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Measuring what matters: Digital inclusion and South Africa's growth and development agenda

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EXECUTIVE SUMMARY

South Africa has near-universal mobile broadband coverage, and a growing share of households report some form of internet access. Coverage tells us whether a network is available, but not who uses it. Household figures do not tell us which members have access or whether they have a suitable device. Subscription figures in mobile markets (measured by the number of active SIM cards) can count the same person more than once because a single user can hold multiple SIM cards, resulting in reported penetration rates above 100%. These aggregate figures do not reveal whether people own the devices they use or their gender, education or income. They do not show whether people can afford to be online regularly, possess the skills to use digital services effectively or can turn connectivity into better work, learning, business opportunities and access to public services. They also reveal little about the circumstances of people who are not online or the reasons for their exclusion.

These gaps are important because universal internet access advances wider economic, social and constitutional aims. Relevant South African policy instruments, such as the National Development Plan (NDP) and SA Connect broadband policy, situate connectivity within the broader goal of building a more equitable and inclusive society. Universal internet access gives practical expression to the Constitution's commitment to 'improve the quality of life of all citizens and free the potential of each person'. It is also consistent with the United Nations human-rights framework for internet access, which considers universal access essential for individuals to exercise their right to freedom of opinion and expression.

These commitments have practical implications for how digital progress should be defined and measured, and international policy has increasingly reflected this shift. The UN's World Summit on the Information Society and its 2003 Geneva Plan of Action placed universal access and comparable measurement at the centre of the global development agenda. Yet 2.2 billion people remained offline in 2025, and many more lacked the conditions required for meaningful connectivity.¹ Policy has consequently moved beyond addressing a binary distinction between being connected and being offline towards achieving 'meaningful connectivity' for effective social and economic participation. Measures consider access to suitable devices and high-speed connectivity alongside affordability, skills, safety and regularity of use.

South Africa's policy on overcoming the 'digital divide' recognises many of these demand-side constraints. Early universal access policy treated exclusion mainly as a gap in infrastructure that could be bridged, but since at least 2012, the NDP and a growing body of demand-side evidence have drawn attention to the fact that affordability, devices, skills, language, trust and relevance also shape use. Recent frameworks focus on universal and meaningful connectivity and, increasingly, on the outcomes enabled by digital participation. South Africa's G20 Presidency reflected this broader approach in its digital-economy agenda, which built on the goal of universal and meaningful connectivity by placing greater emphasis on equitable digital inclusion.

¹ Measuring digital development: Facts and Figures 2025, ITU. The offline estimate excludes people who used the internet at least once in the preceding three months.

Yet the institutions responsible for digital policy are primarily equipped to regulate networks and markets, while many of the strongest constraints on meaningful use sit in other sectors: education, household income, labour-market access, small-business capability and the design of public services. Policy recognises these constraints, but implementation largely remains focused on infrastructure, spectrum, coverage and prices. Digital skills and literacy tend to appear as secondary objectives.

This continued emphasis on supply reflects how institutional responsibilities and incentives are distributed. Spectrum licensing, network infrastructure and regulation sit within clear sectoral mandates. Network investment and spectrum allocation attract commercial funding, generate fiscal revenue and produce outputs that can be financed and counted. Demand-side activity is not absent, but it lacks a comparable institutional constituency and accurate, timely indicators.

The evidence gap further limits implementation. The Digital Futures analysis prepared for the National Planning Commission highlighted that available supply-side data (such as operator reports, regulator statistics and administrative data) are insufficient to understand digital inequality. It emphasised that nationally representative demand-side surveys are needed to identify differences by gender, income, education and location and to model the factors underpinning digital inequality. Without regular, disaggregated evidence, the government cannot reliably establish who is offline, why they are excluded or whether policies such as SA Connect and related interventions are reducing digital inequality.

The Roadmap for the Digital Transformation of Government, implemented under Operation Vulindlela Phase II, and the broader MyMzansi initiative, which aims to bring together digital identity, digital payments and data exchange with trusted channels for accessing government services, place the need for demand-side evidence in the spotlight. These investments could improve administrative efficiency, lower transaction costs and expand access to public services, but unless affordability, devices, skills, accessibility and patterns of use are addressed, digital public infrastructure (DPI) risks mainly improving services for people already equipped to use them. The same concern applies to the use of artificial intelligence in public and private decision-making. The key to realising transformative DPI lies not in the technology but in the governance framework that builds legitimacy and trust and enables public value creation for society as a whole (see the South African G20 Digital Economy Working Group Chair's Statement).

