

**2020**

## **SA Connect Project**

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## Executive Summary

SA Connect is a project being implemented by the Department of Communications and Digital Technologies (DCDT) to roll out the broadband connectively to the underserved areas in terms of the National Broadband Policy published in 2013. The policy aims to increase broadband penetration while bringing down data communication cost and increasing employment and contribute to economic growth. The project aims to provide access to broadband to users at 100Mbps by 2030.

This project is related to one pillar of the SA Connect policy called “Digital Development”. The aim is to connect public buildings to broadband using public sector demand to do so. So this project is focussed on that pillar and not on all internet users in the country. It is being implemented in a phased-in approach and is targeting National Health Insurance (NHI) sites focusing on 8 District Municipalities in 7 Provinces excluding Gauteng and the Western Cape. The department has through a Master Service Agreement (MSA) appointed Broadband Infraco (BBI) and the State Information Technology Agency (SITA) as implementing agents of this project and Phase 1 which is underway since 2017/18 has to date connected 970 government facilities (mainly schools & clinics) to the internet. BBI’s responsibility is to lay down the necessary infrastructure connecting the sites to its access points and SITA will then activate services when sites are ready.

Phase 2 which aims to roll out connections to 44 District Municipalities by connecting 35211 government facilities is expected to start soon after the feasibility study has been completed by the Development Bank of Southern Africa (DBSA) in March 2021. While Phase 1 is currently being funded on-budget through annual appropriations, there is currently no funding mechanism for the entire project (Phase 1& 2) which was conceived to run over a 10year period. The aim of this spending review is/was to review progress in the implementation of Phase 1 in order to gain insights about the delivery model, cost drivers as well as impact on the ground in order to inform the roll out of Phase 2.

In total, more than R400 million was transferred to SITA and BBI over 2 years since the start up to 2019/20. Bulk of the funds went to capital expenditure (connecting layer three services) which includes connecting the last mile as well as Opex (VPN and Dataline services). It is not yet clear what the impact of this project on the ground has been or whether government is paying a fair price in contracting entities from its own portfolio without any competition.

This review raises few issues to consider including the expectations from the feasibility study on the future rollouts including cost projections, impact of project scope on costs to leverage on economies of scale, performance monitoring and evaluation. In the medium term it is *This document is not for quoting or circulation. It was done as part of the NT training exercise on the spending review methodology and is intended for discussion purposes. Further, there were some data limitations and both the appropriate level of information, and its correctness could not be independently verified.*

recommended that similar to phase 1, implementation of Phase 2 follow a phased-in approach for the rollout of the planned 35 211 sites and be designed with evaluation points to measure success. Explored an option to include other potential implementing agents in the sector for the rollout of phase 2, in order to ensure value for money.

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## Summary

The Department of Communications and Digital Technologies (DCDT) has in the past 2 years since 2017/18 to 2019/20 embarked on the process to roll out the SA Connect Project. This project implements the national broadband policy approved in 2013 and which aims to provide internet connectivity to 100 % of the users at broadband speeds of 10Mbps by 2020 and 100Mbps by 2030. The SA Connect policy is made up of 4 pillars: Digital Readiness (restructuring markets and institutions to create an environment for broadband investment and to improve competition); Digital Development (pooling public sector demand to address public sector needs by providing broadband connectivity); Digital Future (introducing an open access wholesale fibre and wireless network); and Digital Opportunity (stimulate demand through general awareness and e-literacy programmes). The Policy intends to cover the entire SA population (% population - inclusive of individuals, businesses and government). It is the overall broadband penetration measure which takes into account all broadband initiatives, both public and private sectors, i.e. it combines public and private sector broadband coverages.

This project, which is linked to the digital development pillar, is being implemented by Broadband Infraco (BBI) and the State Information Technology Agency (SITA) as contracted by the DCDT through the Master Service Agreement (MSA) to rollout connectivity infrastructure and to activate internet services at 8 District Municipalities focusing on National Health Insurance (NHI) pilot sites in 7 Provinces excluding in Gauteng and Western Cape. The logic for using SITA & BBI as implementing agents was purely based on them being under the department's portfolio. However, Section 7 of the amended SITA Act, 2005, requires that all national and provincial departments will have to use SITA to address its IT needs. It has not been tested yet if the price is on par with other private service providers.

The project is being rolled out in a phased-in approach starting with Phase 1 which has a target of connecting 6135 sites and with Phase 2 which will be scaled up in the whole country to connect 35 211 sites. Phase 1 implementation started in 2017/18 and owing to general budget cuts in 2018 due to poor performance, the targets were reduced to 970 sites. Phase 2, a massive scaled up phase of the project targets to connect 35 211 sites over 10 years. The design of the project envisaged leveraging on economies of scale as well as value add services. Furthermore, there is no revenue model yet for target areas which are primarily underserved areas.

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While partial funding allocations were made since 2017/18 to roll out Phase 1, there is no clear funding mechanism to support the rollout of Phase 2 due to high costs associated with broadband programmes. It is expected that the feasibility study currently being undertaken by the Development Bank of Southern Africa (DBSA) will address these issues.

This spending review sought to review progress in the implementation of Phase 1 in order to gain insights about the delivery model, cost drivers as well as impact on the ground in order to inform the roll out of Phase 2. It is recorded however that the project has only been running for two years and as such the length may not fully give an accurate picture we are looking for. The spending review process relied on data available from the Basic Accounting System (BAS) as well as expenditure reports from the implementing agents Broadband Infraco (BBI) and State Information Technology Agency (SITA) to analyse expenditure for the 2years implementation period starting from 2018/19 to 2019/20.

Expenditure for Phase 1 of the SA Connect project amounted to R99.2 million in 2018/19 and R100.2 million in 2019/20 for both capital and operational expenditure. Operational expenditure accounted for approximately 17% of total expenditure, the majority of which was spent on Uplink IP services, while Capital expenditure accounted for approximately 25%. The main drivers of capital expenditure are Labour (37%), maintenance and support (12%), Travel and Subsistence (4%) and VPN and Dataline services (46%). Other expenses include costs such as consulting fees, staff costs, health and safety costs, security services and licensing fees.

Based on the spending performance in phase 1 and certain assumptions (cost per site including inflationary adjustments of 4.4 per cent per year) were made to estimate costs for Phase 2 taking into account the anticipated massive increase in the number of sites to be connected in that phase. The estimated future cost to connect 35 211 is R9.2 billion over 15 years in order to expand roll out without any maintenance costs. Phase 1 relied mostly on existing infrastructure by Broadband Infraco and as such, at the moment, the distance of the site from the Point of Presence (PoPs) does not make any difference in the price unit costs. In future rollouts, when fibre builds are required and there are longer distances between Broadband Infraco's PoPs and stakeholders (sites/facilities to be connected), it might start having an impact, i.e. there could be a need to lay new infrastructure in the future, cost of which is not yet quantified.

In light of the significant upfront funding required, the constrained fiscal space, 2 options are recommended for the roll out of phase 2, namely: (i) to connect half of the total targets for

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phase 2 over 5 years; (ii) to connect the remainder of the targets but over a longer period of 10 years.

The following key findings has emerged from our analysis includes that:

- ❖ Policy intention can be further clarified to clearly set out and fully quantify the extent of public sector investment requirement in this project.
- ❖ Projected future cost of the project is of R9.2 billion over the next 15 years in order to complete the rollout of 35 211 sites. The department could explore ways of reducing this cost, such as running fibre on overhead poles rather than underground. The latter requires trenching, which is the largest cost component of installing fibre.
- ❖ Our expectation that the feasibility study will produce a business case that will illustrate future planning, funding requirements and milestones.
- ❖ The rollout of this project leverages on economies of scale whereby volume discounts apply to large volume orders and if volumes are drastically reduced, costs are pushed higher.
- ❖ There is a case to be made for other service providers in the communications space to be considered as implementing agents.
- ❖ There's a need for performance monitoring and evaluation in order to understand the impact on the ground. It would be interesting to understand how these connections has influenced the lives of beneficiary.

Based on the above findings, this report makes the following recommendations on four key themes namely: *Feasibility study; Current MTEF Funding; Reporting requirements; SA Connect Phase 2 implementation.*

*Feasibility study: It is expected the that the feasibility study should clarify amongst other things the policy intentions of this project in order to distinguish between requirements for public investment versus the targets to be fulfilled by private sector investment. This will make it clear for government to understand the extent of public investments requirements for the future. Moreover, to ensure fair competition and value for more, an option of contracting other institutions within the ICT space (More so when it is a known fact that many departments don't always find SITA prices to be fair) be explored as potential implementing agents for the rollout of phase 2.*

It would be prudent if the department could consider, similar to the rollout of Phase 1, a phased-in approach for the rollout of the planned 35 211 sites of Phase 2.

*Current MTEF Funding: Beyond 2020/21 when all Phase 1 rollout of 970 sites will have been completed, the available baseline of approximately R200 million per annum allocated for this project will be used to cover maintenance of these completed sites. It is therefore required that the department demonstrates the maintenance cost requirement for the activated 970 sites.*

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*Reporting requirements: Since inception, all allocations made for SA Connect project are conditional upon the Department of Communications and Digital Technologies submitting quarterly progress reports to the National Treasury. The spending review highlighted that these reports are not yet readily available nor have been previously submitted.*

*Furthermore, there is an opportunity for an impact analysis study to be conducted in future when many more sites have been connected in order to get a sense of how this project has impacted lives of the beneficiaries.*

*SA Connect Phase 2 implementation: As already mentioned above, the medium-term goal should be to adopt a phased-in approach for the rollout of the planned 35 211 sites of phase 2. This must be designed with feedback/evaluation points to measure success. Given that volumes play a huge role in the price (as large volumes attract better volume discounts and therefore helps in reducing the price), it is recommended that any future decision around budget allocations and setting of targets must take into account the implication of lower volumes on the economies of scale.*

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# 1 Introduction

South Africa ranks low on indicators relating to the adoption of ICTs to solve societal problems and this is due to the high cost of communications. Furthermore, government does not have a coherent and coordinated plan cutting across all government departments and across all three spheres to harness the potential of ICTs to contribute towards socio-economic development. This has led to duplication of efforts and wastage of resources. Investments in South Africa by job creating industries has largely been constrained by high costs of communication.

The National Development Plan (NDP) envision that by 2030, the country's development will be underpinned by Information Technology and Communications (ICTs) in order to ensure an all-inclusive information society and a vibrant knowledge economy that is prosperous. This vision finds meaning in the government's 2015-2020 Medium-Term Strategic Framework (MTSF) by ensuring that ICT Infrastructure and services are accessible, affordable, robust, reliable and secure in order to contribute to the achievement of Outcome 6: An efficient, competitive and responsive economic infrastructure network.

