

DIGITAL ECONOMY MASTERPLAN FOR SOUTH AFRICA VERSION 2.0

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**communications &
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FOREWORD

South Africa stands at an important moment in its economic transformation. Rapid advances in digital technologies are reshaping economies across the world, creating new opportunities for innovation, productivity and job creation. For South Africa, the digital economy presents a powerful opportunity to drive inclusive growth, expand participation in the economy and position our country to compete effectively in an increasingly digital global marketplace.

Many South Africans are already benefiting from the expansion of digital technologies. From the growth of digital payments to the increasing availability of online services and digital platforms, technology is transforming the way we live, work and do business. Initiatives such as the MyMzansi programme are expanding the potential for citizens to access government services digitally and more efficiently.

Despite this progress, the contribution of the digital economy to South Africa's GDP remains relatively modest, currently estimated at between 7 and 8 per cent. With the right policies, investments and partnerships in place, the digital economy has the potential to contribute more than 15 per cent of GDP in the years ahead. Realising this potential will require deliberate action to expand connectivity, strengthen digital inclusion and promote the meaningful use of digital technologies across all sectors of society.

Achieving this ambition will require coordinated effort across the entire digital ecosystem. This includes expanding and modernising digital infrastructure, strengthening digital platforms and technologies, improving access to digital financial services, and building the digital skills required to support innovation and economic growth. It will also require effective governance and a regulatory environment that enables investment, competition and innovation.

At the centre of this transformation is the development of digital skills. South Africa must equip its citizens with both foundational digital literacy and advanced technical capabilities that enable them to participate fully in the digital economy and continue building it. This requires sustained investment in education and training, as well as the integration of digital tools into teaching and learning across our education system. We cannot build a thriving digital economy without a digitally capable workforce.

Government has a critical role to play in creating the enabling environment for the digital economy to flourish. At the same time, the private sector will be central in driving investment, innovation and job creation, ensuring that the benefits of the digital economy reach all parts of our society.

Our vision is clear: that all South Africans are digitally empowered to create and participate in technology-enabled opportunities that drive economic inclusion, employment and transformation across all cities, towns and rural areas.

The Digital Economy Masterplan and the Priority Action Plan represent an important step towards achieving this vision. Developed through extensive consultation with stakeholders across government, labour, industry and the investment community, it provides a coordinated framework for unlocking the full potential of South Africa's digital economy.

The successful implementation of this Masterplan will depend on sustained collaboration between the public and private sectors. Working together, we can harness the transformative power of digital technologies to build a more inclusive, competitive and dynamic economy for the benefit of all South Africans.



Hon. Solly Malatsi, MP

Minister of Communications and Digital Technologies

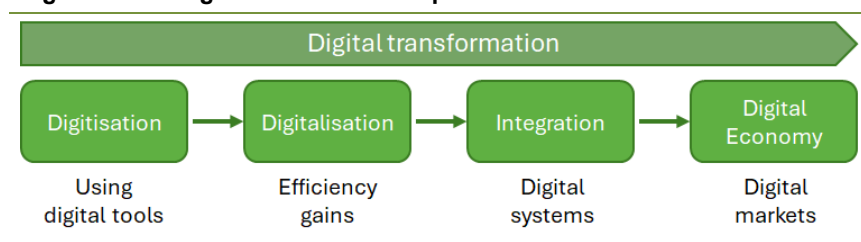
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1. INTRODUCTION

Globally, countries have shown that the development of the digital economy is an essential national growth strategy, and that the rewards can be substantial. As some of the traditional employment avenues begin to disappear due to automation and the reshoring of global value chains, the digital economy offers South Africa a promising pathway to improving the performance of its economy and to greater prosperity for its people.

Digital solutions are woven into the fabric of our everyday lives, shaping us and presenting enormous opportunities for South Africa to charter a new digitally driven development path.

Figure 1: The digital transformation process



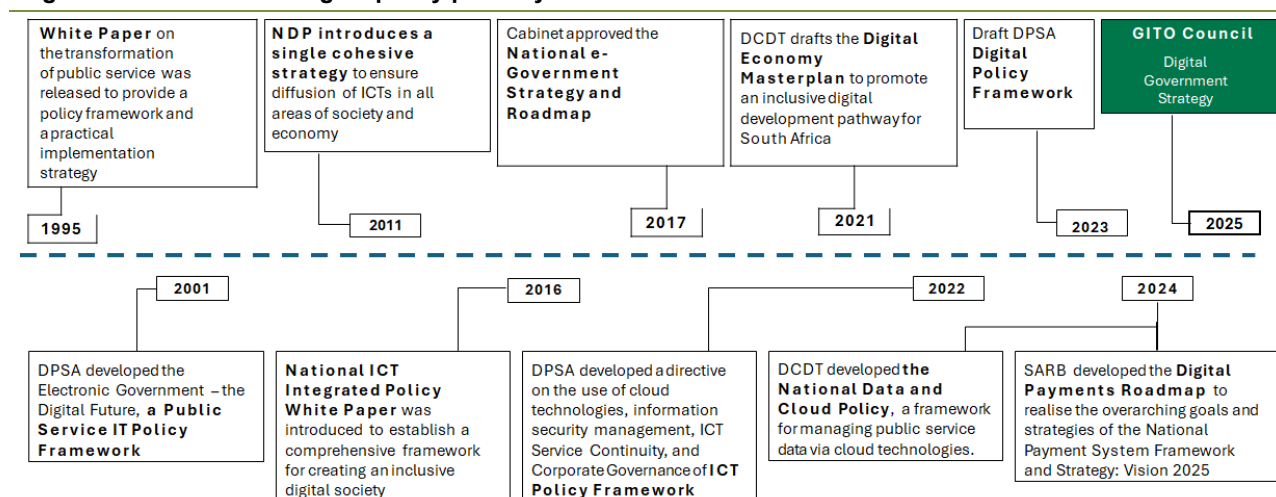
Source: The authors, 2026

The digital economy in South Africa, as defined broadly, encompasses the use of digital technologies to facilitate economic activities. This includes the production, distribution, and consumption of goods and services that rely on digital technologies.

Essentially, it is the transformation of all sectors and the integration of the Internet and data into business models and production processes, as illustrated above.

South Africa's digital policy pathway to achieve digital transformation commenced in 1995 with the White Paper on the transformation of the public service, followed by multiple policy documents and initiatives undertaken by different government departments at different times. The thirty-year policy pathway is outlined below.

Figure 2: South Africa's digital policy pathway



Note: GITO Council - the Government Information Technology Officers Council is a Cabinet-created body serving as an ICT advisory, coordination, and strategy-setting forum for national and provincial government

Source: MyMzansi, 2024

The first version of the Digital Economy Masterplan was drafted at a time of fundamental change in South Africa, particularly as the world adjusted to the COVID-19 related disruptions. As the world went into lockdown it paved the way for mainstream adoption of digital technologies. Since then, the use of digital technologies has only gained momentum. The concept of Industry 5.0 is now being discussed, characterised by a focus on human-machine collaboration and the integration of advanced technologies, such as artificial intelligence (AI), robotics and big data to enhance manufacturing and industrial processes. China, for example, is actively pursuing Industry 5.0 through initiatives such as "Made in China 2025", aiming to become a global leader in advanced manufacturing by leveraging automation, robotics and data-driven solutions. Similarly, the European

Commission has been deliberating Industry 5.0, where emphasis is placed on a more sustainable, resilient and human-centric industry. It departs from the premise that digitalisation provides industry unprecedented opportunities.

As the Digital Economy Masterplan is updated and reflects on the content of Version 1.0, Version 2.0 takes a brief look at how far South Africa has come over the past several years, and what needs to happen from this point forward to ensure that the country is a worthy contender in the global digital economy. For this to happen, there is a need to consider the opportunities of the digital economy which in many cases are already broadly accepted. However, South Africa is a highly unequal nation, and therefore, it is also important to consider the risks associated with rapid technological and digital transformation.

Arguably the greatest risk is an inability to deal with a nation's digital divide (infrastructure access, device access and affordability of services) which may result in digital economy worsening, rather than alleviating, South Africa's dire inequality. Therefore, it is essential that the country's broader digital economy is developed with the end in mind, ensuring inclusivity, so that all South Africans, irrespective of income or geography, can benefit from these opportunities. Charting this path to equal digital prosperity, where value is increasingly driven by technology adoption, constitutes an immense task for the digital economy.

Failure to adopt and invest in modern technologies would almost guarantee a South Africa that does not keep pace with global trends and so digital empowerment must be a national priority.

This imperative requires unprecedented national coordination mandated across every sphere of government, as well as investment and activity across the private sector and the involvement of civil society, including labour, and also skills development.

This Digital Economy Masterplan (DEM) provides a blueprint for South Africa to harness the power of digital technologies, coupled with innovation and the broader digital economy, and addresses priorities for developing this digital empowerment. The DEM is a mechanism for government to mobilise its business and social partners and move towards implementation of its recommendations.

The initial Masterplan was developed through an online process of in-depth research and extensive stakeholder consultation across the public, private and civil sectors. It set out the aspirational vision of what the digital economy can deliver in South Africa over the short, medium and long term, and a practical action plan for achieving this vision.

