



Western Cape  
Government

BETTER TOGETHER.

## Greater Saldanha Regional Spatial Implementation Framework

Information, Communication and  
Technology Assessment

*Final Report*

*December 2017*



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# Content

<b>1. Introduction</b>	<b>6</b>	<b>3.3. Key Roleplayers in the ICT Sector</b>	<b>18</b>
1.1. Background	6	<b>3.4. Overview: How the Internet is Configured</b>	<b>19</b>
1.2. Project Terms of Reference	6	<b>3.5. Broadband in the GSR</b>	<b>22</b>
1.3. Amended Outputs of the GRSIF	7	3.5.1. Current ICT/Broadband Initiatives in the GSR	24
1.4. This Report	7		
1.5. Report Limitations	8	<b>4. Managing the Deployment of ICT Infrastructure</b>	<b>27</b>
1.6. Stakeholder Engagement	8		
1.7. Report Structure	8	<b>5. Conclusion and Recommendations</b>	<b>28</b>
<b>2. Problem Statement</b>	<b>10</b>	<b>5.1. Proposed Interventions</b>	<b>28</b>
<b>3. Development Perspective</b>	<b>11</b>	5.1.1. Pursuing a Partnership Approach	28
<b>3.1. Legal Framework</b>	<b>11</b>	5.1.2. Development of Online Portal for Wayleave Notices and Applications	28
3.1.1. Electronic Communications Act	11		
3.1.2. Independent Communications Authority of South Africa Act	11	<b>References</b>	<b>29</b>
<b>3.2. Policy Context</b>	<b>11</b>		
3.2.1. Global: The UN 2030 Agenda for Sustainable Development	11		
3.2.2. National Policy	12		
3.2.3. Provincial Policy	16		
3.2.3.1 <i>Broadband 2030 Provincial Vision</i>	16		
3.2.3.2 <i>The Provincial Strategic Goals</i>	16		

# 4 List of Figures and Tables

Table 1.	Stakeholder engagement summary	9	Figure 8. African Undersea Cables as at July 2017 (Source: <a href="https://manypossibilities.net/african-undersea-cables/">https://manypossibilities.net/african-undersea-cables/</a> )	19
Table 2.	South Africa Connect Strategy	13	Figure 9. National Fibre Networks (Source: <a href="https://afterfibre.nsrc.org">https://afterfibre.nsrc.org</a> )	20
Table 3.	Key Roleplayers in the ICT Sector	18	Figure 10. Example of Metropolitan Fibre Network (Dark Fibre Africa) (Source: <a href="https://mybroadband.co.za/news/internet/98178-this-is-what-south-africas-internet-actually-looks-like.html">https://mybroadband.co.za/news/internet/98178-this-is-what-south-africas-internet-actually-looks-like.html</a> (accessed 21 July 2017))	21
Diagram 1.	Outline of GSRSIF Outputs	7	Figure 11. Example of Open Access Fibre Network Coverage Map (Source: <a href="https://www.octotel.co.za/coverage-map/">https://www.octotel.co.za/coverage-map/</a> )	22
Figure 1.	The UN 2030 Sustainable Goals	11	Figure 12. Terrestrial Fibre-Optic Backhaul Network in GSR (Data interpreted from <a href="https://afterfibre.nsrc.org">https://afterfibre.nsrc.org</a> )	23
Figure 2.	Source: PICC, 2012. Presentation: Summary of the National Infrastructure Plan	12	Figure 13. WCG Broadband Initiative Connected Buildings (August 2017) (Data Source: WCG DotP_CEI_BBISites & DEDAT_WiFiHotSpots GIS Data)	24
Figure 3.	SA Connect Strategies in Outline (Source: Presentation by researchICTafrica, Khan. S, 2015)	14	Figure 14. Project Baobab Rollout Zones in Vredenburg	25
Figure 4.	Diagrammatic Outline of White Paper Focus Areas	15		
Figure 5.	The 5 WCG PSGs for the period 2014-2019	16		
Figure 6.	Current Distribution of WCG BBI and Wi-Fi Hotspots (August 2017) (Data Source: WCG DotP_CEI_BBISites & DEDAT_WiFiHotSpots GIS Data)	17		
Figure 7.	Schematic Overview of Internet Network Configuration in SA (Source: <a href="http://www.mybroadband.co.za">www.mybroadband.co.za</a> )	19		

# Acronyms and Abbreviations

CoCT	City of Cape Town	SA	South Africa
CSIR	Council for Scientific and Industrial Research	SBIDZ	Saldanha Bay Industrial Development Zone
DEA&DP	WCG: Department of Environmental Affairs & Development Planning	SBM	Saldanha Bay Municipality
ECA	Electronic Communications Act, Act 36 of 2005	SDF	Spatial Development Framework
ECNS	Electronic Communications Network Service	SEA	Strategic Environmental Assessment
ECS	Electronic Communications Service	SEZ	Special Economic Zone
FtTB	Fibre to the Business	SIP	Strategic Integrated Project
FtTH	Fibre to the Home	SITA	State Information Technology Agency
Gb	Gigabit	SKA	Square Kilometre Array
GB	Gigabyte (= 8 Gigabits)	SOE	State Owned Enterprise
GSR	Greater Saldanha Region	UN	United Nations
GSRsIF	Greater Saldanha Regional Spatial Implementation Framework	USAASA	Universal Service and Access Agency of South Africa
ICASA	Independent Communications Authority of South Africa	USAF	Universal Service and Access Fund
ICT	Information and Communications Technology	VOIP	Voice Over Internet Protocol
IDZ	Industrial Development Zone	WCG	Western Cape Government
LUPA	Land Use Planning Act, Act 3 of 2014	WCIF	Western Cape Infrastructure Framework
Mb	Megabit	WCIP	West Coast Industrial Plan
MB	Megabyte (= 8 megabits)		
NDP	National Development Plan: Vision 2030		
PICC	Presidential Infrastructure Coordinating Commission		
POP	Points of Presence		
R&D	Research and Development		

# 1. Introduction

## 1.1. Background

In March 2014, the Western Cape Minister of Local Government, Environmental Affairs and Development Planning approved the Western Cape Provincial Spatial Development Framework (PSDF).

In adopting a strategic view of the Provincial space economy, the PSDF identified three functional regions where significant development trends and/or development potentials were seen to exist. One of these identified functional regions is the emerging Greater Saldanha Regional Industrial Complex, with the Saldanha Bay/Vredenburg growth centre at its heart.

This Greater Saldanha Region (GSR) is noted as experiencing a wide range of developmental and environmental initiatives driven by an array of role-players. These initiatives, furthermore, are likely to be progressively realised in implementation programmes over an extended period of time.

It is against this background that the Western Cape Government: Department of Environmental Affairs & Development Planning (WCG: DEADP), in partnership with the municipalities in the West Coast district, agreed to collaborate in preparing a Regional Spatial Implementation Framework (RSIF) for the broadly defined Greater Saldanha Region, with a specific focus on the Saldanha Bay/ Vredenburg development centre, and the adjoining towns of the bordering municipalities of Swartland and Bergrivier.

## 1.2. Project Terms of Reference

The Greater Saldanha RSIF (GSRISIF) was originally directed to address the following priorities for the Greater Saldanha Region:

- Improving regional competitiveness;
- Skills Development (education) linked to Job Creation (assimilating young people out of schools);
- Integrated Social Strategy: Co-ordination and building of social capital in all stakeholders through an appropriate structure (per municipality) supported by a Social Contract; and
- Infrastructure: Integrated Planning and Budgeting.

In addressing all the above, the project Terms of Reference specified that the GSRISIF should contain the following elements:

1. A vision for the integrated development of the functional region.
2. An assessment of the existing levels of development in the functional region.
3. An assessment of the challenges of provincial land use planning in relation to other provincial functional areas listed in Schedules 4 and 5 of the Constitution;
4. An assessment of Provincial priorities, objectives and strategies, dealing in particular with:
  - Compliance with land use planning principles as set out in LUPA;
  - Biodiversity, ecology, tourism, heritage and agricultural resources, socio-economic development, efficient use of resources and government infrastructure; and
  - Adaptation to climate change, mitigation of the impact of climate change, renewable energy production and energy conservation.
5. A review and update of the Greater Saldanha Area Environmental Management Framework that includes a Strategic Environmental Management Plan.
6. Proposals to unlock opportunities in the functional region's space-economy,
7. including the identification of a list of catalytic governmental regional infrastructure projects
8. by determining bulk infrastructure requirements for water, solid waste, energy, and transport over the next 15 years; taking into account existing Infrastructure Growth Plans (IGP) and the Industrial Project Inventory conducted by the DEDAT; also including three-year action plans to align and inform the MTEF.
9. An accessibility analysis for social infrastructure (i.e. education, health, libraries and sport facilities) for the West Coast District.
10. Proposals on the rationalisation and clustering of social services and facilities in order for government to deliver these services in an integrated and financial sustainable manner.
11. A determination of the viability of different public transport options, as well an investigation on the shift from road to rail for freight.
12. Proposals on settlement level strategies that align housing with transport, land-use, economic and large-scale infrastructure decisions within a long-term vision of a more integrated region.
13. Categories of land development that will require approval under section 53(1) of LUPA.
14. A description of the process followed in the drafting of the Regional Spatial Implementation Framework.

### 1.3. Amended Outputs of the GRSIF

Following an initial phase of work that addressed the Status Quo and SWOT elements of the overall project, the full range of outputs required of the GRSIF was reassessed and a variation order was approved by the Provincial Tender Bid Adjudication Committee, in February 2017.

Accordingly, in order to achieve the desired GRSIF project outcomes, the Professional Team is to deliver a number of outputs within an overall 21-month programme, as follows:

- Inception Report (month 1)
- Status Quo Assessment Report (months 2 – 6)
- SWOT Analysis (months 6 – 12)
- Thematic Component Studies (months 2 – 17)
  - Review and Update of draft Greater Saldanha Environmental Management Framework

- West Coast District Social Facilities Study
- Economic Development Enabling Infrastructure Assessment
- Information Communications Technology (ICT) Thematic Study
- Energy Grid/Corridors Framework
- Regional Transport and Freight Assessment
- Summary Report and Implementation Framework (months 17 – 21)

The revised scheme of work and outputs to be completed for the GRSIF is illustrated below in Diagram 1.

### 1.4. This Report

*“In a digital society, universal access to communications services is not just a tool to address inequality across society but also a precondition for equality.”*

National Integrated ICT Policy White Paper, 2016

Information and Communications Technology (ICT) became a subject of interest to the Greater Saldanha Regional Spatial Implementation Framework (GRSIF) as a result of a series of interactions and work that was done in the early phases of the project process.

Specifically, out of engagements and reports produced in the Status Quo and SWOT phases of work, a number of stakeholders identified that ICT represented a particular sphere of interest within the GSR study area, with the initial motivation for this notion put forward by Swartland Municipality, stemming, it was understood, from the fact that a Data Cable Landing Station exists at the coastal settlement of Yzerfontein in the Swartland Municipality. This facility is where the West Africa Cable System (WACS) makes landfall in South Africa and, this fact and the associated perceived potential for data-related enterprises to be developed and/or located in the Swartland municipal area, was raised as a factor of interest that needed to be explored further.