SA Connect, the National Broadband Policy published in December 2013, aims to significantly improve broadband penetration, reduce broadband prices, increase employment and drive economic growth. This policy is aimed at providing access to Broadband to 100% of users at 10 Mbps by 2020 and 100Mbps by 2030. The primary goal of the programme is the creation of a high-capacity national network that will meet the connectivity needs of the citizen. The network will ensure economies of scale, reduce risk and guaranteeing returns. The SA Connect policy is made up of 4 pillars: Digital Readiness (restructuring markets and institutions to create an environment for broadband investment and to improve competition); Digital Development (pooling public sector demand to address public sector needs by providing broadband connectivity); Digital Future (introducing an open access wholesale fibre and wireless network); and Digital Opportunity (stimulate demand through general awareness and e-literacy programmes). This project is linked to the Digital Development pillar of the policy. Due to the magnitude and complexity this project, SA Connect programme will be implemented in two phases i.e. Phase 1 and Phase 2.

A business case for the implementation of Phase 1 in eight of the district municipalities where the National Health Insurance (NHI) is being piloted was submitted to National Treasury for a funding in 2014. The proposal was for the connection of 6135 government facilities (including schools, clinics, police stations, and other government offices) for a period of 10 years in the eight districts. A total amount of R1.8 billion was approved in 2017 budget process, but due to government wide budget cuts in 2018, R1.4 billion of this amount was cut and this resulted in targets of 6135 facilities that were initially planned being reduced to 970.

Due to high costs associated with broadband programmes, there is currently no funding mechanism for this entire project in South Africa owing to affordability to the fiscus. Phase 2 will be at a massive scale and will focus on expanding infrastructure and broadband services to underserved areas in the 44 District Municipalities by connecting 35211 government facilities. It is envisaged that it will follow a hybrid (which include public and private sector

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funding) implementation model. The implementation model for Phase 2 is being investigated through a feasibility study by the Development Bank of Southern Africa (DBSA) and it is expected to be finalised by March 2021.

Phase 1 is about addressing a need to connect government facilities (public sector demand), and not about owning a network and service infrastructure, the broadband connectivity services procured are technology agnostic and are priced based on bandwidth speed offered (measured in megabits per second (Mbps)). It is expected that Phase 1 can provide insights to inform the approach for the roll out of Phase 2 which will be scaled-up across the whole country.

This expenditure review therefore seeks to review progress with the rollout of Phase 1 of the SA Connect project and to highlight issues about the delivery model, cost drivers as well as impact on the ground in order to inform the roll out of Phase 2.

The expenditure data was obtained from the implementing agents Broadband Infraco (BBI) and State Information Technology Agency (SITA) and analysed 2 years of the implementation period from 2018/19-2019/20. This information was used to analyse the spending trends and specifically looking at understanding the main cost drivers and projection for future growth in costs. Further information was accessed from BAS reports although the lower level details of how much was transferred to the implementation agencies could not be determined, reliance was placed on what the entities reported a having received from the department.

## **2 Policy and Institutional Information**

Amongst key strategic delivery areas for the department of communications and digital Technologies is the delivery of secure broadband connectivity at affordable levels to government facilities for various sectors i.e. education, health etc. The national Broadband Policy known as SA Connect was approved in 2013 to ensure universal access to connectivity services. It is a policy that will roll out broadband connectivity services to the underserved areas by 2030.

The roll out of SA Connect project is not a constitutional mandate like provision of housing and water or others. The National Broadband Policy gives expression to the National Development Plan (NDP) vision of “a seamless information infrastructure, a widespread communication system that will provide a universal access across the country at a cost and quality that meets the communication 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 by 2030.”

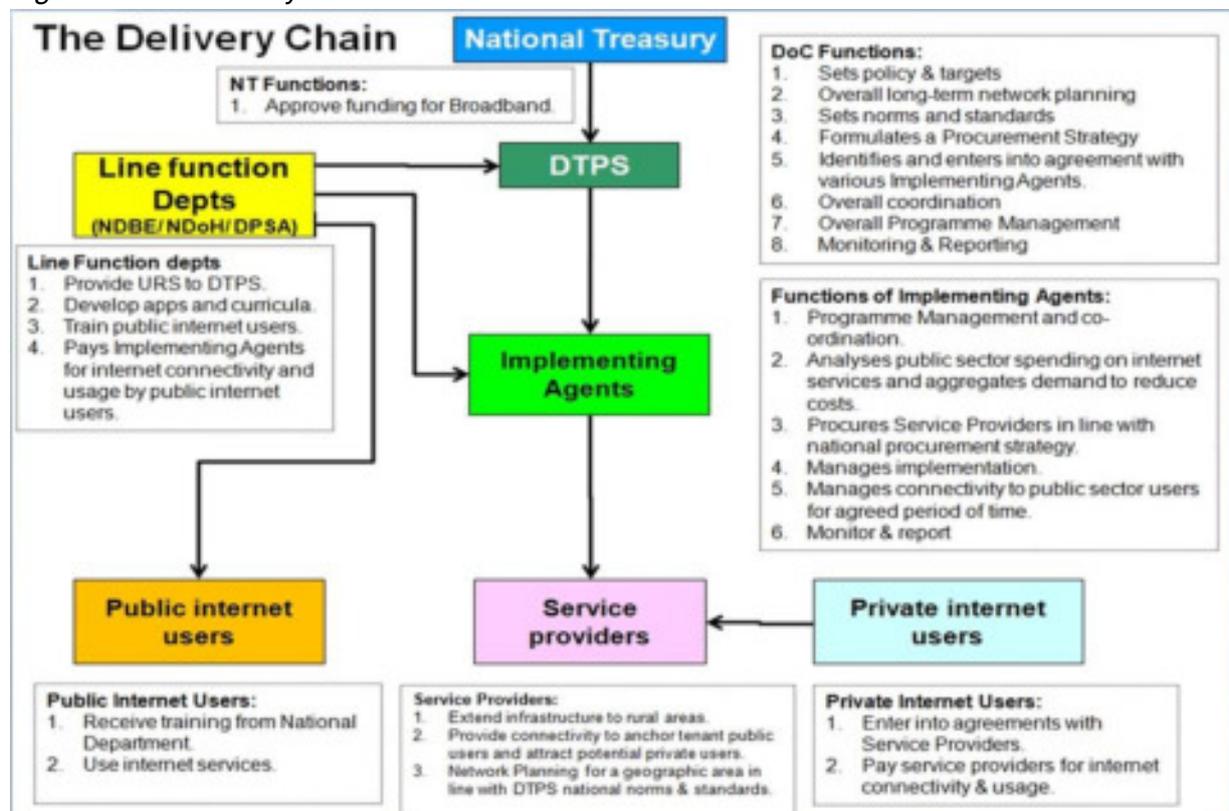
This policy envisages both demand and supply side initiatives. On the demand side, SA Connect intends to pool public sector demand for broadband to facilitate the procurement of high-quality broadband connectivity and services to address public sector needs (government anchor tenancy model).

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The Department of Communication and Digital Technologies (DCDT) is the main role player in this project and has the responsibility to guide the policy implementation process in line with the main policy intention, approved business case and implementation plan to ensure that the targets are met as set out in the broadband policy document. It is also responsible to undertake monitoring and evaluation function on this project.

Two of the public entities under the DCDT portfolio, Broadband Infraco (BBI) and State Information Technology Agency (SITA) were appointed as implementing agents for this project and will conduct its role in accordance with the Master Service Agreement (MSA) agreement signed with the DCDT. The two entities have different roles to play in the delivery of this project according to their business mandate. Broadband Infraco is responsible for the laying out of necessary broadband infrastructure to connect the identified sites and SITA is responsible for the activating of internet services at the sites after they had been connected by BBI. Section 7 of the amended SITA Act requires national and provincial departments to use SITA for their ICT needs. The Treasury is responsible for assessing funding requirements of this project and for making recommendations to MINCOMBUD on necessary budget allocations to fund this project. The diagram below illustrates the delivery chain and function of each role player.

Figure 1: The Delivery Chain



While the decision to appoint BBI and SITA came about following and unsuccessful attempt to appoint Telkom as a lead agent in this project (due to constitutional challenges of such approach) it is unclear whether using these two entities as approved by the department provides the best solution and value for money given that it is widely understood that SITA is not giving value for money in the normal course of providing ICT infrastructure support to government.

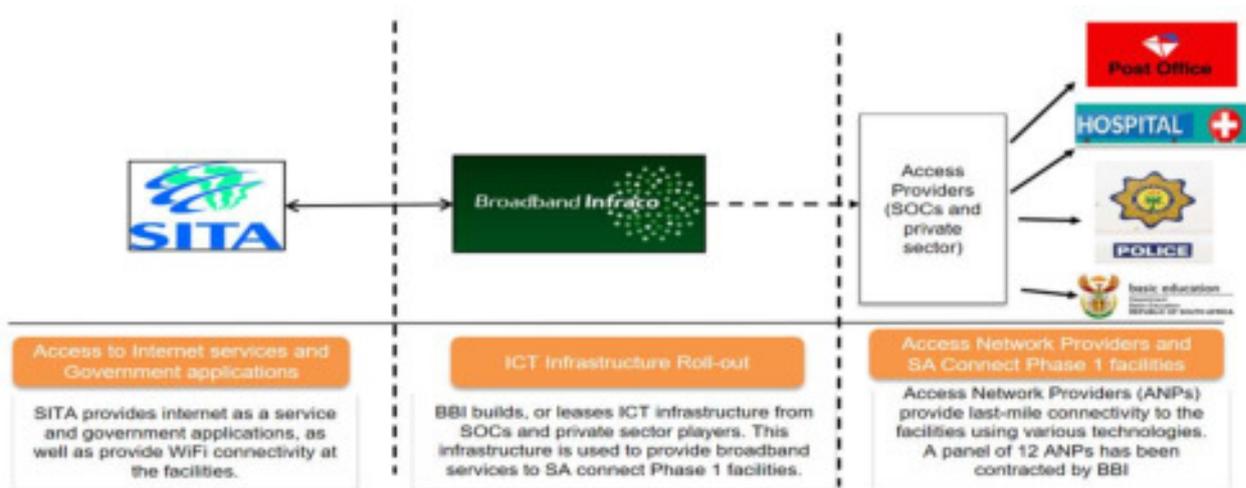
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### 3 Programme Chain of Delivery

SA connect is conceived as a 10-year broadband connectivity project that is being rolled out by the national government through the Department of Communications and Digital Technologies (DCDT). This project will focus on providing broadband connectivity services to Government facilities i.e. schools, health, police stations, post offices and a number of other government buildings. The project will deliver broadband connectivity services using various technologies in line with SA Connect Policy targets to 35 211 Government facilities. The project is being rolled out in a phased-in approach and Phase 1 of the project which also serves, as the pilot phase is currently underway with a target of 970 broadband connected government facilities sites and sustained per year to 2022/23 financial year.