This update of the original DEM is not a complete reworking of the Masterplan, but rather a high-level revision which takes into account the developments impacting the digital economy which have unfolded over the intervening years, and persistent blockages to its more effective functioning and growth. This impacts (1) the actions recommended for implementation and their timelines, and (2) the specific structure for the implementation of the Masterplan.

The DEM update process included engagement with stakeholders from the government, labour and a range of private sector actors. This built on the extensive stakeholder engagement undertaken during the initial work on the Masterplan.

Version 2.0 of the Masterplan takes a look at the present state of the sector and its outlook. It also considers the existing state of connectivity and the strides made in ensuring that the cornerstone of the digital economy – connectivity – is reaching all South Africans. It further considers all the components that make up a successful digital economy. This includes the Key Pillars and identifies the digital economy opportunities that hold the greatest potential for delivering these objectives. It also seeks to understand the critical enablers which must be in place for these opportunities to pay off. The Key Pillars are (1) Digital Infrastructure, (2) Digital Platforms, (3) Digital Financial Services, (4) Digital Technologies, and (5) Digital Skills & Entrepreneurship.

These Key Pillars will be unlocked by the following critical enablers – digital inclusion, skills for work, skills to harness the broader power of the digital and platform economies, innovation and competitiveness, government digitisation (digital citizen), as well as investment imperatives to ensure the set targets are achieved.

The Masterplan further reviews South Africa as it moves towards becoming a digital society and looks to a framework for achieving the objectives of contribution to GDP, job creation and transformation (through SMME

support).

Finally, this version of the Masterplan summarises the key actions that must be taken, including some potential quick wins, medium-term priorities, and long-term investments to achieve the set objectives.

2. LIMITATIONS OF THE DIGITAL ECONOMY MASTERPLAN

In the updating of the Digital Economy Masterplan, certain limitations were encountered during the research / data sourcing process. These limitations are outlined below.

2.1. Lack of Requested Information

During the DEM update process, the Service Provider updating the Masterplan requested information from government department and institutions. The requested information pertained to activities and initiatives being undertaken or planned related to the digital economy. The objective of requesting such information was to obtain a more comprehensive view of the scale of such activities, which would assist in the development of the Priority Action Plan recommendations.

Lack of the requested information means that such information will need to be obtained by the implementors of the DEM recommendations as an initial step in developing an approach to the implementation.

2.2. Insufficient Requisite Official Data

One of the key limitations of assessing the current state of the digital ecosystem is the lack of some of the official data (in the public domain). While some of the more basic ICT indicators are collected and available by institutions such as the Independent Communications Authority of South Africa (ICASA) and Stats SA, much of the requisite data is not available. Data that may be available, is in some instances fragmented, gathered by disparate institutions, which makes it more difficult to collate and use the data in a cohesive fashion. In particular, the use of ICT in the business environment shows large gaps in the availability of data. The table below illustrates the availability of data.

This presents a problem in that without such data it is very difficult to set targets (e.g., proportion of individuals using a computer) for the future and to monitor progress over time towards these targets. The gap in the data is partially closed by private sector institutions gathering data through market studies. However, this is not ideal, as such data may not have been verified and is not necessarily gathered and presented in accordance with globally prescribed frameworks and definitions. This may make the data non-comparable.

Table 1: ICT core list of indicators

ICT Infrastructure and Access		Source in South Africa	ICT Access and Use by Households and Individuals		Source in South Africa
A1 Fixed-telephone subscriptions per 100 inhabitants		ICASA	HH1 Proportion of households with a radio		Stats SA
A2 Mobile cellular telephone subscriptions per 100 inhabitants		ICASA	HH2 Proportion of households with a TV		Stats SA
A3 Fixed broadband Internet subscriptions per 100 inhabitants, broken down by speed		ICASA	HH3 Proportion of households with a telephone		Stats SA
A4 Active mobile broadband subscriptions per 100 inhabitants		ICASA	HH4 Proportion of households with a computer		Stats SA
A5 International bandwidth usage per inhabitant (bits / second / inhabitant)		ICASA	HH5 Proportion of individuals using a computer		Data not captured by Stats SA
A6 Percentage of the population covered by at least 4G mobile network		ICASA	HH6 Proportion of households with Internet		Stats SA
A7 Fixed broadband basket		ICASA	HH7 Proportion of individuals using the Internet		Stats SA
A8 Mobile cellular low-usage basket		ICASA	HH8 Proportion of individuals using the Internet, by location		Data not captured by Stats SA
A9 Mobile broadband Internet prices per month		ICASA	HH9 Proportion of individuals using the Internet, by type of activity		Data not captured by Stats SA
A10 Multichannel TV subscriptions per 100 inhabitants		Data not submitted to the ITU	HH10 Proportion of individuals using a mobile cellular telephone		Stats SA
			HH11 Proportion of households with Internet, by type of service		Data not captured by Stats SA
ICT Access and Use by Enterprises			HH12 Proportion of individuals using the Internet, by frequency		Data not captured by Stats SA
B1 Proportion of businesses using computers		Data not captured by Stats SA	HH13 Proportion of households with multichannel television, by type		Data not captured by Stats SA
B2 Proportion of persons employed routinely using computers			HH14 Barriers to household Internet access		Data not captured by Stats SA
B3 Proportion of businesses using the Internet			HH15 Individuals with ICT skills, by type of skills		Data not captured by Stats SA

B4 Proportion of persons employed routinely using the Internet		HH16 Household expenditure on ICT	Stats SA
B5 Proportion of businesses with a web presence		HH17 Proportion of individuals using the Internet, by type of portable device and network used to access the Internet	Stats SA
B6 Proportion of businesses with an Intranet		HH18 Proportion of individuals who own a mobile phone	Data not captured by Stats SA
B7 Proportion of businesses receiving orders over the Internet		HH19 Proportion of individuals not using the Internet, by type of reason	Data not captured by Stats SA
B8 Proportion of businesses placing orders over the Internet		HH20 Proportion of individuals who purchased goods or services online, by type of good and service purchased	Data not captured by Stats SA
B9 Proportion of businesses using the Internet by type of access		HH21 Proportion of individuals who purchased goods or services online, by type of payment channel	Data not captured by Stats SA
B10 Proportion of businesses with a Local Area Network		HH22 Proportion of individuals who purchased goods or services online, by method of delivery	Data not captured by Stats SA
B11 Proportion of businesses with an extranet		HH23 Proportion of individuals who did not purchase goods or services online, by type of reason	Data not captured by Stats SA
B12 Proportion of businesses using the Internet, by type of activity			
ICT Sector and Trade in ICT Goods		ICT in Education	
ICT1 Workforce of the ICT sector (as a percentage of total business sector workforce)	Can be determined from the Stats SA QES report	ED1 Proportion of schools with a radio used for educational purposes	Some data available in a fragmented form from the Department of Basic Education. Data is not submitted to the ITU.
ICT2 Value added of the ICT sector (as a percentage of total business sector value added)	Not available	ED2 Proportion of schools with a television used for educational purposes	
ICT3 ICT goods imports as a percentage of total imports	Data used to be available via DTIC	ED3 Proportion of schools with a telephone communication facility	
ICT4 ICT goods exports as a percentage of total export	Data used to be available via DTIC	ED4 Learners-to-computer ratio in schools with computer-assisted instruction	
ICT5 ICT services imports as a percentage of total imports of services	Data used to be available via DTIC	ED5 Proportion of schools with Internet access, by type of access	
ICT6 ICT services exports as a percentage of total export of services	Data used to be available via DTIC	ED6 Proportion of learners who have access to the Internet at school	

ICT7 ICT-enabled services imports as a percentage of total imports of services	Data used to be available via DTIC	ED7 Proportion of learners enrolled at the post-secondary level in ICT-related fields	
ICT8 ICT-enabled services exports as a percentage of total export of services	Data used to be available via DTIC	ED8 Proportion of ICT-qualified teachers in schools	
		EDR1 Proportion of schools with electricity	
ICT in Government			
EG1 Presence of National e-Government Strategy or Equivalent	DCDT		
EG2 Presence of Digital ID or Similar Authentication Required to Access Online Services	Not available		
EG3 Presence of a Public Procurement Portal	Available		
EG4 E-participation Index	Available		
EG5 Open Government Data Index	Available		

Source: The authors, 2026

3. TOWARDS A DIGITAL ECONOMY IN SOUTH AFRICA

Digital transformation of the South African economy is vital to remain globally competitive and to better serve the needs of South Africans. It involves transforming business processes, improving operations, and creating new opportunities, ultimately leading to a more digital-first approach across various industries. This encompasses a broad range of activities, from automating tasks and enhancing communication to developing new products and services.

The transformation of South Africa's economy into a digital economy is transversal. It involves the application of technology to business models across the entire economy. It is defined and discussed in this section.

3.1. What is the Digital Economy?

To correctly target initiatives aimed at developing and growing the digital economy, the concept of the “digital economy” itself needs to be defined and placed in context. Global organisations which publish papers on this topic have a similar understanding of this concept, with examples provided below.

A specific definition for the purposes of this Masterplan has been developed on the basis of global definitions and with the specific South African context in mind. This is also provided below (under DEM definition).