**Following on from the decision to re-orientate the GRSIF as described in 1.3 above, it was decided that a report should be compiled to provide more insight into the ICT sectoral issues, focusing primarily on access to high-speed broadband data networks and identifying possible related development issues and/or opportunities. Accordingly, this report seeks to achieve the following:**

## GREATER SALDANHA RSIF – PACKAGE OF REPORTS

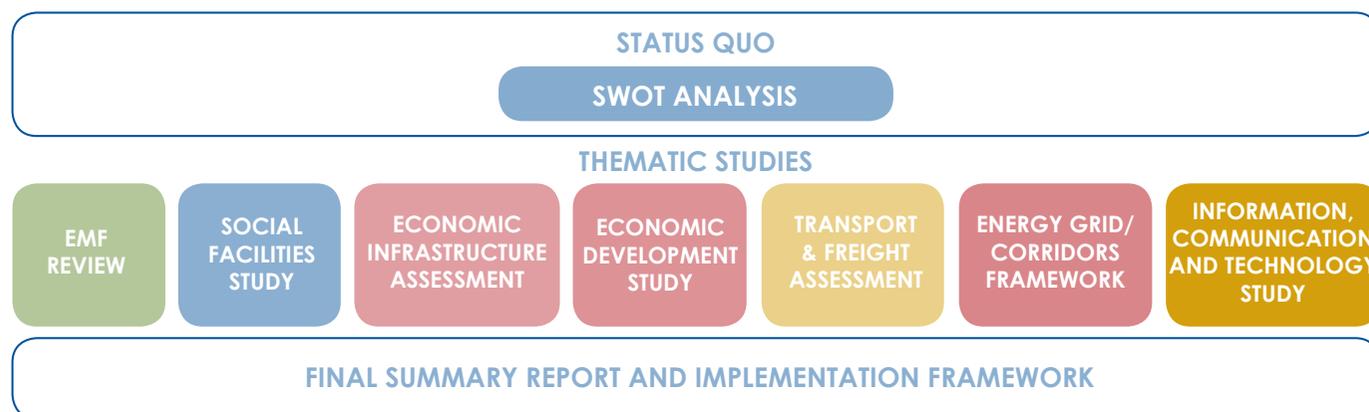


Diagram 1. Outline of GRSIF Outputs

1. To provide an oversight of the legal/regulatory and policy context for the ICT sector, principally as it relates to the issue of access to Broadband in the GSR (high-speed Internet access);
2. To gain greater insight into what may be necessary to improve levels of access to high-speed broadband in the GSR;
3. A brief exposition of data sourced that help to illustrate the status of the Broadband network in the GSR and a discussion of the "Internet-access" market characteristics;
4. A consideration of potential interventions to facilitate the deployment of broadband infrastructure in the GSR.

For purposes of clarity, the term "broadband" is taken to mean "always-on" Internet connectivity. The issue of whether a broadband connection is, however, high-speed or not is a matter of further definition as standards have evolved over a period of time. Thus, in 2002 when broadband services first became more widely available to consumers in South Africa (in the form of fixed line ADSL connections), the evolution from dial-up Internet connections to always-on connections meant an increase in connection speeds from around 56 kilobits per second (kbps) to around 2 Megabits per second (Mbps), a huge difference that enabled a re-conceptualisation of what services could be accessed through broadband.

Today, with technological advances based on fibre-optic networks and fourth generation (4G) wireless networks, commercial broadband connections are possible at speeds of up to 200 Mbps.

Therefore, in this report, a distinction is made between broadband, which is seen to comprise of copper fixed wire connections (e.g. ADSL) or second generation (2G) wireless connectivity and high-speed broadband, which is seen to comprise of fibre-optic networks and/or fourth generation (4G) wireless networks.

Finally, it should be noted that this work is intended to feed into further Provincial and Municipal planning processes as an informant towards contributing to the establishment of further iterative processes for engagement around the planning and implementation of ICT infrastructure and related spatial allocations for ICT corridors as well as developing an enhanced understanding of the particular needs (from a spatial planning perspective) that may be pertinent in facilitating future developments in the digital economy.

## 1.5. Report Limitations

As noted above, the decision to explore this subject came as part of an amendment of the overall GRSIF scope of work and, as such, this work was undertaken by the duly appointed professional team, which did not include the services of an ICT expert. As such, the work is broadly descriptive in nature and attempts to achieve an understanding of what high-level (potentially regional-scale) approaches may be useful in facilitating an improvement in the levels of access to high-speed broadband in the GSR.

In carrying out this work, the following study limitations are noted:

- No primary research or data collection was undertaken.
- The work was primarily desktop-based, augmented by Information sourced from interviews and data sourced from third parties.
- As the ICT sector (especially the development of broadband networks) operates within a predominantly commercial prerogative, information regarded as strategic is often jealously guarded and, accordingly, it is understood that the information contained herein – with specific reference to spatial data reflecting network coverages – is broadly indicative and incomplete.

- Finally, it should be noted that the ICT sector remains very dynamic in nature and strategic and technological changes are rapid and ongoing. Hence, this report should be taken as a time-bound snapshot view of the sector within the context of the GRSIF.

## 1.6. Stakeholder Engagement

In the course of compiling this report, a number of interviews and engagements were undertaken with stakeholders. See Table 1.

## 1.7. Report Structure

This report is structured as follows: -

Section 2 briefly sets out a broad Problem Statement

Section 3 sets out a Development Perspective on the issue of ICTs and High-Speed Broadband in the GSR

Section 4 considers some pertinent issues related to managing the deployment of Electronic Telecommunications Infrastructure

Section 4 puts forward conclusions and recommendations

Table 1. Stakeholder engagement summary

DATE OF ENGAGEMENT	STAKEHOLDERS/EVENT	NATURE OF ENGAGEMENT
17 May 2017	<ul style="list-style-type: none"> <li>Mr John Lawson</li> </ul>	Information sharing meeting with LED service provider to Swartland Municipality, Saldanha Bay Municipality and West Coast District Municipality
12 June 2017	<ul style="list-style-type: none"> <li>Mr Ian Merrington</li> <li>Michal Szymanski</li> </ul>	Information sharing meeting with the Cape Innovation and Technology Initiative (CITI)
10 July 2017	<ul style="list-style-type: none"> <li>Ms Olivia Dyers</li> </ul>	Information sharing meeting with Director: Digital Leadership at Department of Economic Development & Tourism
11 July 2017	<ul style="list-style-type: none"> <li>Digital Disruption Workshop: Multiple Stakeholders</li> </ul>	DEDAT- convened workshop hosted by CITI to consider Digital Disruption draft report
25 July 2017	<ul style="list-style-type: none"> <li>Jawahir Nandha</li> </ul>	Information sharing meeting with Executive: Commercial of the Saldanha Bay IDZ
1 September 2017	<ul style="list-style-type: none"> <li>Jo-Ann Johnston</li> <li>Herman Jonker</li> </ul>	Strategy information sharing meeting with DEDAT officials
15 September 2017	<ul style="list-style-type: none"> <li>Economic Focus Group: Multiple Stakeholders</li> </ul>	EDP-facilitated Focus Group to consider economic and ICT issues in GSR

## 2. Problem Statement

In the 21st century, there is a growing consensus that societies are embarking on what is termed the “Fourth Industrial Revolution” – the “digital revolution”.

With the so-called First Industrial Revolution being characterised by the use of water and steam-generated power to mechanise production in key sectors of the economy in the 18th and 19th centuries, the Second Industrial Revolution harnessed the power of electricity to develop mass production techniques and improve productivity in manufacturing of goods in the early 20th century, and the Third Industrial Revolution used electronics and developing information technologies to automate production.

From about the mid 20th century, trends began coalescing into what is now termed a Fourth Industrial Revolution, which is distinguished by “a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres” and the “velocity, scope and systems impact” of these<sup>1</sup>.

The pace of change and the scope of the impacts of the digital revolution across all human activities is proving to be disruptive and challenging to long-held orthodoxies as well as entrenched procedures in government, business across all sectors, and social and intellectual interactions. The possibilities created by ever-expanding access by people to the processing power, and data access and storage capabilities of increasingly accessible devices are profound. Moreover, these possibilities are likely to “be multiplied by emerging technology breakthroughs in fields such as artificial intelligence, robotics, the Internet of Things, autonomous vehicles, 3-D printing, nanotechnology,

biotechnology, materials science, energy storage, and quantum computing”<sup>2</sup>.

However, for the impacts and possibilities of the Fourth Industrial Revolution to become more widely accessible, a crucial enabling factor is functional access to the data flows pervading the world through a range of mediums but largely centred on a system of interconnected data networks: the Internet. The Internet is enabled by a system of data hubs, telecommunications cables and microwave transmitters that traverse the globe, linking countries, regions, cities and rural settlements at varying levels of connectivity and functionality.

In the face of this requirement, it is understood that the levels of access to broadband connectivity (specifically, high-speed broadband) in the GSR are extremely limited and, as such, represent a hindrance to the ease of basic communications and the ability of businesses, organisations and individuals to access the opportunities afforded by web-based services that require such connectivity.

This low level of access to high-speed broadband may be directly linked to the challenge of rolling out infrastructure to extend fixed wire or wireless broadband coverage in the GSR.

That rollout, in turn, is affected by the regulatory approach of the state in managing the licensing of ICT network providers and ICT service providers: In effect, the market conditions that are created by the policy and legal frameworks in place that determine the “rules of the game”.

<sup>1</sup> Schwab, Karl; The Fourth Industrial Revolution: what it means, how to respond, 14 January 2016, World Economic Forum, <https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond>, accessed, 27 July 2017.

<sup>2</sup> Ibid

## 3. Development Perspective

### 3.1. Legal Framework

#### 3.1.1. Electronic Communications Act

The main piece of legislation governing the regulation and administration of the ICT sector in South Africa is the Electronic Communications Act (ECA, Act 36 of 2005) which has as its objects the following:

*To promote convergence in the broadcasting, broadcasting signal distribution and telecommunications sectors and to provide the legal framework for convergence of these sectors; to make new provision for the regulation of electronic communications services, electronic communications network services and broadcasting services; to provide for the granting of new licences and new social obligations; to provide for the control of the radio frequency spectrum; to provide for the continued existence of the Universal Service Agency and the Universal Service Fund; and to provide for matters incidental thereto.*

Amongst a number of focus areas, the ECA regulates the licensing of electronic communications service providers and network providers, the control of radio frequency spectrum, provides for the deployment and/or construction of electronic communications networks and facilities (and the development of guidelines to direct the rapid deployment of those activities), and establishes the Universal Service and Access Agency of South Africa (USASAA) and provides for the Universal Service and Access Fund (USAF).

Of particular note for public and private land administrators and authorities responsible for managing land use, land development and associated aspects such as approval of wayleaves, servitudes and building plan approvals are the provisions in Chapter 4 of the ECA that permit

Electronic Communications Network Services (ECNS) licensees much leeway in accessing land for the deployment of linear infrastructure and electronic communications facilities. This is considered further in Section 4.

#### 3.1.2. Independent Communications Authority of South Africa Act

Electronic communications networks and services are primarily regulated by the Independent Communications Authority of South Africa (ICASA), established in terms of the Independent Communications Authority of South Africa Act (Act 13 of 2000).

However, the Minister of Telecommunications & Postal Services remains responsible for making policy and issuing policy directions to ICASA as well as for making key regulatory decisions.

The provision of an Electronic Communications Network Service (ECNS) and/or an Electronic Communications Service (ECS) requires either an individual or class license, or must be exempt from licensing. ECNS and ECS licenses are either classified as "individual" or "class". Those licensees that are individual include ECNS of national or provincial scale, and voice telephony ECS that use numbers allocated by ICASA.

