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Discussion paper

Development of a Rapid Deployment Policy for Electronic Communications infrastructure

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1 Executive summary

This document is a discussion paper on the rapid deployment of electronic communications ("EC") facilities. It is part of the project titled "Support towards the development of a National Rapid Deployment Policy and policy directions for South Africa", being conducted by Analysys Mason (Pty) Ltd on behalf of the South African Department of Telecommunications and Postal Services ("DTPS").

The Electronic Communications Act ("ECA") No. 36 of 2005, as amended in 2014, requires the Minister of Telecommunications and Postal Services ("the Minister") to develop a Policy and Policy Directions for the rapid deployment and provisioning of electronic communications facilities. The general objective stated in the project Terms of Reference ("ToR") is "to assist the DTPS with the development of a Draft Rapid Deployment Policy and Policy Directions and to ensure that the objectives of the SA Connect Policy and requirements from the Electronic Communications Act are achieved". The ToR further lists the following specific objectives:

A. Identify approvals
B. Identify and engage with key stakeholders
C. Develop a discussion paper
D. Develop policy and policy directions.

The project began in June 2015, and the two major tasks undertaken to date are stakeholder engagement and a review of approvals and notifications, and specifically the legislative and policy background to providing these. This discussion paper seeks to summarise the work that has been undertaken so far on understanding stakeholder concerns and reviewing the legal and policy framework that gives rise to the present mechanisms for approval and for deployment of EC facilities. Specifically, it is intended to raise issues and suggest how the policy might deal with these issues. As such, it reflects compromises and judgments which stakeholders may wish to consider. The major findings and recommendations are collected together in Annex C of this report.

Stakeholders will be given an opportunity to share their views at a public workshop during August 2015. Workshop participants are urged to read this discussion paper prior to attending the workshop, and to be prepared to share their views in an interactive process. The workshop will be the only chance to influence the translation of the discussion paper into draft policy; no written comments will be accepted on this discussion paper. Written comments will be accepted on the draft policy once it is gazetted.

As described above, the ECA requires the Minister to issue the policy that is the subject of this discussion paper. Under the ECA prior to its amendment in 2014, the Minister had been required to issue Rapid Deployment Guidelines, but this was never done. Draft guidelines were in fact proposed with input from industry and ICASA during 2013, but these were not adopted by the Minister.

Rapid deployment of EC facilities is intended to support economic growth in South Africa. This paper presents a brief qualitative impact assessment which indicates what we expect the consequences to be on four major stakeholders: electronic communications licensees, land owners/administrators, the national fiscus and consumers/households. We conclude that while some parties may be negatively affected, the negative effects could be mitigated through increased sharing and other measures to improve the implementation of deployment, but that ultimately the public interest is likely to be served by ensuring that EC facilities can be deployed rapidly.

In examining the legal and policy context for developing a Rapid Deployment Policy, we begin by considering the nature of a policy, its limitations, and its effects on others, and the process for preparing a policy. We then consider Chapter 4 of the ECA which obliges the Minister to make policy on rapid deployment, and other sections related to how the Minister should make policy. We then situate the Rapid Deployment Policy in the context of national policy and goals, notably the National Development Plan ("NDP") and the "South Africa Connect" national broadband policy. Rapid deployment must also be seen within the context of existing practice around facilities leasing which is dealt with in regulations published by ICASA which might reduce demand for new deployment, and dispute resolution, which is already undertaken by ICASA and on which the Rapid Deployment Policy is specifically required to offer guidance.

A fundamental consideration in developing this policy is the constraints imposed by the Constitution which envisages separate powers for different spheres of government but that each sphere will, despite its own jurisdictional influences, work together with other spheres to give effect to national priorities. Further constraints are emerging through case law regarding application of Chapter 4 of the ECA, which has held that licensees can exercise the rights to deploy EC facilities contained in this chapter but are bound by considerations of administrative justice. One decision has been taken to the Constitutional Court, and a decision is expected in the next few months. Two decisions have in the meantime been handed down by the Supreme Court of Appeal in this regard.

The policy required from the Minister arguably limits one or more rights in the Bill of Rights, which must therefore be tested against section 36 of the Constitution which deals with limitation of rights; in particular, the policy should probably consider whether there are less restrictive ways to achieve the policy goal of rapid deployment. In examining how the policy is issued, we conclude that national policy published by a member of the Executive such as the Minister is binding and not reviewable. This being the case, the Minister has the power and duty to make policy, and this policy is capable of being applied in the face of other potentially conflicting laws and regulations.

In turning to the types of regulations and legal instruments that may impact the effect of the policy, we conclude that there are a multiplicity of such instruments that lead to varying processes across different spheres of government. There is no central co-ordination, no consistency in process, no benchmark for pricing, lack of specificity in laws and regulations, failure to implement some regulations, and no clear method for determining exactly what constitutes "the public interest". This will have to be taken into account in drafting the policy, as will the obligations imposed on licensees by the ECA which may limit how other parties' rights are impacted.

Views expressed by stakeholders have helped to identify four broad themes that should be addressed in the policy: areas that may require national co-ordination, and who might be responsible for achieving that co-ordination; ICASA's existing responsibilities, and new ones that may be allocated to it under the policy; specific issues requiring direction that fall to other parties, notably municipalities, private landowners and national government departments; and conflicting interests that arise and may require compromise by one or more parties.

In terms of **national co-ordination**, we consider whether there should be a central database or set of linked databases that record locations and planned locations of services infrastructure, which could include not just electronic communications cabling, ducts and high sites, but potentially also roads, electricity, gas, and water and sanitation. Access to such data could reduce planning complexity and promote sharing. We propose that processes and standards used to grant wayleaves and permissions could be more harmonised across co-ordinating entities which include municipalities, state-owned entities and private electronic communications licensees. Once harmonised, these processes could be automated and put online, as is already beginning to be done by some co-ordinating authorities. The processes themselves could in some cases benefit from streamlining, to avoid unnecessary administrative burden on both local authorities and licensees. The number of charging structures for administration and access to land are believed to be a hindrance, and could benefit from application of principles which would improve transparency and relationship to actual cost plus a reasonable return. Finally, we consider which body or bodies could be responsible for any tasks – such as those identified above – which require co-ordination.

Two key existing areas of **ICASA's responsibility** which we believe need to be addressed by the policy are its implementation of facilities leasing obligations set out in Chapter 8 of the ECA, and ICASA's dispute resolution abilities. Facilities leasing regulations have been issued, and the ECA is quite explicit on the degree of sharing required of licensees, but to date sharing and leasing have not been effective. This is partly due to a perceived failure of the Complaints and Compliance Committee ("CCC"), a committee formed by and responsible to ICASA, to resolve disputes and enforce decisions. Both of these situations must be remedied to avoid rapid deployment leading simply to inefficient and unnecessarily duplicated deployment of infrastructure. ICASA should further help with developing understanding of the application of operators' rights under the ECA, and ensuring that Telkom is included equitably when contemplating deployment and sharing of infrastructure.

Government and landowner issues include some private and public landowners' requirement that only one trench ever be dug for electronic communications on a given route or road, the so-called single trench policy. We believe that various issues raised by stakeholders about private landowners could mostly be resolved through improving landowners' understanding of what electronic communications network build and service provision entails, particularly in the context of section 22 of the ECA which potentially gives rights to all (numerous) ECNS licensees to construct networks on their land. Similarly, issues that have arisen between licensees and SANRAL for example, could potentially be resolved through offering guidelines and improving both sides' appreciation of the others' situation. Building regulations could also be revised to include specific requirements to support choice in the provision of electronic communications, which may reduce the need to impose a single trench policy. Issues that stakeholders have raised around failure to meet deadlines could be addressed through moving towards more streamlined and automated processes, as described earlier – but this may require substantial improvement in the IT skills of process administrators in the public sector. Finally, issues around delivery of power to EC facilities should be resolved through engagement and clarification of the relevant processes and regulations, in collaboration with Eskom and other power suppliers.

We address three types of **conflicting interests**. In some cases, government bodies such as municipalities are deploying their own electronic communications infrastructure, in competition with private operators. This in itself is not a problem, but may lead to them acting in an anti-competitive manner by hindering deployment by other parties, and there appear to be cases where public money is being or was spent wastefully. There should be clearer rules governing such public investments. Disputes may arise from section 25 of the ECA, which requires road authorities to cover the cost of relocating electronic communications infrastructure when they widen or improve roads. Finally, rural communities and their leaders may sometimes demand individual engagement with operators and sometimes compensation for engagement, which raises the cost of deploying infrastructure in the very places where the "digital divide" may be starkest and most benefits could flow from availability of broadband data services.

Annexes to this report include details of the stakeholder engagement process, a brief review of deployment practice in a sample of countries, and the proposed policy issues and approaches that are intended to form the basis of the draft policy.

2 Introduction

This document is a discussion paper on the rapid deployment of electronic communications ("EC") facilities. It is part of the project titled "Support towards the development of a National Rapid Deployment Policy and policy directions for South Africa", being conducted by Analysys Mason (Pty) Ltd on behalf of the South African Department of Telecommunications and Postal Services ("DTPS").

2.1 Overview of the present project

The Electronic Communications Act ("ECA") No. 36 of 2005, as amended in 2014, requires the Minister of Telecommunications and Postal Services ("Minister") to develop a Policy and Policy Directions for the rapid deployment and provisioning of electronic communications facilities.

There are currently no uniform nationwide requirements for granting permits and authorisations for the roll-out of electronic communications network ("ECN") infrastructure such as towers and ducts or the use of existing public infrastructure, few legislated or regulated deadlines for granting them, and wide discretion for private landowners to dictate terms for access to their land. This delays and increases the cost of network roll-out, as well as causes legal disputes between operators and landowners. This will hamper the implementation of the "South Africa Connect" ("SA Connect") national broadband policy.

DTPS has appointed Analysys Mason to assist with the development of the Rapid Deployment Policy and Policy Directions, drawing on input from affected parties.

This project falls under the Digital Readiness pillar of SA Connect, which aims to improve the policy and regulatory environment and remove administrative bottlenecks to broadband deployment. It is anticipated that once the policy and associated regulations are in place, ECNS[1] licensees and the entire South African population – through improved access to broadband – will stand to benefit, in other words, there are "public interest" considerations.

The general objective stated in the project Terms of Reference ("ToR") is "to assist the DTPS with the development of a Draft Rapid Deployment Policy and Policy Directions and to ensure that the objectives of the SA Connect Policy and requirements from the Electronic Communications Act are achieved". The ToR further lists the following specific objectives:

A. Identify approvals
B. Identify and engage with key stakeholders
C. Develop a discussion paper
D. Develop policy and policy directions.

[1] Electronic communications network service

2.2 Project plan

The project plan is shown in Figure 2.1. Two key tasks have already been undertaken:

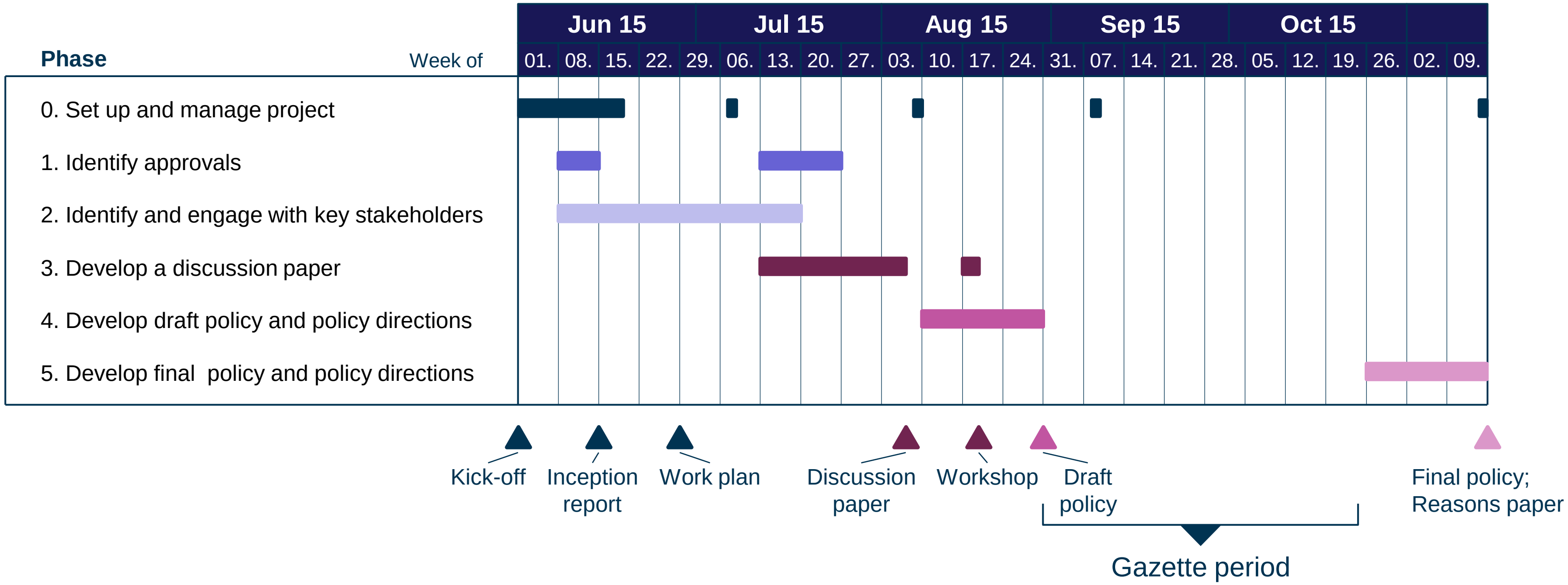
- Our **stakeholder engagement** has involved meeting with over 40 stakeholders including licensees, public landowners such as municipalities and state-owned entities, private landowners and their managing agents, and industry bodies. We have held two roundtables with national government departments to explain and receive input on this project. The views of stakeholders are considered central to the development of policy, and we have attempted to encapsulate the views encountered in Section 5 of this report.

- In order to **identify approvals** necessary for deployment of EC facilities, we have reviewed national legislation, policy and strategy documents, as well as reviewed a selection of municipal by-laws and manuals. We have also drawn extensively on stakeholder engagement to understand what is currently involved (both practically and legally) in obtaining permission to deploy infrastructure.

During August 2015, a discussion paper (the present document) is to be published, a public workshop will be held, and the draft policy will be prepared building on the concepts presented in the discussion paper.

Following this, the draft Rapid Deployment Policy will be gazetted – potentially after some internal consultation within DTPS – and public feedback will be accepted in writing during the statutory consultation period. The feedback will be used to prepare a final policy and policy directions, which will be accompanied by a reasons paper outlining the nature of consultation feedback and why the feedback may or may not have led to revisions to the policy.

Figure 2.1: Project Gantt chart [Source: Analysys Mason, 2015]



2.3 Role of this discussion paper

This discussion paper seeks to summarise the work that has been undertaken so far on understanding stakeholder concerns and reviewing the legal and policy framework that gives rise to the present mechanisms for approval and for deployment of EC facilities. Specifically, it is intended to raise issues and suggest how the policy might deal with these issues. As such, it reflects compromises and judgments which stakeholders are invited to consider.

Our initial conclusions on the positions that the Minister should adopt in the policy are shown throughout this text in this format, and these conclusions are summarised in Annex C.

Stakeholders will be given an opportunity to share their views at a public workshop. The workshop will aim not only to allow views to be expressed, but to attempt to bring together stakeholders who may not be familiar with each other – licensees, landlords, municipalities, national and provincial government departments. The stakeholder engagement has left the project team with the impression that all parties are doing their best to navigate a complex situation but may not have the best information at their disposal, may have other priorities that influence their decisions, or may not understand the motivations of their counterparts. It is hoped that the workshop will foster greater understanding among the various stakeholders that is likely to be required for a successful Rapid Deployment Policy.

Workshop participants are urged to read this discussion paper prior to attending the workshop, and to be prepared to share their views in an interactive process. The workshop will be an important opportunity to influence the translation of the discussion paper into draft policy; no written comments will be accepted on this discussion paper.

The remainder of this document is laid out as follows:

- Section 3 describes the background to why a Rapid Deployment Policy is required, what it might cover, what has already been done, and what the expected benefits of such a policy might be.
- Section 4 reviews the legal and policy context for developing the policy, in particular considering the role of policy, its interaction with the Constitution and other legislation, policy and strategy, and the legal disputes that have arisen around deployment of EC facilities.
- Section 5 summarises the views expressed during the stakeholder engagement that has been undertaken during June and July 2015, identifies specific issues raised that the policy should address, and suggests what the policy direction on these issues should be.

The report includes a number of annexes containing supplementary material:

- Annex A lists the stakeholders interviewed for this project, and the questionnaire used to guide discussions.

- Annex B surveys practice in rapid deployment of infrastructure from five other countries (Australia, Canada, France, UK and USA), to give some context to the discussion in South Africa.
- Annex C collects together all the initial conclusions on the content of the policy that are reached throughout the discussion paper.
- Annex D provides a glossary of the terms used in this document.

3 Background

In this section, we address the questions:

- Why is a Rapid Deployment Policy required?
- What infrastructure is in scope of a Rapid Development Policy?
- What progress has already been made towards a policy and regulation?
- What is the impact or value of promoting rapid deployment of ECN infrastructure?

In this way, we aim to set the context for the legal and policy considerations presented in Section 4 and the stakeholder views presented in Section 5. The considerations of this section also help to identify what is required from the Rapid Deployment Policy in terms of its scope, compatibility with previous work, and the goal of minimising the negative impacts on stakeholders.

3.1 Why is a Rapid Deployment Policy required?

The Rapid Deployment Policy is required under the ECA.

Chapter 4 (sections 20 to 29) of the ECA, headed "Electronic Communications Networks and Electronic Communications Facilities", is the genesis for this project. Section 21 obliges the Minister to,

> "…*in consultation with the Minister of Co-operative Governance and Traditional Affairs, the Minister of Rural Development and Land Reform, the Minister of Water and Environmental Affairs [now two separate departments], the Authority [meaning ICASA] and other relevant institutions, develop a policy and policy directions for the rapid deployment and provisioning of electronic communications facilities,*[2] *following which the Authority must prescribe regulations*."

The regulations which ICASA is required to prescribe under section 21(2) must provide procedures and processes for:

"(a) obtaining any necessary permit, authorisation, approval or other governmental authority including the criteria necessary to qualify for such permit, authorisation, approval or other governmental authority; and

(b) resolving disputes that may arise between an electronic communications network service licensee and any landowner, in order to satisfy the public interest in the rapid rollout of electronic communications networks and electronic communications facilities."

2 See Section 3.2 for the ECA's definitions of ECNs and electronic communications facilities.

In the 2005 version of the ECA, the Minister – again in consultation – was required to develop guidelines, rather than policy, for rapid deployment. Such guidelines were never finalised.

3.2 What infrastructure is in scope of a Rapid Deployment Policy?

While a wide range of infrastructure types might be considered in scope, practical considerations mean that most focus will be on deployment of optical fibre cable and wireless base stations.

Section 20 of the ECA notes that the chapter – and therefore, the Rapid Deployment Policy it envisages – applies only to ECNS licensees. [3] The Rapid Deployment Policy is therefore intended to be focused on infrastructure deployed by ECNS licensees.

According to the ECA, **electronic communications facilities** include but are not limited to: "wire, including wiring in multi-tenant buildings; cable (including undersea and land-based fibre optic cables); antenna; mast; satellite transponder; circuit; cable landing station; international gateway; earth station; radio apparatus; exchange buildings; data centres; and carrier neutral hotels, or other thing, which can be used for, or in connection with, electronic communications, including where applicable – collocation [sic] space; monitoring equipment; space on or within poles, ducts, cable trays, manholes, hand holds and conduits; and associated support systems, sub-systems and services, ancillary to such electronic communications facilities or otherwise necessary for controlling connectivity of the various electronic communications facilities for proper functionality, control, integration and utilisation of such electronic communications facilities;…".

The Rapid Deployment Policy in principle should apply to all types of EC facilities. The description of what constitutes EC facilities is open-ended, which means that potentially any type of infrastructure or facility used by an ECNS licensee could be in scope for the policy.

Discussions with stakeholders indicate that much of the challenges that arise are a result of proposed deployment of

- underground fibre and duct
- premises fibre and duct, including in business parks and on private land
- aerial fibre, deployed on poles
- high sites including rooftops for wireless sites
- masts and towers, and land for such towers.

The policy should therefore offer more detailed guidance to stakeholders on the deployment of these specific types of facility. Other facilities that are of emerging interest and could be considered are submarine cable landing stations, high-tower sites (e.g. for television or long-distance microwave communications), satellite earth stations and data centres. Due to their

[3] An electronic communications network (ECN) is defined in the ECA as "any system of electronic communications facilities (excluding subscriber equipment), including without limitation – satellite systems; fixed systems (circuit and packet-switched); mobile systems; fibre optic cables (undersea and land-based); electricity cable systems (to the extent used for electronic communications services); and other transmission systems, used for conveyance of electronic communications."

relatively infrequent deployment and lower intensity of land use, these latter types of facility do not require detailed consideration in the Rapid Deployment Policy.

It can be argued that different geographies might be treated differently in the Rapid Deployment Policy due to their differing infrastructure demands. For example, in the context of attempting to reach coverage and usage targets of the SA Connect policy (see Section 4.1.4) it may be argued that it is more important to ensure rapid deployment in underserved or unserved areas, while competitive areas (notably urban areas) may not require the intervention of Rapid Deployment. However, in the absence of such guidance from the legislation, we believe the Rapid Deployment Policy should apply to all geographies, with differences between geographies emerging as a result of consideration of detailed constraints (such as environmental or community concerns).

