# **SA Connect National Broadband Policy**

Review for NIP 2050 Submission

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### Key References from SA Connect International Conference 11/12 November 2013

The following list of reference documents represents a short selection from thirty high quality papers and presentations from the International Experts Meeting held in Pretoria, South Africa, 11 to 12 November 2013. All documents in this small selection are available for download at <a href="https://www.sakan.org.za/SakanDocs.html">https://www.sakan.org.za/SakanDocs.html</a>. The remaining 27 documents are available via email request to

walter@sakan.org.za.

- 1. Introduction: Department of Communications, 11 November 2013. 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.
- 2. Global Perspectives on Broadband Policy And their implications for South Africa: Broadband in education targets insufficiently ambitious (should be 100% connectivity and a minimum of 10 Mbit/s per class by 2016, not per school): Tim Kelly, The World Bank.
- ACCESS TO UNDERSERVICED/RURAL AREAS AND LICENSING: Dr Ernest C Ndukwe, OFR, former CEO of Nigerian Communications Commission, NCC.: "People will sign on for Broadband internet when: ● it is available; ● they understand and appreciate its benefits; ● it is affordable; ● relevant content is available to meet their needs and tastes".
- 4. The impact of South Africa Connect on jobs and the economy: Dr Raul Katz, Columbia University/ITU: Slide 24 If SA Connect delivered by 2020, R 90,397 billion added to GDP, 400,000 jobs per annum. Demand Gaps in 2012/2013: 65% fixed, 56% mobile: Primary obstacle is <u>AFFORDABILITY!</u>
- Policies and Challenges on the Brazilian National Broadband Plan: André Gomes, Ministry of Communications, Brazil: Aggressively assigned and allocated 2,5 GHz, 450 MHz and 700 MHz spectrum bands for rapid broadband rollout and price reductions, 35Mbps download speed at 450MHz band LTE Rural Service, Full DTT migration by 2016.
- 6. Contribution by the Office of Electronic Communications, Republic of Poland: Ms Marzena Sliz: All broadband maps with full details in 100% public domain, attracting investors to fill all access gaps; ●

Access targets: 100% households at 30 Mbps, 50% at 100 Mbps by 2020; • 100% Open Access Networks, all non-telecommunications infrastructure utilised, including electrical power pole-mounted and buried cable routes:

7. Broadband – why and how?: Lessons from Estonia, Mait Heidelberg, Ministry of Economic Affairs and Communications: Country Background: 
• Population//Population Density: 1.3m//29/km<sup>2</sup> (Compare S. Africa 2022 – 66.7m//25/km<sup>2</sup>); • Fixed Broadband per 100//Fixed Broadband Households: [2010 -26%//68%: 2021 – 33%//92% | S. Africa 2010 – 1.45%//10%: 2021 – 2.2%//8.3%] • Schools: Absolute equality of schools and children; All schools connected at >10 Mbps per class; Best Educational Outcomes in EU; Online presence and identity from birth; • Difficult terrain and access rural areas given hights priority; • Most resilient ICT networks – hostile former colonial power, major cyber attacks in 2007 and 2022, rapid restoration of services.

### SA Connect Targets set in 2013:

SOUTH AFRICA CONNECT: CREATING OPPORTUNITIES, ENSURING INCLUSION Broadband Targets				the Departin Communication	doc ment: unications BLIC OF SOUTH AFRICA
Target	Penetration measure	Baseline (2013)	By 2016	Ву 2020	By 2030
Broadband access in Mbps user	% 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					

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". Page 13 of 62 in Government Notice 953 of 6 December 2013

"In line with the broader vision

speed of installation and fault repair

A global leader in the development and use of Information and Co

### The Reality in 2021: STATS SA P0318

Figure 13.2: Percentage of households with access to the Internet at home, or anywhere, by province, 2021



Just 10.4 South African Homes have internet connections for Entertainment, Information, Education and Learning, and holistic personal and community development for a decent existence.