License applications for individual licenses may only be made in response to an invitation and, in

respect of individual ECNS licenses, only after a policy direction issued by the Minister.

Class licenses include ECNS of municipal scale, data ECS and voice ECS where numbers are sub-allocated by licensees.

ICASA has prescribed that certain services may be exempt from licensing, including non-profit ECS, resellers of ECS and private ECNS. However, service providers must nonetheless apply for the right to provide exempt services in terms of ICASA regulations<sup>3</sup>.

### 3.2. Policy Context

#### 3.2.1. Global: The UN 2030 Agenda for Sustainable Development

As part of its 2030 Agenda for Sustainable Development, the United Nations (UN) has formulated 17 Sustainable Development Goals.

Of relevance to ICT, Sustainable Development Goal 9: Build resilient infrastructure, promote sustainable



Figure 1. The UN 2030 Sustainable Goals

<sup>3</sup> <https://www.wits.ac.za/media/migration/files/cs-38933-fix/migrated-pdf/pdfs-5/LTIQA.pdf> - accessed 27 July 2017

industrialization and foster innovation has a specific ICT Target:

- Goal 9 ICT target: Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

By setting this target, the 2030 Agenda for Sustainable Development recognizes that the spread of ICT and global inter-connectedness has the potential to “accelerate human progress, bridge the digital divide and develop knowledge societies”<sup>4</sup>

### 3.2.2. National Policy

South African national government policy towards ICT is embodied in a number of documents:

#### The National Development Plan: Vision 2030 (2012)

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. Public services and educational and information products will be accessible to all, and will build on the information, education and entertainment role envisaged for public broadcasting.

The human development on which all this is premised will have created an e- literate (online) public able to take advantage of these technological advances and drive demand for services.

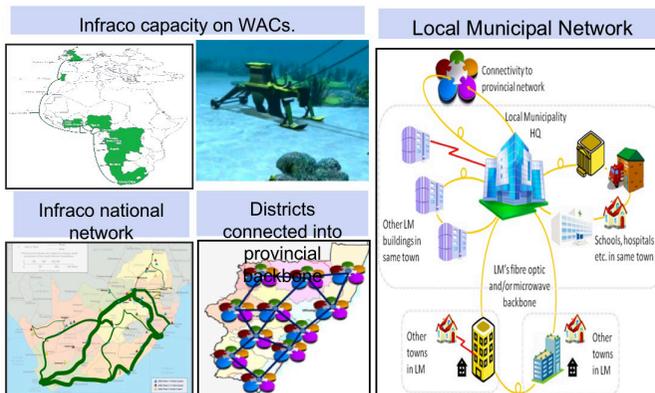
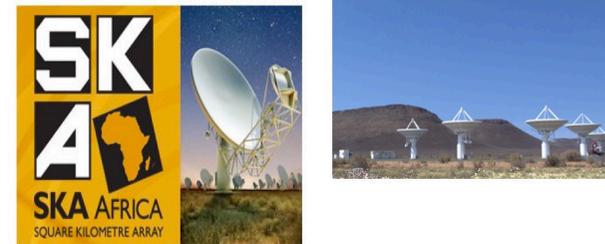
### The National Infrastructure Plan and related Strategic Integrated Projects (2012)

See Figure 2:

## Knowledge SIPS

**SIP 16: SKA & Meerkat**

SKA is a global mega science project, building an advanced radio-telescope facility linked to research infrastructure and high speed ICT capacity & provides an opportunity for Africa and South Africa to contribute towards advance science.



### SIP 15: Expanding access to communication technology

Provide for 100% broadband coverage to all households by 2020 by establishing core Points of Presence (POP's) in district municipalities, extend new Infraco fibre networks across provinces linking districts, establish POP's and fibre connectivity at local level, and further penetrate the network into deep rural areas.

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.

The school rollout focus initially on the 125 Dinaledi (science and math focussed) schools and 1525 district schools. Part of digital access to all South Africans includes TV migration nationally from analogue to digital broadcasting.

Figure 2. Source: PICC, 2012. Presentation: Summary of the National Infrastructure Plan

4 UN, "Transforming our World: The 2030 Agenda for Sustainable Development"

See Table 2 and Figure 3:

Table 2. South Africa Connect Strategy

STRATEGY INTERVENTION	ASPECTS ADDRESSED BY THE STRATEGY	INTENDED OUTCOMES	INDICATORS
1. Digital Readiness	<ul style="list-style-type: none"> <li>Institutional capacity Regulation and administrative bottlenecks</li> <li>Efficiency and effectiveness</li> <li>Data and analysis for monitoring and evaluation and policy reformulation</li> <li>Establishment of the National Broadband Council</li> <li>Rationalisation of SOCs</li> </ul>	<ul style="list-style-type: none"> <li>An enabling regulatory and administrative environment that facilitates broadband rollout</li> <li>Broader public interest preserved</li> <li>Level playing field with fair market conditions Dedicated council to advise Minister on policy, planning and implementation</li> </ul>	<ul style="list-style-type: none"> <li>Autonomy, accountability and efficiency of regulator Access, price and quality of broadband</li> <li>Time and cost of network build approval</li> <li>Degree of disruption due to network build Environmental impact of network builds</li> <li>Targets met</li> <li>Coverage, price</li> </ul>
2. Digital Development	<ul style="list-style-type: none"> <li>Pooling of public sector demand</li> <li>Public sector networks</li> <li>Open access to network regulation</li> </ul>	<ul style="list-style-type: none"> <li>High capacity future-proof network capacity procured for key public sector broadband needs at more affordable rates Government's on-going operational communications expenditure reduced through upfront capital expenditure</li> <li>Risk of investment in network extensions for operators reduced through anchor tenancy</li> </ul>	<ul style="list-style-type: none"> <li>Speed, quality and cost of network capacity at government facilities</li> <li>Speed of rollout and quality of service</li> <li>Network reach and price of access</li> <li>Increased investment by network operators</li> <li>Take up of services in public sector, schools and clinics.</li> </ul>
3. Building the Digital Future	<ul style="list-style-type: none"> <li>Mechanisms for sharing of infrastructure</li> <li>Coordination of infrastructure rollout</li> <li>Enhanced use and licensing of spectrum</li> </ul>	<ul style="list-style-type: none"> <li>Where competition is viable this will produce best outcomes but infrastructure sharing and cooperation to be enabled on network builds to reduced cost Economies of scale enabled in medium density areas that cannot afford duplication through infrastructure sharing / pooling /swapping</li> <li>Risk and time to return reduced in low density and low-income areas through government investments and guarantees in network extensions</li> </ul>	<ul style="list-style-type: none"> <li>Network reach</li> <li>Cost to communicate Speed, quality and cost of network capacity</li> <li>Speed of rollout</li> <li>Increased investment by network operators Improved penetration</li> </ul>
4. Realising Digital opportunity	<ul style="list-style-type: none"> <li>Capability and capacity R&amp;D, innovation and entrepreneurship</li> <li>Industry development</li> </ul>	<ul style="list-style-type: none"> <li>Uptake and use enabled through institutional capacity and individual capability and institutional</li> </ul>	Demand stimulation through: <ul style="list-style-type: none"> <li>Fund local content</li> <li>Support apps to market</li> </ul>

## Broadband Value Chain

### South Africa Connect Strategies

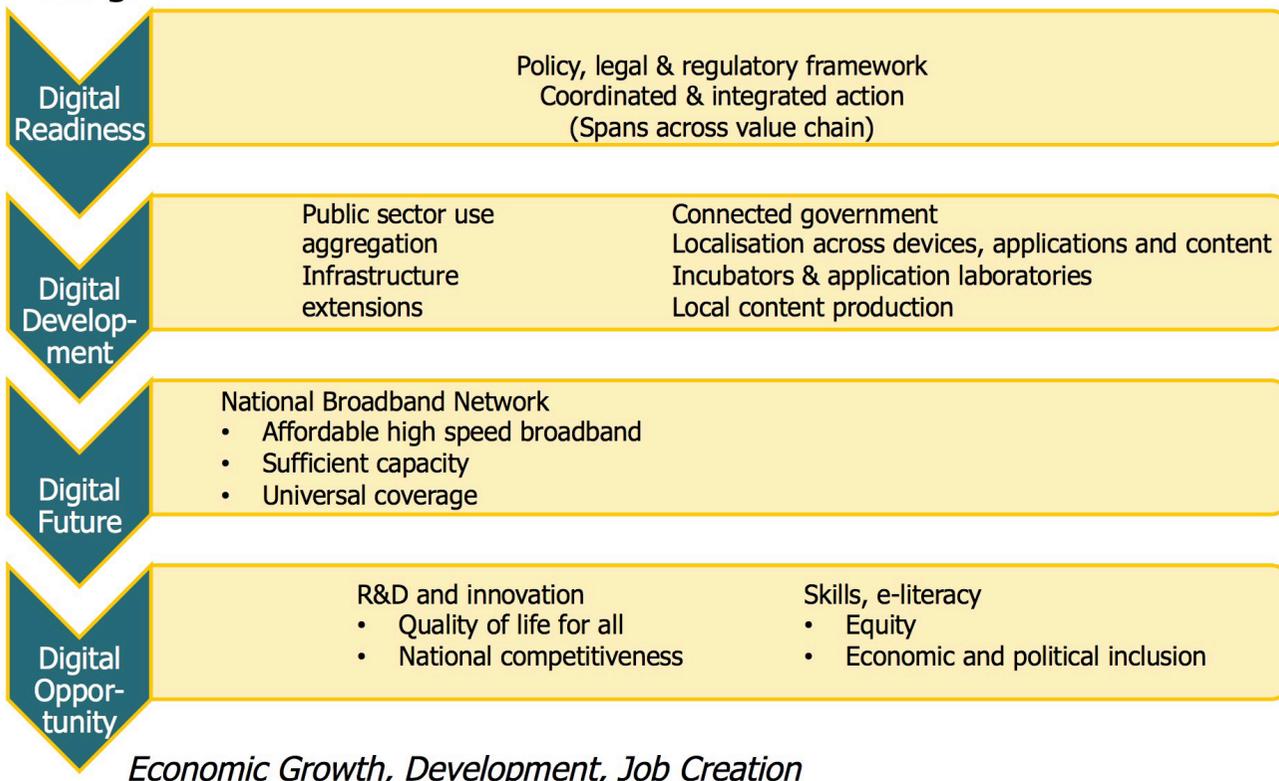


Figure 3. SA Connect Strategies in Outline (Source: Presentation by researchICTAfrica, Khan. S, 2015)

## National Integrated ICT Policy White Paper (2016)

The National ICT Policy White Paper gazetted in October 2016 “outlines the overarching policy framework for the transformation of South Africa into an inclusive and innovative digital and knowledge society”. As such, it is intended to reinforce and extend existing strategies such as South Africa Connect (the national broadband policy), the National Cybersecurity Policy Framework, 2012 and the National Information Society and Development Plan<sup>5</sup>.

In pursuing the realisation of the ICT Vision set out in the NDP, the ICT White Paper places the issue of ICT Convergence central to the policy. In this regard, the White Paper defines its use of the term “ICT” to include “a broad range of technologies such as computing and information technology, telecommunications technology (including fixed and wireless telephony and data communications), audio and audio-visual content (including broadcasting), the Internet (including the services carried over this platform) and more traditional means for communication such as postal deliveries”<sup>6</sup>.