This is why equitable digital inclusion belongs in South Africa's inclusive growth and development agenda. Connectivity creates economic opportunities only when citizens, workers, households and firms can use it regularly and productively. The expected return on infrastructure depends on capabilities produced across several areas of government. Treating digital inclusion solely as a sectoral objective separates the investment from the conditions required to realise its value. Resource allocation must therefore consider both infrastructural supply and the demand-side conditions that determine whether people can access and benefit from connectivity. Equitable digital inclusion requires transversal policy that connects communications institutions to economic, education, labour, small-business, social and public-service policy.

The resulting policy challenge concerns coordination and allocation. South Africa needs a common outcomes framework for equitable digital participation that explicitly aims to

enable people marginalised from the benefits of digital inclusion to participate meaningfully and equitably online. This framework should be supported by regular, granular demand-side evidence of how people and firms, both formal and informal, participate online. This evidence should be used to coordinate responsibilities across government and between the public and private sectors in increasingly globalised markets and identify precise points for policy intervention. It should also be used to test whether spectrum, data, connectivity and DPI are expanding digital participation. Infrastructure policy remains essential, but it cannot deliver equitable digital inclusion on its own.

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INTRODUCTION

Access to digital technologies is widely treated as an enabler of the United Nations' Sustainable Development Goals (SDGs), a condition that affects the enjoyment of human rights and a potential source of economic returns.² This broad consensus has supported sustained investment in network infrastructure, spectrum and public connectivity programmes, but it has not led to equitable digital inclusion.

In South Africa, investment in connectivity has enabled near-universal mobile broadband coverage and much wider reported household internet access than a decade ago.³ The usual measures of progress reveal little, however, about the frequency, quality or purpose of people's internet use. Someone may live within reach of a network yet lack affordable data, a suitable device or the skills to transact, learn or work online. A small firm may have a smartphone and nominal broadband coverage but remain unable to integrate digital tools into its operations. In both cases, infrastructure exists without delivering the participation on which its expected economic and social value depends.

This note uses **digital participation** to describe the relationship between access, meaningful use and outcomes. Participation is understood as the opportunity and ability to engage with digital systems, or to choose not to, in ways that bring benefits and avoid harm, both for oneself and for others, now and in the future. This moves attention beyond connectivity to what people and firms are able and **choose to do** with it and whether this leads to better outcomes, including economic ones. Equitable digital inclusion remains the wider policy objective.

We explain why this framing matters. South African policy increasingly recognises meaningful connectivity, skills and equity, yet its main policy instruments and measures remain concentrated on networks, spectrum, connections and price. Network coverage is close to universal, but meaningful use is not.⁴ Institutional responsibilities help explain this continued emphasis on supply. This note examines the gap between this broader understanding and the arrangements needed to put it into practice.

Communications institutions cannot, by themselves, address factors such as education, income, labour-market position, business capability and public-service design that often determine whether connectivity is useful or meaningful. Their work needs to align with the responsibilities of other government institutions. As long as digital inclusion is confined to the communications portfolio, the link between infrastructure and

² United Nations General Assembly, **Transforming Our World: The 2030 Agenda for Sustainable Development**, A/RES/70/1, 21 October 2015, para. 15; United Nations Human Rights Council, **The Promotion, Protection and Enjoyment of Human Rights on the Internet**, A/HRC/RES/47/16, 26 July 2021, paras 1–5.

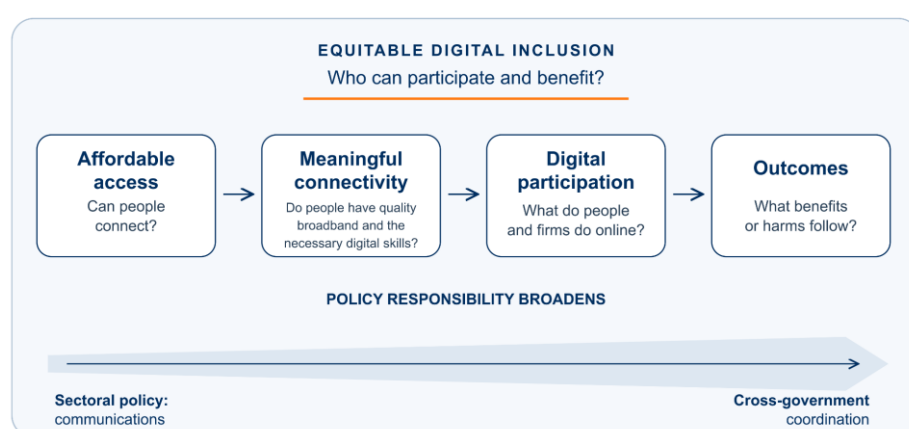
³ ICASA, State of the ICT Sector Report of South Africa, 2026, p. 41; Statistics South Africa, General Household Survey 2025, Figure 14.2.

