Department of Communications

SOUTH AFRICA CONNECT:
CREATING OPPORTUNITIES, ENSURING INCLUSION

South Africa's National Broadband Policy

11 November 2013

International Expert Meeting, Pretoria

Process

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

- 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

Policy & strategic planning

A **national project** that will galvanise the capability, resources and energy of public and private actors towards realising a bold vision of a connected society

South African ICT ecosytem

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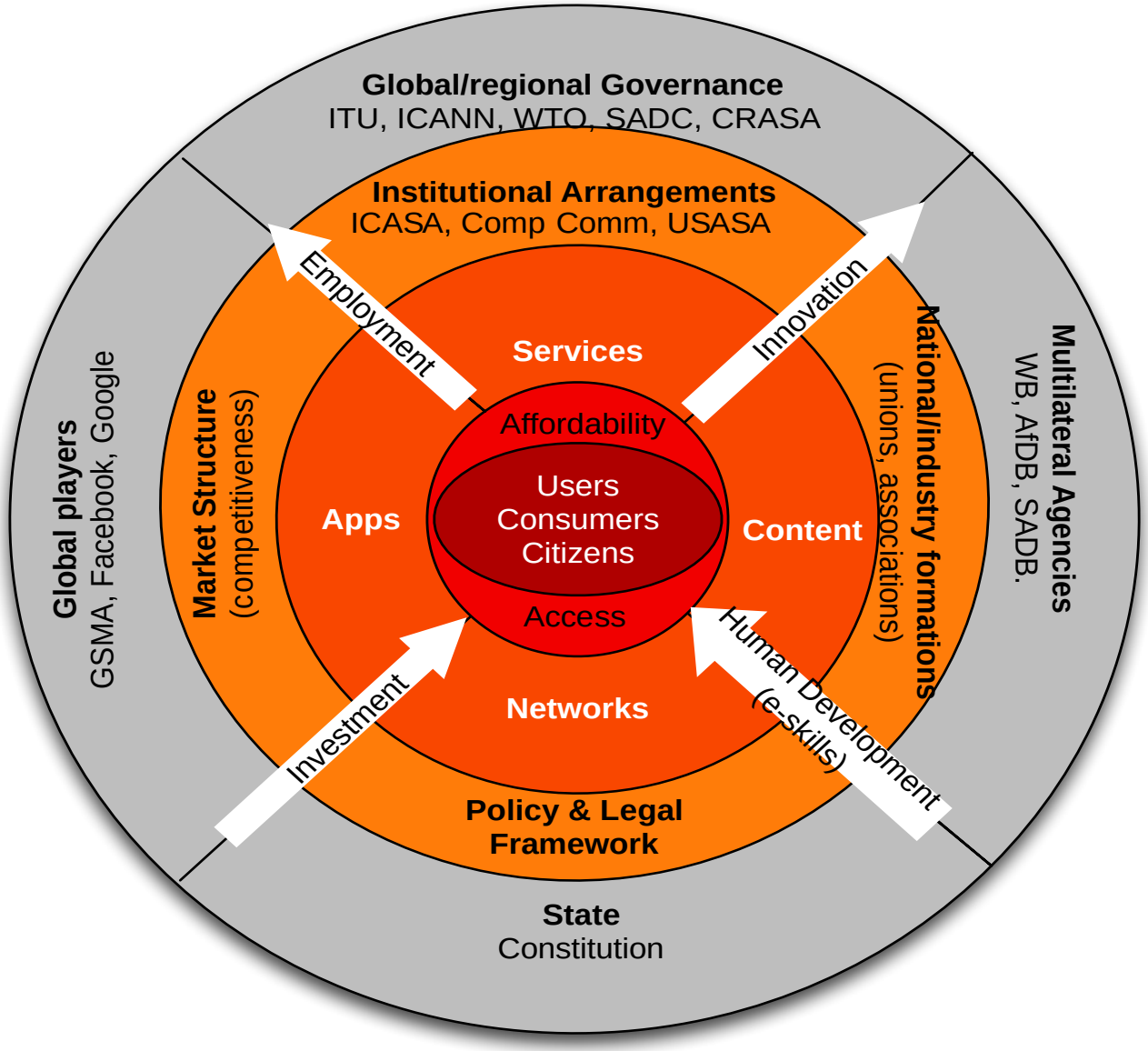

Policy options

Supply side policies	Demand side policies
Investment/competition	Affordability of services/devices
Core/access network expansion – public/private	Government leadership/role model - demand stimulation
Reduction of infrastructure costs	Regulation/ ICT skills development/
Spectrum allocation and assignment	Online local content , applications, e-gov services
Universal access/service	Consumer welfare/ user empowerment

Functional definition

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.

