SOUTH AFRICA CONNECT:
CREATING OPPORTUNITIES, ENSURING INCLUSION

South Africa’s National Broadband Policy

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To present a vision, strategy and a long-term plan that is immediately institable and that will catalyse broadband connectivity in South Africa.

- **robust and cost effective broadband** solution to **universal, affordable** broadband access

- **market structure** and **associated regulatory regime** required to induce sufficient public and private investment

- mechanisms for greater **co-ordination at all tiers of government**, to enable more equitable access to broadband and to manage the **removal of impediments to broadband network extension**

- **co-ordination between state owned entities** through clear role definition, integration of planning, monitoring and evaluation

- Facilitate **infrastructure planning** through the mapping of existing **broadband networks**, **co-ordination of deployment plans of operators** and **infrastructure sharing** in order to limit the duplication of civil works

- **vision, model and plan towards a world class open-access national broadband network** and harnessing **public and private** sector contributions, capabilities and resources.
Draft broadband policy – 2010 Broadband policy revised and published for comment in April 2013. Revision on basis of public submissions & early evidence emerging from international broadband plans & international expert meeting.

• Need to understand broadband as ecosystem
• Lack of reference to role of regulator
• Narrowness/outmoded definition/targets
• Absence of demand stimulation measures
• Identification of strategies, mechanisms to achieve objectives
• Specificity on who does what – co-ordination, operations, enforcement
• National, provincial and municipal co-ordination
South African ICT Ecosystem

Global/regional Governance
- ITU, ICANN, WTO, SADC, CRASA

Institutional Arrangements
- ICASA, Comp Comm, USASA

Innovation

Users
- Consumers
- Citizens

Affordability

Access

Networks

Policy & Legal Framework

State
- Constitution

Market Structure
- Competitiveness

Multilateral Agencies
- WB, AfDB, SADB

Global players
- GSMA, Facebook, Google

Investment

Employment

Human Development
- (e-skills)

National/industry formations
- (unions, associations)
Problem Statement

- Lack of affordable always-available, high speed and quality bandwidth required by business, public institutions and citizens impacted negatively on the country’s development and global competitiveness.

- Significant sector in own right but key service sector.

- High input cost for business/ disincentive for investors, negative impact on job creation – e.g. BPO.

- Considerable sector growth despite economic downturn.
  - But universal access objectives not met.

- Unintended, negative outcomes of policy – access/pricing.
## Policy Options

<table>
<thead>
<tr>
<th>Supply side policies</th>
<th>Demand side policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment/competition</td>
<td>Affordability of services/devices</td>
</tr>
<tr>
<td>Core/access network expansion – public/private</td>
<td>Government leadership/role model - demand stimulation</td>
</tr>
<tr>
<td>Reduction of infrastructure costs</td>
<td>Regulation/ICT skills development/</td>
</tr>
<tr>
<td>Spectrum allocation and assignment</td>
<td>Online local content , applications, e-gov services</td>
</tr>
<tr>
<td>Universal access/service</td>
<td>Consumer welfare/ user empowerment</td>
</tr>
</tbody>
</table>
An ecosystem of high capacity, high speed and high quality electronic networks, services, applications and content that enhances the variety, uses and value of information and communication for different types of users.

To be read together with targets (targets to follow).
Rationale for prioritising Broadband

• Strong evidence of linkages investment in broadband economic growth and improvements in the economy
• Direct opportunities for manufacturing, service provision and job creation, but primarily enhancement of communication flows that improve productivity and efficiency
• Need to reach critical mass to enjoy network effects ➔ access, use and price right ➔ general purpose technology
• Historically state owned monopoly ➔ transfer to private ownership and risk ➔ a public-private interplay where the relative powers and resources of both sectors are leveraged to achieve wide-based national benefit
• Success dependent on appropriate market structure, clear institutional arrangements, high levels of state co-ordination across sector, and tiers of government.
Four pronged approach: Identifying the Gaps

SA Connect is made up of a four pronged strategy:
• Both supply and demand side interventions will close the identified gaps between the current relatively poor status of broadband in the country and the vision of a seamless information infrastructure by 2030
• The strategy will provide:
  • Universal accessibility across the country at a cost and quality that meets the needs of citizens, business and the public sector
  • Access to the creation and consumption of a wide range of converged applications and services required for effective economic and social participation.
Four pronged approach: Closing the Gap

(1) Digital Development
Laying the foundations for South Africa’s broadband future.

(2) Digital Readiness
Addressing needs and ensuring sustainable rollout.