The Average for Upper-Middle-Income emerging economies like South Africa, and many poorer ones like

Vietnam, is approximately 60%. South Africa's deficiencies in broadband growth for all leads directly to the alarming inequality differentials depicted by the IMF in the "Inequality 5" graphic that follows.

# Schools Connectivity

- In 2021, the National Education Infrastructure Management System Report (<u>NEIMS 2021</u>) states that just 20% of South Africa's Schools were equipped with Internet for Teaching and Learning – Quality/Quantity unknown, unstated.
- 30% of all schools had internet connections for Admin Only.

### NEIMS Internet Access Reports:

Internet Connections to Schools – 2011 to 2021

Report	Number of	Internet for Teaching and		Internet fo	or Admin Only	Comments
Date	Schools	Learning				
		Number	Percent	Number	Percent	
2011	24,793	3167	13%			
2012	24292	3133	13%			
2013	23909	3182	13%			
2014	23740	4589	19%	5800	24%	
2015	23589	4599	19%	5849	25%	
2016	23577	4646	20%	6041	26%	
2017						No report
2018	23471	4675	20%	6574	28%	
2019	23258	4695	20%	6770	29%	
2020	23267	4723	20%	6852	29%	
2021	23276	4738	20%	6938	30%	

## Cost to Communicate in South Africa 2022

**Cost of Broadband**: The lowest cost of 1 GB per month in South Africa (July 2022) was reported to be Rand 89. This amounts to 12% of the total monthly income for up to 76% (48 million) South Africans who are deemed poor. This also amounts to 17% of the available income for nearly 14 million South Africans who cannot afford enough food for themselves and their families, those who lived at or below the Food Poverty Line (FPL) of R531 per month (2015), as reported by the <u>STATS SA's Poverty Trends Report of 2017</u>. All this before the global coronavirus pandemic added to the woes of South Africa's poorest citizens.

The cost-to-communicate statistics relevant to this discussion are:

- SA Connect Target: 2.5% of monthly income or expenditure. This equates to an average of Rand 19.2 per month for those South Africans living below the national poverty lines.
- The International Recommendation for a transformative broadband service is 2% of monthly income or expenditure for 1GB of mobile broadband per month (<u>https://a4ai.org/1for2-affordability-target/</u>). This equates to an average monthly cost of Rand 15.36 for South Africans living below the national poverty lines.
- The lowest cost of 1 GB per month in South Africa is thus is 4.6 times SA Connect target, 5.8 times the Internationally Recommended target, and demands that the poorest South Africans who struggle to afford food must spend about 17% of what they have on the broadband they need to find the food they need.

# Statistics and Charts

## **Inequality:**



Sources:

- 1. <u>https://www.imf.org/en/News/Articles/2020/01/29/na012820six-charts-on-south-africas-persistent-and-multi-faceted-inequality</u>
- 2. Finland data: https://data.worldbank.org/indicator/SI.DST.FRST.20?locations=FI
- 3. OECD data: <u>https://data.oecd.org/inequality/income-inequality.htm</u>