The Rapid Deployment Policy should offer general principles for rapid deployment of all electronic communications facilities (as defined by the ECA) by ECNS licensees throughout the country, but must offer more detailed guidance regarding facilities of most concern to stakeholders. The Rapid Deployment Policy scope should therefore supply particular detail on improving deployment of underground fibre/duct, premises fibre/duct, aerial fibre, wireless rooftop sites, and towers on public or private land.

3.3 What progress has already been made towards a policy or regulation?

A set of draft Rapid Deployment Guidelines[4] was developed in 2013 through a collaborative process between industry and ICASA, pursuant to the requirement of the ECA prior to its amendment in 2014.

Substantial consultation was undertaken among electronic communications industry stakeholders in the preparation of those guidelines, and they were reportedly accepted by the Council of ICASA. However, we understand that little or no consultation was undertaken with non-industry stakeholders such as private landowners, municipalities, state-owned entities and national government departments.

The guidelines take a stance on several of the key questions which are discussed in the remainder of this report, and on which the Rapid Deployment Policy is expected to offer guidance. Some key features of the draft guidelines include:

- They aim to bind municipalities to the procedures determined in the guidelines.
- ICASA and municipalities are both given responsibilities for maintaining lists of firms deploying infrastructure.

4 Unattributed, "Draft guidelines for the rapid deployment of electronic communications facilities", dated 18 March 2013.

- Disputes are expected to be resolved, as a last resort, by ICASA's Complaints and Compliance Committee ("CCC").
- Firm deadlines of a few days are given for most approval processes.
- It is envisaged that land authorities may issue "universal permissions" to some firms that creates a presumption of permission to deploy infrastructure.
- Operators are required to submit data regarding their infrastructure to both land authorities and to ICASA.
- ICASA is required to set fees for wayleave applications, and no reimbursement may be demanded for use of the land or right of way.
- Facilities must be deployed in such a way that sharing is feasible.
- Network infrastructure should not be considered a "land use", so should not require onerous rezoning and building plan approval.
- Land authorities are to develop a harmonised Standard Operating Procedure for wayleave application.

The existing structure and content of the Draft Rapid Deployment guidelines could be borne in mind when developing policy.

3.4 What is the impact or value of promoting rapid deployment of ECN infrastructure?

Rapid deployment of EC facilities incurs both costs and facilitates benefits which accrue to a variety of different parties. In this section we give a brief overview of the nature of these costs and benefits, while also considering that speedier deployment has indirect impacts which should be factored into the discussion.

There are numerous studies that demonstrate the economic value of Internet use and broadband access, and these are quoted in other policy documents such as the SA Connect policy. We assume here that access to electronic communications increases GDP and increases both producer surplus (business profits) and consumer surplus (through lower cost services, wider reach, higher service quality, or all of the above). In particular, we consider that the following types of stakeholders may be impacted by a policy that promotes rapid deployment in the following ways that are discussed further in this section:

- *ECNS licensees:* We assume that licensees incur a **planning overhead** cost in terms of systems, processes and people that must be put into place in order to manage wayleave or site applications. They also incur an **administrative cost** which is proportional to the time taken to process applications, best thought of as the cost of staff to attend to ongoing queries about applications. Owners of land may charge **application fees** or land use fees which may be impacted by the policy. Licensees also have to incur the cost of **execution** of their construction projects, and once built they receive a **service revenue** – which will be greater due to being realised more quickly if facilities are deployed more quickly.

- *Owners of land and rights of way:* Landowners must incur some **overhead** cost to set up a process for handling applications. As with licensees, they also incur an **administration** cost which is proportional to the time to process applications. They then incur the cost of **maintenance** – of roads, poles or land – which tends to be higher when multiple third parties are digging or building in the same place with less-than-ideal supervision. Finally, the **application fees** are a source of revenue for owners.

- *The fiscus (i.e. national treasury and public finances):* We assume that the fiscus benefits when GDP increases through taxation of national income, and that the source of the benefit is only two sectors: **construction** (those firms that are contracted to deploy EC facilities) and **electronic communications services** (which include all firms in the industry, not just ECNS licensees).

- *Households and consumers:* Consumers benefit when they use more of a service, whether because it is made available at a lower cost, better quality, or is more widely available. This is the **consumer surplus**. Households also benefit from firms – in construction and electronic communications, in this case – offering **employment**. We do not consider here the loss of consumer surplus which may arise from unsightly or inconvenient infrastructure since we assume that these issues can be suitably managed within a future rapid deployment regulation.

We should also isolate what we believe to be the expected impacts of a successful Rapid Deployment Policy. In the first instance, one might simply expect speedier deployment of infrastructure, with no change to the total ECNS industry cost base. This corresponds to an assumption that the surplus arising from the cost saving is appropriated by landowners, e.g. through higher application fees.

This somewhat artificial assumption allows us to separate another potential impact of a Rapid Deployment Policy: lower costs for industry change investment incentives. ECNS licensees facing lower administrative and application costs are likely to consider more projects to be viable. In the worst case this could lead to an increase in inefficient duplicative construction which does not widen coverage but instead increases the total industry cost base without delivering higher quality[5] – a situation which many stakeholders perceive to be the case today, even before a Rapid Deployment Policy has been introduced. Finally, if rapid deployment were coupled with an improved infrastructure-sharing or facilities-leasing regime, we would expect – along with all the cost and time savings from the first two impacts – the total industry cost base to be lower with corresponding benefits to households and, probably, the fiscus.

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5 Efficient duplication might be considered to be that which leads to higher quality services where these are required. Examples might be to deploy more frequent network access points (e.g. to allow deployment of fibre-to-the-home, FTTH) or to offer redundancy on important routes, or to allow the operation of competitive forces in the improvement of service delivery.

The cumulative effect of these three impacts of a possible Rapid Deployment Policy are described in Figure 3.1 and their indicative effect on each of the financial categories described above is illustrated in Figure 3.2.

Figure 3.1: Cumulative effect of speedier deployment, lower costs, and more sharing on the costs and benefits of various Rapid Deployment Policy stakeholders [Source: Analysys Mason, 2015]

Impact of…	Speedier deployment	+ Lower costs	+ More sharing
On ECNS licensees	Approvals are received more quickly and with less effort. By assumption, any administrative cost savings are translated into fees payable to the owner, so overall costs do not change.	Process admin cost savings are appropriated by operators, so harmonised and reduced fees are payable to owners. Since total costs are lower, more projects become economically viable and are executed – which may include duplicating existing infrastructure.	Planning overhead is reduced due to less reliance on new build. Lower industry cost base leads to lower prices to consumers.
On owners	Harmonised processes reduce the overheads required to administer approvals. Admin costs are reduced, and licensee fee savings are appropriated by owners.	Application fees are reduced. This is slightly counterbalanced by larger number of applications. However more applications increases maintenance costs.	Fewer applications, since there is more reuse of existing infrastructure. This lowers application fee revenue but also reduces maintenance costs.
On fiscus	Amount of construction work does not change (some may be brought forward). More ECN services are available, so there is higher revenue to be taxed.	With more projects, construction income increases.	Construction income declines, ECN industry aggregate profit is likely to increase with lower costs and higher usage.
On households/ consumers	Higher quality services are more widely available to consumers. Employment is reduced slightly due to reduced administration by both owners and licensees.	Increased employment due to additional construction.	Consumers benefit from lower service prices. Due to fewer building projects and reduced admin, employment declines.

Figure 3.2: Indicative effect of three possible impacts of a Rapid Deployment Policy on the finances[6] of each class of stakeholder. All effects are relative to the current status quo. [Source: Analysys Mason, 2015]

	Financial impact	Speedier deployment	+ Lower costs	+ More sharing
ECNS licensees	Planning overhead	0	0	+
	Administration	+ *	+	+
	Application fee (cost)	– *	+	+
	Execution	0	0	+
	Service revenue	+	+	+
Owners	Overhead	+	+	+
	Administration	+	0	++
	Maintenance	–	– –	0
	Application fee (revenue)	+	–	– –
Fiscus	Construction taxes	0	+	–
	ECN service taxes	+	+	+
Households	Consumer surplus	+	+	++
	Employment	–	0	– –

* We assume that overall cost to licensees is unchanged in the Speedier deployment scenario, so that administration cost reductions for licensees are offset by (hypothetical) application fee increases. This assumption is made to separate the incentive effect of lower costs (which would encourage licensees to deploy more facilities) from the effect of faster approvals.

A Rapid Deployment Policy that successfully achieved speedier deployment and lower costs, would therefore unambiguously be to the benefit of ECNS licensees, and would probably also increase national government revenue through increased activity in both the construction and EC industries. Consumers would probably benefit since the likely loss in employment would be small, relative to the surplus from improved services.

The only parties that may be negatively affected in such a situation are landowners such as provinces, municipalities and state-owned entities, most notably through potentially minor damages to their assets that cumulatively lead to service delivery failures that may not be compensated for. These entities are responsible for investments – in roads, railways, water reticulation, electricity distribution, sewers, and stormwater drains – that each on their own dwarf the investments of the EC industry, and that arguably have a higher GDP impact than those claimed for broadband and Internet.

6 It should be noted that some important dynamic factors are not included in this impact assessment. Competitive effects appear to be a principal reason why licensees do not share infrastructure today; sharing would diminish network competitive advantages and likely increase price competition. Elasticity effects and competition would determine whether service revenue of any one operator were to increase or decrease following price reductions due to sharing.

The loss to these landowners would be somewhat mitigated if there was more sharing of EC facilities. The table above suggests that any potential losses would actually be reduced or reversed through more sharing, relative to the situation of only speedier deployment and lower costs. It could also be convincingly argued that the wider benefits – to citizens and the economy, notably through lower prices for consumers – would be worth any inconvenience or loss that remains to them.

The Rapid Deployment Policy must acknowledge the potential costs incurred as well as benefits enjoyed by various stakeholders in the deployment of EC facilities. If it is agreed that land and rights-of-way owners are negatively impacted this must be acknowledged and compromises made on both sides, in particular to avoid incorrectly incentivising those who may be compromised by poor implementation of the policy.

4 Legal and policy context for development of the policy

4.1 Key policy considerations

4.1.1 The nature of a policy

A policy is a framework or vision for the sector. Laws are often implemented so as to give effect to a policy. A policy is an important document, giving guidance to industry and, as in this case, the regulatory authority (and therefore to investors) about how certain aspects of or problems with a market or industry are going to be addressed and what outcomes are expected. It can do this by setting out a goal or vision, priorities, options, responsibilities and alternatives.

It is important to be clear about the boundaries of the policy – what will a policy be able to resolve and what will it not be able to resolve? What will this mean for related goals or priorities? In the case of rapid deployment, the exercise of policy formulation should take into account, among other things:

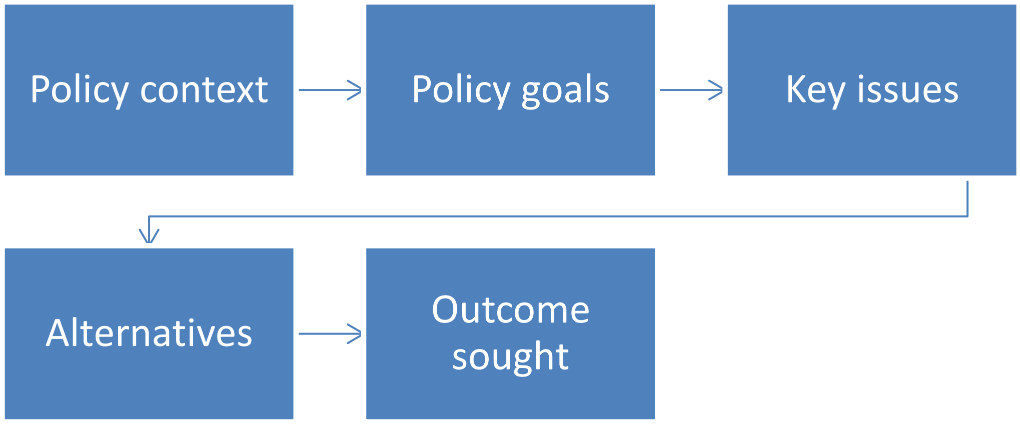
- the effect of the policy on ICASA's obligations to make regulations
- whether or not the policy will be capable of enforcement by other organs of state and also private entities
- what the policy can or should anticipate if policy goals are not achieved.

The Rapid Deployment Policy should take into account the effect it will have on ICASA's obligations to make regulations; whether or not it will be capable of enforcement by other organs of state and private entities; and what it can or should anticipate if policy goals are not achieved.

4.1.2 Preparing a policy

The obvious starting point is the reason for and authority to make policy – what is it intended to achieve and who is supposed to formulate it. It may involve participation by several stakeholders to ensure that the analysis of issues to be included is as accurate and thorough as possible. In the formulation of national government policy, participation should be sought from both the private and public sector, and sector specialists. The following figure describes the basics of a policy-making process:

Figure 4.1: Process to prepare a policy [Source: Analysys Mason, 2015]



In the end, there will be trade-offs between different goals, priorities and activities that are regarded as necessary for implementation.

In the course of preparing the Rapid Deployment Policy and as described above, we have engaged with numerous stakeholders and conducted substantial research into the legislative instruments, guidelines and policies that exist in relation to the construction of ECNs specifically, and access to land, use of land and construction in general. The stakeholders engaged in the preparation of this document are listed in Annex A, and their responses are summarised in Section 5. The conclusions from our review of legislative instruments and other documents are explained below.

4.1.3 The context for the Rapid Deployment Policy

Section 3.1 of the present document has indicated that the Minister is obliged to issue policy and policy directions relating to rapid deployment of electronic communications infrastructure, as described in section 22 of the ECA.

In Annex B of this document we briefly examine issues that are similar in nature to those with which we are concerned in this project, that arise in other countries. The reason for this is not only to establish a benchmark but to indicate that the issues of rights of way, wayleaves and other land use rights are not new and not unique to South Africa. The rights contained in Chapter 4 of the ECA are not dissimilar to those contained in the legislative instruments of other countries.

Section 22 of the ECA authorises ECNS licensees to:

“*(a)* *enter upon any land, including any street, road, footpath or land reserved for public purposes, any railway and any waterway of the Republic;*

(b) *construct and maintain an electronic communications network or electronic communications facilities upon, under, over, along or across*

any land, including any street, road, footpath or land reserved for public purposes, any railway and any waterway of the Republic; and

(c) *alter or remove its electronic communications network or electronic communications facilities, and may for that purpose attach wires, stays or any other kind of support to any building or other structure*."

An important aspect of section 22 which sometimes gets lost, is subsection (2), which requires that

"*In taking any action in terms of subsection (1), due regard must be had to applicable law and the environmental policy of the Republic*".

The Minister is required to make a policy and to issue policy directions to ICASA in terms of Chapter 4 of the ECA. The Minister has the power to make policy under section 3(1) of the ECA, which provides that:

"*3(1) The Minister may make policies on matters of national policy applicable to the ICT sector, consistent with the objects of this Act and of the related legislation…"*

The Minister is authorised to issue policy directions under sections 3(1A) and 3(2) of the ECA, which provide that:

"*3(1A) The Minister may, after having obtained Cabinet approval, issue a policy direction in order to –*

(a) initiate and facilitate intervention by Government to ensure strategic ICT infrastructure investment; and …"

"*3(2) The Minister may, subject to subsections (3) and (5), issue to the Authority ... policy directions consistent with the objects of this Act, national policies and of the related legislation in relation to –*

…

(b) the determination of priorities for the development of electronic communications networks and electronic communications services or any other service contemplated in Chapter 3; …

(e) any other matter which may be necessary for the application of this Act or the related legislation."

Content and background of Chapter 4

Chapter 4 of the ECA, which is the origin of the requirement for Rapid Deployment Policy, contains a variety of provisions in addition to those discussed above. The various sections in the Chapter are summarised in Figure 4.2.

Figure 4.2: Summary of the sections in Chapter 4 of the ECA [Source: Analysys Mason, 2015]

Section	Summary
20	The chapter applies only to ECNS licensees, and ICASA must issue regulations which describe how licensees must "exercise their rights and fulfil their obligations under this Chapter".
21	The Minister must issue policy on rapid deployment.
22	As described above, licensees may enter upon and construct lines across land and waterways.
23	A local authority may provide underground pipes for ECNS when deploying electricity from a street into a premises, in agreement with an ECNS licensee.
24	An ECNS licensee may, on giving 30 days' notice, bury, alter, or remove its conduits in streets or alter position of other services pipes; local authorities can supervise this work at the licensees' expense.
25	Costs for moving ECNS facilities must be borne by the party that requires the relocation (e.g. for road alteration); disputes between private landowners and licensees around altering EC facilities should be referred to the CCC.
26	ECNS licensees may erect gates in fences that land owners put up around the EC facilities.
27	Subject to environmental law, ECNS licensees may cut down or require to be cut down trees that may interfere with the EC facilities.
28	Subject to environmental law and sections 22 and 25, the height of aerial or depth of underground facilities must be as prescribed; an ECNS licensee may depart from this if a landowner can demonstrate that they are obstructed from free use of the land.
29	Construction of other utilities (light, heat, power) must conform to the requirements of owners of nearby EC facilities to prevent damage, must provide 30 days' notice, with detailed plans; the constructor may be liable for damage to EC facilities if they do not heed notice that the plans may lead to such damage.

It is worth noting that sections 22 to 29 shown above are largely unchanged from sections 70 to 77 of the Telecommunications Act, No. 103 of 1996. That Act was replaced by the Electronic Communications Act, No. 36 of 2005, which replaced the old Act's reference to "a fixed line operator" with references to the wider class of ECNS licensees, who were now allowed to exercise the rights that had previously only been given to Telkom.

In setting the Rapid Deployment Policy in context we will need to take account of:

• The fact that there is, on balance, currently insufficient infrastructure to enable service provision in South Africa to meet demand for voice and data services.

• Whether Chapter 4 of the ECA is adequate to solve or ameliorate any problems in deploying infrastructure that you may be experiencing (if you are a licensee) or to solve or ameliorate any issues you may have (as landowner or member of the public).

• The specific issues that are experienced currently as articulated in Section 5.

• Those issues that might or should be dealt with in the regulations to be produced by ICASA.

4.1.4 Situating the Rapid Deployment Policy within national policy and goals

The National Development Plan ("NDP") is a national policy document produced by central government that identifies the role that different sectors of society need to play in reaching certain goals. The NDP and its proposals will need to be implemented in the right order over the next 17 years (now 15 years). Three phases have been identified (2014–2019, 2019–2024 and 2024–2029).

The Rapid Deployment Policy falls squarely within the first phase and should arguably enable progression towards the achievement of the NDP goals as a whole, which include the following:

> "*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. Within this vision, the underlying ICT infrastructure and institutions will be the core of a widespread digital communications system. This ecosystem of digital networks, services, applications, content and devices, firmly integrated in the economic and social fabric, will connect public administration and the active citizen; promote economic growth, development and competitiveness; drive the creation of decent work; underpin nation building and strengthen social cohesion; and support local, national and regional integration.*"

Pursuant to the NDP, Cabinet established the Presidential Infrastructure Coordinating Committee ("PICC") to:

- co-ordinate, integrate and accelerate implementation
- develop a single common National Infrastructure Plan that will be monitored and centrally driven
- identify who is responsible and hold them to account
- develop a 20-year planning framework beyond one administration to avoid a stop-start pattern to the infrastructure roll-out.

The PICC has developed 18 strategic integrated projects (“SIPs”). The SIPs cover social and economic infrastructure across all nine provinces (with an emphasis on lagging regions) and include what are termed “catalytic projects that can fast-track development and growth”. Among the SIPs is SIP15, referred to as “*Expanding access to communication technology*”. The goals of SIP15 are:

“*to provide for broadband coverage to all households by 2020 by:*

- *establishing core Points of Presence (“PoPs”) in district municipalities*
- *extend new Infraco fibre networks across provinces linking districts*
- *establish PoPs and fibre connectivity at local level*
- *further penetrate the network into deep rural areas*”[7].

SIP15 anticipates 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. As can be seen from this section, the goals and priorities for the sector at the highest level of government provide a platform for the policy anticipated in the ECA.

In December 2013, the Minister of (what was then) the Department of Communications, now DTPS, gazetted “SA Connect”. The chief objective of this policy is that by 2020, 100% of South Africans will have access to broadband services at download speeds of 5Mbit/s at 2.5% or less of the population’s average monthly income. It is intended to give effect to the vision articulated in the NDP. In addition, the policy is intended to implement the New Growth Path and the Presidential Infrastructure Co-ordinating Commission and SIP15.

At the core of the SA Connect vision is the statement that there will be

> “…a *widespread communication system that will be universally accessible across the country at a cost and quality that meets the communication [needs] of citizens, business and the public sector and provides access to the creation and consumption of a wide range of converged applications and services required for effective economic and social participation*”.

As recently as 17 July 2015, the Minister said the following:

> “*The Internet drives socio-economic development and globalisation. As government, our aim is to ensure we connect all citizens to the Internet, including those who live on farms. While SA compares well in relation to other countries in terms of broadband infrastructure rollout, this infrastructure does not yet reach everyone and those who have access are not using it optimally.*”

7 Available at www.dtps.gov.za/documents-publications/ict-policy-review.html

The ITWeb article in which the Minister was quoted also notes that as part of the SA Connect project, government has undertaken to connect its offices across the country, starting in the rural areas, to ensure South Africans have access to the most modern communications tools and services, and are able to use them to accelerate socio-economic development.[8]

The purpose of the policy can therefore also be said to be to give effect to national priorities as set out in numerous policy pronouncements and national law.