3.1.1 Digital Economy Definition

There are various definitions of the digital economy proposed by global organisations but no generally accepted single definition. However, there is generally agreement on what a digital economy consists of – what is (or is not) included in the digital economy. For example:

United Nations definition

UN Trade and Development (UNCTAD) refers to the broad range of economic activities that rely on or are significantly enhanced by digital inputs, including technologies, infrastructure, services and data. The key components of a digital economy include:

- **Core Aspects:** Digital infrastructure (telecommunications, hardware, software) and digital services.
- **Digitalised Transactions:** Economic activities facilitated by digital platforms, including e-commerce and online marketplaces.
- **Data-driven Activities:** Production processes that leverage data, artificial intelligence, and cloud computing.

Digital economy consists of economic activities:

- Reliant on digital inputs – ICTs, data, infrastructure, services,
- Encompassing digitally produced / delivered goods – ICTs, content, and
- Digitally ordered / delivered transactions

extending from core digital sectors to all digitally transformed traditional sectors.¹

¹ “What is the digital economy?”, a presentation by UN Trade & Development (UNCTAD) in May 2024.

OECD Definition

The OECD posits that there is no single definition of the digital economy. Rather, it is considered a multidimensional phenomenon. All economic activities that rely on, or are significantly enhanced by, digital inputs, including technologies, infrastructure, services and data are considered to be a part of the digital economy. It covers all producers, consumers, and governments utilising these tools, representing a broad, transformative shift rather than a separate sector. The “transformation” concept refers not only to technology companies but to the digitalisation of traditional industries (for examples, smart factories, digital healthcare or precision farming in agriculture).

The digital economy has a broad scope, including any economic activity driven by digital technologies such as AI, IoT, blockchain, big data and cloud computing. In the modern economy, almost every transaction contains an element of digitalisation in its production.²

DEM Definition

For the purposes of this Digital Economy Masterplan, the proposed definition of digital economy is:

The digital economy is an economic system in which digital technologies, data and networks fundamentally reshape production, consumption, labour and governance.

The digital economy includes:

- Physical communications infrastructure – telecoms networks, data centres, including the corresponding hardware
- Digital public infrastructure – secure, interoperable, foundational digital systems that create a shared digital backbone for governments, businesses, and people
- Platform economy (platform / gig work)
- Artificial Intelligence (AI) and automation
- Data governance, e-Governance, trust and security
- Digital skills

It must be noted that this is a generic definition, not specific to any jurisdiction or socio-economic conditions of a country. It is simply the definition of what a digital economy is or should be. The government of SA and its institutions, private sector organisations and the South African public must ensure that the underlying foundation of the digital economy is properly built in SA, addressing all the elements which ensure that the digital economy is operational.

3.1.2 Digital Economy Value Chain and Ecosystem

According to the OECD³, the digital economy is based on three main building blocks: (1) digital data, (2) digital technologies and (3) digital infrastructure. While these building blocks are key, other upstream and downstream elements are required for the digital economy to function. A high-level digital economy value chain is illustrated below, demonstrating linkages between the different value chain components.

² “OECD Digital Economy Outlook 2024”, OECD, 2024 and “OECD Handbook on Digital Supply and Use Tables”, a presentation delivered by the OECD Statistics and Data Directorate in May 2024.

³ “The Digital Economy, Multinational Enterprises and International Investment Policy”, Gestrin, Michael V. and Julia Staudt, OECD, 2018.

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Elements of the Value Chain

Digital Infrastructure (and Providers)

Infrastructure providers consist of telecommunications operators, broadcasters, tower companies (towercos), data centre operators (smaller operators and hyperscalers) and cloud infrastructure providers.

Currently, most of these inputs (hardware and software) are imported from into South Africa from other countries, rather than manufactured or developed locally. A service is included in this value chain component that is rendered locally is refurbishment of equipment and in particular mobile devices and customer premises

equipment (CPE).

System integrators – those companies that connect disparate ICT components into cohesive systems – and business process outsourcing companies are also a key element, providing services used by infrastructure providers, as well as providers of wholesale and retail services rendered by ICT / technology service providers.

Cloud Providers

This grouping of value chain elements consists of a range of service providers delivering their services mainly from the cloud – a trend that is expected to become more engrained going forward. This grouping includes platform and e-Commerce providers, application providers, fintech providers, cyber security providers and content providers. Their services are provided either via providers of retail ICT services or directly to the end-users.

Upstream from the various cloud providers are application / software and content developers who create the apps, services and content consumed by the end-users. These products and services are created either outside of South Africa or locally.

Retail and Wholesale Service Providers

These are providers such as Internet service providers (ISP) which sell services on a retail and/or wholesale basis to end-users or downstream resellers and agents. They can be a part of the upstream operators and providers or independent of them. These are the entities with which the end-users most often have a direct relationship to purchase products and services.

Digital End-Users (and Enablers / Contributors)

Digital end-users constitute businesses, government (departments and agencies), other organisations (government or non-governmental) and consumers or citizens. These entities and individuals consume the products and services supplied by the service providers, whether these products and services are digital in their own right or not.

However, the entities that are end-users are also often enablers of or contributors to other elements of the digital economy. For example, the government influences the value chain (and the entire digital ecosystem) through policies, legislation and regulation. It also provides e-Government platforms and services, such as MyMzansi. Businesses themselves may be involved in the creation of elements of the digital economy – infrastructure, product / service or content development. They may also use digital inputs to create products and services sold to other end-users.

Thus, the digital economy is not a linear progression of elements (or products / services created with digital inputs or delivered digitally) from upstream to downstream but a circular economy.

Artificial intelligence

Artificial intelligence (AI) increasingly permeates all aspects of the digital world, including the digital economy, and its role will only grow going into the future. Generative, and increasingly Agentic, AI is used by businesses and government agencies to drive efficiencies at work and service delivery and optimisation (e.g., through automation of certain tasks). The use of AI includes the value chain elements of development and manufacturing, infrastructure operations, service delivery and others. AI is also being provided to end-users through smartphones, software and applications.

AI is thus depicted in the graphic above as an all-encompassing phenomenon, present across all elements of the value chain.

AI can also be considered to be a part of a wider digital economy ecosystem but does not have to be a part of the value chain. The digital economy can function without AI, but not as efficiently as it does with the application of AI.

Research and Development

Similarly to AI, research and development (R&D) plays a role at various points of the value chain. R&D includes innovation.

Every product and service begins with an idea which is then developed until it ultimately becomes useful (most often distributed through the value chain on a commercial basis). One could argue that, in that sense, R&D is the starting point of the value chain. Subsequently, new or further development (or innovation) is enabled by the already existing digital infrastructure and systems, replicating the R&D function at different components of the value chain.

Digital Technologies

New and emerging (digital) technologies are typically not a direct part of the digital economy value chain, as the digital economy can function without them. However, they enable greater potential and efficiencies in the development of new products and services, and their delivery. Through this, they ultimately enable sector improvements and new economies (e.g., the drone economy). These digital technologies include robotics, drones, automation, autonomous vehicles, augmented / virtual reality, among others. The actors in this grouping consist of technology and electronics manufacturers and suppliers.

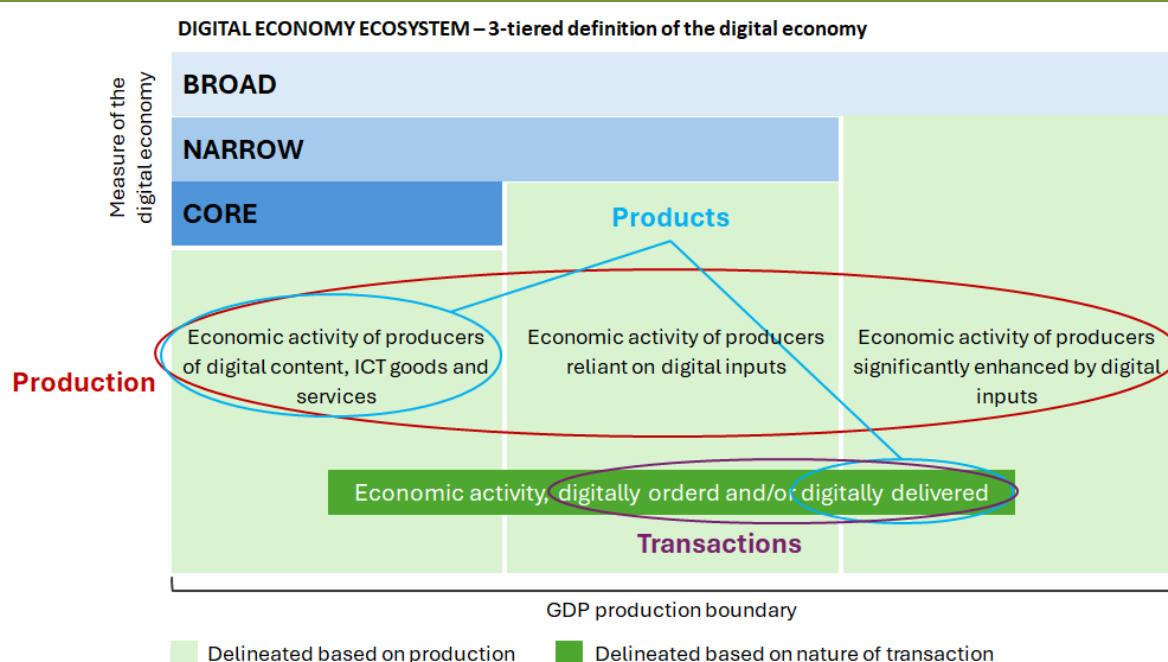
Digital technologies are part of a wider digital economy ecosystem.