The DCDT mandated Broadband Infraco (BBI) and State Information Technology Agency (SITA) as the implementing Agents to collaborate and roll-out broadband services to SA Connect facilities. The other role players in the roll out includes the Access Network Providers (ANPs) and this could be various service providers as will have been appointed by BBI as necessary.

Figure 2: SA Connect Phase 1 Implementation Model



The role of each implementing agency in the roll out is different:

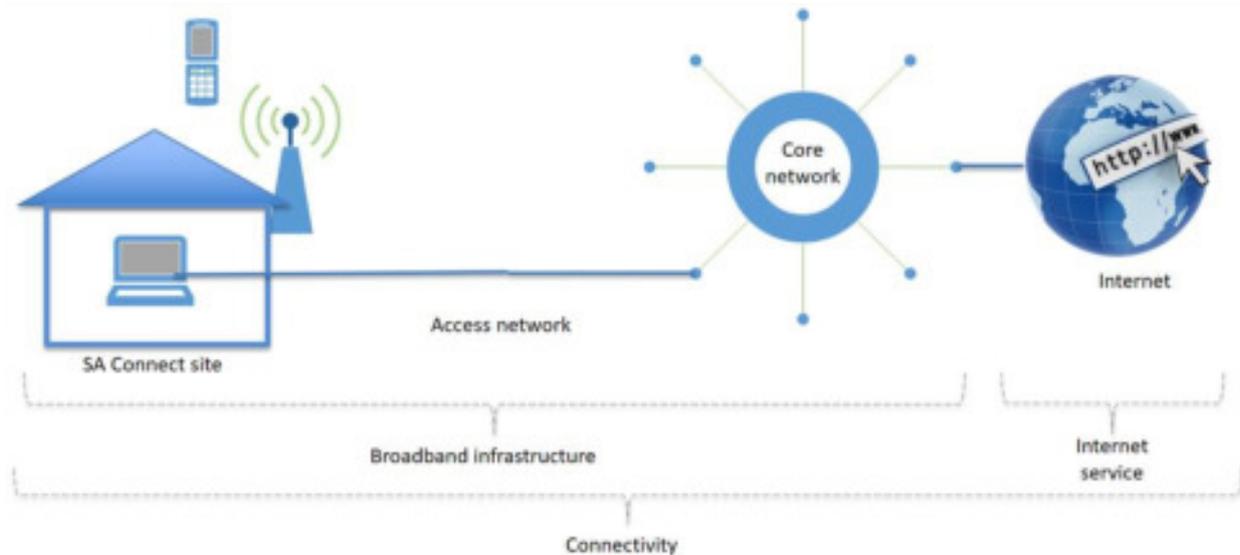
- Broadband Infraco (BBI) builds, or leases ICT infrastructure from state owned companies (SOCs) and private sector players. This infrastructure is used to provide broadband services to SA connect Phase 1 facilities.
- When BBI has completed the laying down of infrastructure at a site, State Information Technology Agency (SITA) assumes the responsibility to provide internet as a service and government applications, as well as provide WiFi connectivity at the facilities.
- Access Network Providers (ANPs) provide last-mile connectivity to the facilities using various technologies. A panel of 12 ANPs has been contracted by BBI.

At phase 1 stage the role of National Treasury has been to recommend funding proposals for allocations through Parliamentary budget appropriations. The Development Bank of Southern

Africa (DBSA) has a role to play as consultants to develop a feasibility study for the roll out of phase 2 of the project.

Connectivity at a facility is established when the broadband infrastructure is installed and the internet service is activated.

Figure 3: Connectivity Solution



The broadband connectivity to government facilities should be able to support the following end-user requirements:

- Uncapped internet service at a minimum speed of 10 Mbps
- Allow access to relevant Government applications and services
- Provision WiFi access at designated areas

The technology used for broadband connectivity must be robust, scalable and future proof, at cost effective and economically viable to meet SA Connect targets.

## 4 Performance Analysis

### Design – full project

In order to provide universal access to broadband connectivity services, the broadband policy, SA Connect commits to providing access to schools, health facilities and other government facilities at 5Mbps speeds by 2020 and 10Mbps to 100 per cent of the population by 2030. The % population covers the entire SA population (inclusive of individuals, businesses and government), it is the overall broadband penetration measure. This measure takes into account all broadband initiatives, both public and private sectors, i.e. it combines public and private sector broadband coverages.

According to the broadband policy document, the broadband penetration levels were low as the 2013 baseline data reflects that only 25% of schools were connected to broadband and 13% of health facilities were connected. The policy therefore aims to connect Education and

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Health facilities at 1Gbps speeds by 2030; while government facilities will be connected at 100Mbps speeds by 2030.

**Table 1: below illustrate the performance indicator targets for the SA Connect project as per the approved policy document.**

| Table 1: SA Connect Targets              |                         |                 |                |                                    |                  |
|--|-------------------------|-----------------|----------------|------------------------------------|------------------|
| Target                                   | Penetration measure     | Baseline (2013) | By 2016        | By 2020                            | By 2030          |
| Broadband access in Mbps user experience | % of population         | 33.70%          | 50% at 5 Mbps  | 90% at 5 Mbps                      | 100% at 10 Mbps  |
|  |                         | Internet access |                | 50% at 100Mbps                     | 80% at 100 Mbps  |
| Schools                                  | % of schools            | 25% connected   | 50% at 10 Mbps | 100% at 10 Mbps<br>80% at 100 Mbps | 100% at 1 Gbps   |
| Health facilities                        | % of health facilities  | 13% connected   | 50% at 10Mbps  | 100% at 10 Mbps<br>80% at 100 Mbps | 100% at 1Gbps    |
| Government facilities                    | % of government offices |                 | 50% at 5Mbps   | 100% at 10 Mbps                    | 100% at 100 Mbps |

#### Approach

The project is being rollout into two phases, which is phase 1 and phase 2. The purpose of this spending review is to analyse the implementation of phase 1, in order to inform implementation of phase 2. We analyse below the phase1 of the project.

#### Phase 1 – Design

Phase 1 of the SA Connect is intended to extend connectivity to the underserved areas. The geographical location of these areas makes it economically not viable for private sector to roll out infrastructure due to low economic growth prospects or potential positive returns for the future. It is for this reason therefore that government is required to intervene and invest in these areas on the basis of market failure. The intervention would not gain momentum unless government kick start the investment through anchor tenancy model in order to create the uptake. This model is aimed at government stimulating the uptake.

Phase 1 of the implementation focuses on connecting the National Health Insurance (NHI) sites at 8 District Municipalities in 7 Provinces excluding Gauteng and Western Cape.

**Table 2 below illustrate the performance indicator targets for phase 1 in line with the approved policy document:**

| Table 2: PHASE TARGETS |                       |                         |                                     |         |         |
|------------------------|-----------------------|-------------------------|-------------------------------------|---------|---------|
| Provinces              | District Municipality | Total new sites planned | Total existing sites to be upgraded | By 2020 | By 2030 |
| Eastern Cape           | O.R Tambo             | 177                     | 16                                  | 00 % at | 100% at |

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|               |                    |     |     |  |  |
|---------------|--------------------|-----|-----|--|--|
| Free State    | Thabo Mofutsanyane | 171 | 49  |  |  |
| KwaZulu Natal | uMgungundlovu      | 142 | 54  |  |  |
| KwaZulu Natal | uMzinyathi         | 55  | 20  |  |  |
| Limpopo       | Vhembe             | 75  | 24  |  |  |
| Mpumalanga    | Gert Sibande       | 143 | 66  |  |  |
| Northern Cape | Pixley ka Seme     | 71  | 17  |  |  |
| North West    | Dr Kenneth Kaunda  | 136 | 11  |  |  |
| Total         |                    | 970 | 257 |  |  |

### *Implementation*

The implementation for phase 1 SA Connect started in 2018/19 financial year. The initial scope of the project was for connecting 6135 sites, however following the budget cuts in 2018 budget process, the targets were reduced to 970 sites.

As part of the spending review process, we requested performance data from the implementing agents – BBI and SITA – and the information reflects that over the past 2 years since 2018/19 to end September 2020, a total of 936 facilities were connected and services activated. This information is assumed to be accurate as provided.

| <b>Table 3: SITES CONNECTED AND ACTIVATED</b> |                              |                            |                           |                         |                        |
|---|------------------------------|----------------------------|---------------------------|-------------------------|------------------------|
| <b>Provinces</b>                              | <b>District Municipality</b> | <b>Total Planned sites</b> | <b>Total Actual Sites</b> | <b>Planned Upgrades</b> | <b>Actual Upgrades</b> |
| Eastern Cape                                  | O.R Tambo                    | 177                        | 171                       | 16                      | 16                     |
| Free State                                    | Thabo Mofutsanyane           | 171                        | 169                       | 49                      | 49                     |
| KwaZulu Natal                                 | uMgungundlovu                | 142                        | 122                       | 54                      | 54                     |
| KwaZulu Natal                                 | uMzinyathi                   | 55                         | 53                        | 20                      | 20                     |
| Limpopo                                       | Vhembe                       | 75                         | 75                        | 24                      | 24                     |
| Mpumalanga                                    | Gert Sibande                 | 143                        | 142                       | 66                      | 66                     |
| Northern Cape                                 | Pixley ka Seme               | 71                         | 68                        | 17                      | 17                     |
| North West                                    | Dr Kenneth Kaunda            | 136                        | 136                       | 11                      | 11                     |
| Total   |                              | 970                        | 936                       | 257                     | 257                    |

According to the data provided, 936 facilities were connected to broadband infrastructure and internet activated at the various sites. The Eastern Cape and Free State appears to be Provinces with the high number of sites to be connected at 177 & 171 respectively while Kwa Zulu Natal had few sites to connected (55).

As at end September 2020, all 257 existing sites planned to be upgraded were completed. Of the total 713 new sites planned, only 34 were yet to be completed and this was mostly in Eastern Cape (6) and KwaZulu Natal (20). BBI reported that of the 713 sites allocated to them,

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they had completed all the rollout of infrastructure. SITA however still had 34 sites that still required internet activation to be completed.

It is not yet clear what the impact of this project on the ground has been. The aim of this spending review was not to test the impact but to find out how the roll out is progressing.