## **Poverty:**



## **Unemployment:**



## Peer country benchmarks

### ICT Access and Use (1)

Ηοι	isehol	d Broadba	and Pe	netration 2	2019	24/7 Internet Connected House	seholds
Develo	ping	Develo	ped	Global Le	Global Leaders 11.5		
Country	Value	Country	Value	Country	Value		0.0
Argentina	63	USA	88	France	100	ş / /	0.0
/ietnam	55	Australia	86	Switzerland	100	e 10.5	
Colombia	48	Ireland	84	S. Korea	100		
hailand	45	Uruguay	82	Netherlands	96	9 <u>.8</u>	\
5. Africa	9	Estonia	75	Denmark	92	ō 9.5	
Eco	onomic B	ackground: Gl	NI per Ca	oita (2019 US\$ 0	00)	9 0	21
Argentina	11.13	USA	65.9	France	42.5	Leg .	5.1
/ietnam	2.6	Australia	55.1	Switzerland	85.5	8.5 STATS SA March 2022: Value for 2020 (6	Graph 3 page 12): 8.3%
Colombia	6.51	Ireland	64	S. Korea	33.8	8	
hailand	7.26	Uruguay	16.2	Netherlands	53.1	2011 2012 2013 2014 2015 2016 2	017 2018 2019
S. Africa	6.04	Estonia	23.3	Denmark	64	South Africa: Fixed Internet Household Penetral	tion 2011 to 2019
. Source: https:// . "Value" . Fixed B weighti househ	World /data.wo / = estima roadband ing "broa	Bank Fixed rldbank.org/in ated % of hous d household pe dband subscri	Broadbar dicator/I1 seholds w enetration ptions pe	nd Subscription <u>ENET.BBND.P2</u> ith 24/7 broadbin: estimates derived r 100" using ave	s per 100: and ved from rage	South African official statistics by STAT Household Survey series P0318 - 2011 to 2019 <u>http://www.statssa.gov.za/publications/P0318/P0</u> for year 2019	S SA: Genera ), e.g., <u>)3182019.pdf</u>

### ICT Access and Use (2)



## SADC Benchmarks:



## Fixed Broadband Growth Rates SADC



# Education and Learning



# Media Coverage related to SA Connect and NIP 2050



https://www.itweb.co.za/content/R8OKdWMDeLEqbznQ Staff Writer, 12 March 2015

## Phase one of SA Connect to begin in April - Minister Siyabonga Cwele



Telecommunications and postal services minister, Siyabonga Cwele says WiFi should not only be for the privileged.

The first phase of SA Connect will kick off next month, with plans to have more than 4 000 schools online by mid-year.

This is according to telecommunications and postal services minister Siyabonga Cwele, addressing the inaugural conference of the WiFi Forum of South Africa in Johannesburg today.

Cwele announced the first phase of implementation for SA Connect will begin next month. "We will connect 580

clinics, 4 444 schools, 182 police stations and 572 other government offices to the internet by June this year," he said.

The SA Connect policy framework was important for the forum to reflect on as it discusses the best means to deploy WiFi in South Africa, said Cwele. "The inexpensive equipment used to create Wifi hotspots and their low operating costs make it possible for widespread adoption of WiFi as a delivery method for the goals of SA Connect."

Last month, president Jacob Zuma highlighted broadband as one of the country's nine focus points for this year during his State of the Nation Address.

Cwele also stressed the critical role access to Internet connectivity has to play as the country seeks to grow the economy, which is languishing and only expected to grow 2% this year. The forum is a voluntary industry body comprising operators, service providers, technology providers and associated parties that have been tasked with implementing reliable and affordable WiFi across South Africa

By 2020, South Africa should achieve a 100% penetration rate for broadband, with all South Africans connected. Cwele said that currently, Internet is at 49% penetration, while high-speed broadband only has a penetration rate of 17%.

See also

Govt still skirting Telkom tender issue

### **R1.1bn earmarked for SA Connect**

"In pursuit of this goal, government has developed SA Connect, our national broadband policy to guide how best we can roll out broadband and ICT services to all South Africans," added Cwele.

# **ENGINEERING NEWS**

https://www.engineeringnews.co.za/article/public-works-dept-calls-for-public-comment-on-draftnational-infrastructure-plan-2021-08-12 | 12th August 2021 By: <u>Tasneem Bulbulia</u>

### Public Works dept calls for public comment on draft National Infrastructure Plan

The Department of Public Works and <u>Infrastructure</u> (DPWI) has gazetted the draft National <u>Infrastructure</u> Plan 2050 (NIP 2050) for public comment.

The NIP 2050 was prepared by <u>Infrastructure</u> South <u>Africa</u> (ISA), working closely with sector specialists and other stakeholders, over a period of six months, the DPWI notes.

It highlights that <u>infrastructure</u> development is critical to attaining South <u>Africa</u>'s long-term economic and social goals and that the NIP 2050 will ensure that the foundations for achieving the National Development Plan (NDP) vision for inclusive growth are supported.