4.1.5 Other considerations to take into account when preparing the policy and policy directions

Infrastructure leasing

If facilities exist already in a particular area, licensees would avoid delays in obtaining approvals from the various agencies referenced by stakeholders (Section 5 of this report) and there could be substantial capex savings, not to mention that the adverse environmental effect of duplicating infrastructure could be alleviated.

It is obviously the case that the purpose of the rapid deployment of infrastructure is to ensure the quick implementation and therefore uptake of electronic communications services. If it is technically and economically feasible to provide services over existing infrastructure, this would seem to be a more palatable alternative to constructing more infrastructure at huge expense.

The term "technically and economically feasible" is taken in part from the reasonableness test contained in Chapter 8 of the ECA, which deals with facilities leasing. For a request to lease facilities to be "reasonable" it must meet all three legs of a test, comprising:

- technical feasibility, and
- economic feasibility, and
- the promotion of efficient use of networks and services.

ICASA made regulations entitled "Facilities-Leasing Regulations" in 2010. Despite these regulations having been in force for some years, it is debatable whether they have actually been enforced. We are aware of only one complaint being brought to ICASA's attention under these Regulations, namely that of Neotel which complained that Telkom's failure to unbundle the local loop constituted a failure to comply with the requirements of section 43(1) of the ECA, which states:

8 ITWeb, *SA Connect: North-West allocates R10m for WiFi*, 17 July 2015. Available at http://www.itweb.co.za/index.php?option=com_content&view=article&id=144766

> "*Subject to section 44(5) and (6), an electronic communications network service licensee must, on request, lease electronic communications facilities to any other person licensed in terms of this Act and persons providing services pursuant to a licence exemption in accordance with the terms and conditions of an electronic communications facilities leasing agreement entered into between the parties, unless such request is unreasonable*."

The CCC made a finding in favour of Neotel but Telkom took the matter to the courts, and local-loop unbundling has not yet been implemented.

Two issues arise in this context:

- Why do more operators not make use of these Regulations to gain access to existing facilities?
- Is ICASA able and willing to enforce these Regulations, and if so, is the dispute resolution process within ICASA sufficiently effective between licensees?

The stakeholders interviewed in the course of this project included private landowners such as Growthpoint and Century City. Their view was that operators should share infrastructure to avoid inconvenience and disturbance to their tenants, unnecessary duplication of infrastructure, and to ensure the maintenance of an aesthetically pleasing set of premises. In some cases, it was felt that there was no option but for them to contract with one licensee only because there was little interest in providing service from other operators. This is discussed in more detail in Section 5.

Dispute resolution

Section 25(8) of the ECA provides that –

> "*Where a dispute arises between any owner of private property and an electronic communications network service licensee in respect of any decision made by an electronic communications network service licensee in terms of subsection (4), such dispute must be referred to the Complaints and Compliance Committee in accordance with section 17C of the ICASA Act*."

This subsection (4) is limited to dealing with pipes under streets; the right of the licensee to construct, alter, maintain or remove pipes, tunnels or tubes; the rights of local authorities or persons to whom pipes belong or by whom they are used, to supervise the work; and the obligation of the licensee to pay "*all reasonable expenses*" incurred by that authority or person in connection with any supervision or other work.

Section 21(2) of the ECA specifically obliges ICASA to make regulations pursuant to the policy and policy directions to be made under section 21(1)(b), that will include processes and procedures for –

> "*resolving disputes that may arise between an electronic communications network service licensee and any landowner, in order to satisfy the public interest in the rapid rollout of electronic communications networks and electronic communications facilities*".

Even though ICASA only has jurisdiction over licensees (and licence-exempt entities) under the ECA, this section envisages that its processes should extend to admitting complaints and disputes with non-licensees as well. The existing processes under section 17 of the ICASA Act authorises ICASA to appoint committees from time to time.

It is possible that ICASA could use these provisions to create another committee, separate from the CCC and any consumer complaints process, to deal specifically with issues relating to access to land. In order to give effect to this, it seems inevitable that the policy and policy directions would have to deal with this in some detail.

In this part of the drafting process, we will need to take account of the following issues:

• why more operators do not make use of the Facilities-Leasing Regulations to gain access to existing facilities.

• what might constrain ICASA in its enforcement of these Regulations and if the dispute resolution process within ICASA is sufficiently effective between licensees.

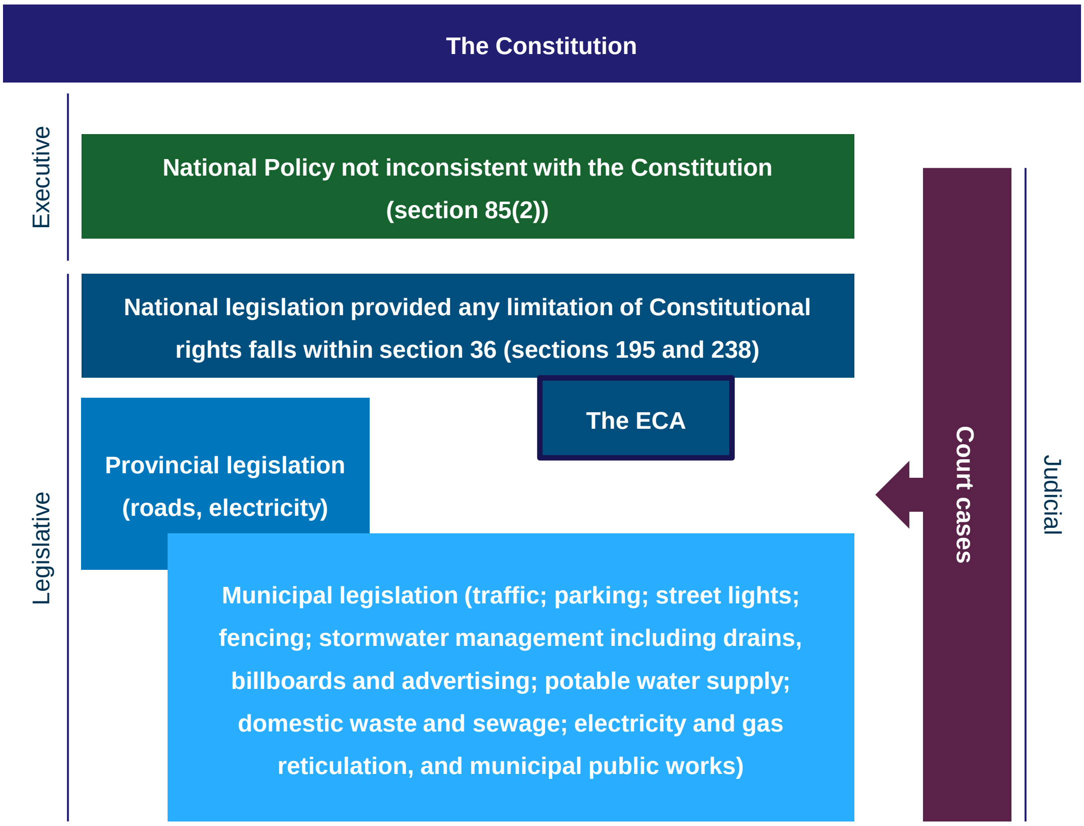
• whether the policy would need to require or direct ICASA to create a new dispute resolution process to deal with disputes with landowners and, if so, what the main concerns might be about, e.g. the formation and resourcing of such a committee, its mandate, and enforcement of any finding by ICASA.

• whether the ECA can be said to imply that the "public interest" is the justification for encroaching on the rights of landowners, and if, on balance, the public interest in rapid deployment is such that it does in fact justify licensees' activities in accessing and using land for purposes of network construction; and whether this would be the case even if there are alternatives, such as leasing existing facilities.

4.1.6 The status and application of the Rapid Deployment Policy

Policy made by the Minister will constitute "sector" policy, but it is of national application because it is created at the Executive level of government, meaning that it applies to the sector nationally. Figure 4.3 illustrates the relationship between the various levels of government:

Figure 4.3: Relationship between the various levels of the South African government [Source: Analysys Mason, 2015]



This section considers why, how and in what way this policy might or should also be binding on other spheres of government and therefore capable of implementation not only by ICASA but also by these other spheres of government.

Section 2 of our Constitution[9] provides that it is "*the supreme law of the Republic; law or conduct inconsistent with it is invalid, and the obligations imposed by it must be fulfilled*." This is very clear. We have set out below some of the other provisions of the Constitution that, in relation to approvals, processes and national policy, we consider to be most relevant.

These are:

9 Constitution, Act No. 108 of 1996.

1. Chapter 3 (sections 40 and 41) is headed "*Co-operative Government*".

    a. Despite the fact that government is constituted as national, provincial and local, each of these spheres is referred to as "distinctive, *interdependent and interrelated*". In summary, municipalities or local authorities have competence in relation to municipal roads, traffic, parking, street lights, fencing, stormwater management including drains, billboards and advertising, potable water supply, domestic waste and sewage, electricity and gas reticulation, and municipal public works. Provincial government has responsibility for provincial roads and traffic and public works and housing. National competencies are therefore limited to national roads (SANRAL[10]), electricity supply, and the ECA. In each case (provincial and national government), the entity concerned has its own budget.

    b. All spheres of government and all "*organs of state*" (including any department of state or administration in the national, provincial or local sphere of government or any other functionary or institution, including ICASA, exercising a power or performing a function in terms of the Constitution or a provincial constitution; or exercising a public power or performing a public function in terms of any legislation but not a court or judicial officer)[11] are required to adhere to a number of principles in such a way as to:

        i. "*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;…*

        ii. *co-operate with one another in mutual trust and good faith by – …(iv) co-ordinating their actions and legislation with one another; (v) adhering to agreed procedures; and (vi) avoiding legal proceedings against one another*".[12]

    c. Furthermore, "An Act of Parliament must – (a) establish or provide for structures and institutions to *promote and facilitate intergovernmental relations*; and (b) provide for appropriate mechanisms and procedures to facilitate settlement of intergovernmental disputes".[13]

2. Section 146, headed "*Conflicts between national and provincial legislation*", provides clarity on how to deal with conflicts or the absence of legislation. In general, national legislation prevails over provincial legislation in certain conditions, including where, as expressed in subsection (2)(c) –

10 The South African National Roads Agency.

11 Section 239 of the Constitution.

12 Section 41(1) of the Constitution.

13 Section 41(2) of the Constitution.

— “*The national legislation is necessary for – …*

— *(ii) the maintenance of economic unity;*

— *(iii) the protection of the common market in respect of the mobility of goods, services, capital and labour;*

(i) the promotion of economic activities across provincial boundaries;…

(ii) the protection of the environment.”

In summary, the Constitution envisages separate powers for different spheres, but that each sphere will, despite its own jurisdictional influences, work together with other spheres to give effect to national priorities in the interest of efficiency, development and transparency.

National laws, such as the ECA, can and should therefore be considered to be applicable to all such spheres of government; national policy made by the Executive is similarly of general application and must be given effect to; and even where each sphere of government is given authority to govern certain areas independently (which we will discuss shortly) this policy must be taken into account and given effect to, to the greatest extent possible.

4.1.7 The court cases

In this context, we must also consider the impact of the pronouncements of our Supreme Court of Appeal (“SCA”) in two cases concerning ECNS licensees and landowners. Currently these cases are the final word on the subject of licensee rights under Chapter 4, but one of the cases was taken on further appeal to the Constitutional Court in May of this year[14]. A finding by the Constitutional Court that contradicts or changes the SCA findings would ultimately prevail over the wording of the ECA and the outcomes of these court cases, and may have an effect on the goals, objectives and implementation of a Rapid Deployment Policy.

In the last three years, there have been two cases heard in front of the SCA, and one in the High Court, which has subsequently been referred to the Constitutional Court[15]. These cases, and particularly those heard in the SCA, have set useful precedent and shed important light on the manner in which Chapter 4 of the ECA is to be interpreted and applied, at least until the Constitutional Court makes a finding in the matter of *City of Tshwane Metropolitan Municipality v. Link Africa (Pty) Ltd*.

In the case of *Msunduzi Municipality v. Dark Fibre Africa RF (Pty) Ltd*, reported in October 2014, the SCA through Dambuza, AJA, remarked,

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14 Available at http://www.bdlive.co.za/national/2015/05/13/court-must-decide-on-link-africas-fibre-cables

15 We have noted the case of *SANRAL Ltd v. Telkom Ltd*, which dealt in the main with the parties’ disagreement on the terms on which a more general form of permission might be granted to Telkom to lay fibre in or across roads under the SANRAL Act. The more recent case law supersedes this finding.

— "*Although the appellant argued that it had become practice for licensees to apply for wayleaves, and that the respondent was accordingly obliged to do so, this cannot be so. It would defeat the very object of s 22 [of the ECA] which is to enable a licensee to enter upon land and perform its work without first obtaining the consent of the landowner*."

The clear findings in this, the most recent case, reiterate the principle that applicable law may not be used to limit the very act that has been authorised under another law.

The cases can be summarised as follows:

- *SMI Trading cc v. MTN (Pty) Ltd (SCA, 2012)* – a dispute between a private landowner and MTN regarding MTN's right to leave a base station on private land after it was no longer used, and without making any payment, was settled on the basis that in the taking of action under Chapter 4, a licensee must give "proper consideration" to the applicable law (i.e. there is no impediment to taking the action) and act "fairly" i.e. negotiate, engage with, and take a rational and reasoned decision. MTN failed to do this but had it done so, its rights under Chapter 4 would have been upheld.

- *City of Tshwane Metropolitan Municipality v. Link Africa (Pty) Ltd, Minister of Justice and Constitutional Development, and Minister of Communications (GP, March 2014)* – no consent is required from the municipality for the licensee to exercise its Chapter 4 rights, although the licensee must give 30 days' notice to the municipality which may supervise the work (and potentially can claim the cost of doing so, but only under section 24 of the ECA which deals with removal or alteration of a network). In this case, Link Africa was able to advance specific public interest arguments on the basis of its technology and method of deployment and was successful in High Court. This case is now before the Constitutional Court.

- *Msunduzi Municipality v. Dark Fibre Africa (Pty) Ltd (SCA, October 2014)* – the finding of the court was that "applicable law" (i.e. the ECA and specifically section 22(2) which refers to compliance with other applicable laws) cannot be used to limit the very act authorised in the licence but an act under section 22 constitutes "*administrative action*" and should therefore be subject to the Promotion of Administrative Justice Act, 2000 ("PAJA") i.e. it must be "fair". Licensees may nonetheless exercise the rights given to them in the law and in their licences.

4.1.8 Balancing rights under the Constitution and the Rapid Deployment Policy that may potentially be conflicting

If we consider the possibility that any operator seeking to install any facilities within the wide categories of electronic communications facilities and networks has the power granted to it under Chapter 4 of the ECA, and the support of the vision enunciated in SA Connect to enter into and to use public or private land to fulfil the goals of SA Connect, we can imagine, as a worst-case scenario, a world cluttered with a plethora of pipes, fibres, masts, antennae and other paraphernalia associated with operating an ECN. Such a situation would create an increasing burden on the environment, town planning, other important services, human settlements in general, and on the private landowner.

In order to give effect to what may appear to be conflicting laws or regulations or laws that deal with matters such as access to land in very different ways between spheres of government and even within national government itself, the Constitution created a balancing provision.

Section 36 is entitled "*Limitation of rights*". In this section, the drafters anticipated that conflicting laws may apply in a given situation and provided that the rights set out in the Bill of Rights including those of the right to property (section 25), the right to the environment (section 24) and the right to just administrative action (section 33) "may be limited only in terms of a law of general application to the extent that the limitation is reasonable and justifiable in an open and democratic society based on human dignity, equality and freedom, taking into account all relevant factors, including –

(a) the nature of the right;

(b) the importance of the purpose of the limitation;

(c) the nature and extent of the limitation;

(d) the relation between the limitation and its purpose; and

(e) *less restrictive means to achieve the purpose*."

Subsection (2) of this important section also provides that "*Except as provided in subsection (1) [as above], or in any other provision of the Constitution, no law may limit any right entrenched in the Bill of Rights.*"

In the present project, the policy required from the Minister under the ECA arguably limits one or more rights in the Bill of Rights (although it is a policy, it is made pursuant to a law). Rights such as the right to property (section 25), the right to the environment (section 24) and the right to just administrative action (section 33) are all potentially at risk of being affected by the policy.

Applying the test in section 36 of the Constitution, we are of the view that each of (a) to (d) above are nonetheless met and the sections that follow explain this in more detail. However (e) requires consideration of whether or not there are less restrictive means to achieve "the purpose".

We need to consider, as part of the policy-making process, whether there might be other ways to achieve rapid deployment, for example, by agreement between operators to lease or share or co-build, or by focusing on particular geographic areas or needs.

In the court cases we referred to in Section 4.1.7, we noted that the courts considered the application of the Constitution when determining that the rights to access land granted to ECNS licensees in section 22 of the ECA ought to be upheld.

4.1.9 Issuing a policy or a policy direction

We turn now to consider the process that must be followed to create a binding policy under the ECA and to ensure that it is implementable.

Under section 3(5) the Minister is required to:

- consult ICASA
- publish the policy or policy direction by notice in the *Gazette* and invite written submissions from the public in not less than 30 days from the date of the notice
- publish a final version of the policy and policy direction in the *Gazette*.

Section 4 of the ECA deals with ICASA's powers to make regulations and in subsection (4) states that ICASA,

> "*in exercising its powers and performing its duties in terms of this Act and the related legislation must consider policies made by the Minister in terms of subsection (1) and policy directions issued by the Minister in terms of subsection (2)*."

A similar section is included as section 4(3A) of the ICASA Act, 2000 as amended in 2014.

Much has been written and debated about the binding nature of a policy and policy direction on Chapter 9 institutions, such as ICASA, under the Constitution. There are questions about why ICASA was included in this chapter at all, alongside entities like the Public Protector and Auditor General, the Human Rights Commission and the Electoral Commission. The likely answers have to do with the fact that section 192 of the Constitution actually requires the creation of an independent authority to regulate the politically sensitive domain of broadcasting. The independence of ICASA in this regard has been extended under the ICASA Act, 2000, to include independence in relation to the wider field of electronic communications.

ICASA's regulations are not within the scope of this project, except that it will be important for the policy and policy directions to be sufficient to ensure that ICASA can carry out its duties under Chapter 4 of the ECA and specifically section 21(2) which we have set out above; the directions are sufficiently clear and the scope and terms of the directions do not amount to instructions that will encroach on ICASA's own mandate.

Although perhaps not the leading case on the matter, the case of *etv v. Minister of Communications, Minister of Telecommunications and Postal Services, ICASA, USAASA, SABC, MNet [and 10 others*] (which is not reported) is probably the most recent case[16]. The judge in this

16 High Court of South Africa, Gauteng Division, Pretoria on 14 June 2015, case no. 26166/2015.

case made it plain that section 85(2)(b) of the Constitution applies to Ministerial policy making. In other words, the making of policy is a function of the Executive, and as such it is not included in the list of powers and functions that are capable of review under the Promotion of Administrative Justice Act, 2000 ("PAJA").

As the judge put it,

> "*It seems to me where this policy was made (or amended) in terms of section 3(1) of the ECA, a step falling within the powers of the Minister, and duly promulgated and published, the amendments have become "legislative instruments" and not merely "policy determinations". As such, they seem to me to bind "the public*"."[17]

In summary, national policy published by a member of the Executive such as the Minister in terms of Chapter 4 of the ECA, is binding and not reviewable. This being the case, we can conclude at this point that not only does the Minister have the power and the duty to make policy, but that this policy is of a binding nature, is not reviewable, constitutes action by the Executive, and is capable of being applied in the face of other potentially conflicting laws and regulations.

While Ministerial policy directions could include requesting ICASA to form a committee under section 17 of the ICASA Act, 2000 to deal specifically with disputes regarding the manner in which licensees gain or use their access to land, we propose that the direction request that this responsibility be taken on by the existing CCC provided that ICASA ensure, as far as possible, that such a committee is comprised of experts in certain specified areas.

The policy should indicate that, as set out in the court cases, licensees have absolute rights to enter land as set out in Chapter 4 of the ECA, but in all cases licensees should attempt to negotiate in good faith and on market-related terms. However the Minister should further direct ICASA to more closely examine the current practice regarding application of Chapter 4, with the aim of identifying any amendments to the ECA that may be needed to enhance its operation.

We turn now to examine the nature of the rights that the policy will have to deal with and the types of regulations and other legal instruments that currently govern or affect or have the potential to impact on the rights under section 22 of the ECA that the Minister will seek to give effect to in the policy.

4.1.10 The "rights" that Chapter 4 is concerned with

The essential right under discussion is access to land (including waterways, roads, railways, footpaths and tunnels). This right of access may be authorised in one of a number of different ways, but is usually processed through the instruments known as "wayleaves" (right of use) and "rights of way". Simply put, wayleaves are consents to do certain things, an indication of no

[17] Quoting from the judgment in *Akani Garden Route (Pty) Ltd v. Pinnacle Point Casino (Pty) Ltd* (252/99) [2001] ZASCA 59 (17 May 2001).

objection rather than a permission. A servitude is the more formal legal right to land which is registered against the title deed of a property (this passes with the property and remains in force in favour of the holder of the servitude despite a change in ownership of the land)[18]. A servitude endures for a long period of time, whereas wayleaves and rights of way can be for one-time access only, or for a limited period of time.[19] We have not considered servitudes in detail in this report as it would appear that most operators are likely to obtain wayleaves or rights of way over third-party servitudes rather than to obtain servitudes themselves.