Digital Economy Ecosystem

The digital economy operates within a broader ecosystem which consists of a complex, interconnected network of technologies, businesses, government organisations and users that collaborate to create, exchange and consume digital value. Value creation often depends on the open sharing of ideas, data and interfaces supported by digital infrastructure.

The graphic below represents the digital economy spectrum from a core economy focus to a broad ecosystem view, where any application of digital inputs into the production process of products and services brings these activities and actors into the fold of the digital economy. This is important for the understanding of the extent of the digital economy and its contribution to the national GDP.

Figure 4: Digital economy ecosystem



Source: UNCTAD, 2024

3.2. South Africa in Relation to the Global Digital Economy

Globally, the digital economy is completely restructuring traditional markets as it causes widespread disruption to sectors and their respective supply chains. The digital economy is characterised by:

- **Value creation** – An estimated 70% of new value created in the coming decade will be based on digitally enabled platform business models.⁴
- **Digitalisation across industries** – A significant portion of the value added by data flows over the Internet accrues within traditional industries, meaning that all industries are affected by digitalisation.
- **Emerging technologies** – Emerging technologies such as artificial intelligence (AI) are redefining international relations and shaping the future of the digital economy.

Digital transformation is changing the forces that traditionally determined industrial structures. All indications are that the process of digital transformation is accelerating year-on-year.

Industries such as tourism, food and transport are being transformed by the application of digital technology through the adoption of online applications that are enabling this. It further extends to transaction costs, how information is generated and shared, how production occurs, how products get from producers to consumers, and how risk is managed. Industries such as media, banking, postal services, retail and telephony are being disrupted by new digital entrants with far lower capital and operational costs. This process is accelerating and spreading to almost every industry.

Additionally, digital technologies are expected to play a crucial role in creating exponential new values in the next decade, based on digitally enabled platform business models. With the rapid growth of online retail and travel services, the digital economy has become a permanent fixture in the lives of many.

Globally, the average contribution of digital economy to a country's GDP was around 15% in 2024 (World Bank, IDCA). This is expected to increase to 17% to 20% by 2028, representing a significant increase in both value and its share of the global economy. The size of the digital economy varies by country and its contribution to the GDP is typically larger in the technologically more advanced countries. In the United States, for example, the contribution of the digital economy to the GDP stood at 10% in 2022 (the last year it was measured by the US Bureau of Economic Analysis), rising to over 16% by early 2025⁵. Growth of the digital economy has been driven by increasing expansion of broadband connectivity and smartphone penetration, expansion of cloud infrastructure and adoption of cloud-based services and apps, e-Commerce expansion, as well as digital content development and consumption. Future growth is anticipated to be fuelled by the expansion of the industrial Internet and the increasing digitalisation of various industries.

Within the global ICT sphere, research has shown an increase in employment by 5 million jobs between 2010 and 2015, with the expectation that it will continue to grow as the digital economy accelerates.⁶ The digital economy is projected to create a significant number of new jobs by 2030, with estimations ranging from 78 million to 230 million, depending on the source. For example, the World Economic Forum's "Future of Jobs Report 2025"⁷ predicts a net increase of 78 million jobs due to job disruption and new roles created. This growth is fueled by the rapid adoption of technologies such as AI and automation, which are transforming industries and creating new opportunities.

Other gains from the digital economy will be an outcome of investment in technologies, estimated to be more than six times that of non-digital investments, as well as the enhancement of productivity and innovation for firms. An example is the impact of AI on labour productivity, estimated to contribute around USD 6 trillion by

⁴ World Economic Forum, 2023; <https://www.weforum.org/stories/2023/12/tech-diplomacy-harness-digital-economy/>

⁵ BEA, Interactive Advertising Bureau (IAB), own calculations.

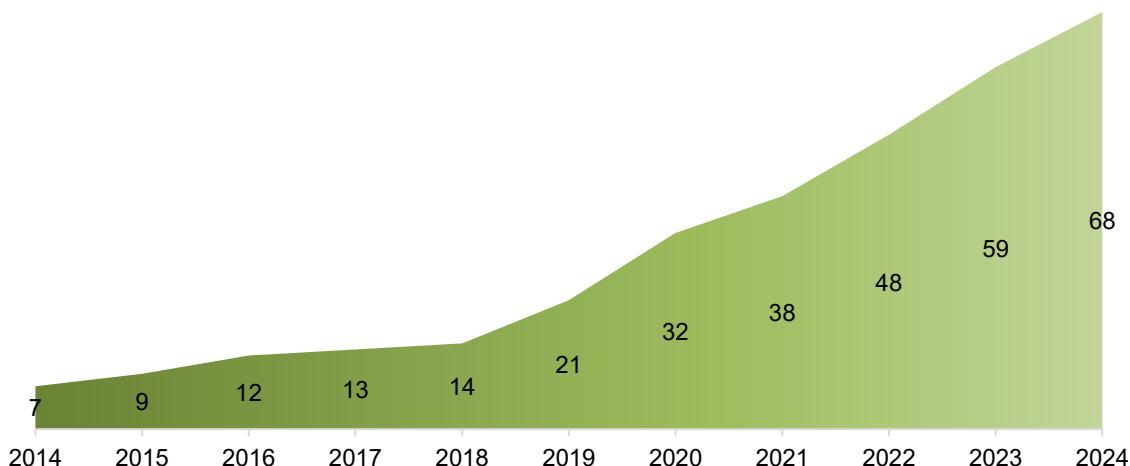
⁶ UNCTAD, 2019, Value creation and capture: implications for developing countries, *Digital Economy Report 2019*, online, available: https://unctad.org/en/PublicationsLibrary/der2019_en.pdf

⁷ The report can be accessed here: <https://www.weforum.org/publications/the-future-of-jobs-report-2025/>

2030.⁸

As a result of the explosion of digital technologies – their innovation and application across the world – and the manner in which they are interconnected, an exponentially growing volume of data has become a defining characteristic of the global digital economy. The quantum of data generated by the digital economy today is difficult to comprehend, yet the world is only at the beginning stages of a data-driven global economy. The figure below shows the increase in Internet protocol traffic (a good proxy for data flows) over a decade.

Figure 5: Global data traffic volumes - Data exchange at major Internet exchanges (in Exabytes – EB)



Source: Intelligent CIO, various

Over a period of 10 years (2014 to 2024), the volume of data has grown by a CAGR of over 25% and continues to increase by 15% to 20% annually. The volume of global data flows is expected to more than double from the current level by 2030.

3.2.1 The Digital Economy and its Contribution to Economic Activity in South Africa

The International Telecommunications Union (ITU) and studies conducted locally in South Africa confirm that increased penetration of broadband stimulates economic growth, with digital transformation and the uptake of digital platforms driving further growth and employment opportunities.

While it is clear that there are areas of rapid digital economy transformation in certain parts of the South African economy, it is also clear that this exists alongside areas of lagging digital economy development, with each sector adopting digital technologies at different rates and pathways. We need to ensure that those sectors and operations lagging behind are supported to “catch-up” with the rest of world, while continuing to support the leading sectors.

As such, South Africa needs a clear and coherent action plan for harnessing the immense potential of the digital economy to generate new opportunities for all socio-economic segments in the country. Failure to do so will exclude many small companies from potentially scaling their operations nationally and even globally.

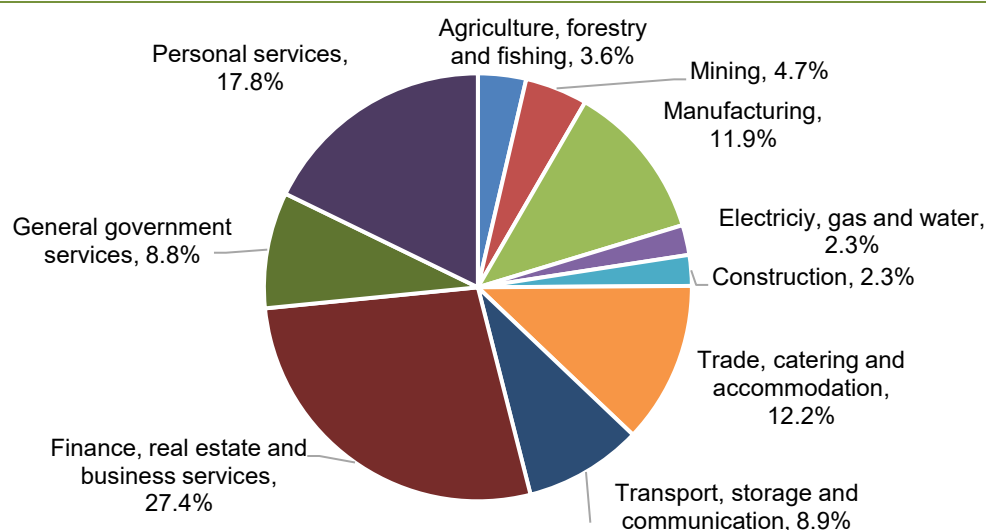
Measuring the digital economy’s contribution to the South African economy

To effectively measure a country’s contribution to GDP, it is important to understand the potential and impact of a specific sector on the broader economy.