"The NIP 2050 offers a strategic vision and plan that links top NDP objectives to actionable steps and intermediate outcomes.

"The aim is to promote dynamism in <u>infrastructure</u> delivery and address institutional blockages and weaknesses that hinder success over the longer term. Additionally, the NIP 2050 will guide the way to <u>building</u> stronger institutions that can deliver on [the] <u>infrastructure</u>-related aspirations of the NDP," the DPWI says.

Recommendations are made to accelerate progress towards its development objectives.

There is a focus on strengthening the performance of State-owned enterprises; sector-specific regulation; State capacity; and private participation in public <u>infrastructure</u> delivery and management.

The NIP 2050 is neither a database of all <u>projects</u>, a consolidation of master plans, a spatial mapping of <u>projects</u> nor a mechanism for centralised decision-making, the DPWI clarifies.

It says the NIP 2050 seeks to identify the most critical actions needed for sustained improvement in public <u>infrastructure</u> delivery that will have an impact in the short term but with the longer-term outcomes in view.

In this first iteration, the NIP 2050 will focus on the critical network <u>infrastructure</u> sectors of <u>energy</u>, <u>freight</u> <u>transport</u>, <u>water</u> and digital communications.

A second-round NIP 2050 will extend to distributed infrastructure and related municipal services.

The public have until September 17 to make written submissions.

A copy of the gazette is available at: <u>http://www.publicworks.gov.za/PDFs/44951\_10-8\_PublicWorksInfras.pd</u>



https://www.engineeringnews.co.za/article/national-infrastructure-plan-2050-leans-heavily-onprivate-sector-to-close-r2tr-finance-gap-2022-03-16 | 16th March 2022 By: <u>Terence Creamer</u>

## National Infrastructure Plan 2050 leans heavily on private sector to close R2tr finance gap



Infrastructure South Africa head Dr Kgosientsho Ramokgopa

The first iteration of the updated National <u>Infrastructure</u> Plan 2050 (NIP 2050) points to a substantial finance gap of at least R2-trillion that will have to be closed if South <u>Africa</u> is to build the economic <u>infrastructure</u> required to deliver the growth and social objectives outlined in the National Development Plan (NDP).

Gazetted last week by Public Works and <u>Infrastructure</u> Minister **Patricia de Lille**, the document focuses exclusively on <u>energy</u>, <u>water</u>, <u>freight transport</u> and digital communications <u>infrastructure</u>, with a second iteration to

follow focusing on distributed infrastructure and related municipal services.

The 80-page document states that meeting the <u>infrastructure</u> goals outlined in the NDP will cost R6.2-trillion between 2016 and 2040, with <u>transport</u> and <u>energy</u> accounting for over 72% of the investment required.

"As of 2021, the finance gap that needs to be closed is estimated at R2.15-trillion," the document states.

In a briefing on the plan, <u>Infrastructure</u> South <u>Africa</u> head Dr **Kgosientsho Ramokgopa** said the capacity of government and State-owned companies to secure the required finance had been "significantly undermined" in recent years and that it would, thus, need to lean more heavily on alternative financing models to crowd in private finance.

The document states that the public sector will partner with the private sector and development finance agencies to secure about one-third of the amount that needs to be invested until 2050.

"Ultimately, infrastructure can be funded only by two sources: taxes and user payments.

"While finance can be raised from multiple sources, its availability and cost depend on the reliability of funding plans to <u>service</u> and ultimately repay any finance," the document states.

The plan envisages the <u>building</u> of government-wide capacity to <u>design</u> and launch partnerships and alliances with the private sector, including public–private partnerships (PPPs), which are described as an "underutilised opportunity to raise private investment in public <u>infrastructure</u>".

Besides continuing with the <u>Renewable Energy</u> Independent <u>Power</u> Producer Procurement Programme, the NIP 2050 envisages partnerships emerging across most, if not all, of the 62 Strategic Integrated <u>Projects</u> that have been Gazetted for expedited development in terms of the <u>Infrastructure</u> Development Act.