The most extreme form of right over land is created by the expropriation of land by one person, from its owner. The Constitution limits the circumstances in which land may be expropriated and attaches conditions to this because of the limitation of the rights of the property owner which results. We do not consider this aspect in any more detail since no operator has yet attempted a land expropriation in order to deploy network infrastructure and it would, as we say above, be an extreme form of action to enable land use.

Each municipality, public sector landowner (municipality or metro), state-owned company and private landowner can legitimately determine its own process, terms and price for these rights, provided such a price or tariff has been incorporated in the fee tariff of the municipality each year and has been published as a by-law under the Municipal Finance Management Act, Act No. 56 of 2003 (“MFMA”).

Under section 25 of the ECA, if a licensee has to move its infrastructure “owing to any alteration of alignment or level or any other work on the part of any public authority or person, the cost of the alteration or removal must be borne by that local authority or person.” Notice must be given to the licensee “not less than 28 days before the alteration or deviation is to be effected.” The licensee also has the right to “decide whether or not the deviation or alteration is possible, necessary or expedient” where its facility may interfere with a building about to be erected. Again, the cost to the licensee of the alteration or deviation must be borne by the person at whose request the deviation or alteration is effected.

The other rights granted to licensees in Chapter 4 include:

- section 22: entry upon and construction of lines across land and waterways
- section 24: use of pipes under streets
- section 26: erecting and maintaining fences
- section 27: cutting down or trimming trees and removing them where necessary
- section 29: prescribing requirements for prevention of damage to facilities by other works.

18 There are two types of servitude – praedial and personal. Praedial servitudes are more common in this context, being continuing rights over property regardless of ownership. When we refer to servitudes, we therefore refer to praedial servitudes, since they are more common in the context of this project.

19 PRASA advised that their wayleaves are current for 9.11 (nine point eleven) months.

4.1.11 Identifying the issues

The number of policies at national level, and even national legislation, would suggest that several Ministries and the government as a whole is committed to rapid deployment of ECNS. However, the cascading nature of the spheres of government under the Constitution creates an overarching problem: it has been interpreted, particularly by municipalities in the exercise of their powers and duties, as authorising them to deal with applications by operators in any way they choose, rather than in such a way as to give effect to *national* policy objectives and goals and *national* legislation.

Our review of documents and the interview process conducted to date highlights just how different the process and procedures are within different spheres of government. This complicating factor means that not only are there numerous procedures within different provinces and municipalities but they are not the same even within each province or municipality.

Additional observations are listed below:

- There is no central co-ordinating body with power to monitor activities, set prices, determine application conditions or enforce time periods (see below on the Infrastructure Development Act, 2014) despite the creation of the Broadband Council, SIP15, PICC and a provision for the creation of a Council and Steering Committee under the Infrastructure Development Act, 2014.

- There is no consistency in process, application conditions, wayleave or permitting conditions, or the duration of permits across state-owned companies, public sector landowners, municipalities or provinces (with the exception of the processes and procedures applying to permits under environmental legislation).

- There is no benchmark for pricing for access to and use of private or public land, so the prices range from a few hundred rand to hundreds of thousands of rand, seemingly without cost or other market-related justification.

- Some laws and regulations are not specific about the process to be followed for applications, leaving this to be determined at will because they contain provisions such as ‘‘*any ancillary or incidental administrative or procedural matter which is necessary or expedient to prescribe for the implementation or administration of this [Act/regulation]*’[20].

- ICASA has failed to implement the Facilities-Leasing Regulations, 2010, or to require Telkom to unbundle its local loop pursuant to those regulations, or at all, and there is no precedent in relation to the application of the Facilities-Leasing Regulations in the case of disputes between licensees.

[20] This statement is a summation of similar sorts of provisions found in many of the instruments that we reviewed.

- There is no clear method in any document for determining how one should balance the interests of the public at large in aesthetically pleasing structures, parks and buildings and in uninterrupted traffic flows and not having to circumnavigate inconvenient road closures during construction for example; and those interests of the municipal and provincial agencies tasked with providing basic services to their citizens in as effective a manner as possible, alternatively with sweating their own assets so as to maximise profit (where public sector assets including land, road and rail reserves, streetlights and ducts or pipes are made available to operators at a cost).

Clearly some balancing of "public interest" issues and Constitutional rights as against the Chapter 4 rights is required.

4.1.12 Addressing the issues

The policy drafting process will require consideration of these and other factors. The provisions of Chapter 4 are not solely concerned with rights. This Chapter does require some degree of responsibility from licensees:

- To the extent that the law already imposes on licensees an obligation to have "due regard to the environmental laws of the Republic", all ECNS licensees must comply (sections 27 and 28).
- The law also stipulates that "*In taking any action in terms of subsection (1) [of section 22], due regard must be had to applicable law and the environmental policy of the Republic*" (section 22)
- Licensees may agree with local authorities that electricity supply and ECNS to a particular area to be supplied by means of an underground cable could include provision of a conduit pipe or other facility to enable installation of electronic communications facilities. It is clearly in the interests of all parties that agreement would be reached, and in this case, the ECNS licensee is required to pay for the provision of that pipe (section 23).
- Licensees must pay reasonable expenses incurred by local authorities or other persons in connection with altering or removing pipes under streets (section 24).
- Licensees must deviate or alter the position of their facilities so as to remove obstacles to planned building activities (section 25).
- Licensees must first give notice regarding their intention to cut down or trim trees at their own expense (section 27).
- Aerial networks and facilities must be installed "at the prescribed height" and underground facilities must be installed "at the prescribed depth" and if a landowner complains, the licensee

is obliged to take steps to give relief (even if they are at the discretion of the licensee) (section 28).

The case law also requires of licensees that they act as "administrators" would be required to act in terms of PAJA. This over-arching obligation entails that the actions of licensees under Chapter 4 be lawful, reasonable and administratively fair.

The policy should reiterate the provisions of Chapter 4 outlined above which impose obligations on licensees. Along with other more specific measures outlined elsewhere in this discussion paper, we believe that these provisions are sufficient to protect the rights of landowners (as part of the balancing of rights required). Those further specific measures, along with improved oversight and enforcement from ICASA, should give more insight into the manner in which licensees might be considered to act in a "lawful, reasonable and administratively fair manner" in exercising their Chapter 4 rights.

4.2 Preparing the policy

Having regard to all of these considerations, we conclude with a few thoughts on the mechanisms that might be useful to address problems, present alternatives, and give effect to the policy outcome we are seeking.

- The Infrastructure Development Act, 2014, may offer a potential central agency for co-ordination, and the endorsement of the policy and policy directions by the Minister for Economic Development may assist in this regard which would avoid (i) having to provide for the creation of yet another such body at additional expense to the taxpayer and (ii) having to amend any legislation.

- The same Act may also offer a solution to the plethora of processes and procedures by ensuring that no matter which process has to be followed, it is simple, accessible, executed in a timely manner and consistently applied, since the Act envisages that "*any approval, authorisation, licence, permission or exemption required in terms of other legislation can be facilitated and expedited…*"[21] pursuant to its terms.

- Nothing in the existing documents that we have examined prevents the Minister from determining a policy specific to the deployment of network infrastructure that is of national and binding effect. As set out in relation to the Constitution, organs of state are, however, required to co-ordinate and co-operate, and the existing requirements of other spheres of government must be given effect to, to the extent possible, in terms of current case law.

- The policy would ideally, using the logic set out in this report, seek to consolidate the approvals process for land access in a legitimate and practical way, so that it can have application across the spheres of government.

21 Section 2 (Objects) of the Infrastructure Development Act, 2014.

- Many of the laws and regulations that we have reviewed contain provisions in one or other form, pertaining to exemptions, exceptions and special provisions. The relevant authority (usually the relevant Minister) in each case has power to make certain decisions and even, in the case of SANRAL for example, to make regulations. This is helpful – given the level of co-ordination required at a national level, and the application of national policy across the Executive, Ministerial discretion could play a very useful role in ensuring that other spheres of government facilitate and support rapid deployment by:
  - adopting the new policy, i.e. the policy produced as part of this project
  - taking steps to implement those parts of the policy as are applicable to that entity or that entity's process and procedures
  - adopting a similar policy.

4.2.1 Example of co-ordination

We have noted some recent attempts by a new body called the Roads Coordinating Body of the COTO ("Committee of Transport Officials", under the auspices of the Department of Transport which includes SANRAL) to create a standard set of processes and procedures in a manual; the version we have been provided with is termed "TRH27: South African Manual for Permitting Services in Road Reserves (2012)." The manual recognises the need to install services in or over road reserves and that the issues that need to be taken into account in this regard include:

- interruptions to traffic flow
- impairment of road safety
- damage to road surface and pavement structures during installation or maintenance
- creation of hazards or obstacles
- damage to other services installed in the same reserve
- over-filling the road reserve, requiring road widening which in itself could require relocation of existing services.

Other related legal issues are dealt with in detail in this useful manual, but what is most relevant for purposes of our report is that:

- such a manual exists
- it attempts to ensure a standard approach will be taken when dealing with road reserves
- such an approach should offer comfort to and ensure consistency for licensees
- provided it is enforced nationally and among all entities with power over roads, it will significantly reduce the burden on operators when creating networks across, over or alongside roads.

The manual recognised as early on as 2012, in section 2.10, that third parties cannot deny ECNS licensees the exercise of their section 22 rights.

A further useful point raised by the manual and one which we have come across time and again during the course of our interviews with stakeholders, is the issue of multiple service providers attempting to use the same area or reserve in which to install services. The manual states that this is acceptable if it is "physically possible and practical to install more than one service within the same portion of land".

The provision, set out in clause 2.8 in relation to servitudes, contemplates this only where use can be made of existing ducts. Other points to note which the manual makes clear, are that roads can only accommodate certain types of infrastructure like pipes and cables (underground or overhead), and only where they allow sufficient space for road-related services and infrastructure. Certain types of roads are deemed to be unsuitable by the manual because of high speed and traffic volumes – permitting the installation of infrastructure on, under or over freeways is therefore not advised.

The Rapid Deployment Policy should draw on COTO practice in achieving co-ordination and any other lessons learnt in harmonising processes.

5 Views expressed by stakeholders

Our stakeholder engagement has involved meeting with over 40 stakeholders including licensees, public landowners such as municipalities and state-owned entities, private landowners and their managing agents, and industry bodies. We have held two roundtables with national government departments to explain and receive input on this project. The views of stakeholders are considered central to the development of policy, and we have attempted to encapsulate the views encountered in this section of the report.

In this section, we group the views expressed by stakeholders into the following major themes:

- the need for national co-ordination of infrastructure and of processes and standards
- ICASA's responsibilities
- government/landowner responsibilities
- dealing with directly conflicting interests.

These themes, and the twenty specific issues raised, have been distilled following a review of the notes from our stakeholder meetings. Each issue is considered to be something on which the Rapid Deployment Policy should offer guidance, and as such the discussion of each issue is followed by a proposed policy approach.

It should be noted that the views reflected in this section are not necessarily factually correct and in most cases represent the opinions or perceptions of stakeholders.

5.1 Need for national co-ordination

5.1.1 Infrastructure database

Our stakeholder engagement has revealed that there is significant demand from operators and authorities for an up-to-date infrastructure geographic information system ("GIS") database for telecoms and other service infrastructure. To a lesser extent, there has been demand for a database or collection of databases of land/areas deemed suitable for the deployment of EC facilities, e.g. road reserves. It is anticipated that such databases will:

- *Improve speed of deployment*: For each wayleave application, operators may be required to contact up to 18 service providers in a given municipality to establish whether they have infrastructure on the operators' potential routes. Operators have indicated that getting responses from service providers often takes up to 30 days and requires notable administrative effort on the part of the requester. These issues could be avoided if there is an up-to-date database. There are a variety of reasons why entities do not respond to infrastructure information requests immediately, including the fact that some entities – such as Eskom for example – are understaffed. Tshwane Metropolitan Municipality requests operators to conduct a cross-cut prior to each wayleave application to confirm viability of further deployment. Operators find this process unnecessarily time-consuming and costly; some other municipalities simply require a cross-cut at the start of actual works. An up-to-date database could notably increase the efficiency of this stage of the wayleave application process.

- *Assist in the planning of other stakeholders:* According to section 25 of the ECA, the cost of relocating EC facilities must be borne by the person requesting the relocation. With this in mind, other service providers and roads agencies would benefit from a database of all electronic communication infrastructure on their desired route as this would help them to better plan their routes and forecast the cost implications involved more accurately. Of particular importance in this regard is SANRAL, which, as per its own mandate, has to frequently engage with EC providers when conducting works on its roads. Moreover, ICASA is mandated to report on the connectivity of schools, hospitals and government sites under the national broadband policy, SA Connect. An infrastructure database could assist all affected stakeholders to improve their planning.

- *Assist in identifying relevant land authorities to approach:* There have been a number of cases where operators have had difficulty establishing the ownership of land on which they would like to deploy EC facilities. A database detailing landownership could assist operators in knowing which authorities to approach. However, considering that significant amounts of land in South Africa is privately owned, private property owners would need to be engaged in this process.

Evidently, a well-managed infrastructure databases can deliver significant value to all the stakeholders involved.

Stakeholders have highlighted some issues regarding the implementation of an infrastructure database. The greatest concern is the lack of co-operation from EC providers. Despite the fact that an infrastructure database would bring major benefits to EC providers, there have been indications that operators would be reluctant to share data regarding the location of their service infrastructure. Both the Centre for Scientific and Industrial Research (“CSIR”) and ICASA have had difficulty collecting infrastructure location data from EC providers. In addition, some EC providers have explicitly indicated their reluctance to contribute their data to this process, explaining that such data is of strategic importance and should be kept confidential. Some providers expressed the fear that such data could be used to regulate them further. Another concern raised by operators is that it might be challenging to keep the database up to date, as infrastructure is constantly changing.

Nevertheless, the public sector has been making progress towards developing isolated infrastructure databases. SANRAL maintains a GIS of services along its road routes. This is reportedly mostly up to date, though it does not contain details of Telkom’s historic infrastructure, and still needs to be updated with details of recently deployed infrastructure that deviate from SANRAL’s permitted routes. The Department of Transport is currently collecting information from a few last municipalities in order to develop a road asset management system that aims to identify the location of roads, road conditions and road owners. The Municipal Infrastructure Support Agency ("MISA"), a component within the Ministry of Cooperative Governance and Traditional Affairs ("CoGTA"), is in the process of putting together a database of infrastructure owned by municipalities across the country. ICASA in 2013 collected data from a number of major operators on all fibre and copper routes and wireless sites and towers, using its rights to request information under the ECA and/or the ICASA Act. All these efforts together provide a good foundation for the development of an inclusive infrastructure database which can be used to promote efficiency in the wayleave application process, and improve stakeholder planning.

Discussion

A well-maintained database or linked set of databases of all infrastructure would be beneficial to ECNS licensees, other service providers, roads agencies and municipalities. For ECNS licensees, the database can assist in improving the efficiency of the wayleave application and facilitating infrastructure sharing; and it can assist in the planning of other stakeholders who are potentially exposed to large relocation costs as a result of section 25 of the ECA. While we note that information on the location of infrastructure may be commercially sensitive for ECNS licensees, the success of such a GIS is highly dependent on the co-operation of the operators. At present, the public sector is making notable strides towards collecting such information. The European Commission report on the EU initiative to reduce the costs of high-speed broadband infrastructure deployment further demonstrates the value of an infrastructure database[22], and the practices to ensure responsible data management.

The databases should include underground services, overhead services, high sites and towers.

Efforts to establish infrastructure GIS databases should be co-ordinated with a view to allowing unified access for the purposes of planning infrastructure deployment. All licensees and service providers should submit detailed information on their infrastructure types and locations to local authorities and/or to relevant national agencies. Public sector service providers and state-owned licensees should be required to submit all data on existing infrastructure, and that on any planned deployments. Private sector licensees should at a minimum be required to submit electronic GIS information in demarcated areas in response to wayleave information requests, and encouraged to contribute planned deployments. All new wayleaves should be granted on condition that this database is checked and that new infrastructure is recorded. Builders of new infrastructure will not be held liable for damage to existing infrastructure which has not been correctly recorded.

[22] Available at http://ec.europa.eu/digital-agenda/en/news/support-preparation-impact-assessment-accompany-eu-initiative-reducing-costs-high-speed

5.1.2 Harmonising processes and standards

Our engagement with stakeholders has revealed that the various land authorities have different application processes and required works standards. Operators have requested that, for the sake of certainty and consistency, the Policy should aim to harmonise these processes and standards as far as possible.

There is a general appeal from operators for the harmonisation of wayleave application processes and required works standards across municipalities. Different municipalities tend to have different processes for the same applications, causing delays for operators as they have to learn new processes. Some examples of inconsistencies between municipalities are highlighted below.

Municipal wayleave applications are traditionally process-driven, however we have had operator feedback indicating that certain municipalities' processes are relationship-driven. Relationship-driven application processes tend to be less transparent and more costly and time-consuming for operators. Some operators have mentioned that building relationships with key people in the municipality or recruiting consultants with such relationships ensures a quicker turnaround of applications. One operator indicated that a particular engineer in the Western Cape has been able to obtain wayleaves in two weeks – thus in a much shorter time than most operators have reportedly been able to do – due to the trust he has developed with the local council. Municipalities, however, have indicated that qualified professionals know the processes and follow them more closely than operators are able to do. For this reason, some municipalities, including Tshwane, have gone so far as mandating that all applications be submitted by qualified engineers only.

Municipalities tend to have differing requirements for standards of works. Some municipalities, including Johannesburg and Tshwane, will not allow micro-trenching or slot-cutting on local roads as this supposedly damages the integrity of the road surface. However, despite a city-wide ban on micro-trenching in Johannesburg, it is reported that Dark Fibre Africa ("DFA") has recently been allowed to use this deployment method in Parkview for fibre to the home ("FTTH") – potentially indicating an inconsistent application of standards across operators. Some municipalities have demanded the use of local labour in deployment. Finally, certain municipalities have demanded the reinstatement of pavements beyond the extent of damage. For example, Nelson Mandela Municipality has reportedly requested the reinstatement of one metre of sidewalk for a 30cm trench.

Industry has very little understanding of the processes involved in gaining access to poles for aerial fibre. City Power has announced that any operator is welcome to use its infrastructure so long as it uses one of its approved contractors. Despite the seemingly straightforward process, operators have suggested that the process is more complicated and opaque than claimed, resulting in them choosing to trench instead of deploying aerial fibre, despite a cost that is ten times higher.

Stakeholders have indicated a few potential solutions to these problems:

- *National standards of work:* There have been suggestions that universal standards and processes for wayleave applications and deployment should be created. One proposal was that the government should set standards for the industry, but at a minimal level. Alternatively, there was a suggestion that the industry should adopt the ITU-T[23] standards manual for all infrastructure deployment.

- *Use of civil engineers for wayleave applications:* Many municipalities indicated their support for the use of consultants and civil engineers. In their view, such professionals know and are able to follow their processes better than most operators, resulting in shorter wayleave application times.

- *Banning of micro-trenching and slot-cutting:* Many roads agencies across South Africa have expressed dissatisfaction at the use of micro-trenching and slot-cutting because these processes compromise the integrity of the road surface. Some municipalities have banned the use of such deployment techniques and have suggested that this be a nationwide municipal ban.

- *Capacity development for relevant entities to manage deployment of aerial infrastructure:* Many operators have indicated that the lack of clear processes and know-how in the relevant entities, such as City Power in Johannesburg, is hindering the development of aerial fibre as a deployment technique. This has resulted in operators resorting to costlier forms of fibre deployment, such as trenching.

Some municipalities have taken steps towards standardising processes and standards. The Western Cape Department of Economic Development has developed a wayleave strategy for the province. Unfortunately, this has not gained traction across the province. SANRAL is in the process of defining guidelines and processes for deploying infrastructure on SANRAL land. Similarly, the Department of Transport is working on a roads policy that includes solutions to accommodate infrastructure in road reserves. The Department of Water is also conducting a verification and validation process determining various entities' rights to water.

Discussion

Harmonisation of processes and standards will promote greater efficiency in the wayleave and high-site application processes. Harmonised processes will promote transparency and thereby encourage process-driven rather than relationship-driven application processes. Furthermore, a consistent set of standards will allow operators more certainty as to what is expected of them. Such consistency will allow operators to maintain a high quality of work and increase the efficiency of their work.

23 International Telecommunication Union Telecommunication Standardization Sector.

A national co-ordination body should facilitate a process to harmonise processes and standards for wayleaves across municipalities. Ongoing harmonisation of COTO/RCB and others must be encouraged. All municipalities should be encouraged to follow the harmonised process and standards or otherwise document and publish any deviations from the harmonised process and standards.

Furthermore, this harmonisation process should have some private sector input. Ideally, a panel of private sector experts (e.g. including ICT industry associations such as FTTH Council, WAPA, ISPA, SACF and the Wi-Fi Forum, as well as consulting engineers) should lead the process with the support of local and national government. The panel can be structured as a PPP to ensure participation from both the private and public sector.

5.1.3 Automated permit application system

Many operators have requested that an automated permit application system be implemented. This system would streamline and increase the transparency of the application procedure, ultimately resulting in a faster application process. Stakeholders highlighted the number portability system as one that works well and could be used as a starting point. Other processes that operators identified as working well in a public sector context were the SARS process and the procedure of verifying criminal records.