The contribution of the different sectors to the national GDP of South Africa for the first three quarter of 2025 (Q1 to Q3) is shown below.

⁸ PwC, 2017, *Sizing the prize: What’s the real value of AI for your business and how can you capitalise?* p.5.

Figure 6: Sectoral composition of GDP for first 3 quarters of 2025 (% total GDP)



Source: Statistical Release P0441, Stats SA, 2025

Countries measure the contribution of each sector to their economies by disaggregating economic information through the global System of National Accounts (SNA)⁹. This is a comprehensive statistical system that provides a standardised way to measure and present the economic activities of a particular sector. In turn, these sectors make up the GDP of a country. The SNA helps to create a coherent and integrated set of macro-economic accounts for the country, providing a comprehensive view of its economic activity. In South Africa, the task of calculating the value of the digital economy (and its contribution to the country's GDP) has been assigned to Statistics South Africa (Stats SA), in collaboration with the South African Reserve Bank (SARB). However, this process is still at an early stage of execution.

In South Africa, the Information and Communication Technologies (ICT) sector is not directly measured within the core SNA framework and a separate satellite account is used to capture the specific details of ICT's economic impact. A satellite account is a supplementary set of statistics that complements national accounts, focusing on specific segments.

Why does it matter?

The private sector drives the growth trajectory of our economy. The more we know about different economic activities, the better clarity of sight with respect to future decisions investors have, while the government can better understand what is driving the economy. Collecting information about the digital economy will allow the government to better understand what policy mechanisms need to be changed or introduced, as well as where best to allocate financial resources to stimulate inclusive growth. Therefore, accurately measuring a sector's contribution to GDP is critically important for it to receive the necessary resources, support and consideration from the national government.

The digital economy impacts multiple (vertical) sectors. Therefore, the calculation of its contribution to the GDP is more complex than merely assessing a single sector. In the same vein, it will likely impact the budget allocation for a number of government departments, particularly those that manage the "key pillars" of the digital economy.

⁹ A more detailed description of the SNA can be found in Annexure 2.

The size of the South African digital economy

South Africa's official statistics do not currently separate the digital economy from the traditional economy. There is little formal data available to accurately quantify the size and nature of South Africa's digital economy and data is collected from available online resources to understand the impact.

Although there are relatively accurate estimates of the size and contribution of the ICT sector, the digital economy is far broader than ICT and encompasses the value added from digital providers and digital applications in almost every sector in the country.

The size of the digital economy in South Africa is currently not known. Once Stats SA has concluded the process of calculating the size of the digital economy, it will be possible to develop targets, from the established base, for growth of the digital economy as a percentage of the national gross domestic product (GDP).

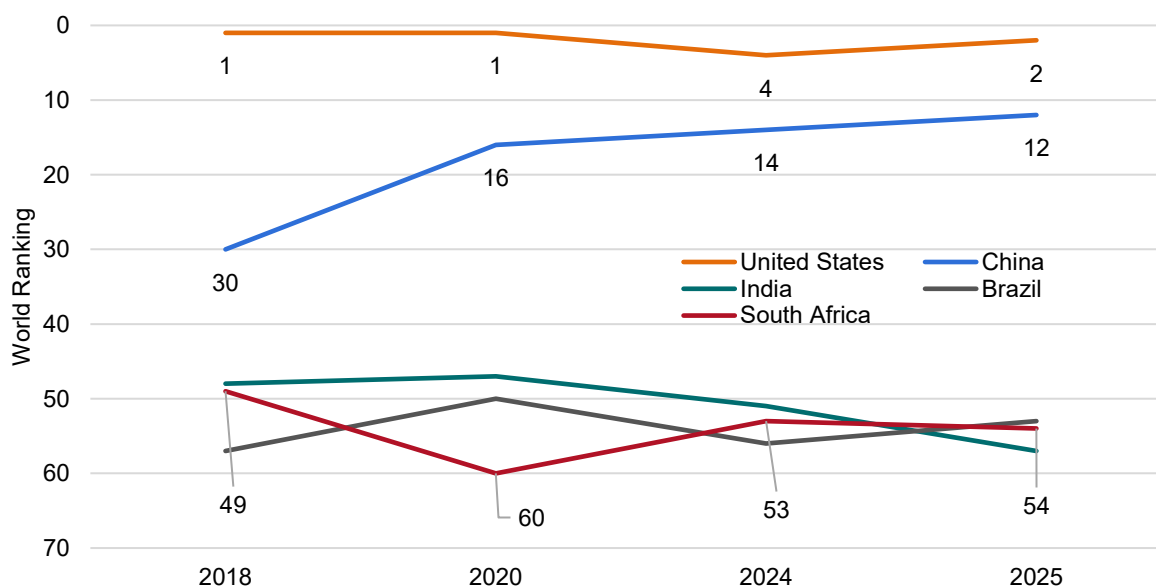
The current estimate is that the digital economy contributes between 7% and 8% of the GDP annually. This amounts to at least ZAR 600 billion, based on the expected 2025 GDP of approximately ZAR 7.8 trillion (at market prices). However, some estimates are even higher, similar to the global average of 15% of the GDP or higher. According to Stats SA, the ICT sector alone accounts for approximately ZAR 360 billion or around 4.6%.

Where does South Africa stand relative to the rest of the world?

From an international perspective, South Africa is a country that offers opportunities in the digital sphere and is restrained by systemic structural binding constraints. South Africa is gradually climbing the international rankings of network availability but is making limited progress in the ability to leverage increased broadband connectivity and higher broadband speeds to expand economic activities.

South Africa's level of digital competitiveness declined sharply between 2018 and 2020 and has yet to regain its previous level of digital competitiveness. This is illustrated in the graphic below and juxtaposed against other key global markets, three of which are in BRICS. The index measures 69 countries globally (in 2025).

Figure 7: South Africa's digital competitiveness relative to BRICS and the United States



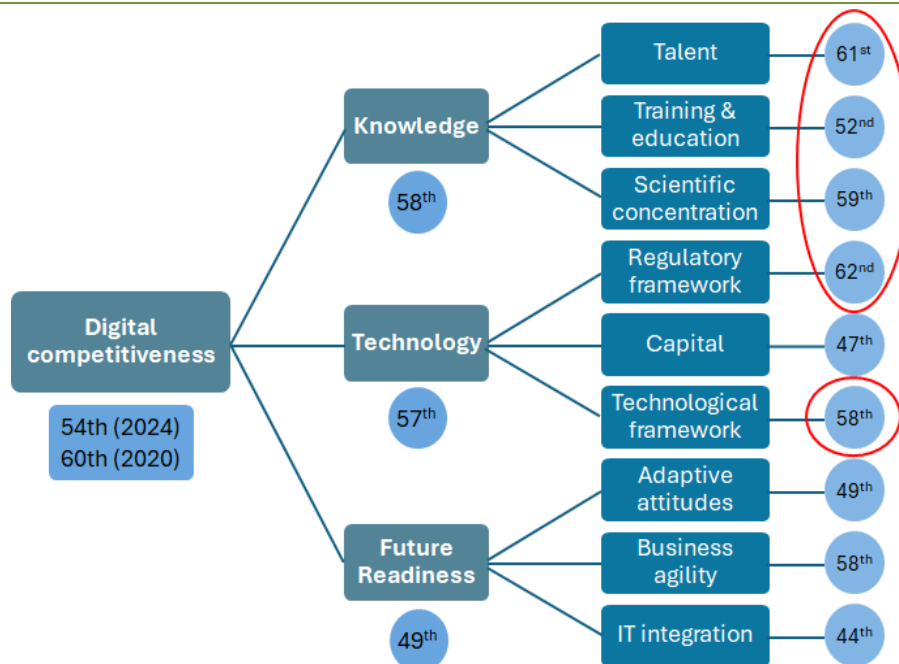
Source: IMD, 2018 – 2025

The cause of South Africa's limited progress in international digital competitiveness is linked to the performance of two key structural elements of the South African technology development ecosystem:

- Limited knowledge development and knowledge transfer; and
- Restrictive and/or dated technology and regulatory frameworks.

The detail of the digital competitiveness index and South Africa's position within it is illustrated below.