In addition, the <u>infrastructure</u> procurement framework will be revised "to require public institutions to consider partnering with private sector partners as an optimal procurement option", while the PPP regulations will be revised to simplify approval processes, standardise models for certain types of <u>infrastructure</u>, and speed up the time from initiation to procurement.

The document also states that the approach, rules and regulations for partnerships and alliances will be widened with the intention of deepening and expanding the opportunity for finance, build and operation.

There is also an intention to apply lifecycle planning to all <u>infrastructure</u>, with full budgets determined upfront and measured against lifecycle benefits.

Meanwhile, it is envisaged that the R100-billion <u>Infrastructure</u> Fund will deliver a robust pipeline of <u>projects</u> through blended finance models with significant participation from the private sector.

Ramokgopa said it would be essential to build capacity at all levels of the public sector to <u>design</u> bankable <u>projects</u> and manage them through to completion.

Capacity should also be built at national and local government level to issue specialist green finance instruments such as green bonds.

De Lille said the NIP 2050 aimed to ensure that there was the necessary long-term view of <u>infrastructure</u> to drive economic and social transformation in line with the NDP.

"There is a pressing need for a shared long-term vision and a robust institutional platform to enable sustained and continuous improvement in public <u>infrastructure</u> delivery," she added, arguing that the ISA was providing government and its partners with a bird's eye view of the opportunities.

# •••• <u>https://www.ellipsis.co.za/national-infrastructure-plan-2050/</u> | 8 November 2021

## Ellipsis Summary of the Draft National infrastructure plan 2050 Phase 2

[8 November 2022] The Department of Public Works and Infrastructure (DPWI) has published the draft National Infrastructure Plan 2050 Phase 2 for public comment.

Comments are due by 9 December 2022 and should be submitted to the Deputy Director-General: Infrastructure Investment Planning | <u>NIP2050Phase2@dpw.gov.za</u> and any enquiries can be directed to Mr Charles Mabuza, Lead: National Infrastructure Plan at 011 269 3128.

### Draft National Infrastructure Plan 2050 Phase 2

[*14 September 2021*] The deadline for comments on the draft National Infrastructure Plan 2050 has been extended to 1 October 2021 (previously 17 September 2021).

Infrastructure Development Act: National Infrastructure Plan 2050: Extension of date for comments

[11 August 2021] The Department of Public Works and Infrastructure (DPWI) has published a draft National Infrastructure Plan 2050 for public comment.

### Draft National Infrastructure Plan 2050

### NIP 2050 Digital Consultation August 2021 - DPWI presentation

The Draft NIP 2050 includes a section relating to digital communications. We have set out below the table showing elements of the plan relating to digital communications and the steps to be taken to achieve the objectives of the Plan:

Strategic element	2050 Vision – how it will be done
	<ul> <li>High speed broadband will be available in underserved areas and affordable and accessible to low income communities.</li> </ul>
High speed broadband is universally	<ul> <li>Investment in last mile connectivity, mainly through a complementary mix of wireless broadband technologies, targeting rural and underserved populations</li> </ul>
accessible	<ul> <li>Lessons from SA Connect and Universal access initiatives will be reviewed to improve delivery and impact in future</li> </ul>
	<ul> <li>There will be better coordination of infrastructure projects to leverage complementary resources (such as roads or electricity)</li> </ul>
	<ul> <li>All government buildings will be connected with high speed broadband, have sufficient services to make the broadband usable (LAN, WAN, equipment).</li> </ul>
	All government buildings will offer access to free wifi for low income users.
Government services and buildings are digitally enabled	<ul> <li>Government will implements the National e-Strategy and e-Government Strategy and Roadmap (2017). There will be clear role identification and approaches to ensure interoperability and data sharing</li> </ul>
	<ul> <li>Universal access and public sector connectivity will rely on government as procurer and regulator and not as implementer. The Western Cape and Tshwane offer two different examples.</li> </ul>
	<ul> <li>There will be transparent monitoring and evaluation of digital services in the public sector.</li> </ul>
	<ul> <li>ICASA's regulatory capability will benchmark to the best globally.</li> </ul>
Population is anabling of compatitive	<ul> <li>The appointment of ICASA regulators will be transparent, with clear criteria and a committee containing critical stakeholders</li> </ul>
and universally accessible broadband	<ul> <li>ICASA will be held accountable for the quality of regulation with respect to spectrum, pricing, infrastructure sharing and similar</li> </ul>
	<ul> <li>There will be a robust model for wholesale data services which is effectively regulated</li> </ul>

