Progress on the Broadband Programme and its spending Plans

Presentation to Standing Committee on Appropriations
18 August 2017
SA’s Broadband Challenge
SA Connect Programme
Funding Allocations and Spending
Spectrum Allocation and Cost to Communicate Programme
1

SA’s Broadband Challenge
### South Africa’s ICT Ranking

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Network readiness</td>
<td>75</td>
<td>65</td>
<td>75</td>
<td>73</td>
<td>92</td>
</tr>
<tr>
<td>Infrastructure &amp; digital content</td>
<td>44</td>
<td>75</td>
<td>77</td>
<td>49</td>
<td>Economic Impact</td>
</tr>
<tr>
<td>Affordability</td>
<td>112</td>
<td>74</td>
<td>30</td>
<td>32</td>
<td>Social Impact</td>
</tr>
<tr>
<td>103</td>
<td>Government Usage</td>
<td>105</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** World Economic Forum’s Global Information Technology Report 2016

- The WEF Global Competitive Index (GCI) 2016 report indicates that SA has seen an overall improvement raking from 56 to 49 out of 140 countries.
- There is also a significant improvement on the Network Readiness Index (NRI) from 75 to 65.
- The climb in the rank is mainly due to the increased uptake of ICT especially higher internet bandwidth and improvements in innovation which establish the SA economy as the region’s most innovative.
- However the country needs to make significant improvements on Government usage and social impact sub-indexes.
Making South Africa a Global Leader in Harnessing ICTs for Socio-economic Development

Broadband Challenge

• While ICT is seen as a powerful tool to economic development and to an effective and efficient service delivery by government, SA is still challenged with issues of accessibility, usability and affordability.
• Inability to access ICT is closely associated with poverty which is most prevalent in predominantly rural or poor areas.
• The Statistics SA, General Household Survey (GHS) 2016 re-affirms the existence of a digital divide between provinces, districts and municipalities.

Supply Side Considerations

• Broadband roll-out is very capital intensive and requires billions of Rands
• Recovery of investments must be secured – long payback period
• SA Geography challenges - population is dispersed
• Uneconomical to roll-out in certain areas and requires cross-subsidization.

Demand Side Considerations

• Affordability of services and devices
• Availability of local content
• E-literacy and massification of e-skills
• Availability of electricity
SA Connect Programme
Digital Readiness
- Enabling policy & regulatory frameworks; institutional capacity

Digital Development
- Public sector demand aggregation to address critical gaps

Digital Future
- National Broadband Network

Digital Opportunity
- Demand Stimulation

**Four Key strategic Pillars**

**Broadband**
- Broadband as an ecosystem of digital networks, services, applications, content and devices, will be firmly integrated into the economic and social fabric of the country.
- A key objective of SA Connect is that broadband must reach a critical mass of South Africans.

**Ultimate Objectives**
- Affordable, high quality, high speed broadband
- 100% penetration of broadband
- Broadband usage
- Exportable skills
SA Connect Programme
Phase 1 Implementation Approach

Phase 1 Implementation Approach

- This first Phase of Digital Development focuses on prioritised provision of Broadband connection services to 6135 facilities (Government buildings, health facilities, schools, post offices and police stations) in 8 districts.
- The project positions government to play an enabling role in the provision of broadband to a number of underserved districts.
- This is to be achieved by aggregating government demand and positioning government as an anchor tenant of the broadband infrastructure in order to incentivise the sector to investment sustainably in infrastructure in the under-served areas.
- The pooling of public sector demand and procuring of high-capacity and future-proof network capacity at more affordable rates to address public sector broadband requirements; and, in this process, stimulating network builds by operators by reducing the associated investment risk, by ensuring demand.
- This strategy will also reduce Government’s on-going operational expenditure on cost to communicate through upfront capital expenditure.
## SA Connect Digital Development Pillar - Phase 1 - Scope

### Broadband Policy Target

<table>
<thead>
<tr>
<th>Broadband Policy Target</th>
<th>Penetration measure</th>
<th>Baseline (2013)</th>
<th>By 2016</th>
<th>By 2020</th>
<th>By 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadband access in Mbps user experience</td>
<td>% of population</td>
<td>33.7% Internet access</td>
<td>50% at 5Mbps</td>
<td>90% at 5Mbps</td>
<td>100% at 10Mbps</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>50% at 100Mbps</td>
<td>80% at 100Mbps</td>
<td></td>
</tr>
<tr>
<td>Schools</td>
<td>% of schools</td>
<td>25% connected</td>
<td>50% at 10 Mbps</td>
<td>100% at 10Mbps</td>
<td>100% at 1Gbps</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>80% at 100Mbps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health facilities</td>
<td>% of health facilities</td>
<td>13% connected</td>
<td>50% at 10Mbps</td>
<td>100% at 10Mbps</td>
<td>100% at 1Gbps</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>80% at 100Mbps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public sector facilities</td>
<td>% of government offices</td>
<td>50% at 5Mbps</td>
<td>100% at 10Mbps</td>
<td></td>
<td>100% at 100Mbps</td>
</tr>
</tbody>
</table>

