building their own networks instead of relying on third party infrastructure, which in certain cases remain unprofitable. This leads to unnecessary duplication of infrastructure and hinders competition particularly in the services segment of the market. For example, at an infrastructure level, most operators' network (fibre, ducts), especially active infrastructure, is not available to other licensees. Competing through the facility-based model is capital intensive, thus posing a barrier to entry into the sector for most players. This necessitates policy to encourage competitive infrastructure sharing. Key issues which need to be addressed include a determination on which level of infrastructure provision is infrastructure sharing intervention required and if LLU policy needs to be advanced.

A majority of Green Paper respondents indicated support for the advancement of local loop unbundling, and more-so as a principle of open access and facilities leasing. Other respondents argued that the policy should not limit LLU to copper local network only but should also consider access platform technologies such as wireless. The exception to this position was MTN which argued that LLU should be restricted to unbundled access to the copper local network and bit-stream access/xDSL services. Cell C proposed that the local loop should be made accessible as an essential facility on non-discriminatory and reasonable terms with price control. WAPA argued that the EC Act explicitly obliges essential facilities providers to lease such facilities upon request subject to technical and financial feasibility; and that a request for access to the local loop is a facilities leasing request and should be seen to be such. Strong support was also evident for the coordination of infrastructure rollout to enable network extension through the regulation of "one build" civil works or mast erection, in line with the SA Connect Policy.

Other issues raised in submissions included the separation of the business of incumbents (both mobile and fixed line) as a key intervention to facilitate infrastructure sharing. ISPA emphasised a need to consider both retail and wholesale markets to determine which market needs to be regulated. Allowing network competition to extend networks and services, with likely duplication of resources and infrastructure in a resource constrained environment, needs to be weighed against the effects of having a single common carrier backbone that offers fair, open access to its facilities in a competitive services sector. Thus structural separation of the local loop and backbone activities may be required. Internationally, Open Reach and British Telecom are a successful example of such structural separation.

Infrastructure sharing will promote the objective of the NDP to ensure affordable access to an array of ICT services. To this end, policy must seek to provide for the maximisation of use of facilities through infrastructure sharing. Furthermore, in keeping with the object of the EC Act, facilities leasing should promote an environment of open, fair and non-discriminatory access to broadcasting services, electronic communication networks and to electronic communications services.

OPTIONS

Option One: Status quo strengthened

ICASA's capacity to enforce existing facilities leasing legislative provisions and therefore broadband infrastructure sharing would be strengthened. This would include requirements for network licensees to interconnect networks, make facilities available at cost-based rates plus a reasonable rate of return, and for the regulator to identify essential facilities and ensure access by competitors. Regulatory powers would include requiring infrastructure licensees to publish reference offers outlining commercial and contractual terms and conditions for access to specific wholesale offerings. This would facilitate more speedy negotiations and possible dispute resolution amongst licensees.

Option Two: Regulate infrastructure sharing at various levels of the network

Infrastructure sharing would be regulated at specific levels of the network as required. This would include the **infrastructure layer** of the network, through enabling sharing of passive infrastructure such as masts and ducts, and the **transmission media layer**, through enabling the sharing of copper (LLU) and fibre infrastructure. A thorough market analysis into the behaviour of incumbent operators would be essential to determine policy and regulatory interventions.

Option Three: Local loop unbundling

Local loop unbundling is a specific application of open access and facilities leasing. Technological developments are changing the landscape of "essential facilities". For example, technology has introduced the wireless local loop (WLL). Policy would thus make provision for other access technology platforms of the local loop, including unbundling of copper, fibre and wireless infrastructure to allow access to other licensees, based on open access principles.

Option Four: Encourage active network sharing

This option would include core network sharing or national roaming based on market competition analysis. An appropriate legal and regulatory framework would be developed to ensure smooth roaming arrangements between operators without any uncertainty. This option thus relates to the creation of policy promoting competition in the active infrastructure segment of the market.

- **A strong argument has been made in submissions for the promotion of network sharing. Which combination of the above options will in your view most effectively support the objective of the NDP of ensuring affordable access to ICT services?**

3.6 Universal access & service (UAS)

South Africa as an emerging economy is faced with a number of developmental challenges. Out of a population of 52 million people in 2011[37], some 45% lived below the poverty line, an unemployment level of 22% and income inequality among the highest in the world, with a Gini co-efficient of 0,7. About 68% of households had radios[38] according to the Census and 75% televisions. Only 15% of households had a fixed line phone, 24% a computer/s and only 25% access to the Internet at home. Although the country has made great strides in the area of mobile telephony, resulting in mobile

[37] Unless otherwise indicated, all figures in this paragraph are from the 2011 Census conducted by Stats SA.
[38] This does not include car radios or access to radio on other devices but only radio sets in households.

teledensity figures of well over 100% (with just under 90% of households reporting mobile phone access), broadband penetration has lagged, with just under 7% of the population having access to broadband, the majority of them via 3G.[39]

In recognising the importance of access to infrastructure, services and content in accelerating social and economic development, government adopted a National Infrastructure Development Plan. The aim of the SIP 15, in this regard is to attain broadband coverage for all by the year 2020.

The vision for ICT related policy (see Introduction of this Discussion Paper) emphasises the right of access to communications infrastructure, content and services by all citizens in all areas on non-discriminatory terms. One way of ensuring access to services by all citizens is through universal access and service (UAS) programmes. UAS refers to policies adopted by governments to ensure that citizens have equal and fair access to a point of communication. While traditionally UAS programmes were aimed at providing fixed telephony, in the current era, the focus has shifted to mobile telephony, Internet and broadband (fixed and wireless).

A distinction is made between universal service and universal access to communication services, although the two terms are often used interchangeably. **Universal service** is aimed at direct provision of telecommunications, broadcasting or postal services to *individuals or households*. **Universal access** on the other hand is aimed at increasing access to communication services on a shared basis, such as on a *community or village-wide level*, regardless of geographic location or income level.

The Access Gap diagram below, drawn from ITU international best practice, assists in developing policy and regulatory interventions to facilitate UAS. The diagram distinguishes between areas where access can be achieved by good regulation, those areas where once-off interventions in the form of smart subsidies or strategic programmes can close the gap by bringing them within the sphere of commercial feasibility and those where long-term subsidies and ongoing interventions are required. UAS policy aims to reduce or eliminate *all* the gaps indicated in the Access Gap figure. However, much of the focus and nuance of UAS policy inevitably is targeted at the areas of the greatest gaps, which usually entail the *smart subsidy zone* and the *true access gap.*

[39] Arthur Goldstuck, 'Internet Access in South Africa 2012', World Wide Worx (Pty) Ltd, Johannesburg

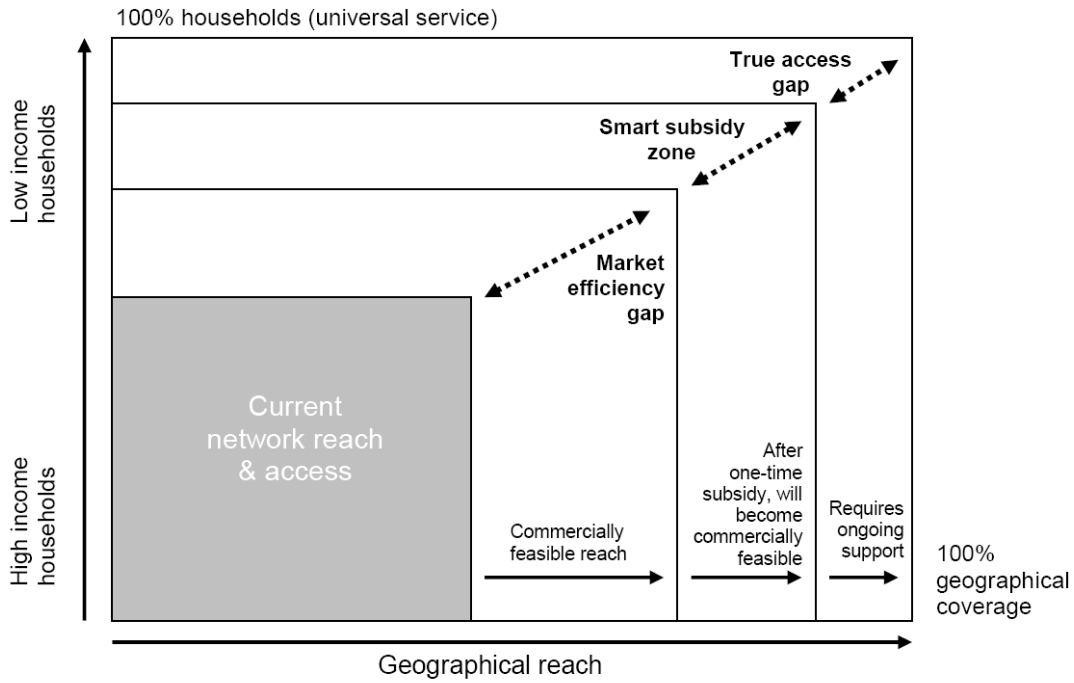

Figure 1: The Access Gap (Source: Infodev, 2009[40], p10)

3.6.1 Universal Access and Service Legislation and Regulation

Universal access and service has been at the centre of policy and regulation since the call in the Reconstruction and Development Plan for "*universal affordable access for all*".[41] The 1996 Telecommunications Act had as one of its foremost objects, to "*promote the universal and affordable provision of telecommunication services*".[42] This focus on universal access and service has been carried through to the EC Act which also aims to "*promote the universal provision of electronic communications networks and electronic communications services and connectivity for all*".[43]

The EC Act contains a number of provisions designed to ensure universal access and service:

- **Universal Service Obligations:** ICASA may (after consultation with USAASA, and considering the Minister's determinations as to what constitutes universal access and service) impose universal service and universal access obligations on designated licensees.[44] ICASA has recently completed a review of these obligations (ICASA, 2012), and revised its USOs associated with spectrum for Cell C, MTN, Neotel and Vodacom (ICASA, 2014);
- **Universal Service and Access Agency of South Africa:** The EC Act provides for the functions and governance of the USAASA;[45]

[40] InfoDev, 'Universal Access and Service', 2009, Executive Summary, Module 4, ICT Regulation Toolkit and International Telecommunication Union available online at http://www.ictregulationtoolkit.org//Mod4ExecSummary (**Note**: Versions of this diagram appear frequently in international best practice. It has evolved and been developed since its original appearance in Navas-Sabater, Dymond & Juntunen, 2002, p8.)

[41] ANC, Reconstruction and Development Programme, 1994, Section 2.8.4.

[42] Telecommunications Act, Section 2(a).

[43] Electronic Communications Act, Section 2(c).

[44] Electronic Communications Act, Section 8.

[45] Electronic Communications Act, Chapter 14. The structure, role and governance of USAASA , along with options for the future, are discussed in the paper dealing with institutional frameworks.

- **Universal Service Fund:** South Africa's Universal Service and Access Fund (USAF) is governed by the EC Act, which requires ICASA to set the levy payable by operators towards the fund (Section 89 (2)), and empowers USAASA to make disbursements in line with provision (see relevant sub-section below).
- **USAF levy:** ICASA has set the levy for licensees at 0,2% of annual turnover (less MDDA contributions for broadcast licensees) (ICASA, 2011) and channels contributions from licensees through to Treasury. It has also defined under-serviced areas (ICASA, 2012). No determination of "*needy persons*" has ever been made by the Minister, and expenditure from the USAF by USAASA has been extremely limited, falling far short of contributions;
- **e-Rate:** The Act also provides for at least a 50% discount on Internet services provided to public health establishments, schools, colleges, public further education and training institutions and higher education institutions. ICASA prescribed E-Rate Regulations in 2009.

3.6.2 Universal Access and Service (UAS) in the Era of Convergence

Convergence has implications in developing UAS policy, given that it has altered the original scope of UAS. Whereas in 1995 universal service was regarded as putting a fixed phone line in every household wanting the service, in a converged era, the notion has expanded to include the convergence of voice and data into a single service. It can be expanded to address the convergence of voice, data and video services, including traditional broadcasting services. The scope of UAS policy must be sufficiently broad so as to encompass and cater for convergence and it must be sufficiently flexible to achieve the goals identified in the NDP of universal access and availability to a wide range of converged services at a "*cost and quality at least equal to South Africa's main peers and competitors*".

The foundation of UAS policy rests on having a clear set of definitions for Universal Service, Universal Access, and related concepts.

3.6.2.1 Definitions of UAS

It is critical to have common understanding and agreement on the key pillars and the resultant definitions that make up UAS in the context of convergence in order to:

- Guide policy formulation governing UAS;
- Support the formulation, implementation and monitoring of suitable regulations;
- Guide industry in implementing Universal Service Obligations (USOs); and
- Assist citizens to exercise their right to universal, affordable access to the full range of ICT infrastructure, services and content.

In addition, policy must:

- Ensure a clear understanding of what constitutes Universal Access and Universal Service, along with meaningful distinctions between the terms, both in terms of definition and in terms of policy objectives and their legislative and regulatory implementation.
- Provide for practical definitions to give effect to the right to universal, affordable access to communications infrastructure, services and content, paying special attention to the exercise of this right by the poor, by marginalised communities, and by persons with disabilities so that there is no discrimination on the basis of disability.

In terms of Chapter 14 of the EC Act, USAASA must make recommendations to the Minister regarding definitions for universal access and service. The Agency did finalise these following public consultation and the Minister issued a gazette in line with the Act in 2010. The definitions do reflect the tenets of a converged environment:

Determination in respect of Universal Access

1. (a) Universal access is provided where all persons in all areas and communities are able to obtain quality, affordable and usable access to a publicly available minimum set of quality -
   - (i) electronic communications network service and electronic communications service, including voice, messaging and data electronic communications service and, in the case of data, including a broadband connection, and access to emergency services using free calls and messaging; and
   - (ii) broadcasting service, including television and sound broadcasting service

Determination in respect of Universal Service

2. (a)
   - (i) Universal service for Electronic Communications Services is provided where all persons if they require it, are able to obtain quality, affordable and usable access to a minimum set of electronic communications network service and electronic communications service, on either a household or individual basis, including a voice and data electronic communications service and, in the case of data, including a broadband connection. and access to emergency services using free calls and messaging, where all services are offered on a non-discriminatory basis.
   - (ii) For the purposes of this determination, affordable means at a rate (including connection and usage charges, but not subscriber equipment charges) that does not exceed a defined percentage of a household's total expenditure.
   - (b) Universal service for Broadcasting Service is provided where all persons have access to a diverse range of television and sound broadcasting services, in terms of three categories of Broadcasting Service, that cater for all language and cultural groups, including persons with disabilities, and which provide entertainment, education and information.

Figure 2: Current Definitions of Universal Access and Service (Gazette No.32939, 08 February 2010)

Although the Gazette also provided targets for universal service and access which "*apply for a maximum period of two years or until amended or substituted*", the targets have not been pursued in any visible manner, and at this time have not yet been amended or substituted.

3.6.2.2 Pillars of UAS

Universal access and service is conventionally understood to rest on three critical pillars.[46] Together these pillars provide guidance for policy formulation and regulatory and programmatic intervention aimed at achieving universal access and service. The three also provide useful focus areas for assessing the effectiveness of UAS interventions. They are:

- **Availability –** network coverage of the inhabited geographic territory;
- **Affordability –** ability of users to pay for access to infrastructure and services, including access to devices and networks, cost of service and consumption (e.g. calls, data, content), with targets often set as a percentage of family income;
- **Accessibility –** ability of all inhabitants to use the service concerned (regardless of location, gender; race, disability).

[46] ITU, World Telecommunication Development Report 1998: Universal Access

Respondents to the Green Paper made a number of suggestions regarding definitions for UAS. There were suggestions that the SADC Guidelines on Universal Access and Services be followed, which provide for ongoing convergence of infrastructure, services and content in the ICT sector, and that provision be made for the full range of services beyond fixed and mobile telephony to include Internet, broadband and broadcasting. Meredict's submission, for example, proposed that data, voice, video and multimedia be encompassed in the definition.

Both SALGA and Broadband Infraco highlighted the three pillars of a UAS policy, viz. affordability, accessibility and access. While SALGA emphasised affordability, Broadband Infraco suggested that *awareness* of the use and benefits of communications must be incorporated as a fourth pillar. ISPA called for clarity between "*universal service and access*" and "*universal affordability*", pointing out that the overlapping relationship is evident in the SA Connect Policy. The Media Policy and Democracy Project (MPDP) also proposed an expanded view of UAS, and suggested that capabilities and literacy's to use ICTs must be included, and that UAS must enable participation in public life.

OPTIONS

Option One: Status quo plus

The current definitions would remain in place (see above) as these do encompass convergence in terms of providing for voice, data, and content, although access to broadcasting services is still defined separately. The definitions also provide for availability and affordability. It would be necessary to amend these to specify that the definitions should be reviewed periodically and provide for a maximum period within which definitions must be revised.

Option Two: Expand the definitions

This would accommodate submissions made on extending the term beyond the constructs of availability, affordability and accessibility. Proposals appear to align with two additional pillars which the ITU has recently identified:

- **Awareness -** citizens need to be properly informed of the existence of available infrastructure and services, and of their potential benefits;
- **Ability** - users need to possess the necessary skills to take advantage of the infrastructure and services, such as literacy, language fluency, ability to use a computer and navigate the internet.

This option would also include additional definitions, such as that for Persons with Disabilities (see next sub-section).

- **Which is your preferred option? Please motivate.**
- **If you propose expanding the definitions as per option 2, please comment on the proposed expansion.**
- **If neither options one or two are acceptable, please provide alternative recommendations.**
- **Do you agree that provisions must be added to provide for periodic review? If so how often should definitions be reviewed?**

3.6.2.3 Responsibilities for developing definitions

The EC Act splits responsibilities for definitions between USAASA, the Minister and ICASA as follows::

- **Universal Service and Access**
  - USAASA is required to recommend to the Minister the definitions for Universal Service, Universal Access, after a public participation process (section 82(3));
- **Underserviced areas**
  - ICASA must make a determination in respect of underserviced areas (section 88 (2))
- **Needy persons**
  - The Minister is required to determine:
    - Types of needy persons to whom assistance may be given;
    - Persons who may apply for assistance and the manner in which such application may be made;
    - The manner in which and persons to whom subsidies may be paid (section 88(4)).

Although, as indicated above, definitions of Universal Service and Access and Underserviced areas were gazetted in 2010, definitions of needy persons have not yet been published. ICASA did, however, publish draft Underserviced Areas Definitions in 2011. These included a list of municipalities which could be defined as underserviced areas, according to data from the 2007 Stats SA Community Survey. The methodology of determining these areas was not explained, and they did not seem to be aligned with the proposed definition. The draft stated that the list should be reviewed and updated at least biannually. In September 2012, ICASA published an explanatory memorandum related to the Underserviced Areas Definitions. ICASA also has in place a Code of Conduct on Persons with Disabilities, which it is currently in the process of updating.

It has been argued that splitting of responsibilities has had the effect of non-synchronisation.

OPTIONS

Option One: Status quo

The current arrangements would remain.

Option Two: Consolidate responsibilities for the provision of definitions

The responsibility for developing and reviewing definitions would be consolidated. There are a number of alternatives, including:

- Agency/Entity charged with UAS responsibility (if it is not the regulator);
- The regulator;
- The relevant government department.

- **Please comment on the above proposals. Provide reasons as to which entity is best suited to assume responsibility for *all* definitions**

3.6.2.4 UAS and persons with disabilities

Section 88(1) of the EC Act provides that money in the USAF may be used for the payment of subsidies, for, amongst other things, "*the assistance of needy persons towards the cost of the*

provision to, or the use by, them of broadcasting and electronic communications services". While the current definitions for universal service and access refer to "all persons", it is implied that persons with disability are encompassed. The definition for universal service for broadcasting, however, does specify persons with disabilities as indicated above.

It is noted that, although the Act gives the Minister the responsibility of defining needy persons, this has not been done to date. USAASA did, following its 2010 consultative process, recommend a draft definition for needy persons, this has yet to be published. The proposed definition for needy persons provided for in the USAASA recommendations is:[47]

> *'Needy persons' are persons (either collective or individual) who qualify through the application of a means test, considering a combination of factors, such as financial means, disability, age or other vulnerabilities: devised by the Agency; or devised by one or more public service organisations or institutions, which are selected for this purpose by the Agency.*

Some respondents to the Green Paper made further recommendations on the definition of needy persons. In a detailed submission the South African National Deaf Association (SANDA) made a number of recommendations for incorporation into the definitions for UAS, including:

- The incorporation of "universal design" requirements into the design of general-purpose products to ensure maximum usability by all without the need for adaptation or specialised design.
- The term 'communications' should be defined in line with UN specifications to include "*languages, display of text, Braille, tactile communication, large print, accessible multimedia as well as written, audio, plain-language, human-reader and augmentative and alternative modes, means and formats of communication, including accessible information and communication technology*". This, the Association said, would remove generalisations and support the development of clear regulations for the sector.
- The term '*language'* should include signed as well as spoken languages and other forms of non-spoken languages.
- The definition for "persons with disabilities" in the UN Convention on the Rights of Persons with Disabilities should be incorporated i.e. "*those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others*".[48]

OPTIONS

Option One: Status quo

Option Two: The term "needy persons" to be amended to reflect current discourse.

Option Three: Implement the USAASA recommended definitions for "needy persons"

Option Four: Reconsider all of the definitions, including that of "needy persons", and provide specific definitions for persons with disabilities.

[47] USAASA, "Position paper and recommendations to the Minister of Communications and the Independent Communications Authority of South Africa regarding definitions of universal service, universal access, under-serviced areas and needy persons", April 2009.

[48] UN, 'Convention on the Rights of Persons with Disabilities', www.un.org/disabilities/convention/conventionfull.shtml

Option Five: Retain current requirement that ICASA develop a Code of Conduct for persons with disabilities (undefined in the ECA).

- **Which of the following options best addresses the concerns raised in terms of a lack of clarity on persons with disability?**
- **Is it appropriate to encompass persons with disabilities into the definition of "needy persons", or should a separate provision be made?**
- **Is the term "needy persons" still appropriate? If not what would be a more suitable term which addresses the original intention of the ECA?**

3.6.3 Meeting the Access Gap

Respondents to the Green Paper identified a number of impediments to the closing of the access gap:

- The focus of business has been on small elite and urban areas where there are substantial returns on investment driven by demand for advanced ICT services;
- Lack of appropriate regulatory mechanisms to encourage licensed operators to invest and achieve the economies of scale in the Access Gap areas, such as incentives linked to spectrum allocation or allowing localised monopolies in underserviced areas, supported by direct government interventions; and
- Lack of demand-side pressures created in underserviced areas through e-Government and similar programmes.

The affordability of access is seen as the greatest barrier. Proposals to address this included:

- Reducing the cost of providing services through greater use of wireless technologies;
- Stimulating the demand-side to make access to communications services more desirable;
- Stimulating the supply side, including promoting access in rural areas through infrastructure sharing and the targeted use of public funds to extend the backhaul network to rural areas; and
- Reviewing current universal service obligations and funding to determine the most effective way to address basic connectivity needs of those not served by other aspects of the strategy.

Suggestions made for policy options to meet the access gap include the need for:

- A detailed Access Gap Analysis to ensure that USOs and USF financing are not employed in competitive market segments;
- An examination of appropriate technologies to be used to address the Access Gap; and
- Proper costing of the Access Gap.

Meeting UAS in broadband might require a different approach to that adopted previously. South Africa in making public investment decisions will have to take into account not only existing NGN infrastructure but also concrete plans by operators to deploy such networks in the future. Broadband investment tends to be investment ahead of the market and this should be recognised. Other countries experiences could prove useful in this regard. For example, the EU has published State Aid guidelines designating areas that could justifiably be awarded funds. Funding of areas with competitive provision already available is unlikely to be justifiable in terms of these. The Guidelines

prohibit any public funding that distorts or threatens competition to ensure that private investment is not crowded out.

- **In undertaking a holistic review of interventions intended to close the access gap, what principles and programmatic approaches are needed?**

3.6.4 Universal Service Obligations (USOs)

USOs remain a recognised and widely used tool to promote the availability of infrastructure and services to all citizens. In most countries USOs initially concerned basic voice services but with ubiquitous mobile networks offering affordable voice communications, this goal may be considered to have been met in most countries. Broadband connectivity is now the main target, either in terms of households connected (e.g. Korea is targeting 100% household penetration) or access for all citizens via community broadband centres.

As noted at the beginning of this section, ICASA has the option under the ECA of imposing universal access and service obligations on licensees. Such obligations have historically been included in the licences of major telecommunications operators (Telkom, Vodacom, MTN, Cell C, and Neotel) as well as in some spectrum licences. They typically include geographic coverage, the provision of payphones or community service telephones, and, latterly, access for schools and public health institutions.

The SA Connect broadband policy notes, however, the "*failure to enforce USOs*" reflecting considerable public debate on their effectiveness, appropriateness and continued relevance. In 2010, ICASA began a comprehensive review of the USO framework to "*establish the need for a revised USAO regulatory framework and the development and publication of regulations, if necessary*" (ICASA, 2012). This culminated in the publication in 2012 of a Findings document, which concluded among other things that:

- The USOs imposed to date remain binding on licensees;
- Any USOs not yet implemented should be suspended;
- A "*pay or play model [should] be invoked*";
- The determination of USOs should be influenced by a broader range of considerations than merely the category of licence;
- The imposition of USOs should not be subject to detailed market access gap studies.

ICASA subsequently issued revised USO regulations applicable to Cell C, MTN, Neotel and Vodacom which reduced the number of public schools to be connected, removed SIM card and handset rollout obligations and included a requirement to provide Internet access 'schools connectivity', subject to an allocation of schools to be determined by ICASA (2014).

There were several submissions on the issue of USOs. Qualcomm suggested that USOs should be reconsidered so as to address universal access to broadband services. The Link Centre cautioned that experiences to date show how easy it is to get such obligations wrong and that any future requirements should be extremely carefully considered, be of limited and appropriate application and subject to revision on an ongoing basis in the light of changing circumstances in the sector.

A number of submissions, including those of USAASA, the SABC, and Vodacom, argued for no differentiation, stating that in the converged environment operators in the different sub-sectors should be treated the same and have similar obligations with regards to USOs and the USF. Others though argued that there *should be* differences in the treatment of operators in the different sub-sectors in so far as USOs are concerned (ISPA, Progressive Professionals Forum, Cell C).

National Treasury held a slightly different view and submitted that rather than assigning obligations to the different licensees (which could have varying financial implications especially across different services), licensees across all services should be required to make a specific contribution to the USAF. They did caution that the administration of USAF would have to be improved to achieve maximum impact.

POLICY OPTIONS

Option One: Status Quo

ICASA would retain its discretion to impose USOs on licensees after consultation.

Option Two: Differential Treatment of Licensee USOs

ICASA would be required to differentiate between licensees in different sub-sectors (e.g. telephony versus broadcasting versus Internet access versus broadband provision) in imposing USOs Any such requirement would need to be based on objective criteria differentiating between classes of infrastructure and service, and may present problems in the face of ongoing convergence in the sector and may be dependent on what licensing categories are adopted in the White Paper.[49]

Option Three: Removal of USOs

Given historical problems with specifying, imposing and enforcing compliance with USOs, related provisions would be removed and licensees instead required to contribute to a properly managed Universal Service Fund. This may require that mandatory contributions to the USAF would increase.

Option Four: Strengthening the USO Framework

An improved USO framework would ensure that obligations are clearly defined, robust, capable of satisfaction and enforceable.

The strengthening of the USO regime for South Africa might include provisions specific to:

- The alignment with determinations on universal access, universal service, underserviced areas and other relevant definitions to be kept relevant through periodic review.
- Achieving UAS in respect of broadband.
- A requirement for a dedicated periodic consultation process with stakeholders to consider issues, including appropriate target levels of service or access, a timeline for reaching such targets, the level of service to be provided, mechanisms for monitoring and enforcement.
- Periodic reporting requirements for operators in respect of targets achieved and compliance on the part of licensees with their USOs.

[49] Options for the categorisation of licences are dealt with elsewhere in this chapter.

- **Which option do you prefer and why?**
- **If you prefer either of the last two options, please include specific proposals for how USO differentiation should be specified/how the USO framework should be strengthened to address the challenge of affordability.**
- **Should USOs be offset against USF contributions, and, if so, in what way?**
- **If an Open Access model is adopted how would that change the implementation of USOs?**

3.6.4.1 *Obligations for Wi-Fi Hot spots*

Wi-Fi technology based on the IEEE 802.11 family of standards continues to gain momentum in the South African market. This is fuelled by the low costs of the technology and its increased prevalence in end-user devices including smart-phones and tablets. Public access at Wi-Fi hotspots in built up areas is becoming commonplace and the number of free offerings is increasing. Wi-Fi is an important means of accessing the Internet for individuals, communities and businesses. The consideration of how Wi-Fi can be used to drive universal service and access is thus an important issue to address.

There are many trials taking place to assess this, such as the proof-of-concept trial in Khayelitsha and Mitchells Plain by the City of Cape Town. SA Connect (Digital Development Policy decisions) include provision of free public Wi-Fi at selected points reached by the public sector networks to stimulate demand and provide access to government services. The policy action points include integration of Wi-Fi into public sector, school, health and community networks. In addition, the fact-tracking of the implementation of Wi-Fi at public facilities by agencies responsible for these facilities and networks is called for. Mechanisms will be explored to support and encourage municipalities to establish municipal-wide free Wi-Fi networks aimed at enabling access and innovation.

New research conducted on behalf of international Wi-Fi provider iPass indicates that by 2018, South Africa will have one Wi-Fi hotspot for every 122 people. The research found that Wi-Fi hotspots in South Africa improved 10% in 2014, to 8 611 commercial hotspots (including 2 256 cafes, 3 211 retail areas, 3 099 hotels and 39 airports) - up from 7 796 in 2013. iPass predicts that Wi-Fi hotspots will increase by a further 26% in 2015 to 9 859 spots and will include 10 planes and 3 529 retail areas. The number is then expected to sky-rocket 2 817% in 2016 to 11,897 commercial hotspots and 215 514 community 'homespots'.[50]

Respondents to the Green Paper commented on Wi-Fi from two perspectives. Some respondents argued for the use of licence-exempt spectrum over which Wi-Fi connectivity is provided. This is dealt with in the sub-section on Spectrum below. Others, such as the Right to Know Campaign and the Western Cape Provincial Treasury called for the rollout of Wi-Fi networks in marginalised communities. SALGA noted that due to limited national planning, several municipalities have already successfully implemented their own broadband and free Wi-Fi projects.

OPTIONS

Option One: Status quo

[50] http://businesstech.co.za/news/telecommunications/72316/sa-wi-fi-growth-mapped/

Market forces would continue to drive rollout of Wi-Fi. It should be noted that there is no guarantee that the poorest communities, especially those in rural areas, will benefit from this.

Option Two: Impose obligations on operators

In the past there were obligations on operators such as Telkom to provide public telephone services. Given penetration of mobile voice telephony, this has largely become obsolete. Existing obligations would therefore be revised or new requirements set focused on provision of Wi-Fi hotspots in underserved communities. The obligations for Wi-Fi would be aligned to the policy decisions in SA Connect.

- **Which of the above two options is preferred?**
- **In the case of option two, should these obligations be extended to all operators?**

3.6.5 Universal Service and Access Fund (USAF)

Current international approaches to universal service funds are somewhat divided, as two recent global studies show. After examining 64 such funds around the world, of which a quarter were found to be "inactive", the GSMA concluded that universal service funds "*do not appear to be the most appropriate mechanism to achieve universal service and further social and economic development*".[51] On the other hand, a recent ITU examination of 69 such funds worldwide, while finding similar problems of low or non-existent levels of activity, went on to make a number of strategic recommendations, including the need to ensure that funds are enabled to "*respond to rapidly changing and evolving priorities*", that they are placed under the control of an "*independent unit*" and managed "*in a transparent, autonomous and competitive manner*" and that they need to be utilised to "*address broadband access*".[52]

In South Africa, a universal service fund (USF), now under the rubric of the Universal Service and Access Fund (USAF), has been in place since 1998. Arrangements governing the fund are somewhat complex. It operates under administrative control of USAASA (but in accordance with the instructions of the Minister), but the level of contribution to the fund is regulated (subject to a legislated cap of 1% of annual turnover) by ICASA, which also collects and submits to Treasury operator contributions to the fund, but without accounting for these to USAASA.

Disbursements from the fund are limited to "*subsidies*" in a range of areas, including "*needy persons*" (as determined by the Minister with the assistance of USAASA), network rollout by ECNS licensees (subject to competitive tender), the acquisition of services by schools and colleges, the "*establishment and operation of community centres*" offering access to ICT services, or any other area as determined by the Minister with the concurrence of the Minister of Finance.

The USAF has been the subject of controversy, and has been widely criticised for failing to disburse funds on any significant scale. In addition, no audit or financial statement in respect of the USF is available.

[51] GSMA (2013),'Survey of Universal Service Funds: Key Findings', GSM Association, London, http://www.gsma.com/publicpolicy/wp-content/uploads/2013/04/GSMA-USF-Key-findings-final.pdf
[52] ITU (2013), `Universal Service Fund and Digital Inclusion for all Study', http://www.itu.int/en/ITU-/Conferences/GSR/Documents/ITU%20USF%20Final%20Report.pdf

An assessment of policy regarding the USAF is necessary to ensure that:

- A UAS levy is fairly and equitably imposed on all licensees in the ICT sector;
- The funds appropriated are efficiently, appropriately and effectively utilised in support of universal access and service in South Africa; and
- The utilisation and disbursement of the monies in the fund is transparent and subject to the necessary fiduciary controls.

Accordingly, a number of policy questions have been identified:

- To what extent does a universal service fund remain relevant given convergence?
- How should control and oversight of such a fund be streamlined so as to simplify and balance the competing jurisdictions of ICASA, USAASA and the Minister?
- How can the management and governance of the USAF be strengthened to ensure effective, transparent and accountable use of funds?
- Should the funding priorities of the USAF be extended to cater for the expanded scope of ICTs given convergence, advances in technology and market developments?
- Who should be responsible for the management of the USAF? Should it remain under USAASA, or be transferred to ICASA (the most common international best practice), or assigned to an independent board (also common international best practice), or to an existing funding entity such as the DBSA or the IDC?

The issues around the USAF, given the general consternation around its effectiveness, attracted many comments and proposals in the Green Paper submissions. Note that this section focuses only on the USAF and not on USAASA as this is dealt with in a separate chapter of the Discussion Paper dealing exclusively with institutional frameworks.

With regards to the **management and control of the USAF:**

- A number of submissions called for the USAF to be placed under the control of ICASA. Research ICT Africa, for example, argued that affordable universal access should be at the core of all regulatory decision-making anyway and that the administrative institutional duplication is wasteful and has historically lent itself to misappropriation. Cell C called for ICASA to be properly capacitated to manage the USAF, while Vodacom suggested that all matters relating UAS and universal access to broadcasting services be entrusted exclusively to ICASA.
- Other submissions, for example from the Link Centre and the SABC, called for the funds administered by the USAF and those by the Media Development and Diversity Agency (MDDA) to be consolidated into a single fund under the control of a single, independent governance structure. Others however proposed that the MDDA remain separate.

With regards to the **disbursement of funding from the USAF:**

- MTN argued for the funding to be unlocked for application as subsidies in *both* the demand and supply side, and suggested that the fund should focus exclusively on areas where private investment cannot be expected to reach, such as bringing fibre backhaul to rural areas.
- Intel suggested the fund should be used as a targeted and time-bound instrument to incentivise private sector investment in identified service gap areas, managed in a

transparent manner, and reviewed annually. Citing examples from Malaysia and Turkey, Intel further suggested using the USAF to connect and equip students with broadband, devices, and content. It proposed that the USAF be deployed in a competitively and technically neutral way in consultation with industry and civil society.

- The SABC called for funding to be made available to the public broadcaster to extend its coverage. Note it also proposed that it be exempted from contributing to the Fund.
- The Progressive Professional Forum called for differential treatment by the USAF for operators in the different sub-sectors, and suggested a mandatory review of the fund every five years.
- USAASA called for the USAF to be used to support extension of the network backbone to regional centres where there is no backbone. In a similar vein, Fibreco suggested that USAF funding be most effectively deployed to build out regional distribution networks (i.e. provincial backbone networks) needed for connecting underserviced areas to the national backbone links already in place or under construction.
- The National Community Radio Forum suggested the fund could be used to support community broadcasting signal distribution activities.
- Intel proposed changes to the current USF levy, suggesting a "*comprehensive, fixed charge on end-users*" rather than the current percentage of operator revenue levy, which it described as a "*distortive usage-based*" charge.

OPTIONS: MANAGEMENT AND CONTROL OF THE USAF

Note:

- The options proposed here are not mutually exclusive.
- As no submissions called for the discontinuation of the USAF, and only one advocated changes to the USAF levy, these are not included as specific options. Stakeholders can nevertheless make submissions on this should they wish.
- Please also consider responses to these options in tandem with (i) the proposal to establish a larger, ICT-Development Fund, of which the USAF becomes a component (*refer to the Infrastructure Investment sub-section of Chapter Six: Policy Options - Industry Growth*); (ii) options regarding USAASA (*presented in Chapter Seven: Policy Options - Institutional Frameworks*).

Option One: Status Quo

The USAF would continue to be controlled by USAASA and the Minister, though the funding priorities could be extended and transparency and accountability requirements strengthened.

Option Two: Management of the USAF by ICASA

Management and control of the USAF and the disbursement of its funds would be assigned to ICASA.

Option Three: Independent Management of the USAF

Management and control of the USAF would be assigned to a newly created independent entity, or to a new fund based on a merger of the MDDA and USAASA, or to an existing independent entity

such as the DBSA or the IDC. Under this option, consideration could be given as one of the alternatives, to evolving the USAF to become a component of a larger ICT-Development Fund.

- **Which option do you prefer and why? Please give concrete details if recommending any changes to the status quo.**
- **If you favour any options not specifically listed above, please make and motivate concrete and specific suggestions.**

OPTIONS: SCOPE OF THE USAF

As above, the options below are not mutually exclusive.

Option One: Amalgamation of the USAF with the MDDA fund

The USAF and the MDDA would be merged and existing funding priorities of both entities extended in line with this. Note that the MDDA Act current provides for division of funds between community media and small and micro media enterprises. Similar separations could be set for other funding streams and priorities.

Option Two: Increased Discretion in the Disbursement of UAS Funding

The current relatively legislative circumscription of the disbursement of funds from the USAF would be removed. The entity managing the fund would be required to develop criteria and an annual plan for the deployment of monies in the fund, possibly through a public stakeholder consultative process, and possibly subject to third party approval by Parliament, or the Minister or ICASA. Increased scope may include earmarked funding for broadband deployment and uptake, and thus support infrastructure and services and the creation of demand, as proposed in several submissions.

Option Three: Improved Governance and Accountability of the USAF

The USAF would be required to publish separate annual audited statements and an annual report, and to commission independent research into its impact in achieving UAS targets.

Option Four: Guidelines on the Use and Disbursements of the USAF

Clear and unambiguous guidelines would be published providing unambiguous guidance on the scope of the fund and the procedures to be followed to access the fund. In addition, specific requirements on transparency so that contributors to the fund have visibility as to how the funds are utilised would be introduced, in line with the PFA. The guidelines must be synchronised with the UAS definitions at all times.

- **Which option/s do you think would best meet objectives? Please be concrete and specific.**
- **You are welcome to make additional proposals not specifically listed above. Please though include concrete and specific suggestions.**

3.6.6 e-Rate

The EC Act requires licensees to offer an e-rate discount of at least 50% on Internet services provided to public health establishments, schools, colleges, public further education and training institutions and higher education institutions. ICASA's 2009 E-Rate Regulations largely restate the provisions of the ECA (ICASA, 2009).

The e-rate was criticised by some stakeholders since its introduction under a 2001 amendment to the then Telecommunications Act. The 2014 amendments to the EC Act sought to address some of the criticism by ensuring the e-rate is applicable at both wholesale and retail levels.

There were a limited number of submissions to the Green Paper that dealt with the question of the e-rate. A number of these called for a comprehensive review of the e-rate, its application and its impact (Intel, LINK Centre). Other submissions argued that the e-rate be extended to additional beneficiaries. Vodacom called for this to include rural clinics, while Intel went further to call for the inclusion of a range of other public institutions which require broadband services for their core function such as public libraries, clinics, hospitals, correctional facilities and police stations.

Some submissions called for the e-rate to be increased above the current 50% minimum (Intel), with the Progressive Professionals Forum (PPF) calling for Internet access to be entirely free at schools. The PPF also argued for zero-rating of specific, educational content. The LINK Centre called for the e-rate subsidy to be claimable from the USF. No submissions which called for the discontinuation of the e-rate.

POLICY QUESTIONS

Given that submissions largely centred on the application of the e-rate, no options are presented. However, taking into account the submissions, the following questions are posed.

- **What form should the e-rate take in the future?**
- **Should the e-rate be extended to additional beneficiaries, and, if so, which ones?**
- **Should the e-rate be increased above the current 50% minimum?**
- **Should the e-rate be claimable from the USAF?**
- **Should educational content and websites be zero-rated (i.e. free), and, if so, how can this be reconciled with the principle of net neutrality (discussed elsewhere in this document)?**

3.6.7 Consumer Protection and Quality of Service

The vision for the ICT policy stresses that South African users of communications services are entitled to consumer protection. As penetration of service increases there is bound to be greater concern on consumer protection in a digital environment. Policy in respect of consumer protection and quality of services is necessary to ensure:

- The rights of consumers in the ICT sector are adequately protected;
- Quality of service standards are appropriate, clearly specified and adequately enforced;
- There is proper transparency and publicity on the monitoring, reporting and enforcement of consumer protection and quality of service; and
- Concurrent jurisdiction between ICASA and the National Consumer Commission (the NCC) is effectively managed in the best interests of consumers.

Consumer protection across the board is governed by the 2008 Consumer Protection Act (CPA), an overarching piece of legislation, which establishes the NCC and the National Consumer Tribunal. The CPA provides for a regulator such as ICASA to apply to the Minister of Trade and Industry for industry-wide exemption from the provisions of the CPA. ICASA has indicated its intention to do so, but the current status of this process remains unclear. There is currently no requirement in the ECA for ICASA to negotiate a memorandum of understanding with the NCC.

Consumer issues in the ICT sector are largely dealt with in Chapter 12 of the EC Act. The Act requires ICASA to prescribe codes of conduct for ECNS, ECS licensees and broadcasting service licensees (ECA, Section 54). Code of Conduct regulations were issued by ICASA in 2008 and 2009 and set out standards of conduct by licensees in respect of consumers.

The ECA also requires ICASA to issue regulations setting out minimum quality of service standards for licensees via End-user and Subscriber Service Charters. These regulations were issued in 2009 and cover issues such as the provision of information regarding services, rates and performance procedures; provisioning and fault repair services; protection of private information; charging, billing, collection and credit practices; complaints procedures and remedies. A separate set of regulations (ICASA, 2012) sets out the format in which licensees are required to report compliance with these charters, and the reports are made available on the ICASA website. The EC Act further mandates ICASA to prescribe regulations setting out a Code on Persons with Disabilities requiring licensees to ensure that their services are ‘‘*accessible and available to people with disabilities*”. The code was issued in 2007.

ICASA is currently formally reviewing both the End-user and Subscriber Service Charters and the Code on Persons with Disabilities.

Co-regulatory/self-regulatory codes of conduct have been established by both ISPA and WASPA to deal with the handling, adjudication, enforcement and publication of consumer complaints in their respective spheres.

Particular problems which have been highlighted include the following:

- ICASA conducts its own quality of service testing and publishes the results from time to time. Such reports are frequently criticised by the operators.
- The EC Act requires ICASA to establish a Consumer Advisory Panel. ICASA established this Panel in 2010, but suspended it the following year.

The provisions relating to consumer protection under the Electronic Communications Transactions Act will be dealt with under the Chapter/Policy Options Paper dealing with e-services. Provisions of the Protection of Personal Information Act are dealt with in the same chapter.

There were a limited number of submissions dealing with consumer protection and quality of service regulation. In respect of co-jurisdiction, MTN called for greater co-ordination, and proposed that ICASA apply for the necessary exemption in terms of the Consumer Protection Act. The SACF, on the other hand, felt that ICSA is already over-burdened with issues directly related to the provision of ICT services, and suggested that consumer protection issues be assigned to an independent neutral

institution, with technical assistance from the regulator to deal with technologically-specific issues related to consumer protection.

In relation to the questions of co-regulation and self-regulation, WASPA pointed to its success in dealing with consumer complaints raised against WASPs, and suggested this as a model for effective consumer protection mechanisms and self-regulatory models in SA.

Treasury suggested that ICASA's quarterly quality of service reports obviated the need to develop a "customer satisfaction measurement".

POLICY QUESTIONS

The role of ICASA in relation to general consumer protection issues is covered in Chapter Seven: Policy Options - Institutional Frameworks. Due to this and the dearth of submissions on specific requirements in relation to infrastructure and services, policy questions are posed rather than policy options presented. When answering the question, please make concrete and specific recommendations.

- **What changes, if any, should be made to strengthen ICASA's powers and competence to regulate, monitor, enforce and publicise consumer protection and quality of service codes and standards?**

3.6.7.1 Type Approvals

Type approval regulations are necessary to ensure that third party equipment connected to the communication networks meets the necessary technical parameters to prevent interference and ensures good quality of service and safety. Conformity to technical standards is therefore essential for the interoperability of the equipment and networks. Type approval regulation also protects consumers against the purchase of sub-standard devices and against illegal or 'grey' imports.

Type approval is granted to a product that meets a minimum set of regulatory technical and safety requirements. It means that the product is guaranteed to meet certain requirements for its type, whatever that may be.[53] Section 35 of the EC Act states that

> *No person may possess, use, supply, sell, offer for sale or lease or hire any type of electronic communications equipment or electronic communications facility, including radio apparatus, used or to be used in connection with the provision of electronic communications, unless such equipment, electronic communications facility or radio apparatus has, subject to subsection (2), been approved by the Authority.*

ICASA may pass regulation which exempt equipment which has been approved for use by the European Telecommunications Standards Associations or other competent standards body where the equipment complies with type approval standards prescribed by the Authority. ICASA issued Regulations in Respect of Technical Standards for Electronic Communications Equipment in 2010, prescribing national standards for the performance and operation of equipment and electronic communications facilities, including radio apparatus, particularly with respect to electromagnetic

[53] Association of Regulators of Eastern and Southern Africa, "Policy guidelines on equipments [sic] type approval and standards", undated.

compatibility.[54] ICASA in 2013 issued new Type Approval Regulations, dealing with procedures and fees and the maintenance of an equipment register, as well as Labelling Regulations.

During the Green Paper consultations, companies involved in electronics manufacturing and distribution pointed out that the process of applying for type approvals and labelling was often beset by delays, resulting in loss of earnings.

QUESTIONS

- **Are the current provisions in the EC Act covering type approvals and labelling adequate?**
- **What suggestions do you have to improve the process for granting type approvals and labelling?**

3.7 Spectrum management

This section focuses on the planning, allocation, assignment and management of frequency spectrum, a scarce national resource, in order to ensure maximum public value. The section is premised on the notion that spectrum as a public resource must be focused on delivering public value. The optimum and effective utilisation of spectrum from social, economic and technical perspectives to enable the achievement of the developmental goals in the NDP Vision 2030 is the first point of departure for the policy options herein. In addition, the options are in support of the National Broadband Policy and its positions regarding broadband for all.

3.7.1 Context

The 2010 Radio Frequency Spectrum Policy for South Africa characterises spectrum as a "*limited natural virtual resource where, in certain frequency bands, the demand for spectrum far exceeds the amount of spectrum that is available. The radio spectrum is available equally in every country, and is a resource limited by technology and management capability. It is not a consumable resource. Management of the radio-frequency spectrum is subject to Government authority and spectrum must be managed efficiently so as to be of greatest benefit to the entire population.*"[55]

Radio Frequency Spectrum (hereafter Spectrum) was a key focus in the Green Paper which highlighted concerns about spectrum pricing, the fact that spectrum demand will inevitably increase as society moves through the "information age", creating a need for ever more "Information Bandwidth".

In planning and allocating radio frequency spectrum, South Africa must take into account the outcomes of the International Telecommunication Union (ITU) World Radio-communication Conferences (WRCs).

[54] ICASA, 'Regulations in Respect of Tecnical Standards for Electronic Communications Equipment', Government Gazette 32885, 22 January 2010.
[55] RSA, 'Radio Frequency Spectrum Policy for South Africa', *Government Gazette*, No 33116, 16 April 2010.

Spectrum management takes place within a regulatory framework comprising policies, legislation, regulations and procedures. Spectrum policy must provide for the harmonisation of spectrum bands to ensure spectrum efficiency and regional economies of scale in radio equipment.

The radio frequency spectrum is a key resource for many essential communication services in society such as, mobile, fixed wireless and satellite communications, television and sound broadcasting, transport, radiolocation, (Global Positioning Systems) radio navigation, safety of life and many other applications. Radio technology supports public services such as defence, safety and security as well as scientific activities (e.g. meteorology, earth observation, radio astronomy, space research, etc.). Radio-communication, which is reliant on the electromagnetic spectrum, is one of South Africa's most dynamic technology sectors. South African society and the entire industry rely on radio frequency spectrum, a resource where the demand far exceeds the supply.

Use of the radio frequency spectrum should contribute to the promotion of national interests, development and diversity, including increasing the amount of spectrum available for assignment, improving sharing conditions among different radio communication services and increasing the number of licences dedicated to community radio and television broadcasting services

ICASA estimates that 450 MHz of spectrum, below the 3,5 GHz range, is available for assignment for broadband services, but cannot be utilised presently because other services are using this spectrum. There is therefore a need for the migration of these services including the delayed migration of the broadcasting services. The issue of TV white spaces has been raised and many have argued that the advent of cognitive radios capable of identifying unused spectrum could open avenues for spectrum sharing. The availability of the TV white spaces spectrum is seen as a way of increasing the amount of spectrum that could be released for the deployment of broadband services. However, traditional broadcasters have expressed caution in relation to this, and emphasised that spectrum policy must take into account the current and future needs of broadcasters. They raised concern that if this is not considered they would migrate in order to give lucrative spectrum to broadband services that will ultimately use this to compete against them.

Submissions on spectrum focused on two questions:

- What considerations should inform the new spectrum policy and regulatory regime?
- If there is a need for a separate agency to regulate the spectrum?

This section focuses on the new spectrum policy, spectrum planning and spectrum pricing. The issue of whether a separate agency should be established to regulate spectrum is dealt with more detail in Chapter Seven: Policy Options - Institutional Frameworks which looks specifically at ICASA's mandate.

3.7.2 Spectrum Policy Objectives

The 2005 EC Act provides limited guidance to the regulator in terms of the allocation and assignment of spectrum, focusing on issues such as efficiency, avoidance of interference, harmonisation with ITU agreements and compliance with the national band plan, taking into account the needs of security services, and the promotion of digitisation.

The 2010 Radio Frequency Spectrum Policy for South Africa goes considerably further, setting out eleven policy objectives that should be met:

- Establish the environment within which national spectrum policy objectives are implemented;
- Establish principles for spectrum management;
- Promote transparency and openness in spectrum management;
- Establish the framework for radio frequency spectrum planning so as to ensure the efficient and effective usage of the radio frequency spectrum;
- Set guidelines for spectrum usage;
- Establish principles for spectrum fees;
- Contribute to the promotion of national interests, development and diversity within the framework of Government strategic objectives;
- Provide for the allocation of spectrum for safety of life services;
- Provide for the allocation of spectrum for government services;
- Promote universal service and access; and
- Provide for the allocation of spectrum for scientific research.[56]

A number of Green Paper submissions advocated varying *underlying objectives* to guide spectrum management. In the main respondents called for **effective and efficient management of radio frequency spectrum to ensure agility, flexibility and adaptability in spectrum administration.**

Objectives for spectrum related policy put forward included that:

- South Africans realise the maximum possible economic & social benefit from the use of spectrum as national strategic resource;
- Radio frequency spectrum policy supports and is in alignment with the SA Connect Broadband policy, especially with regards to universal access and service in rural areas.

Policy objectives should be, unambiguous, measurable, achievable, realistic and time dependent. Current objectives should be reviewed to ensure this. For example, one critique is that the policy objectives provide for the establishment of *principles for spectrum management*. There is a view that principles must prevail in the first instance and that objectives must be carved accordingly.

OPTIONS

Option One: Maintain the current eleven objectives as set out in policy

Option Two: Review the current policy objectives

The policy would be reviewed to develop a more concise set of objectives with clear guidelines. Policy objectives and principles would need to be delineated. The objectives should be stated in accordance with a set of broad principles for an effective spectrum policy and management regime

[56] RSA, 'Radio Frequency Spectrum Policy for South Africa', Government Gazette, No 33116, 16 April 2010.

that serves to achieve economic and social benefits South Africans. In addition objectives should be aligned with the broadband policy.

Option Three: Incorporate some or all of the objectives into legislation

- **Should the current objectives be reviewed as proposed above? If so, which of the objectives need to be reviewed?**
- **Should the objectives be incorporated into legislation? Which ones are candidates for incorporation?**

3.7.3 Principles underlying spectrum management

As highlighted, it has been proposed that a set of policy principles be clearly articulated to ensure a consistent regulatory and management framework. Almost all respondents to the Green Paper, commented on issues to consider in managing the allocation of spectrum. Some of these are clearly linked to the current *objectives* outlined above. The responses have been consolidated and summarised as follows:

- **Recognition that allocation and management of spectrum takes place on a global platform:** South Africa, together with international partners must influence global policies such as those at the ITU, to ensure that these do not, even inadvertently, negatively impact on the developmental objectives of the country.
- **Managing unused licensed spectrum:** The hoarding of spectrum by users is not conducive to efficient spectrum usage and this practice should be discouraged at all costs. Spectrum management policy should strictly apply "use it or lose it" principles to all spectrum licensees. Passive science services, due to the nature of their operation, will be exempt from this provision.
- **Priority of access to spectrum related to safety of life *(currently a policy objective)*:** The international spectrum regulatory framework has as one of its founding principles the availability and protection from harmful interference of frequencies provided for distress and safety purposes. A safety service is any radio-communication service used permanently or temporarily for the safeguarding of human life and property. It is recognised that safety services require special measures to ensure protection from harmful interference and this must be taken into account in the assignment and use of frequencies. Priority of access to spectrum must be given to safety of life services including public safety and security communications.
- **Allocation of spectrum for research, development and innovation *(currently a policy objective)*:** The radio spectrum facilitates a range of scientific applications used for research purposes. Currently, radio frequency spectrum for trial and testing is assigned on a case-by-case basis. A proposed research and development spectrum allocation will encourage a research and development mind-set. In addition scientific applications should not compete for spectrum with commercial applications. It is in the national interest that the needs of active and passive scientific research are taken into account when allocating spectrum. In addition, spectrum policy must be crafted to spur entrepreneurial activity and innovations among local companies to grow the electronics manufacturing and software development sector,

- **Spectrum for wireless technologies:** Wireless technologies are more appropriate for the provision of electronic communication services in rural areas due to the population distribution, lack of infrastructure, terrain etc. Spectrum usage should be used to promote universal access and service.
- **Contiguous frequency assignment**: The adoption of contiguous frequency assignments to promote spectrum sharing, as this is the most spectrum efficient and feasible means to encourage this.
- **Holistic approach to spectrum planning to accommodate additional multiplexes:** Spectrum plans must adopt a holistic approach accommodating the creation of additional multiplexes and catering for future spectrum needs for broadband, Digital Terrestrial Television (DTT), digital radio as well as possible future technologies to ensure capacity for new audio-visual and content services.
- **Regular spectrum audits:** Necessary to weed out any 'ghost' services.

- **Do you agree with the above principles?**
- **Are there any principles which should be removed?**
- **What other principles should be added?**

3.7.4 Spectrum planning and management

The management of the radio spectrum combines administrative, regulatory and technical procedures to ensure the efficient operation of radio communication equipment and services. Spectrum management is the overall process of regulating and administering access to and use of the spectrum. A primary goal is to ensure optimal use of radio spectrum in social, economic and technical terms. The RF spectrum is a national resource, much like water, land, gas and minerals. Unlike these, however, RF is reusable. The purpose of spectrum management is to mitigate radio spectrum pollution and maximise the benefits of usable radio spectrum. The ITU constitution recognises "*the sovereign right of each State to regulate its telecommunication*". Effective spectrum management requires regulation at national, regional and global levels. There are several variables one must consider when managing the spectrum resource:

- Political issues, both national and international;
- The effect of spectrum use on society;
- Economic impacts; and
- Technical considerations.

In general, respondents to the Green Paper lamented the perceived failure to assign high demand spectrum. The incumbents argued for the immediate assignment of high demand spectrum even though some of the spectrum cannot be allocated given that services using it must still be migrated. There was general agreement also on the need for more effective management of this scarce public resource.

Many submissions also endorsed the need to ensure that the public realises full economic value from the utilisation of the spectrum. There were suggestions that spectrum allocation should be awarded on the basis of licensed operators' commitment and ability to roll out and expand services on a commercially sustainable basis in marginalised communities. Some respondents however

cautioned against making economic value the single determinant as there are social and cultural values that can be advanced through an appropriate spectrum policy.
The need for a policy to prioritise new entrants through setting aside spectrum for a common carrier licence to provide wholesale access was also raised. These submissions argued that since the spectrum is finite and cannot be parcelled out to many operators, policy should recognise the need for a common facility that will help everyone to deliver services. Others argued that anyone given the privilege of access to this scarce resource should have a minimum set of common carrier obligations enabling other service providers to provide services over their networks.

Submissions also urged that radio frequency spectrum policy should be driven by objectives of efficient spectrum usage and that the policy must provide overarching guidance for the utilisation of spectrum in the broad public interest. Calls were made for a coordinated and harmonised national approach to spectrum usage, with set conditions for the availability and efficient use of radio spectrum by various services to support specific national objectives and to provide greater predictability and certainty to current and future use. Policy certainty was also seen as crucial to the development of a favourable investment climate.

The submissions on spectrum management were diverse, with a plethora of inputs on how spectrum should be managed and on various approaches to allocation. Some of the important issues raised include the need to:

- Permit the flexible use of spectrum to the extent possible;
- Harmonise spectrum use with international allocations and standards, except where national interests warrant a different determination;
- Make spectrum available for use in a timely fashion;
- Facilitate secondary markets for spectrum authorisations;
- Clearly define obligations and privileges associated with spectrum authorisations;
- Ensure that appropriate interference protection measures are in place;
- Reallocate spectrum where appropriate, taking into account the impact on existing services; and
- Ensure timely and effective enforcement that is commensurate with the risks posed by non-compliance.

The following sub-section presents a series of options based on a careful review of the inputs.

3.7.4.1 Spectrum Allocation

Spectrum allocation is defined by the ITU as *"entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space radio-communication services or the radio astronomy service under specified conditions*". In terms of the current provisions of the EC Act, the Minister represents South Africa in the ITU. This includes the allocation of the radio frequency spectrum to various radio-communication services.

The ITU convenes World Radiocommunication Conferences (WRCs) every four years. The purpose of a WRC is to review, and, if necessary, revise the Radio Regulations, the international treaty governing the use of the radio frequency spectrum. Following each WRC, South Africa updates its national allocation plan in accordance with the decisions taken in so far as these affect the Republic.

Following approval of the national allocation plan by the Minister, ICASA is then able to assign spectrum (licence operators) within the allocation framework.

The foregoing provides a description of the status quo. There have however been calls for a review of the roles and functions in relation to spectrum allocation.

OPTIONS: ROLE FUNCTIONS

Option One: Status Quo

The status quo as describe above would prevail. The Minister represents South Africa at ITU on all spectrum issues and approves of the national frequency plan and has the right to make spectrum policy and issue guidelines on spectrum fees. ICASA develops the national frequency plan setting out spectrum allocation for the Minister's approval, assigns spectrum and issues spectrum licences.

Option Two: Reduced Role for Minister

Some or all of the existing ministerial prerogatives would go to ICASA (or a spectrum management agency if established).

Option Three: Increased Role for Minister

Some or all of ICASA functions would go to the Minister.

- **Which of the above options is preferred?**
- **If either Option 2 or Option 3 is preferred, please suggest which functions should be allocated to whom (between the regulator and the Minister)**

OPTIONS : SPECTRUM ALLOCATION PRINCIPLES

Note, that the following options are not mutually exclusive.

Option One: Spectrum provision for an open access network

An open access model is advocated in the SA Connect broadband policy to facilitate competition and ensure universal service and access is achieved. High demand spectrum should thus be set aside for an open network that will sell wholesale access to new and established operators.

Option Two: Must carry obligations for high demand spectrum recipients

All operators given access to the so-called "high demand spectrum" must be subjected to minimum obligations to allow other service providers to access their networks.

Option Three: Spectrum band harmonisation

Spectrum policy must provide for spectrum band harmonisation including the adoption of contiguous band assignments to promote sharing of spectrum.

Option Four: Competitive bidding

In terms of spectrum pricing, it is important for the price charged to reflect the true value of spectrum as a scarce resource. For this to take place, a competitive bidding process needs to be accommodated in the spectrum assignment model.

Option Five: *More multiplexes to accommodate future terrestrial services*

In order to accommodate future television technologies like High Definition, Ultra High Definition and 3D more multiplexes should be catered for during the digital migration phase

Option Six: Licence exempt spectrum

- **Which of the above options or combination of options should underpin the spectrum allocation regime? Provide motivations for preferred options.**

3.7.4.2 Spectrum Assignment and Licensing

ICASA is responsible for assigning spectrum to ECNS licensees. Traditionally spectrum has been assigned through a comparative administrative process (beauty contest), or on a first-come first-served basis. The EC Act and the National Spectrum Policy, however, provide that when there are competing applications or the demand for radio frequency spectrum exceeds the amount available, other approaches, including market approaches, could be adopted for the assignment of frequencies.

Market based approaches to spectrum management such as spectrum auctions, spectrum sharing, and spectrum trading are considerations for certain licences. In such instances, spectrum is placed in the hands of users that most value spectrum. This also enhances efficient use of spectrum.

OPTIONS

Option One: Status quo

Maintain current spectrum licensing regime i.e. discretionary assignment or a command and control approach.

Option Two: Market-based approach

Implement primarily market-based spectrum licensing through competitive bidding and the use of auctions.

Option Three: Promote spectrum commons / licence exempt spectrum in bands which are suitable

Policy provisions would highlight the value of licence-exempt spectrum usage and seek to promote it through directing that suitable further bands be allocated to the licence-exempt on a secondary basis or that the transmission restrictions on existing licence-exempt bands be relaxed.

Option Four: Hybrid model

Implement a hybrid spectrum licensing model combining elements of the current regime and market-based and spectrum commons approaches.

- **Has the current spectrum licensing regime met Government objectives as well as national needs?**
- **Which of the above options do you think would best meet the objectives of policy?**

3.7.5 Spectrum Pricing

One way of managing demand for a limited resource is to charge fees for its use. Spectrum users are therefore required to pay for the privilege of using this resource through spectrum fees. Spectrum fees also reduce the rationale for "hoarding" spectrum. Spectrum is not "owned" by a licensee – the licensee has a right of use. The fees to be paid for the usage of the radio frequency spectrum should be based on factors that take into account the inherent properties of the radio frequency spectrum, such as the frequency band, congestion in the particular band, and other factors such as bandwidth, coverage, degree of loading, spectrum efficiency of the equipment used, economic factors and geographical area of operation.

3.7.5.1 Spectrum pricing for all user services

Section 7 of the National Radio Frequency Spectrum Policy of 2010 provides that all spectrum users should be liable for the payment of spectrum fees unless the spectrum user is exempted from payment through appropriate policy directions issued by the Minister.

South Africa introduced the Administrative Incentive Pricing (AIP) model in 2012. The goal of AIP is to promote efficient spectrum use. Prices are set by the regulator at a level that seeks to promote efficient spectrum use and not simply recover spectrum management costs. The idea is that if spectrum pricing reflects its value, a user with unused or underutilised spectrum will choose to return it rather than pay the charge.

The current spectrum pricing regime does not distinguish between licensees that use the spectrum for commercial purposes to generate profit and licensees that use the spectrum for non-commercial purposes.

OPTIONS

Note the options are not necessarily mutually exclusive.

Option One: Maintain the status quo

The AIP model introduced in 2012 would be maintained. All users of spectrum would be liable for the payment of spectrum fees unless exempted from payment through a policy direction issued by the Minister.

Option Two: Distinction between commercial and non-commercial pricing model

The spectrum model would distinguish between licensees that use the spectrum for commercial purposes and those that use the spectrum for non-commercial purposes, such as emergency services, defence, research and development.