### Strategic element

Public sector capacity is strong and can drive the required policy agenda

Private sector participation in achieving universal broadband access is prevalent [The immense private sector participation, and the impressive albeit pro-wealthy focused national networks must be acknowledged, an extended to SME providers]

Partnerships are strong and there are Centres of Digital Excellence promoting a growing knowledge base on delivery and innovation

The ICT skills base is robust

[It is more than the ICT skills base that needs attention – it is the fundamental knowledge base which ultimately builds and shapes the ICT skills base]

#### 2050 Vision – how it will be done

- Government capacity to design and procure digital infrastructure and services projects will be technically sound.
- There will be commitment to institutional stability, good governance, and appropriate capacitation in senior appointments.
- There will be attention to leveraging state infrastructure from non-ICT SOCs to enable faster deployment of broadband
- The model of delivery increasingly leverages a vibrant private sector participation and blended financing. It is envisaged that R30bn to R80bn will be raised to finance the roll-out of government broadband and services in the medium term.
- There will be special vehicles promoting blended finance in public broadband infrastructure. Inter alia, these provide incentives for de-risking private sector investments in rural areas and accelerating broadband delivery in peri-urban areas; demand-side schemes for subsidizing low-income consumers' communication costs; and innovative use of unlicensed spectrum (Wi-Fi, TV whitespace).
- The allowable period for public procurement of telecoms and digital services will be lengthened, to enable private provision in ways that also deliver services to underserved communities monetized over 10-20 years.
- The PPP framework will be strengthened as discussed in section 4 of the NIP 2050

Globally, governments and regulators struggle to keep up with fastmoving digital trends and this is also so in South Africa. Meaningful sustained partnerships and knowledge forums will be leveraged and engage government, business and other stakeholders in a focused practical manner. These will enable governments and regulators to keep up with fast-moving digital trends and also contribute to strengthening private-public cooperation and joint learning. There will be a number of formations that could service this need such as the Presidential Commission on 4IR (PC4IR) and/or the Public-Private Growth Initiative (PPGI).

The ICT skills base will be continuously improving, creating an e-savvy nation and offering sufficient support to private and public investments. Some of the priorities include:

- Connecting all schools by 2023, with supportive digital services in the school and in the cloud, and free WiFi to low-income households nearby.
- Centres of excellence supported to innovate in digital teaching and learning methodology from school to PSET. ICT training need to be core in teacher training curriculum and in ongoing professional development.
- Stronger partnerships between vocational training and industry to ensure relevance of curriculum and pathway into digital apprenticeships and workplace learning.
- The causes of poor throughput of high-quality ICT graduates identified and addressed
- Opportunities to unemployed youth to gain digital literacy and related vocational skills created and act as significant channel to work
- Critical technical skills to operate and maintain digital infrastructure will be developed and available in South Africa
- There will be innovation in the ICT industry and testing of newer cost effective technologies for broadband penetration
- There will be enhanced links to international Accelerator Programmes through ICT organisations like ITU and GSMA to boost the youth e-readiness.

### SIPs:

Expand broadband coverage to all households and schools by 2020 – No 15.