### Phase 1 District Facilities

<table>
<thead>
<tr>
<th>No</th>
<th>Phase 1 District</th>
<th>Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dr Kenneth Kaunda(NW)</td>
<td>340</td>
</tr>
<tr>
<td>2</td>
<td>Gert Sibande(MP)</td>
<td>797</td>
</tr>
<tr>
<td>3</td>
<td>O.R. Tambo(EC)</td>
<td>1444</td>
</tr>
<tr>
<td>4</td>
<td>Pixley ka Seme(NC)</td>
<td>225</td>
</tr>
<tr>
<td>5</td>
<td>Thabo Mofutsanyane(FS)</td>
<td>747</td>
</tr>
<tr>
<td>6</td>
<td>uMgungundlovu(KZN)</td>
<td>771</td>
</tr>
<tr>
<td>7</td>
<td>uMzinyathi (KZN)</td>
<td>601</td>
</tr>
<tr>
<td>8</td>
<td>Vhembe(LIM)</td>
<td>1210</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>6135</td>
</tr>
</tbody>
</table>
Phase 1 Infrastructure and Government facilities distribution

**Gert Sibande, Mpumalanga**
- Schools – 541
- Police – 37
- Health – 74
- Post Office – 31
- Rural – 2
- Government - 113
- Thusong – 9

Total = 807

**Thabo Mofutsanyane, Free State**
- Schools – 521
- Police – 30
- Health – 74
- Post Office – 30
- Rural – 1
- Government - 101
- Thusong – 3

Total = 751

**Vhembe, Limpopo**
- Schools – 983
- Police – 20
- Health – 120
- Post Office – 33
- Rural – 2
- Government - 54
- Thusong – 3

Total = 1215

**OR Tambo, Eastern Cape**
- Schools – 1228
- Police – 17
- Health – 133
- Post Office – 23
- Rural – 0
- Government - 47
- Thusong – 0

Total = 1448

**Dr. Kenneth Kaunda, North West**
- Schools – 233
- Police – 15
- Health – 38
- Post Office – 27
- Rural – 0
- Government - 33
- Thusong – 0

Total = 345

**UMgungundlovu, KZN**
- Schools – 542
- Police – 25
- Health – 58
- Post Office – 34
- Rural – 1
- Government - 122
- Thusong – 2

Total = 784

**UMzinyathi, KZN**
- Schools – 481
- Police – 12
- Health – 45
- Post Office – 10
- Rural – 0
- Government - 61
- Thusong – 1

Total = 610

**Pixley Ka Seme, NC**
- Schools – 100
- Police – 26
- Health – 38
- Post Office – 14
- Rural – 1
- Government - 46
- Thusong – 0

Total = 225
Phase 2 of SA Connect will focus on prioritised provision of Broadband connection services to 35211 facilities (Government buildings, health facilities, schools, post offices and police stations) in the remaining 44 districts.

Government will also invest in infrastructure through the creation of a Wholesale open Access Network.

The capacity procured will enable government administration and electronic service delivery (e-government), to digitally enable key social functions such as education and health, as well as to support emerging smart city requirements.

This aggregated government demand will give rise to sustainable business models which will further incentivise investment by private sector.

The Department is in the process of developing a Phase 2 funding document which will outline Phase 2 funding requirements as well as the implementation approach.

Funding for the Phase 2 of SA Connect will be required for two purposes: firstly to fund broadband infrastructure expansion for the NBN and services for government facilities; and secondly, to increase government’s shareholding in the NBN.
3

Broadband Initiatives to connect Government initiatives
The USO rollout forms part of the license obligations for MTN, Vodacom, Neotel & Cell C. Target of 5250 Schools in 5 years with a yearly target of 1050 schools. Project commenced in 2015/16.

- 3653 schools connected to date
  - 1822 schools were connected in 2015/16
  - Additional 1527 schools will benefit from the USO connectivity project by 2020.
  - Education content placed in local servers.