It notes further that “Convergence has meant that these technologies do not operate in isolation from each other. They are increasingly accessed using the same devices. A mobile phone, for example, can be used to access the Internet, read email, make calls and listen to music or the radio. Calls can be made over the mobile network or via over-the-top Internet based services (e.g. video-on-demand, Skype and WhatsApp). Correspondence can be sent via the post or email and documents can be signed physically or electronically”<sup>7</sup>.

From the perspective of its broad objective, the White Paper seeks to set in place the

5 Department of Telecommunications and Postal Services, 2016. National Integrated ICT Policy White Paper

6 Ibid

7 Op Cit

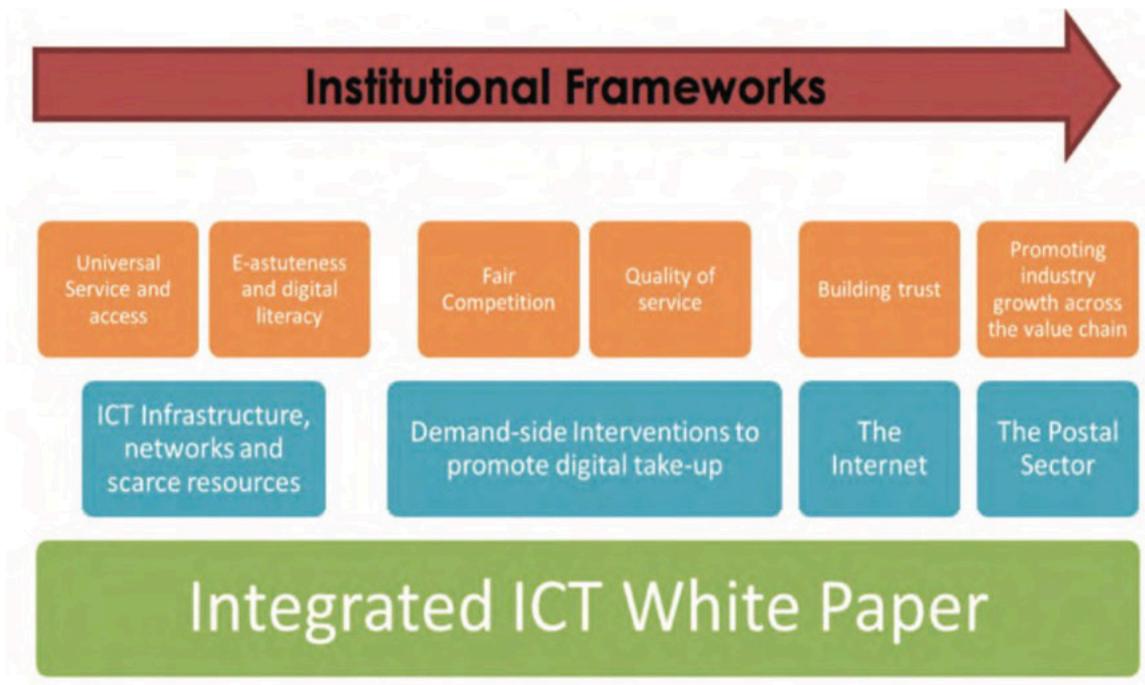


Figure 4. Diagrammatic Outline of White Paper Focus Areas

conditions that would enable “A people-centred, development-oriented and inclusive digital society”<sup>8</sup>. This is broken down into sub-objectives as follows:

- Equality: All South Africans must have affordable access to communications infrastructure and services and the capacity and means to access, create and distribute information, applications and content in the language of their choice.
- Accessibility: Services, devices, infrastructure and content must be accessible for all sectors of the population, including persons with disabilities, so that all can equally enjoy and benefit from communication services
- Social Development: All South Africans must benefit from the ability of the ICT sector to facilitate social development and improve the quality of life for individuals and communities.
- Economic Growth: Policy must facilitate access by all South Africans to quality communication infrastructure and services to enable economic growth, employment and wealth creation.
- Investment: Policy must promote and stimulate domestic and foreign investment in ICT infrastructure, manufacturing, services, content, and research and development.
- User Protection: End-users, from the most disadvantaged individual to the largest corporate, must be at the centre of ICT sector-related policies. Effective protection and empowerment of end-users.

<sup>8</sup> Inputs by the Deputy Minister of the Department of Telecommunications and Postal Services, Honourable Prof. Hlengiwe Mkhize, at the GovTech Conference, Gallagher Estate, Midrand, 31 October 2016

The following is noted in the above regard: -

- National government policy is premised on the state being responsible for policy, legislation and regulation to govern the ICT sector;
- The state is also seen as being responsible for ensuring that gaps in broadband service availability in underserved areas where, it anticipates, the private sector would not venture due to weak market conditions (e.g. low levels of affordability and/or demand and take-up of services) or other inhibiting factors are addressed;
- Through levying a percentage on license fees, a Universal Service and Access Fund is seen to be the vehicle to enable the state to plug gaps in broadband networks;
- However, a core assumption in the government's policies and strategic approach to regulating and extending ICTs in South Africa is that the national government itself, together with its mandated agencies and SOEs, has the capacity to fulfil its roles and responsibilities effectively and efficiently. This has not proven to be the case to date and has left many commentators critical of the policy and regulatory frameworks.
- Specifically, criticisms have suggested that the applicable legal and policy frameworks have led to a lack of competition in the ICT sector, which has led to relatively high costs of data as well as inefficiencies in the extension of ICT services and broadband coverage;
- That, in turn, has led to a so-called “digital divide” between individuals and communities that are advantaged by socio-economic and locational factors and have high levels of access to broadband services, and those who are economically disadvantaged and, typically, resident in areas where broadband connectivity is either unaffordable for them, or unavailable.

### 3.2.3. Provincial Policy

#### 3.2.3.1 Broadband 2030 Provincial Vision

By 2030, every citizen in every town and village will have access to affordable high-speed broadband infrastructure and services, will have the necessary skills to be able to effectively utilise this infrastructure and is actively using broadband in their day to day lives.

#### 3.2.3.2 The Provincial Strategic Goals

Within the Western Cape province, much emphasis has been placed in the current administration's policies and strategies on pursuing a so-called "digital dividend" and improving levels of access to ICTs to address the digital divide as part of a growth- and job-creation focus in developing the provincial economy. The Provincial Strategic Plan 2014-2019 gave rise to 5 Provincial Strategic Goals (PSGs)

Within the strategic context of the PSGs, the provincial government identified seven so-called "Game Changers": priority projects that were identified as having the potential to be catalytic interventions in the provincial economy and, in so doing, make a tangible improvement in people's lives in the Western Cape. Amongst these seven Game Changers, two relate directly to the ICT sector: **The High-Speed Broadband Game Changer**, and the **E-Learning Game Changer**. A third Game Changer, **Better Living Models**, described by the WCG Premier as "pioneering an integrated living model that can pave the way for restructuring the apartheid legacy of our cities and towns"<sup>9</sup> also could be seen to have the integration of ICT networks and new, data-driven, data-enabled ways of delivering infrastructure and managing flows of people and traffic as a key facilitative element.

Within the context of the PSGs and the Game Changer approach, the WCG is pursuing a range of initiatives, mainly through the Department of



Figure 5. The 5 WCG PSGs for the period 2014-2019

Economic Development & Tourism and the Office of the Premier. These include:

- The Broadband Initiative (BBI) in terms of which the WCG has partnered with the State Information Technology Agency (SITA) and has contracted with Neotel Liquid Telecom for the roll out of high-speed broadband to 1,900 public buildings (schools, libraries, clinics, departmental regional offices etc.);
- Once these sites have all been connected, to upgrade line/network speeds to a minimum standard of 100 megabits per second (Mbps) – the equivalent of 12.5 megabytes per second (MBps);
- As part of the Neotel contract, the development of 384 public access Wi-Fi Hotspots across the Western Cape (so-called NeoHotspots) where limited free Internet access would be provided that would allow every device that connects to one of the hotspots a free allocation of 250MB data every month. Furthermore, government websites and a basic 'Internet Champion' digital literacy course would be permanently free to browse.

<sup>9</sup> WCG Premier Zille. State of the Province Speech, 2015

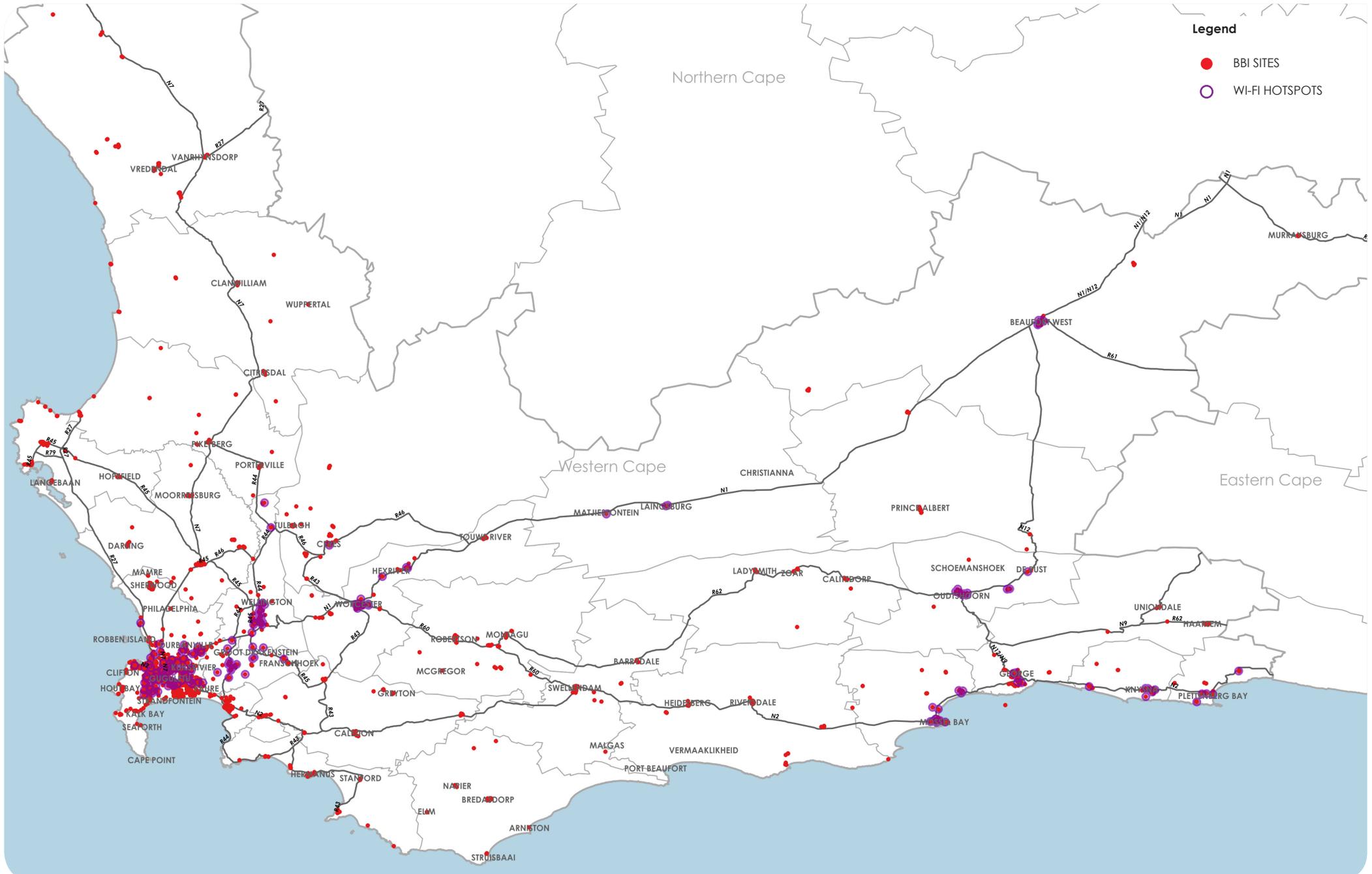


Figure 6. Current Distribution of WCG BBI and Wi-Fi Hotspots (August 2017) (Data Source: WCG DotP\_CEI\_BBISites & DEDAT\_WiFiHotSpots GIS Data)

### 3.3. Key Roleplayers in the ICT Sector

Within the policy and legal framework established in South Africa, there are an array of roleplayers in the ICT sector. Given the focus of this report on the extension of infrastructure and the availability or access to broadband in the GSR, the most relevant of these are noted in Table 3.