(3) Digital Future
Roadmap for public and private investment in the next generation broadband networks.

(4) Digital Opportunity
Ensuring that South Africa harnesses the benefit of broadband based on skills, R&D and innovation, entrepreneurship, and relevant content and applications.
Four pronged approach: Closing the Gap

(1) Digital Development
The market and sectoral institutions will be restructured to create an environment conducive to public and private investment in the levels of broadband network extension (role of regulation).

(2) Digital Readiness
Supply measures will be used with demand measures in a bid to provide connectivity and enable network extension in areas that are unconnected. Human development needs will be met, via connected schools and hospitals.

(3) Digital Future
An open access national wholesale broadband network will be created through public and private investment in a manner that will initiate long term collaboration of existing infrastructure provider.

(4) Digital Opportunity
Fostering programmes that will realise the benefits of a world-class broadband infrastructure requires complementary policy action related to demand stimulation, skills, research and development (R&D), innovation and entrepreneurship; to local content and applications as well as to ensuring demand.
Digital Readiness
- Policy, legal & regulatory framework
- Coordinated & integrated action
- (Spans across value chain)

Digital Development
- Public sector use aggregation
- Infrastructure extensions
- Connected government
- Localisation across devices, applications and content
- Incubators & application laboratories
- Local content production

Digital Future
- National Broadband Network
  - Affordable high speed broadband
  - Sufficient capacity
  - Universal coverage

Digital Opportunity
- R&D and innovation
  - Quality of life for all
  - National competitiveness
- Skills, e-literacy
  - Equity
  - Economic and political inclusion

Economic Growth, Development, Job Creation
Broadband Policy Objectives

**Current state**

**Affordable, ubiquitous broadband** to meet the diverse needs of public and private users, formal and informal business, and consumers and citizens

**Policy and regulatory** conditions that **enable investment** by public and private sector players to reach South Africa's broadband ambition

**Efficient public sector delivery**, including e-government services - national, provincial and municipal - have broadband connectivity, extended to communities

**Public and private** enterprise, formal and informal, able to fully **exploit the efficiencies offered by broadband** and its potential for innovation

A **strong national skills base** developed for the country to be a proficient and globally competitive knowledge economy

Create an environment for a **vibrant creative and software industry** producing content and applications relevant to meet the needs of the diverse users in the country
Broadband Policy Principles

- Openness
- Service and technological neutrality
- Inclusion: Universality and equity
- Collaboration

- Competition: service and platform
- Co-ordination: Transparency and accountability
- Complementarity
- Future-proof
## Broadband Targets

<table>
<thead>
<tr>
<th>Target</th>
<th>Penetration measure</th>
<th>Baseline (2013)</th>
<th>By 2016</th>
<th>By 2020</th>
<th>By 2030</th>
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<tr>
<td>Broadband access in</td>
<td>% of population</td>
<td>33.7%</td>
<td>50% at 5Mbps</td>
<td>90% at 5Mbps</td>
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<tr>
<td>Mbps user experience</td>
<td>Internet access</td>
<td></td>
<td></td>
<td>50% at 100Mbps</td>
<td>80% at 100Mbps</td>
</tr>
<tr>
<td>Schools/</td>
<td>% of schools</td>
<td>25% connected</td>
<td>50% at 10 Mbps</td>
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<td>Education</td>
<td>connected</td>
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<td></td>
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<tr>
<td>Health facilities</td>
<td>% of health</td>
<td>13% connected</td>
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<tr>
<td>Public sector facilities</td>
<td>% of government</td>
<td>50% at 5Mbps</td>
<td>100% at 10Mbps</td>
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<tr>
<td>offices</td>
<td></td>
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Reviewed periodically and supplemented by pricing and quality of service targets as well as speed of installation and fault repair.
Gap Analysis

- Market structure
- Institutional – capacity and competencies
- Infrastructure
  - Reach
  - Availability and cost
  - Spectrum
- Funding
- Demand stimulation
- R&D, innovation and skills
- Content and applications
- Trust, security and privacy
- Regional integration
- Open access
Gap Analysis - Infrastructure

International connectivity
- Before 2009: 0.34 Tbps
- Today: 11.5 Tbps

Domestic backbone or National Long Distance Network
- > 50 000km

Metropolitan area networks
- Considerable core network infrastructure

Access networks
- Biggest gap

On-site (LAN) connectivity and devices
- Mobile revolution has decreased cost significantly
86% of the South African population resides within 10km of a fibre node.
Strategy to bridging the gap (four prongs)