Number of Schools connected per operator to date:
- MTN: 1237
- Vodacom: 1143
- Cell C: 902
- Neotel: 371
Provincial Led Initiatives Complementing SA Connect

Making South Africa a Global Leader in Harnessing ICTs for Socio-economic Development

14 June 2014

Core = 0
Access = 0

March 2015
Core Nodes = 8
Access Sites Connected = 592

March 2017
Core = 8
Access Sites Connected = 1000

2019
Target 3000 Sites

Target of 3000

Phase 1  Phase 2  Phase 3
2014 - 2016  2017 - 2021  2022 & beyond

Duration
3 years  5 years  2 years

Cumulative Duration
3 years  8 years  10 years

<table>
<thead>
<tr>
<th>Bandwidth</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Mbps</td>
<td>90%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>100 Mbps</td>
<td>4%</td>
<td>90%</td>
<td>0%</td>
</tr>
<tr>
<td>1 Gbps</td>
<td>6%</td>
<td>10%</td>
<td>90%</td>
</tr>
<tr>
<td>10 Gbps</td>
<td>3 Sites</td>
<td>3 Sites</td>
<td>10%</td>
</tr>
</tbody>
</table>

More than 1900 facilities have been connected to date

Gauteng Broadband Network (GBN)

Western Cape Broadband Project

1286 Schools
298 Healthcare facilities
413 Other Govt. Offices
USAASA Broadband Expansion Programme

- USAASA connected facilities will be integrated to the SA Connect roll-out programme for upgrades
- USAASA used the Universal Service Access Fund (USAF) to expand their program of connecting underserved areas

- **Emalahleni**
  - 25 Clinics; 3 schools; 3 Municipality offices, SMMEs

- **Msinga**
  - 24 Clinics; 4 schools; 1 Education District office, SMMEs.

- **Ratlou**
  - 18 Clinics; 8 schools

- **Joe Morolong**
  - 27 Clinics; 10 schools

2013/14

2014/15
USAASA used the Universal Service Access Fund (USAF) to expand their program of connecting underserved areas in the:

- Chief Albert Luthuli Municipality in the Mpumalanga province,
- Mutale in the Limpopo Province and;
- OR Tambo District Municipality *(King Sabata Dalindyebo and Mhlonlilo local Municipality)*

### 2015/16

#### Chief Albert Luthuli
- 21 Clinics; 1 school for children with special needs

#### Mutale
- 17 Clinics; 1 school for children with special needs

### 2016/17

<table>
<thead>
<tr>
<th>Category</th>
<th>Planned</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Facilities</td>
<td>65</td>
<td>24</td>
</tr>
<tr>
<td>Police</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Post Office</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Schools</td>
<td>533</td>
<td>184</td>
</tr>
<tr>
<td>Community Centre</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>609</strong></td>
<td><strong>210</strong></td>
</tr>
</tbody>
</table>
4

Funding Allocations and Spending
Below is an outline of the procurement options undertaken to appoint a service provider to implement SA Connect Phase 1. Option 1-4 have not been successful, implementation of Option 5 is underway.

**2015**
- **OPTION 1**
  - Application for Exemption from the PFMA to appoint Service Provider

**2015**
- **OPTION 2**
  - SITA Tender to implement Phase 1 issued and later cancelled, due to bidders not meeting minimum requirements

**2016**
- **OPTION 3**
  - Decision to use ICT SOCs.
  - SITA’s application for deviation to appoint BBI for aggregation of ICT infrastructure from multiple providers

**2017**
- **OPTION 4**
  - BBI and SITA to collaborate in line with the IGRF, ECA, SITA Act
- **OPTION 5**
  - Application for Deviation from tender processes to appoint a service provider for SA Connect Phase 1

Making South Africa a Global Leader in Harnessing ICTs for Socio-economic Development
SA Connect Phase 1 Funding Allocation and APP Targets

2016/17

R 336 Million Allocated

- Application to National Treasury for roll-over of 2016 allocation was not granted.

2017/18

R 411 Million Allocated

- BBI and SITA mandated to roll-out Broadband services to SA Connect Phase 1 facilities.

Applications for roll-over was not approved.
Transfer of Funds

- Of the **R 411 912 000** allocated for broadband services in the 2017/18 financial year the Department requested that National Treasury to transfer **R 317 456 400** to BBI for the provision of broadband infrastructure services to **1931** Government facilities, in line with the BBI mandate.