Option Three: Designation of categories for fee exemption

Policy directions are required to identify users that should be fee exempt. A policy direction designating all categories that would qualify for fee exemptions would be issued. All other users currently not paying fees would have to start paying a fee.

- **Which of the above options do you support, and why?**
- **Do you agree that the AIP model should continue to apply to all users of spectrum irrespective of purpose of use? Which other model would you propose?**
- **Should auctions be included as a pricing model, and if so, which auction variant must be preferred?**
- **Are there any other means of addressing non-payers of spectrum if they do exist and do think they should be exempted?**

3.7.5.2 Spectrum pricing for government services

The use of spectrum by Government is essential for, among other things, national safety and security and aeronautical and maritime applications. As Government at various levels begins to turn to the Internet to increase efficiency of service delivery, it might need spectrum allocation. For example, the City of Matlosana proposed that licences for spectrum for municipalities, should be issued to enable it to provide e-services to citizens, especially the poor. Of course in this regard, there are other options, which might not necessitate needing a licence.

Government departments in their submissions lamented the high costs of accessing the spectrum to deliver public services. They questioned the need to make public services pay for the use of a public resource. They also questioned why public entities are required to pay the same fees as commercial entities. On the other hand, the Link Centre was of the view that spectrum fees function as an important incentive to efficient utilisation of assigned spectrum, and that spectrum fees should therefore also apply to government entities.

OPTIONS

Option One: Maintain the status quo

As currently, all providers would be treated the same, including government.

Option Two: Special pricing for spectrum assigned for government services

The spectrum assigned for specified government services (e.g. safety and security, aeronautical, maritime, education, health) would be priced differently to spectrum assigned for commercial use.

Option Three: No-fee option for government

No-fee spectrum would be set aside for government public services. Government and the regulator would be compelled to analyse public sector spectrum needs and review this every five years.

- **Which of the above options do you support, and why?**
- **Are there any other means of addressing governments' concern, other than those proposed?**

3.7.5.3 Compensation for the cost of migration

Migration or reframing of spectrum is a recognised feature of spectrum management. Currently there is no policy on compensation for the costs incurred by licensees in migrating services from one frequency band to another.

The 2013 frequency migration plan stipulates that the users of spectrum to be migrated shall not be entitled to be compensated for the cost of the migration, and "*to the extent that if possible, the cost of migration should be minimised by considering, amongst other things, the duration of the licence and economic life time of the equipment*".

OPTIONS

Option One: Incoming licensee compensates the outgoing licensee for the cost of migrating

Option Two: The licensee that is required to migrate covers its own costs

Option Three: Migration only occurs at the end-of-life of equipment when costs are minimal

Option Four: A portion of proceeds from the sale of spectrum (e.g. the digital dividend) would be used to fund migration

- **Which of the above options is viable to compensate licensees for the costs of migration? Motivate your preferred option.**

3.7.6 Other issues

3.7.6.1 Spectrum trading

Spectrum trading is complementary to other market-orientated mechanisms for allocating spectrum. Spectrum trading should be allowed, for example, in certain bands used for civil telecommunication in order to simplify authorisations. Policy reforms in this regard will facilitate the migration of spectrum to those that can generate the greatest value for society and promote the efficient and optimal usage of spectrum by enabling more licensees to obtain access without having to depend only on the regulator for frequency assignments.

The 2014 amendments to the EC Act provide that ICASA may, taking into account the objects of the Act, prescribe procedures and criteria for—

- The amendment, transfer, transfer of control, renewal, suspension, cancellation and withdrawal of radio frequency spectrum licences; and
- Permission to assign, cede, share or in any way transfer a radio frequency spectrum licence, or assign, cede or transfer control of a radio frequency spectrum licence as contemplated in subsection. (Section 31(3))

OPTIONS

Option One: Maintain the status quo

The status quo would be maintained.

Option Two: Additional restrictions on spectrum trading

Limited trading would be allowed, but with additional restrictions specified in legislation: For example, trading could be restricted to certain bands or subject to pricing restrictions.

Option Three: Spectrum is freely tradeable

Spectrum would be freely tradeable, including letting, sub-letting ceding, sharing and transferring, subject only to notifying ICASA

- **Which of the above options do you support, and why? Are there any other means or ways of trading you can propose?**

3.7.6.2 Spectrum Sharing

Increased spectrum sharing will become more and more important to address scarcity of available spectrum. In a given spectrum band, adoption of one form of spectrum-sharing usually precludes many other sharing possibilities. Since policy must change slowly to protect legacy systems, a policy decision in favour of one form typically precludes the alternatives for many years.

Dynamic Spectrum Access (DSA) - the opposite of the current static spectrum management policy – is one way of facilitating this. DSA has broad implications that encompass various approaches to spectrum reform.

OPTIONS

Option One: Dynamic Exclusive Use Model

The basic structure of the current spectrum regulation policy would be maintained and spectrum bands licensed to services for exclusive use. Flexibility would, however, be introduced to improve spectrum efficiency. Two approaches could be proposed under this model:

- ***Spectrum property rights****:* The approach allows licensees to sell and trade spectrum and supports technology neutrality. The economy and market would play a more important role in driving the most profitable use of this limited resource. Note that even though licensees have the right to lease or share the spectrum for profit, such sharing is not mandated by the regulation policy
- ***Dynamic spectrum allocation***: This approach aims to improve spectrum efficiency through dynamic spectrum assignment by exploiting the spatial and temporal traffic statistics of different services. In other words, in a given region and at a given time, spectrum is allocated to services. This allocation, however, varies at a much faster scale than the current policy. Based on an exclusive-use model, however, these approaches cannot eliminate white space in spectrum resulting from the bursty nature of wireless traffic.

Option Two: Open Sharing Model (spectrum commons)

This model uses open sharing among peer users as the basis for managing a spectral region. Advocates of this model draw support from the success of wireless services operating in the

unlicensed ISM band (e.g. Wi-Fi). Centralised and distributed spectrum sharing strategies have been initially investigated to address technological challenges under this spectrum management model.

Option Three: Hybrid model - Hierarchical Access Model

Built upon a hierarchical access structure with primary and secondary users, this model can be considered a hybrid of options 1 and 2. The basic idea is to open licensed spectrum to secondary users and limit the interference perceived by primary users (licensees). Two approaches to spectrum sharing between primary and secondary users have been considered: *spectrum underlay* and *spectrum overlay*. Compared to the dynamic exclusive use and open sharing models, this hierarchical model is perhaps the most compatible with the current spectrum management policy and legacy wireless systems

- **Do you agree that the sharing model should be applied to ensure effective and efficient management of spectrum? Is so, why? If not, why?**
- **Which option do you think would best advance effective and efficient management of spectrum? Why?**

3.8 Emerging issues

Technologies are innovative ideas that are commercialised and mainstreamed so that some value is derived. The continuous deriving of value from a technology defines the trend of that technology. A key factor in measuring a trend is its ability to impact, evolve and transform businesses and individuals. Generally there are two categories of trends, viz. disruptor and enablers. Disruptors are trends that create a sustainable positive disruption in transforming business, government and society. Enablers can be defined as technology developments that alone or in combination with related technologies, provide a way to generate giant leaps in performance and capabilities of a user or user group.[57]

There were limited questions on technology trends and new innovations in the Green Paper, and hence few submissions. Notwithstanding, a future White Paper will need to be cognisant of emerging issues and how they might impact on users and therefore policy to ensure policy is an enabler rather than inhibitor.

This section presents an overview of some of the emerging issues requiring policy consideration. The intention is not to provide an exhaustive list of trends, given that technology innovation is constantly taking place. Given the effect of Moore's Law,[58] it is becoming increasingly difficult to predict the effect of faster processers and more compact devices.

Note: *There are also several other emerging issues and trends dealt with in other chapters*

3.8.1 IP based technologies

The Internet Protocol suite brings together different transmission layer protocols into a single, standardised protocol architecture, which can be utilised by applications for different communication purposes. As a result, any application that supports TCP/IP will also be able to

57 Deloitte. 2014. What are technology enablers; and why are they relevant?
[online: http://deloitteblog.co.za/2014/02/06/what-are-technology-enablers-and-why-are-they-relevant/]
58 Moore's Law is a computing term which originated around 1970; the simplified version of this law states that processor speeds, or overall processing power for computers will double every two years. See http://www.mooreslaw.org/

communicate over any IP-based network. The predominantly used IP based technologies are Voice over IP (VoIP), Internet Broadcasting, and Wireless Mobile Technology.

IP-based technologies make it possible to distribute many applications over a single network. In the IP-based environment there is no longer any need to build distinct and separate networks for voice, data, audio and video. This significantly decreases costs associated with network roll-out, and network operations.
On the application side, IP-based technologies impact positively in that they remove the need for specialised networks for application providers. New service providers are able to enter the market or create a new market by connecting to any available IP-based network. It is therefore possible to expand service delivery and competition with appropriate policies and regulations.

The shift to IP-based technologies present a major challenge to the current regulatory structure that still distinguishes between electronic communications network operators based on the kind of platform they operate on. In theory, electronic communications licensees could offer any type of service and data, but the current legislation requires the holding of a broadcasting licence to offer broadcasting services. The current provisions do not take into account the inherent capabilities of the IP-based network to transmit any kind of data to any device that can receive it.

In the options below, questions are posed rather than options. In responding to these, the effects of IP based technologies should be considered. These include:

- Service providers offering equivalent voice and data services which are not regulated;
- A growing user demand and sophistication exerts growing pressure on spectrum;
- An increasing pressure for networks and services to become more interoperable, with users expecting to transfer seamlessly between networks;
- Increased pressure on regulation to keep up with the market changes;
- The need for regulators to ensure an even and competitive landscape for services for all players, which by implication is a requirement to level the playing field via policy.

POLICY QUESTIONS

The framing of potential policy requires a response to the following issues:[59]

ISSUE 1: Universal access/service provisions

Should access to IP-based networks, in particular via high-speed links, also be subject to universal access/service provisions?

ISSUE 2: Consumer protection

A key policy question is whether, and if so to what extent and how, provisions relevant to consumer protection should apply to the use of IP-based networks or the provision of IP-based applications, taking into account the traditional differences in the treatment of public and private networks.

ISSUE 3: Supervision of dominant market players

[59] These questions were extracted from: ITU, "A Handbook on Internet Protocol (IP)-Based Networks and Related Topics and Issues", 2005 http://www.itu.int/ITU-T/special-projects/ip-policy/final/IPPolicyHandbook-E.pdf

To what extent and how, should the regulator be tasked with supervising suppliers of IP-based networks or IP-based applications, taking into account the traditional differences in the treatment of public and private networks?

ISSUE 4: Emergency services

To what extent and how, should emergency service provisions apply to IP-based networks or IP-based applications?

ISSUE 5: Access for persons with disabilities

To what extent and how should access provisions for persons with disabilities apply to IP-based networks or IP-based applications, taking into account the traditional differences in the treatment of public and private networks?

ISSUE 6: Security (e.g. law enforcement, cybercrime, legal intercept) and privacy protection

Whether, and if so, to what extent and how, provisions related to security and privacy should apply to IP-based networks or IP-based applications, taking into account the traditional differences in the treatment of public and private networks?

- **Please respond to the questions posed. Highlight areas which you feel are not important. Please also add any other policy implications of IP-based technologies which you believe require policy consideration.**

3.8.2 Over-the-top (OTT) services

Many users of communications services are currently using OTT services. OTT refers to services provided over the Internet rather than solely over the provider's own managed network (OECD, 2013, p. 20).[60] Examples of OTT services include chat applications (e.g. Whatsapp, Wechat, Facebook Messenger), streaming video services (e.g. Netflix, Amazon Prime, YouTube), voice calling and video chatting services (e.g. Skype, Google Hangout, Facetime) and new services such as videogame streaming (e.g. Twitch). Internet based broadcasting-like OTT content services are dealt with extensively in audio-visual policy options in Chapter Five, and thus this section will not deal with these.

The implications of OTT services in economic terms, is that OTT players which rely on IP based networks to reach their customers do not make any direct contribution towards the cost of providing it. Some network service providers have argued this causes them harm. In the USA, for example, network carriers have reacted to OTT. Unuth (2014) reports that when Apple's iPhone was released, AT&T imposed a restriction on VoIP services over its 3G network. After pressure from users and the US regulator, the restriction was finally lifted. It is understood that US providers have realised they can't fight that battle, and that they should content themselves with reaping the benefits of offering good 3G and 4G connectivity for those who use OTT services. Some network service providers even have their own OTT service (which is finally not really OTT, but rather an alternative to it), with favourable rates to its customers.[61]

[60] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2418792
[61] Unuth, N, "What is OTT?", 2014 http://voip.about.com/od/markettrends/a/What-Is-Ott.htm

The ITU makes the following points about OTT services: [62]

- Proliferation of content and applications services is to be welcomed – they add utility for users. Some new OTT services did not previously exist and do not undermine the current operator business models (e.g. location-based GPS mobile services). However some new OTT services may threaten the economics of investing in fast broadband networks (e.g. internet television).
- Change is inevitable. As network operators migrate to next generation networks, voice services will become software applications riding over the network. During this transition, policy-makers are finding different paths to balancing innovation, investment and competition.
- Regulators cannot hold back the tide of changes to maintain the status quo. To a large extent, existing operators are able to change their business models to stay afloat. For example, OTT services manifest themselves on networks as traffic. If network builders and operators align revenue models more with traffic, their financial position is more secure. This would reverse current trend.
- These changes are disruptive and inconvenient for those with a stake in existing arrangements, but the benefits of change outweigh the costs. For example, VoIP leads to dramatic reductions in the cost in telecommunication and this has beneficial impacts on the development of business and economic growth. India found that VoIP opened up new employment opportunities with call centres serving overseas markets.
- Regulators generally support innovation. They prevent fixed and mobile operators from blocking or degrading competing services.

A key policy issue thus is whether OTT services should be regulated or not. For instance the Telecom Regulatory Authority of India (TRAI) took a decision in August 2014 not to regulate OTT. TRAI's argument was that the mobile operators recover their losses through increased data revenue. Mobile operators had claimed that the use of applications such as Skype and WhatsApp would annually cost them over US$822 million in lost revenue. There are similar claims that also being made here in South Africa by the mobile operators.

- **Should OTT services in South Africa be regulated?**
- **If so, how?**

3.8.3 Conclusion

- **Are there any issues that you believe have been neglected?**
- **Can you suggest any benchmarks and targets which may be incorporated to monitor progress against policies objectives?**

[62] ITU-infoDev "ICT Regulation Toolkit: Regulating 'Over-the-Top' Services", undated, http://www.ictregulationtoolkit.org/2.5.1

4 Policy Options: The Digital Society

4.1 Introduction

The World Summit of Information Societies (WSIS) Plan of Action emphasises the key role electronic communications networks can play in enabling the implementation of development strategies and highlights that in order to harness this, governments should develop and implement "*forward looking and sustainable national e-strategies*" in dialogue with the private sector and civil society. The Policy Options and issues put forward in this Chapter are in many ways focused on further developing the principles and strategies necessary to finalise such a holistic national e-strategy to ensure a coordinated approach to building an information society. It builds on existing strategies, including South Africa's national broadband policy, '*South Africa Connect: Creating opportunities, Ensuring Inclusion*", adopted in 2013

It is recognised that ICTs are a tool in developing a dynamic information society and that this is dependent to a large extent on universal service and access to the Internet and to other ICTs. It is also crucial that government policies ensure all South Africans have the skills and opportunities to meaningfully engage with services and products available online, via mobile devices or on platforms such as the Digital Terrestrial Television (DTT) platform. South Africans must also have opportunities and the skills to create content and offer services and products themselves and know how to protect themselves online.

Promotion of universal access to affordable broadband and other platforms is, however, dealt with in Chapter Three (Policy Options: Infrastructure and Services), skills development in Chapter Six (Policy Options - Industry Growth) and audio-visual content (including broadcasting and broadcasting-like content) in Chapter Five. The SA Post Office (SAPO) can assist in extending digital services. While these are referred to where necessary (e.g. regarding accreditation of electronic signatures), Policy Options for Infrastructure and Services (Chapter Three) deals extensively with the role of SAPO in general including its role in promoting and supporting e-government, e-commerce and other services.

This Chapter/Policy Options Paper focuses therefore on digital services (including e-government services), the digital economy (and e-commerce) and the issues necessary to promote trust and confidence (including privacy provisions, protection of consumers, cybercrime and cybersecurity). The primary focus is on the ambit of the DTPS and its roles and responsibilities as well as those of the agencies aligned to it. Given that a dynamic information and knowledge society relies on cooperation and coordination between all spheres of government, the private sector, civil society and citizens, issues related to other entities are also dealt with to some extent with a focus on how to facilitate the partnerships necessary to achieving the vision.

The terms e-services, e-commerce and e-society are used to cover the use of a range of digital technologies and platforms including the Internet, mobile phones and other platforms, for example, DTT. It also in this context refers to use of SMS and other such services.

4.2 Context

4.2.1 National policies

4.2.1.1 National Cyber Security Framework

Cabinet approved the National Cyber Security Framework in March 2012 and the DTPS established the National Cybersecurity Advisory Council in 2013 in terms of this to advise government on cybersecurity policies. The aim of the Framework is to:

- Promote a cybersecurity culture and facilitate compliance with minimum security standards;
- Strengthen mechanisms in place to prevent and address cybercrime, cyber warfare, cyber terrorism, and other related issues;
- Establish public-private and societal partnerships within South Africa and internationally to strengthen awareness and enforcement;
- Ensure the protection of national critical information infrastructure;
- Promote and ensure a comprehensive legal framework governing cyberspace; and
- Ensure adequate national capacity to develop and protect South Africa's cyberspace

A number of government departments are involved in the implementation of the Framework under the oversight of the Cabinet Justice, Crime Prevention and Security Cluster. The DTPS is specifically tasked with establishing a National Cybersecurity Advisory Council, Cybersecurity Hub as well as the national Computer Security Incident Response Team (CSIRT).

4.2.1.2 Electronic Government: The Digital Future: A Public Service IT Policy Framework

This policy on e-government was developed by the Department of Public Service and Administration (DPSA) in 2001. It is currently being reviewed.

4.2.1.3 King III and Companies Act

The 2009 King Report on Governance for South Africa and the King Code of Governance Principles (collectively referred to as King III) has a full chapter on information technology governance recognising that IT is fundamental to the growth of many organisations but also poses significant risks. It states therefore that IT should be governed at a Board level. It requires that a specific independent audit on IT is conducted.

4.2.1.4 Other policies

A number of other policies are relevant to building a digital society, including the Minimum Information Security Standards and the Minimum Operability Standards. Both need to be updated but are in place.

4.2.2 Relevant laws

Provisions related to the digital economy and knowledge society are spread across many different laws, including:

- E-communications are currently regulated by the Electronic Communications and Transactions Act, 2002 ("ECTA" or "ECT Act") which provides for "*the facilitation and regulation of electronic communications and transactions*". Amendments to the Independent Communications Authority of South Africa Act introduced in 2014 give the regulator some responsibilities in relation to electronic transactions including monitoring the implementation

of ECTA. Amendments to the ECT Act were drafted in 2012 but have yet to be promulgated, pending the outcomes of the ICT Policy Review process. A number of regulations have been promulgated under the Act, including the Alternative Dispute Resolution Regulations.[63]

- The Promotion of Access to Information Act, no 2 of 2000 ("PAIA") which gives effect to the constitutional right to access to information.
- The Public Service Act, 1994 (amended in 2007) states that the Minister of Public Service and Administration is responsible for information management in Government and for electronic government ("*the use of information and communication technologies in the public service to improve its internal functioning and to render services to the public*").
- The Regulation of Interception of Communications and Provision of Communication-Related Information Act, no 70 of 2002.
- The Film and Publications Act, no 65 of 1996 which sets out the regulatory framework for film and publications by means of "*classification, the imposition of age restrictions, and giving of consumer advice*" and bans the exploitative use of children in pornographic publications, films or on the internet. The Film and Publications Board (FPB) established in terms of the Act has indicated that an amendment process is underway "*to allow for better regulation of online content distribution*".[64]
- The Consumer Protection Act, no 68 of 2008 which sets out an overarching framework for consumer protection in South Africa.
- The Protection of Personal Information Act, no 4 of 2013 regulates how personal information can be processed.
- The Income Tax Act, no 58 of 1962 deals with the levying of income tax on all individuals either residing or earning their income in South Africa along with the Tax Administration Act, 28 of 2011 and the 2014 "*Rules for Electronic Communications prescribed under the Act*".
- A range of laws related to copyright and intellectual property protection such as the Copyright Act (no 98 of 1978), the Patents Act (no 57 of 1978), the Trade Marks Act (no 194 of 1993), the Intellectual Property from Publicly Financed Research and Development Act (no 51 of 2008) and the Intellectual Property Rights Amendment Act (no 38 of 1997). The Intellectual Property Laws Amendment Act, 28 of 2013 (IPLAA) was assented to by the President in December 2013 but is not yet in effect. It focuses on the protection of indigenous knowledge.
- The Protection from Harassment Act, no 17 of 2011, provides easy, quick and inexpensive mechanisms for victims of harassment to get a court order to protect themselves. The Act includes unwanted verbal or written communication via electronic communications in its definition of harassment.
- The National Gambling Act, No 7 of 2004
- The Protection of Administrative Justice Act, no 3 of 2000, sets out provisions to ensure the constitutional right to administrative justice.

[63] Department of Communications, "Electronic Communications and Transactions Act 2002: Alternative Dispute Resolution Regulations", 22 November 2006, http://www.domaindisputes.co.za/downloads/AlternativeDisputeResolutionRegulations.pdf

[64] Ellipsis, "The Film & Publications Board and online content regulation", 13 September 2014, http://www.ellipsis.co.za/the-film-publications-board-and-online-content-regulation/

4.2.3 International Treaties and Agreements

A number of International, regional and SADC treaties, protocols, agreements and policies are of relevance, including:

- The ITU/UN **World Summit on the Information Society** to "*harness the potential of knowledge and technology for promoting the goals of the United Nations Millennium Declaration and to find effective and innovative ways to put this potential at the service of development for all*". It was held in two phases, and included governments, members of civil society and of the private sector:
    - The Geneva Phase (2003) adopted the Geneva Declaration of Principles and the Geneva Plan of Action which outline a clear statement of political will and concrete steps to establish the foundations for an Information Society for all.
    - The Tunis Phase (2005) adopted the Tunis Commitment and Tunis Agenda for the Information Society which considered Internet governance, financing mechanisms and follow up implementation of the commitments made in the two summits. [65]
- The **Budapest Convention on Cybercrime, 2001,** is an international treaty dealing with crimes committed via the Internet and other computer networks, including infringements of copyright, computer-related fraud, child pornography, hate crimes and violations of network security.
- There are a range of treaties that deal with **intellectual property** issues including the Berne Convention (1978), the Trade Related Aspects of Intellectual Property Rights (TRIPS) of the General Agreement of Trade in Services (GATT), the World Intellectual Property Organisation Treaty (WIPO Treaty), and a number of other treaties administered by WIPO such the WIPO Performance and Phonograms Treaty
- The **African Union Convention on the Establishment of a Credible Legal Framework for Cyber Security in Africa** which was brought into law in 2014 indicates that it is aimed at harmonising laws in African countries dealing with e-commerce, personal data protection, cyber-security promotion and cyber-crime control.[66]
- The **Southern African Development Community** ICT Ministers adopted **an e-SADC Strategy** in May 2010. As part of the implementation of the strategy, a **SADC e-Commerce Strategy and Action Plan** aimed at enhancing regional trade through e-Commerce was developed and adopted in November 2012. Among other things, the Strategy raises the need to develop a holistic framework to raise awareness on cybersecurity and cybercrime issues, establish national and regional Computer Incident Response Teams (CIRTs), and collect and share cybercrime statistics/indicators for a SADC Annual Cybercrime Reports.
- SADC has also developed **Harmonised Cyber Security Model Laws**, including **e-Transactions/e-Commerce, Data Protection and Cybercrime model laws**.
- The **United Nations Commission on International Trade Law** (UNCITRAL) specialises in commercial law reform and the harmonisation of rules on international business. It has formulated a range of related conventions, model laws and rules.

[65] http://www.itu.int/wsis/basic/about.html
[66] http://au.int/en/cyberlegislation

4.3 Overall policy approach

ICTs are an important tool for sustainable development and economic growth. Government, however, will need to provide strong leadership if the benefits of new technologies to social, cultural and economic development are to be realised.

Probably the most important principle that underpins all policy approaches in this Chapter is that of ensuring inclusion and that all South Africans can access and interact with the benefits of building a digital economy and information society. This is in line with the SA Connect Broadband Policy and the NDP. Inclusive development requires not only access to infrastructure, devices and affordable services, but also that content, information, products, services and applications developed are relevant to the most disadvantaged sectors of society, support welfare and entrepreneurship and are available in a range of South African languages. E-government and other e-services and applications will further have to consider the different technologies used by different sectors of society and, for example, design applications recognising that many users will be, at least in the medium term, reliant on mobile technology and less sophisticated mobile phones. The costs of accessing data will also have to be taken into account.

Accessibility by persons with disabilities is another critical aspect of inclusion to address in ensuring universal access and should be built into all policy approaches and be considered in developing innovative services and solutions.

As emphasised in the National Broadband Policy, open access and the promotion of interoperable platforms and standards should be another primary focus of government policy if the full benefits of the digital society are to be reaped, and fair competition between new and existing companies and large firms and SMMEs facilitated. The impact of new technologies and the Internet on competition will need to be continually assessed to address any new challenges that might arise.

Given the above, policy will need to be flexible, people-centred, rights-based and balance the need to promote innovation with that of protecting users. Creative policy interventions will have to be developed in order to protect individual rights while ensuring regulation does not inadvertently constrain economic development. Finally as noted in several submissions to the Green Paper, digital technologies and e-strategies are not ends, but tools to assist the public, private and non-governmental sectors to fulfil their transformation goals.[67]

4.3.1 Government approach

There are currently a number of different e-policies and strategies in place. The DPSA is responsible for e-government strategies and developed a national e-government policy in 2001 (The Digital Future). The ECT Act meanwhile states that the Minister of Telecommunications and Postal Services should lead the development of a three year national e-strategy and monitor its implementation. It states that this should include provisions on e-government strategies developed in consultation with

[67] Submissions that focused on this include those from Cell C, the National Cybersecurity Advisory Council, Sizwe Snail Attorneys, the Western Cape Government ICT Policy and Strategy Directorate, SALGA and several municipalities and the Western Cape Government ICT Policy and Strategy Directorate.

the Minister of Public Service and Administration, and a national policy for electronic transactions. Such a policy has not been finally adopted by Cabinet, though an Information Society Development (ISAD) plan was developed and approved by Parliament in 2007. In addition, a cybersecurity framework has been developed. and as indicated in the relevant sections below, a draft cybercrime policy is under discussion. Subsequent to this, the NDP has called for the finalisation of a national e-strategy that cuts across government departments and sectors of society.

It is clear that the issues related to building a digital society cut across many different government departments, entities and spheres of government and that there is a need therefore for a holistic overarching approach that would define the different issues and areas to be covered and assign responsibilities for e-government, the development of infrastructure and networks to support strategies, the promotion of a digital society, e-commerce and e-services across society as well as issues on crime and security. Initiatives related to skills development and building of awareness and digital literacy also need to be coordinated to increase their impact.

Several submissions highlighted that coordination across a range of government departments and entities is crucial and the need for alignment of the different laws in place. Proposals and options relating to this are dealt with at the end of this Chapter. Research ICT Africa said that an "*integrated national e-strategy*" must "*cut across sectors, government departments, meet the diverse needs of the public sector, the formal sector and the informal sector, foreign investors, start-ups, and citizens where ever they may be*".[68]

Others highlighted that government has a critical role to play not only in developing policies in relation to e-government, e-commerce and e-services, but also in providing South African best practice models in relation to the provision of such services. The SACF, for example, stated that government should lead the way in adopting digital technologies and shifting activities online, showcase achievements of business innovators and develop e-commerce certification certificates. It also proposed that government could through its procurement policies facilitate increased compliance with laws by service providers by, for example, taking into account the ability of the provider and/or technology to protect the privacy and security of customer information. [69]

4.4 E-Government

E-government is "*the use of ICT and its application by the government for the provision of information and public services to the people*".[70] It includes the use of technologies to make government work processes more efficient, strengthen public service delivery and enhance communication channels with citizens:

- Government to Government programmes (G2G);
- Government to Citizen programmes (G2C);
- Citizen to Government programmes (C2G); and
- Government to Business programmes (G2B).

[68] Research ICT Africa, Green Paper submission, page 7
[69] SACF, Green Paper submission, page 28
[70] United Nations, "E-government Survey 2014", Executive Summary, page 2, http://unpan3.un.org/egovkb/Portals/egovkb/Documents/un/2014-Survey/0ExecutiveSummary.pdf

The UN in its latest e-government survey states that there are four stages to e-government:

- Stage One – Emerging Presence: E-government presents information which is limited and basic. It includes an official web-site and links to individual web-sites.
- Stage Two – Enhanced Presence: Online services of government include interactive services such as downloadable forms.
- Stage Three – Transactional Presence: E-government allows for two-way interaction including e-tax filing for example and systems to allow for citizens to submit applications online 24/7.
- Stage Four – Networked Presence includes an integration of all programmes enabling participatory decision-making and involvement of society in a two-way open dialogue.

South Africa ranked 93 out of the 193 countries included in the UN survey (up from 101 in the 2012 survey) and 97 in the e-Participation Index. [71]

As highlighted previously, the Minister of Public Service and Administration is responsible for government's overall e-government strategy in terms of the Public Service Act. The DPSA developed an e-government strategy in 2001 and is currently reviewing this. The ECT Act notes that an e-strategy must incorporate an e-government strategy and plan and emphasises the need for consultation and coordination between the DPSA and DTPS and other government departments, spheres and public entities. An Intergovernmental Task Team has been established to develop the "National e-Government Strategy 2030" in recognition of this. It is led by the DPSA and the DTPS is part of the team.

A number of structures, policies, programmes and activities have been put in place or are in the process of being developed in order to assist in delivering and enhancing e-government services:

- The SA Connect Broadband Policy emphasises the need to pool public sector demand for broadband and to procure "*high-capacity and future-proof network capacity at more affordable rates to address public sector broadband requirements*".[72] The National Broadband Advisory Council was established in March 2014 to advise the Minister on implementation of the policy.
- The Presidential Infrastructure Coordinating Commission's (PICC) SIPs 15 focuses on expanding access to communication technology and extending broadband coverage to all households by 2020 by establishing core Points of Presence in district municipalities, extending Broadband Infraco's fibre networks across provinces and ensuring penetration into rural areas.[73]
- In order to facilitate the above two policies and programmes of action, state owned entities are undergoing a rationalisation process. SITA and Broadband Infraco have been transferred to the DTPS.

[71] UN Public Administration Country Studies, "UN E-Government survey 2014", http://unpan3.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2014

[72] Department of Communications, "South Africa Connect: Digital Opportunities, Ensuring Inclusion: South Africa's Broadband Policy", page 30

[73] PICC, "A summary of the South African National Infrastructure Plan", page 23, http://www.gov.za/sites/www.gov.za/files/PICC_Final.pdf

- The Government IT Officers Council (GITOC) was formed in 2000 as an advisory body to government and facilitates effective and efficient information technology and information management in the public service.

There are numerous applications running in different government departments and entities, from one-stop web portals to electronic transactional services such as those set up by the South African Revenue Services for tax. Some municipalities have also introduced mobile applications to allow for reporting of service delivery problems. Other e-government initiatives include e-Natis online vehicle and transport management system, the e-justice programme to improve judicial procedures, the e-Hanis programme to streamline and integrate personal identification data across government departments and the National Automated Archival Information Retrieval System to facilitate access to public archived records.

In further developing e-government services, it is important that government develop specific interventions, including social media, to promote participation by citizens in governance and monitoring of service delivery. There is a need to develop standardised approaches to such engagement, and ensure that government not only develops tools to promote citizen engagement but also mechanisms to ensure that contributions from the public are engaged with and, for example, problems identified by organisations and individuals addressed.

A number of stakeholders made proposals in response to the Green Paper emphasising the necessity of strengthening coordination of e-government services and ensuring harmonisation of policies. Submissions highlighted the need for government to use ICTs as a catalyst to improve the quality and cost-effectiveness of government operations and to drive improvement in service delivery. Stakeholders proposed that the DPSA and DTPS work more closely on these issues, that a range of enforceable norms and standards on e-government and information management be developed and that SITA's role is reviewed. It was suggested that SITA focus on design development and implementation support for government entities with limited ICT capabilities and develops wholesale business models to improve procurement efficiency across government.[74]
The South African Local Government Agency (SALGA) and a number of individual municipalities also made submissions focusing on the need to support implementation of e-government services at a local level. SALGA emphasised the need for any e-government strategies, policies and implementation plans to specifically consider the needs of local government and its role in delivering services at a local level. It said that all related policies need to be reviewed given changes in technology brought about by convergence and proposed that specific policies on open data (digital information available at no cost through free internet connectivity to key sites) must be incorporated. [75]

In a supplementary submission, SALGA noted that there are very different capacities in local municipalities to integrate ICT into their plans and ensure that technology addresses efficiency within local government and is used to improve services to the public. While many metros have implemented ICT strategies to support development initiatives, district and local municipalities often

[74] Submissions on this were made by a number of entities including National Treasury, the Progressive Professionals Forum (PPF), Snail Attorneys and the NCAC
[75] SALGA, Green Paper submission, pages 4-5

have no ICT strategy and struggle to build efficient and effective financial and administration systems.

The Municipality of Matlosana in its response stated that any review of e-government initiatives should also include the Municipal Structures Act of 1998, the Municipal Systems Act of 2000 and local government performance management regulations to incorporate provisions on how ICT in local government should be governed, regulated, monitored and evaluated. It also proposed that:

- Training for ICT personnel in municipalities be standardised;
- Training service providers should be regulated to ensure accreditation in line with NQF requirements.
- Executive training in the importance of ICTs be introduced.
- Mechanisms be put in place to attract ICT expertise at a local government level.[76]

Snail Attorneys meanwhile noted that it was important in developing a trusted and secure e-commerce environment to urgently use digital technologies to address challenges in the justice system. An e-justice system focusing on improving the efficiency of the justice system would address some of the delays currently beleaguering prosecution such as the loss of court files and dockets.[77]

POLICY OPTIONS: E-GOVERNMENT STRATEGY

- There is clearly a need to update the existing e-government strategies as well as align and update related regulations and standards. This will assist in determining public sector need, and pooling this as indicated in the National Broadband Policy. Currently both the DPSA and DTPS have a role to play in this.
- There is also clearly a need to develop additional norms and standards, both on technology solutions and content approaches to promote openness (including open data policies).
- Linked to this are questions about what issues and areas an e-Government strategy should address. It is proposed that key areas include e-administration (ICTs to improve the internal functioning of government institutions), e-service delivery (public investment to deliver public services and information to the public), and e-participation (tools and mechanisms to enhance interaction and dialogue with the public). A strategy can define these areas and commitments. While some implementation is possible at a national level, provinces, municipalities, individual departments and public entities need to develop their own digital strategies linked to their specific development plans and programmes. These would ultimately need to be integrated into a holistic government portal/s. An overarching e-government strategy and implementation plan could indicate key components and approaches to be considered by individual departments, spheres and entities in developing digital plans to support their strategies.
- A policy must also develop tools and mechanisms to ensure that all government services are integrated so that citizens only have to provide information once to receive/access all government services from any public service point. It will have to promote the development

[76] City of Motlasana, Green Paper submission, pages 7-10
[77] Snail Attorneys, Green Paper submission, page 2

of an integration backbone to enable information sharing between government departments, agencies, provinces and municipalities.

Option One: Status quo strengthened

The DTPS is responsible for developing a national overarching e-strategy and implementation plan to be approved by Cabinet and Parliament, including approaches to e-government. The DPSA and the DTPS would work together with other relevant Departments to update the existing e-government strategy. Existing norms and standards (such as MISS and MIOS) would be updated jointly and new norms and standards developed if necessary as part of this, and the e-strategy would determine responsibility for each of these. The e-government strategy should be developed through a consultative process, and include inputs from a range of entities, including representation from provincial and local government, as well as entities such as the National Broadband Advisory Council and SIPs 15. Roles of different entities should be specified in the strategy and associated implementation plan. A White Paper would need to set deadlines for finalisation of this and put in place mechanisms for review and accountability if deadlines are not met.

- **What areas should an e-government strategy focus on?**
- **What norms and standards need to be updated and what additional standards developed?**

Option 2: Using digital technologies to address challenges relating to justice and prosecution of crimes

As suggested above, it is proposed that a specific focus on addressing administrative challenges in the justice and courts system through development of digital technological solutions would be identified as a priority.

- **Do you agree that e-justice systems be identified as a specific priority in relation to e-government services?**

POLICY ISSUES: ROLE OF STATE OWNED COMPANIES

The Government Chief Information Officer situated within the DPSA is responsible for developing IT related policies, regulations, norms and standards. The Government Information Technology Officers Council (GITOC) includes national and provincial IT officers and is responsible for coordinating IT initiatives in government, including e-government, to facilitate service delivery.

The State Information Technology Agency (SITA) was established in 1998 to improve the effectiveness and efficiency of the public sector and facilitate service delivery through the provision of information technology, information systems and related services. In 2014 the Agency was moved from the DPSA to the DTPS. Section 7(6) of the SITA Act also requires the Agency to set standards for the interoperability of information systems and for a comprehensive information systems security environment for departments. SITA is further required in the Act to certify every acquisition of any information technology goods or services by a government department for compliance with the above mentioned standards.

It has been suggested that the role and mandate of SITA be reviewed and that it specifically focus on, for example, design-development and implementation support to all government entities,

including to national, provincial and local government with a specific focus on those with limited capacity. It has also been suggested that the mandate of GITOC needs to be strengthened to ensure that it has the powers to oversee implementation of e-government and ICT strategies.

- **How could government ensure better implementation of its e-government objectives?**
- **What role should SITA play?**
- **How could GITOC be strengthened?**

4.4.1 Government e-segments/services

The SIPs 15 programme and the National Broadband Policy have prioritised e-health (including support for the National Health Insurance plan) and e-education as the initial focal points for infrastructure development. This does not negate the need for the development of strategies by other departments and spheres of government but rather highlights the specific initial priorities for infrastructure development. The Minister of Health has finalised an e-health strategy and the education departments have developed a White Policy on e-education.

The **e-health strategy** focuses predominantly on the role ICTs can play in facilitating effective monitoring of the health systems, and roll-out of the National Health Insurance. It highlights that the roll-out of health information systems has been characterised by "*fragmentation and lack of coordination*" and a lack of interoperability between the different systems and outlines how this will be addressed.

The White Paper on **e-Education** (2004) stresses the need for all learners to be equipped with the skills and knowledge to use ICTs confidently:

> *"Every South African learner in the general and further education and training bands will be able to use ICTs confidently and creatively to help develop the skills and knowledge they need to achieve personal goals and to be full participants in the global community by 2013."*

The National Broadband Policy specifies that roll-out of broadband to schools and other educational institutions is a priority in light of this and highlights that the Education Departments have identified the need to use digital technologies to:

- Extend access to educational opportunities across gender, spatial and socio-economic divides and ensure access by persons with disabilities.
- Enable flexible open learning environments including interactive and personalised learning opportunities.
- Extend learning beyond the formal schooling system; and
- Streamline administration for teachers and administrators and enable assessment and data collection.

The NDP recognises that there are many ways to facilitate this, and highlights the need to "*explore the use of mobile devices such as phones and tablets in distributing learning content".*

The initial emphasis of the DTPS is on facilitating roll-out to all schools and it is working with the SIPs 15 team and the National Broadband Advisory Council on this so that the NDP vision can be realised and *"(high speed broadband will be readily available and incorporated into the design of schools.*

This will enable greater use of technology in education and enhance the classroom experience for both teachers and students."

Option One: Status quo

E-health and e-education remain the priorities.

Option Two: Extended priorities

The policies extend priorities to all frontline citizen interacting Departments.

- **Do you think the priorities should be extended?**
- **What targets could be set in policy in relation to this?**

4.4.2 Promoting access to information and open government data

Digital technologies can play a key role in promoting access to information, both by improving records management and by providing open access to key public information (open data policies). Open government data policies would emphasise that information and data are made available for "*everyone to access, reuse and redistribute without any restrictions*".[78] Open government data therefore is a means not only to facilitate the right of access to information, but to enable others (including the private sector, communities, academics, research institutions and civil society organisations) to conduct further analysis on such data. This is seen as promoting accountability, transparency and allowing for informed participation in the development of public policies.

The possibilities and benefits of open data are growing given the increasing pools of data available known as Big Data. Big Data makes it possible to integrate and analyse data sets from various data sources, thereby providing an opportunity to extract potentially valuable information in an automated and cost-efficient way. This provides an opportunity for the public sector, as an important source and user of data, to exploit the full potential of the data it generates and collects, as well as the potential of data generated elsewhere. Big data could also assist in improving internal security and law enforcement. For example, government can exploit non-traditional data sources such as SMS and social media to complement official crime statistics. Big Data can also benefit other industries including the private sector, health care, utilities and logistics and transport.

In his submission on the Green Paper, Jean-Paul Van Belle, from the University of Cape Town's Department of Information Systems, stated that he thought it critical that a new policy specifically include commitments to open government data. He said that this would not only promote transparency but assist the "*public and research community… in researching, creatively addressing and possibly relieving social ills*".

While there is not a national open data policy, the principle of transparency is captured in many government standards and practices, and, for example, organisations such as Statistics South Africa have data available for use and reuse by any member of the public and have introduced tools to assist in extracting and analysing such data. The Independent Electoral Commission provides

[78] United Nations Department of Economic and Social Affairs, "Guidelines on Open Government Data for Citizen Engagement", 2013, http://workspace.unpan.org/sites/Internet/Documents/Guidenlines%20on%20OGDCE%20May17%202013.pdf

detailed information on its website on voting patterns at a national, provincial and municipal level, and the City of Cape Town has recently published an open data policy.

- **Is there a need for a specific national open data policy?**
- **If so, what do you propose should be included in such a policy?**
- **How can government ensure that policies relating to open data are implemented across all government and public entities and spheres?**

4.4.3 Protecting information

It is also crucial that the state puts in place adequate measure to ensure the integrity of digital public information to protect it from being manipulated or changed, to ensure confidentiality of, for example, personal records and to ensure there are mechanisms in place to ensure the security of sensitive information within the framework of the Public Access to Information Act. Currently, there are no common standards or mechanisms in place across government to address the protection of digital information. While some departments and different government entities have developed their own solutions to this, these are not necessarily interoperable across all government entities.

A number of norms have been put in place:

- The Minimum Information Security Standards (MISS) were developed in 1992 but are outdated. These address information security within Government. Draft National Information Security Regulations were prepared seven years ago but have never been published.
- The Minimum Interoperability Standards (MIOS) have been updated more regularly by SITA (most recently in 2009) but several submissions on the Green Paper stated that these are routinely ignored. While various solutions exist for the encryption of data, they are generally regarded as too cumbersome to set up, manage and use on an ongoing basis. There is therefore a need to ensure interoperability, promote electronic and secure digital records management and ensure adherence to policies.

There is clearly a need for the finalisation of a government-wide IT governance framework and to update all standards and rules. The need for this has been emphasised by the Auditor General which conducts audits on management of IT vulnerabilities and risks across government and public entities. Public entities and state owned companies are also subject to the Companies Act and the King III Code which highlight the importance of IT governance and risk management. The DPSA "Protocol on Corporate Governance in the Public Sector" further reinforces this.

POLICY OPTIONS

It is essential that all policies, norms and standards to protect digital information and data are reviewed and mechanisms put in place to ensure they are applied and implemented.

- **How could the overarching ICT government framework be improved?**
- **How can policy protect the integrity and security of government digital information while promoting open data policies?**

- **How can this be coordinated across Government to ensure the involvement of key institutions and stakeholders, including the DTPS, DPSA, SITA, GITOC etc.?**

4.4.4 Promotion of access to government e-services and information by persons with disabilities

While other chapters/policy options papers in this Discussion Document deal specifically with access by persons with disabilities to services and content (including, for example, development and promotion of assistive technologies, sign language and audio-description on broadcasting services and training and skills development), this sub-section focuses on the role that government should play in ensuring access and inclusion. ICTs can be used to promote inclusion within the public service as well as ensure access to government services and information by people with disabilities.

In line with this the following policy principles are proposed for incorporation into a final policy, and in related policies and implementation plans:

- Software and operating systems developed to improve administrative efficiency within government must incorporate mechanisms to ensure access and easy use by persons with disabilities working within the public sector.
- In its procurement of hardware and software, government should require service providers to ensure accessibility and compliance with universal standards. This will assist not only government as it is a major procurer of hardware and software and therefore such requirements will encourage suppliers to ensure access and compliance with universal standards more generally.
- Systems should be introduced across government to ensure integration of data regarding a person's disability to avoid the need to recapture the same data as the person moves from one service point to the next.
- In developing e-government services and solutions, government should both specifically consider how it can use ICTs to promote access by people with disabilities to government services and must ensure all e-government services provided by it are accessible.
- Government must also set guidelines and standards in line with recognised Web Content Accessibility Guidelines to ensure access to all public websites.

In order to facilitate the above, it is crucial that any coordinating structure/s involve organisations of persons with disabilities to ensure their needs are integrated into all e-strategies, e-government policies and other relevant frameworks.

- **Are there other options which should be incorporated into government strategies, policies, standards and frameworks?**
- **How can policy ensure that the needs of persons with disabilities are integrated into planning and implementation of e-government services?**

4.5 The digital economy and e-commerce

The ECT Act sets out the legal framework that governs e-commerce in South Africa. Government plays a key role in facilitating and enabling e-commerce and creating an environment for economic growth. An effective e-commerce framework can, for example, allow for greater access to local and

international markets by individuals and the public or private sectors and promote SMME development by facilitating easier and cheaper access by providers to different markets and customers (including local and international buyers). E-commerce can also reduce expenditure in the value chain from supplier to end-user, resulting in lower prices for the consumer and increase efficiency and ease of use of financial transactions with mobile banking. It incorporates:

- Business to-business transactions (B2B);
- Business to customer products and services (B2C);
- Business to government provision (B2G); and
- Consumer-to-consumer transactions (C2C)

There are thus essentially three different possible players involved in e-commerce: The buyer (an individual, public entity, organisation or enterprise), the seller (an individual, organisation, public entity or enterprise) and manufacturer (the individual or entity that produces the product or service). Sellers can offer services directly to customers/users or to a wholesaler/intermediary. The manufacturer can sell to retailers, wholesalers or directly to customers.

The ECT Act it is recognised needs to be updated and amended to address challenges and potential conflicts with other legislation. An Amendment Bill was drafted in 2012 and will be finalised in line with policies developed through this policy review process and to ensure harmonisation with other laws and policies (including, for example, cybercrime and cybersecurity policies, the POPI and Consumer Protection Acts).

An enabling e-commerce environment further recognises that there are a range of different government departments, public entities and private and non-governmental organisations that need to work together in developing a dynamic digital economy. This section deals specifically with the provisions of the ECT Act and with policies that need to be adopted to promote this. As issues relating to promoting trust and security (including provisions to deal with cybercrime, consumer protection and protection of children) relate to both the e-government and e-commerce sectors, these are dealt with in a separate section below.

Research conducted for the ICT Policy Review process as well as submissions by stakeholders to the Green Paper highlighted a number of specific issues as dealt with below.

4.5.1 Legislative duplications and contradictions

There are numerous duplications and contradictions between the ECT Act and other laws and regulations. These include:

- Contradictions between the ECT Act, the regulations to the Companies Act and the Uniform Rules of Court. on methods and timeframes for delivery of documents
- Contradictory definitions and approaches to critical databases/information infrastructure between, for example, the ECT Act, the Regulation of Interception of Communications and Provision of Communication-related Information Act, the SITA Act and the Protection of Constitutional Democracy against Terrorist and related Activities Act of 2004.
- Different provisions on cooling off periods, SPAM and marketing in the Consumer Protection Act and the ECT Act.

Once the White Paper is adopted by Cabinet, it will be necessary to amend the ECT Act to bring this in line with new policies, and for the South African Law Reform Commission to conduct a thorough review to ensure alignment across all legislation.

4.5.2 Electronic Transaction Framework: Electronic signatures

Several submissions were made on ways to improve the general framework and the accreditation process for electronic signature service providers. The ECT Act makes the DTPS responsible for accreditation of electronic signature service providers. Regulations on the accreditation of signatures and the process for accreditation of authentication service providers were published in 2007 by the Minister. Two service providers have been accredited by the DTPS: LAWtrust and SAPO.

The NCAC in its submission said that the system in place is inadequate. It said that the Post Office, for example, had taken more than ten years to accredit service providers and that the "entrenchment" of a government agency as the preferred provider should be reconsidered. The main problem, it highlighted, has been limited market acceptance due to: Limited awareness of the relevance of e-signatures, inconsistencies in the legislation and the application of the legal framework, exacerbated by the mixed role of DTPS as both policy-maker and implementer.[79]

Other submissions the Green Paper also raised concerns about the overall framework, including overlaps in different laws (e.g. privacy, copyright and consumer protection laws) and laws which they said hindered e-commerce development (e.g. laws relating to taxation or trade).[80]

Research conducted indicated that the current limitations in law should be reviewed. Schedule 2 to the Act states that the law will not give validity to transactions relating to immovable property, leases on immovable property of longer than 20 years, wills and codicils and bills of exchange as determined in the Exchange Act (for e.g. cheques). Given that new technologies have resulted in digital signatures being regarded in many instances as superior to manuscript signatures, as they do not allow for any alteration of electronically signed documents, these limitations should be reviewed. Research also indicated that the process for accreditation and the requirement that accredited electronic signatures must meet a set South African National Standard (based on the international standard) is regarded as unnecessarily onerous and could result in limited harmonisation with international developments and therefore affect cross-border transactions.

It is noted that the ECT Amendment Bill includes amendments to deal with some of the gaps in the current law, but that these revisions need to be further reviewed once the policy process has been finalised. Some of the gaps addressed in the current Bill include:

- Definitions for electronic transactions, commercial electronic transactions and non-commercial transactions have been proposed for inclusion.
- The definition for electronic signatures has been strengthened and brought in line with international best practice to ensure that text signed digitally cannot be altered.

[79] NCAC, Green Paper submission, pages 7&8
[80] For example, PPF, Green Paper submission

- Provisions have also tried to address the specific requirements of different sectors and, for example, the need for high requirements for the banking sector but simplified, though still credible, requirements for SMME's.
- Updates to the law in line with the Consumer Protection Act.

POLICY OPTIONS: ELECTRONIC SIGNATURES AND DIGITAL TRANSACTIONS

As highlighted, once the policy framework is finalised, the Amendment Bill will be revised in line with policies developed and international best practice. Such a review should consider all related laws to ensure there is alignment between different legislation, and remove overlaps and conflicts, if any.

- **Stakeholders are invited to propose specific amendments to the existing law that are not covered in the related Amendment Bill.**

Option One: Status quo regarding accreditation of electronic signatures is strengthened

The existing framework provided for in law would continue – i.e. the DTPS remains the Accreditation Authority, but provisions in the law would be reviewed to ensure harmonisation with international best practice, recognise the needs of different sectors (e.g. banks versus SMMEs) and assess the ongoing relevance of exceptions in the law given advancements in digital signatures.

Option Two: A separate entity is appointed as the Accreditation authority

As with the above, current weaknesses in the law limiting harmonisation with international best practice would be addressed, but the policy and law would provide for the appointment of an Accreditation Authority outside of the DTPS.

- **Please indicate your preferred option. Note that the options are not exclusive and suggested alternatives are welcomed.**
- **Please elaborate on your proposal and indicate, for example, how you think the current provisions on electronic signatures could be amended to ensure harmonisation with international laws and promote cross-border acceptance.**

4.5.3 Banking and mobile and online payment systems

The introduction of online banking and mobile and online payment systems by banks and other businesses (including mobile operators) has supported growth in e-commerce and assisted end-users across the country (including those that do not have bank accounts or payment cards) to access resources, products and services.

There is a need to encourage innovation in this area, given its benefits to citizens, the private sector and SMME development. At the same time, policy should address consumer protection issues and ensure consumers know their rights and obligations. It is important in this to recognise that a number of parties may be involved in such transactions (including customers, mobile operators, ISPs and social media) and there are therefore many different payment regimes (e.g. payment charged on mobile phone bills versus credit, debit or pre-paid payment cards). This could result in a lack of clarity regarding who is responsible for addressing any problems and what remedies are available.

While consumer protection and other such laws in South Africa do address these issues to some extent, and if necessary could be strengthened, it is important in this Discussion Paper to consider whether or not an ICT White Paper should address these issues, and to what extent. The role of ICASA as a custodian of the ECT Act and as the regulator of electronic communications should also be considered. Areas which policy could address include:

- Guidelines and/or rules on the need for easy-to-use and secure payment mechanisms and understandable and accessible consumer information on the level of security such mechanisms provide (including terms, conditions and costs of transactions). This should include ensuring information is accessible to persons with disabilities.
- Regulations to protect against fraudulent and misleading commercial practices. This could include partnerships with bodies such as the Advertising Standards Authority of South Africa which is recognised as a self-regulatory body in the EC Act.
- Additional provisions specific to the sectors regulated on dispute resolution and redress.

The NCAC in its submission asked whether or not it would be possible to regulate data-sharing between banks and ISPs/mobile operators "*to enable the prevention and combating of electronic financial crimes*".[81]

There are no policy options in relation to this, as the question really is whether or not there is a need to specifically address issues regarding banking in a policy and what, if any, role ICASA can play in strengthening the protection of consumers.

- **How if at all should a final ICT policy address issues related to online and mobile banking and payment systems?**
- **Should the convergence of mobile communications and banking be regulated?**
- **Could ICASA's role in consumer protection in this regard be enhanced? If so, how?**

4.5.4 Taxation issues

It is recognised that e-commerce raises a number of issues related to taxation and that there will be a need to review all taxation policies in line with this. There is a need to examine, for example, double taxation treaties and international, regional and inter-country agreements on taxation.

From a consumer point of view, it is also important to ensure awareness of the implications of customs duties and taxes on the total costs of purchasing goods online from providers outside the country. Many small companies and individuals are not aware of the implications of duty fees and taxes (calculated at an added tax value and not the standard 14% VAT). It has been suggested that there should be more upfront and transparent information regarding this so that users can calculate the costs which will be imposed on collection of items so they can properly assess the competitiveness of such purchases.

[81] NCAC, Green Paper submission, page 16

The Progressive Professional Forum (PPF) suggested that all taxation and trade laws should be reviewed to address e-commerce issues and to allow consumers to benefit from competitive prices abroad.[82]

While this is not an area that the Minister or Department can address as this is the prerogative of the Minister of Finance, it is recognised that taxation issues are one of the ongoing areas for debate in relation to promotion of a digital economy and digital commerce. Stakeholders are therefore invited to highlight issues that the DTPS and Minister can, if relevant, raise with the Minister of Finance in this regard.

4.5.5 Cross-border flows of information

One of the opportunities arising from digital transactions is the borderless and global nature of the Internet. This allows for South Africans to access goods and services outside of the country and to offer goods and services to a wider base.

There are though inevitably also risks associated with this and therefore there is a need to harmonise rules (including taxation provisions) and mechanisms in place to ensure security and instil trust and confidence through developing common standards for verification, accreditation and approaches to consumer protection. SADC's model laws and e-commerce related frameworks are aimed at addressing this in the region. The ECT Act also makes provision for recognition of accreditation for foreign products and services (section 40).
To realise the opportunities of cross-border trade, and ensure that SMME's can benefit from these, South Africa will need to consider what barriers may exist and how these could be overcome. This will need to be considered together with the Ministry of Trade and Industry and the Ministry of Small Business Development. Such issues and policy positions in relation to these will also need to be raised in regional (SADC), African and international forums.

The Swedish National Board of Trade, a public entity established to promote Swedish trade, conducted a study in 2012 into the specific e-commerce related barriers faced by Swedish companies. The report highlights that many e-commerce entities are small businesses and that some of the challenges faced relate to this as they, for example, often ship a large number of small consignments rather than single larger ones and have limited capacity to research all the trade regulations in the countries they trade in. The report states that the following types of cross-border electronic trading are most common:

- Goods and/or services are bought over the Internet but delivered in a non-electronic form (i.e. physical books).
- Goods are bought over the Internet and delivered electronically (i.e. music or e-books).
- Electronic services are sold (e.g. a South African individual or company provides editing or accounting services to a business or organisation located in a different country).

The study identified eight barriers:

[82] PPF, Green Paper submission, page 11

- Lack of information – It is particularly difficult for small companies to find adequate information about the laws, regulations, procedures and methods in place in other countries.
- Customs barriers create administrative challenges for e-traders and in particular for those that are shipping a large number of small consignments.
- Payments and taxes – Country specific payment solutions and differences in tax regulations create costs and administrative problems for e-commerce.
- Intellectual property rights barriers.
- Cross-border data transfer can be affected by legislation that limits the ability of a business to store and transfer data across borders.
- State controls in some countries on the need for local establishment to register domain names and/or specific encryption methods can restrict cross-border trade.
- Other barriers: those identified in the study include roaming charges, certification of products, lack of standards, rules of origin etc. [83]

The PPF in its Green Paper submission highlighted the challenges of cross-border trade for e-commerce providers. It stated that cross-country legal differences are a complex issue but could be "*one of the largest impediments as additional costs of compliance with another country's law*" may compel South African providers to stay local.[84]

As with similar sections, there are no specific policy options proposed in relation to cross-border trade issues. Rather stakeholders are invited to identify whether or not there are any specific mechanisms that can be put in place or particular barriers that need to be addressed to promote cross-border transactions.

- **What, if any, barriers exist in current requirements that limit cross-border transactions?**
- **What issues should South Africa be raising in regional, African and/or international forums in relation to this?**
- **Are there any policies and or amendments to the ECT Act that you propose to address barriers to cross-border trade in South Africa?**

4.5.6 SMME Development

The development of SMME's is one of the priorities set in South Africa's economic development framework. The introduction of a Ministry and Department of Small Business Development in April 2014 is a key step in facilitating growth in this area.

Digital technologies provide opportunities for SMMEs to enter the e-commerce market and can assist in reducing start-up costs of SMMEs in other sectors by decreasing the costs of products and services (e.g. cloud computing can reduce high infrastructure costs). It is important, however, to ensure that any new entrepreneurs entering the ICT and e-commerce sectors have sufficient skills and information to protect themselves, users and potential clients from cyber threats (including

[83] Kommerskollegium, "E-Commerce: New opportunities, New barriers", 2012, http://www.wto.org/english/tratop_e/serv_e/wkshop_june13_e/ecom_national_board_e.pdf
[84] PPF, Green Paper submission, page 11

protection of data, adequate anti-virus protection and tools to ensure secure networks). The Department and Ministry will work with the new Ministry and Department of Small Business Development to holistically address these issues and consider the specific skills needs of the entrepreneurial sector.

- **Stakeholders are invited to submit ideas on how the policy could support and promote SMMEs in the e-commerce sector.**
- **What challenges do SMMEs currently face?**

4.6 Cloud computing

Cloud computing involves the storing, processing and use of data on remotely located computers accessed over the Internet. The ITU defines cloud computing as:

> *"A model for enabling service users to have ubiquitous, convenient and on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services), that can be rapidly provisioned and released with minimal management effort or service-provider interaction. Cloud computing enables cloud services."*[85]

Cloud computing has the potential to lower barriers to entry for new players as it allows for government agencies, individuals, entrepreneurs, SMMEs and other companies to access IT resources on demand without significant capital expenditure. South Africa needs to ensure its policies facilitate cloud computing as a platform for innovation and job creation, promoting the development of new services and products. This should be balanced with the need to protect privacy and the security of information, data and systems. There are also issues regarding the liability of service providers (noting that these may be global) and the need to promote open standards to facilitate fair competition between service providers.

Cloud computing can also support government IT development, e-government and development services and priorities. Government is a major user of IT services, software and hardware. Innovative use of cloud computing solutions could result in significant savings for national, provincial and local government and public entities and allow for better organisation. This will require coordination at a national level to ensure that government leverages the most benefits and that common cloud standards are promoted across the public service.

Cloud computing as a tool for development is an area that should be further explored, given the potential it offers in areas such as education, health care and promotion of open government. Cloud services designed for mobile devices (including phones) are another important issue to explore further in this regard.

Because of the nature of cloud computing, it is also critical that South Africa not only focuses on its own policies, but works together with its neighbours and with the international community to ensure that the benefits of this platform can be realised while protecting privacy, security and consumer rights. The impact of cloud services on taxation and cross-border controls will also have to be carefully considered.

[85] ITU, "Cloud Computing Standards: Overview and ITU-T positioning", http://www.itu.int/dms_pub/itu-t/oth/06/5B/T065B00001C0043PDFE.pdf

The OECD in a paper on cloud computing suggested the following areas for government intervention. Many of these issues are not specific to cloud computing (e.g. taxation and protection of privacy), and are covered in other sections of this Chapter or the Discussion Paper. They are nevertheless listed for completeness:

- Raising awareness of cloud computing, developing skills and education to ensure understanding of the concept, its benefits and challenges.
- Developing intra-government policies on cloud computing.
- Promoting research and development into cloud computing solutions and open standards.
- Standardisation and the promotion of open, interoperable and appropriate standards to address potential vendor lock-in.
- Introducing mechanisms to measure cloud computing and tools to collect data on revenues, supply and demand, cross-border flows of data and the location of data.
- Focusing on building cloud computing infrastructure in South Africa in partnership with other partners (such as SADC and BRICS) to address the current unequal flow of data given that most cloud computing providers are located in the northern hemisphere.
- Addressing potential competition and trade implications that could arise if the sector is dominated by a few companies.
- Consideration of the tax implications. Cloud computing has the potential to improve standards of record-keeping by SMME's in particular but there will also be a need to have flexible policies to address future challenges that might arise (e.g. tax evasion).
- Consumer protection and a specific focus on cloud computing contracts recognising that individuals and smaller companies will not have the power to negotiate on contracts. Privacy and security are critical issues as providers may not necessarily be located in South Africa.[86]

- **Should South Africa develop a specific cloud computing policy to address these issues?**
- **How can this best be coordinated, recognising that these issues are relevant across a range of government departments and entities and to the private and non-governmental sectors?**
- **What role should the DTPS and/or the regulator play in this regard?**
- **How can open standards be promoted?**
- **What role should government play in promoting awareness and skills development?**

4.7 Internet Governance

> *"Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet." 87*

[86] OECD, "Cloud computing: The Concept, Impacts and the Role of Government Policy", Digital Economy Papers no 240, 19 August 2014, http://www.keepeek.com/Digital-Asset-Management/oecd/science-and-technology/cloud-computing-the-concept-impacts-and-the-role-of-government-policy_5jxzf4lcc7f5-en#page1

[87] Report of the Working Group on Internet Governance (WGIG), June 2005

4.7.1 International institutions

4.7.1.1 ICANN

The Internet Corporation for Assigned Names and Numbers (ICANN) has overall responsibility for managing the Domain Naming System (DNS). It administers the root domain, delegating control over each Top Level Domain (TLD) to a ccTLD administrator, such as .ZA Domain Name Authority (zaDNA). zaDNA is an active participant in the country code Name Supporting Organisation (ccNSO) of ICANN.

Government has participated in ICANN's Governmental Advisory Council (GAC). The GAC's main limitation is that it is an advisory structure, and the ICANN Board only has to consider rather than accept its advice. This status effectively means that other stakeholders have a stronger platform within ICANN to push their interests than governments. ICANN's work however entails wide-ranging public policy issues that cannot be left entirely in the hands of the private sector.

The position that governments currently occupy within ICANN is made more powerless by the fact that the US government maintains sole influence over what ICANN does and how it does it. This is contrary to agreements reached in the 2005 Tunis meeting of WSIS. The Tunis Agenda for the Information Society outlines the roles and responsibilities of all stakeholders in Internet governance and recognises that governments are custodians of public policy:

> *"The international management of the Internet should be multilateral, transparent and democratic, with the full involvement of governments, the private sector, civil society and international organisations. It should ensure an equitable distribution of resources, facilitate access for all and ensure a stable and secure functioning of the Internet, taking into account multilingualism. … We commit ourselves to the stability and security of the Internet as a global facility and to ensuring the requisite legitimacy of its governance, based on the full participation of all stakeholders, from both developed and developing countries, within their respective roles and responsibilities."88*

In the past, calls have been made by some governments to have the ITU take over the role of ICANN. This view has now apparently lost substantial support, seemingly because of the appreciation that the ITU is not suited to play such a role. South Africa's BRICS partners have in the last two years repeatedly reinforced the need for governance to be brought in line with the WSIS Tuna Agenda and have called for an enhanced role for governments within ICANN. In the recent past, the European Union has made calls to have ICANN internationalised and relocated to Geneva so that it can be seen to be really free from the US government influence.