Figure 8: Diagnosis of South Africa's digital competitiveness, 2025



Source: IMD, 2025

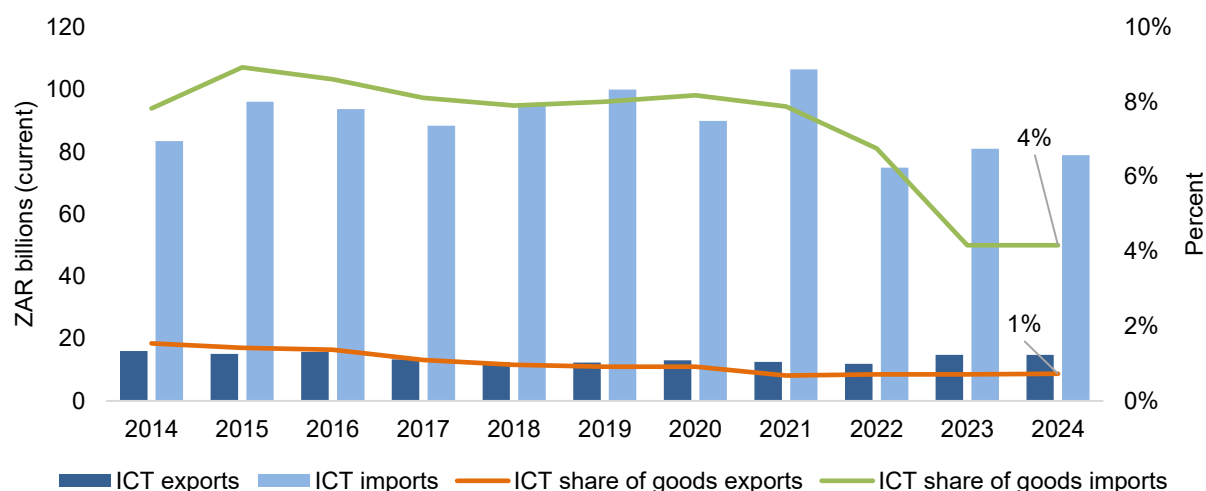
Improvements in the “Knowledge” and “Technology” subsets of the Digital Competitiveness Index are significantly dependent on impactful policy design and implementation by government (at all levels).

South Africa's product and service technology export performance

South Africa's export and import performance projects the results of the Digital Competitiveness rankings. Over the past ten years, the share of ICT manufacturing products¹⁰ has remained static at around 1% of total merchandise exports. The stagnant performance of ICT-related exports indicates that South Africa has a very limited production base in this product area **and** that this production base has not expanded its output over the last ten years.

¹⁰ The ICT product list has been constructed using the UNCTAD guideline entitled “Technical Notes on ICT for Development”, issued in 2014.

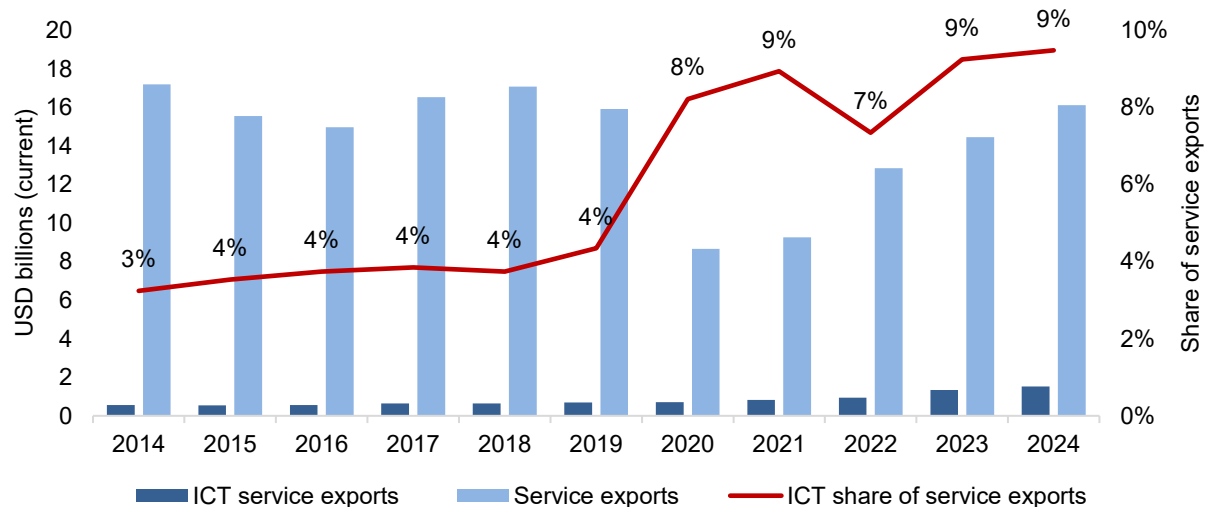
Figure 9: Trends in South Africa's ICT exports and imports, 2014 – 2024



Source: DTIC, 2026 and World Bank, 2026

However, although South Africa's production capacity in ICT products is limited, ICT-related export services have shown significant growth in the same comparative period.

Figure 10: Trends in South Africa's ICT-related services, 2014 – 2024



Source: World Bank, 2026

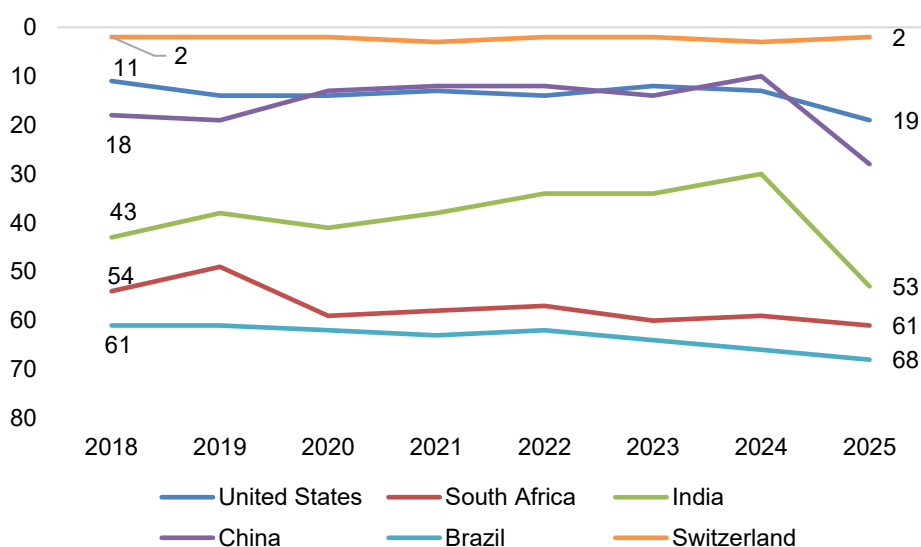
Total service exports reported a dramatic decline in the 2020 – 2021 COVID-19 period and have only recently recovered to previous levels. However, ICT-related service exports have grown over 2.5 times during the comparative period – the fastest growing export grouping outside of mineral exports. Historically, ICT service exports accounted for less than 5% of total exported services, but are now close to 10%. South Africa has established a small, but growing ICT services industry that services export markets. These services include business process outsourcing and enablement, as well as multiple other technology and design-related services.

A key element of this DEM is to identify, explore and support existing digital services servicing export markets, and to remove any binding constraints, particularly in support of the African Continental Free Trade Agreement (AfCFTA).

South Africa's readiness to leverage the global digital economy

South Africa's ability to productively use Internet connectivity is absolutely critical and is the missing link between being able to communicate and the ability to leverage opportunities in the digital economy to achieve inclusive growth. Our ability to compete internationally, for example, in the provision of digital business services, is reliant on the skills development ecosystem from primary through to tertiary education, as well as demand-led skills development to satisfy specific requirements and use-cases. The figure below illustrates that, in comparison to peer and aspirational countries, South Africa's relative levels of digital talent are firstly low and secondly deteriorating. The ranking is presented in an ascending order, where number 1 is the best and the lower the number, the lower the comparable position of a country in the ranking.

Figure 11: South Africa's digital competitiveness ranking – availability of digital talent