⁴ Andrew Partridge, Sandra Makumbirofa, Mpho Moyo, Nawal Omar and Abdiaziz Ahmed, After Access 2022–2023, **Digital Africa Post the Pandemic: South Africa Report**, Research ICT Africa, April 2024, pp. 40–44 and 51–54.

participation remains tenuous, leaving the development goal of equitable digital inclusion unfulfilled.

FROM ACCESS TO OUTCOMES

Digital inclusion policy can be understood through cumulative layers: access, meaningful connectivity, digital participation and outcomes, all of which are crucial to equitable digital inclusion. Each layer directs policy towards a broader set of stakeholders and institutions. Access remains necessary throughout, but the availability of infrastructure alone is not sufficient evidence of equitable inclusion.



Box 1: Layers of digital inclusion

Concept	Indicative measures	Who is responsible?
Affordable access	The availability of an affordable internet connection, whether through individual, household, workplace or public access.	National government (policymakers and regulators responsible for implementation), municipalities, network operators and electronic service providers.
Meaningful connectivity	Connectivity that is available when needed, reliable and secure, and supported by an appropriate device and adequate skills.	Communications and competition authorities, network and device providers, and public and private institutions responsible for education and digital skills.
Digital participation	Whether and how people and firms choose to use digital technologies to participate in economic, social and public life. Measures include frequency, quality and purpose of use.	Responsibility for enabling participation extends across education, labour, economic development, small-business support and public-service institutions, as well as private service providers such as banks and retailers.
Outcomes	The benefits and harms associated with use, such as effects on work, learning, firm capabilities, access to public services, privacy and exposure to online risks. Access or use does not automatically produce positive outcomes.	The institutions responsible for each outcome, in coordination across government and with communications authorities.

Access: the digital divide

Digitalisation fundamentally changed the economics and structure of telecommunications. Legacy fixed-line networks combined high fixed costs with strong economies of scale and scope, features that historically supported state ownership or close regulation. Liberalisation introduced competition, but experience showed that regulation and universal service policy remained necessary to address inequalities in access.⁵

Mobile technology made it possible for competing operators to build separate radio-based networks without each having to replicate a single national wireline network. This change contributed to the wave of telecommunications liberalisation that began in the 1980s and was consolidated internationally through the World Trade Organisation's (WTO) 1997 Agreement on Basic Telecommunications, implemented through the Fourth Protocol to the General Agreement on Trade in Services (GATS).⁶ The WTO Reference Paper on Telecommunications Services set regulatory principles covering competitive safeguards, interconnection, universal service, public licensing criteria, independent regulators and the allocation of scarce resources.⁷ Many countries used universal service mechanisms to support coverage in areas that markets did not serve or served inadequately.

The corresponding policy frame was the **digital divide**, often expressed as a binary distinction between people connected to the internet and those who were not. The response centred on infrastructure rollout, spectrum reform, devices, public-access facilities and universal-service mechanisms.

This emphasis on access shaped international policy. The World Summit on the Information Society (WSIS), held in Geneva in 2003 and Tunis in 2005, described information and communication infrastructure as a central priority, alongside access to information, capacity-building and other goals.⁸ The Broadband Commission for Digital Development was established in 2010 and renamed the Broadband Commission for Sustainable Development in 2015.⁹ The UN's SDGs, adopted in 2015, called for universal and affordable internet access in least-developed countries by 2020 and, more broadly, treated information and communication technologies as a means of implementing the development agenda.¹⁰

In South Africa, the emphasis on universal access also reflects infrastructure disparities inherited from apartheid, including severe racial and spatial inequalities in telephone

⁵ William H. Melody, 'Telecom Reform: Progress and Prospects', Telecommunications Policy, 23(1), February 1999, pp. 7–34.

⁶ World Trade Organization (WTO), 'Telecommunications Services: Negotiations on Basic Telecommunications', history of the negotiations and Fourth Protocol.

⁷ WTO, Reference Paper on Basic Telecommunications, 24 April 1996, sections 1–6.

⁸ International Telecommunication Union, World Summit on the Information Society, 'Outcome Documents', Geneva 2003 and Tunis 2005; WSIS Plan of Action, Action Line C2, 'Information and Communication Infrastructure', 12 December 2003.

⁹ ITU and UNESCO, 'ITU and UNESCO Announce Top-Level Global Broadband Commission', 10 May 2010; ITU, 'UN Broadband Commission: Time for a New Deal', 16 March 2017, noting the September 2015 renaming.

¹⁰ United Nations Statistics Division, SDG Indicator Metadata, Target 9.c, 'Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020'.

provision. The question is whether the institutions established for network expansion remain adequate as the conditions necessary for equitable digital inclusion have evolved.