South Africa will need to determine its own positions and participate in the debate at national, regional and international level. This may include giving governments their own structure to which ICANN accounts in public policy issues. Such a structure would have to have clear terms of reference, and be equally representative of different UN regions.

One of the other weaknesses in the current ICANN multi-stakeholder model is the lack of clarity regarding the definition of multi-stakeholders and the process of accepting such stakeholders in ICANN structures. Most of the exiting stakeholders are moreover largely from the developed economies, with Africa and other developing regions having little meaningful participation. This

[88] WSIS, "The Tunis Agenda for the Information Society", paragraphs 29-35

approach it has been argued will dilute the influence of developing countries, including South Africa, contrary to South Africa's general foreign policy approach to building a multilateral rules-based system which can act as a buffer to excessive influence by individual or groups of countries.

Research ICT Africa emphasised in its submission on the Green Paper that South Africa needs to adopt a "clear policy" on Internet Governance that will allow the country to "*defend its interests, its constitutional values and more actively influence global governance outcomes*".[89]

- **What positions should the South African government adopt to address challenges in the current ICANN model?**
- **How can the weaknesses identified above in the multi-stakeholder concept for Internet governance of ICANN be addressed in this policy position?**
- **What type of internet governance framework would ensure all role players are involved?**
- **What would be the best model to ensure participatory internet governance?**

4.7.1.2 Regional Internet Registries

Regional internet registries receive IP address allocations from ICANN and sell them usually to ISPs in their region. The African Network Information Centre (AfriNIC) is Africa's regional internet registry. South Africa's participation in AfriNIC is through local ISPs that are members of AfriNIC. AfriNIC is also responsible for developing and implementing policy guiding IP address in Africa.

4.7.2 South African institutions

The ECT Act established the .ZA Domain Name Authority (zaDNA) in 2002. It is responsible for the .za domain name space and is the statutory regulator of South Africa's domain name space, dotZA (.ZA). Its mandate is enshrined in Chapter X of the ECT Act which requires zaDNA to regulate and manage the namespace, including licensing registries and registrars. The ECT Act also makes provision for alternative dispute resolution mechanisms. It is a practice initiated by ICANN, which developed the Uniform Dispute Resolution Policy (UDPR). The UDPR was designed to allow trademark holders to recover domain names registered in bad faith and is based on the First WIPO Internet Domain Name Process.

To date, zaDNA has not implemented the licensing regime set out in legislation due to inadequacies in the Act. The ECT Amendment Bill published in 2012 addresses gaps in the existing legislation. The Bill, for example:

- Gives zaDNA final overall responsibility for the DNS in South Africa in recognition that there are a number of registry operators administering second-level domain names, such as UNIFORUM South Africa (.co.za), state-owned SITA (.gov.za) and privately-owned Internet Solutions (Pty) Ltd (.org.za). The Bill states that to ensure stability of the system, zaDNA must be able to perform the functions of the registrars and registry operators as and when required.

[89] Research ICT Africa, Green Paper submission, page 6

- States that to the extent that zaDNA does receive funds from National Revenue Fund or other government sources, it should be required to report on them to Parliament, but this is an obligation that need not apply to funds that zaDNA receives from other sources.
- Addresses gaps and issues relating to the appointment of the Board.
- Introduces new provisions to address the registration by ICANN of new generic domain names. This is for several reasons:
    - Domain names are becoming increasingly important.
    - South African names that are intrinsically of national importance or relevance should be treated differently than corporate or brand names for reasons of public interest.
    - It is proposed that geographic or cultural gTLDs that are uniquely South African should not be registered without the permission of the Minister. These names might include any reference to a South African national language, place name, heritage site, historical event, product or service, or a South African national team. The registration of a South African language domain name such as .zulu by a non-South African for example, would be innately wrong.

The domain name authority has proposed that any policy and legislative review further consider options in relation to regulation of registries. Currently, zaDNA regulates the ZA Central Registry through an operating agreement:

- Policy and law could allow for regulation of registries through an accreditation agreement to promote speedy responses to deal with the fast-changing and fast-developing internet.
- Policy and law could consider requiring the registries, instead of zaDNA to accredit registrars. It stated that in practice the real interface with registrars lies primarily with the registries and not zaDNA. The ZACR already has +400 accredited registrars for .ZA, and also has to interface with +1000 international ICANN-accredited registrars because it operates the dotAfrica, dotCapeTown, dotDurban and dotJoburg domains.
  zaDNA stated that leaving registrar accreditation to the ZACR may enable the ZACR to better adapt its systems to deal with registrars using two autonomous regulatory frameworks (i.e. the .ZA framework based on SA law, and the ICANN framework based on US law).
  The domain name authority noted that having zaDNA continuing to be responsible for accrediting/licensing the .ZA registrars is not necessarily unsustainable. Australia (.au) accredits both registries and registrars, and has not reported any problems with this approach. In New Zealand, InternetNZ has a Domain Name Commission that accredits the registry operator – NZ Registry Services – and the NZ registrars.

Cell C in its submission on the Green Paper recommended that the ICT Policy Review process should benchmark best practice in other countries. This should include the relationship between the domain authority and ICASA and their differing responsibilities.

POLICY OPTIONS: LICENSING VERSUS ACCREDITATION

Option One: Status quo

zaDNA continues to be responsible for licensing (rather than accrediting) registries once the necessary amendments to the ECT Act have been finalised.

Option Two: Accreditation allowed

The policy and law provide for zaDNA to accredit registries and set rules in relation to this.

- **Please select your preferred option. Please motivate and elaborate on specific policy and/or legislative provisions you suggest in relation to your preferred option.**

POLICY OPTIONS: RESPONSIBILITY FOR ACCREDITING REGISTRARS

Option One: Status quo

The status quo remains and zaDNA remains responsible for accrediting .ZA registrars.

Option Two: Registries responsible for accreditation of .ZA registrars

The policy and law could give responsibility for accreditation of .ZA registrars to licensed/accredited registries (see above).

- **Please select your preferred option and state why you prefer this approach.**
- **Are there any other proposals or amendments that you believe would strengthen the existing registration process?**

4.7.3 Domain names and mandate of zaDNA

South Africa's authority in domain names only applies to the names registered in .ZA, and zaDNA is the entity entrusted with this authority. Domain names registered in other namespaces do not fall under its jurisdiction. Each country in the internet governance environment retains autonomy over how it runs and regulates its internet namespace. Generic top level domains (gTLDs) such as .com, .net and .org do not identify a specific country but are open to domain name registrations from entities around the world. All gTLDs (including the around 1300 new gTLDs added since 2013) fall under the jurisdiction of the US government simply because gTLDs account to ICANN, which is a California-registered entity.

There are currently just under one million names registered in South Africa to date (.ZA domain names). This is limited given that the population of South Africa is +50 million people, and can, at least in part, be linked to the broader socio-economic realities of South Africa where a substantial percentage of the population do not have Internet access. Domain names have further not formed part of broader ICT service delivery, due largely to lack of domain name education and awareness.

Another factor is that the internet is global, and there is nothing that hinders South Africans from registering domain names elsewhere (e.g. in .com and .net). A survey conducted by ZADNA in 2010 showed that domain names registered in namespaces other than .ZA accounted for almost 20% of all registered domain names in the country. This figure is likely to have dropped slightly because .ZA awareness, especially in the local registrar community, has grown substantially in the last five years.

zaDNA suggested in its submissions that its mandate could be extended to cover broad Internet awareness beyond just domain name awareness. The ECT Act currently states that it must enhance public awareness on the economic and commercial benefits of domain name registration (section 65(2)). The policy could stipulate that zaDNA should develop and implement strategies to ensure a

more forward-looking Internet policy and generally promote Internet awareness and security. It could also be specifically mandated to develop proposals on ICT technical skills training at primary and tertiary institutions and, for example, engage with FET colleges to develop technical course certification relating to Internet standards and domain names. Such capacity building could include a focus on enterprise development and the establishment of registrar and hosting businesses in order to take advantage of the opportunities that come with the expansion of the domain name landscape There are several models in other countries of internet authorities that have such a wider mandate, including in China and Korea.

POLICY OPTIONS: ZADNA MANDATE

Option One: zaDNA's mandate is extended

zaDNA's mandate could be extended to cover awareness raising of all Internet related issues and develop and implement strategies to extend South Africa's presence on the Internet. It could further be tasked with engaging with educational authorities to extend training on Internet governance and domain name hosting.
If this is your preferred option, please detail what specific issues you think ZADNA should be given additional responsibility for.

Option Two: Status quo

zaDNA's mandate would focus on increasing public awareness on the economic and commercial benefits of domain name registration.

- **Please select your preferred option.**

4.7.4 Domain name security

Issues of domain name security relate largely to security and reliability of both the domain name registry infrastructure and the integrity of domain name data. There are a range of different security measures that domain name regulators have used in the past to secure their namespaces, though ICANN – as the "regulator" of all generic, non-country specific top level domains – has required that registry operators implement DNS Security (DNSSec). The Internet Society (internetsociety.org) explains DNSSec as follows:

> *"DNS Security (DNSSEC) is designed to authenticate DNS response data. It verifies responses to ensure a DNS server's response is what the zone administrator intended. It does not address all threats (nothing does), but it provides a building block for providing additional data security, and not just within the DNS but also within the applications and services that are built on it."*[90]

DNSSec is gradually gaining momentum in line with this ICANN requirement and an increasing number of country-specific domain name regulators are now implementing DNSSec. In South Africa, ZADNA has committed to a gradual DNSSec deployment starting in the near future.

POLICY OPTIONS

As ZADNA has already identified DNSSec as a value-adding security measure for the .ZA namespace, it is proposed that this be endorsed in policy.

[90] http://www.internetsociety.org/deploy360/dnssec/

4.7.5 Dispute resolution

The ECT Act states that the Minister together with the Minister of Trade and Industry must promulgate regulations on the resolution of disputes in the .za domain name space (section 69). Regulations were promulgated in 2007 (the Domain Name Dispute Resolution Regulations).[91]

In the subsequent seven years of domain name dispute resolution practice some trends and uncertainties have surfaced that necessitate a review of the Regulations. These include:

- The need to consider including provisions allowing for the deletion or cancellation of a domain name in order to avoid the rights of third parties being ignored.
- The need to extend the list of factors which may be evidence that a domain name is an abusive registration. Regulations could further clarify the term abusive registration to avoid too rigid application. It could, for example, add provisions similar to those in the UK rules:
    - The regulations could clearly state that the failure on the part of the registrant to use the domain name for the purposes of email or a website is not in itself evidence of an abusive registration.[92]
    - They could make it clear that domain name practices such as trading domain names for profit and holding large portfolios of domain names are not as such objectionable activities.
- Suggestions that the initiation of an informal mediation procedure should be mandatory.
- The issue of 'reverse domain name hijacking' (when a trademark owner attempts to secure a domain name by making false cybersquatting claims against a domain name's rightful owner) could be more thoroughly addressed. Reverse domain name hijacking is most often perpetuated by larger corporations against smaller organisations or individuals.[93] In the US some legal professionals have proposed that laws should specifically facilitate litigation against reverse cyber-squatters and introduce severe penalties to deter such actions.

- **Is there a need to review ECT Act provisions on the promulgation of regulations to ensure that the process is efficient? If so, what amendments do you propose to address this?**
- **Is there a need to include in policy and/or legislation clear definitions of prohibited practices (such as abusive practices and domain name hijacking)?**
- **How could the dispute resolution provisions be strengthened?**

4.8 Ensuring trust and confidence in the Internet

Public and business trust and confidence in the Internet is essential to promote both e-government and e-commerce services. There are a number of issues which need to be addressed linked to this:

- Mechanisms to address cybercrime and protect users from criminal activity on the Internet or via their mobile phones (e.g. SIM swaps);
- Enhanced tools to deal with cybersecurity;
- Ensuring that data is protected;

[91] http://www.domaindisputes.co.za/downloads/AFTLDPresentation.pdf
[92] Nominet 'Dispute Resolution Service Policy'
[93] Sallen v. Corinthians Licenciamentos Ltda., 2002 U.S. Dist. LEXIS 19976 (D. Mass. Dec. 19, 2000), rev'd, 273 F.3d 14, 17 (1st Cir. 2001)

- Provisions to ensure privacy of users;
- Consumer protection;
- The protection of children; and
- Intellectual property protection.

Promoting awareness of mechanisms and tools to protect end-users (digital literacy, e-awareness etc.) is part of this, but is dealt with in its own section as there are many dimensions to this.

4.8.1 Cybersecurity

The National Cybersecurity Policy Framework adopted by Cabinet in 2012 defines cybersecurity as follows:

> *"**Cybersecurity** is the collection of tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training, best practices, assurance and technologies that can be used to protect the cyber environment and organization and user assets."*

Government recognises that the issue of cybersecurity is cross-cutting and cannot be addressed by one department alone. In line with this, the Cabinet Justice, Crime Prevention and Security Cluster (JCPS Cluster), led by the Minister of Justice, is currently reviewing all related legislation to ensure harmonisation and alignment. The DTPS is part of the Cyber Response Committee (CRC) established under the Cluster and is thus integrally involved in ensuring alignment with the ECT Act. The State Security Agency is tasked with the overall responsibility of cybersecurity and is working together with other relevant departments on this, including DTPS.

It is noted that the MPDP in its submission to the Green Paper proposed that the DTPS be responsible for cybersecurity rather than the Department of State Security. It argued that there is insufficient evidence to show that State Security is under threat and proposed that the issue should be dealt with "*principally through an information security framework and strategy*"[94].

The NCAC however asked why the Green Paper even raised questions on cybersecurity as this it stated is a matter for the Department of State Security and the JCPS Cluster. It stated that there have been delays in implementation of policy and urged that Government "*advance with speed*". It raised concern that the Policy remains a classified document and stated that Government should realise it is crucial that a public version is developed "*since this is part of building confidence in the secure use of ICTs in the country*".[95]

Intel agreed generally with the NCAC and included in its submission draft cybersecurity guidelines which could be considered. It also highlighted the importance of ensuring that cybersecurity policy should be technology neutral and focus on "*normative business process and risk management processes rather than prescriptive technology solutions*".[96] The South African Chamber of Commerce and Industry (SACCI) agreed that policies must technology-neutral and innovation friendly. It stressed that there is a need for dynamic information sharing between the public and private sectors, focused on addressing specific challenges and responding to specific threats. [97]

[94] MPDP, Green Paper submission, page 25
[95] NCAC, Green Paper submission, page 6
[96] Intel Corporation, Green Paper submission, pages 35-38
[97] SACCI, Green Paper submission, page 6

Vodacom stated that the definition of what constitutes cybersecurity threats needs to be expanded to include critical infrastructure such as electricity, given the impact of outages on services. It stated that a cybersecurity policy incorporate incentives to facilitate the widespread adoption of cybersecurity measures across all sectors. This it proposed should be led by the Presidency and should promote active local and international partnerships to facilitate exchanges of information. [98]

It should be noted that one of the core mandates of the Cybersecurity Hub (see below) is to promote awareness of risks and vulnerabilities.

PROPOSAL

Government has acknowledged the need to benchmark cybersecurity related frameworks, policies and laws in terms of international best practice, taking into consideration the need to promote security while protecting rights encapsulated in the Bill of Rights. A cross-ministerial Cluster is taking responsibility of this.

- **How, if at all, could this approach could be strengthened?**

4.8.2 Cybersecurity hub

The National Cybersecurity Policy Framework mandates the DTPS to establish a National Cybersecurity Hub. This is in the process of being implemented. Provisions relating to this have been incorporated into the ECT Amendment Bill which proposes that the Hub:

- Is the national point of contact for the coordination of cybersecurity incident handling activities,
- Identifies stakeholders, develops public-private relationships and collaborates with sector Computer Security Incident Response Teams (CSIRTs) to centralise coordination for cybersecurity issues and enable organisations to overcome the barriers and differences between languages, security cultures, laws, regulations and time zones.
- Facilitates interaction, both nationally and internationally, including through international memberships to organisations such as the Forum for Incident Response and Security Teams (FIRST); and
- Coordinates the promotion of cybersecurity measures by all role players (State, public, private sector, and civil society and special interest groups) to address cybersecurity threats.

The Policy Framework also proposes the establishment of a Government CSIRT and promotes the establishment of Sector CSIRTs to manage the operational aspects of cybersecurity.

Vodacom suggested that the government established response team should also be responsible for collecting and publishing statistics on cyber-attacks, the different types of attacks, responses to these and mechanisms to be put in place to prevent reoccurrence. It should be a "single point-of-contact" and coordinate CERTs already in place in individual sectors. It said that international experience showed that cybersecurity issues are best placed in the Presidency and that the Security Agency is the most appropriate agency to take responsibility for CERTs.[99]

[98] Vodacom, Green Paper Submission, page 38
[99] Vodacom, Green Paper Submission, page 38

The NCAC also raised the issue of reliable statistics stating that it is critical that such statistics are collected in order to have a "*South African view of the risks rather than depend on international statistics*". It asked further if cybercrime reporting could be made a legal requirement.[100]

MTN proposed that skills development in relation to cybercrime and cybersecurity become a further focus area for the Cybersecurity Hub. The mobile operator further proposed that the Hub be required to enter into MoUs with relevant law enforcement agencies, the Companies and Intellectual Property Commission and the private sector to address "*mutual assistance and co-operation in respect of the identification, investigation and prosecution of cybercrime and the related offenses at a national level, utilising the existing legal framework*". [101]

POLICY PROPOSALS

The DTPS has established the Cybersecurity Hub in line with the National Framework. It is recognised that there is a need for strong public-private partnerships and that it might be necessary to develop an enforceable code of conduct and legal rules to incentivise implementation across government and society of good cybersecurity practices and address liability for cyber breaches such as identity theft and/or cyber financial theft. For example, private parties might be more likely to invest in cybersecurity if they must also bear some of the cost of cybersecurity failures.

- **Is the mandate for the Cybersecurity Hub provided for in the ECT Amendment Bill appropriate?**
- **How, if at all, could provisions be strengthened?**
- **How do you propose policy and legislation address the issue of liability for cyber breaches?**

4.8.3 Critical databases/critical information infrastructure

The protection of critical information databases has been prioritised in the National Cybersecurity Framework. The Cyber Response Committee (CRC) established under the JCPS Cluster has developed a draft National Critical Information Infrastructure Policy outlining an approach to the identification, protection and security of the national information infrastructure. The draft policy categorises such infrastructure as that which is "*critical for the provisioning of essential services to South Africans".*[102] The ECT Act and the Amendment Bill will be adjusted if necessary to accommodate approaches and policies identified in the policy once this has been adopted.

The ECT Act states that the Minister is responsible for developing standards and regulations identifying which classes of information are of importance to "*the protection of the national security of the Republic or the economic or social well-being of its citizens*" as well as prescribing rules for the registration, management and protection of such databases (sections 52-58). The 2012 Amendment Bill includes several amendments to this focused on broadening related provisions to focus on **critical information and critical information infrastructure** rather than just **critical data and critical**

[100] NCAC, Green Paper submission, page 16
[101] MTN, Green Paper submission, pages 26-28
[102] South African Government, "Minister Nathi Nhleko: Justice, Crime Prevention and Security Cluster media briefing", 30 October 2014, http://www.gov.za/minister-nathi-nhleko-justice-crime-prevention-and-security-cluster-media-briefing

databases. The term 'critical information infrastructure' is defined as "*a collection of critical information that is stored or conveyed in or converted to electronic form within an electronic communications network from which it may be accessed, reproduced, distributed or extracted*".[103] Given this proposed amendment, the terms infrastructure and databases and data and information are used together in this text.

Section 53 of the Act states that the Minister may gazette which classes of information are of "*importance to the protection of the national security of the Republic or the economic and social well-being of its citizens to be critical data [information]*" and that s/he must "*establish procedures to be followed in the identification of [national] critical databases [information infrastructure]*". The legislation states that the Minister may set out requirements for registration of national or other critical databases/information infrastructure with the Department as well as minimum standards or prohibitions in relation to the general management, storage and disaster recovery plans of such databases/infrastructure and rules for securing the "*integrity and authenticity*" of critical information. These standards must be set in consultation with all members of Cabinet.

Several submissions focused on this issue.

The NCAC highlighted that concerns were raised in the development of the Act about the appropriateness of the Department being responsible for critical databases, but it said these were ignored. The Advisory Council also raised a concern that the related provisions have never been properly acted on. It proposed that the provisions be reviewed, that the issue of where protection of critical databases is located is again debated and that any provisions facilitate partnerships with the private sector as much of the technology critical to both cyber and national security is not owned by Government. The Council stated that the current wording is prescriptive and limits such partnerships.[104]

The SACF raised additional concerns, stating that the relevant sections are too vague and therefore potentially over-reaching. They emphasised that the current provisions give the Minister "*unfettered discretion*" to determine what is critical data/information and critical information databases/infrastructure.
The Intel Corporation proposed that policy should limit the regulatory framework to "*vital cyber-physical systems that control core critical infrastructure and whose failure would result in mass casualties, a significant national security incident or a catastrophic halt of economic markets*". It stated that an overly broad scope could capture "*many unnecessary elements of the Internet economy and its customers spread resources too thin and defer or delay other investment decisions related to security*". Other entities it said could be governed by voluntary codes of conduct.[105]

POLICY OPTIONS: RESPONSIBILITY

Policy option one: Status quo

[103] ECT Amendment Bill, Section 1: Amendment of Section 1 of Act 36 of 2002
[104] NCAC, Green Paper submission, pages 6-9
[105] Intel Corporation, Green Paper submission, pages 37-38

The Minister would remain responsible for setting rules and overseeing the management of critical information infrastructure. Amendments could be made to policy and legislation if necessary to address gaps (if any) in current provisions.

Policy option two: The responsibility is given to another Ministry

The responsibility would be given to another Ministry under the JCPS Cluster.

POLICY OPTIONS: AMBIT

Policy option One: Status quo

The definition would remain broad giving the responsible Minister the power to define what classes of information will be regarded as critical information and which information infrastructure will be included.

Policy option Two: Limit to state owned critical information and infrastructure

The terms critical information and critical information infrastructure would be clearly defined to limit the Minister's powers in this regard.
In responding to this question, stakeholders should note that it is difficult to isolate state-owned information infrastructure due to the connectivity of networks. The issue of protecting infrastructure is not about government vs. private sector, but about ensuring the safety and security of South Africa. It is recognised that there needs to be a holistic approach to protecting critical information infrastructure and, as highlighted by some stakeholders, it should be recognised that much of the critical information infrastructure is owned by private entities.

- **Which options do you prefer in relation to the above policy proposals?**
- **How could self-regulation and the development of voluntary codes be supported in policy and legislation?**

4.8.4 Cybercrime

Cybercrime is an increasing concern in South Africa and around the world. It affects public entities, individuals, community and non-governmental organisations as well as private enterprises. The ECT Act currently deals to some extent with cybercrime related issues and, for example, includes penalties for such crimes. A Cybercrime Policy is currently being developed by the SAPS together with the JCPS Cluster.

Several submissions said that current provisions in the ECT Act are inadequate (e.g. the penalties provided for crimes are too low) and proposed that issues relating to cybercrime be removed and dealt with by the Justice and related Ministries (including the police) to ensure proper deterrents, and provide for investigation, prosecution and enforcement of provisions.[106]

The NCAC noted that *"with very few exceptions, law enforcement is ill-equipped, prosecutors do not understand the law and presiding officers in legal proceedings do not have sufficient background or experience in ICT issues to enforce the law*". It said that given this, "*it is not at all surprising that*

[106] This includes ISPA and the NCAC

cyber criminals are able to flaunt the law with relative impunity". Vodacom however stated that "*the fact that cybercrime is prosecuted under general criminal law means that it is difficult to prioritise it above other crimes with similar classifications (i.e. fraud, theft, etc.)"*[107]. The mobile operator suggested that best practice models could be developed which could be adapted to allow for economies of scale so that they are relevant to big enterprises, SMME's and individuals.

Snail attorneys proposed further that government focus on addressing current challenges in the justice system by introducing e-justice systems to streamline administration. This it stated would address delays in prosecuting crimes and ensure crime dockets are not lost or misplaced. This should include introduction of e-filing of documents/pleadings in cases to reduce administrative bureaucracy.[108]

The information above is for noting. Once a Cybercrime Policy is finalised by Cabinet, the ECT Act will be amended to ensure alignment. Submissions by stakeholders, if any, in relation to this will be shared with the JCPS Cluster and relevant Ministries.

4.8.4.1 Identity theft

Identity theft is a crime and will be addressed in any cybercrime related legislation. Individuals are often targeted in identity theft incidents. Addressing identity theft and promoting awareness of this crime is an area which could be enhanced through partnerships with the private and non-governmental sector and via self-regulation and co-regulation. Even if a cybercrime law is promulgated, it might be necessary therefore to include provisions relating to this in legislation outlining the responsibilities of ICASA. For example, licensees could be required through guidelines and/or regulations to address this issue.

ISPA in its submission indicated that it has established a voluntary self-regulatory code on protection. The 'icode project' was initiated in 2013 and "*is an industry-driven initiative to identify infected machines, inform affected consumers that they may be at risk, provide support to enable those consumers to disinfect their machines, and reduce their risk of re-infection*". It stressed that "*no component of the icode involves the interception of private communications or the inspection of any consumer's private data" and that potentially infected machines are identified through analysis of traffic patterns. It rather offers "some protection to consumers from potential identity theft due to compromised machines*".[109]

4.8.5 Cyber Inspectors

The ECT Act makes provision for the introduction of a cyber inspectorate and cyber inspectors to assist police in handling cybercrimes given the increase in cyber offences. The cyber inspectorate is a unit in the DTPS' ICT Security Directorate in the ICT Infrastructure Branch.

The inspectorate is still not fully established. Two years ago, the Department embarked on training of the first cyber inspectors. The project was not successful due to financial constraints and other

[107] Vodacom, Green Paper submission, page 37
[108] Snail Attorneys, Green Paper submission, pages 2 & 4
[109] See www.icode.org.za

administrative challenges within the Department. There are thus no cyber inspectors and no indication that the cyber inspectorate in the DTPS will be established soon.

Some aspects of the ECT Act have however been implemented. It stipulates, for example, that an internal operational procedure for the inspectorate should be developed. This has been accomplished and approved by law enforcement agencies. The ECT Act also mandates the Inspectorate to develop conditions of assistance - a guide on how the police will be assisted where necessary by cyber inspectors. The first draft has been developed pending consultation and legal input.

The DTPS recognises that some of the cyber inspector powers provided for in the Act overlap with those of law enforcement officers. This was highlighted in some of the submissions on the Green Paper and stakeholders proposed that these responsibilities be removed from the ECT Act and placed under the Minister of Police or other appropriate Ministry. It is noted that there is general agreement that the introduction of cyber inspectors is critical. The question is rather where it should be located.

The DTPS is of the preliminary view that an inspectorate within the DTPS is still critical considering the increasing numbers of cyber offences and the volume of work the SAPS currently handles. It is though crucial that the roles and responsibilities of any unit established under the DTPS and those of the SAPS are aligned. It is envisaged that the inspectorate would provide assistance to the police and that its powers should be confined to monitoring, investigating and inspecting websites for illicit activities and informing law enforcement agencies. This would require changes to the ECT Act and for example clauses giving inspectors the powers of search and seizure should be removed (section 82(1)).

Note that the ECT Act will be amended in line with a new Cybercrime Policy being developed by the Justice Department. Any submissions made on the roles and responsibilities of cyber inspectors and the SAPS will be shared with the JCPS Cluster and considered in finalising related policies.

Comments are invited on the proposals above on the role of the cyber inspectorate and its continued location within the DTPS.

4.8.6 Data protection and privacy

Data protection policies generally have to balance two goals: The protection of the right to privacy and promoting the free flow of data to support innovation and economic development. The information society is by its nature global and data is the currency of the digital economy. Innovations such as cloud computing, big data and the internet of things promote and rely on cross-border data flows, and South Africa needs, if it is to become more competitive, to encourage technology, business model and service innovation in this area. This, however, must not be at the expense of rights such as privacy or other goals including the promotion of SMMEs.

The Protection of Personal Information Act (the POPI Act) promulgated in 2013 deals with the issue of privacy in the processing of information and establishes an Information Protection Regulator to handle complaints. Processing includes collection, receipt, recording, organisation, collation, storage, updating, modification, retrieval, alteration, use, dissemination or merging of data. In terms of the Act, it must be done lawfully and in a reasonable manner that does not infringe the privacy of the

person whose personal information is being processed. The Act requires that an entity (whether public or private) that processes personal information must notify any person if there have been any breaches of security in protection of such information. It prohibits the processing of personal information for the purpose of direct marketing unless there is consent. This is in essence requires that a person must "*opt-in*" – i.e. give express consent to use of their personal information.

The POPI Act repealed Chapter 8 of the ECT Act which dealt with the protection of personal information. The ECT Act though does still include provisions on unsolicited commercial communications which need to be reviewed in light of the new legislation. Section 45 of the ECT Act states that a person who sends unsolicited commercial communications to any person/entity must give that person or entity an option to be removed from the mailing list and should provide on request information on where the company obtained their personal information. This is essentially an "*opt-out*" scheme. The Consumer Protection and National Credit Acts have some related provisions as well.

Numerous submissions were made on this issue.

The NCAC raised a concern that the data protection provisions in the ECT Act are voluntary in nature. It stated that these had subsequently been overridden by the Protection of Personal Information Act (POPI) and urged government to urgently begin implementing this Act and amend the ECT Act in line with this. The Council also highlighted that there is already a need to review some of the provisions in the POPI Act to strengthen the protection of privacy in line with international best practice. [110]

Microsoft emphasised that consumers continue to have real concerns about online privacy:

> *"When consumers surf the web and use online services, they often leave behind a digital data trail. While these digital data can be and frequently are used for highly beneficial purposes, they also can be misused, especially where the data is collected, processed, or exploited without the consumer's knowledge or consent. Ensuring that consumers have confidence that their private information is not being misused when they go online is essential to building trust in e-commerce—and to spurring ICT industry growth more broadly."*

Several stakeholders raised a concern about possible interpretation of clauses in the POPI Act linked to data protection and stated that it is important that instead of restricting data to a particular geography, South Africa achieves its goal of protecting user data by requiring data exporters to be accountable for the protection of that data regardless of its location. They stated that while they interpreted the POPI Act to provide for this, there is a need to clarify provisions and develop a need for a clear regulatory framework in relation to data protection.[111]

The R2K proposed that a clear policy that protects end-users' rights from corporate and government surveillance via ICTs is developed. It alleged that there has been "*a dramatic increase in the use of formal communications surveillance through RICA*". It said that it has problems with RICA as it requires that surveillance capacity be built into mobile devices and that it has no protection against the surveillance of foreign signals. It proposed that the policy and law require ICASA to develop regulations "*that protects citizens from state security overreach in ICT use*".

[110] NCAC, Green Paper submission, pages 8&9

[111] This included Microsoft, the PPF, the South African Chamber of Commerce and Industry (SACCI), the Information Technology Association of South Africa (ITASA)and ISPA among others

Note that as highlighted in Chapter Five (Policy Options: Audio and Audio-visual Content Services), the introduction of connected televisions might raise new considerations regarding privacy. In some international countries, it has been found that viewers of television-like content provided over the Internet expect greater privacy than when engaging in other activities on the web. It is also recognised that the analysis of such patterns through data trails could make it easier for on-demand providers to suggest content a viewer might like and make the selection of programming easier. In light of this, some countries have proposed that on-demand providers should explicitly spell out the implications of data trails and provide up-front choices allowing users to "opt-out" of such schemes.[112]

POLICY OPTION: ALIGNMENT OF LAWS

Policy Option: Amendment of legislation

The ECT Act provisions on privacy and data protection will be amended to bring these in line with the POPI Act. It is also necessary to ensure alignment and coordination between ICASA and the Information Protection Regulator established under the POPI Act.

- **Are there additional provisions in the ECT Act that should be reviewed/revoked in the ECT Act to bring it in line with the POPI Act? Note that Chapter 8 has been repealed.**
- **Is there a need to consider amending provisions allowing users to "opt-out" to bring them in line with POPI Act rules requiring that consumers specifically "opt-in"?**

POLICY OPTIONS: OTHER PRIVACY ISSUES

In addition to the above broad review of the ECT Act in relation to the POPI Act, there is a need to consider whether or not current legislation (including these two laws) does address privacy and data protection sufficiently given new technological capacities. These include consideration of issues such as the right to be forgotten (as introduced in Europe) and rules on the monitoring and use of cookies by web-sites to track user's activities online.

Policy option: The right to be forgotten

The European Commission has developed a European Data Protection Regulation which includes specific provision on the right to be forgotten. In line with this, the European Court of Justice ruled against Google in May 2014 in a case brought by a Spanish man who requested the removal of a link to a digitised 1998 article online regarding a debt he had subsequently paid. The court ruled that search engines are responsible for the content they point to and thus, Google was required to comply with EU data privacy laws. [113]

- **Is there a need to provide for the right to be forgotten in South Africa? If so, is there any role that ICASA and/or the DTPS should play in entrenching this?**

[112] This issue is under discussion in the European Union review of policies relating to audio-visual media in light of convergence

[113] Ioannis Iglezakis, "Digital Forgetting in the Age of Social Media: Establishing a Comprehensive Right to Cyber-Oblivion", http://curia.europa.eu/jcms/upload/docs/application/pdf/2014-05/cp140070en.pdf

Policy Option: Data trails

All Internet users leave digital trails through their Internet activities allowing for local and international entities to track and collect data about their friendship and business networks, hobbies, interests and shopping patterns. Some of the information gathered in this way is used to collect information on general trends, and is not linked therefore to a specific person. Other information gathered records a person's preferences in order to make a user's online experience more relevant (such as remembering previous music preferences on an online music site). Such information however can also be used to invade a person's privacy, or target a user with spam and unsolicited emails and marketing information. Many sites include settings so that users can control their privacy settings (e.g. privacy settings on Facebook). Digital literacy and awareness programmes can assist in ensuring users are aware of ways they can protect themselves.

Privacy concerns relating to the compiling of information on a user's long-term browsing history (tracking) have prompted the European Union to introduce new rules to regulate this. The EU has introduced data protection regulation to protect Internet users from clandestine tracking and unauthorised personal data storage by requiring that "*explicit consent*" must be gathered from web users who are being tracked via web files called "*cookies*".[114] The definition of personal data includes any information online that can be traced to an individual. More stringent rules on the online profiling of children are included.[115]

In 1998, the USA introduced a law specifically limiting tracking of children's online activity – the Children's Online Privacy Protection Rule. The Federal Trade Commission is responsible for enforcing this.[116] The California State Government in the USA has recently introduced a law requiring disclosure from websites about their tracking of consumers' behaviour.

Given the global nature of the Internet, it is important that any rules are aligned and there have been suggestions that a global privacy policy should be adopted by an international body.

Currently both the POPI and ECT Acts include provisions on privacy in relation to unsolicited marketing.

- **Is there a need to introduce specific policies and rules regarding online privacy in South Africa? Please motivate your response and indicate what, if any, policies and rules you propose.**
- **Is there a need to strengthen rules in place regarding the protection of children's privacy online? Please motivate your response and indicate what policies and rules you propose.**
- **What role could the DTPS and/or ICASA play in relation to ensuring online privacy protection?**

[114] BBC, "New net rules set to make cookies crumble", 8 March 2011, http://www.bbc.co.uk/news/technology-12668552
[115] European Commission, "Online privacy", https://ec.europa.eu/digital-agenda/en/online-privacy
[116] Federal Trade Commission, "Children's Online Privacy Protection Act of 1998", http://www.ftc.gov/enforcement/rules/rulemaking-regulatory-reform-proceedings/childrens-online-privacy-protection-rule

4.8.7 Online gambling

Increased access to the Internet (whether via computers or mobile devices) inevitably increases the reach of online casinos. Online gambling includes virtual online gaming, Internet sports betting, online bingo and online lotteries and online sweepstakes and tournaments. While the National Gambling Act, no 7 of 1996 regulates gambling activities, these online sites challenge the effectiveness of such laws, given that online operators are not necessarily located within South Africa. The potential for fraud and cybercrime also increases as dishonest operators of sites can easily move, alter or even remove a site within minutes after taking money from gamblers. It is also easy for unscrupulous operators to manipulate software and games.

Amendments to the National Gambling Act adopted in 2008 provide for licensing of online casinos, however regulations required in relation to this have not yet been promulgated by the Gambling Board or the Department of Trade and Industry.

While this Discussion Paper, and the subsequent White Paper, will not explicitly deal with challenges associated with online gambling regulation or with the implantation of legislation, it is important to note that the failure to implement provisions and address the associated problems can result in loss of confidence among end-users who have been exploited or who are aware of such exploitation. A loss of trust inevitably negatively affects all online or mobile service providers and therefore impact on e-commerce expansion. This Discussion Paper therefore raises such issues so that they can be referred to the relevant Ministry as well as to other entities to address.

- **How could concerns around online gambling be addressed, if at all? Please indicate which entities you believe should be involved in this and their roles in addressing such challenges.**
- **Are there any rules that the DTPS or ICASA could introduce to address concerns related to online gambling?**

4.8.8 Internet intermediary liability

It is believed that a Cybercrime Bill developed by the Department of Justice, will deal with this issue to some extent. If necessary, the ECT Act might need to be amended to ensure alignment between the different laws. This would it is presumed focus on liability in relation to court actions. Given, however, that the ECT Act currently also provides for the issuing of take-down processes outside of the courts, this section considers whether or not it would be necessary to retain such provisions in an ICT policy and in legislation. It further asks questions about whether or not there is a need to amend current provisions.

Chapter XI of the ECT Act includes limitations on liability for ISPs under certain conditions. The Chapter states that intermediaries have limited liability if they are a member of an industry representative body recognised by the Minister, they conduct their operations in an automatic manner, adhere to the industry body's code of conduct and respond to court orders and take-down notices. ISPA was recognised by the Minister as an industry representative body in 2009 and therefore its members have limited liability when transmitting, caching and storing, hosting and linking or referring to unlawful content as long as the ISP is not aware of the content or did not actively create or modify this. ISPs also need as stated to participate in notice and take-down procedures outlined in Section 77 of the ECT Act.

The take-down provisions state that any person who becomes aware of unlawful material or action taking place on the network of an intermediary may notify the intermediary of the infringement and require it to remove or disable access to the material. In terms of legislation, ISPs can ignore a take-down notice if it is not valid (i.e. if it violates other laws or is in bad faith). The burden of proof of the invalidity of the notice however rests with the intermediary.

According to the ECT Act procedures "*any person who lodges a notification of unlawful activity with a service provider knowing that it materially misrepresents the facts is liable for damages for wrongful take-down*." It also states, however, that a "*service provider is not liable for wrongful take-down in response to a notification*." The Act does not provide for an appeals mechanism against take-down notices other than through the courts, though proposed amendments to the Act do deal with this in part. These amendments stipulate that a service provider has 10 working days to respond to a first take-down notice after which a second notice must be sent. It is not specifically stated that the creator or uploader of the allegedly infringing content should have be given a chance to respond to this notice.

Questions have been asked about whether or not any entity other than a court should be allowed to issue take-down notices.

ISPA in a supplementary submission on the Green Paper generally supported current provisions as they allow service providers to operate without "*undue legal risk*". The industry body however stated that it did have concerns regarding the take-down procedures and questioned if these constituted a "*justifiable limitation on the constitutional right to freedom of speech*" as there are no processes in place to assess the merits of any allegations informing a take-down notice. ISPA further highlighted that the largest ISPs in South Africa (the mobile networks and Telkom) are not members of any industry body recognised by the Minister in terms of the Act and noted that this could imply that common law does limit liability "*given the level of legal expertise these entities are able to access and their general risk-averse culture*".[117]
The Minister of Trade and Industry appointed a Copyright Review Commission (CRC) to consider all provisions relating to copyright in South Africa. In its 2011 report, the Commission recommended that the ECT Act and the Ministerial Guidelines for Recognition of Industry Representative Bodies of Information System Service Providers should be amended to require ISPs to adopt a graduated response for repeat infringers of copyright culminating in the suspension of access services of an individual.[118] Similar provisions introduced in laws in other countries have come under scrutiny as it is argued that terminating the internet access of an individual for a civil offence could be seen as an unjustified infringement on the right to access information.

The FPB in the meanwhile has raised a concern that the Ministerial Guidelines do not specifically reference the Film and Publications Act and that it is necessary to address this and ensure compliance by any accredited representative body.

[117] ISPA, Supplementary submission, 09 October 2014, page 5
[118] http://www.gov.za/sites/www.gov.za/files/CRC%20REPORT.pdf

POLICY OPTIONS

Option One: Status quo

The current provisions would be largely retained, though specific guidelines could be included clarifying the process to be followed in accrediting of self-regulatory providers. The amendments outlined in the ECT Bill could be extended to address concerns raised regarding the fairness of the existing take-down process.

Option Two: Three strikes rules introduced

In addition to the above, the policy and law could provide for a three strikes policy in instances of copyright as proposed by the Copyright Review Commission (see above).

- **Please indicate your preferred option. If you opt for the status quo, please indicate what amendments you propose be included. If you agree with Option Two, please expand on how you think this should be applied.**

The following questions are also relevant:

- **Do you think these provisions should be retained in the ECT Act or rather be moved to a cybercrime law?**
- **If so, which entity should be responsible for accrediting self-regulatory bodies?**
- **Is there a need to introduce other alternative dispute resolution processes in relation to disputes over the legality of content on the Internet?**

4.8.9 Intellectual Property Protection and copyright

The Minister of Trade and Industry is responsible for the protection of intellectual property and copyright. The Ministry is currently reviewing legislation to ensure it accommodates new technologies and is in line with international best practice. Of particular concern in relation to the area of e-commerce and e-services is the issue of online piracy and trademark counterfeiting – including domain name counterfeiting.

It is noted that the take-down procedures outlined in the ECT Act dealt with above do also apply to alleged breaches of copyright and intellectual property. Proposals made on the three-strike rule by the Copyright Review Commission also relate directly to this and should be considered when responding to the questions below. Any submissions and proposals made by stakeholders in relation to this will be referred to Minister of Trade and Industry.

QUESTIONS:

- **What if any measures and mechanisms could be put in place to strengthen online intellectual property protection?**
- **Are there any policy provisions that should be introduced in an ICT White Paper and/or related legislation (such as the EC Act, the ECT Act and/or the ICASA Act?**

4.8.10 Consumer Protection

Chapter Seven (Policy Options: Institutional Frameworks) deals with the relationship between the National Consumer Commission and ICASA. The information below is therefore for noting and no specific options or questions are raised.

The increasing use of digital devices and technologies raises new issues in relation to consumer protection. ICASA is required to some extent to ensure protection of consumers though many of its responsibilities now fall under the National Consumer Commission. The Commission has however not fully implemented provisions relating to this.

MTN, among others, noted that the Consumer Protection Act provides sufficient mechanisms to protect consumers. It said that government should focus on "*properly resourcing regulatory bodies such as the National Consumer Commission to effectively address matters affecting consumers in the e-commerce environment*" and therefore remove related provisions from ICT laws.[119] Vodacom raised similar concerns, stating that the framework is "*disjointed*" resulting in consumer confusion as they have to refer to three different laws (CP, ECT and POPI Acts) and work out which of three regulators they should complain to resulting in "*unnecessary jurisdictional battles*" .[120]

Others however stated that there is a need to make provision for specific protection from unsolicited marketing and highlighted that the provisions in the Consumer Protection Act (including the do-not call register) had not yet been fully implemented and that ICT related policy should therefore set specific provisions in rules and licence conditions.[121] The Wireless Application Service Providers' Association meanwhile stated that it has had success in dealing with consumer complaints raised against members. The Association proposed that the White Paper recognise the value of self-regulatory and co-regulatory codes to protect consumers.[122]

4.8.11 Protection of children

Several other Chapters/Policy Options Papers deal with the protection of children from harm and from accessing inappropriate content. The Film and Publications Act further includes specific provisions and outlaws certain content (including the use of children in pornography), while requiring other content (except for broadcasting content) be submitted where necessary for pre-classification. The FPB has stated that provisions are currently under review in order to ensure the Act better deals with online content.

In relation to e-commerce and e-services, however, there is a need to consider whether or not additional specific mechanisms should be introduced to, for example, put in place payment restrictions for under-age children (including mobile payments) and mechanisms and tools to restrict children's access to harmful goods such as tobacco, alcohol and gambling sites. This includes protection of children from inappropriate marketing of merchandise or services and the introduction of particular provisions on online profiling/tracking of children.

[119] MTN, Green Paper submission, page 22
[120] Vodacom, Green Paper Submission, page 37
[121] This includes Snail Attorneys, Telkom, the SABC and the SACF
[122] WASPA, Green Paper submission, page 10

Mechanisms and tools which could be put in place include ensuring that, for example, violent games and inappropriate or adult material should only be made available on a verifiable order from an adult and should require a credit card, rather than automatically being added to the consumer's phone bill. Rules could also state that mechanisms should be put in place to ensure authentication of credit cards to guard against children using their parents' credit cards without authorisation. Such rules could also specify that that a personal identification number (PIN) is required online.

POLICY OPTIONS

As noted in the Chapter/Paper dealing with Institutional Frameworks, it is necessary to ensure ongoing cooperation between different regulatory bodies and ICASA. ICASA could also be required to strengthen consumer protection by, for example, facilitating co-regulation with licensees on such issues and/or introducing specific requirements in licence conditions or regulations related to this.

- **How could a White Paper on ICT-related policy strengthen provisions to protect children, if at all?**
- **How can self-regulation and co-regulation assist in this, if at all?**
- **What other mechanisms might be necessary to protect children – e.g. could ICASA be required to develop specific rules and/or licence conditions related to this?**

4.9 Awareness and capacity building

The need for e-literacy/digital awareness/media literacy campaigns is highlighted in a number of other Chapters/Policy Options Papers (including Content Services, Industry Growth and Institutional Frameworks). Skills development is a specific focus of the Chapter/Policy Options Paper on Industry Growth. It is recognised that in order to ensure confidence in the digital environment, security has to be assured. This includes training of lawyers, prosecutors and the judiciary on issues such as identity theft.

There is also a need for coordinated awareness campaigns about mechanisms and tools in place which can assist in protecting end-users, including, for example, anti-virus programmes, anti-spam programmes and parental filters available from ISPs. Several submissions highlighted that such awareness-raising should be the responsibility of government and industry and the SACF, for example, highlighted the role that industry should play in ensuring that users are informed about online privacy options.[123] Several submissions further proposed specific interventions for new users, and, for example, the Western Cape Provincial Government proposed that such training could be provided by libraries, community centres etc. and should be required by any entity receiving public funding to promote access.

The North West Provincial Government proposed that the DTPS introduce and co-ordinate a cybersecurity week or month that will ensure that citizens are well informed. Institutions which should be involved in this could include all spheres of government, and public entities such as the

[123] SACF, Green Paper submission, page 27

SAPS, SITA, the CSIR, Telkom and the SABC. Telkom in its submission suggested that specific mechanisms be put in place to allow for anonymous reporting of cybercrimes.[124]

While there is a need to promote awareness and digital literacy across a number of portfolios, and this should be coordinated, the ECT Act or related legislation could put in place specific provisions for e-transactions and online security awareness. This could include requiring ICASA to focus specifically on these issues, for example (as is the case with regulators in other countries such as the UK and Australia), and could include mechanisms to ensure that licensees and/or self-regulatory and co-regulatory bodies provide regular information to end-users in relation to this. Initiatives such as the "icode project" developed by ISPA could through recognition of self-regulatory bodies be given greater weight through such mechanisms.

- **Should the ECT, EC and/or ICASA Acts include specific provisions on awareness and e-literacy?**
- **Would the introduction of a cybersecurity week or month lead by the DTPS assist in this?**
- **Are there regulatory, self-regulatory and/or co-regulatory provisions that could be introduced to strengthen enforcement?**
- **Should service providers receiving public funding to promote access (including funds from entities such as the USAF) be required to provide basic awareness training? If so, how could this be implemented?**

4.10 Overarching issues and coordination

The building of a dynamic and vibrant information society and digital economy requires coordination across a range of government departments and public entities and will be dependent on relationships and partnerships between government, the private sector, non-governmental organisations (including organisations for persons with disabilities) and civil society. A number of submissions to the Green Paper highlighted the need for increased cooperation between the different spheres and entities of government. Several noted that, although the ECT Act specifies that a national e-Strategy should have been adopted by Parliament by 2004,[125] this has yet to be finalised.

The National Cybersecurity Advisory Council (NCAC) said that progress had been hampered by "*departmental turf wars*". It stated that cybersecurity issues must be seen as a multi-department responsibility "*and harmonisation, alignment, optimisation, skills are fundamental requirements*". It proposed that a centralised policy and legislative function is established reporting to the Presidency to "*propose and advise on policy and legislative interventions and to monitor the implementation of ICT related initiatives*". It said that this structure should create a channel for communication between the government and other stakeholders such as the private sector and civil society and include representation from different sectors to facilitate this. [126]

[124] Telkom, Green Paper submission, page 20
[125] Section 5 of the ECT Act deals with the development of a national e-strategy. It states that the Minister of Communications should lead this process, in consultation with the Minister of Public Service and Administration.
[126] NCAC, Green Paper submission, page 2

Vodacom in its submission proposed that the Presidency be responsible for coordination of cybersecurity related issues and that there should be active engagement between public and private stakeholders. The framework should promote best practice risk management cultures and ensure compatibility with international approaches. It highlighted that the approach should be "proportionate" to avoid deterring investment in the infrastructure and services value chains.[127]

The SACF supported this and stated that the promotion of e-commerce and e-services needs a "*cross-functional government lead task force to deal with the larger complexities around e-commerce*".[128]

- **Is there a need for a centralised structure/function to coordinate digital related strategies and implementation across government?**
- **If so, where should it be located and which Department should play the lead role?**
- **What entities should sit on such a structure?**

4.11 Conclusion

- **Are there any other issues you think a policy on ICTs and convergence should address in relation to the information society, a digital economy and e-services?**
- **What benchmarks and targets could be included to ensure better monitoring of the effectiveness of policy?**

[127] Vodacom, Green Paper submission, page 38-40
[128] SACF, Green Paper submission, page 28

5 Policy Options: Audio and Audio-visual Content Services

5.1 Introduction

Convergence, the move to digital terrestrial television, the Internet and the introduction of more devices such as connected TVs will increasingly change how, where and when people in South Africa will access and interact with audio and audio-visual content. This offers great opportunities for audiences, service providers and content producers but also will require a change in the way "broadcasting" is regulated and the policy framework for the sector so that public interest goals continue to be met. A range of questions will need to be considered in crafting a new White Paper, such as:

- How in a multichannel, multiscreen environment does policy and law ensure that all South Africans, regardless of geography, income, age, gender, home language, ability … have access to a wide range of creative and compelling content in all languages, from diverse sources (including community, provincial, national and international content)?
- How can Government promote constitutional rights such as equality and freedom of expression and ensure a new information divide is not inadvertently created – with some people able to access a range of content and others only able to view and listen to content provided by a limited number of traditional broadcasters?
- How does policy continue to protect children from harmful and age-inappropriate content and ensure audiences can make informed choices about what to view and listen to?

The terms "audio" and "audio-visual" content recognise the changes increased access to high-speed broadband and the introduction of digital terrestrial television and new digital radio will bring to both audiences and content providers. Broadcasting-like content will be increasingly available across a number of platforms and on a range of devices (over the air, on the internet, on television and radio sets, and on computers, tablets and mobile phones). Audiences will be able to watch and listen to content "any-time, anywhere, any how": In real-time (as per the programming schedule), on catch-up services (scheduled programmes made available to be viewed or listened to outside the schedule), on demand via catalogues/search engines (e.g. video on-demand) and on the Internet via managed/closed or open portals (such as Internet Protocol TV, Web TV, social media, or other web pages). This content will originate from both inside South Africa and elsewhere and will be provided by South African, international and multinational institutions.

Policy will therefore need to adapt to facilitate and promote the availability of public interest programming, including South African music and content in all languages. At the same time, a new White Paper and related laws will need to focus on ensuring that traditional broadcasting services are viable so that they can fulfil South African content and news and information obligations even as they compete for audiences, advertising and content with both additional traditional channels and radio services and with newer media distributed from inside and outside the country.

As with other chapters/papers of this Discussion Paper, the key issues identified by those that responded to the Framing Paper and Green Paper and/or participated in consultative meetings are highlighted. Possible policy options to address these issues are then outlined for comment. The options proposed reflect submissions from stakeholders, contributions from people and organisations that participated in national and provincial workshops on the Green Paper and findings of research commissioned as part of the policy review process.

Several issues which were highlighted by stakeholders which are *not* covered in this Chapter/Options Paper:

- Regulatory principles and net neutrality: Given convergence, these issues are relevant not only to audio and audio-visual content but affect and apply all sectors and areas covered in this Discussion Paper. They are therefore dealt with in Chapter Two: Policy Options – Key Principles and Approaches.
- Spectrum related policies and principles are covered in the Infrastructure & Services Paper (Chapter Three) as are issues related to signal distribution/transmission.
- Skills training and industry growth matters are focused on in the Industry Growth Paper (Chapter Six).

5.1.1 Scope

This chapter covers *all* audio and audio-visual content carried over electronic communications networks and services. While it focuses on policy suggestions relating to regulation, it does not only deal with regulated and/or licensed broadcasters or content providers. Government policy is aimed at stimulating audio and audio-visual content production and investment across a range of genres, formats and languages. It also recognises that compelling content is critical to drive take-up of technologies such as broadband and the importance of ensuring that audiences not only access programming but also produce, share and engage with content.

5.1.2 Projections

It is important in developing policy to consider future projections. It is recognised that reliable projections for the audio and audio-visual content sector are particularly difficult given uncertainties about how (or if) audiences will change the ways that they access broadcasting and broadcasting-like content. What is certain, however, is that with the introduction of multichannel television via DTT, there will be audience and revenue fragmentation on the terrestrial platform.

Pricewaterhouse Cooper Inc (PwC) releases an annual Entertainment and Media Outlook with their projections for the sector for the next five years. The latest Outlook report (2014) predicts that traditional broadcasting services (pay and free-to-air) will continue to dominate both audiences and revenue until at least 2018. Audiences will though increasingly supplement their viewing and listening with over-the-top services as access to broadband increases.[129] This is in line with international trends, where, for example, in the UK, despite greater access to high speed broadband, traditional television viewership numbers have not dropped significantly (though there are slight variances dependent on age predominantly) and those viewers that do access content via the

[129] Pricewaterhouse Coopers Inc, "Entertainment and media outlook 2014-2018: South Africa, Nigeria, Kenya", 5th annual edition, September 2014, http://www.pwc.co.za/en/assets/pdf/entertainment-and-media-outlook-2014-2018.pdf

Internet, mostly make use of traditional broadcasters' catch-up services.[130] Key projections in the PwC report relevant to the broadcasting and audiovisual content sector/s include:

- South Africa's total entertainment and media market (including broadcasting, print and magazines, music, cinema, out of home, sports and spend on accessing the Internet) will see a consolidated annual growth rate (CAGR) of 10,2% to 2018 (from R117 billion actual in 2013 to R190 billion in 2018). Spend on accessing the Internet will be the largest and fastest growing segment.
- The number of mobile Internet subscribers is forecast to rise from 15 million in 2013 to 35,2m in 2018.
- Television is the second largest segment with combined revenues from TV subscription and advertising (including traditional television services, video-on-demand and pay-per-view) projected to reach an estimated R39,6 billion in 2018 (5,2% CAGR). PwC states: "*A growing middle class with greater disposable income will lead to a rise in pay-tv households. This, alongside regular increases in the licence fee and the perennial popularity of television as a mass medium for advertisers, will account for growth*".
- Television advertising alone, according to PwC forecasts, will see a CAGR of 6,8% from 2014 to 2018 (from R13,2 billion to R18,4 billion).
- The subscription share of total TV spend is likely to drop from 57% in 2013 to 53,6% in 2018, while TV advertising's share will increase from 43% to 46,4% over the same period. The number of subscribers will increase to 6,8 million households from 4,8 million in 2013.
- Radio is expected to have a higher revenue growth rate than TV with a CAGR of 8,2% over the period (to R6,2bn in 2018) as its "*reach across a wide demographic will keep it at the forefront of advertising campaigns*".
- Internet advertising will have the sharpest increase – at a CAGR of 22,7% - but off a low base. The spend on internet advertising will increase from R1,6 billion to R4,4 billion in 2018.
- The Report states that it expects over-the-top TV to "*remain nascent*" over the period due to limited broadband subscribers. While radio listenership will continue to grow with an increase in the number of hours spent commuting and its focus on regional and local traffic and weather, internet streaming of music will start to grow over the period.

5.2 Definitions

One of the first issues that must be addressed in reviewing current broadcasting related policies is the definition of "broadcasting/content services" and which services would need to be licensed. The Electronic Communications Act (EC Act) currently defines broadcasting as "*unidirectional*" and therefore linear. It also states that a '*broadcasting service*" excludes "*a service which provides no more than data or text (including associated still images)*" and "*a service in which the provision of audio-visual or audio material is incidental to the provision of that service*". ICASA is empowered to prescribe other services or classes of services which do not have to have a broadcast licence.[131]

Given convergence, many countries have expanded such definitions to include non-linear television and/or broadcasting-like services (such as VOD and over-the-top television) and a graduated

[130] Office of Communications, "The Communications Market, 2014: Television and audio-visual", Section 2.1: Key Market Developments in television and audio-visual, http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr14/UK_2.pdf
[131] Electronic Communications Act, Section 1: Definitions

approach to regulation. Respondents to this section of the Green Paper generally agreed that the current definition should be amended to cover both linear and non-linear broadcast-like content, regardless of the distribution platform used. Some however expressed caution, stating that the approach to regulation of content services should not stifle innovation.[132] Stakeholders suggested that definitions in the European Audiovisual Media Services Directive (AVMS) and proposals made by the Australian Convergence Review panel should be considered. A concern was raised that the policy and legislation should clearly differentiate between e-commerce and audio-visual content services.

It should be noted that the definition of content services/broadcasting could impact on other entities and laws. For example, the Film and Publications Act excludes broadcasting from the Film and Publications Board ambit.

OPTIONS

There is general agreement that there is a need to more broadly define **content services** so that linear (traditional broadcasting) and broadcasting-like non-linear (on-demand) services are covered.

5.2.1 Exclusions

There seemed to be agreement to continue to specifically exclude data or text services and those where the "*provision of audio-visual or audio material is incidental to the provision of that service*".

It is proposed that current exclusions (data or text services and those where the provision of audio-visual and/or audio material is incidental) remain.

- **Do you agree with this proposal?**

5.2.2 Focus

The options below are based on the European AVMS and the proposal from the 2012 Australian Convergence Review. There are differences in these approaches but both limit regulation to:

- Services *under the editorial control of a content services/media services provider;* and
- Services which *provide programmes/professional content/broadcasting-like content to the general public by electronic communications networks*.

This excludes, for example, social media, blogs, and sites such as YouTube.

It is proposed that similar limits apply in South Africa, i.e. content regulation only applies to:

- **Services which are under the editorial control of a provider**
- **Services which provide programming/professional content to the general public.**

Do you agree with this proposal?

Option One: Graduated approach to linear and non-linear services:

In Europe distinctions are based on the level of control audiences and end-users have over programming. The AVMS directive applies to on-demand (non-linear) and broadcasting (linear) services, with lighter touch regulation for on-demand content providers.

[132] Submissions include ACT-SA, e.tv, MPDP, MTN, NAB, R2K, SABC, SACF, SOS, Telkom, Vodacom, Intel among others

Minimum provisions that apply to *all audio-visual services*:

- Rules prohibiting hate speech;
- Requirements to make services accessible to people with a visual or hearing disability";
- Rules to ensure adherence to copyright and rights regimes;
- Stipulations that editorial content must be distinguishable from commercial content; and
- Requirements on editorial independence from sponsors and advertisers.

Rules specific to non-linear services:

- Measures to protect children from harmful content; and
- Requirements to promote European content, including those on financial contributions and on prominence of European works in catalogues of programmes.

Provisions specific to broadcasters (linear services):

- Measures to limit exclusive rights to events of major importance to society.
- Regulators should ensure broadcasters have access to "*short news reports*" on a reasonable and non-discriminatory basis to "*events of high interest*" to the public, acquired exclusively by any content provider. Short extracts can only be used for news broadcasts.
- A majority of transmission time must be dedicated to European programming.
- Detailed rules on editorial independence from advertising and teleshopping, including limits on the number of breaks for commercials in children's programmes, news and films (only one break every 30 minutes for programmes longer than half an hour).
- Rules limiting advertising to no more than 12 minutes in any hour.
- Requirements to protect children; and
- Right of reply rules.[133]

Other European directives that affect content service providers include:

- The Access Directive which allows regulators to impose 'must carry' obligations on radio and TV services if a significant number of viewers use such networks as their principal means to access these channels. Regulators can also impose obligations on operators to provide access to electronic programme guides.
- The E-Commerce Directive which applies in some instances to on-demand services; and
- Competition rules including state aid rules and specific rules/case law applied to, for example, premium content and vertical and horizontal integration.

Option Two: Regulation dependent on influence:

In 2012, an Australian government appointed committee set up to review the regulatory framework in light of convergence issued its final report. It proposed amending the law to only regulate *significant* content providers which influence the Australian public and are under the editorial control of providers.[134] Others it recommended should not be licensed/regulated. It proposed "thresholds" to define what would be regarded as significant and therefore subject to regulation. Providers would have to meet all thresholds:

[133] In terms of the EU framework, the rules set are minimum requirements. Member countries must therefore rules that at least set the minimum requirements, but are allowed to introduce additional measures and impose greater limits (i.e. some countries have stricter limits on advertising breaks for different sectors of broadcaster).

[134] Note that shortly after the Review was published there was a change of Government in Australia and all recommendations have seemingly not been addressed/considered by the new Government.

- They must have a large number of Australian users of that content. The review proposes that this be set at 500 000 or more initially; and
- They must receive a high level of revenue (proposed at AUS$200m based on 2011 revenue of commercial TV services) derived from supplying professional content to Australians.

It proposed that the threshold for users and revenue be finally determined by a new content focused regulator so as to exclude start-ups and small content providers. The focus of regulation of content service enterprises should be on universal access (including access to public interest programming), media ownership, content standards and common classification systems across different media, the protection of children and Australian content. In Australia the competition and consumer protection authority is given responsibilities in relation to ICT providers and thus in that country the regulator does not deal with competition or consumer protection related issues.

Option Three: Combination

The South African definition of content services could combine the approaches adopted in Europe and proposed in Australia. It could thus stipulate that all broadcasting and broadcasting-like content services as suggested by the AVMS directive be covered, but that even the minimum obligations only kick in when identified thresholds are reached (including audience levels and/or revenue).

- **Which of the above options should be considered?**

Please make suggestions on what thresholds would be fair and how these should be determined.

5.2.3 Grey areas

It is important to reflect on the impact of definitions and possible grey areas.

5.2.3.1 Existing on-demand/Internet services

There are currently a number of Internet audio/radio services available in South Africa. Several of these might qualify as radio or non-linear audio services if the European approach is adopted.

- **Should existing South African based Internet radio services be licence/authorisation?**
- **If so, what approach should be taken to those services which are already available online? Would there, for example, need to be provisions for grandfathering?**

5.2.3.2 Future possible blurring of distinction between traditional and on-demand services

The distinction between traditional broadcasters and on-demand providers might become increasingly blurred on connected devices (including connected television sets). Given that the Internet allows service providers to monitor a data trail, on-demand providers might increasingly suggest a "schedule" of programmes based on the user's profile, for example. Broadcasters provide programmes via a schedule whereas on-demand providers generally provide subscribers/audiences with a catalogue to choose programmes from. The "lighter touch" regulatory approach is based on the assumption that audiences have greater control over what they view or listen to. This distinction could however be increasingly blurred.

- **How, if at all, should policy and regulation best respond to the possible blurring of distinction between traditional broadcasting and on-demand services?**

5.2.3.3 The Internet is global

The Internet is also "borderless" and, for example, Internet Protocol Television Services (IPTV), web TV and on-demand audio and audio-visual services can be streamed into South Africa from anywhere in the world. Some such services might not specifically target South African audiences but could end up competing for audiences and advertising with licensed South African providers. Others might opt to operate outside of South Africa to avoid regulation, including content regulation, but specifically target and market services to South African providers.