## 5 Expenditure Observations

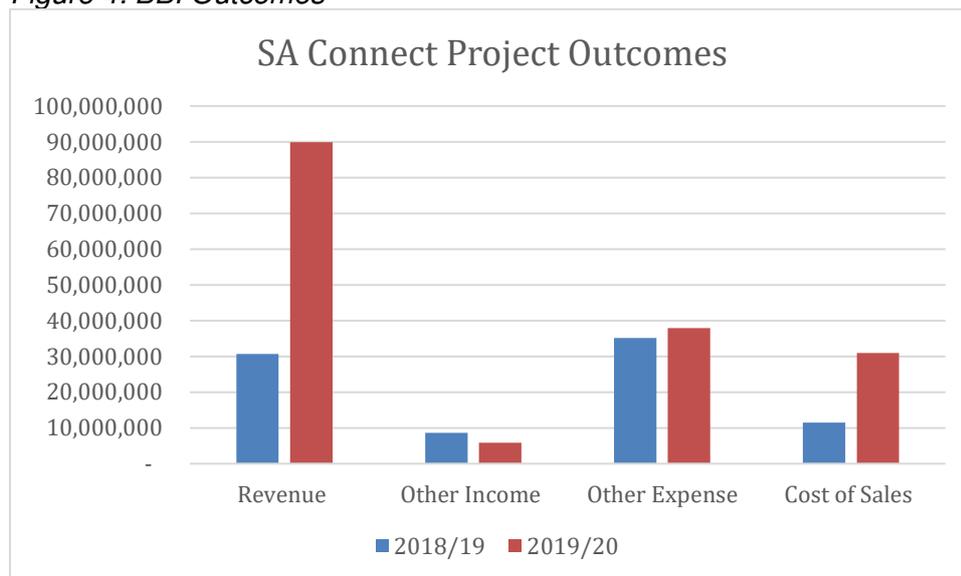
Since 2017/18 financial year – 2019/20 financial year, the SA Connect project has been allocated R456.2 million funding for the project. This amount was used to pay for invoices as received from BBI and SITA as they progress with the implementation. The Department has a prepayment agreement with the entities, whereby we have observed that funds do get transferred to the entities at year end.

Basic Accounting System (BAS) data reflect that R347.7 million was transferred to BBI and SITA under the SCOA item Consultants: Business Advisory and Services.

| Rands        | 2017/18          | 2018/19            | 2019/20            | Grand Total        |
|--------------|------------------|--------------------|--------------------|--------------------|
| SITA         | -                | 24 462 117         | 109 695 893        | 134 158 011        |
| BBI          | 4 900 000        | 96 403 753         | 112 246 478        | 213 550 231        |
| <b>Total</b> | <b>4 900 000</b> | <b>120 865 870</b> | <b>221 942 372</b> | <b>347 708 242</b> |

### 5.1 Broadband Infraco (BBI)

Figure 4: BBI Outcomes



Since the start of the implementation of the SA Connect project and for the period 2018/19 – 2019/20, BBI spent R21.9 million on consulting fees for the 8 district municipalities. These fees relates to the outsourced costs from service providers for the programme as well as project managers to implement the SA Connect project. BBI contracted additional resources to assist with the workload because the company currently has a moratorium on filling out

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vacant position on a permanent basis. This may suggest that BBI has capacity challenges, and may struggle to implement Phase 2, which is on a much larger scale, in a similar manner. The consulting fees are generally billed at a rate that is similar between the districts municipalities.

In order to execute phase 1 of SA Connect, BBI utilized 10% of its existing networks to deliver on this project. This amounts to R18.3 million in 2018/19 and R31.2 million in 2019/20. Between the period 2018/19 – 2019/20, the implementing agent spent R42.5 million on providing layer three services. Layer three services relates to connecting the last mile (access network providers). Connecting to the last mile means that the service providers will provide connectivity from BBI's Point of Presence (POP) to the school, clinic, etc. The average cost of providing the access connectivity is paid per site per month as they are rolled out.

BBI charges a blended rate which includes fixed rates per site per month. On average R8000 – R12000 per month is spent on payment to third parties which would be the Internet Service Providers (ISP).

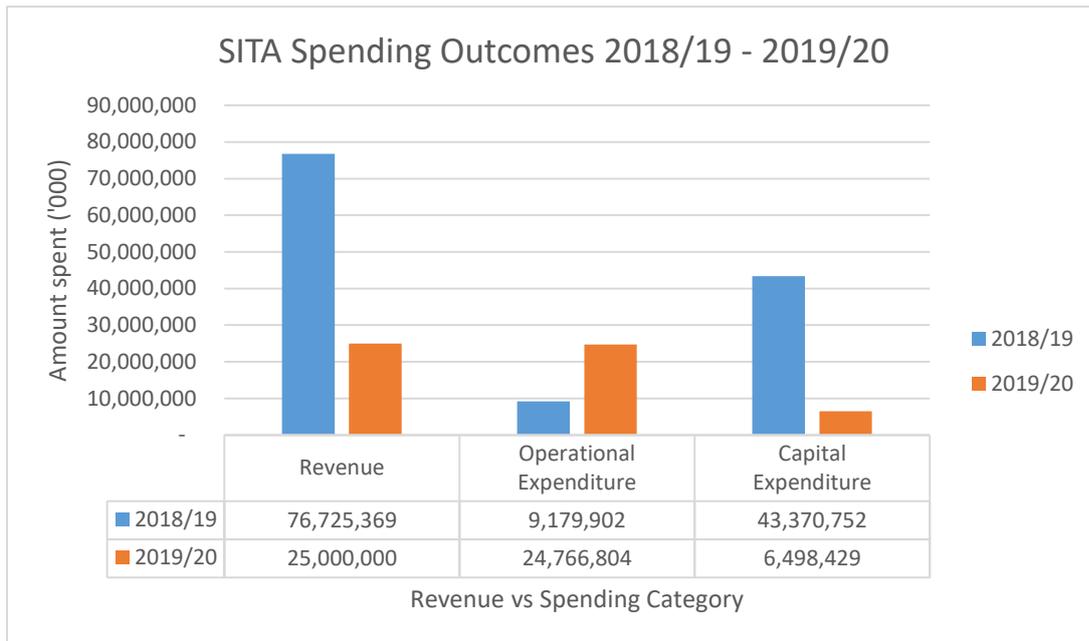
During the period 2018/19 – 2019/20, a total revenue amounting to R120.6 million was accrued for services rendered by BBI. Revenue accrues on a monthly basis per site, as and when sites are connected. There are however, inconsistencies in the revenue amounts from different municipalities in different financial years. This is based on sites that were connected depending on the number of days the sites were connected.

A total amount of R14.6 million was recovered from all 8 district municipalities.

BBI has invested initial capex of R140 million to execute the project. In terms of the agreement with DCDT, the Broadband Infraco sourced own funding to ensure that operations are undertaken and would then recover costs per connection per month from the DCDT.

## **5.2 State Information Technology Agency (SITA)**

*Figure 5: SITA Outcomes*



During the period 2018/19 – 2019/20, SITA received a total of R102 million in three pre-payments made by the DCDT. These payments are meant to cover expenditure relating to capex and opex. During the same period, operational expenditure amounts to R33.9 million for costs associated with labour, maintenance and support, travel and subsistence as well VPN and dataline services. An amount of R15.7 million was paid for operational expenditure for dataline rentals of 257 sites. This is for the infrastructure services paid monthly for sites that do not make use of the BBI last mile service or access links.

Capital expenditure amounts to R49.9 million over two years. The biggest cost driver under opex is the VPN and Dataline services. This is because of the payments that are made to Service providers of data lines. Data line services are infrastructure layers on which SITA provides its internet connectivity services. For Capex, the biggest cost driver has been R25.6 million spent for uplink IP services.

As at end August 2020, SITA had activated 467 layer three sites from the target of 713. Slow progress is Gert Sibande, uMzinyathi and some parts of OR Tambo district municipalities. All 257 existing sites that needed to be upgraded were completed by SITA.

We have observed that under trend analysis, Maintenance & Support is increasing at a rate that's higher than 100%. S&T costs is increasing at a rate that's higher than 100% and VPN & Dataline services is increasing at a rate that's higher than 100%. However, when it comes to capital expenditure, Uplink IP service costs is the biggest expenditure component.

The cost per connection is R86 408 to cover both the operational and capital expenditure for activating a new site by SITA after BBI has fully installed the infrastructure on the site. The biggest cost components for Operational expenditure are VPN and Dataline services, Labour cost as well as maintenance and support.

**Implication for future rollout**

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| BBI Expenditure    | 2018/19           | 2019/20           | Grand Total        | Unit costs -   |                       | Using 4.4% cost assumption |
|--------------------|-------------------|-------------------|--------------------|----------------|-----------------------|----------------------------|
|                    |                   |                   |                    | Sites (713)    | Phase 2 (35211 sites) |                            |
| Cost of Sales      | 11 525 560        | 30 984 216        | 42 509 776         | 59 621         | 2 099 315 188         | 2 191 685 056              |
| Other Expense      | 35 169 558        | 37 962 319        | 73 131 877         | 102 569        | 3 611 565 949         | 3 770 474 851              |
| <b>Total Costs</b> | <b>46 695 118</b> | <b>68 946 535</b> | <b>115 641 653</b> | <b>162 190</b> | <b>5 710 881 136</b>  | <b>5 962 159 906</b>       |

In phase 2, the department plans to connect a total of 35 211 facilities and if we assume a 4.4 per cent increase over the medium term which is based on the total cost incurred by BBI to connect phase, then it means that in total an additional amount of R5.96 billion will be required by BBI only.

For phase 1, it costed R42.5 million to connect layer 2 services while connections to the last mile (layer 3) amounted to R73.1 million. Therefore, BBI spent 115.6 million to execute connections for 713 sites.

| SITA Expenditure        | 2018/19           | 2019/20           | Grand Total       | Unit cost per site Phase 2 (35211 sites) |                      | Using 4.4% cost assumption |
|-------------------------|-------------------|-------------------|-------------------|--|----------------------|----------------------------|
|                         |                   |                   |                   | (936)                                    |                      |                            |
| Operational Expenditure | 9 179 902         | 24 766 804        | 33 946 706        | 36 268                                   | 1 269 374 698        | 1 325 227 185              |
| Capital Expenditure     | 43 370 752        | 6 498 429         | 49 869 181        | 53 279                                   | 1 864 766 371        | 1 946 816 091              |
| <b>Total Costs</b>      | <b>52 550 654</b> | <b>31 265 233</b> | <b>83 815 887</b> | <b>89 547</b>                            | <b>3 134 141 069</b> | <b>3 272 043 276</b>       |

In phase 2, the department plans to connect a total of 35 211 facilities and if we assume a 4.4 per cent increase over the medium term which is based on the total cost incurred by SITA to connect phase 1, then it means that in total an additional amount of R3.3 billion will be required by SITA only.