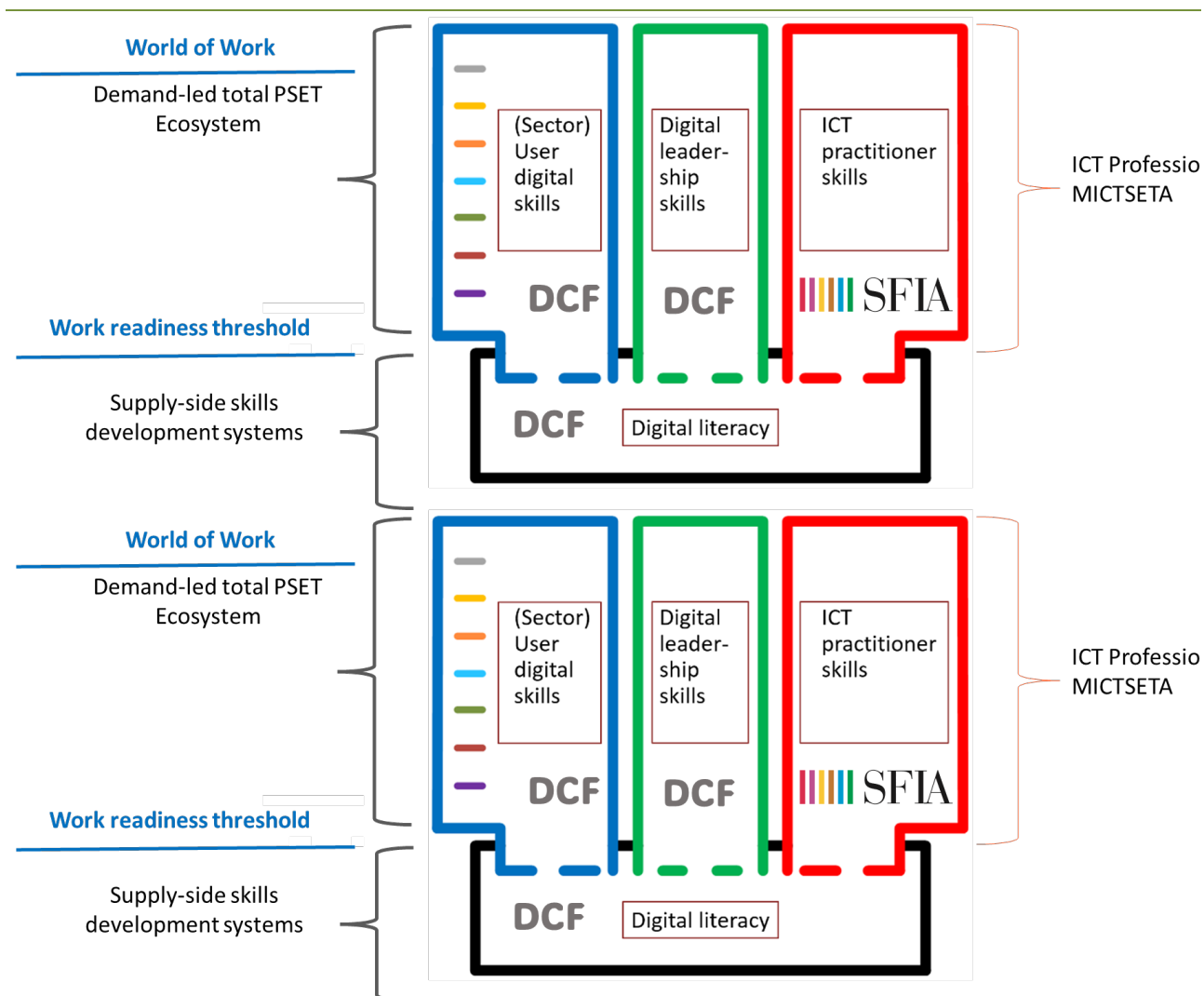
Source: IMD, 2018 – 2025

To arrest this decline and generate the skills South Africa needs, the DCDT, supported by the University of the Western Cape and multiple other partners (SETAs, Department of Basic and Higher Education and others) have been developing a framework for digital skills training initiatives in South Africa. This framework is based on recognising the necessity for a minimum digital literacy skills-base, which individuals can leverage as they progress through the world of work. The National Digital and Future Skills Strategy, with the Digital Competence framework (incorporating SFIA), plays a critical role in coordinating all arms of government and the private sector towards a clear curriculum framework for digital literacy, digital readiness and more detailed technical skills within the digital economy.

Demand-led skills development programmes have been developed over the last few years, culminating in the funded skills and employment initiatives, as well as the release of the Work-Integrated Learning Programme Builder's Toolkit (The Collective_X and Harambee, 2026).

The figure below illustrates that the basis for participation in the digital economy is digital literacy, typically to be addressed during the schooling period of a person's life (although external digital literacy initiatives should continue to occur post-school or be provided to excluded / vulnerable groups). The post-school education and training (PSET) ecosystem is then responsible for providing the necessary training for participation in the World of Work. This training is demand-led to satisfy the needs of the digital economy.

Figure 12: Digital Competence Framework – a shared responsibility



Source: DCDT, 2026

The table below expands the Digital Competence Framework by identifying the key roles of different stakeholders in the education and training ecosystem in South Africa.

DC Ecosystem (Competence Role)	Primary Implementation Sectors (Delivery Channels)
Citizens Digital Competence Framework	Basic Education (under 18); Citizen & Community Sector (18+) outside structured workplace pathways; ABET initiatives, Department of Social Development
Sector Users Digital Competence Framework	Sectors such as Tourism, Financial sector, Agricultural sector, Government sector or Public Administration; Police & Security Services, the related Labour Market & Workplaces; and training institutions contributing towards talent supply for all sectors such as TVETs and Higher Education Institutions (PSET); all the sector SETA's (merSETA, Fasset, Services SETA, TETA, HWSETA, CATHSSETA etc.)
Digital Leadership Digital Competence Framework (& SFIA for CIOs)	Across all sectors, Labour Market & Workplaces and training institutions contributing towards leadership talent supply such as business schools, Higher Education Institutions (PSET); relevant SETAs
ICT Practitioners SFIA Framework	Technology-dominant or technology development companies, ICT support functions across all the other sectors, and training institutions responsible for the talent supply for the total market such as TVETs and Higher Education

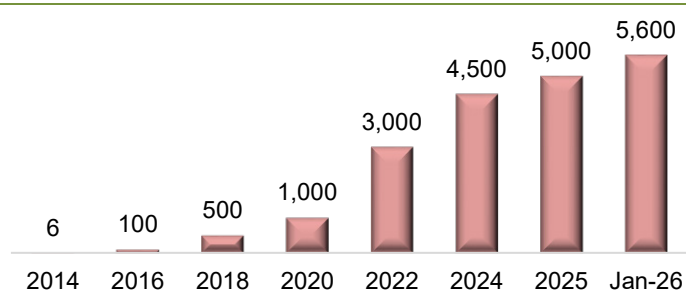
	Institutions (PSET)
DC Ecosystem	Primary Implementation Sectors (Delivery Channels)
(Competence Role)	Relevant SETAs (MICT SETA)

Most importantly, the DEM recognises that momentum already in place in developing new school curricula, existing digital skills development pathways and the host of initiatives underway by private sector entities. The objective under the DEM is to play a coordination role in further digital skills development.

3.3 Current State of the Digital Infrastructure in South Africa

The transformative power of the Digital Economy relies on access to the eco system of connectivity. These include the cables along the ocean bed connecting us the other continents through landing stations, the terrestrial infrastructure such as fibre connecting sub-sea cables to cities and towns, the tower infrastructure that allows for mobile communications, satellite communications, and the data centres that process and store the data transmitted across these networks.

Figure 13: NAPAfrica Internet traffic, 2016 – 2026 (in Gbps*)



* 1 Tbps = 1 000 Gbps

Source: NAPAfrica and MyBroadband, 2026

A good proxy for participation in the digital world by the people and organisations in South Africa is the level of Internet traffic. In January 2025, South Africa's largest Internet Exchange Point (IXP), NAPAfrica, reached a peak traffic volume of 5.6 Tbps, having witnessed exponential growth in traffic over the preceding ten years (growth of 5 500%). This is illustrated in the graphic to the left.

NAPAfrica is one of the top ten IXPs globally by total traffic volume, placing South Africa in the top 10 globally. The number of ISPs / entities peering at the IXP has grown from 200 in 2016 to more than 655 in early 2026.

The growth in traffic is driven by:

- Growing demand for content and cloud services – video streaming, social media, use of data-intensive applications
- Increasing number of entities exchanging traffic locally – ISPs, CDNs and large enterprises

3.3.1 Subsea Cable System Landscape

South Africa's sophisticated international connectivity network, bolstered by an abundance of ocean bed cables, including major initiatives like the proposed Umoja Cable linking Africa with Australia—significantly improves access to global content and services, while also promoting economic growth and digital innovation across the continent.

Table 3: Operational subsea cable systems linking South Africa to other regions globally

Cable Name	Year Live	Design Capacity	Length
SAT-3 / WASC	2002	0.8 Tbps	13,754 km
WACS	2012	14.5 Tbps	14,530 km
SAFE	2002	0.44 Tbps	13,500 km
SEACOM / Tata TGN-Eurasia	2009	6 Tbps	15,000 km
EASSy	2010	11.8 Tbps	10,500 km

ACE	2012 / 2021	12.8 Tbps	17,184 km
METISS	2021	24 Tbps	3,200 km
Equiano	2022	144 Tbps	14,000 km
T3	2023	54 Tbps	3,200 km
2Africa	2024	180 Tbps	45,000 km

Source: TeleGeography, 2026

South Africa boasts an advanced and diverse international connectivity network, linking it to various African nations and extending to Europe via both the eastern and western coasts of the continent. Currently, the country is connected to global networks through ten undersea cables, providing access to a vast array of international content and services. This extensive infrastructure not only enhances communication but also supports economic growth and digital innovation across the region.

3.3.2 South Africa's Terrestrial Fibre Optic Network Infrastructure

Over the past decade, South Africa's national fibre infrastructure has undergone substantial development, driven by the urgent need to enhance broadband connectivity, facilitate digital transformation, and provide robust backhaul services for mobile networks. The country's current fibre footprint is estimated to exceed 250,000 kilometres. Complementing this extensive long-distance layer are various municipal and regional networks that bring fibre connectivity closer to end-users.

However, since 2023 the growth of fibre networks in South Africa has significantly slowed as operators focus on generating revenue from their assets and reducing the substantial debts incurred during their development.

This trend is reflected in the analysis of new homes passed by fibre network operators (FNOs) in the first half of 2024, where fibre coverage increased to over 5.7 million homes as of June 2024, up from 5.3 million the previous year, marking an 8.2% year-on-year growth. The number of homes connected rose to 2.15 million, a 10% increase from 1.95 million a year ago, while the service uptake rate remained stable at 37%. South Africa's fibre-to-the-business (FTTB) market surpassed 240,000 active endpoints. According to the Internet Service Providers' Association of South Africa (ISPA), approximately 33 million of South Africa's 62 million residents have access to fibre-to-the-home (FTTH) from at least one network, with many households having multiple FNO options. Recent market trends show that 50Mbps download speeds, the minimum offered by several FTTH operators, have become the most popular among fixed line customers, with many providers reporting that a significant portion of their user base prefers these entry-level packages.