Enforcement of provisions that no provider can "broadcast" without a licence could be difficult when content is streamed from elsewhere in the world. If these services are streamed from countries that South Africa has relationships with (e.g. Southern African Development Community countries), agreements could be reached to ensure that services have to be licensed or authorised in their "source" country to address this problem. However, services can be streamed from anywhere in the world, and therefore this will not always be a remedy. If special devices are needed to access this content, it will be possible to restrict the sale of these, but this also will not always apply.

- **How, if at all, should South African policy approach Internet content providers from outside the country?**

5.3 Focus of regulation

As can be seen from the above examples of approaches to regulation, countries also differ on the focus areas of regulation. The European Directive outlines a number of areas for regulation, while the Australian Review Panel proposed limiting the focus to four key issues. While several responses to the Green Paper said that the existing objectives in the White Paper and EC Act remain important,[135] MultiChoice and M-Net in a joint submission said these are "*outdated*", had in some instances been achieved and therefore should be reconsidered. The submission said the viability of broadcasters given new competition from, for example, on-demand services and social media, should be considered. They suggested that regulation be limited to specific objectives "*e.g. to protect children, stimulate local content development, create an enabling environment*".

In this regard it is important to highlight that submissions the principles adopted (see Chapter One: Introduction) are based on rights set in the Constitution. The question is therefore if new technologies might impact on the need for regulatory intervention/s to meet each goal. The debate therefore centres on whether it is possible to determine this up-front or rather regularly assess the need for intervention on an "objective-by-objective" basis.

OPTIONS

Option One: Status quo

Regulation would continue to address a broad range of goals with the public service broadcaster having greater obligations than commercial services. Subscription services and on-demand providers would be subject to lighter touch regulation. The ongoing need for regulatory interventions to achieve each objective, and, if so, what type of intervention, would be continuously assessed.

[135] These include SOS, the MPDP, the MMA and R2K as well as submissions from individuals

Option Two: Narrow focus

The focus of regulation of commercial services would be limited to, for example:

- Universal access;
- Ownership plurality;
- The promotion of South African content;
- The protection of children; and
- Ensuring fair competition.

The public broadcaster (and to a more limited extent community broadcasters) would be responsible for fulfilling other objectives.

- **Which option do you prefer? Are there other options? Please also indicate what objectives you propose should be prioritised.**

5.4 Licensing

5.4.1 Licence Categories

There are currently two categories of broadcast licence:

- Class – for community broadcasters[136] ; and
- Individual - for commercial and public broadcasting service licensees

All broadcasters also require a frequency spectrum licence.

Given that the definition of broadcasting might be extended to include on-demand service providers, and in recognition of the changing environment (including, for example, the introduction of multi-channel terrestrial television), it is necessary to consider if these two categories are still the best approach to licensing or whether new categories should be introduced, taking into account the new content value-chain which introduces not only non-linear services, but also new operations, processes and players in relation to television (radio is not affected to the same extent as yet) i.e.:

- Channel packaging of individual channels;
- Channel aggregation into bouquets;
- Aligned services such as electronic programme guide (EPG) development and backdoor services such as subscriber management, complaints etc.;
- Mux operation;
- Multiplexing;
- Platform operation (an end-to-end service, managing a platform and the content); and
- Platform service operator – same as above, but on the basis of lease of platform.

ODM in its submission on the Green Paper stated that there is a need to review separate licences for content, transmission and operation of services as new service providers will be able to perform all these functions and the current approach of separate licences is untenable.

Other related issues are:

[136] Note that challenges identified in the review process relating to the class licensing process for community broadcasters are dealt with in the section on community broadcasters

- Which category of licence would new services (VOD, OTT etc.) require? MultiChoice and M-Net suggested that they be categorised as class licences.
- If there is a need to introduce a multiplex operator licence separate from a transmission/distribution licence? Sentech has proposed this.

It is also useful in considering these issues to look at approaches in other countries. In the UK, for example, there is a two-tier licensing process with platform licences (including a multiplex licence) separated from programme/content provider licences. The following categories of television licence are provided for:

- Television licence (awarded to the existing FTA services which are required to provide some public content programming i.e. the Channel 4, Channel 5 and ITV companies)
- Digital Television Programme Service licence for a block of transmission capacity on the digital multiplex for TV programmes (including interactive enhancements). The applicant has to provide proof of an agreement with the multiplex network operator regarding capacity.
- Digital Television Additional Service licences which include services such as electronic programme guides (EPGs) and teletext on the multiplex.
- Television Licensable Content Services licences for those that provide television programmes or EPGs over electronic networks other than the DTT network (e.g. satellite, cable, Internet or mobile). This includes conventional programming and ancillary services (such as sub-titling). Ofcom stipulates that this licence does not guarantee space on the relevant platform.

The licensees have to abide by the Ofcom Broadcasting Code and other relevant rules (e.g. on advertising). Television and DTPS licensees also have to meet requirements on European content (at least 50% of programming should be European), commissioning of independent production, original content and listed sports events. Network/platform licensees are required to adhere to must-carry provisions and have conditions relating to the range and nature of services they cover. [137]

Ofcom has, in line with the European AVMS, also provided for licensing of on-demand services and entered into a co-regulatory agreement with the Authority for Television on Demand (Atvod) which requires services notify it before providing services and comply with the Authority's codes.[138] Radio licences include those for local radio, community radio, digital radio and radio restricted services (e.g. services that provide only information on weather and traffic).

Policy and legislation will need to take account of the changes introduced by the migration to DTT as well as any new definition of "content services/broadcasting". The proposals and options below separate out general issues, licence categories and the process to be adopted in approving, authorising and/or registering services.

5.4.1.1 Options: Spectrum licences

General spectrum related issues, including fees, are dealt with in Chapter 3 (Policy Options - Infrastructure and Services) This section focuses on new issues. Policy applying to television will need to recognise that a digital licensee will be allocated capacity on a multiplex (MUX) rather than a

[137] Thomson Reuters Practical Law, "Broadcasting Regulation – a quick guide", http://uk.practicallaw.com/4-504-3931
[138] http://atvod.co.uk

specific radio frequency. The multiplex will operate across a number of frequencies. The legislative requirement that all broadcasters should get a radio frequency spectrum licence might need to be reviewed, therefore. It should also be noted that on-demand and broadcasting-like services distributed over the Internet will also not use frequency spectrum.

It is recognised that this has been a lengthy debate – with broadcasters and signal distributors adopting different positions on this in the 2005 Digital Migration Working Group recommendations on the migration from analogue to digital terrestrial television. Broadcasters have expressed concern that if they do not have licences that specify the frequencies used, they could be more easily moved off these frequencies which would have consequences for viewers. These concerns are noted, but could be addressed through, for example, linking the licence to the MUX and the capacity they have been granted very directly, or by including such provisions in the licences granted to signal distributors for the MUX or introducing a MUX operating licence.

Traditional radio licensees would still require a radio frequency spectrum licence.

- **How do you propose the above issue is resolved?**
- **Are there any other general considerations that should be included in a final policy?**

5.4.1.2 Options: Licence categories

Option One: Status quo adapted

The current class and individual licensing approach would be retained, but adapted to accommodate new categories, if necessary, such as VOD or national non-profit services (see section on community broadcasting). As indicated in later sections, a specific content services class licence category could be introduced, recognising the distinctive nature of broadcasting/content services.

Option Two: New categories

New categories of broadcasting and content services licence would be set out which would outline lighter touch requirements for certain categories such as non-linear services. For example:

- Community broadcasting licence (radio and television);
- On-demand programming services/content services licence;
- Special event licences/restricted service licence;
- Digital television licence;
- Analogue commercial radio licence;
- Public broadcasting licences (digital or television and analogue/digital for radio);
- Additional services licences (for EPG's, new services such as teletext services or radio services which give particular information e.g. weather/traffic updates); and/or
- MUX operator licence.

Option Three: Other options?

Are there alternative options for categorising licences?

- **Which option do you propose the policy adopts? Please give details of the types/categories of service you propose under your preferred option.**

5.4.1.3 Options: Multiplex operator licence

If it is determined that there will be a separate multiplex (MUX) operator licence, it will be important to consider who this would be awarded to (e.g. the signal distributor, the broadcasters, and broadcasters and signal distributor or a separate entity) and what licence conditions would be placed on this licensee. Based on an assessment of approaches in other countries, the term 'multiplex operator' here refers to the entity responsible for managing the bandwidth allocated to a particular multiplex and the relationship between the different players involved (broadcasters assigned capacity on the MUX and signal distributors appointed to transmit this signal). It does not incorporate the activity of multiplexing (encoding and packaging). As there will be different broadcasters on each of the multiplexes, the introduction of a multiplex operator licence could assist in defining the relationship between each licensee.

Different countries have allocated differing responsibilities to multiplex operators – with some, for example, setting requirements for the EPG on the MUX operator and others including open access requirements.[139]

Note that the introduction of this licence category could assist in addressing the issue of the allocation of frequencies via a spectrum licence as this could be awarded to the multiplex operator which could include broadcasters operating on the MUX.

Given the range of possibilities, different options are not listed below, but rather questions asked. Stakeholders should elaborate on their responses in order to assist the policy development process should it be decided that a multiplex operator licence would be introduced.

- **Which entity or entities should be granted the multiplex operator licence if this is introduced– i.e. should broadcasters allocated capacity be required to set up a company/entity which would be allocated the licence? Should the signal distributor be granted a separate licence with specific licence conditions? Should it be given to both broadcasters and signal distributor?**
- **What specific licence obligations should apply to a MUX operator?**

5.4.1.4 Options: Process and requirements

For each category of service, the policy should define the process to apply for and renew the licence. It would also need to stipulate the scope of regulation for each category i.e. what sorts of obligations should apply to on-demand services. It must define:

- Which categories of licence would have to wait for an invitation to apply and what obligations would apply to these.
- What considerations would guide the granting of individual licences.

[139] The individual approaches are not listed here due to the many variations adopted. The following reports however include information on this which could assist stakeholders in considering the issues: The European Platform of Regulatory Authorities, "Plenary Session 2: Regulatory and Licensing Models for DTT ", 32nd EPRA Meeting, Belgrade, 6-8 October 2010 , http://epra3-production.s3.amazonaws.com/attachments/files/817/original/DTT_summary_answers_final_revised.pdf and the International Telecommunications Union, Guidelines for the transition from analogue to digital broadcasting, ITU 05-2010, http://www.itu.int/dms_pub/itu-d/opb/hdb/D-HDB-GUIDELINES.01-2010-R1-PDF-E.pdf

- Which services/categories of licence could apply at any time and/or be registered and the processes involved. For example, a simpler and quicker process to award community broadcasting licences is likely to still be necessary, though the regulator might be required to consider whether or not an applicant would meet the requirements set for the sector (i.e. is non-profit and controlled by a community). On-demand services are likely to require an even simpler licensing process.
- Whether there are instances when co-regulation could assist and, if so, what criteria should be considered in adopting this approach. Any co-regulatory framework would need to define the responsibilities of the regulator i.e. what rules and/or guidelines would need to be set for accredited co-regulators and what considerations and processes should be taken into account if the regulator might want to review its decision on co-regulation.

The policy could further require the regulator to perform a public value test/regulatory impact assessment before inviting applications for significant licences (e.g. new major commercial radio or television services), including an assessment of the market impact of a new service and an analysis of what, if any, specific criteria would be set to ensure specific policy objectives such as diversity.

- **What processes should apply to each category of licence (i.e. which would need to wait for an invitation to apply)?**
- **Should a different process be followed for radio and television services?**
- **What processes would be involved in applying for the different services categorised as class licences?**
- **Is there a need for market studies before licensing of new operators? If so, what should these include?**
- **Are their instances when co-regulation could be adopted? If so, what rules should apply to co-regulation accreditation?**
- **What other processes should be considered?**

*5.4.1.5 **Options: Multi-channel broadcasting - authorisation vs. licensing of channels***

There is a need to specifically consider the licensing processes for multi-channel services in light of DTT. This issue is isolated as several stakeholders made specific submissions on this issue.

The SOS raised questions about the best way to ensure public interest objectives are met through licensing and noted that it did not believe the channel authorisation process adopted by ICASA for DTT would achieve this. The SABC meanwhile stated that under ICASA's DTT regulations, it is the only broadcaster required to undergo a public value test for each channel authorisation and said that it is concerned this would result in delays, potentially negatively affecting on its ability to compete with other licensees and therefore its viability. The broadcaster further recommended that ICASA be compelled to conduct a market study before inviting new individual licence applications. The SABC also stated that it and other terrestrial broadcasters should be licensed as a network – with licence conditions applying to the network rather than individual channels. It stated that this was essential so that licensees could have sufficient flexibility to respond to audience need.

Channel authorisation provisions were introduced in the White Paper on Broadcasting in 1998 with the adoption of a framework for licensing of satellite television. As FTA television broadcasting was then all analogue, the policy did not specifically consider whether the authorisation process was appropriate for FTA licensing. The 1999 Broadcasting Act promulgated in line with the White Paper stated that a broadcasting licence consisting of more than one channel could not introduce new channels unless these were authorised in terms of the authorisation process prescribed by the Authority.[140] ICASA in its subscription broadcasting position paper and regulations set out a very simple authorisation process that gives the regulator limited powers to refuse such application.

ICASA has in its digital terrestrial television Position Paper and Regulations outlined the process for authorisation of channels by commercial and public broadcasting licensees. The authorisation process set out for FTA broadcasters is largely administrative, but the SABC would have to undergo a public value test for each channel. There are several key issues which need to be considered in reviewing the current framework relating to the approval by ICASA of channels in a multi-channel environment:

- If licence conditions would be network-wide or if there would be a need to include any channel specific conditions.
- Whether or not the authorisation process as outlined in regulation allows ICASA to fulfil its mandate of ensuring that individual broadcasting licensees offer a diverse range of programming, including South African content.
- If, given the different approaches to regulation of FTA and subscription services, the channel authorisation process should be the same for these two categories of broadcaster. Fair competition principles would be important to consider in relation to this.
- If there should be a different approach for satellite versus terrestrial broadcasters (whether FTA or subscription).

The options below are not all mutually exclusive.

Option One: Network licences

Licences would be given to a network though ICASA would be required to review its current standard licence conditions for terrestrial television broadcasters in order to ensure diversity across the network. Policy and legislation could specify that the network licence conditions would be adapted if a licensee introduces additional channels (i.e. a licensee offers six rather than five channels). This might be necessary if a licence, for example, specifies that the network should have a certain number of minutes of a particular genre of programming across its bouquet rather than sets a minimum percentage. This would not necessarily preclude specific conditions being set on individual channels.

Option Two: Individual channel licences

The current approach of individual channel licensing would remain for FTA broadcasters. While a broadcaster would be allocated capacity on the multiplex, each channel provided would have individual licence conditions.

[140] Section 4(4) and 4(3) of the Broadcasting Act. These sections were repealed with the introduction of the EC Act.

- **Which option do you think would be most efficient and effective?**
- **How can the licensing process best promote policy obligations such as diversity?**
- **What other options could be adopted?**

Options: Channel authorisation

If it is decided that the network approach would best meet policy objectives, there might be a need to review the channel authorisation process. In considering this it will be necessary to weigh up the need for efficiency in authorising new channels to promote take-up and offer audiences a range of channels, with the need to ensure fair competition and promote real content and language diversity. It will also be necessary to consider if the same approach should be adopted for subscription and FTA services, public and commercial services and for satellite and terrestrial broadcasters.

There are a range of options:

- More stringent approval processes could be set for public broadcasting services than for commercial services (as currently in the DTT regulations). It might however be necessary to more clearly define what would constitute a public value test for public broadcasting channels (i.e. what the regulator should take into account in assessing public value).
- The process for authorisation of public and commercial FTA terrestrial services could be similar e.g. all licensees would have to show that the channel would enhance diversity.
- There could be lighter touch approaches for satellite FTA channels or satellite licensees could have to comply with similar provisions to those in place for terrestrial broadcasters.
- There could be lighter touch approaches for terrestrial subscription services – though this process too could be more rigorous than that for satellite services.

- **What channel authorisation process do you propose would best meet policy obligations of diversity, fair competition and promotion of the viability of individual services?**

Please indicate if you propose that different approaches are adopted for the different categories of multi-channel licensee. Please motivate your response.

5.5 Three tier system

The current regulatory framework for broadcasting licensees (linear content providers) is focused on facilitating diversity and plurality of content and service. The three tier broadcasting framework of public, commercial and community services (whether FTA and subscription) is one of the key ways of achieving this. All tiers have to fulfil some public interest obligations with differing responsibilities allocated to each tier and service.

Questions have been raised by some stakeholders about whether, with convergence, the three tier system is still relevant or the best means to promote public interest objectives. The SACF, for example, indicated that its members had different opinions on the compatibility of a three tier system in the long term given convergence. It stated that some members indicated that with "*all communications migrating towards integrated packet switched technologies*", the policy should make provision for future changes to the system to make sure that "*opportunities for each tier*" are not lost. The SACF proposed that the White Paper take into account that "*a migratory path from the*

current three tier system to a fully converged and flexible horizontal sector structure should be anticipated".[141] National Treasury in its submission raised a concern that the three tier system could result in unfair competition and the entrenching of the SABC if it was seen as an end and not a means of achieving key principles.[142]

Others have suggested that there is a need rather to adapt and/or strengthen the system. The NAB, for example, submitted that the three tier system still has a role to play in the converged environment, but needs to evolve to achieve the objectives, recognising that "*broadcasters…can now be accessed online, public interest and local content can be made available on various platforms, broadcasters are no longer geographically confined to a specific footprint and audiences engage with broadcasting content on a range of social media platforms*".[143] SOS stated that it believes the three tier system needs to be strengthened to ensure each tier is distinct. The Coalition said that an over-reliance by all three tiers on commercial funding blurs distinctions exacerbated by ICASA's failure to effectively monitor compliance by licensees.[144]

Both Mindset and ACT-SA meanwhile raised the possible need for a "fourth tier" – national/provincial FTA non-profit broadcasters. Such service/s could be specifically focused on fulfilling key objectives in the Act (i.e. education) or a neglected sector of the audience (e.g. youth).

OPTIONS: THREE TIER SYSTEM

This section does not deal with the individual tiers in detail as sub-sections on public, commercial and community services outline proposals to make each tier distinct. It also includes proposals on the introduction of a fourth tier (see above) to give stakeholders an opportunity to comment. The below policy proposal merges the different submissions on this issue.

The final policy would highlight that convergence and digitisation might render the three tier system irrelevant and propose that:

- In the short- to medium-term the three tier framework would continue to apply to linear content providers (traditional broadcasters).
- The classification would not apply to on-demand audio-visual content providers. Traditional broadcasters should be encouraged to ensure their content is available as catch-up services, for example.
- The policy would stipulate that the ongoing relevance of the three tier system as a means of achieving plurality and diversity of service and content at a local, provincial and national level would be reviewed by government and/or the regulator within five years of the policy being adopted, and at regular intervals thereafter.

The policy would also emphasise the need to ensure access across all platforms and devices to:

- Public content promoting news, education, information and quality South African content for all South Africans,

[141] SACF, Green Paper Submission, page 37
[142] National Treasury, Green Paper Submission, page 3 paragraph 3.1
[143] NAB, Green Paper Submission, page 10
[144] SOS, Green Paper Submission, pages 9 & 10, paragraph 5.7

- Community content and news and information relevant to communities in languages spoken in the community, and that mechanisms be in place to ensure that individuals and community organisations can create and disseminate such content themselves; and
- Entertainment content, including South African drama and music.

The policy could, in line with this, strengthen existing provisions to ensure that the individual sectors are distinct and collectively meet identified policy objectives by, for example:

- Specifying the objectives specific to each tier and type of service and stipulating the distinct responsibilities of the public broadcaster, commercial licences (FTA and pay services) and community broadcasters. *Particular options in relation to this are contained in proposals on the individual sectors.*
- Strengthening the regulation of fair competition (*addressed in sections dealing with competition*).
- Strengthening provisions related to licensing and/or the regulator's capacity to reinforce the underlying objectives for each sector through its licensing. This could include options such as those highlighted previously requiring the regulator to conduct market reviews and/or public interest tests before issuing any major licence.
- Strengthening the monitoring and enforcement provisions in place and the regulator's capacity to effectively monitor and enforce compliance with conditions and regulations.
- Requiring the regulator to conduct and publish regular market reviews and analysis of diversity in the sector, including substantive diversity in, for example, formats, genres, news, opinion and analysis and sources of news and information programming. Reviews on diversity could include analysis of diversity for particular audiences, including children, different language speakers, different LSM's etc.
- Such reviews could also include analysis of the impact of regulatory interventions to assess their effect on the market, whether or not they are achieving the envisaged objectives or should be adapted or revoked, and/or if new approaches are required to promote access by all South African audiences to audiovisual content across different platforms and devices.

- **Do you agree with the above approach?**
- **How else could policy increase diversity through the three tier system?**

OPTION: FOURTH TIER

Should the policy introduce a "fourth tier" for national/provincial non-profit broadcasting services? This would only be available on the digital terrestrial television or digital radio platforms due to spectrum limitations of analogue. If so, what should be the criteria which such services would have to meet?

- **Do you agree with the introduction of a fourth tier? If so, what conditions should apply to this.**

5.6 Public Broadcasting

There are a range of issues relating to the SABC/public broadcasting which need to be covered in a new White Paper, taking into account the strengths and weaknesses of the current system and the

impact of digitisation and convergence, including the nature of the service, its mandate, structure, funding and governance and oversight.

5.6.1 Nature of service

The MPDP stated in its submission that the policy should explore the possibility of establishing a public service publisher with the responsibility of "*commissioning, promoting, aggregating and distributing local content, as well as with ensuring the survival of local content in the digital media environment*". Content would be made available "*on a non-exclusive basis*" to be shared across multiple platforms. It stated that this responsibility could be given to the SABC, or a separate public service publisher could be established. [145] Note that Ofcom in the UK introduced the notion of a public service publisher as part of its 2007 review of public service broadcasting, separate from the BBC,[146] but scrapped the idea subsequently[147].

- **Should the policy introduce a Public Service Publisher? If so, how should this be structured and funded? What would be its mandate? Should it be separate from the SABC?**

5.6.2 The mandate of the SABC

What should the roles and responsibilities for the SABC be in a multi-platform, multi-channel, multi-screen environment? This section considers this question in reviewing the current mandate of the SABC and considers approaches to determine the mandate. Issues relating to oversight and accountability are not dealt with here, but rather in a specific section dealing with this below.

The SABC's mandate is currently outlined in its Charter in the Broadcasting Act and is thus set by Parliament. Parliament approves of the Corporation's operational plan and budget - taking into account its mandate. ICASA is required to translate the Charter into licence conditions.

5.6.2.1 SABC objectives

The majority of submissions on the SABC mandate said it needed to be adapted – either to address current challenges or due to technological changes.

The SABC said that its mandate is too broad and that this results in it "*unintentionally*" neglecting some aspects. It proposes that its Charter be categorised into high priority and general objectives. It proposed that the following be set as high priorities:

- Universal service;
- Providing audio and audio-visual services in all official languages;
- Providing a diversity of services/ programmes which are educative, informative and entertaining;
- Providing services targeted at people with disabilities, youth, children and women;
- Providing international, national , regional and local news and information; and
- Development of the creative industry.

[145] MPDP, Green Paper submission, pages 14-16
[146] Ofcom, "Discussion Paper: A new approach to public service content in the digital media age: The potential role of a Public Service Publisher", 24 January 2007, http://stakeholders.ofcom.org.uk/binaries/consultations/pspnewapproach/summary/newapproach.pdf
[147] Chris Tryhorn, "Ofcom scraps 'public service publisher' plans", the Guardian, 12 March 2008, http://www.theguardian.com/media/2008/mar/12/ofcom.digitalmedia

The public broadcaster further indicated that, while it sees the broadcasting of sports of national interest and development sports as important, it is expensive to fulfil these requirements (over R600m was spent in 2012/2013 on rights for sports of national interest0. [148] It stated that any obligations relating to sports should be funded.[149]

The SOS recommended that the Charter be redrafted as obligations are currently contained in several different sections of the Broadcasting Act. It stated that that the mandate must reinforce SABC's distinctive role and that it should be required to focus explicitly on educational programming. The MPDP said that a recent study it had participated in showed that while South African youth use media (particularly radio and television), the youth "*do not feel that the media are relevant to them*". It stated that the SABC mandate should specifically address this as youth make up a large proportion of the South African population. It further proposed that a new obligation be added requiring the SABC to interact with audiences using mobile phones and the Internet. [150]

Veer Singh from the Ethekwini Municipality stated that the SABC must be accessible to everyone in the country and "*its programming must be understandable to and followed by everyone*". Its programming he said should be "*popular*" – i.e. it must provide a public forum for all to participate in, not just the elite. He stated that the SABC must promote comprehensive, objective and unbiased discussions and play an active role in preventing conflicts while promoting culture. Editorial control must be protected from political and economic interference.[151]

MultiChoice & M-Net stated in a joint submission that the focus of the SABC should be on airing diverse information and viewpoints and providing multicultural programming which informs, educates and entertains and contributes to the development of the SA production industry.
The NAB emphasised the need for any review of the mandate to specify that the SABC's licence conditions should be reviewed by ICASA to ensure that they match mandate obligations. [152]

The NCRF outlined a suggested charter in its submission, adding on responsibilities for providing foreign services. The Progressive Professionals Forum (PPF) highlighted universal access as a critical mandate for the SABC and stated that generally government needed to strengthen oversight of the public broadcaster.[153]

OPTIONS: THE MANDATE

The SABC's existing mandate is outlined below so that stakeholders can make concrete suggestions on amendments. This is extracted from the Broadcasting Act.[154]

> *"The SABC in pursuit of its objectives and in the exercise of its powers, enjoys freedom of expression and journalistic, creative and programming independence as enshrined in the Constitution.*

[148] SABC, Green Paper Submission, page 21, paragraph 7.2.4
[149] SABC, Green Paper Submission, pages 43 & 44, section 9.3.2
[150] MPDP, Green Paper Submission, pages 9-14, section 3: Broadcasting and Youth
[151] Veer Singh, Green Paper Submission, page 3 section 3
[152] NAB, Green Paper Submission, page 32, paragraph 118
[153] PPF, Green Paper submission, page 15
[154] Note that this is extracted from different sections of the Act, namely section 6, section 8 and section 10

"The Corporation must encourage the development of South African expression by providing, in all South African official languages, a wide range of programming that

- *Reflects South African attitudes, opinions, ideas, values and artistic creativity;*
- *Displays South African talent in education and entertainment programmes;*
- *Offers a plurality of views and a variety of news, information and analysis from a South African point of view;*
- *Advances the national and public interest*

"It shall:

- *Make its services available throughout the Republic;*
- *Provide radio and television programming that informs, educations and entertains;*
- *Be responsive to audience needs, including the needs of people with disabilities;*
- *Nurture South African talent and train people in production skills;*
- *Reflect both the unity and diverse cultural and multilingual nature of South Africa and all its cultures and regions to audiences*
- *Strive to be of high quality in all the languages served;*
- *Provide significant news and public affairs programming which meets the highest standards of journalism, as well as fair and unbiased coverage, impartiality, balance and independence from government, commercial and other interests*
- *Include significant amounts of educational programming, both curriculum-based and informal educative topics from a wide range of social, political and economic issues, including but not limited to, human rights, health, early childhood development, agriculture, culture, religion, justice and commerce and contributing to a shared South African consciousness and identity*
- *Enrich the cultural heritage of South Africa by providing support for traditional and contemporary artistic expression*
- *Strive to offer a broad range of services targeting particularly, children, women, the youth and people with disabilities*
- *Include national sports programming as well as developmental and minority sports.*

- **Please highlight which aspects of the remit you believe should remain, be strengthened or removed. Please also identify additional mandates you propose should be added, noting the following:**
- **Suggestions by stakeholders that a specific mandate on interactivity and using new media be included;**
- **Proposals that the SABC be required to focus on youth and/or education and/or debate and discussion on key issues;**
- **The possibility in the multichannel environment of the public broadcaster also providing a parliamentary channel or coverage (dealt with in more detail below);**
- **The current role of the SABC in relation to foreign services.**

ICASA would be required to review licensing conditions based on the revised Charter.

OPTIONS: PROCESS FOR SETTING REMIT

The SOS stated that processes be put in place to regularly review the obligations set for the SABC. It highlighted that this could allow for the remit to be specifically aligned to its budget for a set period.

International benchmarking conducted for this review identified different approaches to reviewing public broadcaster mandates and for setting specific objectives over three to five years. The options below capture this.

Option One: status quo

The broad mandate would continue to be set in law. Changes would require legislative amendment.

Option Two: Act sets out mechanisms for review

The Charter would be separated from the law (e.g. could be an appendix). Policy and legislation would outline the broad objectives and set out a process for regular review of the mandate by Parliament through a public process. Such a review should provide opportunities for members of the public to contribute to the Charter, for the regulator to make recommendations based on its analysis of public need, the SABC to make proposals and Government to contribute. The agreed on remit could also be used to set funding, such as licence fees for a set period.[155]

- **Please identify which option you prefer. Feel free to suggest alternative options.**

5.6.3 SABC structure

The SABC currently includes three FTA television channels and 18 radio stations covering all official languages. All radio stations stream online. In addition, it produces a 24 hour news channel on the DSTV subscription platform, intends to provide an entertainment channel for the same satellite platform and international radio services (Channel Africa) available on shortwave, satellite and the Internet. Two regional SABC licences (SABC 4 & 5) were granted by ICASA in 2005 but these were never issued pending confirmation of sufficient funding.

With the introduction of the White Paper on Broadcasting in 1998 and the Broadcasting Act in 1999, the SABC was required to separate into two divisions – public (with two television channels and 15 radio stations) and public-commercial (SABC 3 and three radio stations). The division was aimed at protecting the public mandate from commercial influence. Revenue from commercial services according to the policy would cross-subsidise public interest programming and obligations. The introduction of DTT and the increased number of television channels requires the policymaker to consider whether these will be divided along public and public commercial lines as previously and, if so, how such a division will be effected.

It is important to note that it is difficult to assess the effectiveness of the division on the funding model of the SABC as the broadcaster has not produced audited separate accounts for the two wings as required by law. It is thus not possible, for example, to assess if the commercial services have in any way cross-subsidised the public stations and channels.

DTT and the additional capacity that will be available to the SABC also raises the possibility of introducing new channels, such as an educational channel, FTA parliamentary channel and/or regional/provincial services. The migration will also affect radio, as stations which were limited by

[155] In the UK, the BBC Royal Charter is set for ten years and amended following widespread consultation by government that starts a few years prior to this. The BBC Charter sets out broad objectives (public purposes) for the broadcaster and is accompanied by an Agreement which includes details on how the BBC will fulfil the broad public purposes over a set period and determines the licence fee for the period based on an assessment of costs.

spectrum scarcity to particular licence areas will now be available on the STB and thus be able to be heard around the country at least in the home. Convergence, moreover, introduces the possibility of SABC becoming a major developer and distributor of public interest content for multiple platforms, screens and devices, which might also necessitate a change in the structure of the broadcaster. The responsibilities of SABC in relation to its foreign services also need to be explored. It currently administers Channel Africa on behalf of government and receives separate funding for this, though it has indicated that the funds provided do not always cover costs. The Department of International Relations and Cooperation (DIRCO) established an online radio station in 2013.

While the structure of the public service broadcaster/content provider must be based on its mandate (form follows function), and is dependent on its funding, it is important to consider the implications of the new environment on the structure so that a final White Paper can include policy perspectives on this.

There were several submissions on each of these issues. The SABC stated that the current division into public and public commercial services is not practical or implementable. It said that it is "*close to impossible to expect three commercial radio stations to fully subsidise the public mandate of the 15 public radio stations*". It further said that obligations to keep separate books of accounts for the two divisions have "*serious administrative implications*".[156] The SABC suggested the following options:

- Divisions are removed, though policy could include limits on commercial content and stress public service responsibilities. ICASA could be required to determine the criteria for public service versus commercial service programming. This is the SABC's preferred option.
- The public commercial division could be privatised and established as a separate company. The SABC could be a shareholder or majority shareholder in this new company.
- The possibility of public/private partnerships (note this was not expanded on but could include partnerships on production of individual channels). [157]

National Treasury, while not commenting directly on the structural division of the SABC, emphasised that separate accounting should be a requirement for all public entities. It said: *"(T)here is a need for a new paradigm where all SOEs including the SABC must be compelled to publish separate accounts for their public interest and commercial businesses. This will assist in evaluating the degree to which cross-subsidisation between the commercial and the public components is occurring".*

The SOS in its submission said that the division had not achieved intended objectives and should therefore be scrapped and all services categorised as public. E.tv made similar charges, stating that SABC practices have negated the objectives of the division and that there is "*no real and meaningful distinction*" between the two. It proposed that any new policy include specific restrictions on commercial activities as it alleged that the SABC currently engaged in unfair competitive practices.
ACT-SA raised a number of questions regarding the structure of the SABC (with a focus on television). It said, for example, that it was not convinced that the SABC should be allocated almost

[156] ICASA in its DTT regulations has stated that one third of all channels would be public commercial though it has not provided detailed reasons for this determination. It is presumed that this is based on the current ratio in an analogue environment.
[157] SABC, Green Paper Submission, Section 6: SABC Structure in terms of section 9, page 19

an entire multiplex with DTT and asked if what it said are "*over inflated budgets*" for such services could not be allocated more "*evenly*" to other stakeholders.

The NCRF was the only stakeholder to make a submission on foreign services. It stated that foreign services should be specifically incorporated into the mandate and funded as part of this.

OPTIONS: SABC DIVISION INTO PUBLIC AND PUBLIC COMMERCIAL DIVISIONS

Option One: Status quo

The SABC would continue to be required to have two divisions, both reporting to the same Board with separate board committees. Provisions that one out of the three TV channels operate as a commercial service would be amended given DTT. The policy would include more clarity on the distinctions between the divisions and ensure fair competition.

Option Two: Remove divisions

The requirement that the SABC be divided into two separate administrative divisions would be removed. The policy would instead define what commercial activities the SABC would be allowed to engage in. All services would be required to focus on meeting public interest objectives, though the SABC would be allowed to subsidise these through commercial activities. *Note that while the SABC proposed requirements to produce separate accounts should be revoked, this is not proposed here.*

Option Three: Commercial services formally separated

The SABC would be required to establish a separate company housing its commercial services. Private shareholders would be invited to participate in the company, though a portion of shareholding would be retained by the SABC. Such an option could also include a public/private partnership to manage the commercial services for a management fee/share of profits.

Option Four: Privatise commercial services

Specific services of the SABC would be privatised completely (e.g. the three commercial radio services, and commercial television channels and/or a portion of the capacity allocated to the SABC in DTT). Such services could either be "sold" (with ICASA making final determinations on licensing through a competitive licensing process) or could be allocated to other non-profit or public interest entities (such as national interest groups or to establish a youth service).

- **How should the SABC be structured in future? Please elaborate.**

OPTIONS: FOREIGN SERVICES

Option One: Status quo

The SABC would continue to administer foreign content services on behalf of government. The policy should clearly specify the funding model for this to ensure adequate resources are provided.

Option Two: SABC given mandate

SABC would be given a mandate to provide foreign services. There are different variants in other countries in relation to this. For example, the BBC World Service was administered as a separate

service by the BBC funded by their foreign affairs ministry until recently. The existing model for Channel Africa is based on the old BBC model. This changed however in 2014 and the BBC World Service is now funded from the TV licence fee.[158] In Australia, foreign services are part of the remit of the ABC and its funding from government includes a specific budget for these services.

Option Three: Government takes it over

The administration of Channel Africa could be handed to the Department of International Relations and Co-operation (DIRCO) as it has now established its own online radio service. DIRCO could formally outsource management to the SABC or another broadcasting services but would be responsible for funding the service.

- **Which option would be best to deliver foreign services?**
- **Are foreign services still relevant?**

OPTIONS RE PARLIAMENTARY SERVICE

The first question in relation to a parliamentary channel is whether or not such a service should be made available on the DTT platform. If so, there are a range of approaches to this.

- **Should policy specify that a parliamentary channel is provided on the DTT platform?.**

Option One: Administered by SABC and funded by Parliament

SABC could administer the channel on behalf of Parliament and be paid by Parliament for this.

Option Two: SABC mandated to cover parliament

The SABC mandate could specify that it must provide a parliamentary channel and ensure coverage of Parliament across all platforms. This would be funded by the SABC.

Option Three: Parliament to take responsibility

Capacity could be set aside on a DTT multiplex. Parliament would be allocated such capacity and could outsource this to an independent service provider.

5.6.4 SABC Funding

Funding requirements are inevitably affected by the remit and structure of the public broadcaster, and the mandate and structure is to some extent limited by what funding is available. This section focuses on possible funding models for public service programming. All respondents to the Green Paper who made submissions on funding of the SABC said this is a critical area given past challenges.

The SABC currently has a mixed funding model – with revenue from advertising and public funding (government allocations and licence fee funding). It is though reliant predominantly on commercial revenue (over 80% of its revenue is from advertising). Some stakeholders argued that this limits its capacity to fulfil its mandate adequately as certain audiences or genres and formats of programming are not attractive to advertisers and that this affects its capacity to provide quality services to all audiences and language groups.

This section deals with four key issues relating to funding and the funding model:

- Broad **approaches to funding**
- How to determine how much funding is needed (the **quantum required**);
- The ideal **ratio** of different sources of funding; and
- **Mechanisms** for funding (e.g. licence fees or other possibilities).

5.6.4.1 Broad approaches

The NCRF and ACT-SA proposed that the SABC be funded from a more general public broadcasting fund that would also allocate funds to community broadcasters.

OPTIONS: BROAD APPROACHES

Option one: Dedicated fund

Public funding would be earmarked only for the SABC.

Option two: Contestable fund

A public service fund or public content fund would be established providing funding to the SABC and other entities (including community broadcasting and possibly public interest programming provided by others).[159] If this approach is adopted, policy would need to determine who would manage such a fund and how it would be established, among other things.

- **Which option do you prefer? Please motivate your choice and provide further detail where necessary i.e. who would be able to source funds from a contestable fund and how it should be established and managed.**

5.6.4.2 Cost of mandate and what should be funded

While the SABC did not fully break down the cost of its existing mandate, it did state in its submission that in 2012/2013, the overall cost of meeting its mandate was over R3bn. This included over R400m for news on its radio and television services, R600m for sporting rights, R500 000 on interns and R9m on signal distribution, including expanding its network through low power transmitters to meet universal service obligations

The SABC also highlighted particular areas that it said require government/public funding:

- Expansion of its radio network: SABC noted that although radio penetration stood at about 90% of the population, this was based on access to any radio service rather than to a service in a person's preferred language. It said that first language radio penetration is much lower for African language population groups and that expansion would cost over R30m.
- Transmission costs: The SABC said that it has on average spent over 8% of its funds on transmission and that this would increase with the migration to DTT and the ongoing expansion of its radio network.
- Funding for the acquisition of rights to sporting events of national interest (unspecified).
- Funding for children's programmes, educational programming and sporting events (both minority and developmental sports and sports of national interest).

[159] New Zealand currently has a contestable fund for public interest programming

National Treasury noted that the failure by the SABC to produce separate accounts made it difficult to assess the costs of the broadcaster's mandate. The NAB emphasised the need for an independent assessment of the costs of the public mandate as part of the policy review process.

OPTIONS: COST OF MANDATE AND WHAT SHOULD BE FUNDED

As noted, the cost of the mandate is unclear. Although the SABC in its submission gave some indication of costs, it has not provided separate accounts, detailed information on how it calculated expenditure or information on current revenue/revenue shortfalls for public obligations. It would not be efficient or responsible use of public funding to determine funding needs without considering what aspects of the mandate are or could be funded by other means. The principle underpinning government and public funding is that it should be used to meet clear public interest objectives that would not be delivered without such resources. Further, any costing of the current mandate would not necessarily be relevant given that the policy process includes a review of the remit.

Finally, it is critical not only that public funds and resources are used efficiently to meet specific mandates, but that there is a perception by the public that public funding equates to public value. This requires an independent evaluation of any costs provided by the SABC as there are perceptions that it has not always used public funding prudently given recent adverse auditor general and other such findings.

In light of this Government is exploring the development of a model which could be used to cost the mandate not only for this policy review but into the future. The adoption of a model would assist in ensuring transparency in relation to budgeting. Given this, this section of the Discussion Paper makes suggestions on the broad approach that could be used to determine ***what is funded*** by public funds (including licence fees/levies).

Option One: Status quo

Public funds (licence fees and parliamentary allocations) are allocated generally rather than to specific budget lines (there are exceptions to this, such as funds from government for particular capital projects or for a specific project such as elections).

Option Two: Earmarked funds

Policy and other instruments would specify which budget lines/mandates would be funded if there is a shortfall. For example, the costs of extending transmission network could be funded, transmission costs, and particular types of programming (educational, news, children's etc.) and sports.

- **Comment is invited on which approach should be adopted. Submissions on other approaches are also welcome. If Option two is your preferred choice, please detail what specific mandates you propose should be funded or how these should be determined.**

5.6.4.3 Funding sources

Most stakeholders that made submissions proposed that the mixed funding model (public and commercial revenue) be retained, but that the ratio of public funding to commercial revenue change. The SABC stated that it should be able source funding from the Universal Service Fund (USF).

MTN said that policy must be based on an in-depth review to determine how SABC could be self-funded from TV licences (with a new strategy and model), advertising and sponsorship (with a five year plan in place), commercial enablement of third party content providers, commercial business models (free and paid for), content development and sales and mobile and other e-services.

OPTIONS: RATIO

The SABC will continue to be funded by a mix of commercial and public revenue. Government together with the SABC will also explore possible new revenue streams opened up by convergence such as content sales and new opportunities for partnerships.

- **Submissions are sought on what the ideal ratio of funding should be to ensure certainty of funding and insulate the SABC from undue influence from commercial, political or other significant interest group influence.**
- **Note that e.tv has proposed that policy, law and regulations specifically limit commercial revenue for the public broadcaster and comments are invited on this proposal.**
- **Proposals on possible additional sources of funding are also invited.**

5.6.4.4 Mechanisms

The SABC in its submission proposed a number of different mechanisms for consideration:

- The television licence fee could be replaced with a tax to solve the problem of evasion or a specific levy on particular services (such as electricity, telephone or other utility bills)
- The licence fee could remain but policy and legislation address collection challenges. This it said could include provisions for inflation-linked increases to licence fees and extending the range of devices linked to payment of the fee. The SABC stated that the current definition of a television set in the Broadcasting Act should be revised to cover all devices that can receive audio-visual content in recognition of convergence.

National Treasury also noted that the licence fee system currently in place is inefficient. MultiChoice and M-Net proposed that the public remit be funded via budget appropriated by Parliament. It said that a more efficient mechanism for collecting licence fees should be explored such as a line item on a tax return or on a utility bill. This could, it stated, be delinked from viewing devices and framed rather as a public broadcasting service levy so that collection mechanisms in place in SARS or municipalities be leveraged to reduce administration and collection costs.

The NCRF suggested that the licence fee be replaced by a 1% tax transferred to a Public Service Broadcasting Fund accessible to the SABC and community broadcasters. Additional sources of revenue for the fund could include expropriations from Parliament, contributions from other broadcasting licensees (commercial) and business. The Fund should be managed by the MDDA.

Paul Hjul proposed that the SABC become a mutual public company with 100 million shares. Sale of these shares (25 million on basis of current valuation of SABC and the rest handed over for payment

of a TV licence or calculated at the cost of a TV licence). The TV licence would fall away and the SABC would become a "*savings instrument with a minor return on investment*".[160]

OPTIONS: FUNDING MECHANISMS

The following funding mechanisms are possible options to consider exploring further. ***Note that Government has not yet determined whether or not any of these options would be viable in the long term.*** The options proposed are not the only possible approaches, but are based on submissions to the Green Paper and international benchmarking. Many countries have in recent years abandoned a traditional TV licence fee, and/or changed the mode of collection due to disproportionate collection costs, evasion rates and/or recognition that with convergence the television set is not the only means to access content.

It is also important to highlight that the proposal made by some stakeholders of a blanket one per cent tax on income, as put forward in 2009 in the draft Public Service Broadcasting Bill is not included. After further consideration it is not deemed viable as it would apply to individuals rather than households and thus negatively affect those sharing residences with numerous working adults. Moreover, such an earmarked tax is contrary to South Africa's general taxation and fiscal policies.

Option One: Status quo tweaked

The SABC would continue to collect licence fees per household/business, but the following options would be explored further to address some of the current weaknesses:

- The definition of the type of equipment that requires a TV is expanded in light of convergence to include any device capable of receiving television;
- Any subsidies (e.g. for the elderly or those on social grants) are recovered from government;
- An automatic inflation-linked increase to the licence fee versus a process of linking the licence fee to commitments over a set period (i.e. an agreed programme of action);
- A due diligence on the collection process is conducted to address any inefficiencies.

Option Two: SARS/another agency collects the licence fee

The licence fee would be determined as above, but collected by another entity such as SARS. The viability and costs of this would have to be explored to assess if this would address inefficiencies.

Option Three: Replace TV licence with public broadcasting fee

Several countries (e.g. the Netherlands) have introduced a public broadcasting fee for all households to replace the TV licence fee to simplify collection. It is based on the fact that everyone benefits in some way from public broadcasting in the digital environment. Such a fee is collected by a range of entities (utility or telephone companies, the revenue collection agency, the post office etc.).

Option four: Once-off levy

A once-off levy/tax on sale of selected devices through which TV/audio-visual content can be accessed would be introduced e.g. smartphones, computers, television sets, STBs, car radios. This

[160] Paul Hjul, Green Paper submission, page 39

would remove the challenge of annual collection of fees and could address to some extent concerns raised by some stakeholders that the licence fee is in effect regressive taxation. In some countries (e.g. Turkey) this tax is payable by producers/importers of equipment. It would have to be determined if a once-off levy would raise sufficient income. It should be noted that it would not be possible to accurately project revenue. It would also be important to ensure that such a fee did not make the cost of devices prohibitive and thus increase the digital divide.

Option Five: Tax other companies

A tax on telecommunications companies and/or advertising and/or commercial broadcasters could be considered. France and Spain have introduced similar schemes along with legislated limitations on advertising on their public broadcasters. At the moment, all SABC TV channels have the same limits on advertising as FTA commercial television services: 12 minutes per hour maximum with an average of 10 minutes per hour. Should such an option be further explored, it would be important to consider other levies/taxes that services currently pay, e.g. broadcasters and telecommunications licensees are required to contribute a percentage of their profits to the USAF or to the MDDA.

- **Comment is invited on your preferred mechanism for funding for the SABC/a public broadcasting fund. Please substantiate your response.**

5.6.5 Reporting, oversight and accountability

As stated in many submissions, it is critical that SABC reports transparently on its use of funds and is held accountable for performance against its mandate. This is in line with general principles on accounting for public resources and provisions on effective and transparent management of public entities. Improved reporting could also address perceptions of over expenditure and inefficient use of funds by the SABC. This could assist in addressing evasion rates.

OPTIONS: REPORTING AND OVERSIGHT

While the SABC has suggested that the requirement that it separate its accounts be reconsidered, as National Treasury has noted, such a requirement should become compulsory for all public entities. Separate accounting is in place in many public broadcasters according to benchmarking conducted (e.g. separate accounts are required by EU State Aid Rules and the Australian Broadcasting Corporation annual reports include both separate narrative and financial reports on commercial and public service activities). This is to ensure that public funds are not used to distort competition. In addition to this, policy and relevant legislation could further specify additional reporting requirements to strengthen accountability. Options include:

- Requiring the public broadcaster to regularly review and report on its performance against its remit, including a review of efficiency in delivering on this. This could include independent evaluation and assessment of, for example, audience and major stakeholder views. The BBC Trust is required to publish such a review every five years.[161] The SABC has suggested in its submission that public report-backs could be held every three years;
- Requiring the SABC to include specific details on identified issues. Both the BBC and the ABC include detailed breakdowns on expenditure on content related and operational activities.

[161] The most recent review published by the BBC Trust is available at http://www.bbc.co.uk/bbctrust/our_work/services/television/service_reviews.html

The BBC gives a detailed narrative and financial breakdown of how licence fee income is used. The ABC gives a detailed report of how it has met its programming remit (including, for example, expenditure on original Australian content per genre comparative to previous years). The BBC provides a financial breakdown of spend in different categories (content, distribution, infrastructure/support) per service.

- Provisions requiring the regulator to report on compliance with the remit could be strengthened. The regulator could, for example, be required to submit an annual report to Parliament on compliance to be considered along with SABC's annual report.
- The SABC could be required to develop its three year/annual operational plans in consultation with the regulator so that the regulator could ensure that such plans incorporate mandate requirements. Performance against these would then be audited by the auditor-general.

- **Stakeholders are invited to comment on provisions to increase transparency. Additional options are also welcome.**

5.6.6 SABC Governance and Management

The SABC has faced a number of governance issues over recent years resulting in audit and other findings against the broadcaster. This has led to questions about governance provisions in place, including:

- The role of the Board versus that of management;
- The appointment and removal procedures for Board members (both executive and non-executive); and
- The mechanisms and structures in place to ensure effective oversight and leadership.

Parliament has also raised concern about whether or not the roles of the Minister as shareholder on behalf of the public versus that of Parliament need to be clarified. A number of stakeholders made submissions on these issues.

The MPDP and SOS said that policy should specify that the Board is solely responsible for appointment of executive members. They argued that the current provisions that the Board recommends candidates for Ministerial approval are unconstitutional and cause confusion about whether the Board or the Minister is responsible for holding executives to account. The SOS further proposed that:

- The Minister representing the public as shareholder of the SABC should not be the same Minister responsible for policy for the sector.
- The SABC should be a Chapter 9 constitutional institution.

The SABC submission dealt primarily with limitations in the Broadcasting Act on the number of members of its executive committee (Exco). It argued that the limit of 14 members impacted on business growth as the "*changing business environment*" would necessitate expansion of the Exco. It proposed that limits removed from law and rather be dealt with in the shareholder compact

The NCRF proposed that the Board of the SABC only include 12 non-executive members and no executive committee members and that it be required to set up an international broadcasting

committee along with public and public commercial service committees. It said that the Board should appoint executive members, but stated this should be "*in consultation with the Minister*".

In addition, the NCRF proposed that the Board be required to appoint a Public Broadcasting Advisory Council to act made up of nine members representing different provincial and regional interests. Members in turn would be expected to set up provincial forums/platforms to solicit views on access, content and compliance with the mandate. The Council would have to submit half yearly reports to the Board and an annual review of the SABC's compliance with its mandate. Other proposals made by the NCRF in relation to governance include:

- Policies and laws should require the chairperson to resolve conflicts and provide leadership;
- Policy and laws should give the shareholder/Minister the power to intervene in limited circumstances to address governance problems. The NCRF stated that the Minister should have the power to "*instruct the Board of the SABC to take any action considered necessary by the Minister*" in specified circumstances, such as mismanagement or breach of the law.

Paul Hjul in his submission proposed that the SABC be structured as a mutual shares company owned by members of the public rather than a state owned company. Shareholders (members of the public) would then vote for board members.[162]

OPTIONS: BOARD SIZE

The size and criteria for membership of a board is in many ways determined by its overall responsibility. International benchmarking identified different structures in place in different countries.

The BBC has a two tier Board: A Trust (12 non-executive Trustees appointed by government including four regional representatives) and an Executive Board (chaired by the director general with 12 members including seven executive members). The Trust sets the strategic direction for the BBC while the Executive Board is responsible for financial oversight and management. There is a separate executive management team. The Trust in many ways performs the role of a regulator, as it issues service licences to channels and stations. The Board of the ABC in Australia includes *up to* seven non-executive members. It is responsible for ensuring the broadcaster brings maximum benefit to the public and is managed efficiently. The Canadian Broadcasting Corporation has 12 members including two executive members.

Both the BBC and ABC Boards appoint the chief executive officer, while the head of the executive team at the CBC (the President) is appointed by government.

Option One: Status quo

The Board would as currently include 15 members (12 non-executive members and three executive members). The distinct roles of the Board and executive management could be further clarified.

Option Two: Reduce

The number of directors is reduced to between 7 – 12 members, including executive members. Again the roles of the Board and management could be clarified.

[162] Paul Hjul, Green Paper submission, page 39

Option Three: No executive members

The Board include only non-executive members (as per the NCRF recommendation).
In all instances, the memoranda of incorporation should be made public.
Please indicate your preference regarding the size of the Board and its structure.

OPTIONS: APPOINTMENT OF NON-EXECUTIVE MEMBERS OF THE BOARD

It is noted that it is important that the appointing body has the capacity to thoroughly assess nominees against the requirements set in law and confirm what experience/expertise is most needed when filling a vacancy. It is further essential that thorough checks are done on candidates before appointment, including, for example, screening to ensure the candidate has fully disclosed all interests, credit checks, verification of qualifications, confirmation of past work experience etc.

Option One: Status quo

The status quo would continue: Parliament calls for nominations and after a public process recommends members for appointment.

Option Two: Appointment committee

Parliament or Government could establish an appointment committee through public nomination, including representatives from sectors of society, provinces, Parliament and Government. The appointing committee would be responsible for recommending members to the Board of the SABC.

- **What is your preferred option for appointment of the SABC Board. If you have alternative suggestions, please put forward such proposals. Please motivate your suggestion/s.**

OPTION: TERM OF OFFICE

Policy will also have to review the terms of office of Board members. It is proposed that the current term of office stands (five years), but that a system is put in place to ensure continuity on any Board.

- **Please comment on the preferred term of office for non-executive Board members.**

OPTION: APPOINTMENT OF EXECUTIVE MEMBERS

The issue of appointment of executive members was raised in submissions as noted and it was suggested by some that the Board be solely responsible for this. Note that there is also a need to review the number of executive directors – particularly if the overall number of directors is reduced.

- **Comments are welcome on submissions recommending that the Board appoint executive directors and on the preferred number of executive members.**

OPTION: BOARD COMMITTEES

The NCRF recommended that the Board establish an advisory council responsible for engaging with audiences in each province (see above).

- **Please give your views on this or on other options, if any, to involve audiences/the public more formally in the SABC**

OPTION: ROLE OF SHAREHOLDER/MINISTER

- **Comment is also invited on the NCRF proposal that the Minister/shareholder be empowered to intervene and direct the Board to take actions in clearly defined circumstances and if so what limitations should be set on this (see above).**

5.7 Community broadcasting

There are three core issues in relation to the community broadcasting sector (TV and radio):

- How to ensure the sector is distinct from others and that target audiences are involved in the services;
- How to ensure community-based content and programming is available across a wide range of platforms and devices and that communities have the means to distribute their own content across these; and
- How to ensure non-profit entities are sustainable and viable

Several submissions were made in relation to these. The SOS stated that the challenges with the sector currently are due to the regulator's failure to adequately monitor community services.

ACT-SA said that the policy should introduce specific community TV models. It suggested that provincial community channels, sub-regional community services (television service operating out of a metropolitan area and covering surrounding rural areas) and metropolitan community channels be recognised. Two to three sub-regional services could be awarded in any one province, though policy should specify that only one licensee should operate out of any one metropolitan area to ensure that services did not compete with each other. It proposed that a more rigorous licensing process be introduced: *"Licences should not be awarded on a 'first come, first served' basis, but ICASA should call for licence applications … and award licences to the strongest applicant".*

The community television membership organisation said that many of the existing community TV services rely on partnerships with the private sector for survival. This should be evaluated to ensure that if such partnerships are necessary, "*the public interest prevails*". ACT-SA suggested further that advertising revenue on community services be limited to no more than eight minutes per hour and that airtime sales should not constitute more than one third of any channel's revenue.

The NCRF in its submission also emphasised the need for the regulator to play a more proactive role. It stated that the regulator should:

- Intervene quickly when there is conflict at a station or non-compliance with rules;
- Work with sector bodies such as the NCRF to resolve conflicts (i.e. co-regulation); and
- Adopt a "*managed approach to the licensing of the sector to ensure sustainability*".

The SABC expressed concern that community television broadcasters are increasingly competing with other FTA services with the extension of their coverage via satellite (on the DSTV platform and

others). It said that increased coverage resulted in community TV services losing their distinctiveness.

In relation to *ensuring community content across a range of platforms*, ACT-SA said that government should facilitate the development of digital content hubs as proposed in the Digital Migration Policy to promote content development by a range of producers across the country.

Funding of community audio and audio-visual services was also raised in several submissions. The SOS proposed that the roles and responsibilities of existing funding agencies, including the MDDA, should be reviewed. The Coalition further submitted that a final policy "*explicitly reject any funding model that ties community broadcasting to the dictates of provincial and municipal authorities*".

ACT-SA stated that policy should oblige provincial and local government to fund community broadcasting. It further proposed that the DTPS "*negotiate policy alignment between particular funding bodies and the community TV sector … to stimulate the development of the sector*". This would include agencies such as the MDDA, USAASA, the NFVF and the MICT Seta. Other proposals made by ACT-SA for leveraging support for community broadcasters include:

- The SABC should be required to make its public interest programming available to community broadcasters either for free or at a minimal licensing fee.
- DTI film and television production support programmes could provide incentives and support for community based production collectives and "super-collectives".
- The NFVF scope should be broadened to provide support for public interest programming for television including series and documentaries.
- The Seta could support learnerships, internships and training programmes for community media; Nemisa should work with the sector in accrediting courses and training producers.
- USAASA could subsidise transmission of community broadcasting services.
- Municipalities could provide office space for broadcasters.
- The DOC/DTPS support for community broadcasters should focus on funding for infrastructure and programming, the MDDA cover start-up and core costs and other entities such as the National Lottery provide support for infrastructure (including studios, equipment and vehicles) and for arts, cultural and sports programming.
- SARS to grant 18(a) tax status to community broadcasters to ensure the release of corporate funding on the basis of corresponding tax breaks.

The NCRF as highlighted in the section on SABC funding proposed the introduction of a public service broadcasting fund established with revenue from a 1% tax on income. They also proposed:

- Assistance from municipalities, including office space and access to resources.
- Subsidised transmission for community broadcasters.

5.7.1 Reach of community broadcasters

The ICT Review Panel invites comment on the proposal made to extend the coverage of community television and allow for:

- **Provincial community services (provided by a coalition of providers in a province)**
- **Sub-regional services, and**

- **Metropolitan channels**
- **Community radio would still be limited to particular geographic areas.**

In this regard, SABC's concern that extension of the coverage blurs the distinctive nature of the sector and therefore the reason for its existence should also be considered.

5.7.2 Open access TV

While no submissions on alternative models for community access to television were put forward, it is important that such options are also explored. Concerns have been raised that the cost of establishing a television service and the resources (including human and technical) required to operate a channel limit access by all communities across the country. A FTA community/public/open access service or open television channel could be introduced to address this. Such a service could be charged with facilitating community content on a range of platforms and devices.

In the US, cable companies are required to make space available for community access, access by local educational institutions and local government. Public access centres are established to facilitate access to the means of production. These are funded by cable operators and/or local municipalities from rights of way fees paid to them. The programming on such services is unmediated by the cable operator and allocated on a first come/first served basis.[163] Other countries have adapted this model – with Canada, for example, limiting access to local government and community organisations rather than individuals.

Norway on the other hand has introduced national and/or regional non-profit channels on their DTT platform managed by NGO forums,[164] while both Germany and the Netherlands have models for open access local TV (including content from municipalities).

- **Should a model for open TV be further explored?**

5.7.3 Strengthening licensing and monitoring

The following mechanisms could be considered to strengthen oversight and monitoring**:**

- Specific provisions could be introduced to ensure that community services remain in the hands of the community. Such rules could be included in policy/legislation or ICASA could be charged with promulgating regulations to ensure that any partnerships or agreements entered into do not in any way undermine community control.
- A specific community broadcasting class licence could be introduced to ensure that the policy objectives of diversity are met, and that the framework does not inadvertently favour more advantaged communities. The regulator could be specifically tasked with ensuring diversity through the licensing process. The policy/law could also bar licensing or authorisation of services that would directly compete with each other.
- The process for renewing licences could specifically allow the regulator to refuse applications if a licensee has not complied with rules and regulations.

[163] Information in this section is a collation from the Federal Communications Commission: 'Fact Sheet on Public, Educational and Governmental Access Channels (PEG), accessed from http://transition.fcc.gov/mb/facts/pegfacts.html and Wikipedia: Public Access Television accessed from http://en.wikipedia.org/wiki/Public-access_television

[164] http://frikanalen.no/english

- The regulator could be given power to intervene in situations where challenges are experienced. This could include provisions enabling co-regulation – with ICASA being empowered to set criteria to be met by such co-regulatory structures and developing partnerships in this regard.
- ICASA could be required to conduct and publish regular reviews of the status of the sector, including assessment of whether or not programming is distinct and diverse and levels of competition.

- **Submissions are invited on the above proposals.**

5.7.4 Funding and sustainability

There is a need to coordinate different support programmes for the sector across government to ensure there is no duplication and that resources are used effectively. This includes coordination between the MDDA and other community broadcasting support programmes based within Government departments, content/programming funds in other content entities (e.g. the NFVF, the National Lottery and Provincial Film Commissions) as suggested by stakeholders. Discussion between the different entities will be coordinated as part of the policy review process to ensure a holistic approach to support the sector/s. It should be noted, however, that the DTPS cannot develop policy that impose responsibilities on other Ministers.

It is further important to highlight that the Constitution sets out the powers and responsibilities of each level of Government – national, provincial and local – and areas of concurrent and exclusive competence. The Constitution thus precludes a national department determining policies and rules for provincial and local government in specified instances. The Minister and the Department will nevertheless engage with provincial and local governments regarding some of the suggestions made on their involvement in the sector.

Finally, discussions around the establishment of a contestable fund have been included in the section dealing with SABC funding above, and are not repeated here. Additional support mechanisms/approaches that could be further explored in the policy review process include:

- The possibility of developing with DTI a specific framework for music royalty payments to SAMRO by community broadcasters. Research conducted by the Department showed that payment of SAMRO royalties is prohibitive for some community radio stations. In Australia, for example, community and non-profit services pay a once-off annual fee rather than a fee based on income and this option might assist the sector.
- The possibility of granting section 18(a) tax status to community/non-profit media projects. This could assist such services to raise funds from a wider base.
- Developing a framework to assist community and non-profit services with transmission costs.

- **Please comment on the above proposals**

5.8 Private broadcasting

Many of the issues raised by stakeholders on private broadcasting/audiovisual content providers, such as those dealing with fair competition, diversity and plurality and South African content in a multi-channel, multi-screen environment are dealt with in other sections of this Chapter/Policy Options Paper. Issues around spectrum are dealt with in the Infrastructure and Services Paper/Chapter. This section does not repeat these, but rather focuses on digital radio as this is not covered anywhere else.

The 1998 White Paper on Broadcasting recognised developments in digital radio (Digital Audio Broadcasting or DAB and Digital Radio Mondiale or DRM rather than audio services on the DTT platform) and recommended that a Digital Advisory Council report on this. [165] Given ITU timelines for migration to digital terrestrial television, the focus of Government has been predominantly on developing policy for the television sector. This does not mean that digital radio has been neglected, and there have been ongoing discussions about DAB and DRM between government, the regulator and industry forums such as the Southern African Digital Broadcasting Association (Sadiba). DAB was adopted as a South African standard by the South African Bureau of Standards (SABS) in 2005. Trials of digital radio services are currently being undertaken by the NAB and Sentech.

Unlike television, the ITU has not made it mandatory for radio to migrate to digital radio transmission. It has therefore been left up to individual governments to decide on approaches to digital radio and whether or not to migrate to the new platform. ICASA in its 2013 Terrestrial Broadcasting Frequency Plan indicated that a switch-off date for AM and FM transmission in South Africa would not be set, though it stated that digital audio broadcasting would be an additional audio service available. The NAB in its submission emphasised that a decision on South Africa's approach to digital audio services should be determined in national policy rather than by the regulator. It noted that FM spectrum "*has already reached saturation point in the major metropolitan areas in Gauteng, Western Cape and Kwa-Zulu Natal and no further high power FM broadcasting licences can be issued in these areas*".

Digital radio will increase capacity, and allow further licensing of local, regional and national radio services. It thus has the potential to address some of the spectrum scarcity related challenges in ensuring universal access to a range of services and to radio content in all languages. At the same time, unless policies are developed to ensure widespread access to digital audio receivers, such services are not likely to be received by all audiences – thus increasing an information divide.

The NAB stated that while FM and AM switch-off is not likely in the short to medium term, South Africa ought to move quickly towards digital audio services. It noted that countries such as Norway, Denmark, Germany, Australia, the Netherlands, Italy, Poland and Switzerland have decided to ultimately switch off FM transmission, while in the UK, trials are currently being carried out to test the effect of a potential FM switch-off on a selected community. In these countries, major car manufacturers have included DAB receivers as standard equipment and household penetration of DAB and DAB+ receivers is also increasing with the devices readily available in retail outlets.