- The remaining funds (**R 94 455 600**) will be used to:
  - Pay SITA for the monthly recurring costs for the provision of routers, access to internet and Government applications in line with the SITA Act.
  - Pay for upgrades of existing services provided by SITA to Government facilities and;
  - Project Management services including monitoring and evaluation by the Department.
The Master Service Agreement (MSA) between DTPS, BBI and SITA has been signed.
- MSA vetted by the Office of the Chief State Law Adviser and suggested amendments implemented.

Application submitted to National Treasury for the transfer of a portion of the Broadband budget to BBI for the provisioning of Broadband infrastructure to enable BBI to aggregate infrastructure from various service providers to minimise duplication and expedite roll-out.
- Detailed Implementation Plan outlining the institutional arrangements, technical solution, costing and pricing, value for money was submitted to National Treasury.
- Signed MSA submitted to National Treasury.

DTPS, BBI and SITA will enter into a Cooperation Agreement in line with the IGRFA.

Legislative Framework governing the provision of Broadband

- Transfer of funds to BBI as per the PFMA
- Procurement of ICT services in line with the PFMA and SITA Act
- BBI to provide ECN services in line with the ECA, in turn SITA uses ECN services to provide EC services in line with the ECA.

Flow of funds

Provision of EC services in line with the ECA.
SA Connect Phase 1 Legislative Framework

DTPS mandates BBI and SITA to collaborate and roll-out broadband services to SA Connect Phase 1 facilities

Access to Internet services and Government applications
SITA will procure routers from the private sector and upgrade current ICT infrastructure provided by SOCs and private sector to provide routers, access to Internet & Government Applications in line with their SCM policy and PFMA

ICT Infrastructure Roll-out
BBI will build, buy or lease ICT infrastructure from SOCs and private sector players. This infrastructure will be used to provide broadband services to SA connect Phase 1 facilities in line with their SCM policy and PFMA

Access Network Providers and SA Connect Phase 1 facilities

Making South Africa a Global Leader in Harnessing ICTs for Socio-economic Development
Overall Progress on Phase 1 and Phase 2

Phase 1 Implementation Progress

Governance and Co-ordination Framework
Infrastructure Gap Analysis
High Level Planning
Business Case development
Funding to procure services
Mandate SOCs
DTPS, BBI & SITA sign MSA
Finalization of SLA’s
Infrastructure Roll-out

Phase 2 Implementation Progress

Governance and Co-ordination Framework
Infrastructure Gap Analysis
High Level Planning
Business Case development
Feasibility Study
Funding
Site Verification
Appointment of a service provider
Infrastructure Roll-out

Overall Progress on Phase 1 and Phase 2

Completed
Underway
Not yet started
SA Connect Phase 1 Implementation Schedule

Project: SA Connect_Core Network
Date: Tue 17-08-15

Making South Africa a Global Leader in Harnessing ICTs for Socio-economic Development
5 Opportunities for SMME’s
### Opportunities for SMME’s

<table>
<thead>
<tr>
<th>Technical Requirements</th>
<th>Commodities and Services</th>
<th>Foreign and Local</th>
<th>SMME Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Civil Works</strong></td>
<td>Fibre Installation</td>
<td>Local</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Site build</td>
<td>Local</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>OEM Supply</strong></td>
<td>Transmission Equipment</td>
<td>Foreign</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Fibre Supply &amp; Accessories</td>
<td>Local</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Batteries &amp; Rectifiers, DCN, FMS</td>
<td>Local/Foreign</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Containers, Cabinets</td>
<td>Local</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Patch Leads &amp; Panels</td>
<td>Local</td>
<td>No</td>
</tr>
<tr>
<td><strong>Professional Services</strong></td>
<td>Route Surveys, Wayleaves</td>
<td>Local</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Project Management</td>
<td>Local</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Mobile Broadband Spectrum
Making South Africa a Global Leader in Harnessing ICTs for Socio-economic Development

Spectrum Challenge

- **Spectrum Scarcity**
- **Exclusive Licensing Regime**
- **Market Dominance**
- **Spectrum Sharing**

**Demand exceeds supply of spectrum**
Over four hundred players hold Electronic Communications Network Service (ECNS) licensees

**Few entities assigned mobile spectrum**
Only six (6) have been assigned mobile broadband spectrum, obtained through various licensing processes undertaken in terms of the managed liberalization dispensation

**Oligopoly**
The outcome is an oligopoly – a highly concentrated market where only a few firms dominate

**Wholesale Open Access Networks**
Policy which promotes the sharing of spectrum, Wholesale Open Access Network (WOAN), has been approved by Cabinet
Progress on the implementation of the ICT Policy White Paper

- Draft legislation has been developed to implement the policies as contained in the ICT White Paper. Inter-governmental consultations are underway, which will be followed by public consultations.