Table 3. Key Roleplayers in the ICT Sector

	ROLEPLAYER	RELEVANT FUNCTIONS RE. ICT
Legal and Regulatory	Department of Telecommunications and Postal Services	<ul style="list-style-type: none"> <li>• Oversight of ICT sector</li> <li>• Development of Policy and Legislation</li> <li>• Drafting of Regulations to direct key activities within the sector</li> <li>• Approval of Radio Frequency Band Plans</li> <li>• Oversight of public enterprises and agencies such as ICASA, Broadband Infraco and Universal Service and Access Agency of SA</li> </ul>
	ICASA	<ul style="list-style-type: none"> <li>• Independent regulatory authority for the telecommunications sector</li> <li>• Development of Policy</li> <li>• Licensing of Electronic Communications Service (ECS) and Electronic Communications Network Service (ECNS) providers</li> <li>• Licensing/allocation of radio frequency spectrum (band allocation)</li> </ul>
Service Provision	Individual ECNS licensees	<ul style="list-style-type: none"> <li>• Deploy and operate physical ICT networks at national or provincial level</li> </ul>
	Class ECNS licensees	<ul style="list-style-type: none"> <li>• Deploy and operate physical ICT networks at district or municipal level</li> </ul>
	Individual ECS licensees	<ul style="list-style-type: none"> <li>• Provide telecommunications services               <ul style="list-style-type: none"> <li>- Voice services (including Voice over Internet Protocol [VOIP] services) that require numbers from the National Numbering Plan</li> <li>- Internet services</li> </ul> </li> </ul>
	Class ECS licensees	<ul style="list-style-type: none"> <li>• Provide telecommunications services               <ul style="list-style-type: none"> <li>- Voice services (including Voice over Internet Protocol [VOIP] services) DO NOT require numbers from the National Numbering Plan</li> <li>- Internet services</li> </ul> </li> </ul>

### 3.4. Overview: How the Internet is Configured

Viewed at a broad level, the Internet in South Africa may be seen to comprise of “layers” of elements enabling broadband connectivity. This is usefully illustrated in Figure 7:

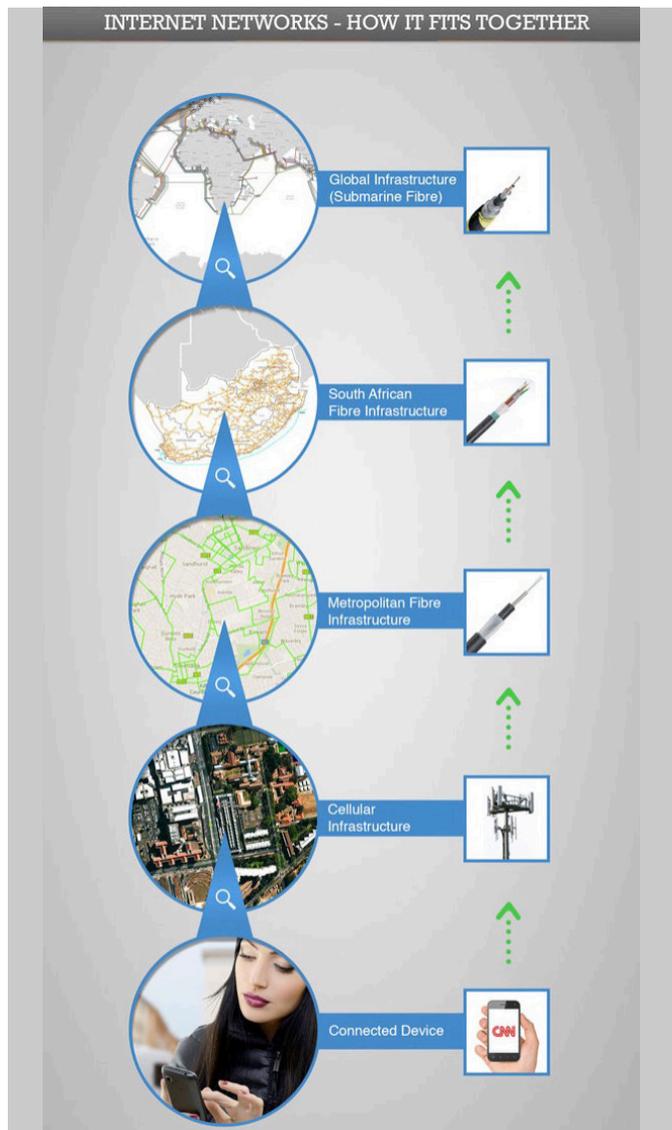


Figure 7. Schematic Overview of Internet Network Configuration in SA (Source: www.mybroadband.co.za)

These elements are simply described as follows:

#### International Connectivity

South Africa is connected to the global Internet by a system of undersea fibre-optic cables, though access may also be gained via satellite technology. The latter is costly and, for most users, the undersea cable network offers the crucial linkages required.

In the Western Cape, the undersea cables make landfall at two Data Cable Landing stations as follows:

- Melkbosstrand (CoCT)
- South Africa Far East/South Atlantic Telecommunications Cable3 (SAFE/SAT3) – operational since April 2002 with a design capacity of 800 Gigabits/second

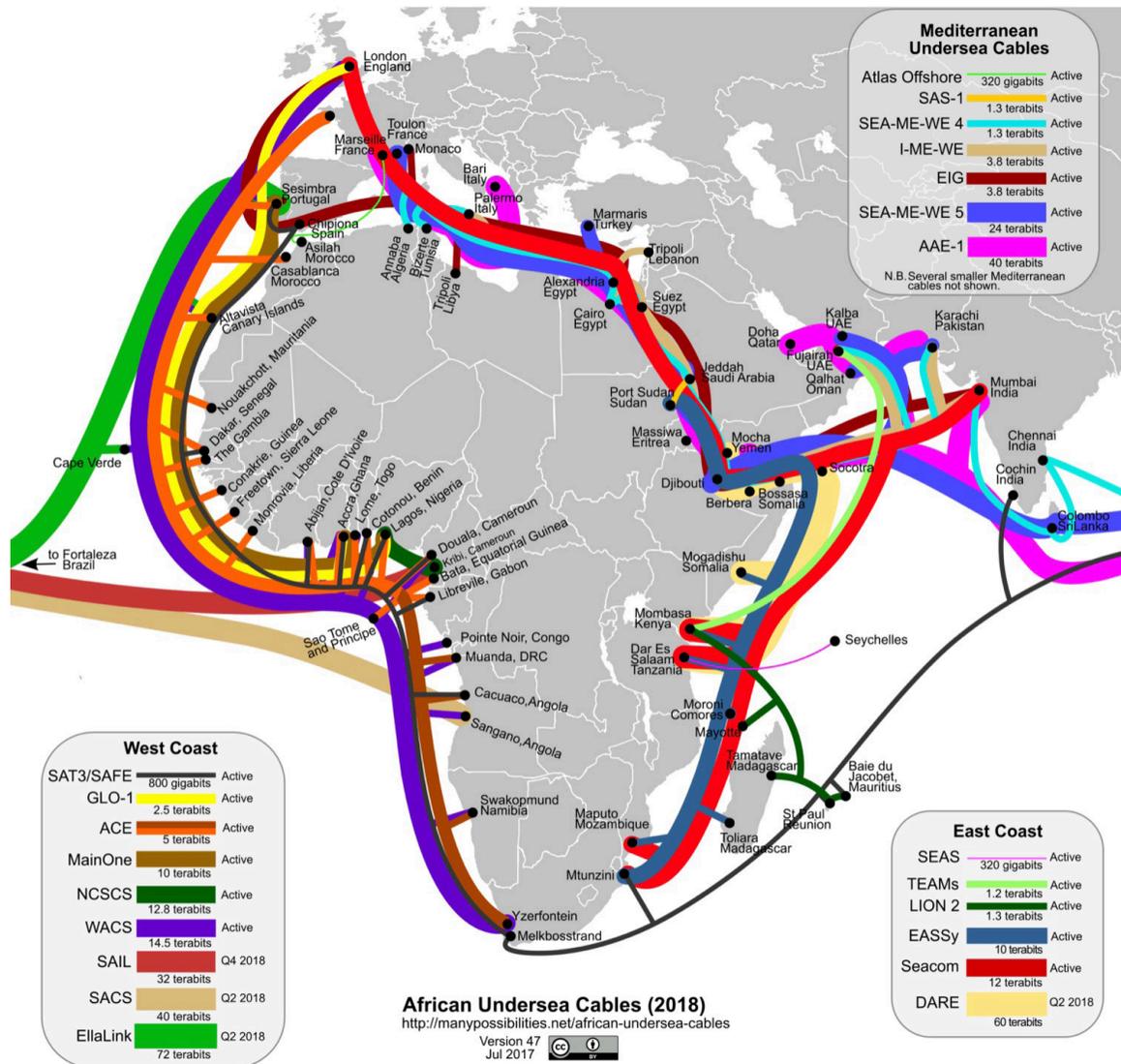


Figure 8. African Undersea Cables as at July 2017 (Source: https://manypossibilities.net/african-undersea-cables/ )

- Yzerfontein (Swartland Municipal area)
  - West Africa Cable System (WACS) – operational since May 2012 with a design capacity of 14.5 Terabits/second and a current “lit” capacity of 500 Gigabits/second

These undersea cables are owned and operated by consortia made up predominantly of telecommunications companies who make bandwidth available to ECNS and/or ECS licensees on a commercial basis.

Between 2002 until 2009, when the SEACOM cable was brought into operation, South Africa was linked to the global Internet by a single undersea fibre-optic cable, the SAT3/SAFE cable. That cable was brought into operation in April 2002 and enabled the first offering of broadband services (ADSL) in August 2002 by the single network operator at that stage, Telkom.

### National Connectivity

Comprised of fixed line and wireless networks made up national backhaul networks providing long-distance “backbone” links between Internet exchanges and distributed Points of Presence (POPS)

These long-distance networks are primarily owned by either Telkom (until 2006 the single fixed line network operator), Neotel Liquid Telecom (since 2006 the second network operator), or Broadband Infracore (the State-Owned Enterprise [SOE] intended to play a facilitative and developmental role in ensuring that market gaps not covered by the private sector are addressed). Some private sector ECNS licensees such as Fibreco and Dark Fibre Africa have also developed shorter fibre-optic links.