[165] Note that the then Minister established the Digital Advisory Council which was dissolved after it submitted a report.

OPTIONS: DIGITAL RADIO

Option One: Status quo

The status quo would remain: i.e. the policy endorses the ICASA decision not to make a determination on the switch off of AM and/or FM signals but to facilitate the licensing of DRM and DAB services alongside these. Government, together with other stakeholders, in the meantime focuses on trialling technologies, developing a licensing framework, setting aside spectrum, encouraging take-up of receivers (in motor vehicles and in houses) and actively promoting awareness of the technology. The policy could set timeframes for this position to be reviewed.

Option Two: Set switch-off date for analogue

The policy would state that AM and FM signals would be switched off in the medium to long term, and either set a deadline, or outline a process to determine and facilitate switch-over.

- **Which approach do you propose should be followed? Please motivate your response and give details on what policy stipulations you suggest to be included in a White Paper in this regard.**

5.9 Competition related issues

A number of concerns relating to fair competition were raised in responses to the Green Paper. These include issues about competition for premium content, concerns about competition within particular broadcasting sectors (i.e. the pay TV market or FTA market), between different tiers (FTA and pay TV) and between broadcasters and new services (including social media, internet television and audio streaming, IPTV and VOD for example). While digitisation and convergence do lower certain barriers to entry (including spectrum constraints), new challenges relating to market access and consumer choice may arise. There may also be a need to reconsider market definitions if telecommunications operators, for example, increasingly distribute broadcasting-like content.

There are inevitably different opinions among stakeholders about what are the threats to fair competition. MultiChoice and M-Net have stated, for example, that the real threat to the viability of broadcasting is new media audio and audio-visual content, while e.tv asserts that commercial FTA television is under threat from subscription and public TV services. There are also differences on the roles of ICASA and the Competition Commission in dealing with such issues. Essentially these centre on when *ex post* or *ex ante* regulation should be used to address alleged unfair practices. MultiChoice and M-Net suggested that a final policy should clearly delineate "*those limited circumstances in which it would be appropriate for ICASA to consider ex ante regulation".*

Several respondents further raised concern about ICASA's capacity to deal with competition-related concerns, stating that the regulator had failed to finalise any broadcasting-related competition inquiries, even though the EC Act had empowered it to do so since 2005. The following areas are dealt with under this section:

- Competition between FTA and pay TV
- Competition within the free to air market

- Premium Content
- Vertical integration
- Access to audiences
- Ease of switching services for customers

Some of the issues are inevitably inter-related – for example fair opportunities to bid for rights to premium content and vertical integration of companies that distribute content are linked. The list is not finite and suggestions of other areas where policy interventions might be necessary are welcome.

It is further clear from submissions that additional clarity on what issues should be resolved by ICASA and which determined by the Competition Commission could be necessary. While this matter will be dealt with in more detail in the chapter dealing with institutional frameworks, **stakeholders are welcome to propose which areas would require ex ante regulation and which ex post regulation.**

5.9.1 Competition between FTA and pay TV services

The existing White Paper on Broadcasting stipulates that pay-TV services should rely primarily on subscription fees and free to air broadcasters must have access to "*revenues that are sufficient to allow them to meet their public service obligations*". In line with this, the EC Act states that advertising and/or sponsorship may not "*be the largest source of annual revenue*" for subscription broadcasters (section 60(4)). Pay TV operators are, given this, subject to lighter touch regulation and free to air services given greater responsibilities.

Since the promulgation of the EC Act in 2005, the number of subscribers to pay TV and thus total subscription revenue has increased and now exceeds total TV ad revenue. According to PwC, total subscription revenue was less than total TV ad revenue in 2005, but has since overtaken adspend.

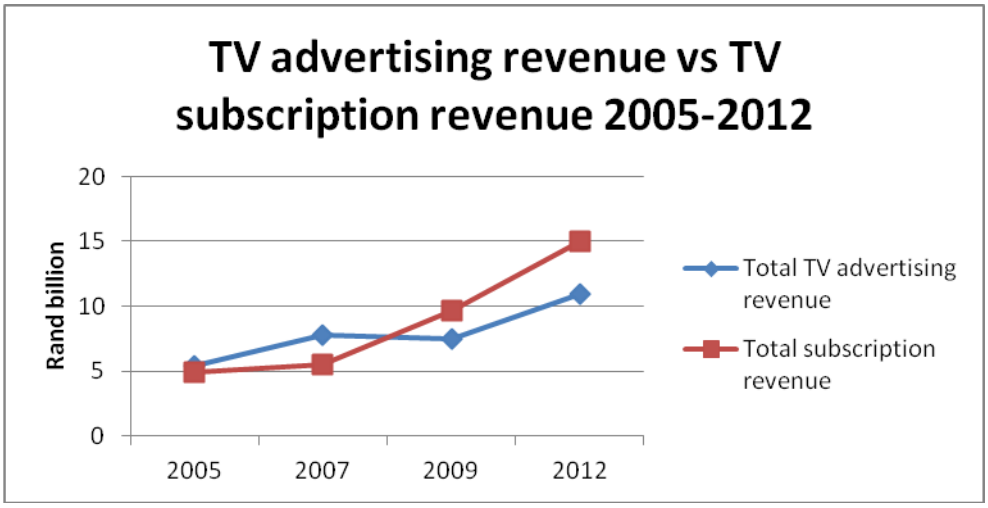

Figure 3: Source PwC South African Entertainment and Media Outlook Reports 2010, 2011 and 2013[166]

Given this, there is a need to assess whether or not limitations on access to advertising/sponsorship by subscription operators are still relevant given convergence and if there is still a need to protect

[166] Note that PwC adjusted previous figures for advertising and subscription revenue in its 2013 report. This chart therefore uses historical information from all three reports.

free to air broadcaster' access to advertising and sponsorship revenue in order to ensure that they are able to meet public service obligations.

MultiChoice & M-Net argued that existing limitations on subscription broadcasters' advertising revenue are "*unwarranted and inappropriate*". They said that subscription services are naturally constrained to limit the amount of advertising as excessive advertising "*would push away, rather than attract or retain, subscribers*". The submission said that the real threat to television broadcasting revenue comes from an increase in online advertising and the introduction of international content service providers. The two broadcasters proposed therefore that viability of the broadcasting sector as a whole be secured through a less restrictive regulatory framework.[167]

E.tv on the other hand said it is urgent that policy and legislation increase the existing limits as the viability of the commercial FTA broadcasting sector is immediately threatened. It stated that this affected its capacity to fulfil public interest obligations, and therefore access by millions of viewers to, for example, a range of South African content. The broadcaster stated that DSTV subscription revenue for the year ended March 2013 is estimated at R15,5 billion and the annual gross revenue for TV advertising in SA over the same period is estimated at R16,5bn. It argued that under current limitations on subscription revenue, broadcasters' could earn "*up to R15,5 billion in advertising revenue (94% of the total television advertising revenue)*".[168]

The SABC proposed that the advertising limitation on subscription broadcaster be retained but that this must be "*effectively monitored by ICASA to ensure that there is fair competition in the market for advertising by the television broadcasters*".[169] Other stakeholders that made submissions on this issue all proposed that the existing limitations be tightened. These included the SACF and SOS.

OPTIONS PAY TV ADVERTISING RESTRICTIONS

Option One: Remove limits

The current limits on advertising and sponsorship revenue for subscription TV broadcasters would be removed. In considering such a provision, it could also be necessary to review the regulatory regime for the different categories of broadcaster as the current policy, legislative and regulatory framework is based on an assumption that Pay-TV licensees have fewer public interest obligations as they rely predominantly on subscription revenue.

Option Two: Increase the limits

The limitations on advertising and sponsorship revenue for pay TV broadcasters would be increased to protect free-to-air broadcasters as originally intended. The policy and law could set the limits, or require that the regulator do so after studying the effects on both the FTA and pay TV markets. Singapore, for example, limits advertising and sponsorship on subscription players to 25% of total

[167] M-Net and MultiChoice, "Green Paper Submission", paragraphs 93-106, pages 29-34
[168] E.tv, "Green Paper Submission", paragraphs 4 – 15, pages 2-7
[169] SABC, Green Paper Submission, section 9, page 46

revenue.[170] A similar restriction in South Africa would limit subscription services to a share of between 20-25% of the total TV advertising revenue in 2017 based on PwC projections on advertising and subscription revenue.[171] The viability of obligations imposed on Pay-TV would need to be reviewed in light of the projected reduced income.

The policy could further specify that the regulator regularly monitor the impact of provisions on the total television market and on particular sectors such as FTA and subscription services. ICASA could use this to advise the policy maker of any changes that should be introduced in related legislation. This would ensure that any limitations set are based on market conditions.

- **Please indicate which option you support, or if you propose any alternative approaches. If you propose increasing existing limits please comment on what would be an appropriate limit and/or how this should be determined.**

5.9.2 Competition: FTA broadcasting sector

E.tv in its submission accused the SABC of unfair competitive practices. It said that the reliance by the SABC on advertising undermines the public broadcaster's public mandate and results in unfair competition with commercial broadcasters. As noted above, the White Paper on Broadcasting divided the SABC into public and public commercial divisions. It stipulated that advertising revenue for the public wing of the SABC "*will be less than that of the commercial arm*" and should not be the "*predominant form of revenue*" for public stations and channels. The SABC has not to date provided separate accounts for its commercial and public services.

E.tv stated that the broadcaster's failure to produce separate accounts makes it impossible to determine if public funds are used to give the broadcaster a competitive advantage, but asserted that the three channels operate effectively as "*a single dominant commercial network*". It raised the following instances as evidence of unfair competitive practice:

- SABC cross-sells advertising across all three channels and therefore is able to discount heavily. E.tv says the SABC also gives discounts for exclusive advertising on SABC.
- SABC collectively purchases international content for all three channels. E.tv said that the SABC recoups the costs across all three channels – thus limiting its costs comparative to competitors. For example, first and second runs are often on SABC 1 and 2 and then repeated on SABC 3 or vice versa.
- SABC 3 moreover according to e.tv uses repeats on different channels to meets its SA content requirements – resulting in it in effect having lesser obligations than e.tv, and
- The SABC shares legal and administrative costs across all services, as well as commissioning and core operational costs. This, e.tv argued, results in reduced costs for the commercial service.

E.tv said that the final policy should include provisions restricting the SABC from the above practices and limit its access to advertising.[172]

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[170] Singapore Media Review Panel, 'Media Convergence Review: Final Report", at page 63, http://www.mda.gov.sg/RegulationsAndLicensing/Consultation/Documents/Media%20Convergence%20Review/Media%20Convergence%20Review%20Final%20Report.pdf

[171] PwC in its 2013-2017 Entertainment and Media Outlook projects that total subscription revenue will be R19.6 billion in 2017 and that the total television advertising on traditional broadcasters will be R15 billion by that date.

[172] E.tv, Green Paper Submission, pages 13-15

The SABC, however, stated that increased competition and the introduction of DTT will further segment advertising revenue and threaten its viability. It suggested that it be allowed to offer more advertising and therefore increased advertising minutes per hour to remain financially secure.[173]

Public broadcasting funding has also been raised as a competition related concern in other countries. The European Commission has t developed specific requirements for public broadcasting as part of its State Aid Rules Treaty.[174] In summary, these state:

- The public remit must be clear and concise and based on fulfilling clear social, political and/or economic goals that would not be met by commercial services.
- There must be accountability mechanisms in place to ensure that public funds are allocated to the net cost of fulfilling the public remit.
- There must be separate accounts for commercial and public service activities.

OPTIONS: FAIR COMPETITION IN THE FTA MARKET

The options proposed here are not necessarily mutually exclusive and therefore stakeholders should indicate if they propose that a combination of the different approaches be included in policy.

Option One: Status quo

The status quo would remain as it could be argued that proposals highlighted above on strengthening the remit of the SABC, resolving issues relating to the public and public commercial division, improving accountability and enforcing provisions related to separation of accounts, will address the concerns raised by e.tv and that therefore no further interventions are required.

Option Two: Regulator/s to be required to address the issue

ICASA and/or the Competition Commission could be given explicit responsibility to ensure that the SABC does not use public funds to unfairly compete with commercial operators. ICASA could further be requested to conduct a hearing within a specified period to determine appropriate measures to be taken and to report explicitly on its monitoring of compliance by the SABC in relation to this. ICASA and/or the Competition Commission could be tasked with resolving complaints relating to alleged abuse of public funds to gain competitive advantages over commercial operators.
Stakeholders should in their responses indicate which regulator they think would be best placed to fulfil these responsibilities and motivate their proposal.

Option Three: Restrict SABC from anti-competitive practices

Policy and law could include explicit restrictions limiting the SABC from engaging in specified anti-competitive practices, in addition to enforcing provisions relating to separation of accounts. Parliament and/or ICASA could be given responsibility for ensuring compliance.
Stakeholders should indicate what provisions they think should be included in law if they select this option and how they propose they be enforced.

- **Which option/s do you prefer? Please motivate your answer.**

[173] SABC, Green Paper Submission, page 46
[174] European Commission, "Communications from the Commission on the Application of State Aid Rules to Public Service Broadcasting", 2 July 2009 http://ec.europa.eu/competition/state_aid/legislation/broadcasting_communication_en.pdf

5.9.3 Competition: Ease of switching/technical access

New services driven by new technologies can potentially facilitate a vibrant, dynamic and competitive environment with increased audience access to a diverse range of content. They can also however result in new bottlenecks, entrench incumbent positions and/or create new dominant players. The ease with which customers can switch between different content providers/platforms linked to the possibilities for providers to reach audiences/inform them of their products/services are key consumer and competition related issues. In the 1998 White Paper on Broadcasting, Government dealt with these competition-related issues by stipulating that content distribution systems must be open and interoperable and that the regulator should develop policies to ensure that content providers have access to distribution facilities and end users (broadcasters and audiences) have access to content.[175] ICASA has not conducted such an inquiry nor developed policies relating to interoperability.

While the principles and objectives identified in the White Paper might still be relevant, achieving these becomes more challenging given the range of different providers and technologies that will be able to deliver content to audiences. In considering any policy interventions it will also be essential to ensure that these do not even inadvertently stifle innovation and investment.
Some of the issues related to this are highlighted below:

- Given technology fragmentation due to the range of proprietary devices such as tablets, computers, cell-phones, STBs, connected television sets, and the range of proprietary operating systems (e.g. android, Apple, Microsoft) it will become increasingly difficult for content providers to access all the devices used by end-users. In the linear environment, some policy makers considered rules relating to open access, conditional access systems (CAS) and Application Programme Interfaces (APIs). Can this be transposed into a multi-screen environment? In addition, is it practical for a country the size of South Africa to impose interoperability of these platforms considering that the development is on a global scale and the need to also build internationally competitive industries? Is it still relevant to consider these interventions in this new environment?
- Smaller or new content providers (producers and those that aggregate content) will have particular difficulties as they will not necessarily have the means to ensure that their content/services are compatible with all the devices and interfaces used by their potential customers. Provisions to ensure interoperability and/or open access and/or standardisation of the API could address some of these issues, however, such rules could also limit investment in technological innovations or increase costs for consumers. Can policy encourage different players to work together to ensure interoperability/open access? Is it feasible to promote standardisation for the South African market alone?

MultiChoice and M-Net in their submission cautioned against "*extensive regulatory intervention*" stating that this would "*distort the markets and results in a lessening of competition*". They said that "*greater reliance should be placed on market forces*" and that broadcasting should be regulated to meet clearly identified objectives and "*only to the extent that standard competition principles are insufficient to cope with market failure*".[176] MTN in its response to the Green Paper said that access

[175] Department of Communications, "White Paper on Broadcasting Policy", Chapter 6: Signal Distribution, section 6.1, Signal Distribution Objectives, 1998
[176] MultiChoice & M-Net, Green Paper submission, page 16

by citizens to a range of content could be promoted by "*a regulated content producer environment, a technical platform that allows for content management, a citizen discovery and education platform and an efficient content delivery platform that allows easy plug and play for integration with other e-services*".[177]

The SOS said that interoperability of set top boxes is a "*particularly critical issue*" to address the "*dominance of DSTV in the pay TV market and the impact this has on the sustainability and viability of other subscription broadcasters*".[178] The SACF proposed that policy and regulation should "*support the development and adoption of voluntary, consensus-based standards that enable interoperability, but should avoid dictating specific technologies or standards to industry*".[179] It further stated that it supports interoperability of set-top boxes for both the pay TV and FTA TV markets. "*If consumers were able to access content from all licensed broadcasters with one interoperable set top box, competition would be greatly enhanced in the sector*".[180]

OPTIONS:EASE OF SWITCHING

It is important in considering options to recognise that convergence and digitisation will introduce new content services. In developing approaches to the new environment, it is necessary therefore to create an enabling environment for the development of the South African sector and allow it to be competitive both in the country, on the continent and internationally. At the same time, it is vital to pre-empt market domination and foreclosure. Flexibility will be essential.

Option one: Status quo

The current legislative provisions on competition would be used to address these issues allowing the regulator to identify if specific regulatory interventions are required or if these matters should be resolved by competition and/or consumer protection authorities. If necessary, a Ministerial direction could be issued to request ICASA to investigate the new environment and challenges around this.

Option Two: Policy promotes open access/interoperability

The policy and linked legislation would include specific proposals on interoperability and compatibility of operating systems and interfaces, standards, transparency and limitations on gatekeeping. Such policy interventions could include directions to ICASA on consumer protection measures and technical access areas as well as co-regulatory/voluntary standards options. Specific roles could be set out together with other Ministries for competition and consumer bodies.

- **What option would best address the issues raised? Proposals on co-regulatory and self-regulatory approaches are also invited.**

5.9.4 Competition: Premium Content

Premium content is content which is time critical and demanded by a mass audience. It is essentially specific content which cannot be substituted with other content (e.g. newly released blockbuster movies, premium entertainment programming or major sporting events). Premium content is critical

[177] MTN, Green Paper submission, page 54
[178] SOS, Green Paper submission, page 10
[179] SACF, Green Paper submission, page 25
[180] SACF, Green Paper submission, page 38

to attracting and retaining audiences and subscribers and therefore to the success of pay TV. Agreements giving a broadcaster exclusive rights to premium content over an extended period are therefore seen as a potential significant barrier to entry to new content services. At the same time, exclusive rights to such content are critical to the attraction and retention of subscribers/audiences and therefore the viability of services. The selling of exclusive rights is also an important source of revenue for rights holders, such as certain sporting codes. Policy interventions, if necessary, are therefore generally focused on ensuring fair opportunities for audio-visual content providers to compete for exclusive rights.

Convergence introduces new complexities given that there are now new platforms for audio-visual content delivery. Potential barriers to accessing high value content in the new environment include the possible integration of content and platform providers (including telecommunications operators), existing contractual arrangements in place between rights holders and broadcasters, legacy arrangements between dominant broadcasters and rights holders and the potential for telecommunications providers to introduce "walled gardens" (only allowing access to a select group of content providers).[181] The premium content market is not growing to the same extent as the number of service providers and therefore access to the supply of such content is becoming relatively scarcer for providers.

In South Africa, Government has indicated that it intends to intervene to ensure fair access to premium rights.[182] ICASA has also issued a notice indicating that it would be exploring competition related concerns, including exclusive access to premium content, across the sectors it regulates.[183]

MultiChoice and MNet in a joint submission suggested that concerns on premium content should be dealt with primarily on an *ex post* basis stating "*there have been only isolated instances in other jurisdictions where this has been dealt with by way of ex ante regulation*".[184] Others disagreed.

Sumeer Mohanlall said that ICASA "*has been too hands-off*" and proposed that SuperSport (a subsidiary of MultiChoice) be forced to resell some of its content to competitors in a fair, equal and non-discriminatory manner. Mr Mohanlall further suggested that rules be put in place to ensure that companies cannot block access by providers on other platforms to content procured, saying that the National Geographic channel, for example, is blocked on the Internet in South Africa. [185]

E.tv stated that the length of exclusive rights licences creates challenges for free to air players. The broadcaster did not make specific proposals in this regard.[186] Vodacom and Cell C said that the introduction in policy of regulation of a wholesale content rights regime to facilitate access on fair

[181] OECD, "Policy Roundtables: Competition Issues in Television and Broadcasting, 2013", http://www.oecd.org/daf/competition/TV-and-broadcasting2013.pdf
[182] See for example: Minister of Telecommunications and Postal Services, Siyabonga Cwele, "Budget Vote Speech 2014", 16 July 2014, http://www.doc.gov.za/mediaroom/minister-s-speeches-mr-yunus-carrim/348-minister-cwele-budget-vote-speech-2014.html
[183] ICASA, "Media Release: ICASA launches inquiry into state of competition in the ICT sector", 12 March 2014, https://www.icasa.org.za/AboutUs/ICASANews/tabid/630/post/Inquiry_Into_State_Of_Competition_In_The_ICT/Default.aspx
[184] MNet and MultiChoice, "Green Paper Submission", paragraph 230, page 68
[185] Sumeer Mohanlall, "Green Paper Submission", pages 10-11
[186] E.tv, "Green Paper Submission", paragraphs 24 & 25, pages 12-13

and non-discriminatory terms would address current challenges in relation to access to premium content, including international content, and would assist in driving uptake of broadband.[187] Intel supported this, stating that it seemed that certain South African public interest content might become a "must have" for service providers to compete and "*measures could be needed to ensure that new providers of broadband and convergent services are able to gain access to this content*".[188]

OPTIONS PREMIUM CONTENT

The fundamental question in relation to fair access to premium content is:

- **Should access to premium content be addressed by ICASA or by the competition authorities? Submissions are invited on this.**

Although dependent on the response to the above question, there are a number of possible approaches which could be adopted in relation to fair competition for high value content.

- **Stakeholders are invited to make submissions on their preferred option/s (see below). Please substantiate your position and indicate what provisions you suggest be included in policy.**

Option One: Status quo

The policy could confirm the status quo – i.e. indicate that the regulator has broad ranging powers to address unfair competition in the ICT sector through *ex ante* regulation and that this includes the power to intervene if necessary in the content market. ICASA should decide whether or not premium content issues should be dealt with by the regulator or by competition authorities.

Option Two: Policy requires ICASA to conduct an inquiry

The White Paper could include a specific requirement that ICASA conduct an inquiry into the content market to ensure fair access to premium rights and investigate wholesale content rights regulation.

Option Three: Competition Commission

This issue would be resolved by the Competition Commission. In some jurisdictions, competition bodies have dealt with such issues by setting rules for rights holders – including, for example, single buyer limitations inhibiting rights holders from selling all packages to a single buy.

Option Four: Policy sets out specific provisions

The policy could set out specific provisions on access to premium content which could, if necessary, be translated into law. There are a range of policy interventions that could be included. It should be noted that setting provisions in policy and law could limit flexibility and the capacity of the regulator to be responsive to challenges faced. If such an option is preferred, the policy, and therefore any amended law, could for example:

- Set a limit on the length of exclusive rights licensing contracts, or specify that the regulator do so. It could stipulate that any process/bid for such rights must be transparent, non-discriminatory, fair and open to all television/audio-visual content providers.

[187] Vodacom, "Green Paper Submission", page 54 among others
[188] Intel, "Green Paper submission", page 42

- Introduce cross-carriage provisions: Singapore has introduced such provisions for pay TV operators, stating that a subscription service must make any exclusive content to, for example, specified sports rights available on its competitors' platforms. Policy could outline such a policy and request the regulator to develop specific rules/determine which sports rights would fall under the provisions.[189]
- Wholesale 'must-offer' content regime: Include provisions requiring licensees holding rights to make content or channels available to competing providers on the same basis that these are made available to its own services. Such provisions could require an entity such as SuperSport to make its channels available to competitors to DStv or M-Net on the same terms as it provides these to DStv or M-Net.
- Introduce rules on vertical integration of content and channel developers and television/audio-visual content providers.

5.9.5 Competition: Vertical integration

The 1998 White Paper on Broadcasting stated that vertical integration between distribution and broadcasting services should be minimised and the regulator should hold an inquiry into this.[190] ICASA has not held such an inquiry. Given digitisation and convergence, is vertical integration still an area that policy should deal with? Note that horizontal integration (cross-media limitations) is dealt with specifically in the section below on diversity of ownership of content service providers.

Vertical integration of content producers, broadcasters, technical platforms, telecommunications/network services, devices and/or customer management services can result in market foreclosure by making products and programmes exclusive to certain devices or platforms or by bundling TV and communications services (triple play) at a discount, for example. Vertically integrated broadcasting/communications, distribution and content companies can furthermore limit access by end-users to products and programmes/content produced by competitors. With convergence, regulators and/or competition bodies have in recent years begun exploring whether or not it is necessary to put in place *ex ante* and/or *ex post* rules on mergers or existing vertically integrated companies.[191]

While this issue is linked to access to premium content and, for example, a wholesale content regime might mitigate some of the potential concerns, a dominant vertically/horizontally integrated company might also be able to affect upstream providers by dictating terms and prices for content/programming, for example. At the same time, vertical integration has some advantages, allowing South African companies to compete against global players and potentially reducing costs for viewers/end-users. Many companies around the world have acquired other companies to give them access to content, platforms etc. so that they have ownership of the full value chain from content creation to providing a service to the subscriber. It is therefore important in considering vertical integration to consider the impact any rules would have on ensuring South African

[189] Media Development Authority, "Cross-carriage to be implemented from 1 August 2011", http://www.mda.gov.sg/Documents/Newsletter/Issue08/Pages/05.aspx.html
[190] Department of Communications, "White Paper on Broadcasting Policy", Chapter 7: Digital Convergence and Multimedia, section 7.3, Policy Framework, 1998
[191] The CRTC in Canada and the FCC in the US have for example recently held inquiries into the impact of vertical integration in the broadcasting sector.

companies can compete with multinational companies that enjoy economies of scale. It might be difficult to enforce such provisions on global companies and local companies could therefore be severely restricted comparatively.

Concerns around media mergers have increasingly been raised in several other countries and specific tests proposed/advanced to assess the effects of these on diversity. In the UK, for example, a media plurality test is included in the Enterprises Act to assess the effects of media mergers. In terms of this, if the Secretary of State believes a merger raises media public interest considerations, s/he can issue an intervention notice specifying these considerations. The regulator, Ofcom, must then provide a report on the specified media public interest considerations.[192] Ireland in October 2014 introduced a dual-notification system for media mergers where the Minister of Communications decides if a media merger is in the public interest, and the Competition and Consumer Protection Commission determines if a deal can go ahead on competition grounds.[193]

Are there any policy or legislative measures that can be put in place to mitigate the effects of vertical integration on providers, audiences/end-users given that convergence means that not all entities that provide content to audiences are licensed at all or as content service providers/broadcasters?

OPTIONS

Option One: Watch and wait

The status quo would remain: Policy and regulation give the regulator the right to determine if there is a need to introduce *ex ante* provisions. The Competition Commission deals with *ex post* regulation. The policy could, as previously, highlight possible challenges and request the regulator to investigate this issue either on its own or together with the Competition Commission.

Option Two: Strengthen provisions

The policy and law could introduce specific provisions on vertical integration. A wholesale content rights regime could constitute one such intervention, policy provisions related to carriage of independent channels/services and/or cross-ownership/cross-platform rules might be other mechanisms for consideration.[194] The regulator could also be specifically mandated to consider the impact of any merger/s of licensees on diversity, plurality and consumer choice.

- **Stakeholders are invited to make inputs on this issue. Proposals on alternative mechanisms are welcome.**

5.9.6 Competition: Discoverability of content

Discoverability of channels/programming is another issue linked to access to content and vertical/horizontal integration. While prominence of public interest content is dealt with in below, discoverability of channels/programming on the electronic programme guide (EPG) of a

[192] Ofcom, "Public Interest Test: The legal framework", http://stakeholders.ofcom.org.uk/broadcasting/guidance/other-guidance/pi_test/pi_legal/

[193] Laura Slattery, "Media mergers regime change tomorrow", Irish Times, 30 October 2014, http://www.irishtimes.com/business/sectors/media-and-marketing/media-mergers-regime-change-tomorrow-1.1980794

[194] Note that cross-media control and horizontal limitations on ownership are also dealt with in the section dealing with diversity of ownership

multichannel television service or, with convergence, on home screens of connected TV sets or on-demand platforms, is also potentially a competition related concern. EPGs have been used by multichannel subscription services in South Africa and with the introduction of FTA multichannel television will be used on the DTT and FTA satellite platforms as well.

In the UK, EPG providers are licensed and are bound by Ofcom's EPG Code. This Code deals predominantly with prominence but also has requirements on fair competition. These include requirements to ensure that agreements with broadcasters are made on fair, reasonable and non-discriminatory terms, rules on the allocation of listings and limits on giving undue prominence to channels with which an EPG provider is connected.[195]

With convergence and the introduction of, for example, connected televisions, new issues might arrive, for example, which services are shown on a TV set/device's home screen, and what apps are available (including for example broadcaster's apps). The discoverability of content/programming on an on demand services catalogue might also be relevant.

OPTIONS: DISCOVERABILITY OF CONTENT

Alternative options are not proposed but rather questions asked for stakeholder input.

- **Is this an area that policy should address? If so how?**
- **Should the regulator be empowered to address issues of fair competition linked to the discoverability of content? Which entities would such rules apply to if promulgated (linear and non-linear)?**

5.10Diversity

Diversity and plurality at an ownership, content and audience level are key principles underpinning the South African broadcasting policy and legislative framework. As highlighted previously, a three tier system is one means to facilitate this. Existing broadcasting laws and policies also specifically require the regulator to consider diversity at an ownership, audience and content level in deciding on licences and developing regulatory policies. In the future, broadcasting-like content will be available across a range of platforms, channels and devices – potentially increasing the diverse range available. How can policy assist in realising this potential?

After considering related responses to the Green Paper, this Discussion Paper focuses on four core linked areas:

- Diversity of ownership;
- Diversity of news, information and analysis;
- Language diversity; and
- Audience diversity.

[195] Ofcom, "Code on Electronic Programming Guides", http://stakeholders.ofcom.org.uk/broadcasting/broadcast-codes/epg-code/

5.10.1 Diversity: Ownership

Note that this section focuses on current restrictions in law and policy that apply only to broadcasters. General provisions applicable to all licensees under the EC Act such as promotion of black economic empowerment are dealt with in Chapter Six (Policy Options - Industry Growth), A number of limits aimed at promoting diversity of ownership of broadcasting services and media are included in current policy and law. These include limits on the number of radio and television services any one entity can control, cross-media controls and limits on foreign ownership. The rules are aimed at ensuring that the broadcasting sector is South African controlled and at limiting the potential effects of media concentration.

Such rules have been seen in many countries as vital to a well-functioning democratic society by preventing too much influence by any one media owner. Given changes in the environment, several countries have reviewed existing ownership limitations to assess whether or not they remain relevant given that digitisation and convergence allow for many more licensed and unlicensed services and, if so, how these should be changed and which entities they should be applied to.

There were very different opinions on this in responses to the Green Paper – although all those that made submissions on the issue agreed that the current limitations must be reviewed.

MultiChoice and M-Net said that historically the rationale for horizontal and cross-media limitations on control was to ensure plurality of voices and a diversity of content, particularly as regards news and current affairs programming. They argued that developments in recent years and the abundance of sources of every kind of content, including news and current affairs (originating from local and international sources), meant there is no longer any basis for retaining the existing cross media limits and that therefore the limitations should be reviewed. They said that these limits were introduced for a single channel analogue terrestrial commercial free-to-air environment and that traditional linear broadcasting services in South Africa are "*facing increasing competition for the provision of audio-visual content from the Internet/over-the-top players, as well as from telecommunications operators (both fixed-line and mobile)*". They noted that many new content providers are multinational companies, not subject to South African regulation.[196]

Vodacom stated that ownership and control restrictions "*may, in addition to being difficult to enforce, deter investment in new broadcast services*".[197] It proposed that ownership limits focus on traditional broadcasters and not be extended to new broadcast media such as IPTV as this would stifle innovation.[198] The MPDP and FXI on the other hand both argued for strengthening existing limitations in light of convergence and digitisation. The MPDP cited data from the DMMA/Effective Measure stating that this showed that the most accessed South African Internet sites are "*published largely by the already dominant providers of news and entertainment, which calls into question whether the introduction of online and mobile sites has in fact increased diversity to the point where ownership rules have become anachronistic.*" The MPDP suggested that new policy strengthen

[196] MultiChoice & M-Net, Green Paper submission, pages pages 42-47
[197] Vodacom, Green Paper submission, page 49
[198] Vodacom, Green Paper submission, page 51

provisions by introducing a "*a diversity of voices test which would be used to monitor the extent to which existing patterns of ownership and control actually enable diversity of voices*". [199]

As ICASA conducted a review of ownership limitations relatively recently (2011),[200] this Paper uses the Authority's proposals as a basis for discussion. ICASA proposed specific amendments to each of the ownership limits in the law, while also suggesting that the Act be amended to remove limits and give the regulator the power to prescribe limitations. The individual proposals are highlighted under each of the relevant sub-sections below, but it is important to interrogate whether or not such rules should be set in policy and law or if the regulator should be given the power to determine these.

- **Should the White Paper and linked legislation set specific limitations on broadcasting ownership controls or should this be delegated to the regulator?**
- **Is there a need to introduce a requirement that the regulator develop a diversity of voices test, as suggested by MPDP?**

5.10.1.1 Limitations on the number of radio licensees

Policy and law currently allow one entity to control two AM licences and two FM licences. ICASA has proposed three amendments to current provisions:

- Dispense with the distinction between AM and FM licences;
- Provide for a percentage based rather than numerical limit and that "*no person may control more than 35% of the number of commercial sound broadcasting services*";
- One person may not exercise control over more than two commercial radio licences which have the same licence areas or substantially overlapping areas.

As no submissions were made proposing that the radio limitations be removed, this is not included as an option. There is also general agreement it seems on setting a percentage based rather than numerical limitation.

- **Should the policy and relevant law stipulate as recommended by ICASA that no person may control more than 35 per cent of the number of licensed commercial radio stations?**
- **Should the ICASA proposal limiting control by one person to no more than two licences in the same licence area/substantially overlapping areas be endorsed?**

5.10.1.2 Limitations on the number of television licences

ICASA proposed that the limitation that no person can control more than one commercial television licence remain. In 2005, ICASA stated that it would recommend that limitations on the number of television licences any one entity can control not apply to subscription broadcasting services.[201]

[199] MPDP, Green Paper submission, pages 19-22

[200] ICASA, "Findings document on the review of ownership and control of commercial services and limitations on broadcasting, electronic communications services and electronic communications network services", Government Gazette no 34601, 15 September 2011. This paper considered recommendations on changes to ownership controls made by ICASA in 2004 and endorsed proposals made then.

[201] ICASA, Subscription services: Position Paper, 1 June 2005

MultiChoice and M-Net proposed that the limit on the number of television licences any one person can control should be removed, but that if such limits remain "*they should be confined to single channel analogue terrestrial commercial free to air television services*".

Option One: Limitation removed

The limitation on the number of television licences any one entity can control would be removed.

Option Two: Limitation retained but limited

The limitation would be retained only for single channel analogue terrestrial commercial free to air television services and thus would not apply following switch-off of the analogue television signal with the migration to DTT.

Option Three: Limitation retained

The limitation would be retained or increased and apply to all broadcasting (linear) services.

- **Please select your preferred option. If Option Three is selected, please make submissions on whether or not the limit should remain or be increased.**
- **Comment is also invited on whether or not limits should be extended to other broadcasting-like and/or non-linear services with significant influence on the South African market.**

5.10.1.3 Cross-media controls

ICASA proposed the following cross-media controls:

- No person who controls a newspaper should be allowed to control both a commercial radio and commercial television licence.
- No person who is in a position to control a newspaper may be in a position to control a radio or TV broadcasting licence in an area where the newspaper has an average weekly ABC circulation of 25% of the total newspaper circulation if the licence area of the radio or TV service licence overlaps substantially with the circulation area of the newspaper

Note that in 2005, ICASA recommended that cross-media limitations not apply to subscription broadcasting services.[202] In addition, in 2013 and 2014, ICASA approved amendments to the ownership of two commercial radio licences which give Times Media Ltd control of these. [203] As the regulator has not to date published reasons for its decision, it is not possible to outline what considerations underpinned the decision to exceed current cross-media requirements.

MultiChoice and M-Net said existing cross-media controls should be removed "*particularly as regards television broadcasting services*" as these had become irrelevant as broadcasters will face competition from new content providers and OTT services which would not face the same limits.

The MPDP disagreed. It stated that ICASA's recommendation that cross-media controls not apply to subscription broadcasters needs to be reviewed as it charged this had allowed Naspers to become a "*major media player in both legacy and new media spaces, to the detriment of plurality and*

[202] ICASA, Subscription services: Position Paper, 1 June 2005

[203] Times Media Group, "Voluntary Announcement: Acquisition of a 65% interest in MPower Radio (Pty) Ltd in Mpumalanga South Africa", 6 December 2013 and "Voluntary Announcement: Acquisition of a 60% interest in Vuma FM in KwaZulu-Natal South Africa, 30 January 2014, http://www.timesmedia.co.za/investor-centre/sens/

diversity". It said that any new policy should consider broadening the scope of the current rules to not only cover existing platforms but also "*new platforms with significant public influence which could be determined on the basis of a specified threshold of traffic to popular sites*".

Option One: Remove cross-media limitations

Cross-media limitations would be removed. Note that these could be replaced by a specific public interest test for media mergers as provided for in legislation in the UK.[204]

Option Two: ICASA proposal - only applied to FTA commercial broadcasters

The ICASA proposal would be adopted (or amended), including its proposal that these not apply to subscription services.

Option Three: ICASA proposals applicable to all licensees

ICASA's proposal would be adopted (or amended) and as currently in law apply to all broadcasting licensees (i.e. include pay TV operators)

Option Four: Cross-media limitations are extended to incorporate other platforms

Limits would be extended beyond print media/broadcasting to cover other platforms distributing news, including news websites with significant public influence (as per MPDP submission – see above).

- **Please select your preferred option. If Option Two, Three or Four are selected, please make submissions on ICASA's proposals. If Option Four is selected, please include proposals on what other platforms should be considered and how significant public influence determined.**

5.10.1.4 Foreign ownership limitations

ICASA proposed the following limitations in relation to foreign ownership of commercial broadcasting licensees:

- One foreign person may not hold securities, either directly or indirectly, equal to or exceeding 25 per cent in a South African unlisted company which controls a commercial broadcasting licence ;
- More than one foreign person may not hold securities, either directly or indirectly, equal to or exceeding 35 per cent in a South African unlisted company which controls a commercial broadcasting licence;
- No foreign person may hold securities, either directly or indirectly, equal to or exceeding 25 per cent in a South African listed company which controls a commercial broadcasting licence.

ICASA also proposed introducing a clause allowing it to exempt a licensee from the limits on good cause shown and if necessary impose additional obligations as a result of the exemption.

ODM in its submission argued that foreign limitations should be relaxed as these limited investment, growth, innovation, diversity, affordable access to services and fair competition thus "*defeating the*

[204] See UK Parliament Select Committee on Communications, "Chapter 6 Changes to Media Ownership Regulation", http://www.publications.parliament.uk/pa/ld200708/ldselect/ldcomuni/122/12209.htm and Ofcom, "Guidance for the public interest test for media mergers", http://stakeholders.ofcom.org.uk/binaries/broadcast/guidance/pi_test.pdf

objectives" of legislation. It said the limits supported the continued domination of monopolies in broadcasting. The broadcaster stated that the limitations are obsolete and if retained will result in "*discrimination*" against traditional broadcasters as international and multinational content providers increasingly enter the market.[205] National Treasury in its submission said that limits on foreign ownership do not recognise that anyone can trade through the JSE and that such restrictions therefore could not be imposed on listed companies.

Option One: Remove restrictions

The foreign ownership restrictions would be removed.

Option Two: Increase the percentage of foreign ownership

As per ICASA's recommendation, foreign ownership levels could be increased to a maximum of 35 per cent as proposed by the regulator or different limits set. The regulator would be allowed to exempt an operator on good cause shown.

Option three: Status quo

The current foreign ownership limitations would be retained.

- **Submissions on these options are invited. Please provide recommendations on what percentage of foreign ownership should be allowed if you select option two.**

5.10.2 Diversity in news

A number of submissions specifically raised diversity in news, information and analysis. MultiChoice and M-Net suggested that increased access to the Internet would ensure access to a diverse range of news and information. MPDP, the FXI and Right2Know however cautioned that an increase in the number of outlets offering news and information would not automatically result in diversity in sources and range of news, analysis and opinion.

Internationally, the need to re-emphasise local news and current affairs of significance to a specific geographic areas has been highlighted. Both Australia and the UK have noted that news and information of local significance could be threatened as broadcasters and content service providers extend their reach using the Internet and regulators have developed specific licensing requirements for local broadcasters to address this.[206] Stakeholders also raised that there could in future be an increased focus on exclusive news agreements which could limit the range of news, analysis and opinion.

OPTIONS

The options presented below are not necessarily mutually exclusive as they address both whether there is a need for policy on diversity of news, as well as if mechanisms to promote local news and current affairs should be introduced.

[205] ODM, Green Paper submission
[206] See Ofcom, "Localness guidelines", http://stakeholders.ofcom.org.uk/broadcasting/radio/localness/localness-guidelines and ACMA, "Local Content Investigation", http://www.acma.gov.au/Industry/Broadcast/Television/Local--regional-content/local-content-investigation

Option One: Status quo

The status quo would remain. Increased licensing, new television channels, on-demand and internet based media services will result in increased diversity.

Option Two: Status quo with specific monitoring

The status quo would remain, but the regulator would be required to conduct regular reviews to assess diversity of news.

Option Three: Strengthen regulator's focus on diversity of news

ICASA is currently required to broadly consider diversity when licensing services. This could be extended to require the regulator to specifically consider diversity of news, review any related regulations to accommodate this and bind licensees to any promises made in relation to this.

Option Four: Focus on local news

Policy could introduce a specific focus on local news and information of significance. Broadcasters covering a particular geographic area could be required to devote a minimum amount of programming to material of local significance. Incentives could be introduced to facilitate innovative ways to deliver such local content, including on new delivery platforms. For example:

- Significant investment by broadcasters in delivery of local news across different platforms could be cited as a crucial consideration that would give competing applicants in new licence bids competitive advantage.
- Existing funds (including the MDDA, CRSP and other funds for content) could be used to assist broadcasters and content service providers to develop innovative ways to extend local coverage to emerging platforms, such as developing location-based apps.
- New/existing innovation funds could be developed together with the private sector to promote innovative technological solutions to meet the demand for local news.

- **Stakeholders are encouraged to propose specific interventions including incentives to promote diversity of content, news and local news/material of local significance across all platforms.**

5.10.3 Language diversity

The need to extend content in all South African languages, including sign language, across all platforms in line with constitutional objectives is another key issue. The introduction of the multiscreen, multichannel environment provides great opportunities for content distribution in all languages. Content in all official languages could also be a key driver of uptake of broadband technology, given the popularity of multilingual television drama content.

The SABC and community broadcasters have been the primary mechanisms for delivering language policy objectives. SABC has been limited in relation to TV as they have only three channels to cover 11 official languages. In radio, spectrum constraints have limited national coverage in all languages, with Radio 2000, Radio Sonder Grense and SAFM having the largest transmission reach.

MMA in its response to the Green Paper said that monitoring of SABC services showed that English seemed to dominate SABC TV schedules, as with other television broadcasters.[207] As noted by several respondents to the Green Paper, while new technologies increase opportunities, they also pose challenges as with convergence services will no longer necessarily have local or national boundaries and will be aimed at appealing to audiences and users both inside and outside South Africa (the SOS, e.tv, the SABC and MultiChoice & M-Net raised similar concerns relating to this). Stakeholders suggested that incentives and funding could assist in this.

OPTIONS: LANGUAGE DIVERSITY

Note t this section does not deal with sign language as this is dealt with more holistically below. Again the options proposed are not necessarily mutually exclusive.

Option One: Status quo

As currently, the SABC would be primarily responsible for fulfilling policy objectives to extend the reach of all South African official languages. The SABC's capacity in relation to all official languages will be extended with the introduction of DTT and radio stations will be available across the country with their inclusion on the multiplex. Any language related promises of performance made during licence applications for community and commercial broadcasting licences would be captured in licence conditions. Other mechanisms such as South African content quotas would continue to be used to incentivise production in the more marginalised languages.

Option Two: Review SABC radio footprints

The SABC has stated that it plans to continue to extend its transmission coverage of its public radio stations to expand access in all official languages. The introduction of digital radio will allow all stations to have national coverage, though access to the devices to listen to these will be limited in the medium- to long-term. Research conducted for the ICT policy review highlighted that those radio stations with lower audiences and first language populations (in English and Afrikaans) have the widest geographic coverage, and that the SABC commercial radio services which cover all metropolitan areas also broadcast predominantly in English.

- **Policy could require that the SABC, Sentech and ICASA review existing frequency allocations to SABC public radio services to address the current apparent inequities in relation to language. Policy could further require that the format of Radio 2000, currently licensed as a facility service, be reviewed to address language challenges.**

Option Three: Review regulatory approach to language

Policy could require the regulator to review its current approach to meeting language related mandates. The regulator has opted to address language objectives through licensing rather than setting specific targets or measures. Most commercial radio applications have focused predominantly on English (with some Afrikaans, a few providing isiZulu programming and others incidental use of other languages). ICASA has introduced incentives in its SA TV content framework to promote programmes in languages other than English, in particular the more marginalised languages.

[207] MMA, Green Paper submission, page 13

Policy could suggest that the regulator, among other things, explore specifically requiring introduction of new channels on DTT in different languages (Canada has provisions on French language channels), or setting aside capacity and/or frequencies for radio, for language services. Provisions could also be considered requiring on-demand services to include content in languages other than English and Afrikaans on their catalogues.

Option Four: Promoting all languages across all platforms

Several respondents highlighted funding and/or incentivising South African audio and audio-visual content development in all languages for all platforms as a means to promote uptake of broadband. No specific suggestions on implementation were put forward, including what types of incentives, how to fund any such content fund and which agency should be responsible for this.

- **Comments on the identified options are invited. Submissions should where relevant provide details of the types of funding and/or incentive programmes they believe would promote the development of content/programming in all languages for all platforms.**

5.10.4 Diversity: audiences

Several submissions said that the objective of reaching all audiences, regardless of locality, class, gender and age, among other things, had not yet been achieved. The SOS, MPDP, R2K and MMA, among others, raised the issue of audience diversity and stated, for example, that women, children and youth are not adequately catered for currently. A range of organisations representing persons with disabilities stated that there are limited programming choices for this sector. MMA further stated that its monitoring of broadcasting services indicated that programming mainly targeted urban dwellers and that "*news analysis reveals that provinces with well-defined metropolitan areas receive better coverage*" than others.[208]

While they proposed that the public broadcaster should be specifically charged with such responsibility, it was also suggested that the term diversity should be explicitly defined to cover all audiences and that funding programmes such as the MDDA or the CRSP, could incentivise content aimed at neglected audiences and promote its distribution across all platforms and devices.

OPTIONS: AUDIENCE DIVERSITY

Option One: ICASA to review and recommend

ICASA could be asked to review the extent to which policy and regulation has ensured that all audiences are catered for. Such a review could be conducted regularly to assess the impact of provisions and the regulator could make amendments to its current frameworks based on this and/or make recommendations on other initiatives to address gaps identified (including any legislative amendments which might be needed).

Option two: Other interventions?

Several respondents to the Green Paper proposed that policy should incentivise and/or provide funding support for initiatives to promote diversity and South African content on broadcasting

[208] MMA, Green Paper submission, page 13

services and across other platforms. No specific recommendations were made in this regard. It is recognised that existing development agencies/incentive schemes such as the USAF, MDDA, NFVF and DTI/provincial film commission incentive schemes could be adapted to support such aims. As many of these, report to other Ministries, such issues can be raised with them, but a new White Paper cannot prescribe policy interventions for these.

Stakeholders are requested to submit concrete proposals around incentive/funding proposals so that these can be considered. Submissions on how else to address apparent challenges relating to audience diversity are also invited.

5.11South African music and television content

The 1998 White Paper says that "*broadcasting plays an integral role in developing and reflecting a South African identity, its character and cultural diversity within the framework of national unity*".[209] In line with this, it stipulated that all broadcasters should commit resources and airtime to South African programmes and music and:

- Television broadcasters must provide a mix of their own productions and programmes produced by independent South African producers.
- Programming on all broadcasting services should be "*predominantly South African*".

Subsequent to the publication of the Green Paper, ICASA has issued a Discussion Paper reviewing its regulatory framework for South African TV and music content, and published research on the costs and benefits of its regulations.[210] While the review process was still ongoing at the time of finalising this Discussion Paper, several initial findings are of relevance to the review of Government policy:

- Most broadcasters according to the study met or exceeded the content related quotas;
- Certain television content, particularly multilingual dramas, has increased in popularity and is now a commercial imperative for television broadcasters. However some content, such as children's content, does not generate sufficient revenues to cover costs;
- Some commercial radio stations raised supply side concerns regarding South African music, stating that the recording industry did not produce sufficient music to support increased quotas across all formats.

ICASA has asked stakeholders to make submissions on the existing definitions for South African music and television content (i.e. if these should be changed to include sports programming) and if the policy framework should promote African as well as South African content. ICASA noted that it would make proposals to Government on these issues. This Discussion Paper therefore does not deal with such questions but will consider any outcomes of the ICASA process related to such issues.

Respondents to the Green Paper differed on the best approach to promote South African content in future. Differences centred on whether content regulation would remain relevant and which entities requirements should apply to. Most however proposed that there is a need to find innovative ways to fund traditional South African programming and content for new media platforms.

[209] Department of Communications, 'White Paper on Broadcasting Policy', 4 June 1998, Section 1.3.3: Public Interest
[210] ICASA, "Discussion Document on review of Regulation on South African Local Content:
Radio and Television" and "Final Study Report South African Local Content", Government Gazette no 37803, 4 July 2014

Vodacom in its submission said that South African content regulation is "*better suited*" to traditional television and that new broadcast media should not have to comply with fixed content quotas *"given the…costs associated with customising content".* [211] It said that there was a need to rethink the approach to South African content promotion and proposed that policy makers consider establishing a "Production Fund" with contributions from all content providers which could be accessed by broadcasters and digital content providers.[212]

MultiChoice and M-Net argued that the approach to regulation of South African content is "*outdated, ineffective, unnecessarily restrictive and increases the costs of compliance*".[213] They said that broadcasters already exceed the minimum quotas due to audience demand, but that regulation increased the costs of regulatory compliance. The subscription licensees said that quotas should focus on the public broadcaster, that those on commercial broadcasters be removed and that policy adopt creative mechanisms to "*promote, encourage and incentivise local content*" and a flexible approach so that providers could "*decide how best to promote and include local content on their services*".[214]

The SABC focused only on its own responsibilities. It said that the approach should change from channel-based quotas to network requirements in light of the migration to DTT. The public broadcaster further suggested that government establish content hubs in all provinces as it could not alone be the "*sole driver of the creative industry development*". It further proposed the introduction of mechanisms so the SABC could "*exploit its archive content in the digital space … to use so-called orphan works on the basis that it can set aside 10% of revenue generated by such contention a trust account to be used for the benefit, and development, of the creative industry"*.

The SOS Coalition said it is critical that the "*credibility, professionalism, quality and creativity of SA Content*" is boosted to counteract the impact of international companies streaming content into the country. It proposed that content requirements (including provisions on independent production) be extended for all broadcasters. Other mechanisms proposed by the Coalition include:

- A shift in the intellectual property regime to enable independent producers to exploit content rights on different platforms and in different territories.
- Strengthening South African production tax and incentive rebates managed by the DTI and increasing support for the NFVF;
- Investigating the establishment of a South African content fund to support production of local content across a number of platforms; and
- Strengthening ICASA's capacity to monitor compliance with South African content requirements.[215]

The MPDP noted that the popularity of South African educational, drama and soaps programming was evidence that the quotas have been successful in stimulating demand for local content. It agreed that convergence and digitisation raise challenges for the local content framework, but

[211] Vodacom, Green Paper submission, page 51
[212] NAB, Green Paper submission, page 27
[213] MultiChoice and M-Net, Green Paper submission, page 18
[214] Multichoice and M-Net, Green Paper submission, pages 36-41
[215] SOS, Green Paper submission, pages 8 and 9

argued that these concerns should not lead to local content quotas being removed as emergent services "*may take many years to reach maturity, and may not even take root at all*". It proposed that all broadcasters and other content services/distributors "*targeting South African audiences*" should have SA content obligations. Where it is impractical to subject new media platforms and services to quotas, "*expenditure requirements could be considered, where services such as ISP's are required to contribute a certain percentage of their annual revenue to a local content production fund*". It suggested that any public broadcasting fund established to support the SABC also provide funding for South African public interest content.[216]

E.tv emphasised that its capacity to fulfil public interest obligations such as South African content quotas depended on the concerns it had raised about unfair competitive practices by subscription broadcasters and the SABC being addressed. It said the new approach to South African content should be based on ensuring parity between like services regardless of delivery platform.

ACT-SA suggested that the policy approach to community television consider the sector's particular circumstances, and thus not require commissioning from independent producers as channels did not have the funds to commission programmes. It further proposed that a contestable fund for public broadcasting set aside grants for community TV programming, and that government explore adapting existing incentives and funds in place for the film industry to boost South African content production capacity across all platforms.

OPTIONS: INCENTIVES, FUNDS AND PAY-OR-PLAY PROVISIONS

While many responses to the Green Paper suggested it would be important to develop creative ways to boost South African audio-visual content production, such approaches are not necessarily new. The EC Act provides for a range of mechanisms to meet the objective of ensuring South Africans have access to a range of creative programming, including airtime and expenditure quotas. ICASA has to date, however, only imposed quotas on the amount of programming or music to be aired.
Government will explore such pay-or-play options further to establish how any funds collected could best be used to promote the industry. Provisions in place in other countries, including Canada, France and Australia will also be considered in this regard.

- **Submissions on how best to use such funds, which agency should be responsible for these and how to determine the amount of any pay or play levies are welcome.**

Proposals made regarding adapting existing tax and other incentives/grant funds will also be discussed with other Ministers and Departments to develop a holistic approach to supporting South African content. In addition, concerns raised by ICASA regarding the music recording industry will be discussed with the DTI to ensure these are addressed through its music development strategies.

OPTIONS SOUTH AFRICAN CONTENT ON TRADITIONAL BROADCASTING SERVICES

Note that most of the submissions focused on television provisions and not on the framework for promoting of South African music on radio licensees. **It is important therefore to ask whether or not**

[216] MPDP, Green Paper submission, pages 16-19

a different approach should be adopted for radio, given that the sector is not facing the same challenges associated for example with the migration to DTT. The options below are therefore focused on linear television services, regardless of what platforms they are aired on (thus they would also relate to Internet Protocol TV (IPTV)). They presume that the South African local music requirements for radio remain the same.

Note it is presumed that regulation would be applied across a bouquet/network and not per channel. Policy could also require broadcasting/platform services to meet quotas/requirements through promoting inclusion of independent channels produced by South African companies.

Option One: Status quo plus

The status quo would remain, with an emphasis on the need to continue to reinforce South African content and music in all genres and formats across all tiers, with a graduated approach. The policy would make a commitment to explore pay or play options so that these could be implemented.

Option Two: Focus on specific genres across all broadcasters

Policy would continue to reinforce the importance of promoting South African content generally and across all tiers. It though would focus on regulation of content in specific genres such as children's content, drama/film, documentaries and/or education.

Option Three: Only focus on public and community broadcasting

Regulation would focus only on the public broadcaster and community services while noting the importance of incentivising SA content on commercial services. A range of options for incentivising the airing of particular genres of programming are possible – including, for example, limiting funds and existing incentives (such as tax breaks on content) only to broadcasters that meet certain minimum quotas (financial or airtime based) or voluntarily opt to comply with regulation. *Note those selecting this option should propose how South African content would be promoted or incentivised.*

Option Four: Focus on significant broadcasters

Regulation would focus only on *significant* broadcasters (those with specific audience and revenue levels). This would give some regulatory relief to new broadcasters, though they would be required to meet requirements when they reached certain audience levels/revenue targets.

- **Which option do you propose be followed?**
- **Are there alternative options**

OPTIONS: NON-LINEAR/ON-DEMAND SERVICES

Option One: South African content requirements do not apply

As stated, on-demand services would be excluded from South African content requirements, though mechanisms could be put in place to encourage them to ensure prominence of South African content on their catalogues and in any search engines.

Option Two: SA content requirements apply to on-demand services

ICASA would be tasked with developing regulations to ensure prominence of South African content on the catalogues of on-demand services or to contribute to a "pay-or-play" fund (see above).

Option Three: Content requirements only apply when on-demand services reach set revenue targets/subscription or user levels

As stated. This would exclude new services and therefore allow for innovation.

- **Which option do you prefer?**
- **Are there alternative approaches which could be adopted?**

OPTIONS: GENERAL

As noted above, a number of general issues were raised in submissions as well as in the research conducted. These are reflected below to invite comment from stakeholders on these:

- The MPDP suggested that services such as ISPs and other telecommunications licensees be required to contribute to a content fund.
- ACT-SA and the SOS stated that government policy should address issues around rights and reinforce a principle that rights should remain with producers so that they could exploit these on other platforms and in other territories.
- ACT-SA proposed that community television services be exempted from provisions on commissioning of independent producers.
- Others raised the need to specifically promote production of more expensive genres, and programming formats that can be licensed and/or require investment in development.

- **Stakeholders are asked to comment on these options/proposals**

5.12Access to public interest programming

There are currently a number of provisions in place in policy, legislation and/or regulation to ensure that audiences can access public interest programming. These include:

- Must carry provisions
- Rules on FTA broadcasting of sports of national interest.

In the multi-channel, multi-screen era where audio and audio-visual content will be available on a range of platforms and devices, some countries have also introduced provisions on prominence of public interest content/public broadcasting to promote access by audiences to such content. Other questions also arise: For example, if requirements should be extended to newer platforms. These issues are all dealt with separately below.

5.12.1 Must carry rules

What are called "must carry" rules requiring, for example, subscription broadcasters to re-transmit broadcasting services with public interest content, are in place in a number of countries[217] and are aimed at ensuring that audiences have easy access to public interest content. They are intended to ensure that audiences do not have to switch platforms to access such content and/or extending the reach of public broadcasting services. In European law, must carry provisions are technology neutral (i.e. apply to any multichannel distributor of broadcasting content) and thus potentially can cover

[217] Must Carry provisions are included in the Universal Service Directive of the European Union and applied in several European countries

satellite broadcasters as well as IPTV providers as long as a "significant number" of end-users use these services to access television and/or radio.

The EC Act states that ICASA must develop regulations on the extent to which subscription broadcasters must carry SABC TV programmes, "*subject to commercially negotiable terms*". The regulator finalised must carry rules for the analogue environment in 2008. There is a need to consider if the legislative requirements on must carry have had the intended effects in South Africa and have achieved the underlying objectives for these requirements. In developing a new policy framework it is also important to consider whether or not such provisions will remain relevant in a converged environment.

There were very different views on whether or not the current provisions should be amended, remain as is or be removed.

The SABC said that while the intentions behind existing provisions are good, they are unnecessary and an "*illegitimate intervention inhibiting market freedom*" in the multichannel environment. They said provisions should ideally be removed as the SABC is the largest broadcaster in the country and not in need of protection. Alternatively, the SABC proposed that the approach be adapted and the number of channels with must carry status limited (particularly noting that DTT will increase the number of SABC channels) and arrangements around who bears the costs adapted.[218]

M-Net and MultiChoice however argued that the rules provide "*an important benefit to the public broadcasting service*" as they assist it in meeting its universal service obligations by ensuring the broadcaster can be received in areas not covered by its transmission network. They said the current provisions are "*technologically neutral*", "*digital ready*" and "*are working well*" and there is no need to amend either policy or legislation in respect of must carry rules.[219]

E.tv on the other hand addressed primarily the issue of costs, linking this to the need to protect FTA television (commercial and public) so it is viable and can meet public interest objectives. It proposed that all FTA television licensees be given must carry status, as they all contribute to meeting public interest objectives, and that subscription broadcasters pay the FTA services carriage or retransmission fees "*reasonably approximating the value they contribute to the pay TV platform*". E.tv argued that in South Africa "*a near monopoly subscription television service has built a …very profitable business, in substantial part by re-selling FTA broadcast signals … while avoiding the considerable costs of public interest obligations*". The commercial FTA broadcaster said that it is one of the most watched channels on the DSTV platform.[220] The SACF also proposed that must carry status be extended to all FTA broadcasters and that retransmission fees be paid by subscription services/platforms to FTA services. [221]

The options below question whether or not must carry provisions remain relevant, and if so who they should apply to.

[218] SABC, Green Paper submission, pages 39-44
[219] M-Net and MultiChoice submission, page 53
[220] E.tv, Green Paper submission, page 10-11
[221] SACF, Green Paper submission, page 40

OPTIONS: MUST CARRY - IS IT RELEVANT?

Option One: Must carry provisions are removed

This was proposed by the SABC as their preferred option. They suggested must offer requirements, where certain content providers/broadcasters would be required to offer content to subscription broadcasters and other competing content providers, replace these. Must offer specifications are generally linked to fair competition and bar certain content providers/broadcasters from entering into exclusive deals with subscription services.

Option Two: Status quo

The current provisions would remain i.e. must carry status is given to public broadcasting channels and the regulator is required to set rules to implement this. The rules could specify that only those subscription services which have a significant number of users/subscribers are required to adhere to the provisions.

Option Three: Status quo, but limited

Policy and law would still require that subscription broadcasters/platform operators (either all or only those with a significant number of subscribers/end-users) must carry certain channels, but that this be limited only to select channels and not all public broadcasting services. Note that the SABC did not specify which services this should be applied to, but seemed to suggest only the existing two public channels (SABC 1 and 2) and not any digital only channels.

If this option is selected, please indicate what principles should guide the limitation.

Option Four: Extend provisions to all FTA broadcasters

Subscription broadcasters would be required to carry all FTA television licensees. If so, should must carry status be given only to national services or also to regional television licensees (which could be licensed in the future) and/or community services? Note that e.tv did not in its submission outline how they propose such a requirement be applied with the migration to DTT.

Option Five: Allow FTA broadcasters to elect to opt in or out

In the USA, cable operators and multichannel audiovisual programming distributors have to carry all local TV licensees if these licensees opt for must carry status (there is no national public service broadcaster). Licensees are required to decide every three years whether or not they want to opt in or opt out of the must carry provisions. Those that request must carry status bear their own costs related to this (as in South Africa). Channels that do not ask for must carry rights can only be broadcast by a cable operation or programme distributor if they give what is called re-transmission consent. Contracts generally include retransmission fee payments payable by the multichannel provider to the broadcaster. [222] Retransmission consent does not only apply to local broadcasters, but to major commercial television networks as well. The US regulator, the FCC, has set rules and guidelines on retransmission agreements/negotiations.

- **Which option do you prefer?**
- **Are their alternative options which should be explored?**

[222] http://www.fcc.gov/guides/cable-carriage-broadcast-stations

OPTIONS: WHO PAYS?

Option One: Status quo

The policy would stipulate that must carry status is subject to commercial terms and the regulator interpret this in regulations (currently ICASA states that each must bear their own costs).

Option Two: Retransmission/carriage fees

Policy and law would specify that FTA television broadcasters must be fairly compensated for carriage by subscription broadcasters according to the value they add to such networks. The regulator would be tasked with setting out the criteria for determining value.

Option three: Must carry channels pay subscription broadcaster

The other option would be for the carried channels to pay for being carried by the subscription broadcaster, the costs would be those that the subscription broadcaster incurs as a result of the carriage.

5.12.2 Prominence of public interest programming/public broadcasters

The issue of prominence on programming guides (EPGs) and other user interfaces relates to must-carry rules. While similar to the issue of discoverability of such programming highlighted in the section dealing with fair competition, prominence is in some countries separately enforced with stricter requirements specifically aimed at ensuring easy access to the public broadcaster/public interest programming (e.g. South African content). Current South African policies, laws and regulations do not deal with the issue of prominence. In the UK, for example, the regulator has set rules and guidelines requiring that public service channels (both the BBC and private channels with substantial public interest obligations) are given "*appropriate prominence*" on EPGs. The following issues are therefore pertinent to this policy review.

- Whether or not prominence of public interest programming is necessary to ensure easy access by viewers to such programming;
- If so, which broadcasters should be given EPG prominence and what criteria should be used to determine this;
- Whether such rules should only apply to EPGs or be extended to mechanisms used on other platforms for discovery of content i.e. catalogues/search engines/ user interfaces on all platforms with significant audiences; and
- How would prominence apply to new interfaces likely to be developed i.e. those that categorise content available via genre rather than channel etc.