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 ➔ **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 **market structure, institutional arrangements, high levels of state co-ordination**

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Purpose

To present a vision, strategy and ultimately a long-term plan that is immediately institutable 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 roadmap for a national broadband network** that harnessing **public and private** sector contributions, capabilities and resources.

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
- Descent down global indices – ITU Development Index, WEF E-readiness Index, WEF Competitiveness Index, Human Development Index
- (See NDP Diagnostic Report)

National policies – NDP, New Growth Path & SIP15

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NDP: The ICT sector by 2030 will underpin the development of a **dynamic and connected information society** and a **vibrant knowledge economy** that is more inclusive and prosperous. A seamless information infrastructure will be **universally available and accessible…**

New Growth Path: One of the **job creation drivers** identified as part of the **New Growth Path**, the national 5-year economic plan for the country, is the element of the **knowledge economy – an economy that is underpinned by access to affordable high speed broadband…**

Strategic Integrated Project (SIP) 15: Expanding Access to Communication Technology which "to ensure **universal service and access to reliable, affordable and secure broadband services** by all South Africans, **prioritising rural and under-serviced areas** and **stimulating economic growth**."

2020 Broadband Vision

South Africa's National Development Plan (NDP) provides a vision of the ICT sector as one, which by 2030 will:

> underpin the development of a **dynamic and connected information society** and a **vibrant knowledge economy** that is more inclusive and prosperous. A **seamless information infrastructure** will be **universally available and accessible** and will meet the needs of individuals, business and the public sector, providing access to the **creation and consumption of a wide range of converged services** required for effective economic and social participation – at a **cost and quality** at least equal to South Africa's main economic peers and competitors

In line with the broader vision of the NDP, the 2020 Vision for broadband is that **by 2020, 100% of South Africans will have access to broadband services at 2,5% or less of the population's average monthly income.**

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Broadband Policy Objectives

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Current state

Broadband vision

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 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