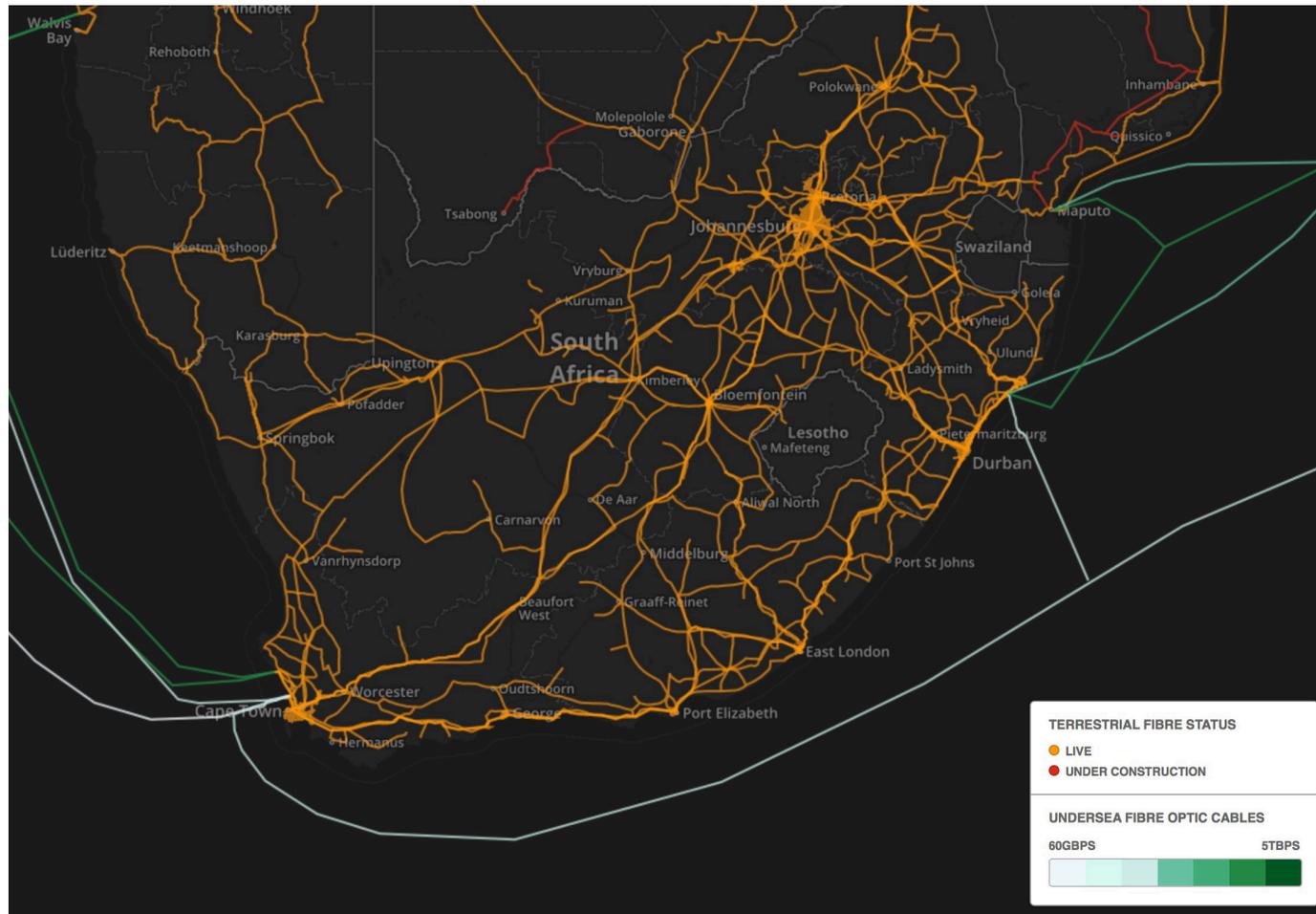


Figure 9. National Fibre Networks (Source: <https://afterfibre.nsrc.org>)

## Metropolitan connectivity

Comprised of fixed line and wireless networks linking back into the national backbone networks via high-speed exchanges and providing the platforms for ECNS and ECS licensees to provide services in local areas; and

## Last-mile connectivity

Last-mile connectivity is a crucial element in providing consumers access to broadband services insofar as it brings the fibre, fixed line or wireless network (e.g. LTE or LTE-A) connection to the local area or premises of the user.

Since 2002, this last-mile connectivity was dominated by fixed line connections (ADSL, Diginet, ISDN etc.) or cellular technologies (2G, 3G or 4G data connectivity). However, ECNS licensees have begun to compete progressively at the neighbourhood scale to roll out fibre-optic cables and/or providing so-called fourth generation (4G) wireless services (LTE or LTE-Advanced) thus enabling so-called Fibre to the Home (FTTH) and Fibre to the Business (FTTB) or 4G broadband connectivity for consumers.

It should be noted that this crucial link in enabling broadband connectivity appears to be currently largely market driven and serves commercial imperatives. Thus, the trend in the rollout of last-mile infrastructure has been to proceed outwards from areas of perceived or registered demand for services where Internet service providers would anticipate the highest take-up rate of consumers able to afford broadband connectivity (e.g. gated estates, more affluent residential and/or business districts in metropolitan areas).

From the perspective of the GSR, this dynamic could be seen to be a key factor in leaving the region as underserved by broadband connectivity.

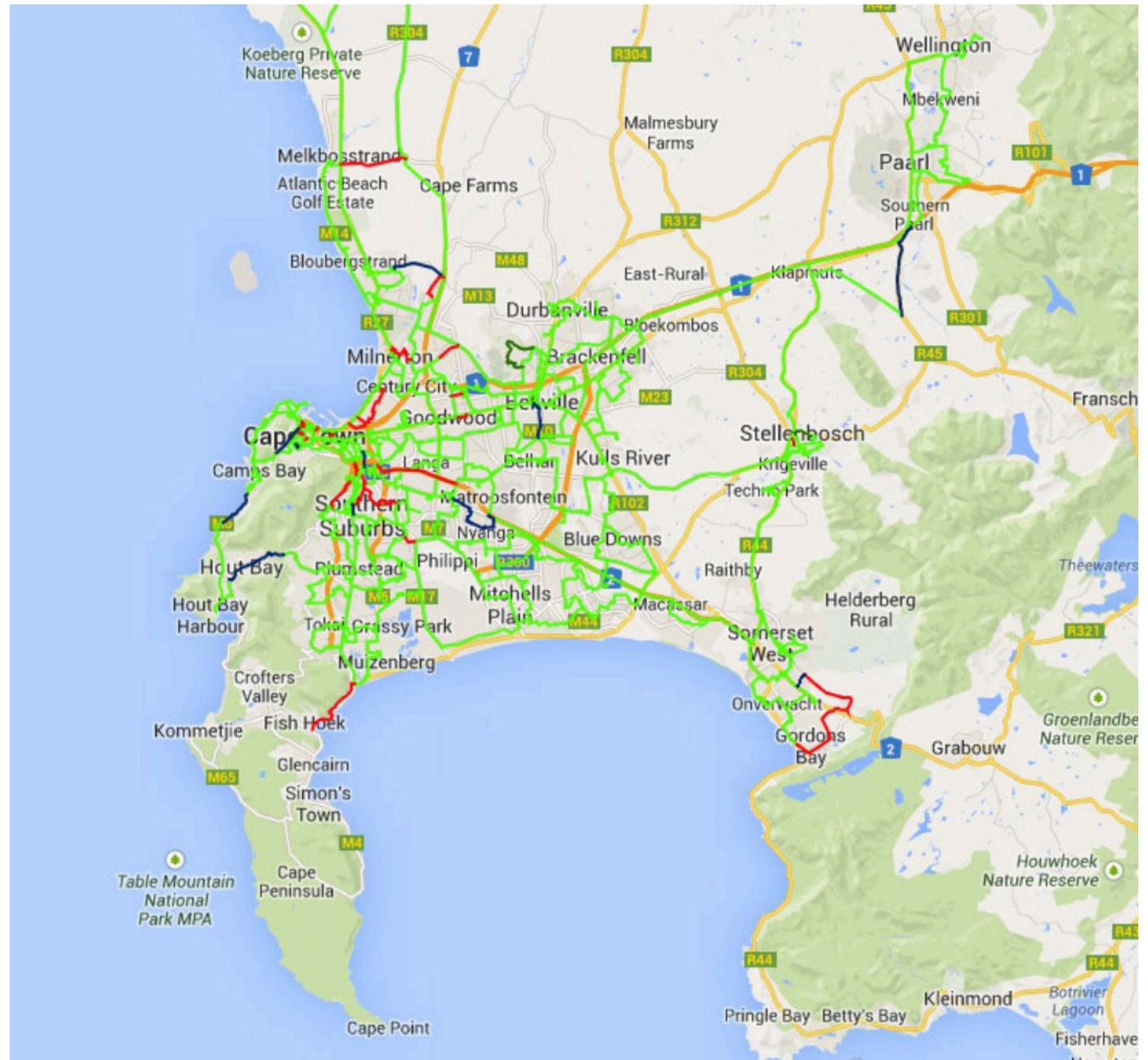


Figure 10. Example of Metropolitan Fibre Network (Dark Fibre Africa) (Source: <https://mybroadband.co.za/news/internet/98178-this-is-what-south-africas-internet-actually-looks-like.html> (accessed 21 July 2017))



whether it is learning to be a carpenter, to fix your car, to write music, to be a magician, to fix electronics, to dance, to understand particle physics, the list is endless"<sup>11</sup>.

As a specific example of the negative socio-economic effect of inadequate high-speed broadband infrastructure and, therefore, connectivity in the GSR, the Saldanha Bay Industrial Development Zone (SBIDZ) has recorded that it is concerned that the most important remaining missing element in their overall Value Proposition to the Oil and Gas sector (their target market) is a lack of a high-speed broadband offering. This is seen as a crucial gap as the Oil and Gas Sector is known to be data-intensive and companies who are active in the sector are heavy data users, thus necessitating access to a high quality, high-speed broadband network<sup>12</sup>.

Notwithstanding the fact that the Data Cable Landing Station at Yzerfontein is located in the GSR (Swartland Municipality) and that the major ECNS licensees appear to have "live" fibre-optic backbone networks in the region, the development of metropolitan and last-mile fibre-optic networks has not been proceeded with yet. (Refer to the Figure 12, which illustrates available data on the existing terrestrial fibre-optic cables making up the national backhaul network in the GSR).

Moreover, no service providers have extended 4G LTE or LTE-Advanced networks to service the area as yet, either.

It is this "Access Gap" that is seen to be an impediment to the ability of government agencies, business, households or individuals to participate in the full benefits of the Fourth Industrial Revolution in the GSR.