OPTIONS: PROMINENCE

Option One: Prominence is regulated

The regulator would be required to assess the need for regulation to ensure prominence of certain content/channels/services and develop rules as necessary. Rules could be limited to those devices and platforms used by a significant number of people. As with must carry requirements, policy would need to determine whether or not the principle of prominence applies only to the SABC/public broadcaster or is extended to other broadcasters which have public interest related

obligations in relation to specific genres of programming, universal service, language and/or South African content. **If this option is preferred, please make submissions on which broadcasters would be given prominence.**

Option Two: status quo remains

Policy would not include any provisions relating to prominence of public interest content.

5.12.3 Events of national interest

South African policy and law currently include measures to ensure that sports of national interest are shown free to air. The sporting events that are covered by these provisions are defined by the regulator in consultation with the Minister and the Minister of Sport.

M-Net and MultiChoice said that regulation of the broadcasting of national sporting events has significant consequences for all stakeholders and the wider economy, and that existing regulations successfully balance the competing interests of parties affected by them and strike an appropriate compromise. They said existing mechanisms are "*adequate and appropriate*" and therefore no amendments are necessary. [223] SABC on the other hand raised concerns with provisions and/or with related ICASA regulations. It said that the regulator's rules allowed subscription broadcasters to charge high prices to FTA broadcasters for subsidiary right and that policy should ensure reasonable rates for sub-licensing of such events. The public broadcaster further said that rules should stipulate that subscription broadcasters must conclude agreements with FTA services timeously so that these services have sufficient time to recoup costs from advertisers/sponsors.

The SABC highlighted approaches in the UK and Australia. In Australia rights for sports on their anti-siphoning list (those which must be shown free to air) must first be offered to FTA services and only if not acquired to subscription services. Australia requires that FTA broadcasters make available games not broadcast to other services at a nominal fee. In the UK, there is a two tier list of major sporting events. Category A events cannot be broadcast live on an exclusive basis by a subscription service at all. Category B events cannot be broadcast live on an exclusive basis unless secondary rights (highlights packages, delayed broadcasts) have been made available to FTA services. Sporting rights only have to be made available to those services reaching a substantial proportion of the public (so not regional or local channels).
Further issues related to this area of relevance to policy are:

- If the listing should only apply to sports of major importance or more broadly to events (as per the European AVMS); and
- If there is a need to also consider requirements (again as per the AVMS) on short reports of key events so that these can be covered on, for example, news broadcasts.

OPTIONS

Option One: Status quo

The current policy and legislative provisions would remain.

[223] M-Net and MultiChoice, Green Paper submission, page 52

Option Two: Status quo plus…

The following principles would be captured in policy and legislation:

- The rights must be made available at reasonable fees (SABC proposed 25% of the cost);
- Pay-TV providers must finalise any sub-licensing agreements timeously (SABC proposes at least three months before the event); and
- Anti-hoarding provisions are introduced.

Option Three: alternative model explored

A new approach would be adopted after considering policies in other countries such as Australia which requires rights holders to listed events to first offer these to FTA services.

- **Which option do you prefer?**

Options: Other issues

- **Should this be broadened to cover events of major public importance? In some European countries, for example, royal weddings have been designated as such.**
- **Is there a need to stipulate in policy that the regulator should develop rules to ensure access to news packages for events of high interest/importance?**

5.13Universal Access: Accessibility and inclusion

Many of the issues above deal with universal access more generally, including, for example the mandate of the public broadcaster to extend its reach and ensure access to a range of programming in all official languages. This section therefore deals specifically with access to programming by persons with disabilities.

Accessibility by and fair representation of persons with disabilities was raised extensively in provincial hearings on the Green Paper organised by the Department. In all provincial meetings, people raised concern about whether the SABC provides sufficient sign language/sub-titles for those with hearing disabilities and if ICASA enforces its guidelines and licence conditions in this regard. Concerns were also raised about inclusion of persons with disabilities in programmes broadcast.

It is important to consider in a new policy whether or not current provisions need to be revised to realise or address the possibilities and challenges of new technologies, and the introduction of new services such as on-demand content and broadcasting-like services broadcast over the internet.
Some of the specific issues to be considered relate to:

- Accessibility of end-user equipment (television sets, STBs and decoders, remote controls and interfaces such as EPGs);
- Whether it should be mandatory for broadcasters to make certain types of information accessible (via sign-language, captioning, audio description etc.), such as information about national disaster/emergency and information on emergency services.
- Promoting awareness of which programmes and services are accessible by providing information on programme schedules and on any programming guides/audience interfaces.

- Ensuring that guidelines/standards are agreed on in relation to the quality of signal language, audio description and sub-titling; and
- Ensuring any editorial guidelines and codes include provisions relating to fair representation of people with disabilities and inclusion of persons with disabilities in programming.

Policy could require the regulator to address all these issues through regulations, licence conditions, editorial standards, codes of good practice and guidelines. Regulatory, co-regulatory and self-regulatory approaches should be explored in relation to these areas.
Policy should also stress the importance of the regulator ensuring that persons with disabilities are consulted and involved in the process of developing any guidelines or rules and in ensuring their implementation.

OPTIONS

Rather than providing alternative options, this section identifies possible approaches that could be included in any policy and/or law for comment. This is not an exhaustive list of possibilities and submissions on other areas which should be covered in policy and law are welcome.

- In relation to accessibility of terminal equipment, it is suggested that the policy require that television broadcasters and manufacturers together develop common standards/approaches to ensure that hard of hearing persons who use hearing aids are able to use assistive listening devices of their choice. Should the self-regulatory approach not be successful, government will intervene to set standards for terminal equipment.
- Manufacturers and retailers will be encouraged to ensure all television receiving equipment and related software complies with universal design standards and consider the needs of persons with disabilities. Universal design standards will be taken into account when government sets standards for such equipment and the regulator will be required to ensure equipment and software meets universal design standards in type approving equipment.
- The regulator should develop rules and/or guidelines for electronic programming guides/catalogues/user interfaces to ensure that these incorporate features, as far as practicable, to ensure access to such guides by persons with hearing and/or sight disabilities.
- EPG rules or guidelines should also require that broadcasters include wherever available information on which programmes are accessible. Standard symbols to indicate which programmes are sub-titled/captioned, have sign language and/or audio description, for example, should be agreed on in consultation with organisations representing persons with disabilities.
- The regulator should develop licence conditions and/or regulations outlining the percentage and genres of television programming/content that should be made accessible to persons with hearing and/or sight disabilities and how this will increase over time.
- The regulator should work with on-demand providers to encourage them to make their services and content available to persons with disabilities and to consult with organisations representing persons with disabilities in developing self-regulatory guidelines and codes.
- The regulator should promote self-regulation by broadcasters acting together with organisations representing persons with disabilities to develop standards for the quality of captioning/sub-titling, audio description and sign language to ensure these are understandable and meaningful to audiences.

- Regulatory, co-regulatory and self-regulatory codes relating to accessibility must include provisions to ensure awareness of the guidelines and standards set and mechanisms for adjudication of complaints about non-compliance with these.

- **Please comment on each of these possible options.**
- **What other rules could be put in place to ensure persons with disabilities are catered for adequately?**

5.14Protection of children, classification and content standards

Under current laws, ICASA has sole responsibility for determining rules on content standards, classification and protection of children for broadcasters. The Film and Publications Board (FPB) is responsible for other content (except for news publications that are members of a self-regulatory body). ICASA can recognise self-regulatory bodies to enforce such codes and has accredited the Broadcasting Complaints Commission of South Africa (BCCSA). The BCCSA in interactions with the ICT Policy Review Panel said that it is guided by the FPB and ICASA codes in place. The FPB has indicated that its founding legislation will be amended to address any gaps regarding online content. In terms of this law, all content providers covered by the Act must submit information prior to publication.

Protecting children from harmful or age inappropriate content, ensuring adults have sufficient information to choose what they want to watch or listen to (within the law) and promoting fairness, accuracy and ethical behaviour in news, current affairs and factual programmes are the three core objectives of current provisions in policy and law. These will continue to underpin future policy, though convergence and digitisation might require new ways to realise these, given that content will be delivered to multiple screens from a range of platforms and sources.

Research conducted in other countries is also important to consider. In the UK, for example, the regulator conducted a study on public attitudes and expectations in the converged world. The 2012 study found, among other things, that audiences have high expectations of television content and may want more assurances for on-demand services, knowledge of content regulation in place for broadcasting is high but lower for other services, audiences expect content over television sets and other devices associated with broadcasting to be regulated closer to the level of broadcast TV than internet content accessed from the open internet via computers. [224]

Comments in submissions on these issues focused primarily on the need for awareness campaigns and digital literacy education so that children, parents and viewers/users are aware of any codes or other rules (e.g. watershed rules on scheduling programming so that children can be protected from harmful or age inappropriate content) and mechanisms that can be used to protect children (e.g. age verification technologies or parental locks on content and search engines). It was also noted that the current co-regulatory system in place for traditional broadcasting has been largely successful.

The FPB has indicated that it is establishing a Regulatory Forum for all related regulators to develop common approaches to this regulation.

[224] http://stakeholders.ofcom.org.uk/binaries/research/tvresearch/UKAudienceattitudes.pdf

OPTIONS

This section does not present options but raises issues for stakeholders to comment on. It does not review the current co-regulatory provisions in place as no stakeholders raised concerns about this. **Should stakeholders believe this should be reviewed, they are welcome to motivate their position in their response to this Discussion Paper.** Issues to be considered include:

- If on-demand providers would be regulated by the FPB as currently, or if the extension of the definition of those that are regulated would mean that they fall under ICASA and/or any approved co-regulatory structure. It is important to consider if audiences/users would view such content as broadcasting or not. It is also important to note that some on-demand services will be provided by traditional broadcasters (catch-up services for example) and audiences might expect to complain to the broadcasting related regulators about these.
- Which body (FPB or ICASA's CCC/the BCCSA) would be responsible for complaints about online content provided by broadcasters on their webpages? Such pages might include additional news information relating to a story which users might have concerns about.
- How to ensure similar criteria are applied by all statutory regulators in approving co-regulatory and self-regulatory mechanisms and institutions? Should ICASA be required to consult the FPB and ensure any criteria it sets are in line with FPB approaches?
- How can policy ensure that complaints procedures are streamlined so that audiences and end-users can easily complain and do not have to first research which regulatory body deals with content it is concerned about? Should the FPB and ICASA be required to set up a portal/complaints office together with other regulatory bodies (statutory, self-regulatory and co-regulatory) to establish a one-stop-shop complaints mechanism?
- The means to protect children and provide adequate audience advisories will depend on the medium and platform. For example, watersheds (where programmes unsuitable for children are only broadcast at times when children are not likely to be part of the audience) are only relevant to scheduled programming. Access controls are also currently in place across many platforms to ensure age verification and/or parental controls. Audience advisories/labels are required across all content either in terms of ICASA or BCCSA provisions or by the FPB. Is there a need to put in place explicit requirements and develop uniform approaches to, for example, classification and labelling? If so, should the FPB and/or ICASA be charged with developing these, together with co-regulatory and self-regulatory bodies?
- Consumer education will become increasingly important to ensure citizens are aware of mechanisms in place to protect children, avoid content and complain about alleged breaches of codes. ICASA requires broadcasters to provide regular information about the code of ethics and how to complain if they believe standards have been breached. Should the regulator require all relevant licensees to provide similar information about these issues?
- Should ICASA be specifically charged with promoting media literacy, and specific provisions and powers in relation to this added to their mandate?
- Is it necessary for the regulator to require providers to warn audiences if they are moving from a managed platform that adheres to such standards to an unmanaged platform (e.g. the Internet) given that audiences might not necessarily be aware of this when they shift programmes? Some countries have specified that providers include both on screen text messages and audio messages to warn audiences of this.

- **Stakeholders are requested to make submissions on these issues as well as other issues they believe need to be addressed**

5.15 Commercial communications and editorial integrity

The content of advertisements is regulated by a self-regulatory body, the Advertising Standards Authority. This section does not review this arrangement. It rather focuses on areas currently within the ambit of ICASA i.e. mechanisms to ensure editorial independence from commercial communication (advertising, sponsorship, product placement etc.), protection of editorial integrity and the right to impose limits on the time allocated to commercials. It does not question if these powers remain relevant, but rather raises possible new challenges which might need to be addressed.

ISSUES

- Convergence is likely to have an effect on the future of commercial communications and therefore the way the regulator ensures editorial integrity. For example, the Internet allows for overlays of advertising which might not always be controlled by the content provider/media services provider. Will there be a need for policy to address this issue?
- There will also likely be a need, given fragmentation of advertising and audiences and the increased demand for content, to balance protection of editorial integrity, innovation and investment in content. SABC has suggested that current limits on the number of minutes per hour allowed for advertising be increased. In addition broadcasters appear to be increasingly including advertiser funded programming (AFPs) in their schedules. Is there a need for more flexible rules on advertising to support investment and innovation? Should requirements be introduced requiring transparency so that viewers are aware when programming is advertiser funded – in the same way provisions are made to ensure awareness of sponsorship and rules set to enforce editorial independence of sponsored material?

- **Stakeholders are invited to comment on these issues.**

5.16 Piracy

It seems there is agreement on the approaches to address this. Mechanisms proposed to strengthen protection against signal piracy will be incorporated into policy:

- The signal-based approach to piracy adopted by WIPO in its Treaty for the Protection of Broadcasting Organisations will be reinforced.
- The law will reintroduce statutory prohibitions on piracy.

5.17Conclusion

- **Are there any issues that you believe have been neglected?**
- **Can you suggest any benchmarks and targets which may be incorporated to monitor progress against policies objectives?**

6 Policy Options: ICT Industry Growth

6.1 Introduction

There is still a long road ahead, to achieve the growth and redistribution and build a more inclusive and equal society as envisaged in the National Development Plan (NDP). South Africa has set a growth target of five percent by 2019, and has identified various measures and interventions to jump-start the economy.[225] In his state of the Nation Address in 2014, the President pointed out that the most effective weapon in the campaign against poverty is the creation of decent work, and that this requires faster economic growth.[226] This paper/chapter focuses on the key challenges in respect of growing the broad ICT industry, with a view to support government's plan to "jump-start" the economy.

It further notes that in the short to medium term it will not be an easy to achieve economic growth. In his 2014 medium term budget policy statement the Minister of Finance acknowledges that the country is not making enough progress in raising incomes or reducing poverty, that far too many people are unemployed and that we import considerably more than we export.[227]

The ICT industry currently has pockets of strengths, but inherent weaknesses too. The subsector of the South African ICT market, comprising of hardware, packaged software and services, is regarded as one of the most developed and sophisticated within the continent. South African ICT companies rank among world leaders in areas such as mobile software, electronic banking services, pre-payment, revenue management, fraud prevention systems and the manufacture of set-top boxes[228], with some of the products destined for the export market. The South African IT industry was valued at R77,1 billion in 2011 and is expected to grow at a compound annual growth rate (CAGR) of 8,6% to reach R116 billion in 2016.[229] There were close to 2 000 companies in the IT industry as at the end of March 2012.[230] The IT services submarket is the largest, accounting for 51%, followed by hardware at 31%, and packaged software at 18% of the total IT market. The hardware sub-market is driven largely by storage and networking services.

While this points to a strong base on which to grow, weaknesses must also be addressed urgently. For example, South Africa is a net importer of ICT products, has a low supply of relevant ICT skills, and is serviced by an industry which does not fully represent the demographics of the country. Opportunities for the creation of jobs in the sector, across micro, small, medium and large

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[225] The Presidency, State of the National Address, 17 June 2014, http://www.thepresidency.gov.za/
[226] Ibid.
[227] National Treasury, "Medium Term Budget Policy Statement, Minister of Finance, Nhlanhla Nene, 22 October 2014 http://www.treasury.gov.za/documents/mtbps/2014/mtbps/speech.pdf
228 http://www.southafrica.info/business/economy/sectors/icte-overview.htm#ixzz2h8sDQxhY
[229] SA IT Market Overview for 2011 with forecast for 2012-2016. BMI-T. 2012
230 The Media, Information and Communication Technologies Sector Education and Training Authority Sector Skills Plan 2013–2018

enterprises must be harnessed. It is especially important to provide more coordinated support and incentives to fast-track growth in the number of entrepreneurial start-ups to match demand, especially in the online services sub-sector. It is critical therefore that government ensures an enabling policy environment. This is the basis of the various options presented in this chapter/policy options paper, including establishing proper investment policy, building research and development capacity, addressing the skills gap, and stimulating South African grown innovation and local intellectual property.

6.2 Overview of Industry Growth Strategy

The overall strategy distinguishes between three key sub-sectors, each with unique properties and needs viz. the electronics and hardware manufacturing sector; the software, local content and applications development sector; and the ICT services sector. The strategy, in taking into account economic growth theory, factors in the bringing together of resources, capital, and enterprises which jointly contribute to jobs and net economic output. The following are important to the ICT industry growth strategy:

- The importance of stimulating ICT demand. This must be viewed on the back of the National Broadband Policy which seeks to ensure universal access to ICT infrastructure by 2020.
- Programmatic interventions to address ICT skills to exponentially increase the levels of uptake and effective use of technology. This must include a national strategy to increase digital literacy, ensuring specialised skills to use ICT for improved productivity in all work-places and developing skills to enable South Africans to grow the local software and content, and hardware and electronics market.
- The need to stimulate national, regional and local systems of research and innovation, so that locally produced knowledge and IP begins to make a dent in the local economy. The output of ICT goods in the manufacturing, software and content sectors must contribute towards a positive net export situation. A key aspect of this is a focus on social innovation at grassroots community level to give birth to ICT software applications and hard goods aimed at addressing localised social issues, and to support the delivery of government services.
- The development of innovative funding instruments which recognise the unique nature of the different sub-sectors, and which will facilitate ease of entry into the market for especially micro-businesses and entrepreneurs.
- The stimulation of greater investment in the sector, with measures in place so that investments support the development of local IP and the transformation of ownership.

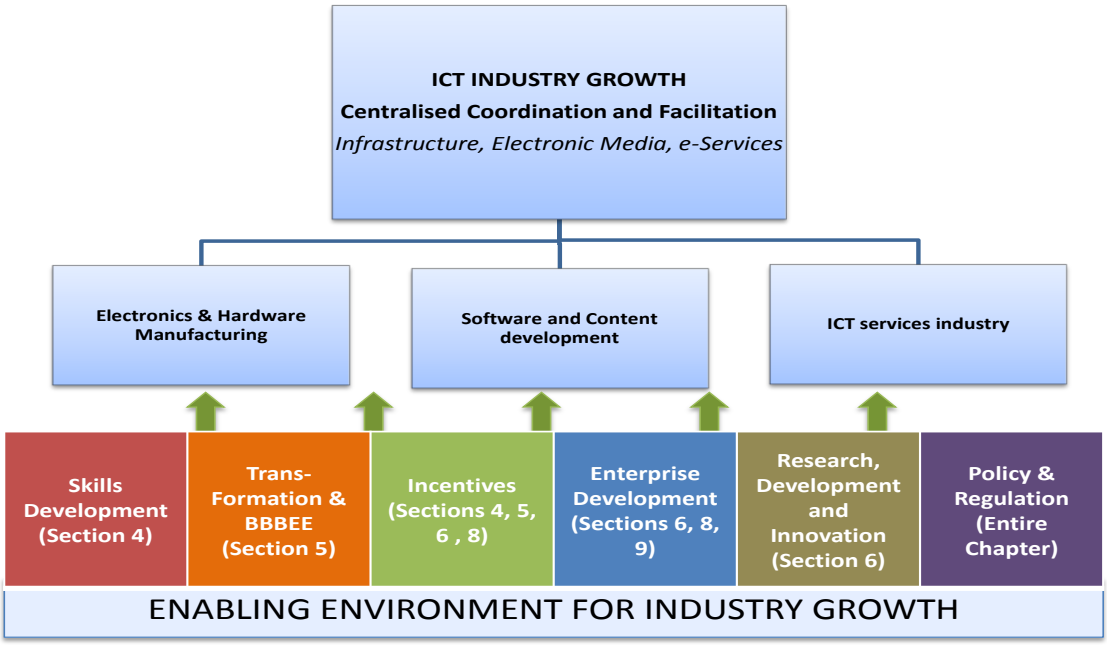

Figure 4: Overview of the ICT Industry Growth strategy

The figure above provides a diagrammatic perspective of this chapter/policy options paper. In the first instance a strong coordination role is required. The ICT industry is a cross-cutting one, and the coordination of various components of the growth strategy is important.

In the current situation the roles and responsibilities for various issues described in this Chapter flow across several government departments and agencies, including the DTPS, DTI, DST, DBE, iNeSI, IDC, and others. There are already some coordination mechanisms in place e.g. the PICC SIP 15 programme and its Intergovernmental Forum. There is also a government economic cluster, which facilitates inter-government consultation and decision making. Operationalising policy in respect of Industry Growth matters however requires a robust coordination and facilitation nucleus.

OPTIONS TO DRIVE COORDINATION

OPTION ONE: Status quo

Continue as per the current situation, with different government departments overseeing their respective mandates.

OPTION TWO: Mandate one agency to coordinate cross-cutting ICT industry growth

One of the government departments/agencies would be mandated e.g. DTPS, the DTI, or the IDC.

OPTION THREE: Establish an ICT Industry Growth Advisory body

An advisory body would serve two purposes i) to advise government and ii) to facilitate synergies and ensure bottlenecks that are experienced by the ICT industry are mitigated. Consideration may be given to whether an existing advisory council, like the National Broadband Council is able to assume this responsibility.

- **Do the current functions undertaken by the DTPS, DTI, DST, IDC, and DBSA achieve the necessary synergies in supporting growth of the ICT industry? What suggestions do you have to strengthen coordination?**
- **Which of the existing institutional mechanisms is suited to undertake the proposed coordination role?**
- **Do you agree that it is necessary to establish an Industry Growth Advisory body? If so, who should undertake the responsibility to establish such a body, and oversee its functioning?**

It is also important, in strategising for the growth of the sector, to delineate the broad sub-sectors of the industry viz. ICT Manufacturing (including the electronics and related hardware sub-sectors), ICT software development (including applications development) and the ICT Services industry (providing maintenance, logistical support, data warehousing, network support etc). This distinction is necessary to ensure that interventions recognise the uniqueness of each and develop targeted support programmes. In addition further value chains will need to be created under each of the sub-sectors to ensure effective implementation. The diagrams below provide a graphic description of two suggested value chains, viz. manufacturing and software applications development.

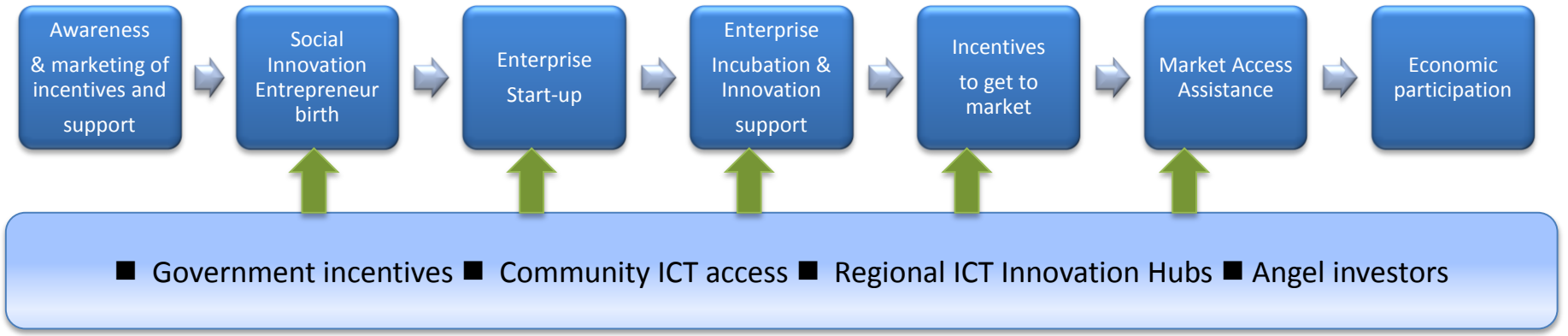

Figure 5: Industry Growth Value Chain (Applications Development, Software Development, Local Content, etc)

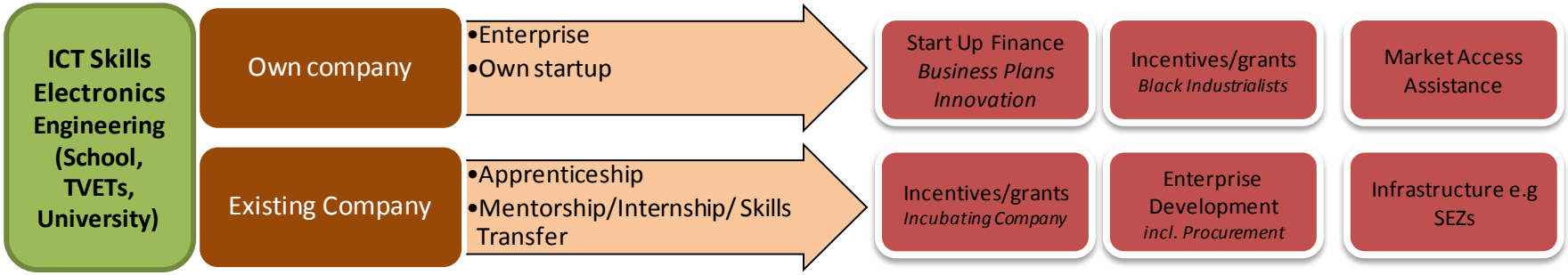

Figure 6: ICT Manufacturing Industry Growth Value Chain (Electronics Manufacturing, etc)

6.3 Delineating the ICT Sector

The ICT sector in South Africa is very diverse. It comprises broad areas such as broadcasting and local content, electronic media, postal services, telecommunications, and IT, among others, representing both public and private interests. These sectors are supported by electronic manufacturing, repairs and installations. A key issue which impacts on policy development concerns the delineation and consequently the classification of a sector. This delineation is relevant to assist in identifying qualifying candidates for special funding incentives and other programmes to support growth of the industry.

The confusion that surrounds the ICT concept is reflected in the different ways the term is used and defined. The distinction between ICT as a sector and ICT as a theme is particularly important, and thus consideration of a definition is necessary.

> Information and Communication Technologies (ICT) consists of the hardware, software, networks and media for the collection, storage, processing, transmission and presentation of information (voice, data, text, images), as well as related services. ICT can be split into ICI and IT.
>
> Information and Communication Infrastructure (ICI) refers to physical telecommunications systems and networks (cellular, broadcast, cable, satellite, postal) and the services that utilize them (Internet, voice, mail, radio and television).
>
> Information Technology (IT) refers to the hardware and software of information collection, storage, processing and presentation.
>
> ICT Applications are hardware and software solutions that utilize ICT to meet business, public administration, social and other goals. In this regard ICT as a theme, is a tool, and a way of doing things (e.g. ICT in Education, e-government).[231]

The above definition provides a broad context to delineate the industry. In South Africa there are currently two delineations in use, viz. from the ICT Charter, and from Statistics South Africa's draft for the Information and Communication Technology satellite account.

6.3.1 ICT Charter description

The ICT Sector Charter says the sector includes the following activities:

- Marketing, manufacturing, assembling, servicing, installing, maintaining and/or repairing systems, software, equipment, machines, devices and apparatus, whether utilising manual, photographic, optical mechanical, electrical, electrostatic or electronic principles or any combination of such principles, that are primarily intended for the recording and/or processing and/or monitoring and/or transmission of voice and /or data and/or image and/or text any combination thereof for use in any one or more of the following activities:
    - Accounting, calculating, data processing, data transmission, duplicating, text processing, document reproduction, document transmission, record keeping and record retrieval, broadcasting or transmission for entertainment or information purposes of voice and/or image and/or text or any combination thereof and/or; the provision of services relating to the above. [232]

[231] UNDP 2004. The Report of the Task Force on Financial Mechanisms for ICT for Development - A review of trends and an analysis of gaps and promising practices.

[232] Notice 485 of 2012, Issued in terms of Section 9(1) of the B-BBEE Act 53, 2003, Department of Trade and Industry, Codes Of Good Practice On Broad-Based Black Economic Empowerment.

6.3.2 Statistics South Africa OECD classification

The OECD[233] uses the following general principle to identify ICT economic activities (industries):

> *"The production (goods and services) of a candidate industry must primarily be intended to fulfil or enable the function of information processing and communication by electronic means, including transmission and display".*

Statistics South Africa delineates the sector in line with the OECD standards to maintain international comparability. ICT definitions used for the draft ICT satellite account[234] are as follows:

- ICT products must primarily be intended to fulfil or enable the function of information processing and communication by electronic means, including transmission and display.
- For the ICT sector, the production (goods and services) of a candidate industry must primarily be intended to fulfil or enable the function of information processing and communication by electronic means, including transmission and display.
- For the 'content and media' sector, the production (goods and services) of a candidate industry must primarily be intended to inform, educate and/or entertain humans through mass communication media. These industries are engaged in the production, publishing, and/or the distribution of content (information, cultural and entertainment products), where content corresponds to an organised message intended for human beings.
- 'Content' corresponds to an organised message intended for human beings published in mass communication media and related media activities. The value of such a product to the consumer does not lie in its tangible qualities but in its information, educational, cultural or entertainment content.

The delineation of the sector is relevant to identifying qualifying candidates for special funding incentives, and other programmes which may be developed to support the growth of the industry.

OPTIONS

OPTION ONE: Status Quo

The current situation and broad definitions in policy would remain.

OPTION TWO: Adopt the ICT Charter description

The ICT Charter sector description would be adopted as a means to identify entities.

OPTION THREE: Adopt a classification system based on Stats SA satellite account

- **Sector classification:** The OECD based sectoral classification adopted by Stats SA, would be used to determine eligibility for support schemes developed for the ICT industry.
- **Product classification:** In addition, the OECD (2009)[235] provides a products categorisation for both ICT products, content and media products. This could be adopted. The product category "*Printed and other text-based content on physical media, and related services*" however would be excluded.

- **Is there a need to formally delineate the ICT industry? If so, which option do you prefer?**

[233] Organisation for Economic Co-operation and Development. 2007. Information Economy Sector Definitions Based on the International Standard Industry Classification (ISIC 4), 05-Mar-2007.
[234] Stats SA. 2013. Draft Information and Communication Technology satellite account for South Africa, 2005. Discussion document: D0405.3.1, March 2013
[235] Organisation for Economic Co-operation and Development, "Information Economy Product Definitions Based on the Central Product Classification (Version 2)", 2009

6.4 Transformation of the sector

In South Africa, transformation is a critical policy goal to achieve equal participation in the economy. Transformation is not an issue of race alone. It has to be looked at from a broad industry perspective in terms of ownership, decision-making, business practices, staffing and products, and the society within which it operates. There is a need therefore for continuous and sustainable transformation that adds value to the industry at large and adds to the bottom line. The moral and social reasons for empowerment to succeed also cannot be ignored.

Statistics SA shows that employment of previously disadvantaged persons in ICTs has progressed relative to the period before 1994. With the exception of postal, the broader ICT sector represents ownership by historically disadvantaged groups (black, women, youth and people with disabilities)[236] as required by the EC Act. The ICT Charter Code has been finalised, although the ICT Council, intended to oversee implementation and measure progress, has yet to be set up. Government has committed to set aside finance to support the Broad-Based BEE process and has revised the mandate of the National Empowerment Fund (NEF) to ensure the effective and efficient utilisation of resources.

There is no comprehensive data set currently which provides an overview of the transformation status of the sector. This is in part due to the lack of an overarching classification system, and also as no entity is charged with monitoring transformation in the sector. The ICT Charter Council, when it is established, will have to undertake this role. Notwithstanding, there are some significant examples of Broad-Based Black Economic Empowerment (B-BBEE) transactions which provide a glimpse into some of the transformation advances made amongst the bigger players in the industry e.g. MTN Zakhele, Dimension Data, On Digital Media and Microsoft Equity Equivalent Programme.

There are also certain government assisted funding mechanisms for telecommunications infrastructure and BEE companies through the DTI, IDC and the Development Bank of Southern Africa (DBSA)

6.4.1 Broad-Based Black Economic Empowerment (B-BBEE)

6.4.1.1 EC Act Amendments

The Electronic Communications Amendment Act (Act 1 of 2014) has as one if its objectives the need to "*align the Act with broad-based black economic empowerment legislation*". This is achieved through removing references in the EC Act to "*historically disadvantaged persons, including Black person*" and replacing it with "*broad-based black empowerment*". For example, Section 2 (h) of the principal Act has been amended to indicate that one of its objects is to "*promote broad-based black economic empowerment with particular attention to the needs of women, opportunities for youth and challenges for [people]persons with disabilities*''. In a similar fashion the Act proposes that ICASA

236The MICT Seta reports that in 2012 the number of employees by race in the telecoms sector was 36 686 black versus 18 013 white (i.e. approximately 67% black).

promote broad-based black empowerment as opposed to historically disadvantaged persons in granting licences.

- **What further policy amendments are necessary to address the broad objective of transformation and B-BBEE in particular?**

6.4.1.2 The ICT Charter

From 1994 it was understood that the ICT industry could play an enabling role by providing employment and entrepreneurial opportunities for South Africans from historically disadvantaged communities and by supporting training programmes. At the outset it was advised that concerted efforts should be made to empower historically disadvantaged South Africans to take up leadership positions in various sectors of the industry. Since then there have been a number of policy to support transformation. The ICT Sector Charter, in particular, is a focused effort to address the issues.

The ICT Sector Charter, initially drafted in 2005, was gazetted in terms of the B-BBEE Act, in June 2012[237]. It is therefore

- A Sector Code of Good Practice (Sector Code) with the same status as the B-BBEE Codes of Good Practice, published by the Minister of Trade and Industry, in February 2007; and
- Fully binding between and among businesses operating in the industry.

The ICT Sector Code is applicable to all persons, organisations and entities operating in the ICT Sector in South Africa, including government. Highlights include the following:

- The ICT sector has set a black ownership target of 30%;
- The main feature is a set target of 5% Net Profit After Tax to be spent on enterprise development initiatives aimed at growing and developing black owned ICT enterprises;
- A spend of 1.5% of Net Profit After Tax on Socio Economic Development Initiatives to improve the lives of communities through programmes such as ICT's in education, and health. The ultimate goal is to bridge the digital divide in the country.

An important feature of the Charter compared to the generic Codes of Good Practice is that, if the rand value of the total BEE stake is in excess of R7.5 billion, the measured enterprise is considered to comply with the equity target. The ICT Code calls for the Council to review this threshold annually. As the Council has not been established, this review has not been done.

In addition, many licensed entities in the sector are subject to ownership requirements in terms of the EC Act and any applicant for an individual licence must have at least 30% ownership by historically disadvantaged persons. Currently (September 2014), the DTPS is:

- Finalising arrangements for the establishment of the Charter Council – a call for nominations was issued on 03 November 2014 by the Minister;[238]
- Aligning the ICT Charter Code with the Generic Code of Good Practise for the consideration of the Charter Council when it is established.

[237] https://www.thedti.gov.za/economic_empowerment/bee_sector_charters.jsp

[238] DTPS, "Invitation to nominate members of the ICT B-BBEE Charter Council", Government Gazette 38152, 03 November 2014.

The Code is effective and legally binding from 6 June 2012 to 31st March 2026 with a mid-term review due on the 31st March 2016 or until amended, substituted or repealed under section 9 of the Broad-Based Black Economic Empowerment Act (the B-BBEE Act) as amended from time to time.

OPTIONS

OPTION ONE: Status Quo

The status quo would remain given that the DTPS has called for nominations to the Council

OPTION TWO: Adopt the generic codes, and withdraw sector codes

Some stakeholders e.g. IITPSA and SACCI proposed that there is no need for a sector Charter, that it would be simpler to follow the generic codes, and that there is no need for the sector to bear the cost of setting up and supporting a sector specific Council.

OPTION THREE: More stringent monitoring of the ICT Charter

Some Green Paper respondents lamented that the Charter is not being consistently enforced. This is in part due to delays in establishing the Council. Given that the DTPS has committed to establish the council in 2015, the issue may be addressed. However, some respondents expressed the concern that the Council may not have the necessary resources to undertake monitoring or enforcement. Thus additional measures may be necessary to ensure enforcement.

- **What further policy amendments are required (taking into account the recently gazetted amendments[239]), to ensure compliance with the ICT sector codes?**
- **What, if any, additional measures do you propose to strengthen the Council's ability to function?**

6.4.2 Applying the Charter in the Government procurement system.

Given the magnitude of Government spend on ICT products and services, there have been proposals that the ICT Sector Charter must be used as one of the requirements for participation in Government procurement. It has been suggested that adjustments to the government procurement policies must therefore be implemented. It must be noted that in terms of the legislation the sector code is applicable to government as follows:

- All public entities listed in schedule 2 or schedule 3 (Parts A and C) of the Public Finance Management Act that fall within the ICT sector;
- Any public entity listed in schedule 3 (Parts B and D) which are trading entities which undertake any business with any organ of state, public entity or any other Enterprise that fall within the ICT sector.

- **What measures are required to ensure that Government and state owned entities comply with the Charter?**

[239] The Generic Amended B-BBEE Codes of Good Practice were gazetted on the 11 October 2013 with a transitional period of 18 months, up to 30 April 2015. The Department of Trade and Industry (the dti) committed to reviewing and gazetting the outstanding statements for public comment and finalisation before the end of the transitional period.

6.4.3 Equity Equivalent Programmes (EEP) for multinationals

The Codes of Good Practice require that all entities operating in the South African economy make a contribution towards Broad-Based Black Economic Empowerment (B-BBEE). It is, however, acknowledged that there may be multinationals that have global practices preventing them from complying with the ownership element of B-BBEE through the traditional sale of shares to black South Africans. In this instance, and provided that it can be proven that such entities do not enter into any partnership arrangements in other countries globally, the Codes of Good Practice have made provision for the recognition of contributions in lieu of equity. Such contributions are referred to as Equity Equivalent (EE) contributions. These count towards the ownership element of B-BBEE. The value of these EE contributions may be measured against 25% of the value of the multinational's South African operations or may be measured against 4% of the total revenue from its South African operations annually over the period of continued measurement. The Microsoft EEP transaction is one well know transaction within this sphere.

- **What additional considerations might be considered to ensure the effectiveness of the EEP within the ICT sector?**
- **DTI currently requires that all ICT EEP transactions be given a go ahead by the DTPS prior to DTI's approval. Do you suggest any additional role for the DTPS?**

6.4.4 Scope of the ICT Charter

As highlighted in sub-section 6.3 above, the ICT Charter sets out a definition for the sector. It is widely applicable across a wide number of industries, including the traditional telecommunications, and broadcasting sectors. The issue for consideration is whether the above definition sufficiently delineates the ICT Sector for the purpose of promoting BBBEE objectives.

OPTIONS

OPTION ONE: The current definition

The current scope of the Charter would remain.

OPTION TWO: A new definition (based on StatsSA definition)

The definition used by StatsSA (see sub-section 6.3 above) should apply.

- **Should the Charter definitions remain as they are?**
- **If not, propose how the definitions might be amended.**

6.5 Investment in the ICT sector

Investment in the ICT sector is a fundamental policy goal for Government, alongside transformation, diversity, universal access, and Black Economic Empowerment. While investment can be approached in broad terms, the ICT industry is slightly complex as each sector is governed by its own legislative and regulatory particularities. Therefore, general economic principles on investment may not necessarily apply. Government, through its Strategic Infrastructure Programme 15 (SIP 15), aims to

ensure that investment resources are effectively coordinated in order to expand access to communication technology infrastructure in the country.

6.5.1 Investment in infrastructure

A historical review over the period 1993-2013 has shown that bulk of investment in infrastructure and services has been undertaken by the private sector. This investment has been significant and South Africa has today a modern telecommunications industry. Most, if not all, investment in infrastructure has been done on a standard commercial basis with a reasonable return required. This has resulted in service providers mostly investing in areas that provide the required return and ignoring areas of the country where demand is inadequate to provide a commercial return.

This is especially true with regard to broadband services both wired and wireless. This lack of investment has created an ever increasing 'Digital Divide'. Moreover, market concentration has resulted in high 'costs-to-communicate' - with very high prices compared to key peer countries. Measures to redirect investment into underserved areas have relied chiefly on projects sponsored by the Universal Service and Access Fund (USAF) via USAASA and Universal Service Obligations (USOs) by operators. This however has not made any significant inroads into underserved areas. Institutional failure by USAASA to effectively manage the USF coupled with institutional failure by ICASA to monitor USOs has resulted in a situation where underserved areas have been significantly neglected by existing operators. In addition the investment scale to deploy affordable broadband to underserved areas is far in excess of that which can be funded by USF and USO sources alone and it is increasingly evident that government itself needs to invest in measures to correct market failure.

Government, especially local government, has indeed in infrastructure at various metros such as eThekwini, Cape Town and Johannesburg over the past seven years. In fact the largest government investor in broadband has been local government rather than national government. Funding models for these networks have evolved but have taken extremely long to implement and it is clear that serious obstacles exist for sourcing new government funding for broadband infrastructure.

6.5.1.1 Funding infrastructure and demand stimulation

Several submissions to the Green Paper said that funding infrastructure must be a responsibility of both the private and public sector. Suggestions included "collaborative partnership with defined social responsibilities" and harnessing public investment to enable demand by, for example, supporting e-literacy and content delivery or reducing investment risk by becoming the anchor. Development Finance Institutions (DFIs) also have a pertinent role to play in supporting infrastructure investment thus ensuring that government's plans of expanding critical ICT services to all South Africans becomes a reality. Since 2000, the Industrial Development Corporation has, in line with government priorities, dedicated funds for the development and growth of the ICT sector broadly. The focus areas include the following:

- Telecommunication and broadband infrastructure in particular: Increase supply-side capacity in the national backbone, metro and last-mile access levels, with a focus on rural and underserved areas.
- Digital migration: Support the analogue to digital migration process by funding the local manufacture and installation of set-top boxes.

- ICT Green/e-Waste and demand-side management: Promote the recycling of e-Waste and projects that leverage smart metering solutions to deliver demand-side management.
- Electronics: Focus on local manufacture of smart meters and LED lights.

The Development Bank of Southern Africa has also played a role in the deployment of infrastructure. As part of its mandate, the Bank has to "*focus on infrastructure and leverage the private sector*". Through its South Africa Financing division, the Bank primarily provides long-term debt solutions for infrastructure projects in the country. Telecommunications infrastructure is one of the focus areas.

The National Broadband Policy, SA Connect, highlights that there is a significant funding gap in relation to broadband infrastructure which will require support from government and the private sector if it is to be addressed. It states"

> *"What is required are new innovative ways that blend private and government funding sources to fund not only infrastructure rollout, but also critical content development and the provision of public services online. Funding models that share investment risk between the public and private sector are emerging across the globe as the burden for funding cannot be carried by government or private sector alone.*[240]

Given this, a different view has to be taken on both the mandate and the sources for a national universal service and access fund (USAF). In other parts of the world such funds have evolved beyond just infrastructure funding. Chapter Three of the Discussion Paper proposes policy options to extend the ambit of definitions for universal access and service (UAS), and Chapter Seven proposes options for institutional arrangement to coordinate UAS. In addition, it may no longer be feasible to host a fund with a single source of income from compulsory contributions from licensed operators. An evolved fund could focus on these areas, for example:

- Funding to support small and medium-sized enterprises to use ICT to improve productivity and competitiveness.
- Funding to assist public sector adoption of ICT and applications and content for government services, including e-health and e-education.
- Funding small but important players within the ICT value chain.
- Funding of infrastructure in underserved areas which remain out of market reach.

Properly designed and implemented, and with sufficient internal resources and expert capacity, an evolved universal service fund model has the potential to serve as a central "clearing house" for a variety of funding sources and development projects, to reduce inefficiencies and improve coordination across the spectrum of ICT development and financing initiatives.[241]

OPTIONS

Note: The options presented here must be considered together with those presented in Chapter Three: Policy Options – Infrastructure and Services. They are not mutually exclusive.

[240] DTPS, "South Africa Connect: Creating Opportunities, Ensuring Inclusion, South Africa's Broadband Policy", 20 November 2013, pg 22.
[241] UNDP, "The Report of the Task Force on Financial Mechanisms for ICT for Development - A review of trends and an analysis of gaps and promising practices".

OPTION ONE: Status quo

Given current policy frameworks, and in considering currently planning and action by SIP 15, and the Broadband Council of the DTPS, no further policy intervention would be required.

OPTION TWO: ICT Development Fund (ICT-DF)

A new funding model for ICT infrastructure *and* demand stimulation projects would be developed. The creation of a ICT-DF would allow for the aggregation of new incremental state funding with private sector funding and donor funding. This vehicle would allow for the joint investment by the state, the private sector and donors on a scale far beyond that done previously. This fund could be a key instrument to help fund new infrastructure investment. In addition, the ICT-DF would be used to stimulate demand including local content and applications development, ICT entrepreneurship and research and development. Consideration should be given to amending the terms of the USAF so that it could evolve into an ICT-DF, and provide a foundational funding source for aggregation of all funding sources.

- **Is it necessary to create a fund which supports <u>both</u> infrastructure and projects or should these be funded by separate institutions?**
- **Who should manage the proposed ICT-DF?**
- **Is it feasible to convert the USAF into an ICT-DF?**
- **Should the USAF form a component of the proposed ICT-DF? If not what other sources of funding may be directed towards the ICT-DF?**

OPTION THREE: A Government approved funding model

Responses to the Green Paper suggested that government should fund market failure in terms of price, coverage or speed. There were various suggestions in this regard, including tenders, and direct funding via public private partnerships (PPPs). It is notable that although formal PPPs exist in most of SA's sectors of the economy, no 'telecommunications PPPs' exist at this time, other than recent efforts in the Western Cape, for example, in the development of the provincial broadband network. This is despite there being compelling reasons for government and the private sector to co-invest in broadband infrastructure. The primary reason for this lies the complexity and delays of the National Treasury PPP process. This has resulted in metros innovating non-PPP funding models. These have all been variations of the SPV vehicle for funding sourcing**.** A Treasury approved funding model for telecommunications infrastructure, based on PPP principles must be developed, which simplifies private-public projects. This might be done via the Infrastructure Bill which will address infrastructure funding as a whole.

- **Is the PPP model viable for the development of infrastructure and if so do you agree that a specific model for infrastructure development is required?**
- **Should the PPP model be restricted to infrastructure investments only in areas where there is market failure?**

OPTION FOUR: Principles for use of public funds for ICT infrastructure

- The NDP states that **"***In future, the State's role in the ICT sector will be to facilitate competition and private investment and to ensure effective regulation where market failure*

is apparent. Direct involvement will be limited to interventions needed to ensure universal access, such as the introduction of "smart subsidies" and to help marginalised communities develop the capacity to use ICTs effectively" (NDP: 171). There is a need thus to ensure that **public funds do not simply replace private investment.** For example, in India funding is concentrated on remote and rural areas, in Malaysia on underserved regions and in Brazil on extending the reach of commercially-funded backbone networks. In South Africa, public funds must be directed, in the main, to the promotion of universal access and service in underserved areas.

- **An open access regime must be made compulsory**, so that the new infrastructure can be used by all service providers on fair and equal terms.
- **Prioritisation of public funding** must in the first instance be committed to improvement of e-Government services, improving government business process schools connectivity of health sites of service; connectivity to improve policing (including community policing) and the delivery of justice.
- In instances where the private sector jointly invests with government, a **negotiated agreement** is required upfront in terms of the rules of application.

- **Should a set of principles as described above be incorporated into policy?**
- **Do you agree with the principles above? If not suggest alternative principles or amendments to the proposed principles.**

6.5.2 Foreign Direct Investments

South Africa has indicated that it wants to attract foreign direct investment (FDI) to enhance growth, productivity and skills. South Africa needs to ensure in doing so that it is well positioned to achieve its socio-economic goals, which will allow for more freedom to attract the kind of FDI that suits the economic goals of the country.[242]

From an FDI perspective, transnational corporations are constantly seeking out and assessing possible new geographical locations for their investments, while countries compete globally to attract such investments. Beyond the theoretical, and, in some cases, ideological, considerations that may be brought to bear, governments face two fundamental policy options in their pursuit of foreign investment. The first is to do nothing and adopt a passive stance; the second is to intervene actively to obtain maximum benefit from the investment process.[243] South Africa faces a challenge particularly in the ICT sector if it continues to adopt non-active and less targeted policies. As a result, the DTPS, in concert with the DTI and other relevant organs of government, must consider basic models based on best practise.

Respondents to the Green Paper e.g. SACCI argue that promoting domestic ICT innovation and encouraging FDI in the ICT sector do not preclude each other. On the contrary, FDI in the sector can

[242] Samuel, C. "The Dark Side of Foreign Direct Investment: A South African Perspective", South African Institute of International Affairs, December 2013

[243] Economic Commission for Latin America and the Caribbean (ECLAC), "Active policies for attracting foreign direct investment: International experiences and the situation in Latin America and the Caribbean", Foreign Investment in Latin America and the Caribbean, Unit on Investment and Corporate Strategies of the ECLAC Division of Production, United Nations, May 2007.

help develop the foundation for a strong domestic ICT industry by facilitating domestic access to new technologies and advancing the IT skills of domestic workers.

OPTIONS

There are two modes of policy which could be considered:

- **Passive policies** rely on a country's comparative advantages and are confined to the establishment of policy frameworks geared to facilitating investment inflows. Passive policies would be the most appropriate for a country whose attractions surpass those of its competitors.
- **Active policies** entail specific measures designed to attract the types of investment that have a greater potential to translate into positive externalities (for example, production linkages or the generation of value added, know-how and employment).

It is proposed the active polices, as compared to passive policies are required to facilitate FDI in the ICT Sector.

The following options are not mutually exclusive. It should be noted that it is recognised that an independent and effective regulator and regulatory framework are necessary to attract any investment.

OPTION ONE: Invest in RDI

South Africa could effectively encourage FDI by investing in fundamental scientific research and making the results available for licensing and use by the private sector. In addition policy which encourages RDI investment by the private sector must be developed.

OPTION TWO: Adherence to international trade commitments

Any measures taken to encourage the growth of South Africa's IT sector must comply with South Africa's international trade commitments.[244] This requires first and foremost that South Africa adheres to the principle of "national treatment" by eliminating any measures that impose differential treatment based on the origin of goods or services or the nationality of suppliers. Restrictions on cross-border data flows should also be avoided. Such measures could be incompatible with South Africa's trade commitments; they also could increase prices for IT goods and services, stifle competition, and discourage foreign investment.

OPTION THREE: Balancing FDI and B-BBEE

There is a tension between attracting foreign investment and implementing B-BBEE that adds to the cost of doing business. It is therefore proposed to bring these two priorities closer together:

- First, incentivise RDI spend in ICT through the ICT Charter to create a supportive business environment generating enough Intellectual Property (IP) and other "soft-infrastructure" to make it easier for new black-owned market entrants (amongst others) to access resources.

[244] GATS commitments for WTO Member States include cross-border supply for non-resident service suppliers; consumption abroad; commercial presence; presence of natural persons. GATS commitments are further required to be set out for specific sectors, including limitations on market access; the national treatment obligation; and additional commitments, for example licensing.

This will allow smaller companies to organically link in to international ICT logistical chains and attract further investment for expansion. Similarly, the equity equivalent principle is a useful tool to bring in foreign companies wherever the need is, as domestic companies would require the skills transfers to be able to access the international market.

- Second, there needs to be seamless adjudication of investment projects for their codes of good practice ratings, as the currently assigned government resources do not allow for a reasonable turnaround time.

- **Do you agree that an active approach to foreign investment policy is required?**
- **Which of the above options do you support, and why?**
- **In addition to the above options, what other polices could be considered to encourage foreign investment in the ICT sector?**

6.5.3 Harnessing local benefit from foreign investment

In the post 1994 era, reforms have given priority to the removal of barriers to inward investment, while strengthening the resilience of the economy to the volatility of foreign capital flows that is frequently observed in emerging economies. One important element of reform has been measures to facilitate inward foreign direct investment. Such investment can yield additional economic benefits including the transfer of technology and skills to the host economy which in turn can promote productivity and growth, linkages with domestic firms supporting employment and growth in other parts of the economy and the opening of new markets through cross-border trade. These benefits are not necessarily automatic and are likely to vary across economies, sectors and investments.[245] This perspective is endorsed in the NDP.

It is thus important that a fine balancing act from a policy perspective prevails which will not deter investors, but which will ensure that sustainable value to the local economy is created. The following proposals suggest how local benefit may be attained from foreign investment

OPTIONS

OPTION ONE: Consider FDI's ability to create local IP and technology transfer

Where foreign direct investments are subjected to instruments such as National Industrial Participation Programme or Equity Equivalence Programme, their initiatives should be approved based on their ability to create local IP and transfer of technology.

OPTION TWO: OEMs to use SA owned companies within the manufacturing value chain

Original Equipment Manufacturer (OEMs) investments must be required to create opportunities for local industries in the manufacturing value chain e.g. supply of parts, production of packaging material, etc.

OPTION THREE: Actively market the EEP internationally

The Equity Equivalent programme, to date, is a suitable instrument to promote FDI. However, there are suggestions that international investors with little knowledge about B-BBEE may have a view that

[245] National Treasury, "A review framework for cross-border direct investment in South Africa: Discussion document", February 2011.

the EEP is a barrier to entry in the South Africa market. The DTI and the DTPS must thus consider a marketing campaign targeting international ICT companies to promote EEP internationally.

- **Should Foreign Direct investments be subjected to any conditions at all?**
- **Are the above proposals sufficient to drive growth in the ICT sector? What amendments to the above would you propose?**

6.5.4 Funding models and incentives

There are currently various schemes in place driven, by a host of government entities, with the DTI playing a foremost role. The following entities all offer some type of funding support or incentives

- Department of Small Business Development
- Department of Trade and Industry (DTI)
- Industrial Development Corporation (IDC)
- National Empowerment Fund (NEF)
- National Youth Development Agency (NYDA)
- Productivity South Africa (PSA)
- Small Enterprise Development Agency (Seda), recently transferred to the Department of Small Business Development.
- Small Enterprise Finance Agency (sefa)
- Technology Innovation Agency (TIA)
- Centre for Public Service Innovation (CPSI), DPSA

The above indicates the fairly substantive base of support for industry growth. However, problems which prevail include a lack of awareness, and the inability to assess which is the best organisation to approach given the specifics of the business venture.

Some of the current funds which are supported by the DTI, include:

- Incubation Support Programme (ISP)
- Isivande Women's Fund (IWF)
- The Black Business Supplier Development Programme (BBSDP)
- Emerging Black Filmmakers Fund

Other funds, supported by the IDC:

- Support Programme for Industrial Innovation (Funding up to prototype stage)
- Technology Venture Capital Fund (Funding for commercialisation of new technologies)
- IDC Venture Capital Fund (The fund focuses on global unique SA owned IP across sector)
- IDC ICT SBU (The focus of the IDC SBU has been on the supply side in the main and there is a need to complement this by funding the demand side - content and applications)
- Technology and Human Resources Programme (R&D programme of the DTI managed by the National Research Foundation).

Although there are several inventive schemes in place, none are tailored specifically to the needs of the ICT sector, besides filmmaker and video funds which targets the content sector. This needs to be addressed, especially as according to SA Connect the realisation of the broadband programme will

require multiple development and incentive programmes. The policy provides for local content and applications development funds and dedicated ICT entrepreneurship and R&D funds.

OPTIONS

OPTION ONE: Status quo plus

Current support programmes would remain in place but be further developed to specifically cater for the ICT sector

OPTION TWO: Centralise funding

As called for by SA Connect a one-stop shop for ICT funding would be developed.

- **Is a separate incentive programme tailored for the ICT sector necessary? If so provide information on the principles for a separate incentive scheme? Who should have oversight and management of this 'one-stop-shop' for ICT funding?**
- **Alternatively will ring-fenced funds from the DTI's ISP, IWF and the BDSSP be able to provide a sufficient incentive base for the sector?**

6.5.5 Funding models for entrepreneurs and start-ups

South Africa has large and growing youth population. This group however faces particular challenges in gaining employment in the South African labour market. Over the period 2008–2014, although their level of education attainment improved, their labour market prospects deteriorated (StatsSA, 2014)[246]. Given current trends this population sector is best poised to contribute to demand and uptake of ICT products and services. This is not peculiar to South Africa, as it is a worldwide trend that the growth of the knowledge economy has been youth driven.

One of the challenges facing newcomers and young entrepreneurs in the ICT sector is the lack of funding instruments. Internationally, projects in this industry have typically been funded by venture capitalists – in particular angel investors. The South African venture capital market is very small. Most venture capitalists and equity investors focus on traditional economic sectors like commodities, property and manufacturing. Moreover sub-sectors such as software and applications development are generally not able to meet finance requirements, as cash-flow projections, for example, are difficult to predict. This is counter-productive to growth, especially for developers who may identify a need, but do not have the necessary funds to get to a prototype stage.

Thus alternative modes of supporting and nurturing ICT entrepreneurs, especially the youth must be considered. For example, angel investing is considered a significant source of investment in start-up and early stage businesses seeking equity to grow their business. Angel investment differs from venture capital finance which invests in businesses through managed funds, raised with private or public money. Business "angels" make their own decisions about investments and generally engage directly with entrepreneurs, often seeing them pitch their business.[247] There are already examples

[246] Statistic South Africa (StatsSA). 2014. National and provincial labour market: Youth, Q1: 2008–Q1: 2014, August 2014.
[247] UK Business Angels Association, Introduction to Angel Investing', http://www.ukbusinessangelsassociation.org.uk/

of angel investor forums in South Africa.[248] However the development of a platform which is dedicated to the ICT sector is needed.

Challenges facing ICT start-ups include:

- **Funding institutions appear not to have a detailed understanding of the ICT sector, beyond that of infrastructure development investment, and hardware manufacturing.**
  In particular most financiers still do not have the skill to assess the financial viability of new ICT projects related to the supply side e.g. software projects. Traditional methods of evaluating a business, especially one in its infant stage, such as discounted cash flow analysis may not be appropriate for ICT projects. Such new ICT projects often have no asset base and cash flow models may not be clear.
- **South Africa is generally short of greenfield funding.**
  Most funders require that projects must have a sufficient track record in terms of technical capabilities and market uptake (proof of economic merit); or in some cases at least two years of proven earnings; or must have signed take-up agreements before being considered for funding. This is impractical for ICT projects.
- **Collateral requirements**
  Another challenge for young entrepreneurs seeking funding for ICT initiatives is that most funders, in particular debt funders require some collateral. In mining, property and manufacturing there are assets like a mine, a factory, machinery and a building that can be used as collateral. ICT projects are generally ideas and concepts that have no physical existence. An added challenge is that most of the participants in this industry are young and have very few assets to offer as collateral.

OPTIONS

OPTION ONE: Development of an angels investment programme for the ICT sector

The DTI could provide oversight for the establishment of such a platform, which would provide for both online and face to face investment networking sessions. Such networks could have a physical presence in the ICT innovation hubs proposed in the ICT RDI sub-section below. Current angel networks could advise on the establishment of the platform.

OPTION TWO: Investigate the feasibility of tax breaks for new ICT SMMEs

Section 18A of the Income Tax Act provides for tax deductions for donations to specific approved Public Benefit Activities. An assessment needs to be made by the DTPS in tandem with the DTI and SARS to determine if companies investing in new SMME ICT projects could benefit.

OPTION THREE: Establish ICT financing guarantee schemes

A special financing guarantee scheme with a focus on ICT projects could be established. A different approach from that of current guarantee schemes would need to be developed.[249] The principles of

[248] See for example e.g. http://investorsnetwork.co.za/; https://angel.co/south-africa/investors ; http://www.angelhub.co.za/

[249] Guarantee schemes take the same risk as those of funders and therefore would face the same challenge when evaluating funding proposals. Guarantee schemes are usually offered to commercial banks by government agencies and

such a scheme must develop different risk and viability tests more suitable to ICT initiatives, than those which are currently applied.

OPTION FOUR: Govt to be key client for start-up ICT initiatives

Government as one of the main buyers of ICT goods and services is in a key position to support innovation in the ICT sector. Treasury needs to assess the extent to which current procurement frameworks could be adapted to enable government to become a key client for ICT entrepreneurial initiatives. In parallel, ICT entrepreneurs need to be encouraged, through the proposed network of ICT innovation hubs (see ICT-RDI sub-section below), to develop solutions which meet government's service delivery objectives.

- **Consider the four options propose, and comment on the feasibility and necessity of each. Provide concrete details of how policy may achieve the objectives described.**

6.6 Research, Development and Innovation (RDI)

SA Connect notes that while South Africa's overall R&D spend has moved towards 1% of GDP, this is still significantly below what is required for economic competitiveness.[250] South Africa spends close to 10% of GDP on ICT goods and services most of which are imported. The development of a national broadband infrastructure will further create unprecedented demand for ICT goods and services.[251]

The country could position itself to leverage the potential market growth so that the country becomes more internationally relevant, as well as being a key supplier to the African continent. To achieve this, South Africa must significantly increase and sustain levels of public and private investment in ICT-RDI and strive to:

- Develop a healthy innovation culture, in which research results flow unencumbered to government and industry to achieve impact in and for society;
- Ensure that industry engages robustly with research communities, so as to ensure rapid uptake and promotion of research results and indigenous innovation;
- Develop an advanced ICT infrastructure which provides requisite quality of connectivity between internally and with the continent and the world and supports RDI initiatives;
- Develop content and applications addressing local needs and creating export opportunities.

In addition to RDI in ICT products and services, broadband internet is also able to support RDI across the spectrum of scientific domains and industries. The ability to transmit high volumes of data, across the world provides for knowledge sharing and scientific networking at an unprecedented level, and has led to new areas of science, as for example in research associated with 'big data'. South Africa's Square Kilometre Array project is one example of how ICTs provide a foundation for ground breaking RDI.

require that the commercial bank goes through their own recovery process before claiming from the Guarantee Scheme. For this reason the scheme may not be attractive to commercial banks/other funders.

[250] DTPS, South Africa Connect, pg 25.

[251] For example, PricewaterhouseCoopers' Entertainment and media outlook (2014–2018) indicates that South Africa's entertainment and media market will see a compound annual growth rate of 10.2% to 2018, with Internet spend the largest and fastest growing segment.

6.6.1 Coherent and coordinated R&D agenda and associated funding for high impact

The Department of Science and Technology has developed an ICT Research, Development and Innovation Roadmap to support the country's strategic objective of increasing the impact of ICTs on society and developing the economy. The Roadmap[252] approved by Cabinet in April 2013, presents a vision that will enable South Africa to become a significant player in the global ICT RDI arena. It provides a coherent framework and plan for South Africa's future investment and planning in ICT research, development and innovation and provides a single point of coordination of RDI activities through the envisaged Office of Digital Advantage.

However, while the ICT roadmap provides a clear future framework, the RDI ecosystem is currently weak. The DTI's IPAP (2014-2017) expresses concern about the inadequate levels of coherence and coordination in prioritisation and agenda-setting for science and technology innovation by, and between, government, business, academia and civil society.[253] Organisations that responded to the Green Paper, such as the ITA and others have urged that government improve coordination of national, provincial, NGO and private sector led research facilities, incubators and accelerators.

OPTIONS

OPTION ONE: Status quo

Current mechanisms would continue. The proposed Office of Digital Advantage (as per the ICT Roadmap) would be set up to coordinate a national ICT-RDI agenda.

OPTION TWO: Establish an ICT RDI Planning and Investment Advisory Council

An ICT RDI Investment and Planning Advisory Council including senior officials from DST, the DTI and DTPS, as well as industry and research institutions (HEI's and science councils) and civil society representatives, would be established to support the Office of Digital Advantage. The Council could continuously evaluate priority areas and promote and monitor policies to support RDI growth in the ICT sector. Such a Council should ideally be co-chaired by the Director Generals of the DST and DTPS It is proposed that it would be supported by Technical Working Groups made up of senior officials from the Departments and an ICT RDI Advisory Panel consisting of science and industry experts.

- **Do you agree that the national ICT-RDI agenda requires coordination? If so how?**
- **Provide your views on the proposed Council and comment on its scope and gaps.**
- **Are there alternative mechanisms to develop, coordinate, implement and evaluate the ICT-RDI priority areas?**

6.6.2 Priority Areas for ICT RDI Intervention

The ICT RDI Roadmap identifies key market opportunities and priority areas of focus. These market opportunities were identified following a rigorous consultative process and desktop research and followed a three-pronged methodology based on ICT trends, the current ICT RDI landscape and a

[252] Department of Science and Technology, "ICT RDI Roadmap, Towards Digital Advantage: Roadmapping South Africa's ICT RDI Future", 2013
[253] DTI, Industrial Policy Action Plan (IPAP 2014/15 – 2016/17), pg 62.

capability map in South Africa. Out of this process, 27 market opportunities were identified and grouped into six clusters based on their affinity and strategic alignment.