Meaningful use: the capabilities behind connection

Central to our argument is that technical broadband availability does not ensure use. People also need an appropriate device, affordable and sufficiently reliable connectivity, relevant services or content and digital skills.¹¹ Equitable use requires that people have the resources to participate in the economy as active users and producers. Productive use demands more than the voice-and-text model around which mobile-led connectivity was built. **The policy question, therefore, shifts from the extent of network rollout to why people who can receive a signal (or have access to fibre in the street) are not connecting to it or using their connection meaningfully.**

High-speed broadband supported a large application and service layer on top of networks, including the web, over-the-top services, platforms and artificial intelligence. The internet developed as a decentralised network of networks, making it difficult to govern through the tools used for a discrete, regulated utility.¹² Multilateral institutions continued to act through the areas within their mandates, including technical standards, spectrum coordination, advocacy and targets.¹³

Focusing on use more clearly reveals the relationship between digital and existing inequality: income shapes the ability to buy devices and data; education influences skills; geography affects infrastructure quality and access to complementary services. In South Africa, gender, age, race and employment often interact with these constraints. The availability of a network does not automatically address these constraints.¹⁴ Policy must therefore consider what follows after access.

International policy began to reflect this broader understanding more clearly from 2020. The UN Secretary-General's Roadmap for Digital Cooperation (2020) called for universal, safe, inclusive and affordable access by 2030.¹⁵ The International Telecommunication Union's (ITU) 2022 Kigali Declaration made universal and meaningful connectivity a central objective.¹⁶ These instruments added quality, affordability, security and skills to the notion of access but remain focused mainly on the conditions of connection. For example, the ITU's Universal and Meaningful Connectivity framework (2022) sets targets for quality, availability, affordability, devices, skills and security.¹⁷ The Alliance for

¹¹ International Telecommunication Union (ITU), Universal and Meaningful Connectivity, 'About UMC'; Alliance for Affordable Internet, **Meaningful Connectivity: A New Target to Raise the Bar for Internet Access**, 2020, pp. 3–4.

¹² Brian Carpenter (ed.), **Architectural Principles of the Internet**, Internet Engineering Task Force, RFC 1958, June 1996, sections 2–3.

¹³ Anri van der Spuy, 'What if we all governed the Internet? Advancing multistakeholder participation in Internet governance', UNESCO Series on Internet Freedom, pp. 16–18.

¹⁴ Kentaro Toyama, 'Technology as Amplifier in International Development', Proceedings of iConference 2011, pp. 75–8; Alison Gillwald and Andrew Partridge, Gendered Nature of Digital Inequality: Evidence for Policy Considerations, background paper for the UN Women Expert Group Meeting, October 2022, pp. 13–18.

¹⁵ United Nations Secretary-General, **Roadmap for Digital Cooperation**, A/74/821, 29 May 2020, especially paras 17–21.

¹⁶ ITU, 'World Telecommunication Development Conference Forges Path to Meaningful Global Connectivity', 16 June 2022, reporting the Kigali Declaration and Action Plan.

¹⁷ ITU, Universal and Meaningful Connectivity, 'About UMC'.

Affordable Internet (A4AI), in turn, emphasises daily use, devices, enough data and a fast connection.¹⁸ Alongside the ITU's affordability target,¹⁹ the 2024 Global Digital Compact addresses accessible services and digital skills and calls for national digital inclusion surveys with disaggregated data. Such commitments provide a basis for assessing participation but require implementation and a regular evidence base.²⁰

In South Africa, the National Planning Commission's 2011 Diagnostic Overview identified shortcomings in affordable access and regulatory effectiveness, and the NDP itself called for an integrated e-strategy, including e-literacy, skills and institutional capacity building. SA Connect followed in 2013 with both supply- and demand-side interventions as South Africa's flagship broadband policy. Its Digital Opportunity programme addressed awareness, skills, literacy, and relevant content and devices, and called for research on barriers to adoption.²¹

South Africa's experience implementing these policies shows why affordability cannot be separated from market structure and why effective regulation of telecoms markets is needed. The #DataMustFall campaign made data prices a national political issue in 2016, and the Competition Commission's 2019 Data Services Market Inquiry found that mobile pricing structures were anti-poor: low-volume consumers paid more per megabyte than high-volume consumers.²²

The concurrent jurisdiction of the Competition Commission and ICASA, the communications sector regulator, remains a central issue.²³ For both, the key focus has been on pricing, although South Africa's Universal Service and Access Fund also provides other support to users and institutions. The premise that other demand-side constraints, such as digital skills or access to devices, will automatically fall into place when data prices are competitive needs to be tested. Network rollout alone is insufficient evidence of success: assessment must also establish whether support enables affordable, sustained and beneficial use.

¹⁸ Alliance for Affordable Internet, *Meaningful Connectivity*, 2020, pp. 3–4.