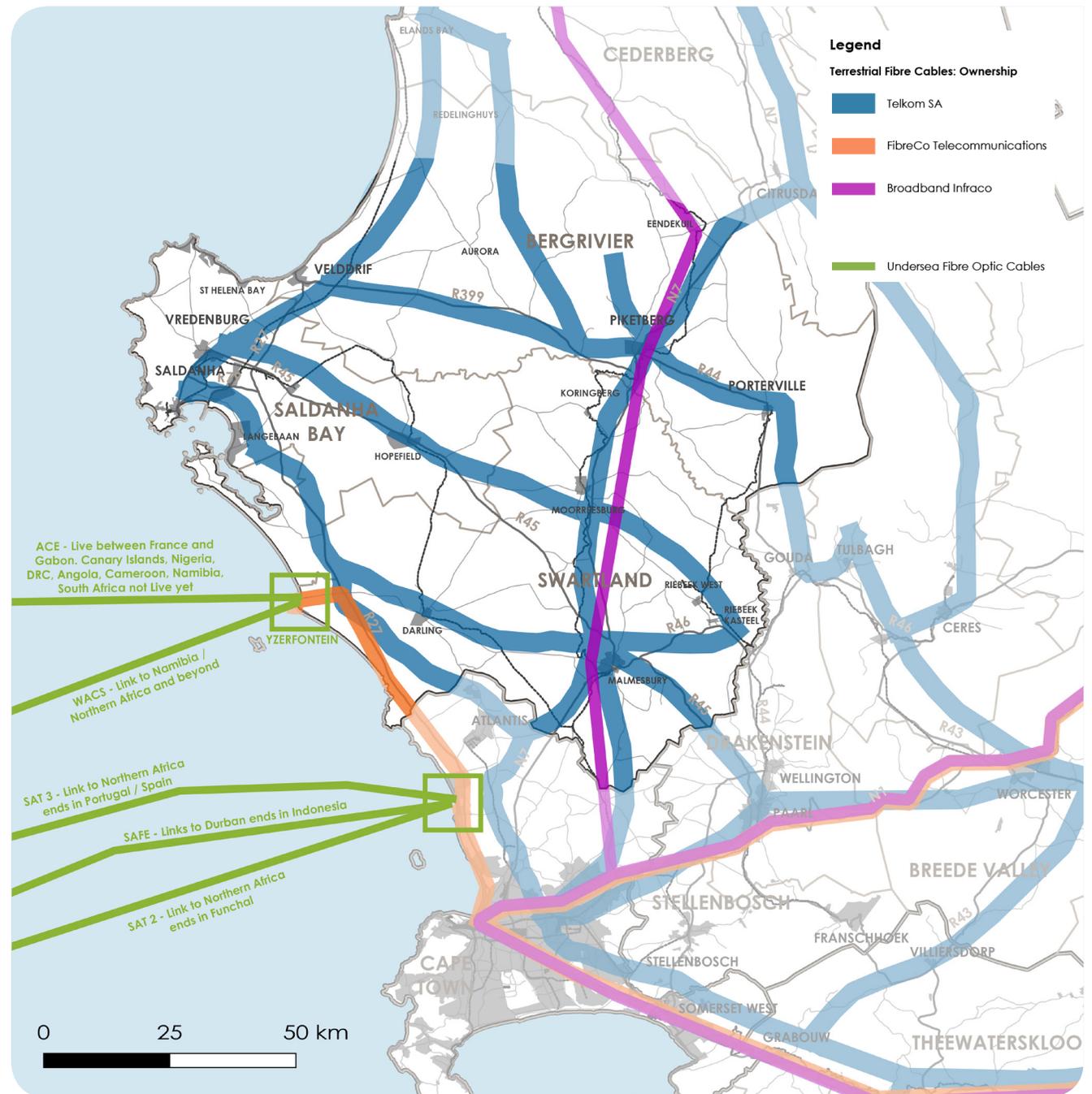


Figure 12. Terrestrial Fibre-Optic Backhaul Network in GSR (Data interpreted from <https://afterfibre.nsrc.org>)

<sup>11</sup> Song, S., 2017. The Internet is U-Shaped

<sup>12</sup> Personal communication. Interview with Mr J. Nandha of SBIDZ, 25 July 2017

### 3.5.1. Current ICT/Broadband Initiatives in the GSR

#### WCG Broadband Rollout

*By the end of the year, almost all schools will have high-speed broadband*

Helen Zille: Catching the rising wave of educational technology, Daily Maverick, accessed 3 July 2017

As noted above, the WCG is proceeding with the implementation of its Broadband Game Changer in terms of which it has partnered with SITA (statutory rules of procurement required it to do so) to contract with Neotel Liquid Telecom in the rollout of high-speed broadband connections to public buildings and the creation of open access public Wi-Fi hotspots at certain of these localities.

Whilst there are no so-called NeoHotspots in the GSR at the time of writing, these are intended for implementation in the immediate to short term, and will provide users of smart devices a free allocation of 250MB data every month. In addition, government websites and a basic 'Internet Champion' digital literacy course would be permanently free to browse.

As regards the rollout of high-speed broadband to public buildings, Figure 13 shows the distribution of these connected buildings in the GSR. At the time of writing, there were 138 such connections (BBI Sites on map) completed in the study area.

#### Saldanha Bay Municipality: Project Baobab

The Saldanha Bay Municipality (SBM) has partnered with the Stellenbosch Good Governance Forum (SGGF) of the Stellenbosch University's School of Public Leadership to implement a pilot project named Project Baobab .

The pilot project has the following objectives:

1. To Design and Build a Fibre to the Home and to the Business (FttX) solution that will deliver broadband to the SBM Municipality, the local

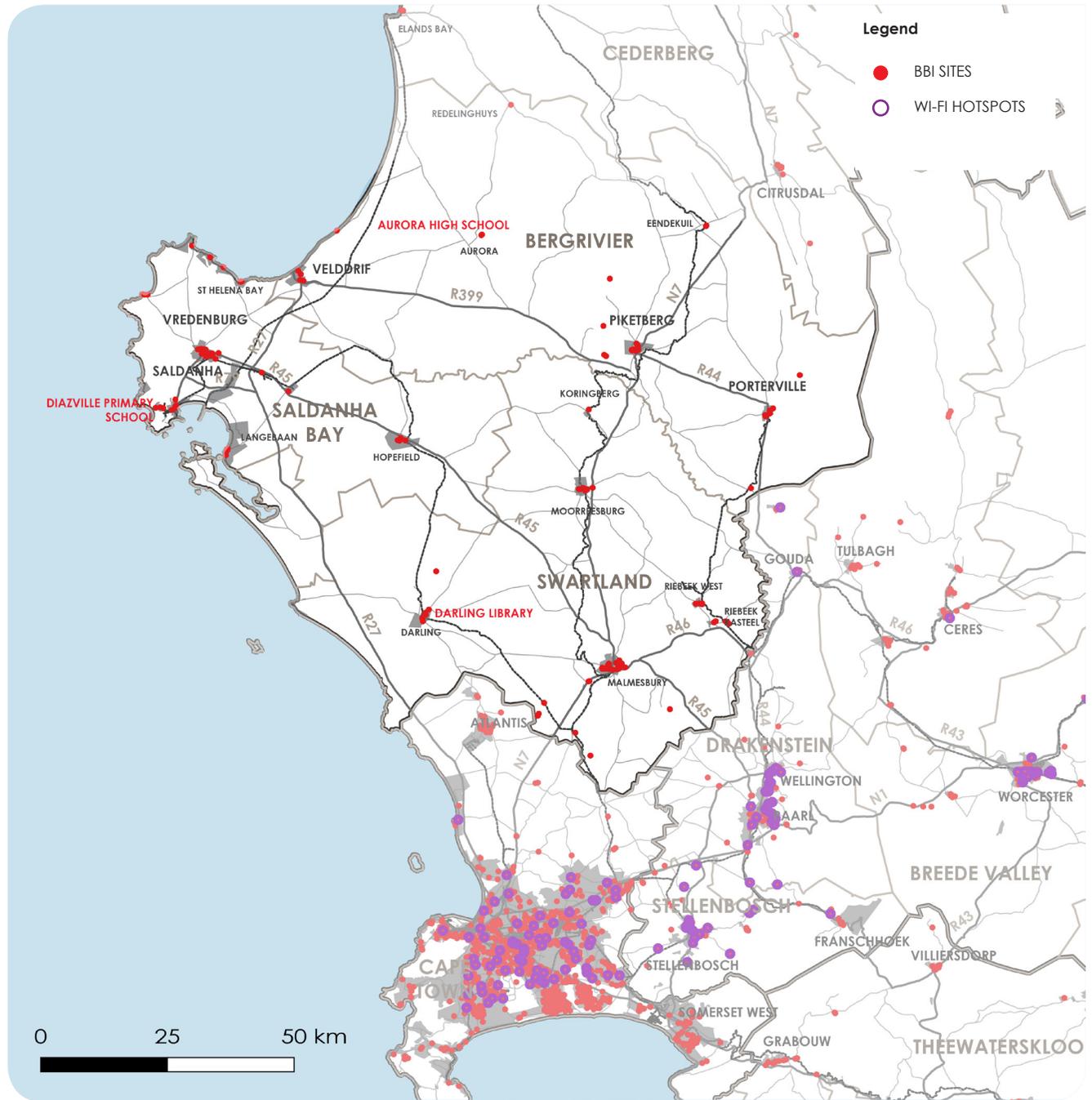


Figure 13. WCG Broadband Initiative Connected Buildings (August 2017) (Data Source: WCG DotP\_CEI\_BBISites & DEDAT\_WiFiHotSpots GIS Data)

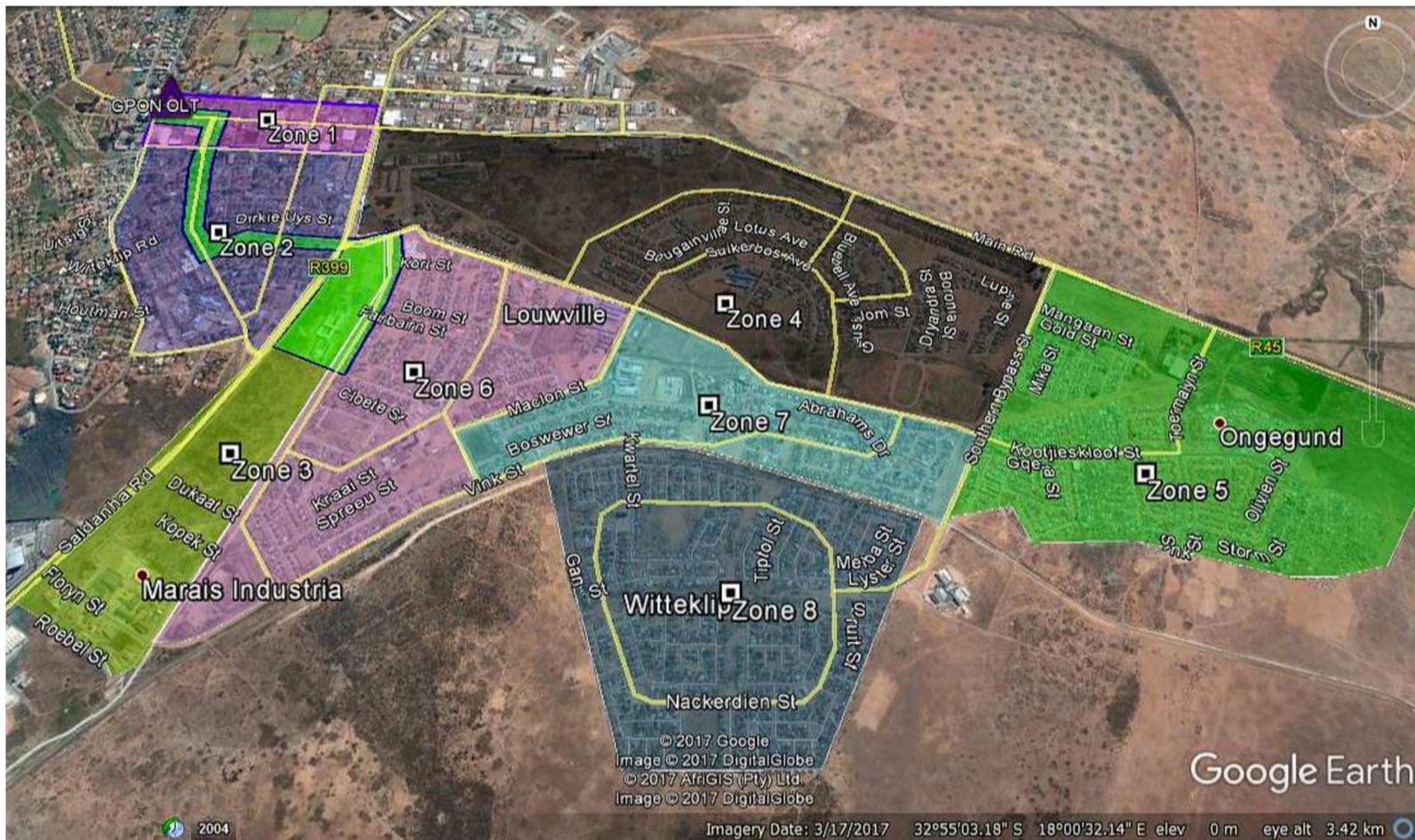


Figure 14. Project Baobab Rollout Zones in Vredenburg

1. Business stakeholders and homes of local citizens;
2. Fast track the delivery of high speed Internet connectivity to all stakeholders in SBM municipal area in line with government key economic growth objectives;
3. The project will demonstrate the unique business model fundamentals on how to create local social innovation and job creation by using innovative Fibre deployment technology to create sustainable income streams and cost reduction for the SBM;

To create a new additional evergreen and sustainable municipal revenue stream for the SBM by using a unique and innovative business model that will allow the SBM to create a significant fibre infrastructure asset.