For phase 1, it costed SITA R34 million for operational expenditure and R50 million for capital expenditure. From this, a total of 970 site have been connected (of which 713 was for the new sites & 257 of these were existing sites which were upgraded).

There is a need to maintain the 970 sites already connected. The total cost for SITA to maintain connections to 970 sites at a cost of R4 100 per site over 10years amount to R40.5 million.

### 5.3 Composition of the cost structure

| Table 5: SITA: Cost structure |                             |
|-------------------------------|-----------------------------|
| New site                      | Existing site (upgrades)    |
| Device on site (Switches)     | Device on site (Switches)   |
| Internet connection           | Internet connection         |
| Connecting elements           | Connecting elements         |
| Management fee                | Management fee              |
| Labour                        | Labour                      |
|                               | Linking cost – rental price |

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|  |                                   |
|--|-----------------------------------|
|  | WIF access points used on sites   |
|  | Maintenance – Hardware & software |

| <b>Table 6: BBI: Cost Structure</b> |  |
|-------------------------------------|--|
| Network Costs                       |  |
| Access Service                      |  |

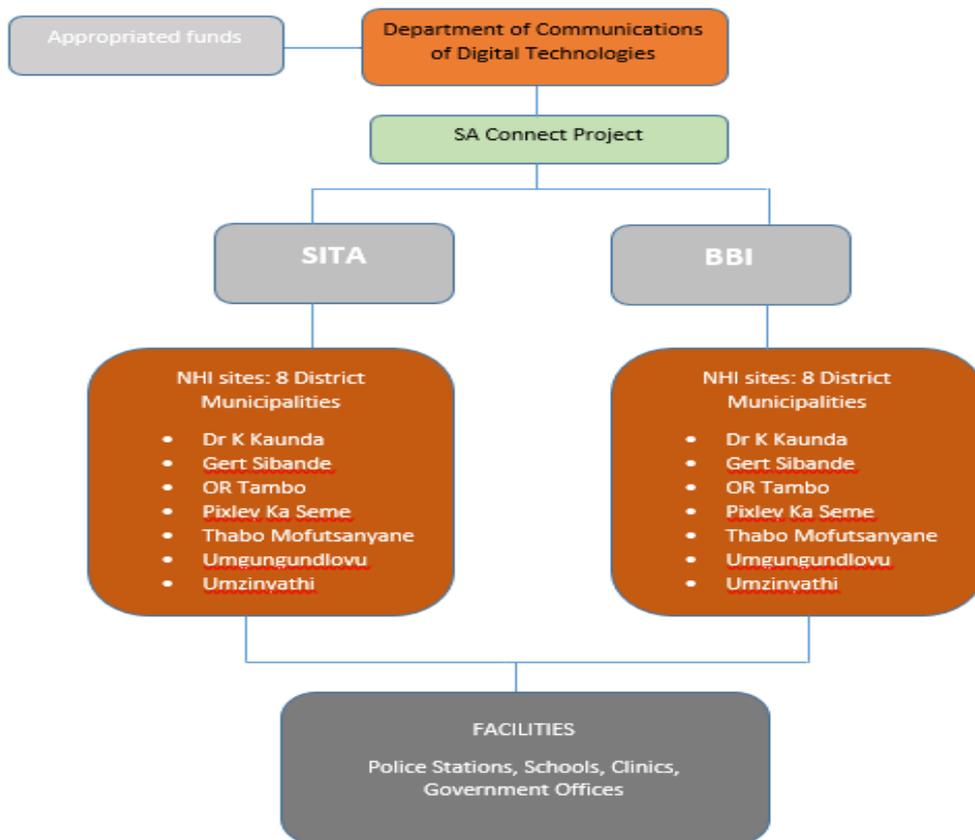
Given the different nature of the work that the two implementing agents undertakes, there is a different cost structure by each entity. Moreover, SITA has a variation on the costs depending on whether it's a new or existing site (as illustrated in table 5 above), and this is because there are more cost components involved in the upgrading of the existing sites than there is for the new site.

SITA has not kept a granular level of cost per sites, as most costs are shared so there is no one-to-one relationship. The aggregated costs against number of sites is therefore used to give indicative figures.

SITA has so far provided information on costs incurred on the programme as well as pricing information which was supplemented by invoices.

## **5.4 Flow of funds**

### **Figure 6: Flow of funds**



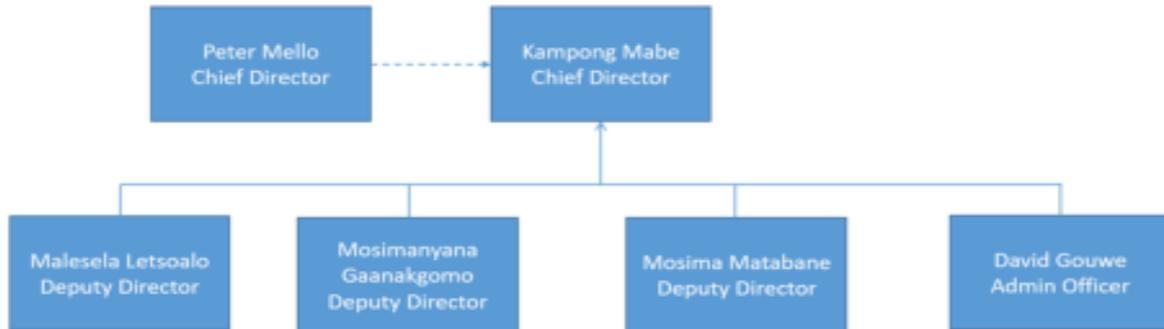
Funding for this project is currently being done through Parliamentary appropriations to the Department of Communications and Digital Technologies budget vote under Goods and Services item line in Programme 5: ICT Infrastructure Development and Support. The department has entered into a Memorandum of Agreement with SITA and BBI as the implementing agents for this project and pays the entities for the connections performed according to this agreement.

## 5.5 Administration Information

The Administration of this project is under the oversight of the department's Programme 5: ICT Infrastructure Support, under the broadband sub-programme. It has a staff complement of 7 personnel including the Head of the Division (Deputy Director-General). This means that on average one person is responsible for the oversight of 139 facilities.

Figure 7: Project Management unit

**PROJECT MANAGEMENT UNIT**



The current structure may seem to work for now given that there’s only a few facilitates to connect. However, when the project gets scaled up in phase 2 to 35 200 sites. This will effectively mean that each person in the team will be responsible for oversight of more than 5029 sites. Therefore, it is possible that capacity within the unit might be a challenge in the future.

## 6 Options

Table 7: Phase 2: number of sites

| Provinces          | Number of Sites |              |             |             |            |            |                  | Total        |
|--------------------|-----------------|--------------|-------------|-------------|------------|------------|------------------|--------------|
|                    | Health          | School       | Government  | Post Office | Police     | Thusong    | Community Center |              |
| Eastern Cape       | 1147            | 4664         | 361         | 188         | 176        | 0          | 59               | 6595         |
| Free State         | 423             | 990          | 227         | 99          | 80         | 7          | 43               | 1869         |
| Gauteng            | 1421            | 2744         | 640         | 362         | 141        | 41         | 334              | 5683         |
| KwaZulu-Natal      | 1065            | 4960         | 420         | 203         | 149        | 19         | 416              | 7232         |
| Limpopo            | 609             | 3010         | 199         | 118         | 77         | 21         | 28               | 4062         |
| Mpumalanga         | 375             | 1330         | 228         | 64          | 49         | 10         | 36               | 2092         |
| North West         | 421             | 1390         | 190         | 106         | 67         | 0          | 28               | 2202         |
| Northern Cape      | 300             | 477          | 184         | 50          | 64         | 0          | 19               | 1094         |
| Western Cape       | 1222            | 2054         | 546         | 192         | 149        | 33         | 186              | 4382         |
| <b>Grand Total</b> | <b>6983</b>     | <b>21619</b> | <b>2995</b> | <b>1382</b> | <b>952</b> | <b>131</b> | <b>1149</b>      | <b>35211</b> |

SA Connect phase 1 target was to connect 970 sites and phase 2 is to scaled up to 35 211 sites. Given the scale of phase 2 and the cost implications, we have prepared various possible options to approach phase 2.

**Option 1: Connecting 10 000 sites over a 5-year period (i.e. 2021 – 2026)**

Given the uncertainty around the funding availability for this project, and also reflecting on phase 1 rollout, whereby 970 sites were connected over two years, thus it is prudent to assume that 10 000 sites can be connected over a 5 year period.

| Year of implementation                               | Year 1       | Year 2       | Year 3       | Year 4        | Year 5        |
|--|--------------|--------------|--------------|---------------|---------------|
| Facilities to be connected (accumulative)            |              |              |              |               |               |
| Health   | 391          | 782          | 1 173        | 1 564         | 1 955         |
| School   | 1 211        | 2 421        | 3 632        | 4 842         | 6 053         |
| Government   | 168          | 335          | 503          | 671           | 839           |
| Post Office  | 77           | 155          | 232          | 310           | 387           |
| Police   | 53           | 107          | 160          | 213           | 267           |
| Thusong  | 7            | 15           | 22           | 29            | 37            |
| Community Center                                     | 64           | 129          | 193          | 257           | 322           |
| <b>Total Facilities</b>                              | <b>1 972</b> | <b>3 943</b> | <b>5 915</b> | <b>7 887</b>  | <b>9 859</b>  |
| Infrastructure Cost (Total no. of site x Unit costs) | 319 790 672  | 639 581 344  | 959 372 015  | 1 279 162 687 | 1 598 953 359 |
| Service Cost (Total no. of site x Unit costs)        | 176 560 178  | 353 120 356  | 529 680 534  | 706 240 712   | 882 800 890   |

In option 1, we estimate that the department will be able to connect 10 000 sites over 5 years at an estimated cost of R1.6 billion for infrastructure costs as well as an estimated cost of R882.8 million for service costs excluding maintenance costs.