City of Tshwane Metropolitan Municipality has developed an online wayleave application system that follows a well-defined process. There are three steps to the Tshwane online wayleave application process, with each step taking approximately four days:

- *Services enquiry*: The electronically submitted application is forwarded via email to representatives of the 18 service providers with infrastructure in Tshwane. Should no response be given at the end of the four days, the email is escalated to a more senior member of the service providers' organisation. This escalation is performed once more, and in practice this has always led to a response. Sometimes failure to respond is due to retirement, retrenchment, leave or there being a new person in the job.

- *Cross-cut application*: Requires the applicant's contractor to go to the site, open a trench and identify whether there is space for new service. If there is no space, the applicant is required to decide on a new route and the process starts again from the beginning.

- *Wayleave application*: This requires the applicant to submit extensive plans including detailed design, site photos and traffic management plans. The municipality is thereafter required to sign the wayleave within four days.

Tshwane's system is designed to be easy to use and to be shared without charge with other municipalities. The system interface is based largely on the paper forms of the application and is therefore familiar to engineers and city employees that have always dealt with wayleave applications. Furthermore, Tshwane only permits professional engineers to use the system. Over the last financial year, Tshwane reported that 1848 wayleave applications were received, with 1000 of these being for telecoms. Only five or six applications were rejected – most were rejected since the land did not belong to Tshwane, and one because it was submitted by a non-engineer. Ekurhuleni Metropolitan Municipality has already indicated interest in using this system.

Tshwane's online wayleave application system has other powerful capabilities. The system includes special handheld devices that allow the user to view aerial photos taken annually to observe new construction and compare this with zoning permissions. The devices also enable the user to view which operators have been granted wayleaves in a particular location, for purposes of identifying who might have caused damage to other services. However, the handheld devices are currently not being used, allegedly due to lack of ICT awareness and fear of change amongst the targeted users. Similarly, SANRAL is also developing an online wayleave application process. It is reportedly at an advanced stage and is scheduled for release in 2016.

Discussion

An automated permit application system can increase the efficiency of the wayleave application process. Increased transparency and accountability of the application process are the major benefits of an automated application system. In addition, an automated system would lower administrative burden on operators as they do not each have to contact and follow up numerous service providers during the information request stage of the application process. The Tshwane municipality is open to sharing its existing system with other municipalities.

Municipalities and other wayleave processing authorities should adopt automated permit application systems. Those developing online systems should co-ordinate activities. DTPS or another existing organ of state should take a role in funding the enhancement and scaling up of one or more interoperable systems which can then be adopted for use by other landowners, notably smaller municipalities. This process should be conducted in tandem with that of harmonising processes and standards.

5.1.4 Standardisation of fees

Operators have indicated that some landowners and authorities are acting as rent-seekers in order to maximise the fees and benefits that they receive for the use of their land. Smaller operators are often willing to give in to these demands in return for access, while larger operators typically refuse to do so. The City of Cape Town Municipality is particularly notorious among operators for displaying rent-seeking behaviour with respect to the fees it charges.

Wayleave and permit application fees

Municipalities are known to charge large sums of money in order to grant wayleaves and permits. One operator noted that, over the years, tower permit applications have risen from R100 to R10 000 per application. In most cases, these application fees are set arbitrarily. Msunduzi, Empangeni and Middelburg municipalities, for example, reportedly stated that they were “revisiting bylaws and wayleave processes” – what this meant in practice was an increase in the application fee to R50 000. In another case, an operator was charged an “administration fee” of R2800 for each utility that the municipality had to check for infrastructure along the proposed route.

Other public entities also engage in the practice of charging rent-seeking prices for wayleave applications. The Passenger Rail Agency of South Africa (“PRASA”) reportedly charges both an “administration” fee and a “technical” fee in order to check whether it owns the land which the operator is seeking permission to access. PRASA’s average wayleave fee is around R40 000, while SANRAL charges an application fee of R25 000 per wayleave.

Land use rentals

Some landowners and authorities tend to also show rent-seeking behaviour when charging operators land use rentals. Link Africa was quoted R60 per metre for access to sewers in Cape Town, while it was charged R1 per metre for similar access in Durban. In the City of Cape Town Municipality, an operator will be charged a monthly rental of R10 000 to erect towers on municipal land. However, when operators choose to co-locate, they are reportedly not allowed to share the rental fee. Instead, each operator co-locating on the site is charged the same rental of R10 000 per month.

Similar rent-seeking behaviour is evident on other public and private land. In one instance, an operator had to pay R1 million to SANRAL in order to deploy fibre across a bridge on the N3. Another operator applied to dig both sides of a street while trenching for FTTH, but was only given permission to dig on one side, and was quoted R6000 for each time it crossed the road. Finally, to deploy wireless infrastructure in the Gautrain stations, an operator has reportedly been quoted over R100 000 per month for site rental for a space less than $8m^2$. Other landowners, including the Airport Company of South Africa (“ACSA”), have requested revenue share agreements for towers built on their properties.

Non-fee demands

In some cases, land authorities request non-fee compensation from operators, often in addition to the fees charged. The most common demands are for extra duct to be deployed free of charge on behalf of the land authority and for operators to reinstate the land beyond the extent of their damage. SANRAL and the City of Cape Town have been identified as authorities that often request additional ducts to be deployed, while Nelson Mandela Municipality has requested an operator to reinstate one metre of pavement for a trench that was 30cm wide. Of particular concern is that the City of Cape Town Municipality uses the duct it has gained from operators requesting access to compete against these operators. In some cases, it is reported that the City of Cape Town Municipality may request an operator to alter its route in order for the route to suit the municipality's needs. SANRAL reports that it only uses the duct it claims from operators for its internal purposes.

Some industry players are not against the idea of providing ducting to city councils. Concerns arise when the council uses the ducting in competition with the operator or requires the operator to change its route. DFA has indicated that it is not concerned with municipalities competing with it using its own duct, as municipalities seldom have the ability to deliver services at the level of quality that DFA can.

Also, municipalities believe that requirements to reinstate roads are justifiable. Municipalities require high-quality reinstatement to ensure that they are not burdened in the future by the cost of reinstating roads.

Discussion

Land use and application fees may pose constraints to infrastructure deployment if they remain unconstrained and high. Operators have argued that land authorities tend to exhibit rent-seeking behaviour, with a high variability in fee structures. On the whole, fees need to be constrained while still keeping in mind all the associated costs incurred by the land authorities.

Fees for private land use and for relocation of EC infrastructure are addressed separately (Sections 5.3.2 and 5.4.2).

In principle, application fees can be set anywhere between zero and the surplus derived by the operator from deployment. It is important to ensure all direct costs are recovered from such fees. Policy should dictate that application fees be set to recover the incremental cost of administering the wayleave application process. Fees for access to publicly owned land should be set nationally by ICASA, with rights for individual organs of state to vary fees only on specified grounds.

Non-fee demands from public entities should be prohibited. This includes requests for free provision of duct, route changes or provision of additional services.

5.1.5 Process streamlining

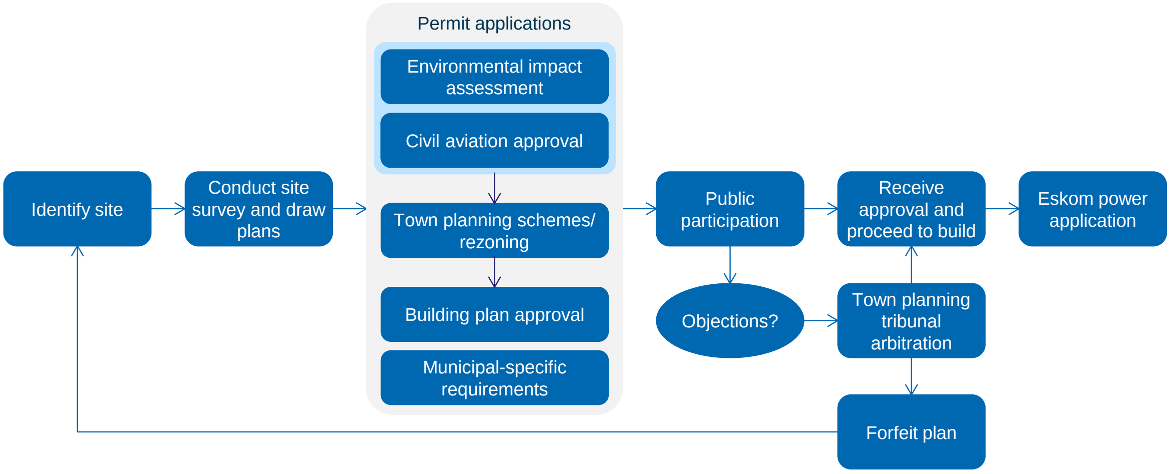
A major theme that arose during stakeholder engagement was the need to streamline processes in order to reduce the delays involved. For example, mobile network operators ("MNOs") have indicated that it takes between two and three years to build a tower while it takes ATC South Africa, a tower company, between nine months and two years to build a tower. Despite fairly consistent overall timelines among operators, there is notable variability in the reported timelines of the individual components of the applications:

- environmental impact assessment ("EIA") – 6–18 months, and up to 24 months if there are objections
- civil aviation approval (by the Civil Aviation Authority ("CAA")) – 18 months

- town-planning schemes/rezoning approval – up to 2 years
- building-plan approval – 1–18 months
- Eskom power application – 30 days to one year; in the most extreme case there was a wait of 638 days for a quotation.

Figure 5.1 illustrates the generic application process followed by operators when deploying cell masts in urban areas.

Figure 5.1: Generic application process followed by operators when deploying cell masts in urban areas [Source: Analysys Mason, Operator interviews, 2015]



The insistence that operators apply for different approvals sequentially rather than in parallel creates a delay in the overall process. Operators indicated that building-plan approval applications can only be submitted once civil aviation, EIA and town-planning schemes approvals or exemptions have been granted. Furthermore, operators have indicated that they cannot apply for power from Eskom until after the structure has been built. This lack of concurrency in the application process increases the time required to deploy wireless masts.

The EIA approval has been lauded as one that works well, as it has clear processes and timelines that tend to be adhered to. Operators believe that this can be used as a template to apply to the water affairs process. However, the EIA approval process has been identified as restrictive in environmentally sensitive areas. Vodacom and the Department of Environmental Affairs have debated about deploying a tower close to a unique species of flora for over eight years. This means that the entire population of a nearby village has not been able to gain access to services during that time. In addition, operators are required to disguise sites built in environmentally sensitive areas as trees. However, it has been suggested that pine-tree designs should no longer be permitted, as these are not indigenous to South Africa and disguised sites are not allowed to be more than 3m taller than the natural tree line.

Public objections also contribute to delays in infrastructure deployment. While health concerns have been overruled as a reason to object to the deployment of a tower (according to one stakeholder, following an announcement by the Ministry of Health[24]), objections based on aesthetics continue to be an issue for operators. Some neighbourhoods continue to have poor cellular coverage as a result of objections from the public. Most objections to towers reportedly come from Cape Town. Also, residents' objections to cabinet-based multi-service access nodes is delaying the roll-out of fibre.

Many operators have been frustrated by the requirement that they apply for water-use licences ("WULs") in cases where it does not seem necessary, for example when operators deploy their fibre across bridge attachments, and where the stream in question has dried up. This has resulted in the perverse situation that operators have drilled under rivers at great cost instead of following the road bridge over the river.

Town-planning schemes, which provide a legislative framework to control the use of buildings and land, tend to cause seemingly unnecessary delays for MNOs. As interpreted by most municipalities, town-planning schemes require that MNOs apply for a deviation in land use in order for them to erect a tower. However, the City of Johannesburg and Ekurhuleni municipalities have concluded that wireless mast networks should be considered as infrastructure rather than land use and should be exempt from the provisions of the town-planning schemes. The City of Johannesburg cellular mast policy has, in fact, been praised as the most favourable municipal policy on wireless masts.

The PRASA wayleave applications process is also inefficient. There are no forms on which to apply and the process is not published anywhere. To submit an application, an operator writes a letter to PRASA, and PRASA then checks whether it owns the land in question. If the land is PRASA-owned, the application is passed on to Metrorail via email and sometimes as a hard copy file. The lack of a published process and application forms and the need for the application to be processed by two entities tend to slow down the application process.

Municipal requirements for wayleave application processes also cause delays. Operators have suggested that municipal wayleave applications are more relationship-based than they are process-based. Building relationships in municipalities is time-consuming, while hiring consultants that already have established relationships with the municipalities can become costly, as they reportedly charge up to R70 000 per application. Operators mentioned that they find Tshwane's requirements for a professional civil engineer's sign-off and the need to provide a cross-cut to evaluate the amount of space in the trench as costly and time-consuming. In addition, health and safety obligations are the same for a 5m as for a 5km trench. For short trenches, this may result in an operator taking longer to meet health and safety regulations than to actually carry out the work.

Stakeholders made the following suggestions regarding how processes could be streamlined:

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24 We believe this stakeholder may be referring to a 14 June 2010 public letter from the Directorate: Radiation Control of the Department of Health in South Africa, stating: "…local authorities, in considering the environmental impact of any particular base station, do not need to and should not attempt to set, from a public health point of view, any restrictions with respect to parameters such as mast heights, separation distances, and duration of exposure."

- *Authorities must ensure there is proportionality in their treatment of applications:* For the purpose of EIA applications, high-impact activities should be distinguished from low-impact activities. Low-impact activities must therefore be subjected to less scrutiny and processed quicker. Operators have suggested following the example of UK's "red-amber-green" classification of infrastructure deployment. Similarly, health and safety requirements must be applied proportionately to the length of the trench being dug. Alternatively, the contractor should be allowed to have a single health and safety file for the entire project, rather than being required to have a file for each trench.

- *Some approvals should be made predictable or even gotten rid of:* The need for EIA applications in non-sensitive areas and WUL applications for crossing bridge attachments must be reconsidered. It has been suggested that these approvals be replaced by a set of standards-based regulations.

- *Wireless masts should be considered as infrastructure instead of land use:* This would allow MNOs to be exempted from applying for a consent use departure on the land when seeking permits to build towers.

- *Additional ducting for future requirement must be supplied on bridge attachments and river crossings:* This would allow operators to avoid having to go through lengthy WUL applications.

- *Wayleave granting should be privatised:* This is based on the premise that a private sector authority would eliminate the efficiencies and process applications quicker.

- *Wayleaves must be treated as notifications instead of requests for permission:* This suggestion is rather aggressive as it does not take into account the concerns of the landowners.

- *Blanket approval for metro and access network should be introduced:* Operators have requested blanket approvals similar to the "universal permissions agreement" suggested in ICASA's draft rapid deployment guidelines. This would involve an operator making a single application to a land authority for all the works it would like to conduct on the land.

- *Ensure that the policy minimises and makes transparent the processes for different infrastructures.*

Discussion

There are delays that arise from inefficiency in the approval applications. Some key issues are obstructive public objections, requirement for approvals in cases where they are unnecessary, and processes that are simply inefficient and not subject to statutory deadlines. Operators have suggested that addressing these issues would assist with the pace at which infrastructure is deployed.

The streamlining process is likely to be complex work without clear, large benefits (e.g. identifying situations in which EIAs can be simplified). This should be undertaken where possible by relevant public sector bodies including the Departments of Environmental Affairs and Water Affairs, and SALGA in the case of municipalities, in consultation with DTPS. Some major issues can be streamlined through an ad hoc process, e.g. ensuring EC facilities do not require use-consent or building plan approval.

There must be increased clarity in the requirements of the different authorities. For example, there should be clarity as to which activities require EIA approvals and WULs. Also, there should be national guidelines for tower construction. Some examples of such standards are: in residential areas, they should be trees; within (say) 10km of an airport approach, towers need to be red and white and have lights on top; brown-field/industrial areas must have fast tracked planning and can be normal steel structures; green areas can only have one tower for every 5km which must be shared, etc.

5.1.6 One-stop shop

There are conflicting views on whether there should be a "one-stop shop" for wayleave applications. The idea of a one-stop shop has been discussed before in various forms – notably in the National Integrated ICT policy review report[25] which was gazetted in March 2015, it was described as a national co-ordination centre. A one-stop shop[26] on rights of way and administrative procedures would be an organisation that managed information and permits on rights of way, although it is possible to conceive of several other tasks, discussed earlier in this section, which could also be assigned to such a central agency. We imagine the roles of a one-stop shop could include:

- dispute resolution
- oversight of processes
- ensuring accountability of public sector administrators
- collection of data and management of the infrastructure database
- harmonising and streamlining of processes and standards
- management of the online application system
- engagement with stakeholders to ensure buy-in to the initiatives
- capacity development for municipalities.

Some stakeholders, namely operators, municipalities and industry associations, have expressed support for the one-stop shop. However, a consistent theme is that the industry needs to be clear on its function

25 Available at http://www.dtps.gov.za/documents-publications/category/102-ict-policy-review-reports-2015.html

26 Definition from Analysys Mason (2012), *Support for the preparation of an impact assessment to accompany an EU initiative on reducing the costs of high-speed broadband infrastructure deployment*. Available at https://ec.europa.eu/digital-agenda/en/news/support-preparation-impact-assessment-accompany-eu-initiative-reducing-costs-high-speed

and the actual problems that it solves. Also, all involved must understand the roles and responsibilities conferred by a one-stop shop. Stakeholders have suggested that the one-stop shop should:

- be an independent entity that grants or referees the wayleave application process
- have participation from the private sector
    - it can be structured as a public–private partnership between government and industry-funded NGOs, or have industry associations on its board of directors
- co-ordinate the wayleave application process with a single view of gas, electricity, water, sanitation and telecoms infrastructure
- ensure neutrality in the evaluation of applications
- facilitate discussions about sharing between operators in order to avoid implication of anti-competitive behaviour
- provide clear regulation and a dispute resolution process
- take responsibility for educating communities about infrastructure deployment in order to limit objections
- promote open access in infrastructure deployed
- be responsible for surveying and creating a reference price for access to high sites
- include an oversight role for the Ministry of Economic Development
- include an incubator role for the Meraka Institute, an operating unit of the CSIR.

On the other hand, some stakeholders have argued against the idea of a one-stop shop. The major concerns around the one-stop shop lie in its implementation. In general, stakeholders do not seem to have faith in government-run entities. Stakeholders are concerned that the one-stop shop could become a single point of failure, result in the loss of best practice gained in the individual municipalities, provide an additional layer of bureaucracy and that it may face funding challenges.

Some stakeholders have suggested that there may be alternative models of co-ordinating wayleave applications. One example is to document a guideline process that is clear and easy to follow. Local municipalities would either accept the process as documented, or deviate and document deviations and the reasons for such. The process should be standards-based and have a centralised review system.

Discussion

There is general distrust of a government-run national co-ordinating agency and lack of consensus on whether this would help or hinder the situation. Although ICASA is widely believed to be the obvious candidate to take this responsibility, given its current resource constraints there is a serious risk of failure at what could become a bottleneck function. A potential solution is to provide adequate ring-fenced funding to ICASA. Some have called for private sector involvement in some central functions.

The tasks and functions identified to be carried out by a "one-stop-shop" or national co-ordinating agency should be led by ICASA. ICASA must be given adequate ring-fenced funding for this purpose. ICASA can draw on other entities such as CSIR and PICC.

5.2 ICASA's responsibilities

5.2.1 Facilities leasing

Proper enforcement of facilities-leasing regulations is vital to rapid deployment of infrastructure in South Africa. Many of the issues raised can be alleviated by an effective facilities-leasing regime. Such a regime would reduce conflicts between landowners and operators, thereby making the single trench policy more beneficial and negating the need for exclusivity arrangements on private land. Also, with facilities leasing, operators can avoid many of the costs and delays associated with new wayleave and permit applications. Equally, the processes would likely be quicker as there would be fewer wayleave and permit applications to process (assuming that operators themselves do not make this process unduly complicated or expensive, perhaps in the hopes of excluding competitors from the market or area and thus from service competition).

Not all operators are willing to share infrastructure, thereby necessitating enforcement of facilities-leasing regulation. Many operators have reported that Telkom is often unwilling to share vital infrastructure including ducts in private property, aerial fibre in environmentally sensitive areas and its access network infrastructure. In some cases, Telkom has reportedly threatened private property owners with litigation if they allowed other service providers to access their ducts. Other operators refuse to share ducts, citing that they do not have commercial products to sell duct access. Some MNOs are reportedly building cheap towers that are incapable of supporting other operators' infrastructure.

Some stakeholders have suggested the following solutions to these problems:

- *ICASA must increase its enforcement of facilities-leasing regulation:* The legal framework for facilities leasing already exists – the only shortfall currently lies in the enforcement of this framework. Stakeholders believe that ICASA needs to take a more active role in enforcing the Facilities-Leasing Regulations, and operators should submit complaints in this regard.

- *Enforce sharing of infrastructure:* Some stakeholders have indicated that they would like to see the Rapid Deployment Policy further requiring operators to share infrastructure. In particular, this would include mandated sharing of duct infrastructure and mandating that all newly constructed towers be capable of co-locating up to three operators' equipment.

Discussion

The lack of infrastructure sharing is a barrier to the development of the industry. Significant investment is being directed towards duplicating access infrastructure, where it could rather be used to enhance core network capacity. Further, the lack of enforcement of facilities sharing is allowing operators to create mini-geographic monopolies by having exclusive access to duct or access fibre, resulting in higher prices for the consumer. Moreover, licensees' inability to share infrastructure is a major frustration for land authorities who, in response, enforce stringent requirements for future infrastructure deployments. Many of the issues surrounding rapid deployment can be addressed by an effective facilities-sharing regime.