OPTIONS

The following are not mutually exclusive options.

OPTION ONE: ICT Roadmap priority areas

The following six clusters are currently identified market opportunities in the ICT Roadmap:

- **Broadband Infrastructure and Services :** Future Wireless Technologies, Broadband Service Infrastructure
- **Development :** E-inclusion, ICT for socio-economic development, Agriculture
- **Sustainability and the Environment:** Green and ICT, Global Change, Geo-spatial Applications
- **Industry Applications:** Infrastructure, Mining, Manufacturing, Future Internet Applications, Content Creation and Delivery, Supply Chain Optimisation, Asset Management
- **Service Economy**: M-Health, E-services, Education, Business Model Innovation, Payment Solutions, Outsourced SA Capability, Systems Integration, Content and Services Localisation, Mobile Enablement, Trust and Security
- **Grand Science:** Astronomy, Bio-Medical Sciences

- **Which of the above priority areas need special attention to drive growth of the ICT industry?**
- **Are there specific foci within the priority areas which you would like to highlight? Please motivate and reference evidence (data, research studies) to support your suggestions.**

OPTION THREE: Enabling critical mass for research in prioritised areas.

The National Broadband Policy calls for investments in the development of critical mass, in ICT RDI capabilities, in innovation support measures and in advanced human capital development. According to the DST, investment in advanced human capital to date has led to 52 PhD and Masters degree graduates, providing the research leadership required for knowledge creation as well as the academic cohort that will teach the next generation of ICT engineers, scientists and technologists.[254] Over the next era greater impetus is required to develop human capital, and a more focused strategy is called for. As such the use of instruments such as the National Research Foundation's (NRF) South African Research Chair Initiative could be leveraged. To this end, an ICT RDI council (should it be established) in conjunction with the NRF, could consider the establishment of Research Chairs, to drive prioritised components of the national RDI agenda.

Private sector investment is required as well. It could be made a requirement for OEMs in the broad ICT sector to co-fund RDI human capital development, through the establishment of endowed research chairs in partnership with the NRF.

- **What other options do you propose to increase the number of Masters and PHD students in ICTs?**

6.6.3 RDI Innovation Funding instruments

6.6.3.1 Uncoordinated RDI funding instruments

Government has currently established a number of instruments and policy frameworks that support generic industry development and innovation, through which most ICT innovations and start-up SMMEs are supported. These instruments include the DTI's SPII, THRIP, NIPF and BBBEE Equity Equivalent policies; the DST's Industry Innovation Partnerships Fund, the Technology Innovation Agency as a funding agency for commercialisation of tech products and services, the DST's Centre of Competence (CoCs) and Centres of Excellence (CoEs), etc. These however are generally uncoordinated.

Some stakeholders e.g. IITPSA argued in Green Paper submissions that investment support programmes must recognise the nature of the software and services markets and apply appropriate criteria, rather than the traditional industrial environment rules which do not apply. The IPAP (2014/16 – 2016/17) notes that the South African list of incentives (policy instruments) is relatively short in comparison with those in other countries e.g. in the EU each country has on average more than 50 programmes/incentives. It has also been argued that incentives are limited as they are horizontal (apply to all disciplines, technologies, sectors etc.) and they have relatively limited budgets.

OPTIONS

OPTION ONE: Development of a single South African ICT Innovation Funding Platform.

A joint platform could be established by all the key departments, including the DST, DTPS and the DTI to provide pooled funding for ICT RDI innovation. This platform would be used to leverage existing instruments and frameworks and identify new innovative mechanisms through joint funding and reprioritisation across government departments. Such a funding platform could be managed by either the DTI or the proposed Office of Digital Advantage**.**

If this approach is adopted, there would need to be a thorough analysis and mapping of current policy frameworks and funding instruments that support research and innovation across government in order to ensure reduction of duplication of resources and efforts

OPTION TWO: Harness the proposed Technology Commercialisation Strategy

The DTI's IPAP strategy[255] proposes a Technology Commercialisation Strategy to bridge the gap between the pre-production prototype stage and commercialisation and to enhance the probability of successfully commercialising new technologies. This strategy could give special consideration to the broad needs of RDI in the ICT sector, including innovation in the software sector.

- **Comment on the above options on coordinating funding for RDI in the ICT sector.**
- **Provide specific details of alternative options which you may propose.**

[255] Pg 61

6.6.3.2 Encouraging the use of local ICT products

Even though international companies might start to recognise South Africa as a business process off-shore destination for software development, Government and South African corporations are still investing in internationally produced software. Valuable software royalties and licensing fees are not therefore accrued to the local economy.[256] There is moreover little incentive for local software developers to use their talents and skills locally. Consideration must thus be given to enforcing a preferential procurement policy that encourages enterprises to use locally developed ICT products.

- **Is a preferential procurement policy necessary?**
- **Will such an intervention open up market opportunities for local software development entrepreneurs and companies?**

6.6.3.3 Incentives for university research to bridge the innovation gap

The Department of Higher Education and Training incentivises university researchers to publish in scientific journals, for which each university receives a subsidy, primarily intended to support further research and development at the institution. These incentives do not include provisions to ensure the visibility and uptake of their research.

OPTION

The DHET could together with the DTI and the DST develop an incentive scheme to encourage university researchers to go beyond the R&D phase so as to realise a higher nett innovation output from the higher education sector.

- **What other incentives could be investigated to ensure a higher net output of ICT innovation from South Africa's university sector?**

6.6.3.4 Tax Relief for RDI investment

The business sector is usually agile in responding to tax incentive schemes. However such schemes for the ICT sector are lacking. SARS, in conjunction with the DTI (and the ICT RDI Council, should it be established) could investigate the feasibility of a tax incentive to encourage increased investment in ICT related RDI by private sector companies. Such tax relief could be developed in partnership with Universities and cover all components of the ICT industry.

- **Is the provision for tax relief a viable options?**
- **If so what modes of tax relief would work taking into account the current tax framework**

6.6.4 Infrastructure to catalyse innovation

Digital technology underpins the knowledge economy and will dominate all aspects of life in the 21st Century – from education to food production; from health to trade; from mining to logistics.[257] For

[256] Andric, "Wanted: software developers for SA", Achiever Magazine, Advanced Education and Training Industry for South Africa, 01 September 2014, http://www.achieveronline.co.za/articles/ict-11885.html
[257] Joburg Centre for Software Engineering, Annual Report 2013-2014, pg 3

South Africa and Africa to truly engage in the knowledge economy it will need to create digital technology, not simply use it. Africans will have to embrace Digital Technology to educate and empower over a billion of its citizens. South Africa has long been at the forefront of developing innovative digital technology (e.g. pre-payment on cell phones is a South African innovation).

In extending this potential however South Africa faces many challenges. Just under 50% of youth are unemployed and six hundred thousand of these are graduates of tertiary education institutions. There is a critical need to harness and channel this talent and integrate the unemployed into the mainstream economy. There is an urgent need to provide platforms for youth to experiment and innovate in a manner that can also generate opportunities for mentoring, teamwork and the incubation of new ideas into realistic and sustainable employment.

Digital technology includes software, hardware, the Internet and digital content and provides an ideal platform for innovation and skills development that will create employment and channel the potential of Africa's youth. The development of "Digital Technology Hubs" provides the enabling environment to harness this potential. Almost every city in the world now has a district, road, building, neighbourhood or precinct where people gather to learn, work and innovate. London has Silicon Roundabout in Shoreditch, Nairobi has its iHub and Boston has Kendall Square. Yet, Johannesburg, Africa's most important economic centre, does not have such an area.

The Innovation Hub, in its submission supported a stronger demand-driven approach to innovation (and the development and use of intellectual property) as well as SMME development. It proposed that local and provincial intermediaries could play a critical role in matching researchers and entrepreneurs with each other and with the potential users of new technologies.

PROPOSALS

- Within a period of five years at least one technology hub should be developed in each of the country's major cities, where these do not currently exist, focusing on inner cities and townships.
- These hubs will serve as zones in which ICT entrepreneurs are incubated, formal RDI entities (universities and research institutes) and industry partners could co-exist. Governments will be required to support the new "life" in the city with efficient security, transport, maintenance and communications services, geared to a 24/7/365 culture.
- There is evidence to support the contention of the multiplier effect of a hub. The benefits derived from the combination of activities in the technology hub equate to more than three times the investment in setup and operations, through job and enterprise creation and other economic added value. The opportunity exists to facilitate partnerships between landlords, municipalities and service providers to repurpose commercial and industrial premises, through grants and incentives that ease access to the capital funding required.
- This requires government to work together, viz the DTI, the DTSP, National Treasury, to seek budget appropriations for this type of infrastructure investment. The private sector must also contribute towards funding.
- The Technology Hubs must be directed, to focus on the priority market areas identified in the ICT RDI Roadmap.

- The innovation hubs should be able to operate as a hub and spoke model with community ICT access centres, such as the ICANN centres in the Western Cape, Siyafunda's centres in Gauteng, and other similar centres supported by USAASA.

- **What policy initiatives are required to facilitate the above? Propose concrete measures which will realise the formation of the ICT hubs.**
- **Will the proposed innovation hubs provide the envisaged catalytic effect on local RDI?**
- **What other infrastructure considerations are there, from an infrastructure perspective to support local RDI?**
- **From a funding perspective, what other options may be considered?**

6.6.5 Grassroots and community-based innovation

According to the National Advisory Council on Innovation (NACI), innovation is

> *"...the process of transforming an idea, generally generated through R&D, into a new or improved service, product, process or approach that relates to the real needs of society and involves scientific, technological, organisational or commercial activities. The key to this definition is the fact that the innovation process is only complete once a defined product, process or system with some tangible benefit has been implemented".*

Thus innovation occurs both in the formal and informal sectors.[258] In the formal sector, innovation generally leads to patents, design registration and related forms of IP protection. However there are examples of innovation which have not followed the cycle of formal research and development and which are realised in commercial markets. The ICT applications market is one example in which innovative ideas have been realised, based just on the power of the Internet to provide reach and access to markets.

In Asia, for example, grassroots and frugal innovation have gained ground. India's National Innovation Foundation and the Tianjin University have documented indigenous innovations.[259] Other studies have also documented innovation in the informal economy and found that this is rarely driven by formal research and development, but more by using and adapting existing knowledge to circumvent problems and provide solutions answering customers' needs and requests.[260] Innovation in this sense is being framed by a number of emerging terms and definitions and perspectives, such as: "grassroots" innovation, "base of the pyramid" innovation, innovation "for the poor by the poor", "frugal" innovation, "jugaad" innovation and "inclusive" innovation.[261]

In the current environment there is very little or non-existent support for innovation in the informal economy in South Africa. The imminent growth of ICT infrastructure however could fuel a more fertile environment in which innovation in the informal economy will prosper if a more enabling

[258] The International Labour Organization (ILO) first defined the "informal sector" in 1972. It characterized the sector based on seven factors: ease of entry; reliance on indigenous resources; family ownership of enterprises; small scale of operations; labor-intensive and adapted technology; skills acquired outside the formal school system; and unregulated and competitive markets. unincorporated enterprises with certain characteristics.

[259] Asian Development Bank (Shanti Jagannathan), "Innovative Asia Advancing The Knowledge-Based Economy: Highlights Of The Forthcoming Adb Study Report", Asian Development Bank, Pg 8.

[260] Saez, C, "WIPO Study: Informal Economy Important To Developing Country Growth, But No IP", Intellectual Property Watch, 07 June 2013. http://www.ip-watch.org/2013/06/07/wipo-study-informal-economy-important-to-developing-country-growth-but-no-ip/

[261] WIPO, "Conceptual Study on Innovation, Intellectual Property and the Informal Economy"

environment is nurtured. Options provided for in previous sub-sections, relating to the creation of Digital Hubs, and for the provision of incentives are framed to support innovation described in this section. However other policies are required as well.

OPTIONS

Note, the following options are not mutually exclusive.

OPTION ONE: Provide for more flexible Intellectual Property protection arrangements

One of the limitations to formal means of protection in the informal economy is the relevance and appropriateness of the Intellectual Property system. In addition the typical innovator in the informal economy is not always aware about options to protect their Intellectual Property. The DTI, in conjunction with CIPRO therefore needs to assess how innovation in the informal economy may be accommodated. A specific policy framework to support innovators in the informal economy is to be developed including measures to reduce typical high costs associated with IP protection. This policy could apply to all innovations and sectors.

OPTION TWO: Community ICT centres

The DTPS, in conjunction with USAASA and the DTI could investigate how ICT specific innovation in the informal sector could be encouraged. Enabling infrastructure at community level, such as Community IT centres[262] (acting as satellite points to urban Innovation hubs) could be considered. Such centres must facilitate access to finance and market opportunities for innovators. There should be a concerted effort to improve cohesion between innovators in the formal and informal sectors.

OPTION THREE: Funding instruments and greater awareness of funding opportunities

There are currently numerous supporting instruments for entrepreneurs. However not all of these may be appropriate for ICT entrepreneurs, especially in the applications and software development area. An assessment must be made of current funding instruments, and if necessary adaptions be applied to support RDI investment in low-income-relevant technologies and software application development. The mobile applications market has been identified as a particular area for growth and opportunity.

- **Please comment on the above three options, and propose additional options to advance the objectives described.**

6.7 Skills Development

Given the anticipated escalation of infrastructure rollout and in consideration of the huge monetary investment, all stakeholders will need to work together to ensure:

- Widespread basic technology skills to take advantage of universal access to broadband and increase demand for ICT products and services;

[262] The South African Communications Forum, for example, suggested that the Brazilian LAN Houses concept may be considered. The LAN Houses are in essence community ICT centres, which are managed and owned by urban youth and provide services such as refurbishing, repairing and maintaining of computers.

- Public service skills to ensure public servants in all three tiers of government are adequately skilled to drive more efficient delivery of services using Government-to-Business, Government-to-Government, Government-to-Citizen and Citizen-to-Government modes;
- A diverse skills base across professions, from both user and ICT developer perspectives, which catalyses the growth of ICT-enabled industries;
- A sufficient supply of skilled professionals, researchers and innovators to build the ICT products and services industry, so that we are not dependent on the import market; and
- Skills development to ensure the anticipated infrastructure expansion is built, serviced and maintained by a majority South African workforce;

All of the above are emphasised in SA Connect[263] which provides for interventions within the basic education and post-school sectors, in government and adult e-literacy as well as youth development and sectoral programmes. In terms of skills to provide and maintain infrastructure, the Minister of Higher Education and Training has been mandated to address the SIPs skills dimension, under the umbrella of the PICC.

6.7.1 DTPS initiatives and the national e-skills agenda

Skills development for an ICT-enabled world by the Department is carried out by two key institutions viz. NEMISA and the iKamva National e-Skills Institute (iNeSI) institute. The iKamva model was developed specifically for South Africa following a six year international investigation. To deliver on iNeSI's mission and strategic objectives and to radically advance the capacity development of e-skills/e-readiness the institute's role is to:

- Act as a national catalyst and change agent for the development of e-skills.
- Play a leading and advocacy role in developing users, consumers and citizens within the globally evolving information and knowledge-based environment that is increasingly dominated and affected by modern ICT devices and applications.
- Through a distributed model i.e. physical presence in each of the nine provinces allow for government, business, education, organized labour, civil society and organized labour to better position South Africa for a Knowledge Economy.
- Collaborate with key stakeholders i.e. government, business, education, organised labour, civil society and global development partners for impact.
- Broaden its scope to address all e-skills interventions (i.e. teaching and learning, research, innovation, monitoring and evaluation, and aggregation).

Six provincial CoLabs of iKamva have been established in association with local universities (see table below). Each of the CoLabs supports a national thematic e-skills area. Plans are underway to establish a CoLab in every province over the next two years; however this is dependent on available financial resources.

[263] South Africa Connect: pg. 58-59.

Table 1: Currently established CoLabs of iKamva

National e-Skills Thematic Area	Hosting University	Province
Enhanced government e-enablement through skilling of employees and use of Web 2.0 technologies for service delivery, e-participation and e-democracy, and efficient use of broadband.	Durban University of Technology	KwaZulu-Natal
Creative New Media Industries including that of cyber entrepreneurship to support a connected society	University of Pretoria	Gauteng
e-Inclusion and social innovation that includes the empowerment of e-centre managers in the social sector	University of the Western Cape	Western Cape
Knowledge-based economy and e-social astuteness (e-literacy)	Vaal University of Technology	Northern Cape and Southern Gauteng
ICT for rural development including production and distribution	Walter Sisulu University	Eastern Cape
Connected Health	University of Limpopo	Limpopo

The iNeSI focus is premised on the following five goals for the development of e-skills human capacity:

- Employment readiness
- Effective e-governance and service delivery
- Business development
- Socio-economic development
- Research and development

- **How should iKamva seek appropriate alignment and aggregation of effort with key entities across government?**
- **What other proposals do you have to strengthen the role of iKamva?**

6.7.2 Coordination of the e-skills agenda

Over the last decade South Africa has invested a great deal of money in ICT education and training by business, government, education and civil society. Currently, the provision of e-skills is delivered by a range of initiatives across education, government, business and civil society funded by private service provider models, government support contributory schemes, and donor agency supported free schemes.

Respondents to the Green Paper pointed out the need for improved coordination, aggregation and integration as well as the provision of a framework for the alignment of effort to South Africa's national strategies. The SACCI proposes that efforts to combine vocational training with academic institutions specifically related to the needs of the ICT sector be initiated, so that graduates have the skills needed by the industry at graduation. According to the Progressive Professional Forum (PPF), government needs to develop a fully integrated and coordinated framework that aligns to the priorities of the NDP and the national skills plan. In addition, it proposes that an aggregated data analysis of South Africa's needs and skills gaps in relation to new global technological trends is

critical. The PPF stated there is a need to develop ICT engineering and programming skills aligned to the ICT R&D Roadmap. A coordinated effort in dealing with the ICT skills challenge in the country is also supported by MNet/Multichoice and NAB, who highlighted the need to address the skills requirements of people with disabilities.

The need for the South African Educational System to focus on science, technology, engineering and maths (STEM) skills featured prominently on the Green paper submissions. Microsoft, in particular stated that STEM skills are required for a wide range of jobs both within the ICT sector and more broadly across a wide range of industries, and are increasingly necessary to succeed in a world (and workplace) that is increasingly complex, technologically advanced and competitive. The SACF referred to collaborative and coordinated partnerships between government skills development initiatives, universities and other tertiary institutions, and the ICT industry.

The Green Paper responses thus underscored the fragmented structures related to the skills sector and the need for coordination. There is currently no coordination of data and skills gaps. There are furthermore countless private sector training interventions, whether through vendor certification programmes or through independent training providers. Industry bodies such as the Institute of IT Professionals and niche trade associations also have with an interest in the skills pool. Information on skills training offered by all of these needs to be collected so that the skills agenda can be more reliably informed and coordinated.

Emerging skills needs should also be identified so that interventions can be planned. These include the need for training of judges, prosecutors, law enforcement officers etc on cyber related laws and provisions, including cyber forensics; training on cloud computing standards; domain name management training; and training of SMME owners on utilisation of e-Commerce models.

In summary, the e-skills sector does not lack ideas, plans and initiatives; it lacks coordination, sustained implementation and accountability. From a government perspective, continuity is also a problem given changes which occur with each new term of government, resulting in re-prioritisation of projects and interventions.

6.7.2.1 E-skills Council

The National e-Skills Plan of Action (NeSPA) 2012 (published in February 2013, prepared by the e-Skills Institute for the previous DoC) calls for the establishment of a national council to coordinate the national e-skills agenda. It states that this should include representatives from government, state owned companies, business, the education sector, civil society and organised labour. This entity could report directly to the Presidency, perhaps through the National Planning Commission, given the cross-cutting nature of the e-skills matrix, and the vital role that e-skills could and should play in the current South African situation. An e-skills council, could:

- Co-ordinate and facilitate opportunities for e-skills within the various current skills plans and strategies, including the current National Skills Development Strategy, the Skills Accord and the DHET's Green Paper for Post School Education and Training.
- Advance synergies and promote alignment in the planning between the different organs responsible for skills in the ICT sector, including the MICT Seta, and other Setas, TVET's, industry, universities, colleges, and schools;

- Address the disconnect between the supply side skills (through universities and FET colleges) and the demand side skills, where the skills needed for economic growth are not supplied by the universities and FET colleges;
- Monitor and report on the various e-skills initiatives;
- Establish integrated database of information on skills training, collating data from relevant government departments, agencies, Statistics SA, etc. ; and
- Develop policy to ensure effective coordination between e-skills initiatives and the standards regulators such as SAQA (South African Qualifications Authority) to preserve standards and control

- **Is there a need for an e-Skills Council? If so, please provide details on structure, funding and role of such a Council.**
- **If a council is to be established, where should it be located?**

6.7.2.2 Consolidated national e-skills data

There is currently a lack of credible labour market data in the sector and incoherent research agenda and labour market information on ICT skills. It is proposed therefore that the MICT SETA in partnership with iKamva and relevant government departments develop and maintain an Information and Knowledge Management System (IKMS) in respect of labour market data. This data bank should also be made accessible for research purposes.

A skills research unit could be established to assist in this and collect all relevant data, carry out additional research and produce frequent reports highlighting skills needs, skills trends and development opportunities. This could be used to inform the Education Departments of skills needs, identify training and education interventions for support and inform the policy on immigration skills. It could also conduct targeted research to understand the skills dynamics and characteristics of the informal economy and the SMME sector to inform Government's programmes for SMME support. The proposed ICT innovation hubs (see relevant sub-section) would provide ideal sites for skills development for this sector.

The Skills Research Unit will also participate in the proposed National e-Skills council, should such a council be established in the future.

- **Do you agree on the need for a dedicated research unit as described above?**
- **Who should take on the responsibility of implementing the research unit?**
- **How should the research unit be funded?**

6.7.3 National Digital literacy or e-astuteness programme to support e-readiness

As noted in other Chapters/Options Papers there is a need for a holistic digital literacy or e-astuteness programme. SA Connect points out that there is now considerable evidence to demonstrate that inequality of access and use of ICTs and therefore the ability to deploy their full potential – is rooted in the unequal capabilities of individuals and groups, such as the poor, particularly poor women, those living in rural areas, persons with disabilities, and the elderly. The policy states that as ICTs become more complex, the ability to optimise their use correlates strongly

with education and income. Those marginalised from education and therefore from employment and income are most likely to be marginalised from access to the type of communications services required to participate meaningfully in a modern economy and society.

Several respondents to the Green Paper provided insightful proposals regarding Digital Literacy. The notion of Digital Literacy is similar to the notion of e-Astuteness. Digital Literacy refers to ensuring citizens can participate fully in the knowledge economy and use technology safely to contribute towards their livelihood and personal growth. A number of initiatives exist across government, the private and civil society sectors. Calls have been made (e.g. by Intel) to scale these up and focus on every day needs of citizens such as financial transactions, agriculture, health care and government services.

Digital Literacy programmes are also crucial to introduce at schools and there is a need to develop a formal curriculum to promote this.

The SA Connect broadband policy suggests that the DTPS via iNesi coordinate a national e-literacy programme and suggests the following allocation of responsibilities to other government departments:

- Department of Basic Education - integration of ICT into school curriculum.
- Department of Higher Education -integration of ICT into post matric curricula.
- DPSA to integrate ICT skills development as an administrative and delivery tool in all government departments
- Department of Labour and SETAs to focus on adult e-literacy, youth development and sectoral programmes.

- **What other considerations are necessary to provide for a national digital literacy programme?**
- **Who should be responsible for the development, implementation and coordination of a National Digital Literacy programme?**
- **How could such a programme be funded?**

6.7.4 Improving access to the world of work

According to the MICT SETA graduates' work-readiness is currently being questioned. Although internship programmes are recognised as an effective way of introducing graduates to the world of work, the challenge is that the exposure may not be enough to ensure improved knowledge and competence. Moreover, some types of work-place exposure do not culminate into genuine learning opportunities.

Furthermore, there is a perceived mismatch between what is provided in institutions of learning and what is actually needed in the workplace. Respondents to the Green Paper (e.g. ITA) argued that the scope of internship programmes and industry exposure programmes be increased, and that realistic incentives be provided to make it attractive for industry partners to become involved in these programmes.

Given this, there is a need ensure alignment to industry needs and identify sector scarce skills occupations. Curricula at the different higher education institutions should be mapped against this. In addition improved relationships need to be built between employers (including government) and education and training institutions in order to expand the quality of work integrated learning, thus turning workplaces into more meaningful training spaces.

- **How can training be better matched to industry needs?**
- **How can the scope of internship programmes and industry exposure programmes be increased?**
- **What incentives would encourage industry partners to become involved in these programmes.**

6.7.5 ICT Vendor skills programmes

According to Green Paper submissions, in particular from the SACF, and according to the MICT SETA, there are numerous vendor courses and programmes designed to skill technicians and engineer who work on specific products for specific companies and which are not transferable outside of a specific employer. However, despite being widely recognised by industry and internationally, skills programmes offered by ICT Vendors are generally not accepted as qualifications in South Africa as most of them are not registered on the NQF.

This has been exacerbated given the regulations published in the Government Gazette (No. 35940, 03 December 2012) regarding Monies Received by a SETA and Related Matters by the DHET Minister wherein funding for NQF registered programmes was advocated. This causes a major problem for employers, who provide funding for students to participate in these programmes but experience difficulties in getting SETA support. Some courses are however offered at public TVET colleges and universities, while others some are offered as continuous professional development courses. There are also discussions regarding the integration of some of the vendor programmes into university curricula.

- **Do you agree that this a substantive problem which requires intervention? If so, how do you propose they be addressed?**
- **What roles do you propose for the SETAs and for Industry to mitigate the problem?**
- **What other qualifications should be developed?**

6.8 Electronics Manufacturing

Developing a vibrant and sustainable electronics manufacturing industry in South Africa is an important aspect of the National Development Plan (NDP). As outlined in the NDP, South Africa must develop from an economy based on extraction of natural resources to one in which economic value is created from the manufacturing of goods for both the domestic and export markets. South Africa needs to move from being a consumer of other countries' finished goods to being a producer. [264]

[264] SACF. 2014. Position paper on STB controls

The foundation of SA's electronics industry has historically always been the public sector. In the pre-1990 era, for example, the demand for electronics in the defence industry far outweighed the requirements for power and security systems, with the combined demand for electronics from Armscor, Telkom (and the Post Office) and Eskom accounting for as much as 75% to 85% of the local electronics market. This has provided a firm foundation for the electronics manufacturing sector in the current era. Today South Africa has world-class engineering facilities, an internationally accepted system of standards and testing, a base of capacity and capabilities including skills that can be optimised in the electronics industry, such that the electronic sector (excluding software) contributes in the region of 12.5% to South African GDP.[265]

According to the DTI:[266]

- Private investors have built capacity and capability to produce electronic products, with the support of both the DTI and the IDC. This has been in the form of both electronics and contract manufacturing facilities that produce products such as set-top boxes (already designated for local procurement), electrical and telecoms cables (designated), televisions (rebate system), residential electricity meters (designated), electromagnetic systems, personal computers and laptop assembly.
- Domestic manufacturers have demonstrated capability to support government initiatives such as digital broadcasting migration, broadband roll-out, e-learning platforms and the state-led electrification programme.

Current plans to increase broadband connectivity, the introduction of digital terrestrial television and the recovery in the global semi-conductor industry are opportunities for growth in the electronics sector. Local demand, coupled with the prospect of export into the African continent, provide a formidable case for continued policy interventions to catalyse growth. The DTI's Industry policy action plan, the DTPS' sector strategy for electronics manufacturing and the DST's ICT roadmap already provide a strong policy framework for the sector. However, inherent weaknesses need to be acknowledged. According to an IDC study[267] weaknesses in the electronics industry include:

- A relatively weak manufacturing and design base.
- Insufficient skills, particularly qualified engineers.
- Weak industry associations.
- Lack of competitiveness relative to successful producers around the world.
- Dominance of foreign brands in local market.
- Lack of progress in the launch of new pay TVs by licensees.

The study also identified the following problems:

- Lack and high cost of finance for small firms.
- The need to promote broad-based BEE.
- Uncompetitive bids due to competitive suppliers from elsewhere in the world.
- Lack of requisite skills.

[265] Department of Trade and Industry, Industrial Policy Action Plan (IPAP): Economic Sectors and Employment Cluster, 2014/15 - 2016/17.
[266] Ibid (DTI, 2014)
[267] IDC, "An overview of South Africa's electronics design industry" February 2011.

- Weak synergies between research institutions and manufacturing industries.

The World Economic Forum (WEF) has also noted that the manufacturing sector in South Africa lacks a high tech manufacturing sector primed to take advantage of the global demand for television sets, tablets, computers and smartphones. This is also a deterrent to growth in the sector.[268]

South Africa is currently not a major player in the manufacturing of equipment such as mobile devices, computing devices and digital set-top boxes. Hence most of the devices used in South Africa are imported and attract customs duties when they are landed in South Africa. These duties contribute to the high access cost of the equipment and are unaffordable to the majority of the people. The DTI is currently providing incentives in support of building excellence in the manufacturing of affordable end-user equipment.

6.8.1 Areas for manufacturing growth

The following current investment opportunities in the South African electronics manufacturing sector have been identified:

- Access control systems and security equipment;
- Systems and software development in the banking and financial services sector;
- Silicone processing for fibre optics;
- Integrated circuits;
- Solar cells; and
- Electronic security devices and associated services, as well as software and peripherals.

In addition to the above, areas for future growth in the manufacturing industry include:

- Set top boxes;
- Low cost tablets and mobile phones.

- **Do you agree with the above identified areas of growth? What other areas have the potential for growth? Please substantiate.**

6.8.2 Facilitating the growth of the local industry

Manufacturing is a capital intensive business. Mass volume products are required to sustain the industry. Lessons from Brazil, China and the US have demonstrated the importance of a sizeable domestic market if the local electronic industry is to be sustainable. Many industry players have found it difficult to penetrate foreign markets due to protectionist industrial policies.

Respondents to the Green Paper have suggested various measures to facilitate growth, including:

- Bringing together role players (beyond SITA and GITOC) to support the manufacturing of low cost devices such as tablets and smartphones as well as mobile-cloud platforms that are relevant to local conditions (affordable, rugged and perhaps running an Open Source Operating systems) which could be sold across Africa and other developing markets;
- Supporting and expanding a national electronic manufacturing base;

[268] Econometrix Sector Focus, Quarter 1, 2014.

- Using the aggregation of public sector demand to create economies of scale for the production and purchase of locally manufactured devices.

6.8.2.1 Declining manufacturing sector

In past years, the South African Electronics Manufacturing Industry has been shrinking due to pressure from imports of cheaply made and, in some cases, dumped electronic goods. This has resulted in a loss of South African jobs, the closing of assembly lines and production plants. [269] A study by Access Market International on the Scope of the Electronics Industry in the Western Cape (2005:16) stated: "*Even though the total electronics industry in South Africa is growing, the overall manufacturing of high volumes of electronics components and products is on the decline. The reason for this is the small size of the domestic market, which does not warrant investment in manufacturing capacity*".

The small domestic market and low levels of international market presence have resulted in a reduction in South Africa's manufacturing capacity in this industry. South Africa's major electronics industries are predominantly centred in Gauteng, the Western Cape and KwaZulu-Natal. Based on export contribution, the Western Cape is the second-largest producer of electronic products in South Africa and contributes approximately 22% of total output.

The majority of ICT products used in the country are imported from abroad. There is therefore a need to rekindle local manufacturing of these goods.

OPTIONS

OPTION ONE: Harnessing the Industrial Policy Action Plan (IPAP)

It is important that the electronics industry is identified in the Industrial Policy Action Plan (IPAP) and the New Growth Path as one of the areas for employment creation and transforming the structure of the South African economy to prioritise industrialisation and address problems relating to balance of payment and trade. In addition it would be beneficial for government, through the Department of Trade and Industry (DTI) to consider an industrial policy action for the electronics manufacturing industry similar to the Automotive Production Development Programme (APDP). In line with this, it is important to consider revision in tariffs for the electronics industry and explore incentives to attract both FDI and local investment in electronics manufacturing and diversification.

OPTION TWO: Creating enabling policy to stimulate the sector

- Government must consider market stimulants such as government seed orders and subsidies to further revitalise the industry. Other than the DTI's limited incentives, no other support mechanisms exist especially for emerging firms.
- Further policy interventions are required to ensure representation in across all nine provinces so as to avoid centralising the economy on only three provinces.
- Policy is required which would stimulate the development of a sustainable manufacturing sector, through ICT sector specific incentives. Incentives are needed particularly for small

[269] SACF. 2014. Position paper on STB controls

emerging firms to be export ready. Current incentives are not industry specific, and thus tailor made incentives for example for white goods need to be developed.

- OEMs must be encouraged to locate some of their R&D laboratories in the country and foster collaboration with local universities and companies. Furthermore incentives could be provided for international companies to at least repair their network equipment locally where such skills exist in the country

- **Do you agree that an industrial policy action for the electronics manufacturing industry is needed?**
- **Consider the four policy mechanisms described above. Which of these are preferred mechanisms to stimulate the electronics manufacturing sector?**

6.8.2.2 Mitigating competition from imports through local procurement

Public procurement is a strategic instrument widely deployed by developed and developing countries to enhance and smooth out certainty of demand over the years; promote competitive industrial capabilities with high employment and growth multipliers; diversify the economy towards more employment-intensive and value-adding activities and ensure value for money for the fiscus and society. Public procurement is one of the key industrial levers in the IPAP.

The revised Preferential Procurement Policy Framework Act (PPPFA), which came into effect on the December 7, 2011, empowers the Minister of Trade and Industry to designate industries, sectors and sub-sectors for local procurement at specified levels of local content. The designation policy instrument is one of a suite of policy levers designed to increase support for domestic manufacturing. Sectors already designated for local production with minimum local content thresholds are rail rolling stock, power pylons, bus bodies, canned/processed vegetables, certain pharmaceutical products, furniture and products, as well as the textile, clothing, leather and footwear sectors[270]. Currently the set top box sector is designated with a 30% minimum local content threshold and the minimum thresholds for local production of DTT Antennas and Satellite DTH Dish Antennas have been set at 100%.

However, there are arguments that while South Africa may have an opportunity to support local producers of ICT hardware through mandating local procurement, the reality of modern day ICT production chains complicates this view. The well-known reality is that hardware is manufactured in countries that are the most cost effective, and South Africa is not yet competitive enough that ICT multinationals will manufacture locally. This indicates a significant premium will be paid in the event of immediate and forced localisation without first addressing the broader cost pressures on industry.

Lastly, consideration must be given to how parastatals could enhance the development and contribution of the electronic industry to the South African economy, by sourcing a certain portion of their inputs locally. This is in line with IPAP 2 and the National Industrial Participation Programme (NIPP).

[270] Department of Trade and Industry, South Africa's Top 10 investment projects, March 2013.

OPTIONS

OPTION ONE: Specify Electronics goods in revised preferential procurement framework

Further sectors in the electronics manufacturing industry could be investigated with a view to designate them within the ambit of the PPPFA. This would serve to incentivise local manufacturers to invest further and expand manufacturing capabilities. This in turn may have the effect of improving capacity which will lead to greater ability to export electronics goods.

OPTION TWO: Provide a broad policy for procurement

This option proposes that a broad policy to promote local procurement be developed rather than any specific industry.

OPTION THREE: Provide a mechanism to monitor the implementation of PPPFA

There is currently no mechanism in place to monitor the implementation of the PPPFA, not least in the ICT sector. It is thus important to be able to monitor the extent to which implementation takes place, and to ensure compliance where there is none.

- **Do you agree that electronics goods needs to be specified in the PPPFA?**
- **Who should be responsible for monitoring the implementation of the PPPFA?**
- **How should compliance with the PPPFA be ensured?**

6.8.2.3 Quality and availability of skills

The general drive for maths and science education does not guarantee the growth in the number of individuals studying electronics related subjects. There is thus a need to increase intake of learners studying electronics into HETs and FETs. There are also gaps in current curricula relative to industry needs.

OPTIONS

- A "Careers in electronics" campaign could be instituted, by the relevant manufacturing association, working closely with the DTPS, to jointly procure special funds via both industry and the MICT Seta. A closer relationship between industry and the education sector is required to foster an effective campaign, which may include:
    - Identification of secondary schools at which electronics study could be prioritised.
    - An assessment of the extent to which electronics prevails in the current curriculum, and how this may be improved.
    - Consideration of annual fairs, exhibitions, and competitions, to attract high school learners to the subject.
    - The industry and the MICT SETA could work together to bolster the number of bursaries on offer for studies in electronics at tertiary level.
- School maths and university electronics curricula could be aligned in partnership with industry.
- Electronics manufacturing in learnership programmes at SETAs could be prioritised.

- A mentorship programme in the private sector could be created. Reports indicate that knowledge transfer in the industry does not take place easily.[271] A mentorship programme enables knowledge transfer, and must be viewed as a short term solution which requires the buy-in of the current incumbents in the industry.

- **How does a career focus in electronics link to other ICT skills programmes?**
- **Do you agree with the proposals above? Please comment on the ideas, and provide comment on how they might be implemented, including identification of responsibilities for the implementation thereof.**

6.8.2.4 Special Economic Zones

The Special Economic Zones (SEZ) Act[272] provides for the designation, promotion, development, operation and management of Special Economic Zones. Among other objectives, the Act provides for the establishment of a SEZ Fund, and a SEZ Advisory board. The SEZ is an economic development tool to promote national economic growth and export by using support measures in order to attract targeted foreign and domestic investments and technology. Other countries which have demonstrated competitiveness in electronics manufacturing and software development, such as Singapore, India, and Philippines, have started special economic zones. However, no SEZ focused on current strengths, as well as growth niches in the electronics manufacturing industry has been identified in South Africa, although there are examples of electronics manufacturing being accommodated in current SEZ's such as in KwaZulu Natal.

OPTION : ESTABLISHMENT OF NICHE ELECTRONICS MANUFACTURING SEZ'S

Based on the assessment of electronic manufacturing industries in the IPAP (2014), as well as the DTPS' ICT sectoral strategy for electro-technical manufacturing a priority list of electronics industry segments could be identified. The SEZ Act could be leveraged to ensure that the growth areas of the sector are catered for in the development of new, or the expansion of currently planned SEZ's. The set top box manufacturing sector must be given priority in this regard.
An SEZ could provide a synergistic geographical co-location of various manufactures in a value chain who jointly contribute to a final product. This would provide cost-savings.

- **What are your views regarding SEZ's focused on the electronics manufacturing sector?**
- **Is the concept of an SEZ too broad to accommodate a specific sector?**
- **How could the provisions of the SEZ Act be leveraged to promote the electronics manufacturing industry?**

6.8.3 Growth into African Markets

ICT goods exports are highly concentrated. The top five exporters – China, the United States, Hong Kong (China), Japan and Singapore – accounted for over half the world's exports of such goods in 2008, and the top 10 for more than 75%. All developing economies (except Mexico), included among the top 20 exporters are in Asia. Mexico is exploiting competitive advantage of proximity to the Latin

[271] See, for example, the Commission Report on the ICT BEE Charter, pg 149
[272] Act No. 16 of 2014: Special Economic Zones Act, 2014

American market. South Africa has not exploited its competitive advantage of proximity to the African market and could do so through manufacturing value added ICT components for that market.

This would be achieved by promoting technology transfer through forging sustainable partnership between domestic ICT SMMEs and foreign ICT companies. In the long term, some assembly of ICT components could take place in the relevant African markets as a starting point to develop African manufacturing capabilities as South Africa moves up the ICT value chain. African countries are becoming increasingly important for global economic growth. Goldman Sachs' research identifies 10 countries (including South Africa, Nigeria, and Egypt) which could drive growth in the African Region to about USD 17 trillion by 2050.[273]

- **How may the electronics manufacturing sector harness the African market?**
- **What specific policy interventions would you suggest to promote greater export into Africa?**

6.8.4 Manufacturing Incentive schemes

While South Africa has introduced various incentive packages to boost investment, only a few are relevant and/or specific to the ICT environment.

The disadvantages of the current broad incentives are that they have to be competed for against established and capital-intensive industries. They do not apply a budget quota system to ensure that all the sectors can benefit. In addition, the number of ICT beneficiaries demonstrates that ICTs are not prioritised[274]. These incentives operate on a first-come first-serve basis, thus benefiting established industries and there is a perceived limited ICT competency. Therefore, on its own the ICT industry does not have industry-specific incentives to drive its growth.

The Manufacturing Competitiveness Enhancement Programme (MCEP) is one of the key action programmes of the Industrial Policy Action Plan 2014/15. The MCEP will provide enhanced manufacturing support aimed at encouraging manufacturers to upgrade their production facilities to sustain employment and maximise value-addition in the short to medium term. The MCEP comprises two sub-programmes: the Production Incentive (PI) and the Industrial Financing Loan Facilities which will be managed by the DTI and the Industrial Development Corporation (IDC) respectively.

Since 2000, the IDC has introduced support mechanisms aimed at facilitating the growth and development of the ICT sector. The IDC considers the ICT sector as one of the priority economic sectors with the potential to grow the economy and create jobs. Through its ICT Business Unit, the IDC provides finance to companies in the Information Technology, Electronic and Telecommunications sectors. Technology-intensive companies operating in the following sectors are prioritised:

- Electrical and Electronic Manufacturing;

[273] Goldman Sachs Asset Management: The outlook for 2012 and 2013 Global GDP Growth, Monday, 20 February 2012, Business Day.
[274] According to the DTI's 2012/13 Report on Incentive Performance: Selected Projects, only 2 electronics companies, Tellumat and Hi Sense, have benefitted from the MIP scheme.

- IT Sector;
- Broadband sector;
- Demand Management sector;
- e-Waste; and
- Advanced Material sector.

- **Is the MCEP a sufficient incentive for the sector? If so, what is needed for the sector to be able to effectively harness it?**
- **Are there specific needs of the electronics manufacturing sector which the MCEP does not cater for?**
- **Does the MCEP suit the needs of emerging SMMEs? If not what incentives are needs for this sector?**
- **Are there any other types of incentives over and above the MCEP which are required by this sector?**
- **With regards to the IDC's ICT sectors which currently receive priority, are there any other areas which need to be considered? Please motivate.**

6.9 Intellectual Property Regime in South Africa

According to the World Intellectual Property Organisation there are several reasons to promote and protect intellectual property:[275]

- Progress and well-being of humanity rest on its capacity to create and invent new works in the areas of technology and culture.
- The legal protection of new creations encourages the commitment of additional resources for further innovation.
- The promotion and protection of intellectual property spurs economic growth, creates new jobs and industries, and enhances the quality and enjoyment of life.

The intellectual property system helps strike a balance between the interests of innovators and the public interest, providing an environment in which creativity and invention can flourish, for the benefit of all.

There were several responses to the Green Paper on Intellectual Property. SACCI welcomed the Green Paper's recognition of the important role that intellectual property plays in the ICT sector, but was concerned by the suggestion that IP protection may create barriers to entry for SMEs and that the nationality of IP ownership is somehow relevant to the growth of a thriving domestic IT sector. It suggested that many of today's most successful IT companies began their existence as SMEs, and were able to grow only because IP protection allowed them to monetise their inventions. Microsoft and ITASA agreed with this above submissions.

[275] World Intellectual Property Organisation, "What is Intellectual Property?" http://www.wipo.int/edocs/pubdocs/en/intproperty/450/wipo_pub_450.pdf

The ABT suggested that innovation and IP policy focus on innovation processes, followed by IP protection concerns. ABT submitted that IP protection provides much-needed incentives for innovation and creativity by enabling enterprises to recoup their investments in research and development and to fund future innovation. Therefore ABT argue that IP is not a barrier but a bridge that enables an innovator to share an innovation with other companies that pass the innovation to their customers – and that pay a license fee to the innovator.

- **It is proposed that South Africa can and should encourage domestic innovation and associated IP, but should ensure that it does so in ways that are even-handed and that promote competition broadly, via tax incentives, investments in scientific research, and the like.**
- **Is there a need for any special incentive to encourage domestics IP, other than the proposals in the ICT_RDI sub-section?**

6.9.1 FDI and local ownership of ICTs

An important factor in attracting FDI in the sector is IP protection. Foreign firms are more likely to invest in developing countries that have stable IP regimes, as IP protection reduces the risks of unauthorised use and leads to a relatively larger new demand for protected products. Effective IP protections may also affect the quality of foreign investment by encouraging investment in high-technology sectors, where IP rights play an important role- in the process helping to shift the focus of FDI projects from distribution to manufacturing.

Promoting domestic ICT innovation and encouraging FDI in the ICT sector do not preclude each other. On the contrary, FDI in the sector can help develop the foundation for a strong domestic IT industry by facilitating domestic access to new technologies and advancing the IT skills of domestic workers.

It has been proposed that South Africa should:

- Invest in fundamental scientific research and make the results of such research available for licensing and use by the private sector;
- Adopt policies that encourage R&D investment by the private sector;
- Expand affordable access to broadband networks; and
- Ensure that policies are technology neutral and provide a level playing field for both domestic and foreign suppliers.

- **What specific provisions are required in the IP regime to create a confident environment for FDI?**

6.9.2 Utility model system to support domestic innovators

The utility model system is an important consideration to promote and protect domestic innovators. Currently there are challenges associated with small scale innovators, given that the nature of their innovations is usually uncharacteristic of the criteria for new innovations. In most cases, innovations are incremental - building on-top of the existing innovations. In this regard, they may not fulfil one of the most important criteria of patenting which is novelty i.e. that the invention must be new.

OPTIONS

The following options are not mutually exclusive, and are proposed as synergistic options.

OPTION ONE: Incorporate the utility model system

The DTPS could propose to the DTI that it consider the utility model system within its Intellectual Property Policy Review process. The implementation of the utility model system could promote and protect domestic innovators. In the utility model system, IP protection is granted for incremental improvements since it is assumed that the invention might have existed before. The utility model system is less costly compared to filing a full patent. It also protects the emerging inventor from costly litigation and contestation of his/her invention on whether it meets the inventive step.

OPTION TWO: Marketing, and awareness of the importance of IP protection

An awareness campaign is required, should the utility model be adopted. This is a critical element in protecting small and micro innovators given the importance of not disclosing information related to invention before protecting the IP.

- **Do you agree on the potential value of the utility model?**
- **What other IP mechanisms would you propose to improve and promote IP protection amongst individual entrepreneurs and micro enterprises in the ICT sector?**
- **Does the software development and applications industry require any different type of IP protection provisions?**

6.9.3 Conclusion

- **Are there any issues that you believe have been neglected?**
- **Can you suggest any benchmarks and targets which may be incorporated to monitor progress against policies objectives?**

7 Policy Options: Institutional Frameworks

7.1 Introduction

This Chapter/Policy Options Paper focuses on the governance and institutional frameworks required to support the implementation of identified policies, and how to ensure maximum public value from public resources. It is essential in doing this to consider if existing entities remain necessary and, if so, how these institutions can be strengthened. The roles of the different spheres of government, parliament, non-governmental organisations and the private sector have to be explored in assessing the relevance of the current institutional frameworks and in developing new options for the future.

This is in line with South Africa's National Broadband Policy, "South Africa Connect". The Policy highlights, among other things, that:

- "*It is vital that the institutional constraints on effective regulation are addressed as a matter of urgency*";
- "Requisite institutional capacity needs to be built, strengthened and, where necessary, *streamlined*" in the Department , as well as in portfolio organisations and other complementary agencies; and
- "*State-owned companies should be rationalised to contribute to contribute to national objectives more efficiently and effectively*.[276]

The National Development Plan ("the NDP") also states that the ICT policy review must address institutional and regulatory weaknesses in order to realise the potential of the sector. [277] In its Vision 2030, the NDP emphasises that a "capable state" is an essential prerequisite for development, and highlights the challenges in realising this:

> *"A capable state does not materialise by decree, nor can it be legislated or created from conference resolutions. It has to be painstakingly built, brick by brick, institution by institution, and sustained and rejuvenated over time. It requires leadership, sound policies, skilled managers and workers, clear lines of accountability, appropriate systems and consistent and fair application of rules."278*

The focus in this Chapter/Paper is on those institutions that are set up by legislation and have some regulatory responsibilities rather than state-owned companies (SOCs). Many of the SOCs aligned to the Department are focused on in depth in other sections of this Discussion Paper (e.g. the SABC, Telkom and the Post Office). It is also noted that the Minister and Department have established a Committee to look at rationalisation of entities in line with the South Africa Connect Broadband Policy. Inputs received on this Discussion Paper will be considered by this Committee.

[276] Department of Telecommunications & Postal Services, "South Africa Connect – Creating Opportunities, Ensuring Inclusion: South Africa's Broadband Policy", page 32
[277] National Planning Commission, "Vision for 2030: National Development Plan", page 176-177, 11 November
[278] Ibid, page 363

7.2 The Context

Key related provisions in the Constitution and in relevant legislation are outlined below, as well as relevant international commitments South Africa has made.

7.2.1 The Constitution

The South African Constitution sets out the broad framework for Government and all public entities. Chapter 2 outlines the Bill of Rights and emphasises that the state, including public institutions, must "*respect, protect, promote and fulfil*" these rights. Of particular relevance to this section of the Discussion Paper are the following provisions:

- The right to just administrative action that is "*lawful, reasonable and procedurally fair*". (Section 33)
- Parliament is the Legislative Authority and must provide "*a national forum for public consideration of issues*" and scrutinise and oversee executive action. (Section 42) All organs of state are accountable to Parliament (Section 55). The Executive is responsible for crafting and implementing national policies and implementing national laws. (Section 85)
- Each sphere of government (national, provincial and local) must "*exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of government in another sphere*". (Section 41)
- Provincial government is given exclusive powers in some areas (provincial planning, provincial cultural matters and sport), and concurrent powers with national government in others (including consumer protection and cultural matters). (Schedules 4 & 5)
- Municipalities have the right to "*govern, on (their) own initiative, the local government affairs of (their) community, subject to national and provincial legislation, as provided for in the Constitution*". The national or a provincial government "*may not compromise or impede a municipality's ability or right to exercise its powers or perform its functions*". (Section 151)
- National legislation must set up an independent authority to regulate broadcasting in the public interest "*and to ensure fairness and a diversity of views broadly representing South African society*". (Section 192)
- The values and principles which must govern public administration include:
    - "*Efficient, effective and economic use of resources";*
    - *"Public administration must be development-oriented";*
    - *"People's needs must be responded to, and public participation in policy-making promoted"; and*
    - *"Transparency must be fostered and public administration must be accountable". (Section 195)*
- In relation to international agreements, the executive is responsible for "*negotiating and signing*" any agreement, but it is only binding on South Africa "*after it has been approved by resolution in both the National Assembly and the National Council of Provinces*". A "*self-executing provision of an agreement*" approved by Parliament is law in South Africa "*unless it is inconsistent with the Constitution or an Act of Parliament*". In addition, courts must in interpreting laws "*prefer any reasonable interpretation*" consistent with international law. (Sections 231 & 233)

7.2.2 Legislation

The **Public Finance Management Act**, no 1 of 1999 ("the PFMA") sets out provisions for sound financial management and mechanisms to ensure transparency and accountability. Specific requirements for government departments, constitutional institutions and different public entities are outlined.

The **Promotion of Administrative Justice Act**, no 3 of 2000 ("PAJ Act" or "PAJA") focuses on ensuring that administrative bodies act reasonably and procedurally fairly. It stipulates that any decisions by an administrative body can be challenged in court if such an action is, among other things, procedurally unfair, not within an entity's powers set out in law, biased "*or reasonably suspected of bias*". It also allows for administrative bodies to be taken to court for "*failure to take a decision*". (Section 2(g))

The **Promotion of Access to Information Act**, no 2 of 2000 ("PAIA" or the "Access to Information Act") expands on the associated right in the Constitution and sets out mechanisms to fulfil the right to access to information held by public entities and institutions.

7.2.3 International agreements

The following international agreements ratified by South Africa are relevant in considering institutional frameworks:

- ***World Trade Organisation Reference Paper on Regulatory Principles***

In February 1998, South Africa submitted a final schedule of telecommunication sector commitments under the WTO Fourth Protocol to the General Agreement on Trade in Services ("GATS").[279] One document is particularly relevant to the institutional framework for regulation: the Fourth Protocol on Basic Communications; ("Fourth Protocol") Reference Paper on Regulatory Principles ("Reference Paper"). South Africa adopted this in full and committed to, among other things, the principle of independent telecommunications regulation in order to licence, monitor and enforce obligations and conditions on operators. According to the Reference Paper, the regulatory agency must be *"separate from, and not accountable to, any supplier of basic telecommunications services"* and *"impartial with respect to all market participants*". The principles of the Reference Paper are binding and can be enforced through dispute settlement under the WTO.[280]

- ***The African Commission on Human and Peoples' Rights: Declaration on Principles of Freedom of Expression (2002)***

The Declaration was adopted by the African Commission on Human and Peoples' Rights ("ACHPR") to guide interpretation of the freedom of expression clauses in the African Charter on Human and Peoples' Rights. Section V of the Declaration deals with private broadcasting and states that "*an independent regulatory body shall be responsible for issuing broadcasting licences and for ensuring observance of licence conditions*" and that licensing processes "*shall be fair and transparent*". Section VII deals with regulators specifically and stipulates: *"Any public authority that exercises powers in the areas of broadcast or telecommunications regulation should be independent and adequately protected against interference, particularly of a political or economic nature."*

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[279] WTO Report on Telecommunications Services: Negotiations, Results Of The Basic Telecommunication Negotiations at http://Www.Wto.Org/English/Tratop_E/Serv_E/Telecom_E/Telecom_Results_E.Htm

[280] ISPA Advisory, 2001 at http://old.ispa.org.za/regcom/advisories/advisory6.shtml

- ***Southern African Development Community: Protocol on Transport, Communications and Meteorology (1996)***

South Africa, as part of the Southern African Development Community ("SADC") region, modelled its telecommunications regulator taking into account the requirements set out in the SADC Protocol on Transport, Communications and Meteorology. This document is becoming outdated in light of ICT sector developments and convergence over the last 15 years, and has been supplemented with various regional harmonisation documents. Notwithstanding this, many of the principles remain relevant. Chapter 10 of the Protocol deals with telecommunications. Article 10.7 requires member to ensure *"the separation between the regulation and operation of telecommunication services... and... establish autonomous, independent and national regulatory bodies which shall have statutory authority to regulate and monitor specified telecommunications related activities".*

- ***Southern African Development Community: Declaration on Information and Communication Technology (2001)***

The Declaration on ICT promotes the development of a three tier system in member states with "*Government responsible for a conducive national policy framework, independent regulators responsible for licensing and a multiplicity of providers in a competitive environment responsible for providing services*". (Section 2(a) (i))

7.3 Overarching challenges

Concerns were raised by many stakeholders in responses to the Green Paper about the effectiveness of the different entities established and what was identified as a lack of coordination between different institutions, duplication of resources and ineffective oversight and accountability.
The challenges raised in many ways mirror the general diagnostic included in the NDP which found that:

- There are often blurred and inconsistent areas of overlap;
- Parliament's oversight role needs to be enhanced;
- A more "*pragmatic approach to the intergovernmental system is required, recognising uneven capacity*"; and
- SOE's have overly complex objectives and governance structures. [281]

The NDP also recognises that there are problems in coordination between the different spheres of government, exacerbated by the "*wide variation in capacity, particularly at a municipal level*". It states that South Africa cannot "*afford to continue with the current level of confusion about how responsibilities are divided, shared and monitored across local, provincial and national government*". It proposes that in areas of low capacity, such as in some rural municipalities, local government must be allowed to focus on its core functions "*and not be too burdened with too many extra responsibilities*".[282]

The South African Local Government Association (SALGA) confirmed in supplementary submissions to the ICT Policy Review Panel that there are huge disparities in capacity between different

[281] Ibid, Page 23 and 39
[282] Ibid, page 356

municipalities. It stated that capacity challenges at a local government level need to be considered in developing policies and strategies on ICTs.

As indicated in the introduction to this Chapter, the NDP emphasises the important role that public entities can play in fulfilling policy goals and constitutional obligations, but cautions that such institutions should be established only when such public objectives will not be met by either Government and/or the private sector. Some submissions also highlighted this. For example, the SACF stated that state-owned companies or other public entities should only focus on areas where there is market failure or where there are clear public interest objectives that will only be met through establishing a state-owned operator.[283]

National Treasury meanwhile in its submission noted that in its view there are currently blurred roles and responsibilities between different entities and the Department and many overlaps.[284]

7.3.1 Key lessons and questions

In order to ensure that these challenges are addressed moving forward, it is useful to extract and repeat the broad considerations which should guide this review of institutional frameworks.

While regulatory principles are identified in Chapter 2 of this Discussion Paper, the questions and criteria suggested below provide a lens through which the ICT institutional framework can be better analysed. Most of these criteria are extracted from existing laws and rules/regulations (including Treasury rules and Department of Public Service and Administration regulations and guidelines). Key questions identified by the ICT Policy Review Panel to ask in relation to any institution include the following:

- Does the public institution or entity have a distinct mandate focused on meeting clearly articulated public goals as set by legislation and/or policy? The functions of such institutions must be specified in any law to extend clarity on the mandate.
- Are there any overlaps or conflicts between the mandates and responsibilities set for the entity and any other public institution?
- Are there any overlaps or conflicts between the mandates and/or responsibilities for the entity and those set for government department/s or any government agency?
- Has there been a thorough assessment to ensure that the mandate cannot or is not likely to be fulfilled by either the executive, the private sector or by NGO's/community organisations? The need for such an entity must be regularly assessed in light of this.
- Could the responsibility or function be better fulfilled through partnerships with non-governmental organisations and/or the private sector?
- Would self-regulation or co-regulation be a better alternative?
- Is the establishment of an entity the most feasible solution to the identified problem?

Once the mandate has been clarified in relation to the above, it is necessary to consider if the governance and institutional structures in place are aligned to this and if these are sufficiently

[283] SACF, Green Paper submission, page 64
[284] National Treasury, Green Paper submission, page 5

flexible to allow the institution to adapt to meet future requirements and the rapidly changing environment. Considerations include the following:

- Any public resources (including, for example, public funding, preferential access to other resources such as spectrum or /or other advantages) must be focused on delivering public value (i.e. meeting the defined goal/s) and funding mechanisms put in place must facilitate this.
- Public entities should be established, structured and managed in order to fulfil objectives set and ensure value for public money.
- The governance and institutional structures established must facilitate delivery and effective mechanisms must be put in place to ensure accountability and sanction for non-delivery in line with the PFMA.
- Parliament's oversight must be strengthened by putting in place a formal framework and mechanisms (including clear performance objectives and indicators) which would enable it to assess whether or not the Department and/or institution is fulfilling its goals and having the intended impact. Accounting officers and/or accounting bodies should be held accountable and, if relevant, sanctioned in line with the PFMA.

In considering the application of these considerations, it is also useful to look at best practice elsewhere. European Union State Aid Rules are related in many ways, though they focus on ensuring that state aid does not inhibit fair competition. These rules generally prohibit state aid to a company or sector unless it is a legitimate response to market failure or a "*necessary response to concerns about equity or wider social and political objectives*". The rules were established in the European Union Treaty to ensure that "*a company which receives state support*" does not gain an unfair advantage over competitors.

The term "state aid" is broadly defined to include grants and other advantages and would thus be considered in relation not only to grants but also additional spectrum allocations or reserved markets. The rules set out the circumstances in which exemptions to this will be granted in order to ensure a well-functioning and equitable economy. These exemptions apply to "*services of general economic interest (SGEI)"* which are "*economic activities that public authorities identify as being of particular importance to citizens and that would not be supplied (or would be supplied under different conditions) if there were no public intervention*". Public broadcasting, telecommunications and postal services have all been included in this general definition.

The European Union has stated that when these criteria are met mechanisms should ensure that State aid should "*not lead to undue market distortions*". They also state that intervention is only warranted "*if it's expected that the expected benefit, in terms of improving market outcomes, outweighs the expected cost of intervention*" and therefore "*if it is the best feasible remedy*". There are four cumulative conditions that are considered in determining whether or not public service compensation constitutes aid:

- The recipient must have clearly defined public service obligations.
- The parameters for calculating the compensation must be objective, transparent and established in advance.

- The compensation provided must not exceed what is necessary to cover all or part of the costs of fulfilling the mandate, "*taking into account the relevant receipts and a reasonable profit*".
- The level of compensation must be determined "*on the basis of an analysis of the costs of a typical well-run company*".[285]

All such entities have to have separate accounts so that these can be analysed in the case of complaints and by operators in their markets.

- **Are the suggested questions and criteria useful tools to incorporate into policy to assess the ongoing relevance and effectiveness of an institution?**
- **What other considerations should guide this?**

7.4 Overarching legislative framework

Institutions cannot be discussed in isolation from the broader governance and legislative framework, including the mechanisms to ensure oversight and accountability broadly.
As highlighted in the section above, the Constitution specifies that:

- Parliament is responsible for law-making and for holding the public sector accountable to laws and policies (including the executive and all public entities).
- The National Executive is solely responsible for development of national policy and for implementation of legislation.
- Provincial Governments and Municipalities have to develop laws, bylaws, policies and regulations on areas of their competence as defined in the Constitution.

A range of laws, regulations, rules and guidelines, including the PFMA and related Treasury Regulations, set out the tools and mechanisms for ensuring effective and efficient governance and further clarify the responsibilities of Parliament, the Executive, Accounting Officers and Boards of public entities. The PFMA establishes a framework for devolved responsibility and different layers of oversight with Parliament bearing overall responsibility for holding the Executive (or in the case of constitutional institutions the Board or equivalent) accountable.

Several submissions suggested that there are weaknesses in the implementation of this overarching governance framework. According to the submissions, there is a lack of coordination generally, failures in relation to implementation of laws or the objects of laws by the Department/Minister and/or public entities and institutions, challenges in relation to the Ministerial policy-making responsibilities and/or ineffective oversight and accountability at multiple levels.

Issues raised in relation to these areas are highlighted in the relevant sub-sections below.

7.4.1 Role of National Government

The Constitution of South Africa is clear: National policy-making is the prerogative of national government, with the executive bearing particular responsibility for this. The executive also bears

[285] European Commission, "Overview: State aid control", http://ec.europa.eu/competition/state_aid/overview/index_en.html

overall responsibility for implementation of laws though public institutions and other government agencies have some responsibility in relation to implementing their own legislation.

The executive is responsible for drafting Bills to implement policy prerogatives for Parliament's consideration. A particular Department or Minister's powers in relation to policy-making and the drafting of laws for consideration of Parliament is curtailed only with regards to any Bill that appropriates money or imposes or relaxes any national taxes, levies, duties or surcharges, taxes, levies etc. Such issues have to be raised in a Money Bill introduced by the Minister of Finance.[286]

The Electronic Communications Act, no 36 of 2005 ("the EC Act") in line with this empowers the Minister to make policies on "*matters of national policy applicable to the ICT sector, consistent with the objects of this Act and of the related legislation*" in relation to a number of strategic areas.[287]

A number of submissions to the Green Paper reinforced the importance of Ministerial policy leadership and the need for all public entities, Departments and agencies to be bound by White Papers and national policy. Some questioned, however, whether or not this responsibility has been effectively fulfilled consistently, citing instances of lengthy policy delays[288] and failure to enforce policy provisions. Several submissions raised concern about delays by Government in implementing its own policies and/or laws.

Meridict Systems stated in its submission that Government has always effectively galvanized industry players in the development phase of policy, but needed to strengthen the follow-through to ensure implementation.[289] ISPA in its response stated that the Department needed to strengthen its capacity to efficiently and effectively develop policy.[290]

Others highlighted delays in implementation of policies and laws.