¹⁹ The ITU's 2030 targets set the cost of an entry-level broadband subscription below 2% of monthly gross national income per capita and extend the affordability benchmark to the bottom 40% of the income distribution. ITU and Office of the UN Secretary-General's Envoy on Technology, **Achieving Universal and Meaningful Digital Connectivity: Setting a Baseline and Targets for 2030**, 2022, p. 17.

²⁰ **United Nations, Global Digital Compact**, annexed to the Pact for the Future, A/RES/79/1, adopted 22 September 2024, paras 10–17.

²¹ National Planning Commission, *Diagnostic Overview*, 2011, p. 17; National Development Plan 2030: Our Future – Make it Work, 2012, p. 194.

²² Competition Commission South Africa, **Data Services Market Inquiry: Final Report**, 2 December 2019, paras 464–467.

²³ Fourie, H., L. Granville and N. Theron (2018). Regulatory ambiguity and policy uncertainty in South Africa's telecommunications sector. ERSA Working Paper Series 729. Economic Research Southern Africa.

Digital participation and outcomes: what connection delivers

An outcomes-focused perspective asks what people and firms can achieve through digital participation: how they can maximise the opportunities and minimise the risks associated with using the internet and other technologies. Work, learning, firm capability and access to public services matter alongside civic engagement and freedom of expression. SA Connect explicitly linked broadband to the Constitution's commitments to quality of life and equal citizenship.²⁴ The potential consequences of South Africans' digital engagement therefore extend beyond development and economic growth. Assessment must also consider risks such as misinformation, data exploitation and discrimination.²⁵

The outcomes perspective also highlights that wider basic access can coexist with deeper inequality in the quality and benefits of use. South African demand-side evidence shows that income, education, age and location remain strongly associated with access and use, while the range of online activities differs across groups.²⁶ On its own, infrastructure rollout cannot ensure the capabilities that determine how connectivity is used, and interventions designed without regard to those capabilities can reproduce existing inequality.

These issues become more important as digital systems grow more data-intensive and reliance on AI increases. People excluded from meaningful use may be absent, underrepresented or misrepresented in the data used to build and calibrate algorithmic systems. Systems used to direct services and resources can then reproduce social and economic inequalities.²⁷ These risks follow the same intersecting inequalities that shape access and use, exposing people at the intersections of race, gender, income and geography to particular risks of absence or misrepresentation.

This outcome-based perspective changes both the boundary of policy and the basis for valuing digital resources. Spectrum, the internet and data generate social value through downstream uses, including benefits that providers cannot fully capture. Their economic characteristics differ, but commercial returns alone do not measure public value. Realising the wider benefits depends on capabilities and services shaped across economic, education, labour and social policies.²⁸

²⁴ Department of Communications, South Africa Connect, 2013, p. 2, 'National policy and constitutional context'.

²⁵ Anri van der Spuy, Jamie Fuller, Alison Gillwald and Araba Sey, **Debugging Development: A risk framework for developmental digital interventions**, 2024, Research ICT Africa.

²⁶ Partridge et al., *After Access 2022–2023: South Africa Report*, 2024; Alison Gillwald, Onkokame Mothobi and Broc Rademan, **The State of ICT in South Africa**, Research ICT Africa, Policy Paper No. 5, Series 5, 2018.

²⁷ Peter Chonka and Mohamed Abdimalik, 2026, The politics of translation in African-language generative AI: opportunities and challenges for critical engagement, education and resistance, *Journal of Eastern African Studies*; Alison Gillwald, Kelle Howson, Parminder Jeet Singh, Anita Gurumurthy and Dewey Murdick, *Data Justice Policy Brief: Putting Data Justice into Practice*, Global Partnership on Artificial Intelligence, November 2022; Virginia Eubanks, 2018, *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*, New York: St. Martin's Press; Linnet Taylor, 2017, What is data justice? The case for connecting digital rights and freedoms globally, *Big Data & Society*, 4(2), 1–14.

²⁸ Brett M. Frischmann, **Infrastructure: The Social Value of Shared Resources**, Oxford University Press, 2012, chapters 3–4.