ICASA must, as a matter of urgency, ensure facilities-leasing regulations are enforced. This includes access to all ducts, trenches, and poles, as explicitly dictated by the ECA. ICASA should engage with industry to understand why more facilities leasing and sharing is not taking place, and issue further guidelines on the implementation of facilities leasing. It may also work with industry to identify and fast-track certain precedent-setting facilities-leasing disputes. DTPS should also use its role as Telkom shareholder to ensure the incumbent supports the process.

Furthermore, wireless base station sharing should be insisted on. Municipal site fee structures should not, as currently, deter site-sharing. Exemption from building plan approval should be conditional on the structure supporting at least three operators' equipment. If later operators are denied co-location, building plan approval should be revoked.

5.2.2 Dispute resolution and arbitration

Industry stakeholders have indicated interest in a dispute resolution process. Operators would like a process that addresses disputes with other operators regarding facilities leasing and service disruptions due to infrastructure damage, and disputes with landowners regarding access to land. On the other hand, public entities such as SANRAL need a means to address disputes with operators about access to land, adherence to wayleave terms, and quality of works.

While ICASA is naturally expected to take on a dispute resolution role, operators have revealed a lack of confidence in the regulator. ICASA reports that only a few disputes between operators have been referred to its CCC. It believes that this is because operators perceive the CCC to lack knowledge, resources and the ability to deal with disputes. ICASA believes these views are unfounded, as there are no test cases before the CCC and no precedent of failure to grant access to facilities. Furthermore, ICASA notes that many disputes are with private landowners over whom the CCC has no jurisdiction as it only deals with complaints against licensees. In this regard, ICASA suggests that licensees follow court decisions. However, ICASA does admit that it could do more with regards to regulations including issuing guidelines to deal with implementation of its regulations.

A few dispute resolution models have been suggested to provide additional dispute resolution and arbitration to support ICASA:

- ICASA has suggested an industry self-regulatory or co-regulatory body formed of industry experts that would provide mediation or arbitration over certain types of disputes. Such a body could resolve most issues without referral to ICASA, much like the Telecoms Adjudicator in the UK, which, it is worth noting, is funded by Ofcom (the UK communications regulator).

- Another option is to engage an independent panel of experts, such as the South African Institute of Electrical Engineers, to take over dispute resolution responsibility (at least with respect to rapid deployment) from ICASA. This would be similar to the South African domain-name dispute resolution model[27]. This model is anticipated to be cheaper and quicker than going to the courts.
- Some stakeholders believe that private arbitration as mentioned above cannot be enforced and would therefore still prefer an ICASA dispute resolution model. These stakeholders believe that the CCC should be further empowered to adjudicate all disputes, through an amendment to the ECA and ICASA Acts. Their belief is that ICASA and CCC performance can be improved by increased engagement with industry and greater resourcing.

Discussion

Existing dispute resolution mechanisms are greatly underutilised. Licensees refrain from going through the CCC as most believe that ICASA lacks the capacity to effectively adjudicate and enforce its judgments over licensees. This is borne out by the current backlog of some 700 cases due to the limited number of committee members, who are only available on a part-time basis. Also, other entities such as municipalities are mostly unaware of the existence of the CCC and hence do not use it.

Several industry bodies such as ISPA already have well-defined, developed and operational dispute resolution processes with meaningful sanctions. This problem could be reasonably easily solved if ICASA issued regulations to mandate such a body to carry out dispute resolution. There is a precedent for this in the Broadcasting Complaints Commission of South Africa (BCCSA) mandated by ICASA to deal with all content-related complaints within the broadcasting industry.

ICASA must urgently rectify the shortcomings of its dispute resolution processes. It could do this by undertaking a study of international best practice in governing and operating dispute resolution processes. The CCC must be adequately resourced, which will require additional funding. We do not recommend establishment of a separate dispute resolution body with wider jurisdiction, partly because in many cases disputes (e.g. on private land) boil down to being between licensees. DTPS might consider an amendment to the ICASA Act to extend CCC jurisdiction to non-licensees. ICASA could also formalise use of existing industry dispute mechanisms to reduce its case load.

27 Refer to http://www.domaindisputes.co.za/ for more details

5.2.3 Enforcement of ECA section 22 rights

According to section 22 of the ECA, ECNS licensees have the right to "construct and maintain an electronic communications network or electronic communications facilities upon, under, over, along or across any land…of the Republic" subject to applicable law and environmental policy. However, the different interpretations of this law have resulted in conflict and litigation between operators and landowners. Some of the related case law includes *Msunduzi Municipality v. Dark Fibre Africa RF (Pty) Ltd* and *City of Tshwane Metropolitan Municipality v. Link Africa (Pty) Ltd, Minister of Justice and Constitutional Development and Minister of Communications.*

For the purposes of rapid deployment, industry stakeholders have requested a set of guidelines illustrating how section 22 is supposed to apply. Litigation causes major delays in infrastructure deployment and some clarity would alleviate these challenges. An industry association has suggested that a handful of situations (around two to five) showing how section 22 is supposed to apply should be identified in the policy.

Discussion

ICASA must work with operators to reach a deeper understanding of how Chapter 4 rights should be used and what their limits are, guided by court decisions.

5.2.4 Normalising Telkom

Telkom continues to enjoy some benefits arising from its historical monopoly status. These benefits include preferential treatment from private property developers. Telkom continues to refuse to give access to infrastructure that it appropriated during its monopoly era. It also seems to be immune to enforcement, as it continues to disregard some of SANRAL's and ICASA's requirements.

Operators have noted that Telkom tends to have an easier time accessing private property than most other operators. In the same way that property developers allocate ducting for water, electricity and gas, they reportedly allocate ducting to Telkom, as was the practice when Telkom was the only operator in the market. Now, years after liberalisation of the market, the continuation of such practices is to the detriment of competition in the market.

Many of the ducts to which Telkom has been granted access that are situated in private property allow it to maintain a monopoly over service to this property. Telkom reportedly has gone to the extent of threatening property owners with litigation if they give other operators access to these ducts.

Telkom is the least compliant operator, according to SANRAL. While SANRAL has managed to sign framework agreements with all other operators using its road reserves, it has failed to get Telkom to sign a framework agreement since 1999. Also, Telkom reportedly deviates from its permitted routes and has poor standards of work in the road reserves. In Polokwane, Telkom is suggested to have deviated by more than 20 metres from its permitted route to avoid unfavourable topography.

Discussion

Telkom's historical monopoly status continues to give it an advantage over other licensees. In general, it is noted that Telkom manages to get access to private developments more easily than most other operators as many developers and municipalities still view it as the statutory telecommunications provider. Furthermore, Telkom is notorious for refusing to give access to its ducts and other access infrastructure to other operators. This clearly hinders the industry's ability to deploy infrastructure rapidly.

ICASA must strive to limit the advantages that Telkom enjoys as a result of its historical monopoly status. Enforcing facilities-leasing regulations (and producing guidelines as to what behaviour is acceptable) will go a long way towards levelling the playing field.

5.2.5 Too many operators/infrastructure providers

Landowners and authorities suffer from an array of operators requesting access to their land to deploy infrastructure. There are a large number of ECNS licensees in South Africa[28] – some parties refer to a perception that there are "over 400 of them" – each with a right to "construct and maintain an electronic communications network or electronic communications facilities upon, under, over, along or across any land" according to section 22 of the ECA. In addition, each licensee tends to have a different interpretation of the law. It becomes unfair to the landowner to be subjected to multiple deployments of infrastructure. Operators tend to insist on enforcing their section 22 rights without taking account of their obligations, resulting in substantial frustration for landowners.

In most cases, operators tend to fail to co-ordinate efforts to alleviate the burden on landowners. There have been reports of MNOs building non-shareable towers and of operators refusing to share access fibre or ducting within developments. Also, for strategic purposes operators are not willing to share the location of their infrastructure and as a result reduce the ability of other operators to request infrastructure sharing. Also, many operators have reported that the facilities-leasing regulations are not properly enforced, indicating a lack of regulatory support for infrastructure sharing despite the obvious benefits to all concerned.

Our engagement with stakeholders has identified a number of potential solutions to the challenge of having too many infrastructure providers:

[28] Operators claim that there are around 400, but ICASA only recognises those licensees that are actually providing services, paying licence fees and are in compliance with other regulatory requirements. The figure, in practise, is likely to be closer to 50 or 100, and those that are able to and are deploying substantial infrastructure are likely to be less than 50.

- *Enforce facilities leasing:* Facilities-leasing regulations are a logical starting point to promote co-ordination of infrastructure deployment by operators. In Cape Town, operators building towers on public land are required to share towers where possible. This is discussed in more detail in Section 5.2.1.

- *Appoint a single-infrastructure owner for each road:* SANRAL has suggested that only one operator be given authority to deploy ducts in any given road. Space in these ducts can be leased out to other operators on an open-access basis. The SANRAL CEO has in fact recently proposed to the Minister of Transport that a national passive infrastructure network could be built on SANRAL roads. However, SANRAL is not permitted to spend public funding in this manner and there would need to be funding allocated for this specific purpose.

- *Appoint an industry body to co-ordinate strategic sharing of infrastructure:* Junior technicians at each company collect data about nearby infrastructure for wayleave applications and planning, but this information is not used at a higher (strategic) level to initiate sharing of existing infrastructure. Industry has asked the FTTH Council[29] to co-ordinate this strategic sharing.

- *Organise an operator forum with landowners for rapid deployment:* Some municipalities and private landowners have requested the opportunity to discuss ways of co-ordinating efforts with operators to ensure the concerns of all parties are addressed. However, the notion of an operator forum with landowners has not been successful.

- *Adopt a single trench policy:* Many municipalities and roads authorities have adopted a single trench policy that involves requiring any operator requesting access to communicate with other operators to allow them to deploy infrastructure at the same time, thus avoiding the need to build multiple trenches. Stakeholders have told us that operators' existing processes are poor at identifying opportunities to share deployments; in many cases, information that other operators are planning to deploy is not communicated to sufficiently senior decision-makers.

- *Provide state ducting:* Some stakeholders believe that ducting provided by the state can alleviate the problems arising from the large number of infrastructure providers. It has been suggested that this ducting would be offered to industry on a commercial basis.

Discussion

There are numerous licensees and numerous land authorities, resulting in frustration for both parties. The multiplicity of licensees in particular results in numerous, sometimes overlapping, wayleave and land use requests being presented to land authorities. To protect their own interests,

[29] The FTTH Council Africa is a not-for-profit, independent organisation that aims to 'to educate Africa governments, policy makers and political leaders on why and how high speed fibre connectivity can be delivered to citizens within the coming years'. More information is available at http://www.ftthcouncilafrica.com/index.php/about-ftth-council-africa.

some land authorities are implementing policies such as the single trench policy, which cause delays and frustration for licensees.

Facilities sharing, if properly implemented, will reduce inefficient use, the burden on the environment and unnecessary duplication.

5.3 Issues under government or landowner authority

5.3.1 Single trench policy

To reduce their exposure to multiple access requests, some municipalities have chosen to engage a single trench policy. In general, this policy mandates that EC providers looking to dig a trench along a given route engage with other EC providers to co-ordinate their trenching activities along the route. Once the trench is closed, EC providers will no longer be permitted to trench along that route. While in theory this is a sound policy, it does not work well in practice.

Operators have indicated that they often do not know in advance where they would like to deploy infrastructure. Numerous operators have mentioned that they are capital constrained, and are forced to limit their infrastructure deployment to routes where there is an immediately identifiable business case. An operator will often only roll out infrastructure on a given route in order to connect an existing customer, or in an area where it anticipates that it will gain customers after roll-out. Furthermore, operators may simply prioritise different routes at different times. For these reasons, it is difficult for the single trench policy to work in practice. However operators have indicated that Cape Town's implementation of single trench policy, notably around making information on sharing available, is effective.

Nonetheless, some municipalities continue to enforce this policy and some stakeholders have argued that this is to the detriment of the end customer and the local economy. Once a few operators have rolled out their infrastructure and the trench is closed, these operators are protected from future competition along this route, thereby allowing them to charge their clients higher prices than if there had been open competition. This is particularly an issue because facilities-leasing regulations are not effectively enforced. Furthermore, stakeholders argue that limiting the infrastructure rolled out on a particular route limits the amount of redundancy available to customers. Finally, the local economy loses out on the demand for labour created from operators' trenching activities.

A few solutions to this issue have been suggested by stakeholders:

- *Promoting facilities leasing:* With enforcement of facilities-leasing regulations, the single trench would not block out operators from any given route. Operators who choose not to deploy infrastructure in the single trench may still gain access by buying services from the existing infrastructure owners.

- *Deployment of additional ducts to be offered on commercial terms:* Other stakeholders have suggested that municipalities include a requirement on operators deploying infrastructure on a given route to deploy additional duct infrastructure. Access to this ducting can be sold to future access seekers to allow them to deploy fibre without having to share with existing operators or dig new trenches.

Discussion

In principle, the single trench policy is a means by public land owners to limit the amount of works conducted by licensees on their land. However, the single trench policy has numerous problems in practice. When implemented, the single trench policy is detrimental to the industry – it promotes cartel behaviour and reduces the demand for local labour. Furthermore, licensees are often unable to roll out infrastructure along the same routes at the same times, necessitating multiple wayleave requests. In the absence of effective facilities leasing, the single trench policy will continue to cause conflict between land authorities and licensees.

Municipalities that use single trench policies should learn from best practice in implementing such policies, e.g. in Cape Town. In addition, there should be a regulatory obligation (backed up with effective dispute resolution), for licensees to include excess capacity in their deployment and to lease spare capacity to other licensees at reasonable rates.

5.3.2 Private landowner challenges

As is the case with public land, there are processes that operators wish were harmonised and standardised with respect to accessing private land.

Of greatest concern to operators is landlords offering particular operators exclusive access to their land. With a lack of enforcement of the facilities-leasing regulations, exclusivity arrangements limit other operators' access to tenants in a given development. An example of such an arrangement is at the V&A Waterfront in Cape Town, where Dimension Data has exclusive access to the ducting. Many operators have complained that Dimension Data sells space in these ducts at "exorbitant" prices. Landlords tend to resort to exclusivity arrangements for a number of reasons: their lack of insight, skills or manpower to manage access to ducting; their rent-seeking behaviour; or concerns about compromising security, tenant convenience or the aesthetics of the property. In some cases these landlords have also struggled to get operators (notably Telkom) to provide service at all and have reached out to alternative providers on a commercial basis which makes sense to them – i.e. only having to manage one provider.

It appears that a lack of knowledge or manpower is one of the leading reasons that private landowners and property managers tend to engage in exclusive access arrangements with operators. Telecoms is often not landowners' core business and they often do not have the manpower to keep up to date with developments in this area. They often prefer to find a single service provider that they trust and offer them exclusive access and rights to manage service provision to the property. Also, in some cases property developers by default only approach Telkom to deploy fibre through the ducts of the property, as was common practice in the era of Telkom's monopoly.

In other cases, landlords and property managers offer exclusive access arrangements to operators in return for high rentals. Such rentals from infrastructure providers are used to supplement the traditional rentals and are termed non-gross-leasable-area rentals. While it is justifiable that property managers and landlords would like to maximise the revenue they receive from the property, this cost is often passed on to their tenants who are charged high prices by the infrastructure provider and have no alternatives. This is not the case in all instances – we are aware of at least two landlords that offer tenants the right to choose a provider, but the provider must use the existing infrastructure. Century City for example, allows operators to terminate at a meet-me room, while Growthpoint permits operators to interconnect with Internet Solutions in whatever way those parties agree, to provide service to their tenants. For various reasons, some relating to price but others potentially to conflicting business models, some operators resist using these existing services.

Other motivating factors that drive landlords and property managers to favour exclusive access arrangements are to limit the number of service providers entering the premises and maintaining the aesthetics of the property. Considering that many operators tend to be reluctant to share infrastructure, offering access to multiple infrastructure providers would most likely mean multiple trenches being dug with differing standards of work. Also, giving access to the premises to multiple service providers raises concern for the security of the premises.

The following potential solutions to these concerns have been raised by stakeholders:

- *Nullify exclusivity access arrangements:* Some parties have suggested that exclusive access arrangements between landlords and operators do not hold weight legally and can therefore be nullified. However, it is noted that the courts have been reluctant to intrude into contracts that have been lawfully agreed. Exclusivity is also questionable if licensees retain Section 22 rights to deploy their own infrastructure if suitable arrangements cannot be reached with the existing service provider.

- *Enforce facilities leasing:* Exclusivity arrangements should not necessarily be a hindrance for alternative operators to gain access to tenants' premises on a given property if facilities-leasing regulations are enforced.

- *Regulate access prices for building cabling and ducts:* Some stakeholders have suggested that exclusivity arrangements are not a problem if the relevant operator is willing to share access to the ducts. However, if it results in high prices, ICASA can step in and regulate these prices if they can define this as a "relevant market", however this is expensive and time-consuming. The Competition Commission does however have jurisdiction over non-licensees.

Discussion

We believe that most problems which arise from access to private land are due to lack of insight of land owners and managers into the complex and changing environment of the EC industry. This lack of insight is exploited by rent-seeking operators who offer to give high rentals and to manage connectivity on behalf of the property managers in exchange for exclusive access to the premises. Such exclusivity arrangements potentially prevent other operators from delivering service to the premises.

DTPS should engage with property industry bodies such as NAMA and SAPOA to raise the general level of knowledge of these parties. In particular, awareness should be raised that landowner attempts to maintain exclusivity may fail when other operators choose to exercise their section 22 rights. National government should, in conjunction with revisions to building regulations, also create a template approach to managing premises fibre and ducting that landowners can adopt or vary as suits their needs.

5.3.3 Building regulations require duct

An array of stakeholders has suggested that all new developments must have duct built in for telecoms purposes. It has been suggested that either the rapid deployment policy should mandate developers to include ducts in all future developments, or that the National Building Regulations may be changed to include a requirement to have ducting and/or fibre installed in all new buildings. Furthermore, it has been suggested that these ducts and/or fibre should not be price regulated, as there is a lack of skills and enforcement capacity within ICASA.

Discussion

The Department of Economic Development should update the building regulations to include requirements for ducting based on international practice, which should include sufficient additional capacity to allow infrastructure competition on the premises. It should also develop guidelines for property owners on how to manage competitive EC provision, including fibre, Wi-Fi and wireless sites.

5.3.4 SANRAL

Numerous operators have indicated that SANRAL causes significant obstacles to rapid deployment. The main arguments against SANRAL are that it charges hefty fees for access to its land and has onerous standards requirements. However, considering the costs that SANRAL incurs as a result of section 25 of the ECA, it may be justified in charging high fees and requiring high standards of work. Operators that are too focused on their own interests may fail to appreciate the fact that SANRAL has its own interests to protect, and vice versa.

SANRAL engages in a variety of commercial arrangements with operators regarding wayleave and land use fees. SANRAL denies that it imposes commercial arrangements on any operator, but rather invites operators to negotiate their own commercial terms. As a starting point, SANRAL charges R100/km per year for the installation of ducting and an application fee per wayleave of R25 000. Liquid Telecom indicated that it is charged 2.5% of its revenue on routes that it runs through SANRAL road reserves, which it believes is effectively an unlawful tax on operators.

Operators believe that SANRAL is indifferent to the need for operators to deploy infrastructure. One major issue for operators is the single trench policy. As discussed in Section 5.3.1, there are limitations to the effectiveness of the single trench policy and operators are generally against it. Furthermore, SANRAL discourages deployment of overhead fibre in the road reserve, unless there is no other option. SANRAL will also not permit micro-trenching along its roads and will not permit operators to hang ducts from bridges that are over water. Furthermore, industry believes that SANRAL could very easily develop standards for installing fibre, as it has done for the erecting of advertising boards along its routes.

Discussion

It should be noted that some estimates of relocation costs may not be entirely reflective of the true incremental cost incurred.

Licensees find SANRAL to be the most difficult land authority to engage with. Operators cite the lack of certainty on commercial terms and SANRAL's supposed indifference to licensees' need to deploy infrastructure.

Some basic grievances about SANRAL appear to be relatively simple to address, such as EC industry preference for certainty on commercial terms (this can also be addressed under harmonisation of fees for public land, described previously). SANRAL as a government organisation should not negotiate contract terms with individual EC operators. Trust and mutual understanding need to be rebuilt, potentially through proactive intervention/oversight by an arbitrator in interactions.

5.3.5 Deadlines and resourcing

Many of the approvals tend to be quite delayed. CAA approvals are meant to have a turnaround time of 90 days according to law, yet operators indicate that the quickest applications tend to take 6 to 9 months, while on average they take about 18 months.

It appears these delays are a result of a lack of manpower, skills and processes. Some operators are of the opinion that city councils and municipalities do not work to any fixed timescales and lack internal governance procedures as they are not aware of what is required of them and that there are low skill levels among approval staff. Additionally, there is an indication that municipalities have great levels of incompetence and bureaucracy. Moreover, there is currently no way of holding councils accountable for delays.

Operators have suggested some measures that can potentially improve the delays. There was a request for an escalation and enforcement measure that operators can use to hold relevant authorities to their deadlines. Also, operators suggested that approval staff be educated about the processes and the implication of delays. This could involve workshops and skills development, in addition to making rules simple to understand. Industry is also willing to assist in paying the wages of additional approval staff in entities that have notable delays, such as the CAA.