**Option 2: Increasing the number of sites to 25 211 over a 10-year period**

Given the uncertainty around the funding availability for this project, and also reflecting on phase 1 rollout, whereby 970 sites were connected over two years, and with a possible 10 000 sites to be connected over 5 year period (as per option 1 proposed above), we propose as option 2 that the remaining 25 211 to be connected over 10 years.

| Year of implementation                               | Year 1       | Year 2       | Year 3        | Year 4        | Year 5        | Year 6        | Year 7        | Year 8        | Year 9        | Year 10       |
|--|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Facilities to be connected (accumulative)            |              |              |               |               |               |               |               |               |               |               |
| Health   | 503          | 1 006        | 1 508         | 2 011         | 2 514         | 3 017         | 3 519         | 4 022         | 4 525         | 5 028         |
| School   | 1 557        | 3 113        | 4 670         | 6 226         | 7 783         | 9 339         | 10 896        | 12 453        | 14 009        | 15 566        |
| Government   | 216          | 431          | 647           | 863           | 1 078         | 1 294         | 1 509         | 1 725         | 1 941         | 2 156         |
| Post Office  | 100          | 199          | 299           | 398           | 498           | 597           | 697           | 796           | 896           | 995           |
| Police   | 69           | 137          | 206           | 274           | 343           | 411           | 480           | 548           | 617           | 685           |
| Thusong  | 9            | 19           | 28            | 38            | 47            | 57            | 66            | 75            | 85            | 94            |
| Community Center                                     | 83           | 165          | 248           | 331           | 414           | 496           | 579           | 662           | 745           | 827           |
| <b>Total Facilities</b>                              | <b>2 535</b> | <b>5 070</b> | <b>7 606</b>  | <b>10 141</b> | <b>12 676</b> | <b>15 211</b> | <b>17 746</b> | <b>20 282</b> | <b>22 817</b> | <b>25 352</b> |
| Infrastructure Cost (Total no. of site x Unit costs) | 411 182 790  | 822 365 581  | 1 233 548 371 | 1 644 731 162 | 2 055 913 952 | 2 467 096 743 | 2 878 279 533 | 3 289 462 324 | 3 700 645 114 | 4 111 827 905 |
| Service Cost (Total no. of site x Unit costs)        | 227 018 838  | 454 037 676  | 681 056 514   | 908 075 352   | 1 135 094 190 | 1 362 113 028 | 1 589 131 866 | 1 816 150 704 | 2 043 169 542 | 2 270 188 380 |

In option 2, we estimate that the department will be able to connect 25 211 sites at an estimated cost of R4.1 billion for infrastructure costs as well as an estimated cost of R2.3 billion for service costs excluding maintenance costs.

Our expectations are that the feasibility studies will result in a business case that will illustrate future planning, funding requirements and milestones.

The above options/proposals does not take into account any leverages on economies of scale, any revenues from value add services or any additional funding requirements should fibre

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builds be required where distances between BBI Point of Presence (PoPs) and stakeholders are longer than they are in Phase 1.

## 7 Key findings

The following key findings emerged from our analysis:

- *Policy intent versus project implementation:* The policy is defined in terms of the number of sites for phase 1 and 2, however it is still unclear how much more public investment is needed from SA Connect in order to ensure full contribution to the needs of government facilities as well as for the rest of the population not covered by private sector initiatives needs to be clearly defined outside. There also seems to be a lack of clarity on which sites will be connected. The initial approach was to connect new sites, but over the course of the project it changed to include the upgrading of existing sites. The complexity of the billing process highlighted in the report by BBI and SITA makes oversight very difficult. Phase 2 may benefit through a different procurement model where pricing is more transparent and simpler. For example, government could procure the cheapest broadband service and leave it up to the provider to provide the infrastructure and other requirements.
- *Feasibility study and the expectations* – If phase 1 had gone by according to plan, it will have been a big feeding point to inform the rollout of phase 2. The reductions in the scope for phase 1 created a limitation in the ability for it to show us feedback on the intended original plan of connecting, enough to guide the implementation of phase 2.
- *Maintenance costs:* Expenditure analysis reflected an estimated R40 million that will be required for maintenance costs. There is currently R200 million available in the baseline of the Department of Communications and Digital Technologies for the SA Connect project. There is also expected revenue from the district municipalities. The department has indicated that the amount in the current baseline is only sufficient to maintain the existing 970 sites without expanding on new sites. Therefore, this demonstrated a disjunction between the estimated costs by the department versus what the expenditure data analysis revealed.
- *Future Cost projections:* The implication for future rollout is that government will require a total funding of R9.2 billion over the next 15 years in order to complete the rollout of 35 211 sites which will cover both infrastructure layout, activation of internet services and maintenance costs.
- *Appointment of implementing agents:* We have noted that SITA & BBI as the implementing agents were assigned to this project by virtue of them being part of the DCDT portfolio as well as the requirement in the SITA Act for national and provincial departments. It is therefore not clear whether government is paying a fair price since there was no competitive bidding process. However, BBI and SITA are required to abide by procurement regulations when they procure infrastructures and services.

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- *Scope changes:* The rollout of this project aims to leverage on economies of scale. Targets for phase 1 were drastically reduced from 6 135 to 970 sites. This eroded a significant portion of the expected economies of scales as large volumes qualify for volume discounts and as a result the costs are higher than what it could have been if volumes were not reduced. The scope also seems to have changed to include upgrading of existing sites, while previously it was just new sites.
- *Project Design versus Model:* The design of the project envisaged leveraging on economies of scale as well as value add services. Given the decrease in the scope, these could not be realized. Furthermore, there is no revenue model yet for target areas which are primarily underserved areas. The design of this policy to provide (broadband speeds of 100Mbps) seems exorbitant and not affordable given that the same objective can be achieved at lower speeds.
- *Performance Reports:* In as far as performance reporting is concerned, the available information, apart from stating how many sites have been connected does not provide clarity on the impact on the ground. It would be interesting to understand how these connections has influenced the lives of beneficiaries.
- *Capacity to implement:* Broadband Infracore (BBI) had to contract consultants to assist them with the roll out of Phase 1. This indicates that they may not have the capacity to implement a scaled-up version of this project.

## 8 Recommendations

### *Feasibility study*

- There is a need to qualify the SA Connect role in terms of the policy intentions to distinguish between requirements for public investment versus the targets to be fulfilled by private sector investment. It is recommended that the department does a phased-in approach for the rollout of the planned 35 211 sites of phase 2.
- It is recommended that other institutions within the ICT space be explored as potential implementing agents for the rollout of phase 2, in order to ensure value for money.

### *Current MTEF Funding*

- It is required that the department demonstrates the maintenance cost requirement for the activated 970 sites.

### *Reporting requirements*

- Allocations made for SA Connect project are conditional upon the Department of Communications and Digital Technologies submitting quarterly progress reports to the National Treasury, and the spending review highlighted that these reports are not yet readily available. Furthermore, there is an opportunity for an impact analysis study to be conducted in future when many more sites have been connected.

### *SA Connect Phase 2 implementation*

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- In the medium term, it is recommended that the department does a phased-in approach for the rollout of the planned 35 211 sites of phase 2. This must be designed with feedback/evaluation points to measure success.
- Future decision around budget allocations and setting of targets must take into account the implication of lower volumes on the economies of scale.

## Appendices

### Appendix A – Roles and Responsibility

| Role players | Responsibility   |
|--------------|--|
| <b>DCDT</b>  | <p>The responsibility of the DCDT as the representative of its targeted users is to specify the needs of those who will use the project's products and services, for liaison with project management team, and for monitoring that the solution meets the needs as per the agreements, and in terms of cost, quality, functionality and ease of use.</p> <p>The DCDT representative(s) specifies the benefits and is held accountable to demonstrate to its programme management (and/or its constituency) that the forecast benefits which were the basis of project approval have been realized.</p> <p>The DCDT is further responsible for:</p> <ul style="list-style-type: none"> <li>a) Secure the funding for the project;</li> <li>b) Provide the customer quality expectations and define acceptance criteria for the project;</li> <li>c) Ensure that the desired outcome of the project is specified;</li> <li>d) Ensure that the project produces products and services that will deliver the desired outcomes, and meet user requirements;</li> <li>e) Ensure that the expected benefits are realized;</li> <li>f) Resolve user requirements and priority conflicts;</li> <li>g) Ensure that resources required for the project (e.g. to undertake site quality inspections and implementation approval) are made available;</li> <li>h) Make decisions on escalated issues;</li> <li>i) Brief and advise management on matters concerning the project;</li> <li>j) Provide the user view on follow-on action recommendations; and</li> <li>k) Undertake Project Assurance from the user perspective, and where appropriate delegate user Project Assurance activities.</li> </ul> |
| <b>SITA</b>  | <p>The responsibility of SITA in relation to its deliverables, is to ensure that the programme is ultimately delivered as follows:</p> <ul style="list-style-type: none"> <li>a) Assess and affirm the viability of the project approach;</li> <li>b) Ensure that proposals for designing and developing the products are realistic;</li> <li>c) Design and appoint the project management team;</li> </ul>  |

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|            |  |
|------------|--|
|            | <ul style="list-style-type: none"> <li>d) Consult in the development of the programme charter, risk management plan, quality management plan, configuration management, and communication management plan;</li> <li>e) Advise on the selection of design, development and acceptance methods;</li> <li>f) Approve any additional supplier contracts;</li> <li>g) Ensure that the sub-contractor resources required for the project are made available;</li> <li>h) Hold the supplier accountable for the quality and integrity of the specialist approach and specialist products created for the project;</li> <li>i) Resolve supplier requirements and priority conflicts;</li> <li>j) Brief non-technical management on sub-contractor aspects of the project;</li> <li>k) Monitor and control the progress of the project/s;</li> <li>l) Escalate risks and issues to corporate or programme management if project tolerances are forecast to be exceeded;</li> <li>m) Ensure the risks of the project are identified, assessed and controlled;</li> <li>n) Make decisions on escalated issues, with particular focus on safeguarding the integrity of the complete solution;</li> <li>o) Ensure overall business assurance of the project – that it remains on target to deliver products and services that will achieve the expected business benefits, and that the project will be completed within its agreed tolerances;</li> <li>p) Undertake Project Assurance from the sub-contractor perspective;</li> <li>q) Carry out assurance on the sub-contractor's products and services; and</li> <li>r) Ensure quality procedures are used correctly, so that products adhere to requirements.</li> </ul> |
| <b>BBI</b> | <p>The responsibility of BBI in relation to its deliverables, is to ensure that the programme is ultimately delivered as follows:</p> <ul style="list-style-type: none"> <li>a) Assess and affirm the viability of the project approach;</li> <li>b) Ensure that proposals for designing and developing the products are realistic;</li> <li>c) Design and appoint the project management team;</li> <li>d) Consult in the development of the programme charter, risk management plan, quality management plan, configuration management, and communication management plan;</li> <li>e) Advise on the selection of design, development and acceptance methods;</li> <li>f) Approve any additional supplier contracts;</li> <li>g) Ensure that the sub-contractor resources required for the project are made available;</li> <li>h) Hold the supplier accountable for the quality and integrity of the specialist approach and specialist products created for the project;</li> <li>i) Resolve supplier requirements and priority conflicts;</li> <li>j) Brief non-technical management on sub-contractor aspects of the project;</li> <li>k) Monitor and control the progress of the project/s;</li> </ul>  |