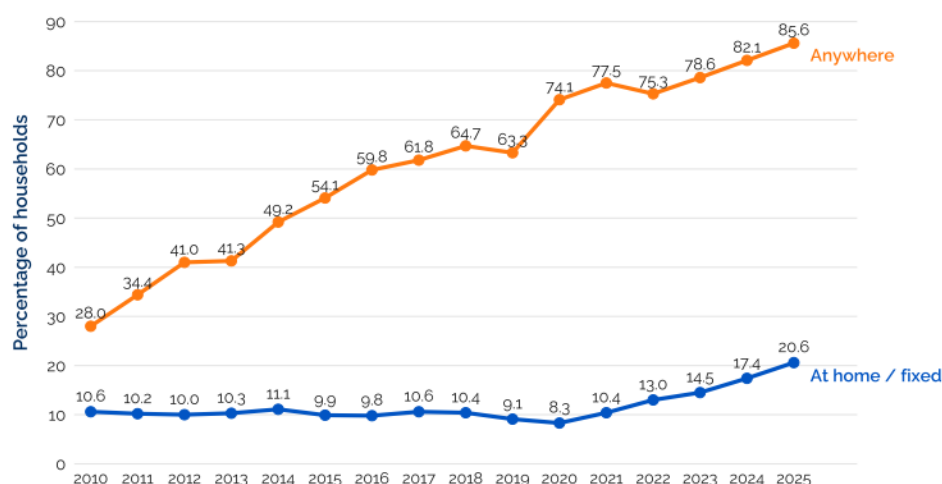
SOUTH AFRICA'S DIGITAL INCLUSION GAP

Why isn't it enough to focus only on access?

Mobile subscriptions, population coverage, broadband speeds and household access provide important information about infrastructure, but they do not establish the regularity, affordability, benefits or risks of individual use. High-speed infrastructure is necessary for a modern economy, but it is not sufficient. In 2024, across the ITU's Africa region (44 economies), 86% of the population had access to at least a 3G network, while only 38% used the internet.²⁹ Brazil's 2024 G20 analysis reported that 84% of people aged 10 and older used the internet, but only 22% met its meaningful-connectivity threshold.³⁰ Coverage is therefore a poor proxy for digital participation and for the economic returns associated with use.

South African data show substantial progress in access. Statistics South Africa reports that the share of households with at least one member who accessed or used the internet from any location rose from 28.0% in 2010 to 85.6% in 2025. Fixed internet access at home rose from 10.6% in 2010 to 20.6% in 2025.³¹ But these are household-level measures, and neither series establishes whether each household member has a suitable device or could afford to use the internet regularly for work, learning or public services.

Figure 1: Households with internet access, 2010 to 2025



Source: Stats SA, General Household Survey 2025

The national average also conceals large differences among metropolitan areas. In 2025, the share of households reporting any kind of access ranged from 95.5% in Cape Town to just 56.3% in Buffalo City. Fixed access at home was 55.4% in Cape Town, compared to

²⁹ ITU, *Measuring Digital Development: State of Digital Development and Trends in Africa*, 2025, pp. 5 and 21, reporting 2024 estimates.

³⁰ Brazilian Ministry of Communications, Universal and Meaningful Connectivity, G20 Digital Economy Working Group, 2024, reporting the **2023 ICT Households survey**. The meaningful-connectivity threshold is specific to the Brazilian analysis.

³¹ Statistics South Africa, General Household Survey 2025, Figure 14.2, p. 55.

12.3% in Buffalo City and Mangaung.³² An improving national average cannot stand in for the distribution of access.

From being online to participating online

Demand-side data provide a more detailed understanding of access to broadband and the internet, as well as the intensity and purpose of use. Research ICT Africa's (RIA) 2022 After Access survey estimates that individual internet use in South Africa rose from less than half of people aged 16 and older in 2018 to about three-quarters in 2022. The report estimates that the gender gap narrowed to 2% and the rural-urban gap fell from 45% to 23%.³³ However, South Africa's spatial and income inequalities mean that aggregate measures can improve while poor, older or less-educated users remain far from meaningfully engaged with online services.

The Covid-19 pandemic illustrated the difference between use and the capacity to substitute digitally for activities that moved online. Seventy per cent of people who had been online before the first lockdown reported using the internet more afterwards.³⁴ The lockdowns deepened use among existing users more than they removed barriers for those who remained offline. Non-users cited a lack of digital skills as the biggest barrier to digital substitution. Those already online said that high data costs constrained their use, especially among lower-income individuals.³⁵

For economic participation, the intensity and purpose of use matter.³⁶ A person who rationed data, waits to get to a location with Wi-Fi, turns off updates or avoids data-heavy services engages with the internet differently from someone who can remain online throughout the day. South African evidence shows that users conserve mobile data and postpone some uses until Wi-Fi is available.³⁷ This creates a divide between people who can use the internet freely and those whose online activities are constrained.

The same distinction applies to firms. RIA's 2022 After Access survey shows that 65% of surveyed microenterprises owned a smartphone, but only 38% used the internet for business and 39% had a bank or mobile money account.³⁸ The report also finds differences by owners' education, gender, location and business formality. These results do not establish that internet use causes better business performance, but they show that network availability, device ownership and business use are distinct. The key

³² Statistics South Africa, General Household Survey 2025, Table 14.2, p. 56.

³³ Partridge et al., After Access 2022–2023, Digital Africa Post the Pandemic: South Africa Report, 2024. The report gives 76% for men and 75% for women after rounding and reports the gender gap as 2%; it gives 81% for urban and 64% for rural areas, with the rural-urban gap falling from 45% to 23%.