Discussion

Many delays in the wayleave processes are a result of a lack of human resources. Entities such as the CAA and Eskom are understaffed resulting in long application turnaround periods.

Resourcing challenges should be addressed once online and automated wayleave applications are implemented more widely. This will enable compliance with regulated deadlines. However, it is likely that there will be substantial IT skills training required among government employees to ensure that they are able to effectively use the online systems. Failure to respond within a specified period should be deemed to be consent to the wayleave.

5.3.6 Eskom and power provision

MNOs have indicated that Eskom often takes a long time to process requests for power to tower sites. In one extreme case, it took 638 days for an operator to receive a quotation from Eskom. In addition, Eskom’s inability to connect MNO tower sites causes delays and additional expense for the operators. Telkom has reported that 25% of its base stations do not have access to power, while other operators fail to roll out towers as the costs of self-providing power is prohibitive in some cases. In addition, some municipalities require operators to use pre-paid electricity, which is difficult to manage and often causes conflict with landowners. Increased electricity consumption on the premises driven by the base station equipment may, if the supplier does not provide a second metered supply on a property, result in a higher unit charge on the landowner’s own consumption.

Eskom also has difficulties in responding to wayleave information requests about the location of its infrastructure. Despite having all the data in a central database, Eskom reports that it often takes 15–20 days to respond to information requests. It has reported that staff shortages and “technology issues” are the major reasons for these delays.

Discussion

Stakeholders have raised numerous points about the difficulty of working with Eskom and municipal power suppliers, some of which could not be verified. Eskom should endeavour to ensure that it accords EC facilities priority commensurate with the economic impact of EC services.

Eskom should clarify the situation, and if necessary make amendments regarding various issues raised.

5.4 Conflicting interests

5.4.1 Government-funded infrastructure

Stakeholders are against the idea of government-funded broadband infrastructure. The main reasons for dissent are that state funding distorts the market, the resulting infrastructure is usually poorly managed and investment is often not conducted in a co-ordinated manner, resulting in wasteful expenditure.

Market distortion arises from the conflict of interest that municipalities are exposed to when they are responsible for both deploying infrastructure in competition with the private sector and granting wayleave applications. For example, KwaDukuza Municipality has reportedly introduced a moratorium with respect to permit applications for cellular infrastructure while it develops its own telecoms infrastructure framework. Similarly, City of Johannesburg Municipality is purportedly reluctant to approve applications on routes that carry the Joburg Connect network. Transnet has been accused of acting in a similar way. Such behaviour from state-owned infrastructure providers can be viewed as anti-competitive. Furthermore, government investment in broadband infrastructure tends to “crowd out” investment from the private sector.

Public infrastructure is also often poorly managed, making it unattractive for operators to deliver services on it. The government is inexperienced in running broadband infrastructure, and is therefore often unable to deliver a service level that is satisfactory to the private sector. In many cases, government broadband infrastructure is designed primarily to connect government sites, which is often unattractive for operators that would like to serve the private sector.

Discussions with some municipalities have revealed that government investment in infrastructure is not co-ordinated and results in wasteful expenditure. Some municipalities have built infrastructure which they are finding difficult to dispose of. Also, while SITA is responsible for procuring services on behalf of government, it does not always make use of the infrastructure deployed by municipalities for the purpose of connecting government sites. Finally, there is duplication of infrastructure by different spheres of government, e.g. provincial networks replicating some of the underlying municipal networks. If state investment were better co-ordinated, more funding could actually be channelled towards increasing broadband coverage across South Africa and improving rapid deployment for the private sector.

On the other hand, some stakeholders believe that government can use its ability to both invest in networks and grant wayleaves to assist in rapid deployment. By rolling out infrastructure in unserved areas and subsequently leasing it out, government can reduce the time and capital it takes for the private sector to deliver services in those areas. In addition, municipalities may consider laying duct for sale on an open-access basis whenever they do civil works along roads, e.g. the construction of Rea Vaya bus lanes. As a precedent, Zambia has built base stations in underserved areas on behalf of operators using universal service funding. However, operators have requested that government communicates its plans to deploy infrastructure in advance to allow them not to duplicate infrastructure and subsequently lose their invesments.

Some operators have requested that legislation that prohibits government from conducting wasteful expenditure be invoked. The Constitution does not include telecoms as a function of local government. CoGTA actually has a "back-to-basics" campaign that encourages local government to limit its activities to the core functions of local government. This campaign covers participation in infrastructure provision.

Discussion

Government-funded infrastructure tends to have a negative impact on rapid deployment. Public investment in infrastructure often discourages operators to invest as well. In addition, the infrastructure is often poorly managed such that licensees are unable to use it to deliver services. Much of the investment by government is unco-ordinated, resulting in duplication of infrastructure belonging to licensees and other spheres of government. This is funding that could be better used to assist in rapid deployment, for example, by deploying passive infrastructure for licensees' use in economically unattractive regions.

Public investments in broadband must always be required to demonstrate (a) value for money, with no way to achieve the same effect at a lower price, and (b) no disproportionate impact on existing competitive EC markets. The Competition Commission should monitor municipal broadband investments, and if necessary issue guidelines for municipalities.

Furthermore, infrastructure deployment by the public sector should follow the same wayleave processes as that by private sector.

5.4.2 Costs to other stakeholders arising from EC infrastructure in road reserves

Section 25 of the ECA passes the cost of relocating EC infrastructure to the public authority or person requesting the relocation of the infrastructure. Relocation of EC infrastructure can be rather expensive, costing millions of rands. SANRAL and municipal road authorities tend to incur these costs when they embark on road improvement projects. For example, during the Gauteng freeway improvement project, SANRAL spent R13 billion improving the roads infrastructure of which R500 million was for relocating telecoms infrastructure. Tshwane reportedly failed to complete the last kilometre of development to Lynnwood Road due to it running out of budget because it spent money on relocating Telkom's infrastructure. SANRAL and municipalities have indicated that this cost is the greatest concern that they have with infrastructure being deployed in road reserves.

The presence of infrastructure also poses a cost to other service providers. Existing infrastructure tends to degrade faster when any other infrastructure is deployed in the vicinity. Galvanised water pipes often have a protective wrapping which allows them to last for 25 to 30 years. However, if this wrapping is torn, the lifetime of the pipeline is reduced to about seven years. Similarly, a nick in the sheathing of an electrical conduit can cause a blow-out once a higher load is put through. It has been observed that there are usually more water leaks and sewer blockages when there is increased road work. Increased EC infrastructure deployment increases the risk of damage to other service infrastructure and ultimately presents a cost to other service providers.

In response to these concerns, SANRAL and municipalities are putting in place measures to mitigate their exposure to risk. SANRAL's planning cycle is typically three years and wherever possible it grants wayleaves according to the planned road reserve rather than the current one. However, it is constrained to the extent that it already owns the land spanning the planned road reserve. The municipality of Tshwane has signed an agreement with DFA which resulted in DFA waiving its Section 25 rights for the permission to install infrastructure in the road.

Discussion

It should be noted that some estimates of relocation costs cited above may not be entirely reflective of the true incremental cost incurred.

Given the otherwise durable and economically useful nature of EC facilities, it should be accepted that public projects may incur costs for relocation. It should also be borne in mind that EC facilities such as wireless towers and underground fibre ducts tend to have longer physical asset lives and suffer less regular physical harm than infrastructure that is carrying electricity, heavy vehicles or large volumes of fluid and is subject to extremes of weather. Correctly deployed, such facilities should impose little or no incremental costs on maintainers of other services infrastructure.

Licensees may feel that they have no choice but to accept such demands to waive their section 25 rights, for fear of being prevented from deploying facilities if they fail to accept them. This, however, can impose substantial unexpected costs on the EC industry as a whole, increasing the cost to communicate.

Fees for use of land could be set to recover maintenance costs – probably not through a central fund (this would run into budget allocation problems with National Treasury) but through local funds (e.g. for provinces, municipalities, SOEs) administered in a uniform way that could be drawn on to supplement the up to approximately 5% additional cost imposed by EC facility relocation. If deployed sensitively, excessive relocation costs can be avoided.

5.4.3 Rural communities and tribal leadership

Engagement with communities and tribal leadership adds another layer of bureaucracy, complexity and a lack of consistency for operators. In addition to the usual processes followed by operators in urban areas, in rural areas operators also need to consult traditional communities and adhere to their requirements, which vary across communities. Operators have indicated that traditional land is considered the property of government, yet traditional communities inhabiting the land enjoy the benefits of ownership of this land (e.g. rent payments).

We understand that the Minister of Land Affairs needs to give consent to a land rental arrangement between an operator and traditional communities, which can cause delays. In Butterworth, for example, an infrastructure provider has been waiting over two years for a response from the Minister of Land Affairs on a land rental arrangement. In some cases, it is difficult to identify a point of contact, as the relevant municipal or provincial government may not have accurate or up-to-date information about the communities' leaders, requiring Sentech to spend time consulting the community to identify the relevant authority.

High sites in rural areas often attract objections from environmentalists. Due to the size of the rural areas and the lack of other buildings and constructions, broadcast infrastructure in rural areas tends to stand out quite significantly. This gives significant scope for objections to infrastructure deployment in rural areas, which has led a deployment delay for one operator of 16 years.

Operators are sometimes caught in the middle between government and local communities. Sentech, for example, was prevented from deploying a high site in a certain rural area owing to an ongoing dispute between the local community and the government. The community was protesting that government should build tarred roads in the region as it had promised, and it was therefore not going to allow Sentech to build until the government's promise was upheld. Another potential problem is that a lack of community involvement or awareness may lead to community indifference, possibly leading to theft or vandalism of infrastructure.

Delays are also caused by communities that insist on the use of local labour for works on their land (and in some cases, work on private land nearby). These communities will in some cases allocate the work to inappropriate people and slow down their rate of work near the end of the project in order to prolong the length of the project and thereby increase their income. When operators have chosen to go ahead with their own contractors, in some instances the contractors have been threatened with physical violence.

Suggested solutions to these problems include:

- *Decentralisation of authority in the Ministry of Land Affairs:* Decisions by the Ministry of Land Affairs are currently conducted at a national level resulting in delays – as in the case of an infrastructure operator waiting for over two years to get a response. Local managers have better knowledge of their jurisdictions and would be able to act faster, yet they have no powers to make decisions. Empowering such local managers would likely speed up the process.

- *Use of existing forums to engage with local communities:* Stakeholders have highlighted the need to explain the benefit of infrastructure deployment to tribal leaders and their communities. There are already multiple forums that can be used to engage with rural communities, e.g. local constituency offices, chiefs, and the Ingonyama Trust[30], and the statutory annual public participation in the Integrated Development Plan[31] (done via an imbizo[32]). This solution would require the private sector to divulge information about its infrastructure plans.

Discussion

There is an important general issue here around relationship-driven applications in contrast to process-driven applications. Several stakeholders have suggested the EC industry must "nurture relationships"; while sounding positive, this tends to be the opposite of rapid deployment because relationships without process are costly and time-consuming.

Online infrastructure information could be used to help facilitate relationships by identifying local responsible parties (e.g. municipal officers, ECNS staff) who can communicate what is expected in terms of processes and standards on a basis of common understanding. The infrastructure plan database could also be used to inform communities about proposed projects and achieve their support.

30 A trust that administers about 2.8 million hectares of land in KwaZulu-Natal.

31 The IDP is a five-year plan which local government is required to compile to determine the development needs of the municipality.

32 A forum for discussion of policy.

Annex A Stakeholder engagement

A.1 Stakeholders engaged in preparing this paper

We conducted interviews with 39 stakeholders encompassing ECNS licensees, municipalities, industry associations, state-owned companies and others. A list of all the stakeholders interviewed is included below:

Figure A.1: List of stakeholders interviewed [Source: Analysys Mason, 2015]

Entity name	Departments represented
ECNS licensees	
Broadband Infraco	Government relations and regulatory affairs
Cell C	Regulation, legal and operations
Dark Fibre Afica	Legal
Fibreco	Executives
Internet Solutions and Dimension Data	Regulatory
Link Africa	Executive planning
Liquid	Legal and fibre operations
MTN	Regulation, legal and broadband infrastructure projects
Neotel	Regulatory and technology
Sentech	Site acquisition and environment
Telkom	Regulatory affairs and government relations
Vodacom	Technical and market regulation
Vumatel	Regulation
Industry associations	
FTTH Council	Executive
GSM Association	Public policy
ICASA	Executives, operations,
Internet Service Providers' Association (ISPA)	Policy and regulation
National Association of Managing Agents (NAMA)	Operations
South African Communications Forum (SACF)	Executives
Wireless Access Providers' Association (WAPA)	Executives
Municipalities	
Cape Town	Information Systems and Technology
Ekurhuleni	ICT
Gauteng	Department of Roads and Transport
KZN and small municipalities	Department of Economic Development (ICT); Impendle municipality; Umgungundlovu
Transnet	Planning

Entity name	Departments represented
Tshwane	Transport Infrastructure Construction
Western Cape	Departments of: Economic Development and Tourism, and Transport and Public Works
State-owned companies	
Eskom	Land development, land and rights
PRASA	GIS
SANRAL	Various
SITA	Technology
Other	
ATC South Africa	Business development
Bridgeport Property Administration	Operations and facilities management
Centre for Scientific and Industrial Research (CSIR)	Operations, research and broadband projects
Century City Connect	Technical
Growthpoint	Office sector
TENET	Executives
BMI-Techknowledge	Industry consultant

We further conducted two roundtable meetings with various national government departments and interested organs of state.

A.2 Stakeholder questionnaire

A.2.1 Questions for all stakeholders:

1. What are the main factors slowing the deployment of network infrastructure at present?
2. What should be in scope for the rapid deployment guidelines?
3. What by-laws and legislation affect you?

A.2.2 Statutory or public stakeholders:

1. What are your main concerns about allowing operators access to land to build their networks?
2. What do you currently require from operators before permitting them to access land (applications, fees, processes)?
3. Is there any area or are there any premises where you would not want operators to enter or to use and why? Would this be different for above-ground and below-ground network infrastructure?
4. Are there any processes that you believe currently work well that you suggest the Minister of TPS could follow for this policy (and to what degree if any, are these processes similar between departments)?
5. Are there any initiatives to help overcome barriers to infrastructure deployment that you have developed or are in the process of developing?
6. Are you aware of, or involved in, any progress that has been made towards meeting the objectives of the Infrastructure Development Act of 2014 in an ICT and telecoms context?

A.2.3 Large users:

In addition to the above questions for statutory and public stakeholders, we will ask:

7. How has land access delayed your ability to access the bandwidth or infrastructure that you need, if at all?
8. What would you like to see as the outcome of the policy?

A.2.4 Large/infrastructure operators:

1. Are you able to build new network at the pace you need to? If not, what are the things that cause delays?
2. Which different types of third-party organisations do you deal with in seeking approvals for new network build?
3. What processes do you follow with each of these types of organisation?
4. How often in recent years have you needed to follow each of these processes?
5. Where are the delays and who in your opinion is responsible for them?
6. Please describe the process steps.
7. What changes to the above processes could be made to make your business more efficient?

8. What legislation and by-laws do you have to follow in order to deploy new network infrastructure?
9. What are the main challenges in complying with these?
10. How could compliance be made simpler?
11. What are your main concerns about network deployment over the coming years?
12. Are there any risks associated with the Rapid Deployment initiative that you foresee?

A.2.5 Small/niche operators:

As above, plus:

1. Do you think you have an unfair disadvantage as compared to large operators?
2. What can be done to support smaller operators?

Annex B Deployment practice in other countries

This Annex highlights some of the deployment practices and initiatives being conducted in other countries. It is intended to provide some international context to the issues raised in this discussion paper. We have selected five case studies of deployment practices in the following countries: Australia, Canada, France, the United Kingdom and the United States of America. Each case study describes the processes towards gaining wayleaves, the extent of various authorities' powers with respect to granting or declining wayleave applications, dispute resolution processes and any rapid deployment initiatives that have been implemented.

The countries have been selected due to their level of overall infrastructure development, and the fact that they have been required to deal with many of the issues currently being faced in South Africa. Deployment of infrastructure in many developing countries is far less structured than in South Africa, and in our view offers limited lessons for policy here; for example, interruptions to services of all kinds may be less noticeable due to general unreliability of infrastructure, or low level of existing infrastructure and service, in those countries. The case study countries below do not necessarily represent best practice but rather illustrate that many of the same challenges are experienced elsewhere, and that there are no simple answers to many of the issues to be confronted by a proposed Rapid Deployment Policy.

B.1 Australia

The Australian government has the jurisdiction to allow operators to place low-impact facilities on public land without approval from local municipalities. Access to rights of way of existing ducts is usually negotiated directly between the carrier and the utility. In 2008 the Law on Modernising the Economy ("LME") set out the rights and obligations of carriers deploying high-speed facilities, and first announced the idea of network sharing in an attempt to limit fibre installation to one per property, and to stimulate competition. According to the Telecommunications Legislation Amendment (Fibre deployment) Act 2011[33] relating to third-party access, "the owner or operator of the facility must, if requested to do so by a carrier, give the carrier access to the facility." Compliance is not required unless "the access is provided for the sole purpose of enabling the carrier:

(i) to provide facilities and carriage services; or
(ii) to establish its own facilities; and

the carrier gives the owner or operator of the facility reasonable notice that the carrier requires the access". Furthermore, compliance is not required if "there is in force a written certificate issued by the ACCC stating that, in the ACCC's opinion, compliance with subsection (2) in relation to the facility is not technically feasible."

33 Third Party Access to Infrastructure Facilities, subsection (2) of Telecommunications Legislation Amendment (Fibre deployment) Act No. 107 of 2011

No approval is required for erection of low-impact RF mobile phone telecoms infrastructure[34] on public property. Carriers are required to notify the Council, occupiers' residences in close proximity (10 to 20 metres) and/or the manager/owner of the land on which the infrastructure is to be erected. For other mobile phone telecoms infrastructure buildout, where no developmental approval is needed, a consultation is required by the carrier to determine any interested and affected parties at risk and to consult with and seek submission from said parties. Where developmental construction (investment in new ducts) is to take place carriers require approval from local municipalities[35].

Complaints or expressions of grievance from landowners/managers and residents in close proximity should be made in writing to the carrier. Each carrier should have a written procedure for dealing with complaints and have their staff trained in the procedure. Ongoing disputes are directed through the Telecommunications Industry Ombudsman. If the dispute is between carriers, an arbitrator decided by the carriers should be appointed to determine the terms of agreement. If an arbitrator cannot be agreed upon this responsibility falls to the Australian Competition and Consumer Commission.

References

Communications Alliance Ltd Industry Code C524:2013 External Telecommunications Cable Networks

B.2 Canada

Telecoms regulation in Canada falls exclusively under Federal jurisdiction. There is open access for carriers to public streets and public property for the deployment, maintenance or operation of telecoms lines. The municipality has no power to make available ducts or prevent construction on public property, although municipal consent is required for breaking up highways during deployment. The area in which municipalities do play a key role is the co-ordination of all affected parties in the prospective occupation and use of municipal rights of way.

In June 2014 a review was launched to analyse whether the sharing of ducts between incumbents and other operators should be mandated. The first hearing was held in November 2014. A decision on the regulation of wholesale fibre access has not yet been reached. The broadband market is currently a duopoly and new entrants such as Primus are looking to Canadian Radio-television and Telecommunications Commission ("CRTC") to disrupt the market structure.[36] The main argument is that, without smaller operators having access to fibre facilities, consumers will not benefit from the service improvement bred through competition. Other opinions that surfaced include Canada

[34] One or more transmitters operating at a total maximum power into the antenna of no greater than 2 Watts

[35] Industry Code C564:2011 Mobile Phone Base Station Deployment, Communications Alliance LTD (2011)

[36] *Bell to CRTC: Don't force us to share fibre*, Terry Pedwell, Metro News (2014). Available at http://metronews.ca/news/canada/1223340/bell-to-crtc-dont-force-us-to-share-fibre/

being too large for facilities competition, and that service competition and the introduction of access to fibre networks in rural areas should be the focus.

One of the incumbents, Bell Canada ("Bell"), is of the opinion that enforcing regulations that allows competitors access to their last mile and FTTH networks will discourage network investments drastically. At the wholesale access hearing in Quebec testimonies from all stakeholders were heard over nine days. Bell urged the CRTC to let the market drive competition. The Competition Bureau agreed that it would be in the best interest to keep the market unregulated and revisit the matter in five years. An option provided by Cogeco Cable, as reported by Cartt Beta[37], is to establish a framework which "encourages negotiation while providing a reference rate as a backstop which could help stimulate more wholesale competition". This would stimulate business relationships instead of animosity.

Under section 43(4) of the Telecommunications Act the carrier may apply to CRTC for permission to construct lines in instances where consent from the municipality was not obtained. The CRTC does not have jurisdiction over electrical utility support structures. Municipalities may also call upon the CRTC to settle disputes.