SKA and MeerKAT – no 16 Space Infrastructure Hub – SANSA – No 22

Digitising of Government Information - no 30

Top priority SIPs

### Strategic element

### 2050 Vision - how it will be done

SA Connect Phase 1B Programme – no 35

#### Priority projects to augment the list of SIPs

- to be augmented upon strategy finalised as listed in the '3-year action steps' below
- Digital migration will be concluded and Spectrum will be released in 2021/2. Digital migration must take place before relevant spectrum is auctioned and/or paid for. Spectrum auction will be done with careful attention to competition objectives.
- Policy will be concluded for rapid deployment of electronic communications networks and facilities in 2021/2
- Executive leadership of government departments, entities and regulator responsible for digital delivery will be stabilised and appointed according to capability.
- Review of approach to wholesale regulation and service provision will be done by 2021/2. The wholesale regulatory approach will be evaluated – whether a Wholesale Open Access Network (WOAN) or alternatively promoting competition through stronger wholesale regulation and obligations tied to spectrum allocation and/or spectrum set-asides to encourage access by operators with less access to capital.
- Arrangements required to enable private participation in public interest digital delivery will be in place by 2022/3. Most importantly, this will include special purpose vehicles to promote blended finance and procurement rules that enable long term partnerships, such as the proposed Broadband Fund.
- 80% of public buildings, especially schools, health facilities and police will be connected by 2023/4, in line with the targets of Government's Medium Term Strategic Framework (MTSF).
- High speed broadband will be available and accessible in every community by 2023/4. There will be consideration of free-basic data for low income users, similar to that for water and electricity.
- SIPs reviewed in 2021/2 to include:

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- E-enablement of all government buildings. Inter alia, this includes:
  - At least 80% of schools are connected by December 2022.
  - Local and provincial government broadband and related ICT initiatives are streamlined and rationalised, with clarification of mandates, roles and responsibilities.
  - The model for public-private partnerships is progressed with material impact on delivery. Government will identify three top priority pilots where PPPs are used to introduce overarching digital modernisation. Examples include policing, health, education, water or smart cities.
- Digitisation of government services to be scoped and projects identified, funded and augmented into the SIP
- Data centre strategy finalised in 2021/2
- Satellite communications strategy finalised in 2021/2. Implementation begins 2022/3.
- SKA regional digital roll out strategy finalised in 2021/2.
- Consideration of Smart City policies

Nov 8th, 2021 electronic communications infrastructure, Open for comment, snippets

### 3-year action steps

[At least 80% of schools are connected by December 2022 – Qualification needed – SA Connect set targets of 100% at 10Mbps, 80% at 100 Mbps, actuality is 20% at unknown, unmeasured gualities]

[Is "digitization" the objective, or is it information and knowledge sharing to all segments of society, young, old, rich, poor? – technology, digital and its successors, are tools to achieve human objectives, not objectives themselves]

## ICASA 2021 5G Annual Report



https://www.icasa.org.za/uploads/files/I CASA-2021-5G-Annual-Report.pdf

### Introduction

5G is a catalyst for innovation, giving an opportunity to industry and service providers, communities, and individuals to advance their digital agendas towards economic growth, job creation and socio-economic development.

The role of the 5G in South Africa cannot be understood independently from the current state of industrialisation, the role of politics and stakeholder organisations, state relationships, multilateral agreements, and more.

This report by ICASA, 'The State of 5G in South Africa: From Readiness to Recommendations', emanates from initial thinking about the state of 5G readiness in South Africa, and aims to benefit the ICT sector at large in order to pave the way to get South Africa fully ready to roll out and benefit from 5G.