³⁴ Andrew Partridge, **After Access 2022: Internet Usage Trends in South Africa**, Policy Brief No. 1, Research ICT Africa, November 2022, pp. 1 and 9–10.

³⁵ Partridge et al., After Access 2022–2023, Digital Africa Post the Pandemic: South Africa Report, 2024.

³⁶ Fourie, H. and Shepherd, D. (2025), Fibre connectivity and economic participation in a South African township, BER Research Note, 1 December. The authors find that, in Kayamandi (a township outside Stellenbosch), the rollout of home fibre was associated with an increase in full-time formal employment among those already engaged in paid work, though not with aggregate employment gains.

³⁷ Alison Gillwald, **Beyond Access: Addressing Digital Inequality in Africa**, Global Commission on Internet Governance Paper No. 48, Centre for International Governance Innovation and Chatham House, March 2017.

³⁸ Partridge et al., After Access 2022–2023, Digital Africa Post the Pandemic: South Africa Report, 2024.

constraint is not only whether an enterprise is connected, but also whether it can use the connection productively.

The gap in demand-side evidence

The limits of South Africa's data are part of the policy problem. Digital Futures, in a 2020 report prepared for the National Planning Commission, called for regular, coordinated demand-side surveys to supplement administrative data and the limited ICT indicators in existing national surveys.³⁹ Knowing the broad constraints is not enough to target interventions or evaluate their outcomes.

Granular participation evidence has public-good characteristics, but no single private actor has a strong incentive to publish it. Operator and platform data reveal company-specific traffic, subscriptions and customer behaviour, but they are proprietary and shaped by commercial incentives. They also tell us little about where users' demand is suppressed, whether users face affordability trade-offs or other constraints, or the circumstances of people who are not connected. We need nationally representative demand-side surveys to observe these gaps and support disaggregation by sex, education, income and location.⁴⁰ Otherwise, we risk focusing only on what is most visible (coverage, subscriptions, speed tests, spectrum assignments and infrastructure rollout) and ignoring the constraints most relevant to inclusive growth and economic participation.

South Africa's long-running General Household Survey already provides useful demand-side evidence at the household level, but household-level access does not establish access for every member. A household can report internet access through one member's phone even if that person is away from home for extended periods, or other household members cannot use it. RIA's After Access survey, in turn, measures individual, household and microenterprise phone ownership and internet access and use, alongside indicators such as access to and use of electricity, large-appliance ownership, education, income, financial inclusion and awareness of data protection and cybersecurity.

A map of broadband infrastructure coverage was developed as part of the South Africa Digital Infrastructure Investment Study (commissioned by the Development Bank of Southern Africa and the NPC).⁴¹ The study recognises affordability, access to devices and digital literacy as affecting broadband take-up and seeks to apply the ITU Meaningful Connectivity assessment to South Africa, but it did not include the necessary demand-side data to underpin such a strategy.

WHERE TO FROM HERE?

South Africa has extended network coverage, released high-demand spectrum and connected public facilities.⁴² It has also recognised affordability, skills and outcomes in its

³⁹ Research ICT Africa, **Digital Futures: South Africa's Digital Readiness for the 'Fourth Industrial Revolution'**, prepared for the National Planning Commission, updated August 2020, p. 125, 'Open data and consolidated national indicators'.

⁴⁰ Gillwald and Partridge, *Gendered Nature of Digital Inequality*, 2022, pp. 6–10; Partridge et al., *After Access 2022–2023, Digital Africa Post the Pandemic: South Africa Report*, 2024.

⁴¹ NPC and DBSA, 2025, **South Africa's Digital Infrastructure Investment Study**.

⁴² ICASA, *State of the ICT Sector Report of South Africa*, 2026, pp. 41 and 70–71; ICASA, **'ICASA Concludes Successful Spectrum Auction and Collects More Than R14.4 Billion Proceeds'**, 17 March 2022.

policy language. At the same time, many citizens, schools, healthcare facilities and other government facilities remain unconnected to high-speed broadband. The task should be to link these investments to the capabilities and services required for equitable participation, with responsibilities extending across government.

Brazil offers a useful comparison for South Africa as another upper-middle-income country seeking to address digital inequality. Its proposed National Digital Inclusion Plan offers design choices for South Africa to assess within its own institutional and fiscal framework. It combines multidimensional targets, targeted support and cross-government coordination. The proposal should not be copied wholesale, but it identifies possibilities that South Africa could test within its existing arrangements.