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

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

2001-2009

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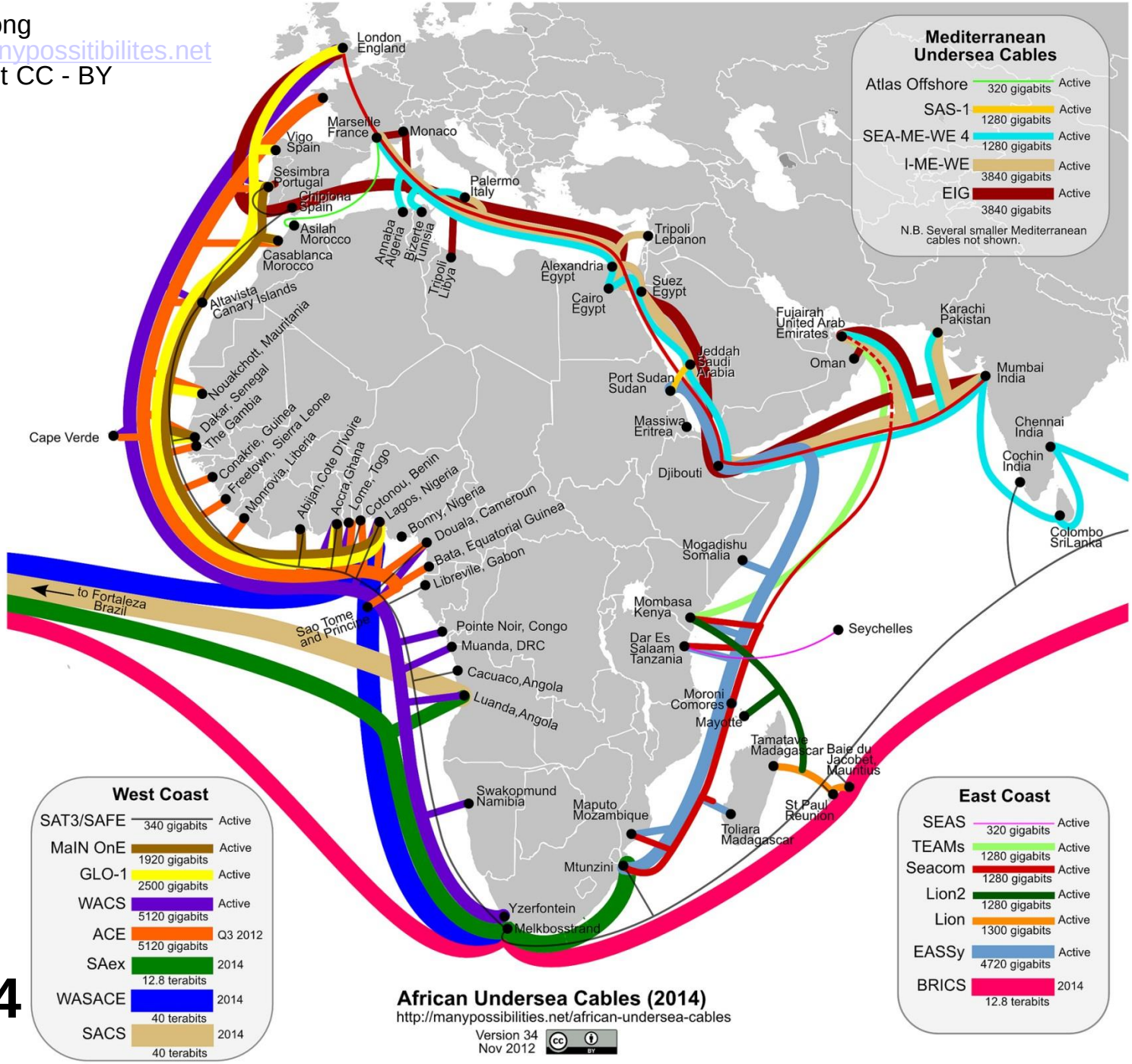
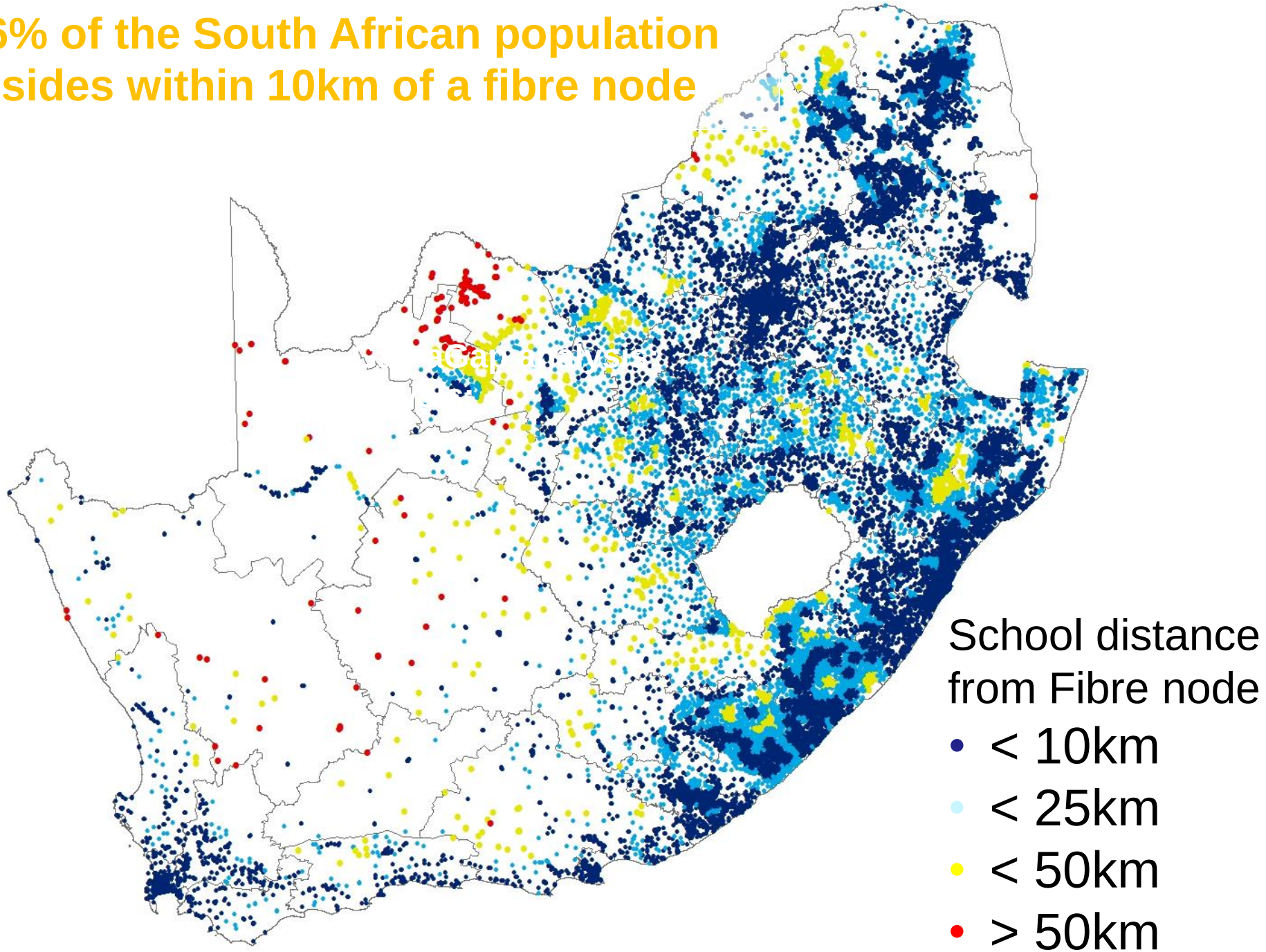