In 2013 a model for Municipal Access Agreement[38] ("MAA") was created as a resource document for operators and municipalities to streamline municipal-carrier negotiations. The MAA will grant access to carriers to municipal property in order to provide telecoms services to the public.[39]

References

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Canada – Telecoms, Media and Internet Laws and Regulations 2015, ICLG. Available at http://www.iclg.co.uk/practice-areas/telecoms-media-and-internet-laws/telecoms,-media-and-internet-laws-and-regulations/canada

Fibre Hearing: To regulate, or not to regulate fibre access. CRTC hears two opposing views on day one, Perry Hoffman, Cartt Beta (2014). Available at https://cartt.ca/article/fibre-hearing-regulate-or-not-regulate-fibre-access-crtc-hears-two-opposing-views-day-one

B.3 France

Carriers have some forms of access to public highways (under Article L. 45-I of the Code[40]) and private property (as stated in Article L. 48 of the code). Where rights of way is required for public

37 *Fibre Hearing: More open, flexible model will lead to wholesale growth, says Cogeco. Notsomuch, says Distributel*, Perry Hoffman, Cartt Beta (2014). Available at https://cartt.ca/article/fibre-hearing-more-open-flexible-model-will-lead-wholesale-growth-says-cogeco-notsomuch-says

38 Available at http://www.crtc.gc.ca/cisc/eng/ciscmanu.htm

39 *CRTC rolls out municipal access agreement model*, Nestor E. Arellano, IT World Canada (2013)

property, other than highways, authorities or managers of the property must provide access through an agreement which is transparent and fair, so long as the property is compatible with and has sufficient capacity for usage. The permits required by carriers to roll out fibre on public property include:

- Permit from the "prefect" for motorways and national roads with exception of those under the concession.
- Permit from concessionaires for structures and motorways under the concession.
- Permit from the executive body of the local authority or co-operative body managing the property (Article L. 47 of CPCE).

Local authorities may become infrastructure or service operators. Local authorities also have the power to refuse the issuance of right-of-way permits if the utilisation for telecoms is not compatible with the property or is in the best interest of the utility. Regarding private property, authorisation is required from landowners although some easements are in place.[41] A new Directive by the European Parliament, to be implemented by July 2016, mandates the sharing of established telecoms infrastructure on "fair or reasonable terms and condition, including price"[42] On the other hand, requirements of the directive are "without prejudice to the right to property of the owner of the physical infrastructure in cases where the network operator is not the owner, and to the right to property of any other third parties, such as landowners and private property owners". This means that sharing of sites may be blocked or disrupted by land or building owners.

The regulator for electronic communication and post in France, ARCEP, has communicated that any carrier bringing fibre to the home and to multiple unit dwellings must enable access to other service providers (mutualisation). In densely populated areas ARCEP has requested that any operator rolling out fibre accept submissions from other carriers to roll out additional fibre as long as the other carrier is willing to co-invest.[43]

Dispute resolution goes directly through the administrative court as it questions the government's powers.

References

Post and Electronic Communications Code (Code des Postes et des Communications Electroniques, CPCE)

40 Post and Electronic Communications Code (Code des Postes et des Communications Electroniques, CPCE)

41 Post and Electronic Communications Code (Code des Postes et des Communications Electroniques, CPCE)

42 The European Parliament and The Council of The European Union (2014), *DIRECTIVE 2014/61/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks*, Official Journal of the European Union, L 155

43 Electronic Communications and Postal Regulatory Authority Decision No. 2010-1312 of 14 December 2010; EU Commission press release, FR/2009/0993, *Telecoms: Commission endorses French access rules on fibre in-building wiring* (2009)

B.4 United Kingdom

Ofcom, under the Communication Act of 2003, has the ability to give specific "Code Powers" to carriers and telecoms providers. Carriers have to apply to Ofcom for Code Powers, at which point Ofcom has the power to give rights to carriers to install or maintain communication apparatus both over and under private and public land.

Municipalities have no authority over permitting the sharing of ducts although operators are obliged to co-operate with street authorities and other operators in duct-sharing negotiations. For deployment that requires development and planning, general planning permit responsibilities are granted at a national level. If a development does not fall under these general planning conditions, a planning permission application must be submitted by operators to the local planning authority, where it will be reviewed by the relevant planning authority. Under the section of the Electronic Communications Code ("ECC") that covers the Installation of Electronic Communications Apparatus it is stated that "A code operator must give one calendar month's notice, in writing, to the planning authority for the area in question where –

(a) he has not previously installed electronic communications apparatus in the area and is intending to install electronic communications apparatus, other than lines, in that area; or
(b) he intends to install a cabinet, box, pillar, pedestal or similar apparatus for the installation of which he is not required to obtain planning permission under the Town and Country Planning Act 1990(1)."

The local planning authorities and Secretary of State hold the power to refuse and withdraw planning permits. In instances where planning permission is refused by local authorities, carriers can appeal the decision to the Planning Inspectorate which will determine the outcome of the case or dispute.

According to the OECD report on *Public Rights of Way for Fibre Deployment to the Home*, sharing of ducts and facilities is not required but promoted and Street Authorities encourage operators to share ducts. Regarding electronic apparatus Item 4 of General Conditions of the ECC expresses that "a code operator, where practicable, shall share the use of electronic communications apparatus".

As far as mobile sites are concerned, there have been major issues for operators regarding the ECC, with claims that it is outdated. The key concerns expressed by mobile carriers include:

- Regulation and spectrum pricing need to be revisited for operators to keep up with the landmark "not-spots" deal. The landmark not-spots deal was struck with government and the top four mobile operators in the UK to improve the situation of mobile roaming not-spots. By 2017 operators will have invested GBP5 billion towards mobile infrastructure, each guaranteeing 90% voice and text coverage country-wide[44].

[44] *UK.gov binds mobe operators to £5bn not-spot deal*, Brid-Aine Parnell, The Register, (2014).

- Regulation equal to that of essential utilities although rights of access not the same as other utilities.

- Questions of landownership and the owners' control over network installation.

- Landowner control over what equipment the network installs. This is analogous to "your landlord putting your rent up because you've bought an HD TV", as stated by one operator[45].

- It is currently not clear whether operators using land owned by others should use the 1954 Act or the Code as their guide.

- Qualified rights to operators to upgrade their equipment on their sites, such as to support 4G mobile connections, irrespective of what the lease agreement says.

Vodafone stated that: "Currently the law doesn't lend the support we need to invest, build, upgrade and maintain our fixed and mobile network. We will continue to talk to Government about the need to act quickly to introduce a code that is pro-coverage."[46] In order to meet the 2017 deadline for coverage the network operators want increased access to cell sites and no scaled market value of the land that they have rented based on the infrastructure rolled out.

The Law Commission gave some recommendations in February 2013 on how the ECC can be improved to eliminate land rental and access issues[47]:

- provide a clearer definition of the market value that landowners can charge for the use of their land
- clarify the conditions under which a landowner can be ordered to give a designated network provider access to his or her land
- clarify the rights of landowners to remove network equipment from land
- specify limited rights for operators to upgrade and share their network equipment
- improve the procedure for resolving disputes under the Code.

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45 *Ministry of Fun tries again on mobile mast planning permission*, Simon Rockman, The Register (2015).

46 *Ministry of Fun tries again on mobile mast planning permission*, Simon Rockman, The Register (2015).

47 *Electronic Communications Code*, Law Commission (2013). Available at http://www.lawcom.gov.uk/project/electronic-communications-code/

B.5 United States of America

Public rights of way are generally controlled through state bodies or local municipalities. The incumbent telecoms operator is obliged to give access to other carriers "within reasonable time frames and on reasonable terms and conditions, with a minimum of administrative costs, and consistent with fair and efficient practices" according to the Communications Act, 1996. In the circumstance of tribal or federal lands, tribal and federal governments have control over rights of way. Relevant state or local law prescribes the correct authority for local rights of way. Operators need to gain approval from local governments for infrastructure roll-out above or below private and public property.

In the USA, one of the major issues regarding deployment is the cost attached to rights of way charged by local municipalities and state bodies. The charges are often exorbitant and much higher than the actual cost of the access. Incumbent providers of rights of way such as utility providers also hinder deployment efficiency due to processes they have put in place for carriers to follow. These charges and delays reduce the profitability of fibre deployment as well as that of service providers which would otherwise deem the project profitable. Other difficulties operators need to overcome or incorporate into their deployment plan is the delivering of free broadband to government buildings and rolling out services to areas with low demand. In specific instances where service providers have significant leverage such as Google Fibre to Kansas City and Austin, Texas, governments dramatically accelerated the application process, reduced rights-of-way costs and did not mandate to roll out to areas of low demand.[48]

In 2011 the FCC launched a Broadband Acceleration Initiative in attempts to aid access to broadband infrastructure, increase competition and reduce development costs, focusing primarily on buildout on public property[49] A number of online tools were launched by the Office of Science and Technology to stimulate the infrastructure deployment, including interactive mapping tools, "Dig Once" guide, and a broadband project platform to submit and track application statuses. In 2012 an order was delivered disallowing local or state governments from denying any facility requests for upgrades or repairs on towers or base stations (wireless broadband facilities) where the modification did not substantially alter the dimensions of the equipment.[50] This has given the mobile operators support to move ahead with network upgrades and LTE deployment, although a number of disputes have emerged between local authorities and operators regarding the definition of "tower", "base station" and to "substantially change the physical dimensions".

48 "Don't Blame Big Cable. It's Local Governments That Choke Broadband Competition", Berin Szoka, Matthew Star and Jon Henke, wired.com (2013)

49 FCC, Broadband Acceleration (2012). Available at https://www.fcc.gov/encyclopedia/broadband-acceleration

50 Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012

Access to rights-of-way disputes usually fall under state or local jurisdiction. In the instance that state or local authorities have refused access to rights of way, operators can put forward a petition to the FCC[51].

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51 Section 253(a) of the Communications Act of 1996

Annex C Policy issues and suggested approach

Our initial conclusions on the positions that the Minister should adopt in the policy, as discussed in the main document, are summarised here.

C.1 Background

The Rapid Deployment Policy should offer general principles for rapid deployment of all electronic communications facilities (as defined by the ECA) by ECNS licensees throughout the country, but must offer more detailed guidance regarding facilities of most concern to stakeholders. The Rapid Deployment Policy scope should therefore supply particular detail on improving deployment of underground fibre/duct, premises fibre/duct, aerial fibre, wireless rooftop sites, and towers on public or private land.

The existing structure and content of the Draft Rapid Deployment guidelines could be borne in mind when developing policy.

The Rapid Deployment Policy must acknowledge the potential costs incurred as well as benefits enjoyed by various stakeholders in the deployment of EC facilities. If it is agreed that land and rights-of-way owners are negatively impacted this must be acknowledged and compromises made on both sides, in particular to avoid incorrectly incentivising those who may be compromised by poor implementation of the policy.

C.2 Legal and policy context for development of the policy

The Rapid Deployment Policy should take into account the effect it will have on ICASA's obligations to make regulations; whether or not it will be capable of enforcement by other organs of state and private entities; and what it can or should anticipate if policy goals are not achieved.

In setting the Rapid Deployment Policy in context we will need to take account of:

• The fact that there is, on balance, currently insufficient infrastructure to enable service provision in South Africa to meet demand for voice and data services.

• Whether Chapter 4 of the ECA is adequate to solve or ameliorate any problems in deploying infrastructure that you may be experiencing (if you are a licensee) or to solve or ameliorate any issues you may have (as landowner or member of the public).

• The specific issues that are experienced currently as articulated in Section 5.

• Those issues that might or should be dealt with in the regulations to be produced by ICASA.

In this part of the drafting process, we will need to take account of the following issues:

• why more operators do not make use of the Facilities-Leasing Regulations to gain access to existing facilities.

• what might constrain ICASA in its enforcement of these Regulations and if the dispute resolution process within ICASA is sufficiently effective between licensees.

• whether the policy would need to require or direct ICASA to create a new dispute resolution process to deal with disputes with landowners and, if so, what the main concerns might be about, e.g. the formation and resourcing of such a committee, its mandate, and enforcement of any finding by ICASA.

• whether the ECA can be said to imply that the "public interest" is the justification for encroaching on the rights of landowners, and if, on balance, the public interest in rapid deployment is such that it does in fact justify licensees' activities in accessing and using land for purposes of network construction; and whether this would be the case even if there are alternatives, such as leasing existing facilities.

We need to consider, as part of the policy-making process, whether there might be other ways to achieve rapid deployment, for example, by agreement between operators to lease or share or co-build, or by focusing on particular geographic areas or needs.

While Ministerial policy directions could include requesting ICASA to form a committee under section 17 of the ICASA Act, 2000 to deal specifically with disputes regarding the manner in which licensees gain or use their access to land, we propose that the direction request that this responsibility be taken on by the existing CCC provided that ICASA ensure, as far as possible, that such a committee is comprised of experts in certain specified areas.

The policy should indicate that, as set out in the court cases, licensees have absolute rights to enter land as set out in Chapter 4 of the ECA, but in all cases licensees should attempt to negotiate in good faith and on market-related terms. However the Minister should further direct ICASA to more closely examine the current practice regarding application of Chapter 4, with the aim of identifying any amendments to the ECA that may be needed to enhance its operation.

The policy should reiterate the provisions of Chapter 4 outlined above which impose obligations on licensees. Along with other more specific measures outlined elsewhere in this discussion paper, we believe that these provisions are sufficient to protect the rights of landowners (as part of the balancing of rights required). Those further specific measures, along with improved oversight and enforcement from ICASA, should give more insight into the manner in which licensees might be considered to act in a "lawful, reasonable and administratively fair manner" in exercising their Chapter 4 rights.

C.3 Views expressed by stakeholders

Efforts to establish infrastructure GIS databases should be co-ordinated with a view to allowing unified access for the purposes of planning infrastructure deployment. All licensees and service providers should submit detailed information on their infrastructure types and locations to local authorities and/or to relevant national agencies. Public sector service providers and state-owned licensees should be required to submit all data on existing infrastructure, and that on any planned deployments. Private sector licensees should at a minimum be required to submit electronic GIS information in demarcated areas in response to wayleave information requests, and encouraged to contribute planned deployments. All new wayleaves should be granted on condition that this database is checked and that new infrastructure is recorded. Builders of new infrastructure will not be held liable for damage to existing infrastructure which has not been correctly recorded.

A national co-ordination body should facilitate a process to harmonise processes and standards for wayleaves across municipalities. Ongoing harmonisation of COTO/RCB and others must be encouraged. All municipalities should be encouraged to follow the harmonised process and standards or otherwise document and publish any deviations from the harmonised process and standards.

Furthermore, this harmonisation process should have some private sector input. Ideally, a panel of private sector experts (e.g. including ICT industry associations such as FTTH Council, WAPA, ISPA, SACF and the Wi-Fi Forum, as well as consulting engineers) should lead the process with the support of local and national government. The panel can be structured as a PPP to ensure participation from both the private and public sector.

Municipalities and other wayleave processing authorities should adopt automated permit application systems. Those developing online systems should co-ordinate activities. DTPS or another existing organ of state should take a role in funding the enhancement and scaling up of one or more interoperable systems which can then be adopted for use by other landowners, notably smaller municipalities. This process should be conducted in tandem with that of harmonising processes and standards.

In principle, application fees can be set anywhere between zero and the surplus derived by the operator from deployment. It is important to ensure all direct costs are recovered from such fees. Policy should dictate that application fees be set to recover the incremental cost of administering the wayleave application process. Fees for access to publicly owned land should be set nationally by ICASA, with rights for individual organs of state to vary fees only on specified grounds.

Non-fee demands from public entities should be prohibited. This includes requests for free provision of duct, route changes or provision of additional services.

The streamlining process is likely to be complex work without clear, large benefits (e.g. identifying situations in which EIAs can be simplified). This should be undertaken where possible by relevant public sector bodies including the Departments of Environmental Affairs and Water Affairs, and SALGA in the case of municipalities, in consultation with DTPS. Some major issues can be streamlined through an ad hoc process, e.g. ensuring EC facilities do not require use-consent or building plan approval.

There must be increased clarity in the requirements of the different authorities. For example, there should be clarity as to which activities require EIA approvals and WULs. Also, there should be national guidelines for tower construction. Some examples of such standards are: in residential areas, they should be trees; within (say) 10km of an airport approach, towers need to be red and white and have lights on top; brown-field/industrial areas must have fast tracked planning and can be normal steel structures; green areas can only have one tower for every 5km which must be shared, etc.

The tasks and functions identified to be carried out by a “one-stop-shop” or national co-ordinating agency should be led by ICASA. ICASA must be given adequate ring-fenced funding for this purpose. ICASA can draw on other entities such as CSIR and PICC.

ICASA must, as a matter of urgency, ensure facilities-leasing regulations are enforced. This includes access to all ducts, trenches, and poles, as explicitly dictated by the ECA. ICASA should engage with industry to understand why more facilities leasing and sharing is not taking place, and issue further guidelines on the implementation of facilities leasing. It may also work with industry to identify and fast-track certain precedent-setting facilities-leasing disputes. DTPS should also use its role as Telkom shareholder to ensure the incumbent supports the process.

Furthermore, wireless base station sharing should be insisted on. Municipal site fee structures should not, as currently, deter site-sharing. Exemption from building plan approval should be conditional on the structure supporting at least three operators’ equipment. If later operators are denied co-location, building plan approval should be revoked.

ICASA must urgently rectify the shortcomings of its dispute resolution processes. It could do this by undertaking a study of international best practice in governing and operating dispute resolution processes. The CCC must be adequately resourced, which will require additional funding. We do not recommend establishment of a separate dispute resolution body with wider jurisdiction, partly because in many cases disputes (e.g. on private land) boil down to being between licensees. DTPS might consider an amendment to the ICASA Act to extend CCC jurisdiction to non-licensees. ICASA could also formalise use of existing industry dispute mechanisms to reduce its case load.

ICASA must work with operators to reach a deeper understanding of how Chapter 4 rights should be used and what their limits are, guided by court decisions.

ICASA must strive to limit the advantages that Telkom enjoys as a result of its historical monopoly status. Enforcing facilities-leasing regulations (and producing guidelines as to what behaviour is acceptable) will go a long way towards levelling the playing field.

Facilities sharing, if properly implemented, will reduce inefficient use, the burden on the environment and unnecessary duplication.

Municipalities that use single trench policies should learn from best practice in implementing such policies, e.g. in Cape Town. In addition, there should be a regulatory obligation (backed up with effective dispute resolution), for licensees to include excess capacity in their deployment and to lease spare capacity to other licensees at reasonable rates.

DTPS should engage with property industry bodies such as NAMA and SAPOA to raise the general level of knowledge of these parties. In particular, awareness should be raised that landowner attempts to maintain exclusivity may fail when other operators choose to exercise their section 22 rights. National government should, in conjunction with revisions to building regulations, also create a template approach to managing premises fibre and ducting that landowners can adopt or vary as suits their needs.

The Department of Economic Development should update the building regulations to include requirements for ducting based on international practice, which should include sufficient additional capacity to allow infrastructure competition on the premises. It should also develop guidelines for property owners on how to manage competitive EC provision, including fibre, Wi-Fi and wireless sites.

Some basic grievances about SANRAL appear to be relatively simple to address, such as EC industry preference for certainty on commercial terms (this can also be addressed under harmonisation of fees for public land, described previously). SANRAL as a government organisation should not negotiate contract terms with individual EC operators. Trust and mutual understanding need to be rebuilt, potentially through proactive intervention/oversight by an arbitrator in interactions.

Resourcing challenges should be addressed once online and automated wayleave applications are implemented more widely. This will enable compliance with regulated deadlines. However, it is likely that there will be substantial IT skills training required among government employees to ensure that they are able to effectively use the online systems. Failure to respond within a specified period should be deemed to be consent to the wayleave.

Eskom should clarify the situation, and if necessary make amendments regarding various issues raised.

Public investments in broadband must always be required to demonstrate (a) value for money, with no way to achieve the same effect at a lower price, and (b) no disproportionate impact on existing competitive EC markets. The Competition Commission should monitor municipal broadband investments, and if necessary issue guidelines for municipalities.

Furthermore, infrastructure deployment by the public sector should follow the same wayleave processes as that by private sector.

Fees for use of land could be set to recover maintenance costs – probably not through a central fund (this would run into budget allocation problems with National Treasury) but through local funds (e.g. for provinces, municipalities, SOEs) administered in a uniform way that could be drawn on to supplement the up to approximately 5% additional cost imposed by EC facility relocation. If deployed sensitively, excessive relocation costs can be avoided.

Online infrastructure information could be used to help facilitate relationships by identifying local responsible parties (e.g. municipal officers, ECNS staff) who can communicate what is expected in terms of processes and standards on a basis of common understanding. The infrastructure plan database could also be used to inform communities about proposed projects and achieve their support.

Annex D Glossary

ACSA – Airport Company of South Africa

BCCSA – Broadcasting Complaints Commission of South Africa

CAA – Civil Aviation Authority

CCC – Complains and Compliance Committee (part of ICASA)

CoGTA – Ministry of Cooperative Governance and Traditional Affairs

COTO – Committee of Transport Officials

CSIR – Council for Scientific and Industrial Research

DFA – Dark Fibre Africa

DTPS – Department of Telecommunications and Postal Services

EC – electronic communications

ECA – Electronic Communications Act No 36 of 2005, amended in 2014

ECN – electronic communications network

ECNS – electronic communications network service

EIA – environmental impact assessment

FTTH – fibre to the home

GIS – geographic information system

ICASA – Independent Communications Authority of South Africa

MFMA – Municipal Finance Management Act, Act No. 56 of 2003

MISA – Municipal Infrastructure Support Agency

MNO – mobile network operator

NDP – National Development Plan

PAJA – Promotion of Administrative Justice Act, 2000

PICC – Presidential Infrastructure Coordinating Committee

PoP – point of presence

PRASA – Passenger Rail Agency of South Africa

SCA – Supreme Court of Appeal

South Africa Connect/SA Connect – National Broadband Policy, 2013, the South African national broadband policy

SANRAL – South African National Roads Agency

SIP – strategic integrated project

SITA – South African State Information Technology Agency

WUL – water-use licence