Table 1: Lessons for South Africa from Brazil's proposed National Digital Inclusion Plan

Brazilian proposal ⁴³	Possible South African application
Proposed targets cover affordability, quality, devices, skills, safety and use.	Supplement coverage measures with indicators of equitable digital inclusion and meaningful access and use, disaggregated by education, income and availability of relevant services.
Affordability and computer-access benchmarks focus on lower-income households.	Use an income-based affordability measure and distinguish smartphone access from access to a device suitable for study, work and business administration.
Social-registry and geospatial network data would guide targeting.	Combine coverage maps and socioeconomic evidence at an appropriate level of aggregation (in line with POPIA) to identify constraints relating to coverage, affordability, devices or skills.
Infrastructure investment is paired with proposed service, device and skills support, including pilots before national expansion.	Pilot time-limited support where there are demand-side constraints, and report adoption and outcomes rather than delivery counts alone.
A central committee, public dashboard and several funding sources would coordinate delivery.	While ICASA and the Department of Communications and Digital Technologies (DCDT) have critical sector-specific and regulatory functions, a transversal policy is needed to ensure more equitable digital inclusion.

Note: The Brazilian report is a technical proposal and has not been formally adopted as of September 2026.

Measure whether people can participate meaningfully in the digital economy

Network coverage and connectivity indicators must be accompanied by evidence on who uses digital services, what they can accomplish and where they encounter barriers. A common outcomes framework should distinguish access, use and benefits, and show how these differ across population groups.

Communications indicators and administrative service records should therefore be combined with representative evidence. A regular digital participation survey, overseen by Stats SA, would link individual circumstances, constraints and activities. It should capture the devices people use, the frequency, cost and purpose of use, and the barriers they face, with results disaggregated by sex, income, education, age and location. RIA's After Access surveys offer a relevant example. Combined with service and programme

⁴³ *Brazilian Ministry of Communications' interministerial report (in Portuguese; translated and synthesised using GPT-6 Astra).*

data, the survey would show whether reform is expanding opportunity and limiting risk, rather than mainly improving the indicators that are easiest to count.⁴⁴

In the context of public services, this could include successful transaction completion, the time and cost involved, and the barriers users face. For workers and firms, it should distinguish activities, such as online job applications and digital business use, from outcomes, such as employment and productivity, while also tracing risks. Devices distributed and training delivered are useful programme measures, but do not establish whether people benefit. Evaluation is needed before attributing changes in outcomes to a particular intervention.

This evidence should inform policy aimed at equitable digital inclusion. Separating device, affordability and skills constraints would help target support more precisely. Identifying where people drop out of online activities, such as partway through a public-service transaction, would help departments improve the design of those services.

Make digital participation an explicit objective of South Africa's reform agenda

No single government department controls all the conditions required for digital participation. Communications policy influences networks and prices; education shapes skills; and labour, small-business and public-service policies affect how people can use digital opportunities. Coordination should connect these responsibilities to shared objectives, each with a baseline, a responsible institution and a reporting schedule. Findings should inform programme changes and resource allocation.

The Roadmap for the Digital Transformation of Government, pursued under Operation Vulindlela Phase II, provides an opportunity to put this approach into practice. Its commitments to accessible, people-centred services and continued non-digital channels should be assessed against evidence of who can successfully access services and at what cost.

The MyMzansi platform is another practical application. It will be important to measure whether people with limited data, shared devices, low digital skills or accessibility needs can complete transactions on the platform. Reporting completion rates, time and costs across groups would help show whether the platform is widening access and where further support is needed. In addition to infrastructure and platform milestones, participation and service outcomes should be measured. This would connect progress in building digital systems to evidence that they serve the people who need them.

Account for digital exclusion in data-driven decisions

People who cannot participate meaningfully online may be absent, underrepresented or misrepresented in the data used to make public and private decisions. Where these gaps affect decisions about services and resources, data-driven systems can reinforce existing inequalities.

Institutions using data and artificial intelligence should assess whose circumstances their datasets capture and whose they may miss. Evidence on digital participation can flag

⁴⁴ Partridge et al., *After Access 2022–2023, Digital Africa Post the Pandemic: South Africa Report*, 2024, pp. 5–6 and 64–68; Gillwald and Partridge, *Gendered Nature of Digital Inequality*, 2022, pp. 6–10.

groups at risk of being overlooked. Institutions should then examine the datasets used in their decision-making systems to establish whether those groups are adequately represented. Low digital participation is a reason to investigate possible gaps; it does not, by itself, establish who is missing from a dataset.

Demand-side measurement, therefore, has a role beyond assessing connectivity and service use. It can help institutions recognise where digital exclusion limits the evidence on which decisions depend.

CONCLUSION

Affordable devices and connectivity, disposable income, skills and usable services are prerequisites for turning universal access into equitable digital inclusion. A common outcomes framework for DPI and, more broadly, equitable digital participation, supported by regular demand-side evidence, would link institutional responsibilities to measurable changes in participation. Tracking who participates online, at what cost and with what benefits and risks, deserves a place on South Africa's growth and development agenda.