The National Cybersecurity Advisory Council, for example, raised that, although the Minister was charged in the Electronic Communications and Transactions Act with developing a national e-strategy by 2004, to date this had not been finalised.[291] The Progressive Professional Forum raised delays in local loop unbundling noting that the Minister had required this by November 2011, but there had so far been no action.[292] The SACF highlighted that government did not always fulfil reporting obligations to international bodies such as the ITU and WTF.[293]

Some submissions proposed that the Minister and Department be given additional responsibilities. SALGA, for example, said that there is currently no comprehensive national map showing where fibre is laid across the country and no requirement that information on this should be shared and collated. It proposed that the DTPS should require in policy and related regulations that all entities

[286] Constitution of the Republic of South Africa, sections 73&77
[287] EC Act, section 3(1)
[288] For example, on policy direction related to spectrum
[289] Meridict Systems, Green Paper submission, page 4
[290] ISPA, Green Paper submission, page 27
[291] NCAC, Green Paper submission, page 7
[292] PPF, Green Paper submission, page 8
[293] SACF, Green Paper submission, page 13

holding this information must submit this to the Department within one month of promulgation of the rules and that any changes should be submitted within three months of fibre being laid/changed. The Department should be responsible for providing detailed maps of all existing and planned fibre networks (including current used and dark fibre). Information and detailed maps should be made readily available to all stakeholders, including municipalities. [294]

Several stakeholders suggested that the roles of policymaker and shareholder in state-owned companies be separated.[295] There is a need to further assess the implications of such a proposal in order to determine whether the benefits would outweigh the challenges that might arise. As the submissions did not include specific details of what problems had arisen from the co-location of these functions, it is difficult at this time to thoroughly assess this. It is noted, though, that it might be difficult to implement, for example, universal service goals if policy and the key performance indicators for an entity agreed on with the shareholder are not fully aligned, and the entity reports to a different Parliamentary Portfolio Committee than the policy-maker. If the concern is regarding policy possibly advantaging a state-owned company to the detriment of overarching public policy goals, there might be alternative ways to address this, by, for example, setting rules similar to the State Aid Rules in Europe (see above).

Others meanwhile suggested there is a need for greater leadership and coordination within government and between government and public entities and institutions.

The SACF suggested that the Ministry should maybe be located in the Presidency to ensure it had effective oversight over other Government departments and spheres of Government. The SACF stated that the Minister should be given responsibility to coordinate the roll-out of infrastructure and address challenges experienced at a municipal level such as approval of rights of way. [296]

Several others suggested that there needed to be central coordination to achieve broadband roll-outs. These include the NCAC which proposed that a "function" be established in the Presidency with oversight of all related issues, noting that some of the essential elements to building a safe and secure digital environment cross numerous departments and agencies (including, for example, the DTPS, the Department of Justice, the Security Cluster, consumer protection agencies and ICASA).
It should be noted that the Presidential Infrastructure Coordinating Commission (PICC) project focus on ICT infrastructure development (Strategic Integrated Project 15) does coordinate infrastructure roll-out in the sector. It is chaired by the Minister for Telecommunications and Postal Services and focuses on:

- The roll-out of national broadband infrastructure
- Digital television terrestrial transmitter roll-out [297]

[294] Salga, Green Paper submission, pages 2-3
[295] SACF, Green Paper submission, page 64, SOS Green paper submission and Paul Hjul Green Paper submission
[296] SACF, Green Paper submission, pages 65-66
[297] http://www.gov.za/issues/national-infrastructure-plan/

7.4.2 Role of local government

As highlighted in the SACF submission above, several respondents raised a concern that implementation is impeded at times at a local government level. SALGA in its submission and in supplementary information provided highlighted that there are capacity challenges at many municipalities. It stated that while some (predominantly those in metropolitan areas) have plans integrating ICTs with e-government services, many have only focused on internal ICT related needs and some do not have a budget for ICTs at all. It emphasised the need to respect the separation of responsibilities for the different spheres of government as set out in the Constitution.

The Association and several provincial governments and municipalities further suggested that local and provincial government be consulted when developing laws, policies and implementation plans and that local government be invited to sit on advisory and/or consultative committees to ensure their challenges are addressed (such as the National Broadband Council). It was also proposed that guidelines be developed to assist those local governments with particular problems.

- **How, if at all, can Government's role be strengthened?**
- **Do you agree with the suggestion that the DTPS take charge of mapping fibre installations? If so, are there any security or confidentiality issues that would need to be addressed?**
- **Do you have any comments or proposals that the shareholder and policy-making functions be separated?**
- **What mechanisms can be introduced to ensure work together more effectively?**

7.4.3 Oversight and accountability

Many of the challenges identified above and in sub-sections below also point to ineffective oversight and accountability. Parliament, as noted, has overall responsibility for holding the Executive and all public institutions to account and scrutinising their plans and activities. The Legislature has developed a number of processes to strengthen its oversight. The PFMA and Treasury Regulations have also included mechanisms to enhance oversight and accountability by, for example, requiring that all public entities are not only subject to independent financial audits but also undergo performance audits.

Development of clear mandates and clarity on the specific functions of the different public entities should assist in addressing some of the concerns raised. Regular reviews by Government and/or Parliament of the ongoing relevance of specific institutions and/or policy plans against clear criteria and questions could further assist in this. It might also be possible to incorporate into such reviews specific tools such as a form of peer review (360 degree review) including assessment of plans and institutions by stakeholders, including beneficiaries. It could further assist if specific powers or functions are built into policy and legislation to ensure that Parliament's activities in relation to oversight and accountability are evidence based.

- **How could oversight and accountability be enhanced?**
- **Please include concrete suggestions that could be considered for inclusion in policy and/or legislation.**

7.5 Licensing and regulation of ICT sector

This section includes options for strengthening the regulator based on submissions made by stakeholders in the Green Paper process and research specifically commissioned by the Department. The research conducted is available on the Department's website.

ICASA is a legislative body, established by the ICASA Act, no 13 of 2000 to regulate broadcasting, electronic communications and postal services "*in the public interest*".[298] A 2014 amendment to the ICASA Act introduced additional responsibilities for electronic transactions (e-commerce), stating that the regulator has the power to study and make recommendations to the Minister on promoting the development of e-commerce and conduct research into the regulation of such transactions.[299]

ICASA is primarily responsible for overseeing the implementation of four key laws:

- The **EC Act** which sets out, among other things, the different licence categories, the specific responsibilities of different services and specific duties for the regulator.;
- The **Broadcasting Act**, no 4 of 1999 which primarily deals with the SABC (its establishment, governance, funding and mandate);
- The **Postal Services Act** 124 of 1998, which provides for the regulation of postal services;
- The **ECT Act** deals with electronic transactions.

Section 3 of the ICASA Act states that the Authority is "*independent, and subject only to the Constitution and the law, and must be impartial and must perform its functions without fear, favour or prejudice*".

The ICASA Council is the executive authority of the regulator. There are nine Councillors. The CEO is the accounting officer and has key responsibilities laid out in the Public Finance Management Act (PFMA) for ensuring adherence to sound financial management practices.

7.5.1 Submissions on ICASA

This does not repeat those representations reflected in other Chapters related to specific areas of ICASA's mandate, but rather outlines broad issues raised. Specific proposals made by stakeholders on areas such as funding, structure etc. are included in the relevant sub-sections below.

Numerous submissions raised frustration at what they described as the ineffectiveness of ICASA and stated that it is imperative that the regulator is strengthened if policies are to be implemented. While some focused on specific areas such as adequate resourcing, others expressed concern about non-compliance by the regulator with national policy objectives and legislative provisions, and with poor administration e.g. failure to respond to e-mails, losing of applications and key documents.

Many raised a particular concern about the regulator's capacity to enforce compliance with legislation, regulations and licence conditions. As ABT stated in its submission, "*ICASA is renowned*

[298] Postal services was added to ICASA's mandate with the introduction of the EC Act in 2005
[299] ICASA Act, Section 4(3)

for its regulations" but unfortunately has a *"bad reputation in policing these*".[300] The Wireless Applications Providers' Association (WAPA) alleged that the regulator does not act against illegal operators even when it has been informed about such unlawful operations. It said:

> *"While the Authority continues to carry out inspections of licensed operators, and makes repeated and increasing compliance requests and requirements of these operators, the illegal operators continue to show a disregard for the law by operating as usual despite having been reported for acting illegally."301*

Concerns were also raised about whether ICASA is sufficiently capacitated to fulfil its responsibilities as an economic regulator. For example, ISPA indicated that the engineering and spectrum management department had more vacancies than employees at the end of March 2014, while the markets and competition unit had only three staff members. It said that this had resulted in "*substantial and regrettable*" opportunity cost.[302]

Others questioned its effectiveness in regulating all sectors. The SACF stated that the regulator needs to be "*dramatically strengthened*" if it is to fulfil the policy goals and requirements in the postal sector,[303] and the NAB referred to what it called "*current inadequacies*" in dealing with broadcasting.[304] Internet Solutions stated that ICASA has "*failed to implement policy and regulate the telecoms sector, with the possible exception of the effective MTR intervention. This could be as a result of institutional competency and/or lack of resources, lack of regulatory independence and/or lack of experience of some of ICASA staff members*".[305]

The DG Murray Trust, however, raised a more nuanced concern. It asserted that the regulator's responsibilities for economic regulation in many ways conflict with its role as a Constitutional Institution meant to protect the rights of citizens. It said that in light of developmental needs and ambitions in South Africa, ICASA should focus a larger portion of its efforts and resources on social welfare objectives.[306]

The National Broadband Plan (SA Connect) also refers, albeit indirectly, to ICASA's apparent failure to fulfil its current mandate and obligations. It states that there is a need to strengthen ICASA's "*capacity to act on already legislated parts of its mandate which, if implemented, would facilitate broadband infrastructure sharing*".[307]

While submissions generally indicated challenges with ICASA, none suggested concrete solutions to these, beyond the need to increase the capacity and ensure the regulator is adequately resourced (including with skills and funds). Funding is dealt with in more detail below and the structure, autonomy and accountability in other sections.

- **How can policy and/or legislation address perceptions of non-compliance by the regulator with the objectives of law and with national policy, while still ensuring its autonomy?**

[300] ABT, Green Paper submission, page 5
[301] WAPA, supplementary submission, page 5
[302] ISPA, Green Paper submission, page 27
[303] SACF, Green Paper submission, page 10
[304] NAB, Green Paper submission, page 7
[305] Internet Solutions, Green Paper submission, page 7
[306] DG Murray Trust, Green Paper submission, page 18
[307] DTPS, South Africa Connect, page 32

7.5.2 Status and independence

As highlighted previously, section 192 of the Constitution states that legislation must establish an independent broadcasting regulator. South Africa, as noted, has endorsed WTO principles requiring the establishment of a telecommunications regulator *"separate from, and not accountable to, any supplier of basic telecommunications services*". The ICASA Act defines the Authority as independent. It states that the regulator "*must function without any political or commercial interference*"[308] and sets out functions that ICASA is solely responsible for (licensing, monitoring and enforcement of compliance with rules, adjudicating complaints about alleged non-compliance, promulgating regulations on "*any matter consistent with the objects*" of the Act and managing the radio frequency spectrum).[309]

The regulator is listed as a Constitutional Institution in schedule 1 of the PFMA which sets out special accountability and oversight arrangements for such institutions, in recognition of their status in the Constitution. While, for example, the director general of a Government department is the "*designated accounting officer*" of other public entities, Schedule 1 institutions are regarded in the same way as Government departments and have their own accounting officer accountable for sound financial management of the entity (Chapter 5 of the PFMA). Similarly, while the relevant Minister is the executive authority of Departments and public entities, the Chairperson of the Board of a Constitutional institution is given this responsibility in related Treasury Regulations.[310]

The EC Act states that the Minister may issue policy directions to the regulator on any matters and priorities except regarding the granting, amendment, transfer, renewal, suspension or revocation of a licence. The Authority must "*consider*" policies made by the Minister and policy directions issued.[311]

The need to reinforce formal and *de facto* independence of ICASA in relation to licensing, rule-making and monitoring and enforcement, while balancing accountability and oversight to ensure it efficiently and effectively fulfils national policy objectives was at the core of many of the submissions on independence. The balancing of these priorities is an ongoing debate not only in South Africa but in other countries and jurisdictions.

As stated by the ITU in its regulatory toolkit:

> *"Absolute independence of regulatory bodies is neither possible nor desirable. A regulator should not set and implement its own agenda. 'Independent' regulators are expected to be subject to government oversight and a system of checks and balances.*
>
> *"Effective regulation that supports sustainable investment requires some independence from political influences, especially on a day-to-day or decision-by-decision basis. The regulatory body must be an impartial, transparent, objective and non-partisan enforcer of government-determined policies by means set out in controlling statutes of the regulator, free of transitory political influences. The regulator should also be independent from the industry that supplies ICT services.*

[308] ICASA Act, Section 3(4)
[309] ICASA Act, Section 4
[310] National Treasury, 'Treasury regulations for departments, constitutional institutions, public entities, Parliament and provincial legislatures: Issued in terms of the Public Finance Management Act", March 2001
[311] EC Act, sections 3(2) to 3(5)

> *"The regulator should implement the policy of the government and only make decisions that are within its legal authority. However, regulators need insulation from political intervention, so that the regulatory process is not politicised, its decisions are not discredited and the policy of the government is implemented."*[312]

Submissions focused on autonomy from both industry and government.

The SOS and MMA proposed that the status of ICASA in relation to Chapter 9 of the Constitution should be clarified by ensuring it is referred to in all relevant sections. Cell-C said that independence from government is critical but does not imply that it should *"act alone without liaison with its Ministry, its industry and its public*". It stated that according to international benchmarking conducted, policies and policy directions could be binding as the regulator would be able to challenge these in court if they encroached on its independence. Cell-C further stated that it believes that ICASA's reliance on its "independence" has led, at least in part, to ICASA's failure to take its statutory and constitutional duties seriously enough[313].

The DG Murray Trust argued that "*ICT industry players with significant market power create 'Resource Position Barriers' through the use of their 'strategic resources' which affects the ability of the regulator to effectively regulate, resulting in 'Regulatory Capture', thus giving commercial industry players a competitive edge over ICASA*". This, the Trust said, resulted in prioritising industry over public need. [314]

Many representations stated that the current powers of the Minister in relation to policy directions are clear and appropriate given the need to protect independence.[315]

Intel in its submission, while broadly agreeing with this, suggested these provisions could be modified. It stated that "*the Authority ought to retain the broad discretion which enables it to consolidate its institutional independence and avert institutional capture, while at the same time being accountable for the translation of policy objectives (expressed as ministerial directives) into regulatory outcomes*". It proposed in line with this that the Authority should be compelled to give reasons if it decides not to implement a direction or if it decides to "*exercise its powers in a manner which is not wholeheartedly consistent with the ministerial policy directive*". The circumstances in which the regulator decides not to implement a policy direction at all could, Intel proposed, be limited to specific areas such as if a direction is *ultra vires* or against the rule of law.[316]

ISPA suggested that the Ministry make public submissions on any regulations during the ordinary public consultation processes undertaken by ICASA.[317]

It is noted that the current provisions in legislation do not define or make any distinction between "policies" and "policy directions". Both of these are referred to in section 3 of the EC Act in the same

[312] http://www.ictregulationtoolkit.org/en/section.3107.html
[313] Cell-C, Green Paper submission, page 14
[314] DG Murray Trust, Green Paper submission, page 17
[315] This includes the Link Centre, SACF, NAB and operators such as MTN and M-Net and MultiChooice
[316] Intel, Green Paper submission, pages 59 - 60
[317] Ispa, Green paper submission, page 27

provisions and it is stated that the regulator must "consider" both, therefore seemingly giving national policy set by Government the same status as a direction in relation to a specific issue.

OPTIONS

These options reflect proposals from stakeholders in their submissions and are not therefore necessarily mutually exclusive.

Option One: Status quo

Provisions on independence and those outlining the Minister's powers in relation to policy and policy directions would remain as is. Other mechanisms, such as parliamentary oversight, would be used to address accountability (see below).

Option Two: Amend the Constitution to reinforce independence further

The Constitution would be amended to include ICASA in section 181 which lists state institutions that strengthen constitutional democracy.
Note that the Constitution sets out an appropriate and particularly laborious process for its amendment. Only Parliament can amend the Constitution, moreover, and therefore a final determination on this would not be finalised in a White Paper. If this is your preferred option, please also address the different nature and function of ICASA and the other institutions included in section 181 which all perform some sort of watchdog role over Government and other public institutions/processes, unlike the Authority. ICASA is a sector regulator while others are not.

Option Three: Requirements on fulfilling policy objectives are strengthened

As per the Intel recommendation, the Act would require that the regulator implements national policy objectives and legislation. ICASA's discretion in how it addresses Ministerial policy directions is retained, but policy and law require the regulator to give reasons if it decides not to implement a direction or varies its approach to deal with the identified issue.

- **Are there other mechanisms which could be put in place to ensure the regulator is independent but acts in line with government policy and policy objectives?**
- **Is there a need to distinguish between national policy and policy directions? If so, how would you propose the two are defined in order to ensure sufficient distinction?**
- **What additional mechanisms, if any, could be put in place to avert regulatory capture?**
- **What mechanisms could be put in place to enhance public involvement in the regulator and ensure public needs are considered and addressed?**

7.5.3 Oversight and accountability

Any independent institution must also be accountable for implementation of its public mandate and key provisions of legislation, its use of public funds and resources and its implementation of annual objectives agreed on with Parliament. Legislation and general laws such as the PFMA and related regulations outline mechanisms to hold public institutions to account for efficient and effective management of public resources. These include provisions requiring the drafting of a performance plan for Parliamentary approval and auditing against this plan.

In addition, the ICASA Act includes specific provisions to "*monitor and evaluate the performance of*" the Council collectively and individual councillors.[318] These have however not been implemented.

Several submissions suggested that Parliament's oversight capacity be enhanced so that it can effectively measure the impact of activities of the regulator against the national policy objectives. In other chapters of this Discussion Paper there have also been suggestions that policy and legislation require specific reporting by ICASA to Parliament on key issues (such as compliance by the SABC with its mandate and reports on diversity and fair competition)

The NAB proposed that, in addition to the general functions currently outlined in the ICASA Act and related legislation, the law should introduce a clear list of general duties to which the regulator could be held accountable. [319]

- **Should the policy introduce additional reporting requirements for ICASA to enable Parliament to proper fulfil its responsibility to hold the regulator to account in terms of its mandate? If so, what provisions should be included?**
- **Would a list of general duties as proposed by the NAB assist in clarifying ICASA's responsibilities further? If so, what should be included in such a list of duties?**
- **Are the current performance management provisions for ICASA implementable?**
- **Do the performance management provisions assist in increasing accountability of the regulator? If so how could they be strengthened?**
- **What other tools and/or mechanisms could be introduced to assist Parliament in strengthening its oversight capacity?**

7.5.4 Responsibilities

Previous chapters/policy options papers identify a number of sector specific responsibilities. This section will not repeat these. It instead looks at broad responsibilities identified across these chapters as well as related amendments to legislation introduced in 2013 which were deferred to the policy review process (e.g. spectrum management and adjudication of complaints).

7.5.4.1 General issues

In previous chapters/policy options papers, it has been suggested that the regulator should be required to more effectively collate information that it already receives, make it publicly available and use this and other research to publish regular reviews of the markets it regulates, industry statistics and assessments of the impact of its interventions.

Several submissions also highlighted this as critical. The SACF stated, for example, that the regular production and publication of collated reports would both strengthen the regulator's knowledge of the sectors it regulates and provide the public with information necessary to monitor progress.[320]

[318] ICASA Act, Section 6A
[319] NAB, Green Paper submission, page 9
[320] SACF, Green Paper submission, page 13

Numerous submissions also stressed the need for Regulatory Impact Assessments before imposition of any rules or inviting major licences.[321] Telkom stated in this regard that these be limited to regulations which are likely to cost operators more than R1 million so that the regulator assessed whether or not the costs outweighed the benefits.[322]

ICASA is also responsible for collecting and collating data for submission to the International Telecommunications Union. The regulator has recently published a call to licensees to submit some key information to assist it in this.

Concern has further been raised about whether or not ICASA has sufficient powers to require licensees to submit the information required to conduct regular market reviews. It has been suggested that Chapter 10 of the Act (competition matters) could be interpreted as limiting its ability to publish information on markets it regulates without conducting a full market inquiry.

- **Should policy and law require ICASA to publish regular reports? If so, what reports should it be compelled to publish?**
- **Should it be required to conduct regulatory impact assessments and publish reasons for all regulatory decisions?**
- **Is there a need to strengthen ICASA's powers to require licensees and other stakeholders to submit information to it?**

7.5.4.2 Spectrum management

In 2013, draft amendments to legislation put forward by the then Minister of Communications included a proposal to establish a Spectrum Management Agency and remove the responsibility of management of spectrum to this new institution. According to the draft provisions, the Agency would also provide advice on spectrum policy. The draft amendments were deferred pending the finalisation of the ICT Policy Review process. Spectrum management is currently one of the responsibilities given to ICASA.

National Treasury in its submission to the Green Paper stated that it did not believe there is a need for a separate entity to manage spectrum and that this would be "*a very costly option*". Many of those that made submissions on spectrum management concurred and stated that ICASA should retain the right to manage the frequency spectrum in line with spectrum policy set by Government.[323] ISPA suggested that the focus should rather be on adequately capacitating the Department so it could fulfil its policy-making role effectively and ensuring ICASA has the skills to implement spectrum policy.[324]

Internet Solutions however suggested a variation to both the current provisions and the proposals in the Bill. It proposed that spectrum management be handed to a new entity which would fall under ICASA. It stated there have been "*myriad challenges … experienced by licensees at ICASA with respect to spectrum allocation and management*". The internet service provider suggested that

[321] These include the SACF, the SABC
[322] Telkom, Green Paper submission, page 11
[323] This includes the SACF, the NAB, M-Net & MultiChoice, Telkom, the MMA, ISPA, the Link Centre and MTN
[324] ISPA, Green Paper submission, page 13

countries which have set up separate spectrum management agencies should be benchmarked, including France, Australia, the USA and Jamaica. [325]

Eskom supported the idea of establishing a separate Spectrum Management Agency to "*focus exclusively on spectrum licences and addressing interference complaints*". It stated that increased use of wireless applications would require faster turnarounds to facilitate the roll-out of infrastructure and highlighted the need to clarify the policy-making and management roles.[326]

OPTIONS: SPECTRUM MANAGEMENT

Option One: Status quo but strengthened

ICASA would retain responsibility for managing the frequency spectrum in line with government policy. The Authority would however be required to strengthen its capacity and at the very least fill all vacancies in the engineering and spectrum management unit. The Department would also ensure it has sufficient capacity to fulfil its responsibilities in relation to development of spectrum policy efficiently and effectively. If necessary, policy and law could more clearly define the two roles.

Option Two: Create an agency reporting to ICASA

Policy and law would that a separate entity is established within ICASA to ensure that there is a greater focus on this area. The policy would have to specify the powers of the agency in relation to this (i.e. which issues it could decide itself and which would have to be referred to ICASA) and the structural arrangements to be put in place (e.g. should there be a specific Councillor appointed to address spectrum management issues)

If this option is selected, please include proposals on what powers you think such an entity should be given and how it should relate to ICASA.

Option Three: Separate agency

A separate agency would be established. If this option is considered, there would need to be further research into the viability and funding of such an entity, as well as its relationship to ICASA and the Minister, its structure and the appointment of members of the Board. It would be important further to ensure that this did not inadvertently result in further delays in issuing spectrum and that there would be a close working relationship between the regulator and the agency.

7.5.4.3 Complaints and compliance

ICASA is currently required to establish a Complaints and Compliance Committee (CCC) of no more than seven members including one Councillor. The Chairperson of the CCC must be a judge, magistrate or advocate or attorney with at least 10 years' experience. The Committee adjudicates on complaints against licensees on non-compliance with the law, regulations and licence conditions. This includes complaints from members of the public and allegations of transgression emanating from ICASA. The CCC makes a finding on any complaint following a hearing. It does not have the power to sanction licensees but must recommend to the Council what action it proposes be taken.[327]

[325] Internet Solutions, Green Paper submission, pages 21-22
[326] Eskom, Green Paper submission, page 5
[327] ICASA Act, sections 17A-17E

The 2013 draft amendments to the ICASA Act proposed that the CCC be restructured as a separate Commission, appointed by the Minister rather than the Council and its ambit be extended to general non-compliance with the Act rather than only allegations of breaches by licensees. This amendment was deferred pending finalisation of the policy review process.

The Link Centre in its submission stated that the proposed separate Complaints and Compliance Commission would "*probably be*" unconstitutional, given that it would be appointed by the Minister and thus not meet criteria of independence of broadcasting regulation.

It is noted that there is a backlog of complaints before the CCC. The Commission is made up of external and therefore part-time members and the seven members are required to deal with complaints about licensees in all regulated sectors. Given this, the policy review should also consider whether the current structure should be adapted to address this by, for example, extending the number of members, establishing specific committees focusing on particular sectors or issues and providing for mediation processes.

OPTIONS: COMPLAINTS AND COMPLIANCE

Option One – Status quo

The status quo would remain i.e. ICASA is required to establish a Complaint and Compliance Committee (see above). This option does not preclude amending current provisions to strengthen ICASA's enforcement capacity. If this is your preferred option please therefore include any amendments that you believe would strengthen enforcement.

Option Two – Establish a Complaints Commission

A Complaints and Compliance Commission would be established as a separate entity to adjudicate complaints. Such a body might be responsible for imposing sanctions on licensees or could, as currently, make recommendations to ICASA in relation to this. *If this is your preferred option, please indicate what existing problems you believe this would address. Please also indicate how this should be structured and how members would be appointed (and appointment criteria). While appointment by the Minister would be one such option, it is not necessarily the only one.*

Option Three – Alternatives

The CCC structure would be adapted and, for example, specific committees established to adjudicate on complaints relevant to the different sectors/additional issues. Policy/law would allow for the appointment of additional commissioners/experts dependent on need to boost capacity and address any back-logs and/or introduce additional alternative dispute resolution mechanisms to allow, for example, for quicker processing of complaints. *If this is your preferred option, please expand on how you propose this could be structured and implemented*.

- **Which is your preferred option? Please motivate your response.**

7.5.5 Reviewing ICASA decisions

Under current policy and legislation, ICASA decisions can only be reviewed by a court.

In countries such as the UK, which has a similar system, concerns have been raised by both consumer groups and the regulator that this can result in an "over-legalistic approach" and delays in effecting rules aimed at protecting consumers due to ongoing and lengthy reviews of decisions on technicalities rather than the substance of requirements.[328]

The DG Murray Trust raised a similar concern in its submission, highlighting that big ICT companies could have specific strategies to delay regulations through ongoing court challenges. As regulators do not have the same resources to fight litigation, ICASA might be prone to consider more seriously possible litigation by industry than its public interest obligations in order to avoid court challenges.
The Link Centre also raised the need to explore alternatives so that court actions did not unnecessarily delay processes. It proposed that a specific court responsible for handling cases against ICASA be established.

OPTIONS: REVIEWING DECISIONS

Option One: Status quo

The status quo would remain, i.e. only a court can review ICASA decisions. ICASA would be given specific resources to assist it in covering the costs of litigation.

Option Two: A special communications court is set up

A specialised court could be established to resolve litigation around ICT regulation. This would be established in a similar way to the Competition Appeals Court or could be an extension of the competition court's mandate.

Option Three: Alternative dispute resolution mechanisms

Alternative dispute mechanism/appeal structures could be introduced to resolve, wherever possible, challenges outside of the courts. These could be limited to certain types of challenge and would not remove the right of any person to take the regulator to court.
Please select your preferred option and elaborate on this.

7.5.6 Structure

The ICASA Council consists of nine full–time members, including the Chairperson, appointed by the Minister on the approval of Parliament following a public nomination process facilitated by the legislature.[329] Section 8 of the ICASA Act states that a councillor may only be removed from office by Parliament for limited reasons (for example, misconduct, absence from three consecutive meetings except on good cause shown, failure to disclose an interest etc.). The process of appointment of members of the regulator and protection against arbitrary removal are seen as important mechanisms in promoting independence of a body such as ICASA. ICASA is responsible for appointing its own CEO and staff. The CEO is the accounting officer for the Authority.

Several stakeholders made recommendations on changes to the structure of the Council

[328] See http://www.theregister.co.uk/2014/02/05/ofcom_appeals_reform_backed/ for example
[329] ICASA Act, section 5

The SACF suggested that ICASA be restructured to include executive and non-executive members of Council/the Board similar to the electricity regulator. It proposed that there should be no more than three executive members with the others serving part-time in a non-executive role. It stated that this, together with the development of a clear Delegation of Authority Framework, would resolve current confusion on the roles of Council versus management. [330]

The NAB also proposed a mix of executive and non-executive members of Council and suggested that the number of councillors be reduced "*by natural attrition*" to at least five members – one of whom should be a chairperson for broadcasting. It noted that the Canadian regulator has two standing committees and vice chairpersons for telecommunications and broadcasting. The Association also highlighted that the British regulator has a Content Board responsible for content issues as well as a Consumer Panel. [331]

ISPA endorsed an integrated board, with the CEO and one or two other executives. Non-executives it proposed should include specialist expertise including economists, consumer champions and academics. Consultative committees under the Board would strengthen this structure.[332] Vodacom did not make any specific recommendations on the size of Council, but stated that current provisions were "*cumbersome*" and did not promote quick decision-making. It proposed that legislation also set out the term of office of the CEO so that s/he had security of tenure as this would promote independence further.[333]

Research commissioned by the Department in 2012 included some international benchmarking of the structure of similar regulators – including international converged ICT regulators and similar South African entities. The full research is available on the DTPS website. In summary, all but one of the ICT regulators included in the benchmark (in the UK, Canada, Australia, Tanzania and Uganda) have integrated boards, including both full-time and part-time members. The ratio of executive to non-executive members varied between countries:

- In Australia, the CEO is the Chairperson of the regulator, the law states that the Vice Chairperson should also be full time and there should be between one to seven additional members either full or part time.
- In the UK, Ofcom has nine board members, three of whom are executive members.
- The Tanzanian regulator has seven members, including one executive member (the director general or CEO).
- In Uganda, there are also seven members and one executive member – the executive director. Other members are nominees from specific institutions such as the law society, professional engineers and the public.
- In Canada, there are no more than 13 full-time members appointed to the communications commission. The CEO is the chairperson of the CRTC. There are two vice chairpersons (one for broadcasting and the other for telecommunications). The CRTC does not regulate postal services.

[330] SACF, Green Paper submission, pages 64 & 66
[331] NAB, Green Paper submission, page 8
[332] ISPA, Green Paper submission, page 28
[333] Vodacom, Green Paper submission, page 80

The research also looked at the structures of similar institutions in South Africa. The National Energy Regulator of South Africa has five part-time members (including the chairperson and deputy chairperson) and four full-time members (including the CEO and members responsible for particular sectors).

OPTIONS: APPOINTMENT PROCESS

Although there were no submissions on the appointment and removal of Council members, many stakeholders indicated broadly that there is a need to ensure that the regulator has sufficient expertise to fulfil its mandatory obligations.

It is noted that it is important that the appointing body has the capacity to thoroughly assess and evaluate nominees against legislative requirements and identify what experience/expertise is most needed when filling a vacancy. It is further essential that thorough checks are done on candidates before appointment, including, for example, screening to ensure the candidate and his or her family have no interests in any entities that could be perceived as conflicts of interest, credit checks, verification of qualifications, confirmation of past work experience cited etc.

The options below deal specifically with the appointment process.

Option One: Status quo

The status quo would continue: Parliament calls for nominations and, after a public process, recommend a short-list of members for appointment. The Minister selects his/her preferred candidates from a short-list and submits these for final approval by the legislature.

Option Two: Appointment committee

Parliament or Government could establish an appointment committee through public nomination .The appointment committee would recommend members to the Council. The committee could include members of Parliament, government and other stakeholders/experts.

- **Please motivate and elaborate on your preferred option.**
- **Are there alternative appointment processes you propose for consideration?**
- **Please also comment on suggestions made on strengthening the evaluation of candidates before appointment**

OPTIONS: STRUCTURE OF BOARD/COUNCIL

The options listed below are not mutually exclusive but rather deal with the specific issues raised – i.e. the structure and size of Council.

Option One: Integrated Board or status quo?

- **Do you agree that the current Council should be replaced by a board including both executive and part-time non-executive members?**
- **How many executive and non-executive members do you propose sit on the Council? How many members should be full-time and how many part-time?**

In responding to the above, please consider the implications of your preferred option, including how to ensure sufficient expertise to cover all the sectors regulated and how to ensure that part-time members have such expertise but are not perceived as being conflicted.

Option Two: Vice chairpersons/special committees

The Council could include vice-chairpersons with specific responsibility for particular areas: i.e. audio-visual content, infrastructure and services, electronic transactions and/or postal services. There could also be specific committees established to oversee spectrum management (see above). In addition, the Council could be required to establish a number of advisory committees (as per the UK as well).

- **Do you agree with the suggestion that there be specific committees to ensure specific attention to key sectors?**
- **Should the regulator be required to establish any additional committees?**

7.5.7 Funding

Funding is seen as a key component of independence both from government and from operators.

ICASA is currently financed from money appropriated by Parliament. Section 15(1A) of the ICASA Act specifies that it may also "*receive money determined in any other manner as agreed between the Minister of Communications in concurrence with the Minister of Finance and approved by Cabinet*". This latter clause was added after the promulgation of the EC Act and in effect gives the two Ministers broad ranging powers to allow the regulator to, for example, retain certain fees to cover services without necessarily having to amend the Act. No alternative funding mechanisms have however been introduced since the introduction of this clause, though ICASA has been allowed to retain interest earned on its funds.

Section 15(3) states that any revenue received by the Authority "*other than that in accordance with sub-section 1*" must be paid into the National Revenue Fund ("the NRF") within 30 days of receipt.

The adequacy of and mechanisms for funding ICASA were raised in most submissions. This was linked in many of the representations to the need to strengthen the capacity of the regulator to cost its activities and budget appropriately. Almost all of these submissions said that ICASA needed to have adequate resources to ensure it can implement policies and laws effectively and independently. Others noted that ICASA had not spent its entire budget in recent years. The SACF said that *"(i)t is imperative for the sound operation of the Authority that it be able to quantify the projected operational spend; and in doing so be able to motivate for the proposed budget*."

In relation to the funding model, most proposed a hybrid model, with the regulator retaining a portion of the fees it collects to cover the costs of regulation.

The research commissioned by the Department on funding models noted the following:

- ICASA is the only ICT regulator benchmarked that does not retain any fees, levies or charges. While the percentage of government contributions against total revenue at other similar

regulators varies extensively (from over 99% in the case of the Australian Authority to 0% in Tanzania and Uganda), all of the others retain at least some of the funds collected.

- The fees and levies payable in the countries benchmarked are determined transparently, with the regulator required to varying degrees, to show that the expenses calculated to determine the fees are justifiable and proportionate. In the majority of cases, moreover, the regulator is required to review such cost-based fees annually, and, for example Ofcom in the UK has to first consult stakeholders on its work-plan and priorities for the upcoming year before costing this and determining the licence fees payable in the following year based on this. Ofcom has further to show in its audited financial statements the actual expenditure for each activity/priority and deduct any surpluses raised from subsequent levies.
- One of the core principles underlying the determination of fees, levies and charges across all these regulators is recognition that those that directly benefit from regulation (i.e. licence holders) should cover the costs associated with this, but that such costs should not excessively burden operators and therefore users/audiences or limit investment in the sector.
- ICASA was also the only South African entity benchmarked which does not retain any of its fees. NERSA and the Financial Services Board determine fees and levies annually on a cost-recovery basis (similar to international ICT regulators benchmarked). The Competition Commission is slightly different as it does not authorise, register or regulate a particular sector, and thus there are no easily identifiable beneficiaries that could be charged fees/levies (the public is the ultimate beneficiary of fair competition). Even it though bases some of its fees on cost recovery – and for example, retains filing fees and deducts the direct costs incurred for imposing fines (such as legal fees) before transferring the penalty fees to Government.

The research recommended that if a hybrid funding model is to be adopted, it be phased in to ensure that the regulator has the capacity to cost all its activities so that fees are cost-based. It noted further that a hybrid model could be adapted to increase direct accountability to the sector regulated, but that there will always be particular mandates which should be covered by government, in particular those related to key public interest objectives such as inquiries into fair competition.

OPTIONS: FUNDING ICASA

Option One: Status quo – ICASA

As currently, ICASA's budget would be approved by Parliament and funds allocated from the fiscus. ICASA is required to hand over all fees collected

Option Two: Self-funded

ICASA would be completely self-funded. Its budget would still be approved by Parliament and it could be required to hand over surplus funds collected.

Option Three: Hybrid

ICASA would retain some of the fees collected on a cost-recovery basis so that the sectors regulated cover the costs of regulation. The determination of these fees would have to be transparent and

proportionate. Certain of the mandates would be covered by government if there is no matching revenue stream. There are a range of variations possible within a hybrid model as shown by the benchmarking in Australia and the UK.

- **Which model do you think would best ensure ICASA meets its mandate?**

If the hybrid model is preferred please provide recommendations on which fees could be retained by the regulator, which handed over to the national revenue fund, and what aspects of the mandate should still be funded by government.

7.6 Self- regulation and co-regulation

Areas for possible self-regulation and co-regulation are identified in previous Chapters. The EC Act currently provides for co-regulation of a code of conduct for broadcasters (section 54) and self-regulation of advertising content by the Advertising Standards Authority.

Several submissions suggested that there should be increased co-regulation and/or self-regulation. SACCI, for example, supported the development of "*voluntary, consensus-based standards that enable interoperability*".[334] The NCRF suggested that industry bodies could play a role in mediating conflicts within the community radio sector (see Chapter Five: Policy Options – Audio and Audio-visual Content Services). WASPA, WAPA and ISPA moreover emphasised the importance of reinforcing the principle of self- and co- regulation in policy stating that it had played a "*significant role*" in addressing consumer complaints.[335]

What might be needed is a clear framework for the accreditation of self-regulatory and/or co-regulatory mechanisms, streamlined across different public entities/government so that similar criteria are considered by bodies such as ICASA, the FPB and the Consumer Commission.

- **Should co-regulation provisions currently in place be expanded, limited or remain as is?**
- **What areas do you propose could be effectively regulated through co-regulation or self-regulation?**
- **What criteria do you think should guide a determination of areas to be subjected to co-regulation/self-regulation? What criteria should be considered by ICASA in accrediting any co-regulatory or self-regulatory bodies?**

7.7 Universal service

The objects of the EC Act stipulate that one of its purposes is to "*promote the universal provision of electronic communications networks and electronic communications services and connectivity for all*". [336] ICASA is given some responsibilities in relation to this through its licensing and by setting universal service and access obligations for relevant licensees. The Broadcasting Act gives specific responsibility to the SABC to be available to all audiences across the country. Sentech as the

[334] SACCI, Green Paper submission, Page 5
[335] WASPA, ISPA and WAPA in supplementary submissions, see also WASPA, Green Paper submission, page 10
[336] EC Act, section 2(c)

common carrier also has to ensure universal access to broadcasting signals. The Post Office has also got specific mandates in this regard.
In order to further policy obligations, the 1996 White Paper on Telecommunications proposed that, in addition to the regulatory specifications dealing with universal service and access, an agency should be established to focus specifically on this area and a fund created to fulfil objectives. The original objectives of this agency and fund were expanded to cover broadcasters with the introduction of the EC Act.

Chapter 14 of the EC Act deals with the structure and mandate of the Universal Service and Access Agency of South Africa (USAASA) and the Universal Service and Access Fund (USAF). Section 82 of the Act states that the Agency must among other things:

- Strive to promote the goal of universal access and universal service;
- Encourage, facilitate and offer guidance in respect of any scheme to provide universal access or universal service; and
- Foster the adoption and use of new methods of attaining universal access and universal service.

The EC Act also states that USAASA must recommend to the Minister what constitutes universal access to electronic communications services and electronic communications network services. The Agency is further charged with the responsibility of monitoring the extent to which universal access and service has been achieved.

Note that the role of the USAF and its structure is dealt with extensively in Chapter Three – Policy Options - Infrastructure and Services. This section therefore only therefore acknowledges it but does not include detailed options or proposals on application of the USAF. The focus is on USAASA itself and its broader obligations (management of the USAF is only one of these).

Almost all stakeholders who made submissions on institutions linked to universal service promotion said that USAASA had been ineffective. National Treasury, for example, stated that there needed to be a thorough review of whether or not USAASA was still necessary to facilitate universal service. It stated that in its view the Agency seems to have "*deviated from its mandate by doing implementation*" which should rather be undertaken by operators.

Research ICT Africa said that universal and affordable access should be at the core of all ICASA decisions and that USAASA and the regulator should therefore be integrated to avoid unnecessary administrative duplication. The SACF also stated that there is no longer a need for an agency such as USAASA, though it would still be necessary to have a fund to cover universal service and access. MTN noted that USAASA had not been effective, which led to questions about its relevance. It proposed that it be absorbed into ICASA.[337] Vodacom stated that it should be dissolved into both the DTPS and ICASA with its policy related roles handled by the Department and those aligned more to regulation to ICASA.[338]

[337] MTN, Green Paper submission, page 43
[338] Vodacom, Green Paper submission, page 85-86

USAASA however disagreed. It said, given the ongoing gaps in universal service and access, there is a need to strengthen its role and address gaps rather than close it down. It said that challenges it had faced are due predominantly to a lack of clarity and overlapping roles between the Agency, ICASA and the Minister/Department and that these should be resolved.

OPTIONS: UNIVERSAL SERVICE AGENCY

Option 1: Retain

USAASA would remain a separate agency, though its mandate would be reviewed in order to ensure it is distinct and pertinent to policy decisions. Legislation would also address identified overlaps and clarify the powers of the Agency to ensure it is not reliant on other entities to the current extent and can be held solely responsible for its mandate. Its governance and structure would be assessed to ensure alignment with its mandate. This could include promulgating separate legislation establishing the Agency if necessary.

Option 2: Dissolve the Agency

The Agency would be dissolved and existing functions transferred to ICASA (regulatory functions) or to the Department (policy-making functions).

- **Please select your preferred option and provide details on how you propose this be implemented.**

7.8 Competition

The Green Paper asked if current provisions on competition regulation, giving ICASA responsibilities for *ex ante* rules and the Competition Commission oversight of *ex post* regulation, are effective. While chapters focusing on particular sectors highlight competition issues in relation to these, this section focuses on the general provisions and delineation of responsibilities between the regulator and the Competition Commission.

The SACF stated that the broad approach is correct, but said that there should be a much closer relationship between the two bodies.[339] MultiChoice and M-Net also proposed that current provisions be strengthened. They recommended that legislation explicitly indicate that there is no concurrent jurisdiction between ICASA and the Competition Commission in relation to mergers and *ex post* competition regulation. In relation to *ex ante* regulation they proposed that this should occur in limited circumstances and suggested that the final policy could give clearer guidance on when it would be appropriate for ICASA to consider such rules. [340]

Internet Solutions, however, submitted that there is a need for strong *ex ante* competition regulation including in the mobile market. This, it said was essential to address "*competition concerns pre-emptively in a forward looking and industry wide manner given the wide ranging and sustained competition concerns in the South African mobile data market*". It proposed that the European Commission three part test to determine which markets should face *ex ante* regulation

[339] SACF, Green Paper submission, page 67
[340] M-Net & MultiChoice, Green Paper submission, page 65

should be applied. This involves consideration of whether or not there are high and non-transitory barriers to entry, if a market would "*tend towards*" effective competition in the relevant time period and if competition law had sufficient mechanisms to address unfair competition. [341] Broadband Infraco stated that the law should require that ICASA conclude a concurrent jurisdiction agreement with the Competition Commission and revise this every three years. [342]

Note that the Competition Commission in response to the Framing Paper stated that it believed the current separation of responsibilities was clear.

OPTIONS: COMPETITION

The options below are not necessarily mutually exclusive.

Option One: Status quo

The current provisions on regulation of fair competition would be retained. If necessary, provisions on the signing of agreements between the two entities could be strengthened.

Option Two: Clearer delineation

As proposed by several stakeholders, the policy and if necessary the law would more clearly delineate the areas which would be subjected to *ex ante* regulation. This could be regularly reviewed by application of a test such as that adopted by the European Commission.
As with the previous option, the Competition Commission and ICASA would be required to review any agreements/MoUs at least every three years. Policy and legislation could also outline other ways that the two entities could work together, including, for example, requiring them to hold joint inquiries on certain issues or that ICASA must consult with the Competition Commission in specific instances.

Option Three: Give primary responsibility to the Competition Commission

Chapter 10 of the EC Act dealing with competition issues would be removed or substantially simplified and some of these responsibilities handed over to the Competition Commission. This could include amendments to competition legislation to empower competition bodies to, for example, consider media diversity and public interest issues in evaluating any media mergers.

- **Please select your preferred option and motivate this.**

7.9 Consumer protection

Chapter 12 of the EC Act gives ICASA specific responsibility in relation to consumer issues and states, for example, that the regulator must develop a consumer code of conduct and minimum standards for end-user and subscriber service charters.

Several stakeholders said that duplication of roles between ICASA and the National Consumer Commission needs to be resolved.

[341] Internet Solutions, Green Paper submission, pages 12-13
[342] Broadband Infraco, Green Paper submission, page 11. Note that the ICASA Act states that ICASA may reach such an agreement and must review it regularly.

MTN said that the current provisions resulted in consumer confusion and increased the potential regulatory burden on licensees and the possibility of being investigated by both ICASA and the National Consumer Commission. It said that currently, for example, ICASA's CCC is mandated to hear complaints on alleged violations of the subscriber service charter developed by ICASA. The Consumer Protection Act it said provides for complaints on similar issues to be handled by the National Consumer Commission. The CPA did provide for exemptions and MTN proposed that ICASA formally apply for an exemption for ICT sectors to "*eliminate the duplication of redress for consumer complaints*".[343]

The SACF stated that there should be a much closer relationship between the Consumer Commission and ICASA.[344] It further highlighted that there could be overlaps between ICASA, the Information Protection Regulator established under the POPI Act and the National Consumer Commission and asked whether or not a super Consumer and Information Protection body is established.[345]

The DG Murray Trust however suggested a more holistic intervention to strengthen provisions for consumers "*in a decisive and urgent manner so that the issues of the ongoing market failure and ineffective competition that exists in the communications industry can be addressed*". It suggested that an "*ICT consumer platform integrated at an inter-governmental level, as well as at agency level (USAASA, ICASA etc.) would improve consumer representation in ICT policy and regulatory matters*".[346] The Trust further emphasised that it is critical that ICASA establish a Consumer Advisory Panel as required in law, and said that legislation should require that all regulations have to be approved by this Panel before being promulgated.[347] Several organisations representing persons with disabilities endorsed the need for a Consumer Panel to advise Council, and said it should include persons with disabilities.

WASPA said that self-regulatory bodies could play a role in dealing with consumer complaints and that a close working relationship between industry bodies and the regulator could further this.[348]
Some submissions highlighted that the National Consumer Commission was not as yet fully operational and that this exposed consumers to unfair action. It was noted, for example, that the do-not-call register was not fully operational as required by the Act and that there could be an increasing need to make provision for specific protection from unsolicited marketing. [349]

OPTIONS: CONSUMER PROTECTION

Option One: Status quo

The status quo would be retained with concurrent jurisdiction on consumer related issues between the National Consumer Commission and ICASA. Policy however would require that the two entities

[343] MTN, Green paper submission, page 13
[344] SACF, Green Paper submission, page 67
[345] SACF, Green Paper submission, page 28
[346] DG Murray Trust, Green Paper submission, page 15
[347] Ibid, page 18
[348] WASPA, Green Paper submission, page 10
[349] This includes Snail Attorneys, the SABC, Telkom and the SACF

have a closer working relationship and, among other things, conclude and review agreements on concurrent jurisdiction every three years. ICASA would also be compelled to set up the consumer advisory panel as required by law with representation from relevant stakeholders.

Option Two: Hand over responsibility to the National Consumer Commission

The responsibilities could be handed over to the National Consumer Commission or policy could require that there is consultation with the Commission prior to development of any rules to ensure that licence conditions adequately provide for regulation of consumer issues.

Option Three: Strengthen current provisions

ICASA's consumer protection function would be strengthened. It could, for example, be given greater enforcement powers and powers to compel disclosure from operators and required to conduct and publish research on consumer-related issues.

- **Which option do you prefer? Please motivate your response. If you select option three please detail how you propose current provisions could be strengthened.**

Other related options

- The policy and law could specifically provide for co-regulation as per WASPA's suggestion and provide criteria for approval by the regulator of self-regulatory Codes of Conduct and mechanisms to ensure compliance.
- Policy could re-emphasise the need for ICASA to establish a Consumer Advisory Panel and if necessary outline the process and criteria to be considered in appointing this. It could also require that all regulations have to be approved by such a panel.

7.10 Privacy

The increasing importance of ensuring that the privacy of end-users is protected has been raised in several other sections of this Discussion Paper. Increased concerns around privacy are inevitable given that providers and others can track online activity by users. It has also been noted that it will become increasingly important to ensure transparent information to users of services and audiences about protection of their information, and how this might be used.

The Protection of Private Information Act (POPI Act) was promulgated in 2013. It provides for the establishment of an Information Protection Regulator to monitor and enforce compliance with the Act (and with PAIA) and adjudicate on complaints on alleged violations.

The SACF in its submission highlighted the need for the Information Protection Regulator and ICASA to cooperate and work together to ensure the privacy of data and individuals. It suggested that all current institutions are reviewed to ensure coordination as "*there are a lot of overlaps and duplication in the current institutions and this should be avoided".*[350] MTN also raised concern about possible joint jurisdiction on privacy issues. It proposed that a MoU be signed between ICASA and the Information regulator.

[350] SACF, Green Paper submission, page 29

It should be noted that, while there are undoubtedly areas where coordination and cooperation would be necessary, ICASA will also be "subject" to regulation by the Information Regulator as it too will have to implement provisions on ensuring it protects data it holds and is subject to PAIA and thus has to comply with provisions relating to this.

- **Is there a need for policy and law to require ICASA to sign and regularly review a memorandum of understanding with the Information Regulator once it is established/**

7.11 Protection of children, content standards and classification

As noted in the Audio and Audio Visual Content and Digital Economy Chapters new media and services introduced with convergence, have implications for the approach to the protection of children and the setting of broadcasting related editorial codes and content standards. These Chapters/Policy Options Papers highlight the need for a closer working relationship between the Film and Publications Board and ICASA in order to ensure, for example, a common classification framework across the different sectors and to make it easy for audiences and users to know which body to complain to.

The NAB stated that in view of convergence and the challenges this brings in relation to ensuring common approaches to protection of children and setting of content standards across all platforms, there is a need for organisations such as the FPB, the BCCSA and ICASA to review the way they work collaboratively. It noted that the co-regulatory structures in place in broadcasting had worked well over the years.[351] The BCCSA in a supplementary submission said that it does work closely with the FPB. The FPB stated that it had initiated a Regulators Forum to address these issues, but that this could be formalised.

ISPA stated that it is important that content standards are clear, but that there would be a need for discussion relating to online content. It noted that jurisdiction in relation to online content is currently vested in the DTPS (with the ECT Act and take down powers) and with the FPB, with ICASA having some jurisdiction as ISPs hold service licences. It proposed that the concurrent jurisdiction issues be resolved and noted that it might be possible to develop a specialist content regulation agency similar to those in other jurisdictions.

ISPA stated that in its view ICASA currently is primarily an economic and technical regulator *"and should focus on developing capacity in those areas given the crucial role it must play in policy implementation and the implementation of the South Africa Connect Policy*". If ICASA were to play a role in the application of content standards, ISPA said it would need to be sufficiently resourced. It further suggested that the FPB is also inadequately resourced in this regard. [352]

- **How can policy and/or legislation ensure better coordination between the different regulatory and classification bodies?**

[351] NAB, Green Paper submission, page 28
[352] ISPA, Green paper submission, pages 28-30

7.12 State-owned entities/companies

Other chapters/sections provide more detail on existing state-owned entities relevant to the sectors covered and consider if their mandates are still relevant. The following state-owned companies fall under the DTPS. [353]

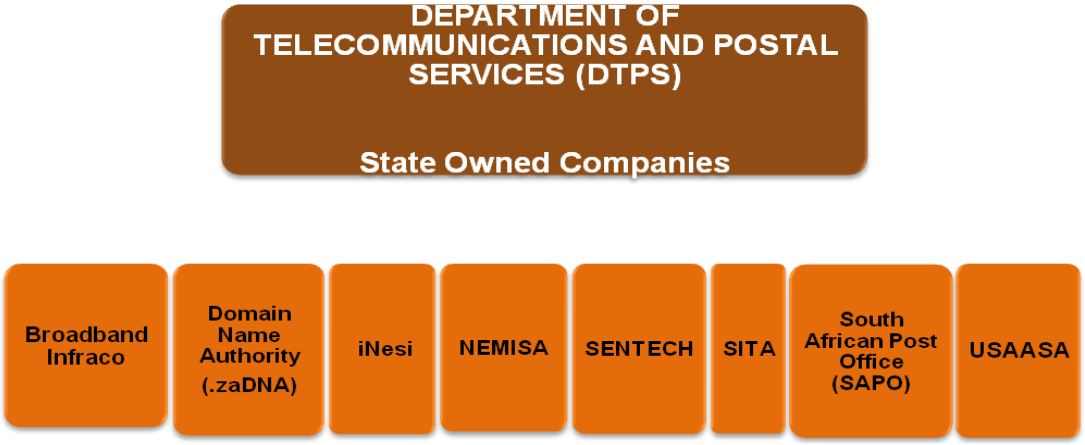

Figure 7: DTPS State Owned Companies

The National Broadband Policy has, as previously indicated, emphasised the need for better coordination between the different entities through clear definition of roles, the integration of planning, monitoring and evaluation and the development of institutional capacity. It has said that rationalisation will remove administrative bottlenecks and unnecessary duplication.

In line with this, the DTPS is conducting a micro study on areas of duplication and possibilities for rationalisation and has established a committee to specifically focus on this. The study will be informed by the macro study of the Presidential Review Committee on State-owned Entities.
This Policy Review process does not want to duplicate the work of these committees and entities, though stakeholders are welcome to make suggestions that they believe could assist in the process.

7.13 Conclusion

- **Are there any other issues that need to be addressed in relation to the Institutional Framework?**

[353] The DTPS also has shareholding in some ECNS licensees such as Telkom and Vodacom.

GLOSSARY[354]

Active infrastructure sharing: Provision of specified services and active network elements needed to ensure interoperability of end-to-end services to users, including facilities for intelligent network services or roaming on mobile networks.

Angel investor: An investor who provides financial backing for small start-ups or entrepreneurs.

App: Application. A usually small, specialised programme or piece of software that runs on the Internet, a computer, mobile phone or other electronic device.

Bandwidth: The range of frequencies available to be occupied by signals. In analogue systems it is measured in terms of Hertz (Hz) and in digital systems in bits per second (bit/s). The higher the bandwidth, the greater the amount of information that can be transmitted in a given time.

Big Data: Is an all-encompassing term for any collection of data sets so large and complex that it becomes difficult to process using traditional data processing applications.

Bit stream access: A form of network unbundling. With bit-stream access, the incumbent maintains management control over the physical line. Unlike full unbundling and line sharing, access seekers can only supply the services that the incumbent designates.

Blog: A weblog is a journal (or newsletter) that is frequently updated and intended for general public consumption.

Broadband: An ecosystem of high capacity, high speed and high quality networks, services, applications and content that enhances the variety, uses and value of information for different types of users (*SA Connect*).

Cellular: A mobile telephone service provided by a network of base stations, each of which covers one geographic cell within the total cellular system service area.

Cost-based pricing: The general principle of charging for services in relation to the cost of providing these services.

Cybercrime: Illegal acts committed through the use of Information and Communication Technology (*National Cybersecurity Policy Framework South Africa)*.

Cybersecurity: is the collection of tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training, best practices, assurance and technologies that can be used to protect the cyber environment and organisation and user assets *(National Cybersecurity Policy Framework South Africa*).

Cross-subsidisation: The practice of using profits generated from one product or service to support another provided by the same operating entity.

Cybersquatting: is registering, trafficking in, or using a domain name with bad faith intent to profit from the goodwill of a trademark belonging to someone else. The common aim of cyber-squatters is to auction the domain names or sell directly to the person or organisation at a cost higher than the registration cost.

Digital: Representation of voice or other information using digits 0 and 1. The digits are transmitted as a series of pulses. Digital networks allow for higher capacity, greater functionality and improved quality.

[354] Adapted from ITU Trends in Telecommunication Reform 2013 unless otherwise stated

e-Commerce: Electronic commerce is used to describe transactions that take place online, where the buyer and seller are remote from each other. In the context of this paper, it also includes the use of any ICTs, including mobile phones, to buy or sell goods and services.

e-Government: e-Government refers broadly to the innovative use of ICTs by government to facilitate collaborative and efficient governance and sustainable development (*UN e-Government Survey, 2014*).

Encryption: The process of converting plain text into code to secure information from being read by unauthorised persons or those without special computing knowledge.

E-services: refer to services delivered via the Internet, and over mobile technology (m-services) and other ICT platforms. This includes e-commerce as well as a wide spectrum of personal and government services based on the provision of knowledge, information, applications ("apps"), access to markets, entertainment, education, health care, social networks, banking, surveillance, remote control, early warning, etc.

***Ex ante* regulation**: Anticipatory intervention. *Ex ante* regulation uses government or regulator specified controls to prevent socially undesirable actions or outcomes in markets, or direct market activity towards socially desirable ends (*infoDev 2005*).

***Ex-Post* regulation**: *Ex post* regulation addresses specific allegations of anti-competitive behaviour or market abuse. *Ex post* regulation aims to redress proven misconduct through a range of enforcement options including fines, injunctions, or bans (*infoDev 2005*).

Fixed line: A physical line connecting the subscriber to the telephone exchange.

Facilities-based service supplier (or operator): An electronic communications service provider owning, as opposed to leasing, networks used to provide electronic communications services *(WTO*).

Facility-based competition vs. service-based competition: When the entrant uses the facilities of the incumbent, competition is called service-based and can be realised either through resale or through unbundling schemes. When the entrant builds its own facility, competition is referred to as facility-based (*Marc Bourreau and Pinar Dogan*).

Free-to-air: refers to a service which is broadcast and capable of being received without payment of subscription fees.

Interconnection: means the physical or logical linking of two or more electronic communications networks, electronic communications services, broadcasting services, services provided pursuant to a licence exemption or any combination thereof.

Internet Exchange Point (IXP): A central location where multiple Internet Service Providers can interconnect their networks and exchange IP traffic.

IPv4: Internet protocol version 4. The version of IP in common use today. **IPv6** is the emerging standard, which aims to rectify some of the problems seen with IPv4, in particular the shortage of address space.

IPTV: The generic term describes a system where a digital television service is delivered using the Internet Protocol over a network infrastructure.

Internet Economy: (also referred to as the Digital Economy) can be broadly defined as an economy that is based on digital technologies (ICT). In this new economy, digital networking and communication infrastructures provide a global platform over which people and organisations devise strategies, interact, transact, communicate, collaborate, shop and search for information (*OECD*)

Interoperability: refers to the ability to make systems and organisations work together (inter-operate).

Internet of Things: A global infrastructure for the Information Society, enabling advanced services by interconnecting (physical and virtual) things based on, existing and evolving, interoperable information and communication technologies.

Mobile virtual network operator (MVNO): A company that does not own a licensed frequency spectrum, but resells wireless services under their own brand name, using the network of another mobile phone operator.

Multiplex: means a network of frequencies designed to simultaneously permit the transmission of two or more channels.

Must-carry obligations: refers to the set of rules that obliges a Pay Television licensee to carry the Television programmes broadcast by a Public Broadcast Service Licensee.

Net Neutrality: is the principle that Internet service providers and governments should treat all data on the internet equally, not discriminating or charging differentially by user, content, site, platform, application, type of attached equipment, or mode of communication (*Wikipedia*)

Networks: refers to the ensemble of equipment, sites, switches, lines, circuits, software, and other transmission apparatus used to provide electronic communications services.

NGN: Next generation networks. These are packet based networks in which service-related functions are independent from underlying transport- related technologies. They are able to provide telecommunication services and make use of multiple broadband transport technologies.

Number portability: The ability of a customer to transfer an account from one service provider to another without requiring a change in number.

Open access: The creation of competition in all layers of the network, allowing a wide variety of physical networks and applications to interact in an open architecture *(infoDev 2005*).

Open standards: are a means of achieving interoperability. Open standards are often developed together with a range of stakeholders and there are no constraints on the re-use of the standard (*adapted from the European Union, "European Interoperability Framework for Pan-European e-Government Services*).

Open Data: refers to datasets that can be freely used, re-used and distributed by anyone, only subject to (at the most) the requirement that users attribute the data and that they make their work available to be shared as well (*OECD)*.

Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others (*UNCRPD*).

Server: (1) A host computer on a network that sends stored information in response to requests or queries. (2) The term server is also used to refer to the software that makes the process of serving information possible.

Spectrum: The radio frequency spectrum of Hertzian waves used as a transmission medium for cellular radio, radio-paging, satellite communication, over-the-air broadcasting and other services.

Over-the-Top (OTT): refers to delivery of services, audio, video and other media over the Internet without a multiple-system operator being involved in the control or distribution of the content.

Packet: Block or grouping of data that is treated as a single unit within a communication network.

Rights of way: Strip or area of land, including surface and overhead or underground space, which is granted by deed or easement for the construction and maintenance of specified infrastructure elements such as copper or fibre optic cables etc.

Spectrum: The radio-frequency spectrum of hertzian waves used as a transmission medium for cellular, radio, radiopaging, satellite communication, over-the-air broadcasting and other services.

Spectrum commons: Spectrum bands reserved for unlicensed use and shared among low-power devices on an open access basis.

STB: Set-top box. A device connected to a television that receives and decodes digital television broadcasts and interfaces with the Internet through the user's television.

Tariff: Tariffs are the schedule of rates and regulations governing the provision of electronic communications services.

Technological convergence: A process by which electronic communications, consumer electronics, information technology and the media, sectors that originally operated largely independent of one another, are growing together. The process has two sides to it; where the technical side refers to the ability of any infrastructure to transport any type of data, while the functional side means that users seamlessly integrate the functions of computation, entertainment, and voice in a unique device able to execute a multiplicity of tasks.

Technology neutrality: A general term referring to rules that allow operators to adopt any technology standard for a particular service.

Teletext services: refers to a system that allows television viewers with special decoders to receive signals that display printed information as well as graphics on their screens.

Teledensity: Number of main telephone lines per 100 inhabitants within a geographical area. Effective teledensity reports fixed-line teledensity or mobile density—whichever is higher—in a particular geographical region.

Universal design means the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design. Universal design shall not exclude assistive devices for particular groups of persons with disabilities where this is needed (UNCRPD).

VANS: Value-added network services. Telecommunication services provided over public or private networks which, in some way, add value to the basic carriage, usually through the application of computerized intelligence.

Wi-Fi: A mark of interoperability among devices adhering to the 802.11b specification for Wireless LANs from the Institute of Electrical and Electronics Engineers (IEEE).

Wireless: Generic term for mobile communication services which do not use fixed-line networks for direct access to the subscriber.

WSIS: The United Nations World Summit on the Information Society. The first phase of WSIS took place in Geneva (hosted by the Government of Switzerland) from 10 to 12 December 2003. The second phase will take place in Tunis (hosted by the Government of Tunisia), from 16 to 18 November 2005.

xDSL: While DSL stands for digital subscriber line, xDSL is the general representation for various types of digital subscriber line technology, such as ADSL
(asynchronous digital subscriber line), such as VDSL(very high-speed digital subscriber line).

Appendix

ABSIP (Association for Black Securities and Investment Professionals)
ABT
ACT-SA
AM Goode
Ashley Madraymuthoo (Ashley@dxl.co.za)
Broadband Infraco
Cell-C
City of Matlosana
ACEIE, University of Pretoria
The DG Murray Trust
Eliac
eNeSi
Ericsson
e-Thekwini Municipality (Mr Veer Sigh)
ESKOM
e-TV
FibreCo Telecommunications (Pty) Ltd
FXI (Freedom of Expression Institute)
GSMA
IITPSA (Institute for Information Technology Professionals SA)
Intel Cooperation
Internet Solutions
ISPA
ITA (Information Technology Association of SA)
Link Centre
LSSA (Law Society of SA)
Kagiso Media
Media Monitoring Africa
Media, Policy & Democracy Project
Meridict Systems
Mestec Technologies
Microsoft South Africa
Mindset
MNET & Multichoice
413 Media Enterprise (Mr Sumeer Mohanlall), KZN
MTN
National Community Radio Forum (NCRF)
National Association of Broadcasters (NAB)
National Cybersecurity Advisory Council (NCAC)
National Treasury
North-West Provincial Government (Office of the Premier: Mr. Kago Mocuminyana, Information Technology: ICT Security Unit)

Nonhlanhla Tshabalala (NNT)
OnDigitalMedia
Paul A.H Hajul
Progressive Professional Forum
Provincial Treasury of the Western Cape
Qualcomm
Research ICT Africa
Right2Know
South African Broadcasting Corporation (SABC)
SACCI
South African Communications Forum (SACF)
SALGA
SKA
Smiles
Snail Attorneys
SoS
South African National Deaf Association (SANDA)
Telkom
The Innovation Hub
University of Cape Town
USAASA
Vodacom
Western Cape Government
WAPA
WASPA
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