### Media Coverage:

**MyBroadband** 24 August 2023: MTN, Vodacom, Cell C weigh in on 5G in South Africa: <u>https://mybroadband.co.za/news/5g/505038-mtn-vodacom-cell-c-weigh-in-on-5g-in-south-africa.html</u>

- MTN: According to Jacqui O'Sullivan, MTN's chief sustainability and corporate affairs officer, the mobile network operator now covers 25% of the population with 5G connectivity. "MTN has deployed 5G in the 3.5GHz spectrum band acquired from the 2022 High Demand Spectrum Auction," said O'Sullivan. "MTN has 25% population coverage and has over 1,600 deployed 5G sites in metros, cities and towns where there is greater data demand and 5G device penetration is growing." "MTN is encouraged by the growth in mid-tier 5G devices at affordable price points, which will drive 5G device penetration in the network," she said.
- **Cell C:** Cell C has yet to launch 5G services in South Africa, and the operator told MyBroadband that it is currently modernising its core network to prepare for the technology. "Cell C is currently in the process of modernising its core network to the latest architecture necessary for 5G deployment and progressing discussions with the network partners," it said. Since the operator doesn't have its own network infrastructure, it didn't comment on the network vendors it is using.
- Rain: Rain said it had recently gained access to its spectrum in the 700MHz band, which will help it expand its 5G coverage. "Rain continues to expand our 5G network, we have recently gained access to the newly acquired spectrum in the 700MHZ band, which will enable us to further expand our 5G coverage layer and bring rain 5G to new towns and regions," it said. "Regarding vendors, Huawei is our key 5G partner."
- Vodacom: Vodacom spokesperson Byron Kennedy told MyBroadband that it is continuing to invest and expand its 5G network in South Africa. "Vodacom South Africa has a multi-vendor approach and uses the likes of Huawei and Nokia as Radio Access Network vendors," Kennedy added.
- **Telkom:** MyBroadband also asked Telkom for comment, but they hadn't answered our questions by publication.

### Now read: Cheapest 5G smartphones in South Africa — prices from R3,599

South Africa plans to <u>switch off its 2G and 3G networks</u>, and while there are numerous affordable smartphone options with support for 4G, cheap 5G-enabled smartphones are far less abundant.

MyBroadband scoured online retailer catalogues in South Africa to find the most affordable 5G-enabled smartphones.

While South Africa's plan to switch off the legacy networks has hit a snag, it is still in effect. Communications minister Mondli Gungubele set a deadline of 30 September 2023 to finalise the next-generation spectrum policy.

Thereafter, South Africa will likely gradually shut down 2G and 3G services and networks.

**Comment:** The cheapest 5G-enabled smartphones costing R3,599 or more, equate to 5.4 times the total monthly R663 per month Food Poverty Line (FPL) below which more than 17 million South Africans live; nearly 4 times the monthly survival income for about 10 million South Africans living below the Lower Bound Poverty Line (LBPL) of R945 per month; and about 2.5 times the monthly income of nearly 11 million South Africans living between the LBPL and the Upper Bound Poverty Line (UBPL) of R1,417. In addition to the cost of owning the smartphone, the cost of using it approximates to R15.36 per month for all South Africans living below all the nation's poverty lines.

Can 5G of any flavour or frequency band meet any of these affordability targets for South Africa's nearly 50 million people living in poverty?

5G, and any other "G", can deliver affordable services to South Africa's poor, and their children, but not under the current competitive market pricing regime. New creative innovative models of providing services to the poor are needed, and these can be provided within the framework of the following international movements:

- <u>The Alliance for Affordable Internet (A4AI)</u>; "Advancing Meaningful Connectivity: Towards Active and Participatory Digital Societies"
- <u>Artificial Intelligence for ALL (AI4ALL)</u>; "AI Will Change the World. Who Will Change AI?" This community of activists, thinks that the children of today, adults of tomorrow, can change AI, but only if we provide the environment for them to be able to do so.

The major challenge for South Africa is how to enable access to the ICTs and therefore the Al's, and the appropriate learning content, for the youngest, poorest, South African children so that they can begin to bridge the vast opportunity divides between the rich and poor children and their communities and families. Both the A4AI and AI4ALL movements have solutions, but they need mass multistakeholder support from all South Africans, irrespective of their political or ideological leanings, for their success. Sustainability should not be a major concern except for the very short term; the long term strategy must be to bring 50 million South Africans into the national ICT market.