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|           |  |
|-----------|--|
|           | <p>l) Escalate risks and issues to corporate or programme management if project tolerances are forecast to be exceeded;</p> <p>m) Ensure the risks of the project are identified, assessed and controlled;</p> <p>n) Make decisions on escalated issues, with particular focus on safeguarding the integrity of the complete solution;</p> <p>o) Ensure overall business assurance of the project – that it remains on target to deliver products and services that will achieve the expected business benefits, and that the project will be completed within its agreed tolerances;</p> <p>p) Undertake Project Assurance from the sub-contractor perspective;</p> <p>q) Carry out assurance on the sub-contractor’s products and services; and</p> <p>r) Ensure quality procedures are used correctly, so that products adhere to requirements.</p> |
| <b>NT</b> | Assessing and making recommendations on the funding requirements of this project   |

## Appendix B - Comparative Analysis: South Africa and France Models

| <b>Comparative Analysis: National Broadband Plans</b> |   |  |
|---|---|--|
|   | <b>South Africa</b>   | <b>France</b>  |
| Policy  | <b>SA Connect</b>   | <b>France Très Haut Débit</b>  |
| Policy Goals  | It is aimed at providing access to Broadband to 100% per cent of users at 10 Mbps by 2030. The primary goal of the programme is the creation of a high-capacity national network that will meet the connectivity needs of the citizen. The network will ensure economies of scale, reduce risk and guaranteeing returns | The national broadband programme <b>France Très Haut Débit</b> sets out the targets of fast broadband access for all households by 2022 and fibre for all by 2025. Furthermore, the National Broadband Plan foresees extending optical fibre to subscribers throughout the country by 2025 |
| Responsible Ministry                                  | Department of Communications and Digital Technologies   | Ministry of Economy, Finance and Recovery  |
| Targets   | 1   | By 2012, 100% of the population to have access to broadband.   |

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|                                  |   |   |
|----------------------------------|---|---|
|                                  | 80% of population connected at 100Mbps by 2030  | By 2025 100% of home to have access to very high speed broadband.   |
| Implementing Agencies            | Broadband Infraco (BBI)   | The National Agency for Territorial Cohesion (l'Agence Nationale de la Cohésion des Territoires) is responsible for implementing France's broadband strategy. The agency operates a task force in charge of the national broadband plan (France Très Haut Débit).   |
|                                  | State Information Technology Agency (SITA)  | The French Regulatory Authority for Electronic Communications and Post (Autorité de régulation des communications électroniques et des postes, arcep) is the main body responsible for regulatory measures concerning the expansion of France's broadband networks.   |
|                                  |   | The General Commission for Territorial Equality (Commissariat Général à l'Égalité des Territoires) acts as national Broadband Competence Office.  |
| Funding Model and Estimated Cost | R6.4bn - R64 billion over 10years. Currently, Phase 1 is funded through Parliamentary Appropriations through the Department of Communications and Digital Technologies. Alternative funding mechanisms is being sought for the implementation of Phase 2. | French officials expect that the national strategy will require mobilisation of private and public investments of up to EUR 20 billion. The Fund for the Digital Society (Fonds pour la société numérique) provides a combination of public loans and funding to support the roll-out of ultrafast broadband by the French government. Infrastructure projects that are eligible include works on backhaul networks (FTTN), passive fibre optic networks (FTTH), customer access (FTTH), access for public institutions (education, health, public administration), support for Wi-Max and/or satellite receivers as well as feasibility studies for planned roll-out projects. |

|                                |  |   |
|--------------------------------|--|---|
| Patterns of population density |  | The French government is considering measures for the provision of FTTH in less densely populated areas of metropolitan France. It also has very distant territories in the Atlantic, Indian and Pacific Oceans, where it has sought to ensure access to the current generation of broadband services that are of qualities and prices comparable to those available in metropolitan France. This has presented significant challenges, which the regulator set out in a report to the French parliament. |
| Geographical size              |  |   |
| Level of economic development  |  |   |

#### Appendix C – SA Connect Allocations

| SA Connect Allocations   |                |          |         |                |         |         |           |
|--------------------------|----------------|----------|---------|----------------|---------|---------|-----------|
| Financial year           | 2017/18        | 2018/19  | 2019/20 | 2020/21        | 2021/22 | 2022/23 | TOTAL     |
| MTEF allocation (R' 000) | 411,000        | 703,619  | 724,530 | 764,379        | -       | -       | 2,603,528 |
| Budget cut (R' 000)      | 139,000        | 693,900  | 550,000 | 580,000        | -       | -       | 1,962,900 |
| % Budget cut             | 34%            | 99%      | 76%     | 76%            | 0%      | 0%      | 75%       |
| Balance (R' 000)         | 272,000        | 9,719.00 | 174,530 | 184,379        | 194,520 | 203,857 | 1,039,005 |
|                          | <b>456,249</b> |          |         | <b>184,379</b> |         |         |           |
|                          | <b>640,628</b> |          |         |                |         |         |           |

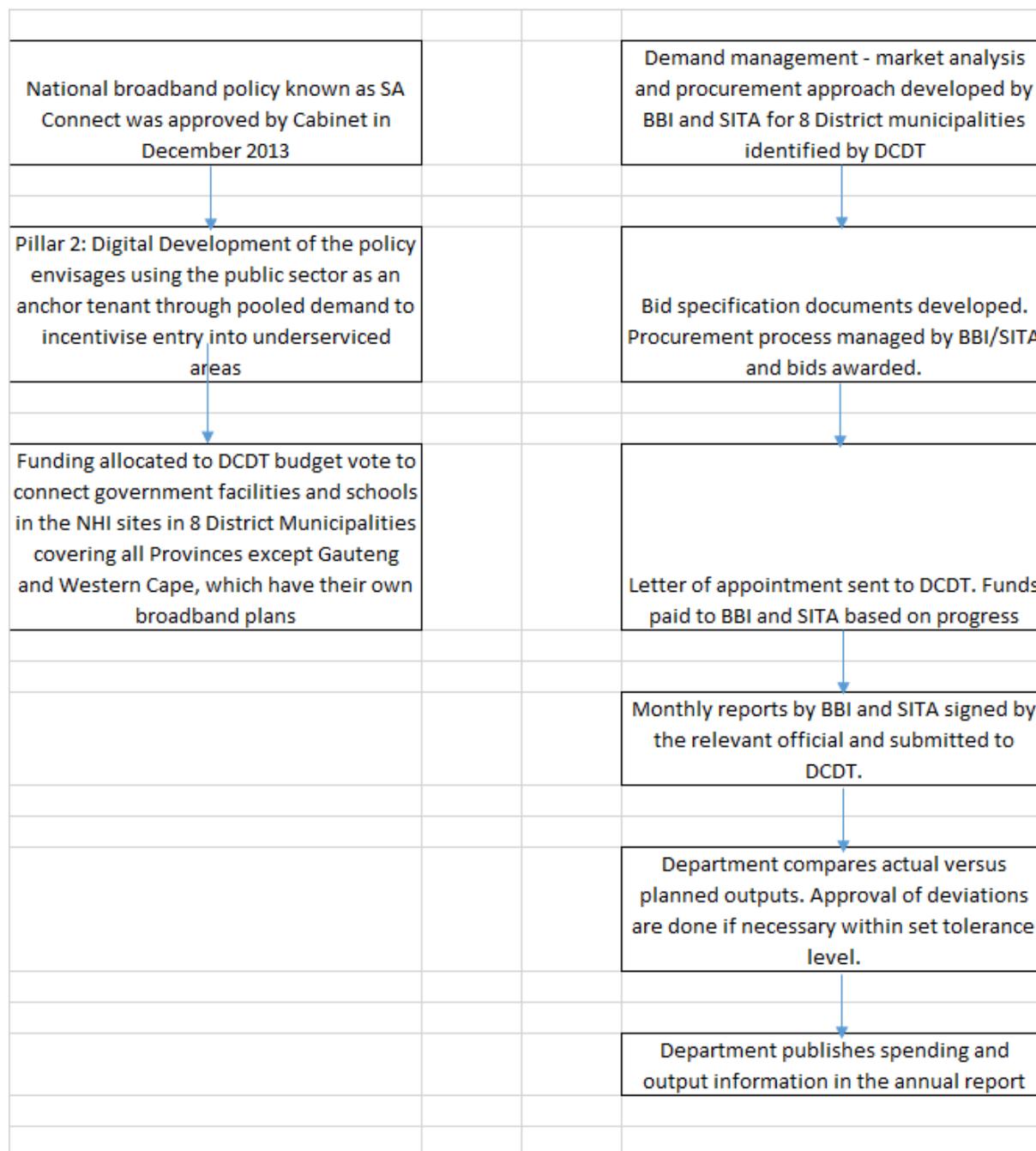
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## Appendix D – Logframe