- Digital Development: Public sector demand aggregation to address critical gaps
  - Policy, regulation & institutional capacity
    - Monitoring and Evaluation

- Digital Opportunity: Skills & institutional capability, R&D, Innovation & entrepreneurship
  - Content and Applications

- Digital Readiness: Policy, regulation & institutional capacity

- Digital Future: National Broadband Network
  - Open access high capacity national broadband network:
    - Wireless
    - Fibre rich access network

Current state

10 year plan

Targets

Broadband vision
Closing the Gap – Digital Readiness

Digital readiness - laying the foundations for South Africa’s broadband future

Establishment of Broadband Council

Institutional capacity – adjust institutional arrangements - ICASA, USASA, USF

Enabling investment in infrastructure build

- Efficient permit granting
- Access to and use of existing physical networking infrastructure:
- Co-ordination and exploiting synergies with other civil works
- Coordination of civil works
- Spectrum

Legal and regulatory framework

- Cybersecurity framework, POPI
- Align existing laws, ECA, ECTA, ICASA, Broadband Infraco Act

Data, information and indicators (Important from the get-go!)

- National ICT indicator portal, transparency, M&E
Closing the Gap – Digital Development

Digital development - addressing needs and ensuring sustainable rollout

• Pooling of public sector demand
  • smart government procurement
  • anchor tenancy
• Closing infrastructure gaps
• Addressing public sector needs
  • Public sector
  • Schools
  • Health
  • Public WiFi
• Incentivising investment in network infrastructure to ‘uneconomic’ areas
• Meeting public sector needs
Digital Future – a roadmap towards South Africa’s National Broadband network

- South Africa’s National Broadband Network will be built as a long term collaborative initiative
  - Consolidation of SOCs
  - Private Sector
- Establishes a high capacity, open access wholesale network that leverages existing infrastructure and private capital to reach underserved areas.
Realising Digital Opportunity

Supply side skills
- Engineering and technical, software development, design, creative, vocational (call centre operations & management)

Demand side skills
- E-literacy
- Institutional capability and capacity (e.g. – schools’ ability to leverage broadband for enhanced educational outcomes)

R&D and innovation and entrepreneurship
- Promoting R&D in ICT South Africa’s ICT RDI Roadmap

Content and Applications
- E-government services
- Local content, diversity of content supply and use.
- E-skills in primary, secondary and tertiary education
- Promoting development of applications, content and services locally
## Measuring performance – Starting point

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<td>Public sector facilities</td>
<td>% of government offices</td>
<td></td>
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Measuring Progress – Potential Indicators

South Africa Connect Strategies

Digital Readiness
- Policy, legal & regulatory framework
  Coordinated & integrated action
  (Spans across value chain)

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Economic Growth, Development, Job Creation

Networks > Services > Devices > Applications > Content
Monitoring and Evaluation –
The role of ICT Indicators

• For reasons of policy purposes and continuous adaptation – we ultimately want granularity (adapted ITU indicators).
• Suggestions of indicators that can be used to measure progress:

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<th>Indicator</th>
<th>Measure of</th>
<th>Data source</th>
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<td>Access</td>
<td>Supply side</td>
</tr>
<tr>
<td>International Internet bandwidth (bit/s) per Internet user</td>
<td>Access</td>
<td>Supply side or demand side</td>
</tr>
<tr>
<td>Percentage of the population covered by at least a 3G mobile network</td>
<td>Access</td>
<td>Supply side or demand side</td>
</tr>
<tr>
<td>Average education level of those who use the internet</td>
<td>Education</td>
<td>Supply side or demand side</td>
</tr>
<tr>
<td>Percentage of women with internet access</td>
<td>Access</td>
<td>Demand side</td>
</tr>
<tr>
<td>Fibre-to-the-home/building Internet subscriptions</td>
<td>Access</td>
<td>Supply side or demand side</td>
</tr>
<tr>
<td>Annual investment in telecommunication services, in USD</td>
<td>Infrastructure</td>
<td>Supply side</td>
</tr>
<tr>
<td>Percentage of households with Internet</td>
<td>Access</td>
<td>Demand side</td>
</tr>
<tr>
<td>Dedicated mobile-broadband subscriptions per 100 inhabitants</td>
<td>Access</td>
<td>Supply side or demand side</td>
</tr>
<tr>
<td>Installation fee for residential telephone service</td>
<td>Affordability</td>
<td>Supply side</td>
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• Importance of supply side and demand side indicators are important
  • NB: National ICT Indicator Portal updated quarterly
  • Nationally representative demand side surveys to fill the gaps that are created by supply side
Thank you