2014

86% of the South African population resides within 10km of a fibre node



A new Broadband Plan – Digital South Africa:

Four Pronged strategy to bridge the gap

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Broadband vision

Government investment in high capacity user networks for key areas of need education, health, rural access

Open access high capacity national broadband network:

- Wireless
- Fibre rich access network

Current state

Digital readiness:
Policy, regulation & institutional capacity
Monitoring and Evaluation

Digital Development:
Public sector demand aggregation to address critical gaps

Road mapping

Digital Future:
National Broadband Network

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

Targets

10 year plan

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

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

- National ICT indicator portal, transparency, M&E, UN reporting

Closing the gap: 2. 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 through
    - Consolidation of SOCs
    - Directing Private Sector investment through incentives
- Establishes a high capacity, open access wholesale network that leverages existing infrastructure and private capital to reach underserved areas.

Design criteria for the National Broadband Network include:

- Open access
- Pooling and sharing of existing network assets by as many existing players as possible
- Collaboration and coordination of future network build outs
- Complementary roles for government, state owned enterprises and the private sector
- Creation of a national open access wireless network, which would also address the regulatory requirement to encourage new entrants

Network Design:

- The ultimate goals of this policy will only be realised through the deployment of **fibre access networks** extensions from a **national fibre backbone**
- The high cost and time required to build fibre access networks demand **wireless access solutions** that need to be implemented in parallel with development of fibre access networks
- Service providers require both fibre-based access networks and the wireless access network at affordable and non-discriminatory rates to fixed fibre backbone facilities to enable attractive end-to-end wholesale services to retail services providers

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
- Industrial policy: promoting development of applications, content and services

Funding

The scale and scope of the South Africa broadband challenge requires investment by both the public and private sector

1. ***Digital readiness*** will be funded by government through **reprioritisation** and rationalisation of existing budget allocations - <<R100m per annum
2. ***Digital development*** will be funded by government through **reprioritisation** of existing national and provincial budget allocations supplemented by **new allocations –** R6bn to R35.1bn over 10 years
3. ***Digital future*** will be funded through public and private funding sources based on the **business plan** developed during the road-mapping process – R70bn to R188bn total investment
4. ***Digital opportunity*** will be funded by government through **reprioritisation** and rationalisation of existing budget allocations supplemented by **new allocations** where appropriate – R900m to R5bn over 10 years

An environment conducive to private sector investment will be created through enabling and certain policy and regulation

Broadband Value Chain

South Africa Connect Strategies

Networks → Services → Devices → Applications → Content

Digital Readiness

Policy, legal & regulatory framework
Coordinated & integrated action

Digital Develop-ment

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 Oppor-tunity

R&D and innovation
- Quality of life for all
- National competitiveness

Skills, e-literacy
- Equity
- Economic and political inclusion

Economic Growth, Development, Job Creation

Thank you