|                             |                |   |                |  |                |  |
|-----------------------------|----------------|---|----------------|--|----------------|--|
| <b>IMPACT</b>               | <b>IMP1</b>    | Provide fast, reliable and affordable broadband connectivity to educational, health and other government sites to enable e-services |                |  |                |  |
| Indicator                   |                | E-government services enabled at government facilities  |                |  |                |  |
| Frequency                   |                | Annual  |                |  |                |  |
| Source of data              |                | NDP / DPSA / provinces / municipalities / DCDT  |                |  |                |  |
| <b>OUTCOME</b>              | <b>OUTC1</b>   | <b>Knowledge Economy and Information Society</b>  | <b>OUTC2</b>   | <b>Access to broadband Internet</b>  |                |  |
| Indicator                   |                | Number of facilities connected to broadband   |                | % of government facilities connected to broadband internet   |                |  |
| Frequency                   |                | Annual  |                | Annual   |                |  |
| Source of data              |                | Annual Reports/ APPs and SP   |                | Reports from Provincial Broadband steering committees  |                |  |
| <b>Final Output</b>         | <b>FOUT1</b>   | <b>Broadband connectivity</b>   | <b>FOUT2</b>   | <b>Connected Society</b>   | <b>FOUT3</b>   | <b>Internet Services provided</b>  |
| Indicator                   |                | % of sites connected to broadband at 10Mbps by 2030   |                | Number of Broadband connections to Government facilities sustained   |                | Number of government facilities provided with internet services  |
| Frequency                   |                | Annual  |                | Annually   |                | As per MSA targets   |
| Source of data              |                | DCDT / Reports by Implementing Agents   |                | Implementing Agents  |                | Districts / DCDT   |
| <b>Intermediate outputs</b> | <b>IDOUT1</b>  | <b>Approved policy on broadband</b>   | <b>IDOUT2</b>  | <b>Approved connected sites</b>  | <b>IDOUT#</b>  | <b>Bulk, Leased connectivity sites</b>   |
| Indicator                   |                | Policy published in government gazette  |                | Number of connected sites  |                | Number of facilities connected   |
| Frequency                   |                | once off  |                | as per MSA   |                | As per MSA targets   |
| Source of data              |                | DCDT website  |                | Project Reports  |                | Districts  |
| <b>Activities</b>           | <b>ACT 1.4</b> | <b>Broadband Policy</b>   | <b>ACT 2.4</b> | <b>Develop the Implementation strategy for Phase 2</b>   | <b>ACT 3.2</b> | <b>BBI contracts ACCESS Network Providers to provide the Last Mile connectivity</b>                        |
| Indicator                   |                | Policy approved by Cabinet  |                | Strategy approved by DG  |                | Number sites connected to the last mile  |
| Frequency                   |                | Once-off  |                | Once-off   |                | As needed  |
| Source of data              |                | Government Gazette  |                | DCDT   |                | BBI  |
| <b>Activities</b>           | <b>ACT 1.3</b> | <b>White Paper Developed</b>  | <b>ACT 2.3</b> | <b>Monitor progress against the implementation plan</b>  | <b>ACT 3.1</b> | <b>SITA provide WIFI connectivity at facilities</b>  |
| Indicator                   |                | Cabinet approved policy White Paper   |                | Number of sites connected against the plan   |                | Number of sites connected by WIFI  |
| Frequency                   |                | Once-off  |                | Quarterly  |                | As needed  |
| Source of data              |                | Government Gazette  |                | Reports from the entities  |                | SITA   |
| <b>Activities</b>           | <b>ACT 1.2</b> | <b>Identify the policy interventions</b>  | <b>ACT 2.2</b> | <b>Roll out the implementation plan</b>  |                | <b>SITA provides internet services and government application</b>  |
| Indicator                   |                | Cabinet approved policy White Paper   |                | Finalise and sign the Master Service Agreement with the Implementing Agents BBI & SITA                             |                | Number of connected site provided with internet services   |
| Frequency                   |                | Once-off  |                | Once-off   |                | As needed  |
| Source of data              |                | Government Gazette  |                | Signed Master Service Agreement  |                | SITA   |
| <b>Activities</b>           | <b>ACT 1.1</b> | <b>Develop the problems statement</b>   | <b>ACT 2.1</b> | <b>Develop an implementation plan (Business case) for approval</b>   |                | <b>BBI builds or Lease ICT infrastructure</b>  |
| Indicator                   |                | Green Paper approved  |                | Approved costed implementation plan and budget submitted to National Treasury                                      |                | Number of new sites build or existing site upgraded  |
| Frequency                   |                | Once-off  |                | As needed  |                | As needed  |
| <b>Inputs</b>               |                | <b>Personnel (ICT Policy development sub-programme),</b>  |                | <b>Personnel (Broadband sub-programme),</b>  |                | <b>SITA Technical staff<br/>BBI Technical contractors</b>  |
| <b>Inputs</b>               |                | <b>Goods &amp; Services Budget: Consultants budget</b>  |                | <b>Goods &amp; Services Budget: Consultants budget: SA Connect allocation</b>                                      |                | <b>Budgets as per MSA &amp; project scope</b>  |
| Performance indicator       |                |   |                |  |                |  |
| Frequency                   |                |   |                |  |                |  |
| <b>Programme elements</b>   |                | <b>Develop policy framework</b>   |                | <b>DITPS mandated BBI and SITA to collaborate and roll-out broadband services to SA Connect Phase 1 facilities</b> |                | <b>SITA: Access to internet services and government applications;<br/>BBI: ICT infrastructure roll out</b> |
| <b>Responsibility</b>       |                | <b>Chief Directorate: ICT Policy development (Programme 3)</b>  |                | <b>CD: Broadband (Programme 5)</b>   |                | <b>Implementing Agents: SITA &amp; BBI</b>   |

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## Appendix E – Process Maps



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## Appendix F – Expenditure Information

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| Row Labels   | 2018/19           | 2019/20           | Grand Total        |
|--|-------------------|-------------------|--------------------|
| <b>Revenue</b>   | <b>30 711 662</b> | <b>89 869 122</b> | <b>120 580 784</b> |
| 2000/310 (Sales/Gert Sibande)                                  | 5 951 852         | 10 692 000        | 16 643 852         |
| 2000/311 (Sales/Dr K Kaunda)                                   | 4 809 484         | 20 524 847        | 25 334 330         |
| 2000/312 (Sales/OR Tambo Qumbu n Qunu)                         | 2 862 892         | 15 504 553        | 18 367 445         |
| 2000/314 (Sales/Pixley ka Seme)                                | 1 634 050         | 5 409 669         | 7 043 719          |
| 2000/316 (Sales/uMgungundlovu)                                 | 3 392 524         | 11 694 247        | 15 086 771         |
| 2000/317 (Sales/uMzinyathi)                                    | 2 311 597         | 4 297 397         | 6 608 993          |
| 2000/318 (Sales/Vhembe)  | 1 597 200         | 4 718 409         | 6 315 609          |
| 2000/315 (Sales/Thabo Mofutsanyane)                            | 8 152 065         | 17 028 000        | 25 180 065         |
| <b>Other Income</b>  | <b>8 659 682</b>  | <b>5 897 741</b>  | <b>14 557 423</b>  |
| 3086/310 (Recovery/Gert Sibande)                               | 978 291           | 655 120           | 1 633 410          |
| 3086/311 (Recovery/Dr K Kaunda)                                | 981 038           | 655 120           | 1 636 158          |
| 3086/312 (Recovery/OR Tambo Qumbu n Qunu)                      | 981 038           | 655 120           | 1 636 158          |
| 3086/313 (Recovery/OR Tambo Zimbane)                           | 967 379           | 655 120           | 1 622 498          |
| 3086/314 (Recovery/Pixley ka Seme)                             | 981 038           | 656 783           | 1 637 821          |
| 3086/315 (Recovery/Thabo Mofutsanyane)                         | 981 038           | 655 120           | 1 636 158          |
| 3086/316 (Recovery/uMgungundlovu)                              | 981 038           | 655 120           | 1 636 158          |
| 3086/317 (Recovery/uMzinyathi)                                 | 981 038           | 655 120           | 1 636 158          |
| 3086/318 (Recovery/Vhembe)                                     | 827 785           | 655 120           | 1 482 905          |
| <b>Other Expense</b>   | <b>35 169 558</b> | <b>37 962 319</b> | <b>73 131 877</b>  |
| 3013/310 (Consulting Fees/Gert Sibande)                        | 1 191 760         | 1 230 259         | 2 422 019          |
| 3013/311 (Consulting Fees/Dr K Kaunda)                         | 1 521 225         | 1 229 639         | 2 750 864          |
| 3013/312 (Consulting Fees/OR Tambo Qumbu n Qunu)               | 1 137 455         | 1 230 259         | 2 367 714          |
| 3013/313 (Consulting Fees/OR Tambo Zimbane)                    | 1 137 455         | 1 230 259         | 2 367 714          |
| 3013/314 (Consulting Fees/Pixley ka Seme)                      | 1 191 760         | 1 230 259         | 2 422 019          |
| 3013/315 (Consulting Fees/Thabo Mofutsanyane)                  | 1 191 760         | 1 230 259         | 2 422 019          |
| 3013/316 (Consulting Fees/uMgungundlovu)                       | 1 191 760         | 1 289 267         | 2 481 027          |
| 3013/317 (Consulting Fees/uMzinyathi)                          | 1 191 760         | 1 230 259         | 2 422 019          |
| 3013/318 (Consulting Fees/Vhembe)                              | 1 063 824         | 1 230 259         | 2 294 083          |
| 3022/038 (IT Charges/General Expenses)                         | 252 285           | 197 265           | 449 549            |
| 3024/038 (License Fees/General Expenses)                       | 138 202           | 404 411           | 542 614            |
| 3028/038 (Office Cleaning/General Expenses)                    | 103 274           | 116 118           | 219 392            |
| 3030/035 (Printing/Local)                                      | 48 313            | 78 331            | 126 645            |
| 3032/036 (Rental/Office Accommodation)                         | 729 219           | 744 930           | 1 474 149          |
| 3033/038 (Security Services/General Expenses)                  | 165 468           | 318 522           | 483 990            |
| 3034/060 (Staff Costs/Salary)                                  | 20 867 953        | 21 859 384        | 42 727 337         |
| 3034/062 (Staff Costs/UIF)                                     | 54 673            | 55 062            | 109 735            |
| 3034/179 (Staff Costs/SDL)                                     | 196 475           | 203 838           | 400 313            |
| 3034/303 (Staff Costs/nightshift)                              | 85 424            | 66 749            | 152 173            |
| 3034/304 (Staff Costs/overtime1.5)                             | 392 495           | 312 678           | 705 173            |
| 3034/305 (Staff Costs/overtime2)                               | 162 058           | 147 482           | 309 540            |
| 3036/072 (Travel & Subsistence/Local Travel and Accommodation) | 1 024 897         | 2 226 258         | 3 251 155          |
| 3037/108 (Telephone Costs/3G Data Cards)                       | 43 200            | 43 200            | 86 400             |
| 3053/184 (Health and Safety/First Aid)                         | 86 860            | 57 373            | 144 233            |
| <b>Cost of Sales</b>   | <b>29 800 359</b> | <b>62 138 485</b> | <b>91 938 844</b>  |
| Cost of existing network                                       | 18 274 799        | 31 154 268        | 49 429 068         |
| 4003/310 (Access Provider/Gert Sibande)                        | 1 741 442         | 4 068 870         | 5 810 312          |
| 4003/311 (Access Provider/Dr K Kaunda)                         | 1 645 205         | 5 221 192         | 6 866 397          |
| 4003/312 (Access Provider/OR Tambo Qumbu n Qunu)               | 925 600           | 1 582 084         | 2 507 684          |
| 4003/313 (Access Provider/OR Tambo Zimbane)                    | 502 241           | 3 372 370         | 3 874 611          |
| 4003/314 (Access Provider/Pixley ka Seme)                      | 1 424 292         | 2 299 700         | 3 723 992          |
| 4003/315 (Access Provider/Thabo Mofutsanyane)                  | 3 199 538         | 4 981 059         | 8 180 597          |
| 4003/316 (Access Provider/uMgungundlovu)                       | 1 133 084         | 4 539 447         | 5 672 531          |
| 4003/317 (Access Provider/uMzinyathi)                          | 121 354           | 2 565 491         | 2 686 845          |
| 4003/318 (Access Provider/Vhembe)                              | 832 804           | 2 354 003         | 3 186 807          |

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