In terms of the above project, the intention is to demonstrate the feasibility of a public-private partnership approach to the development of a physical fibre-optic last-mile network in key urban centres in the Saldanha Bay Municipal area.

It is understood that the model entails a partnership between the SBM, the SGGF and a commercial

ECNS licensee, the latter of whom would be responsible for the development of the last-mile fibre-optic network and would retain ownership of the asset (and would be able to on-sell spare bandwidth to Internet Service providers [ISPs]) until it has achieved its required Return on Investment, where after the asset (the fibre-optic network) will be transferred to the asset register of the SBM.

The project is underway and reportedly making progress, with installation in Zones 1 and 2 in Vredenburg complete (see Figure 14).

Project Baobab appears to hold promise and may come to be seen as a viable PPP model to replicate in other municipal areas where the rollout of fixed line fibre-optic FttH and FttB networks are prioritised (and where a viable Business Case could be developed).

### **Yzerfontein Data Cable Landing Station (Swartland)**

As noted above, the West Africa Cable System (WACS) makes landfall at the Yzerfontein Data Cable Landing Station.

In addition, there is a new cable system currently under development, the African Coast to Europe (ACE) cable system, which is projected to make landfall at Yzerfontein at some stage in the near future (there is some uncertainty on the timing).

The idea that the existence of the Yzerfontein DCLS may offer some competitive advantages with respect to the development of Data Centres in close proximity was one of the main motivating factors for undertaking this assessment as part of the GRSRIF work. However, whether this may be seen as an outright competitive advantage is probably dependent on a range of factors, including the ongoing trends in technological development and markets for data services.

Whilst, in the past, DCLS facilities have proven to be attractive to companies establishing Data Centres, there is no clarity at this point if that dynamic remains as it was, due mainly, it is understood, to the fact that fibre-optic networks offer great flexibility in connecting network elements such as DCLS, signal repeaters, Points of Presence (POPs), Internet Exchanges and Data Centres etc. over extended distances.

Moreover, the current configuration of the Internet is such that Cape Town has been (and currently remains) the dominant location for the development of Data Centres as well as the southern Internet Exchange.

However, certain major players in the Data Centre sector have indicated that they are exploring new technologies such that they envisage future undersea cables terminating in Data Centre facilities rather than at DCLS facilities, thus excluding the need for the development of the backhaul linkages to the main fibre-optic networks<sup>13</sup>.

In sum, it is concluded that, while the Yzerfontein DCLS may have some factors that could represent an opportunity for Data Centre development in close proximity, the uncertainties related to technological development trends and other market factors may ultimately play a deciding role in regard to such development potential.

However, should an opportunity arise for the Swartland Municipality to “pitch” its location to the Data Centre market, this should be pursued, subject to a pre-feasibility assessment.

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<sup>13</sup> <https://blog.equinix.com/blog/2016/09/23/how-subsea-cable-innovation-is-meeting-surge-network-bandwidth-demand/> - accessed on 7 December 2017

## 4. Managing the Deployment of ICT Infrastructure

From the perspective of creating an environment that is conducive to the rollout of key ICT infrastructure, the current legal framework poses some challenges to land administrators and land development management authorities.

It is understood that the provisions of Chapter 4 of the ECA: Electronic Communications Networks and Electronic Communications Facilities, enable ECNS licensees some considerable leeway in deploying their infrastructure and facilities. In this regard, the following is noted:

- *Section 22 of the ECA permits an ECNS licensee to “enter upon any land, including any street, road, footpath or land reserved for public purposes, any railway and any waterway of the Republic” to construct and maintain an electronic communications network or electronic communications facility, alter it or remove it subject to applicable law and the environmental policy of SA.*
- *Section 24 permits an ECNS licensee – after providing the relevant local authority with 30 days’ notice – to “construct and maintain in the manner specified in that notice any pipes, tunnels or tubes required for electronic communications network facilities under any street, road or footpath that is under the care and maintenance of said authority. The licensee may also carry out the work to alter or remove such infrastructure and, in so doing, may also alter the position of any pipe that is not a sewer drain or main line for the conveyance of water, electricity or gas.*

The constitutionality of these provisions has been confirmed by the Constitutional Court Judgement in Case CCT 184/14 (City of Tshwane v Link Africa (Pty) Ltd and others), which affirmed that:

*“the Act does not permit the arbitrary deprivation of property. It was found that the Act must be interpreted in accordance with the spirit, purport and object of the Bill of Rights in a manner that preserves its constitutional validity. The common law, including the common law of servitudes, is sufficiently flexible to allow license holders to enter upon any property without the consent of the land owner provided that they exercise these rights respectfully and with due caution”.*

In the above regard, it is important to note that amendments made to the ECA in 2014, specifically to Section 21 of the Act, required the Minister of Telecommunications and Postal Services to develop policy and issue policy directions, and ICASA to develop and issue regulations to guide the Rapid Deployment of Electronic Telecommunications Infrastructure and facilities. The amended Act set deadlines in this regard, which have not been met.

In the absence of clear Guidelines and Regulations, then, the issue of how to manage the deployment of infrastructure by licensees has remained a troublesome issue in certain instances. This is especially the case in areas of high levels of competition between licensees for market share.

Whilst it is acknowledged that the GSR is not currently a target market for competing licensees seeking to establish metropolitan and last-mile infrastructure, it is nevertheless suggested that it may be of value for the Province to work with the municipalities in the study area in **developing a common approach to managing the deployment of infrastructure** (that is, in how best to deal with potential notices of intent from licensees to lay infrastructure in wayleaves and servitudes etc.). This is motivated on the basis of promoting Ease

of Doing Business in the Province, given that a common concern among ECNS licensees and Wayleave Permit agents is that there is a great variation in how municipal authorities deal with the issues related to access to wayleaves and servitudes for the purposes of deploying ICT infrastructure.

Some possibilities in this regard may include:

### Development of an Infrastructure and Easement Database

At municipal level: establish a record (database) of infrastructure types and infrastructure route alignments in wayleaves within public road reserves and other wayleaves, servitudes and/or registered rights of way, including on privately owned land to inform and guide potential service providers in their decision making.

### Coordinated infrastructure and wayleave plan

Provincial Policy/Guidance Note: To set in place standards and protocols for minimising duplication of infrastructure and/or duplication of effort in the development of wayleaves, servitudes and/or rights of way for linear infrastructure such as ICT, electricity, water services and gas pipelines.

### Development of a Web-Based Portal for Wayleave Notices and Applications

To develop a district- or province-wide web-based portal as a tool for ECNS licensees to make use of in applying (or giving notice of intent) to access wayleaves for the purposes of deploying ICT infrastructure.

## 5. Conclusion and Recommendations

This broad overview of ICT issues and the challenges related to high-speed broadband connectivity in the GSR have highlighted the following: -

- The GSR is an underserved area in terms of high-speed broadband connectivity;
- The study area is subject to the so-called digital divide at a couple of levels:
  - The prevalence of legacy technology for fixed wire connectivity and/or the reliance on 2G and 3G wireless connectivity means that the majority of potential Internet users cannot enjoy the benefits of the Fourth Industrial Revolution at present;
  - The reliance on mobile or wireless technologies for access to broadband is costly and burdensome, given the high costs of data that prevail in South Africa, and this reinforces the digital divide (ability to access broadband services) by preventing the majority of potential users access, based on a lack of affordability;
  - The market environment characteristic of the ICT and broadband sector is primarily commercially driven at this point, and current demand and market opportunities are perceived by the private sector to be largely located in metropolitan areas and some secondary cities (or high-income enclaves such as gated estates). This has left the GSR lagging behind the infrastructure rollout and development curve, creating an Access Gap in the area.
- A key challenge in the GSR is how best to address this Access Gap.
- Whilst the legal and regulatory framework in SA makes provision for the state to take steps to address the Access Gap, and USAASA and the

USAF are in place, little clear progress has been made in this regard.

- Nonetheless, recent surveys have shown that the Western Cape enjoys the highest level of Internet penetration into the community of users, at 75% and this is likely to be amplified by the strides being made by the WCG with its Broadband Game Changer.
- Nevertheless, for the GSR to be able to participate in the so-called Fourth Industrial Revolution, high-speed broadband access will be essential
- It is vital, therefore, that the WCG and the municipalities in the GSR work together to facilitate solutions to creating the necessary infrastructure

### 5.1. Proposed Interventions

From the perspective of the GRSIF, the following two key interventions are proposed:

#### 5.1.1. Pursuing a Partnership Approach

In order to facilitate the greatest possible opportunity for socio-economic development in the GSR, it is suggested that the development of cost efficient high-speed broadband networks in the main towns of the Swartland, Bergrivier, and Saldanha bay Municipalities be prioritised.

Based on the apparent success of the Public-Private Partnership approach pursued on the Broadband Game Changer between the WCG, SITA and Neotel Liquid Telecom, it is proposed that further interventions be considered in the GSR following the PPP methodology in order to achieve improvements in access to high-speed broadband in these areas.

A useful case study in this regard will be Project Baobab in SBM, the outcomes of which may be taken as inputs into further developing and/or refining a PPP approach towards metropolitan and Last-Mile network development in the GSR.

#### 5.1.2. Development of Online Portal for Wayleave Notices and Applications

Given the uncertainties that have been expressed across the country in regard to how best to manage the permitting of easements and Wayleaves for the purposes of ICNS licensees to be able to deploy ICT infrastructure and facilities, it is proposed that DEA&DP investigate the feasibility and potential utility of developing an Online Portal (or Management System) for the management of Wayleaves and dealing with applications for Wayleaves.

It is suggested that the adoption of a standardised approach in the GSR would be useful and facilitate improved turnaround times for applicants and/or ICNS licensees wishing to deploy infrastructure in the area.

An example of such an online Wayleave Management System would be the system put in place by the City of Tshwane, following the judgement of the Constitutional Court in Case CCT 184/14 (City of Tshwane v Link Africa (Pty) Ltd and others, where the City of Tshwane was the plaintiff.

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