- In addition to the drafting of the legislation, an agreement reached with industry on the way forward to implement spectrum and wholesale open access network (WOAN) policies
  - There may be no urgency to return the current high demand spectrum from licensees until the end of current licence period to ensure investment certainty
  - The licensees committed to buy at least 30% of the capacity of WOAN to ensure its viability. Given the current levels of investment on the 4G network, the Minister committed to conduct an urgent high level study to determine spectrum capacity required by WOAN. If there will be remaining spectrum, it will be licenced to operators with rural coverage obligations. In such case the licensees further committed to buy at least 50% of WOAN capacity.
  - CSIR is conducting preliminary studies and has held workshops operators and equipment vendors to obtain input that will be used for the spectrum requirements modelling
7

Demand Stimulation (Cost to Communicate and e-skills)
Telecommunications costs

• The DTPS' Cost to Communicate Programme tracks and analyses telecommunications costs as they relate to voice, data and broadband services.

ECA

• In line with Section 3(2) of the Electronic Communications Act, Minister issued Policy Direction to ICASA in March 2016, directing the Regulator to commence an inquiry and to prescribe regulations to ensure effective competition in broadband markets.

Request for a Market Inquiry

• On 21 June 2017, the Minister of Economic Development issued a Request for a Market Inquiry to the Competition Commission of Section 4(A) of the Competition Act. The Competition Commission is requested to conduct a market inquiry into the telecommunications sector and to work with other regulators to establish the facts, identify measures to reduce data costs and make recommendations to government.

Four-pronged programme

• This is a four-pronged programme that aligns largely with the work of the communications regulator, ICASA.
• The Cost to Communicate programme consists of four key areas a) consumer protection; b) review of priority markets; c) ICT indicators and collation of data and d) Call Termination Market review

Competition Commission

• The Minister enlisted the Competition Commission to undertake an urgent market inquiry in this regard. Subsequently, the Minister of Economic Development, in his Budget Vote Speech also announced that the Competition Commission will be probing the high data costs with the view to identifying measures to reduce these data costs.

Call Termination Market Review

• In terms of the Call Termination Market Review, the last glide path ends in September 2017. The Call Termination Regulations have significantly reduced the costs of voice services in the country.

On August 2017 ICASA proposed the amendment of the Section 8 of the ECA Act that out of bundled voice rates, network operators would need to notify users of their voice and SMS usage in intervals of 50%, 70% and ICASA 90% and 100% using SMS or any other applicable means.
ICASA Cost to Communicate Programme Update for 2016/17 FY

- Identification of specific markets to be regulated in the future, including broadband / data markets
- Project has started and notice to conduct sec 4B of the ICASA inquiry gazette on 30 June 2017
- This project will also address the concerns raised on the prices of Broadband Services

Priority Markets

ICASA/NCC Task Team

Broadband Market Inquiry

Cost to Communicate Programme

Call Termination Market Review

- Established to review current industry rules on data expiry, high OOB rates and the impact on consumers
- One-on-ones held with industry operators on 22 June 2017
- Report with recommendations to be finalized in FY2017/18 Q2

- To be initiated in terms of policy direction on “Effective Competition and the Reduction of Data Prices”
- A formal inquiry in terms of sec 4b and 4C of the ICASA Act and publication of discussion document for comment
- Envisioned that this inquiry will result in the publication of final regulations

- Last glide path ending in September 2017
- Review of regulations started on 01 October 2016 and will be finalized by 30 September 2017
Provincial e-skills CoLabs are based at universities. Each has a focus on a specific area in e-skills. Discussions are underway with universities to cover the remaining provinces.

**Limpopo CoLab**
Univ of Limpopo
*Connected Health*

**EC CoLab**
Walter Sisulu University
*ICT for Rural Dev / Agriculture*

**WC CoLab**
Univ of WC
*E-inclusion and social innovation*

**Gauteng CoLab**
NEMISA
*Creative New media industries*

**KZN CoLab**
Durban Univ of Tech
*e-Enablement for effective service delivery*

**Northern Cape CoLab**
North West University
*e-Agro Tourism*

**Gauteng CoLab**
Vaal Univ of Technology
*e-Literacy, e-Business*
Thank You