South Africa is known for its trend towards open-access networks which allows multiple service providers to lease fibre infrastructure from a single network operator, effectively reducing infrastructure duplication and fostering competition.

This resulted in a robust competitive market giving way to a series of mergers and acquisitions in the sector mainly as fibre network operators and under pressure to raise capital to extend their fibre footprint and continue construction into both smaller towns and underserved areas where the business case for the construction of fibre networks is less feasible.

In 2013, the DCDT launched the SA Connect programme (the national broadband policy) aimed at expanding affordable, high-speed Internet access across the country, with a particular focus on underserved and rural areas. The objective was to bridge the digital divide and achieve universal broadband access by 2030. However, progress has been slower than anticipated, falling behind the targets. Phase 1 of the programme sought to connect 6,135 government facilities but only succeeded in connecting 970 schools and healthcare centers. Launched in 2023, Phase 2 was meant to connect over 42,000 government buildings by 2026, including schools, healthcare facilities, and community centres. Additionally, five million households were to be connected and 32,000 community Wi-Fi hotspots established. The slow progress and delays in implementation suggest that the initiative is still a considerable distance from meeting its original objectives.

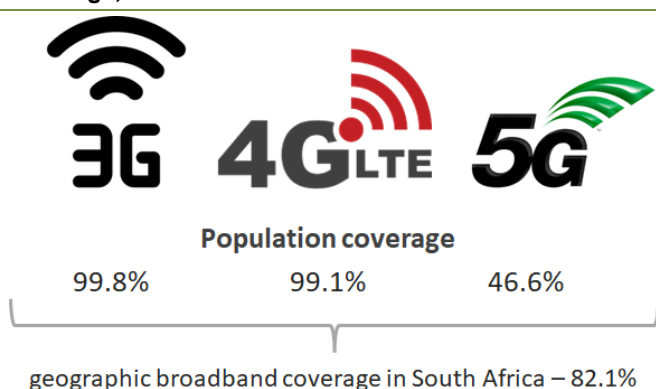
In this regard, the DCDT worked with the Department of Cooperative Governance and Traditional Affairs (CoGTA) to deliver the Standard Bylaw for the deployment of telecommunications infrastructure – a policy direction that seeks to standardise the application processes for the deployment of telecommunications infrastructure at a municipal level. The degree to which this policy has been adopted and implemented is unfortunately very low, mainly due to lack of expertise and capacity at municipal level. Many institutions and municipalities continue to implement cumbersome processes and procedures, and fees for the deployment of telecommunications infrastructure. In doing so, they slow down the progress of the sector.

In addition, in 2024 the DCDT published the Rapid Deployment Policy, further seeking to support the rapid deployment of telecommunications infrastructure.

3.3.3 South Africa Mobile Infrastructure Landscape

The mobile market comprises three major infrastructure-based mobile network operators – Vodacom, MTN and Telkom South Africa¹¹. Cell C, Rain and various mobile virtual network operators (MVNOs), such as FNB Connect, Capitec Connect and K'nect Mobile use the larger operators' networks to provide services.

Figure 14: Mobile network population and geographic coverage, as at March 2025



Source: ICASA, 2025

At the end of 2024, South Africa had approximately 116.8 million active cellular connections (ICASA, 2025), representing about 188% population penetration. This high market penetration is due in large part to multi-SIM ownership by users (i.e., many use more than one device with a mobile SIM card, such as a phone, a tablet or a MiFi device) and machine-to-machine connections. Smart phone subscriptions stood at approximately 82.7 million.

Despite this saturation, the transition from older network technologies (2G and 3G) to 4G and 5G is becoming increasingly critical as

operators prepare for government plans to phase out 2G and 3G networks within the next three years. However, adoption of 5G is expected to be gradual due to economic challenges, which may limit expansion primarily to urban areas.

The mobile industry is also making strides towards the implementation of 5G technologies, which promise to unlock innovative use cases and create new revenue streams. With market growth becoming increasingly reliant on advanced telecommunications offerings, operators are focusing on upselling these services along with value-added propositions, including mobile financial services.

In response to persistent loadshedding challenges, MNOs have invested in significant network resilience programmes which include the installation of backup power systems to ensure service continuity. ICASA (2025) reports that during the period 2022 to 2024, MNOs spent over ZAR 5.42 billion purchasing almost 300,000 batteries and ZAR 2 billion in acquiring over 20,000 generators to mitigate the impact of power outages on service delivery.

Access to devices in South Africa – smartphone vs. feature phone

Feature phones remain a key connectivity tool in South Africa, but smartphones, necessary for access to the Internet, now account for over 70% of all mobile subscriptions (ICASA, 2025). The adoption of smartphones, though rising steadily, remains hindered by several economic and market factors, particularly affordability.

¹¹ Telkom South Africa has a substantial mobile network infrastructure in most commercial centres in South Africa, but roams on other network providers for network access in less dense and rural areas of the country.

While smartphones are becoming central to delivering financial services, productivity tools and entertainment, they are still considered a luxury for many South Africans due to the high costs relative to the average wage.¹² For many, the decision to purchase a smartphone involves significant financial considerations.

Innovative purchasing options such as the ability for consumers to lease phones or adopt Rent-To-Buy options bring the total cost of ownership of a smartphone to more affordable levels that meet the cashflow of consumers.

Additionally, the large mobile operators have begun programmes to provide low-cost (low-end) smartphones to low-income segments of their customer bases to encourage quicker migration from older technologies to 4G and 5G mobile networks.

3.3.4 South Africa's Tower Infrastructure Landscape

South Africa has a robust towerco market, with over 15 tower companies operating 21,451 towers.¹³ These tower companies act as property developers for telecom infrastructure, providing space and supporting services to Mobile Network Operators who then install their equipment on the towers. Towercos offer several benefits, primarily to Mobile Network Operators (MNOs) and indirectly to consumers. By owning and managing this passive infrastructure, towercos enable infrastructure sharing, reducing capital and operational costs and potentially improving network efficiency and coverage. This may lead to the freeing up of capital for investment in other areas, like 5G rollouts. Towercos also play a key role in enhancing network efficiency and reducing costs for 5G rollouts and carbon emission reduction.

Towercos also provision grid and backup power connectivity, as well as much of the necessary backhaul infrastructure to mobile network operators in a colocation model, minimising the need for physical duplication of tower sites. This approach also streamlines application and approval processes and lowers maintenance expenses. In South Africa the pace of construction has slowed down significantly, mainly due to responsible agencies outsourcing operational procedures to external companies and levying fees at such a level that represent effective barriers to future network investment.

Towers are no longer just for passive co-location of active network equipment. They are evolving into “towers-as-a-service” hubs, hosting CCTV and security systems, electric vehicles (EV) charging stations, edge data nodes, digital billboards and drone docking pods.

3.3.5 Satellite Services in South Africa

Satellites play multiple roles in the development of the South African digital economy. Firstly, satellites are a key component on the Internet access technology mix, especially to serve remote, underserved and low population density areas. Secondly, geo-stationary satellites play a vital role in providing the key services regarding population monitoring, environmental monitoring, agricultural planning, security and defence, navigation, and research and development (e.g., the Square Kilometre Array project).

Different satellite technologies offer different opportunities to South Africa, with low earth orbit (LEO) satellites offering higher-speed-lower latency Internet connectivity services, compared to geo-stationary satellites (GEO).¹⁴

The domestic satellite market in South Africa sits at the intersection of three demand pools: (1) state and public-sector (schools, clinics, government sites under the SA Connect programme), (2) enterprise and critical

¹² One of the reasons for high smartphone prices is reliance on imports. High import tariffs increase retail prices. In April 2025, the 9% ad valorem (“luxury” item) tax in South Africa was eliminated on mobile phones priced at ZAR 2,500 or lower. The intention is to reduce the price of entry level to mid-market smartphones. However, prices of most smartphones are still subject to the ZAR : USD exchange rate.

¹³ Africa Digital Infrastructure Market Analysis, 2025 Report, Digital Council Africa (DCA).

¹⁴ Satellite Internet access can be provided by both GEO and LEO satellites, the latter offering higher broadband speeds and lower latency. The provision of LEO satellite services in South Africa is currently under investigation by ICASA, as well as the review of ownership requirements of licensees as per Government Gazette.

industries (mining, maritime, banking), and (3) upstream manufacturing / export of smallsat components and EO payloads. Commercially, South Africa largely follows continental VSAT and smallsat trends – the global VSAT market was approximately USD 13.2 billion in 2024, with mid-single digit CAGRs. Africa is increasing sovereign and manufacturing investment, with estimated continental satellite manufacturing spend rising toward USD 2.6 billion between late-2024 and 2030. South Africa is the regional hub for that activity in southern Africa. South Africa has the estimated potential to capture a high-single-digit to low-teens percentage of Africa's commercial terminal and payload market.

South Africa has consolidated its position as the manufacturing and services hub for southern Africa's satellite economy. The university-industry pipeline (Stellenbosch et al.) and incumbent ground infrastructure (Hartebeesthoek, teleports) give South Africa a material competitive advantage to serve the SADC region and act as a gateway for terrestrial backhaul to regional clients.¹⁵

The Ground-Station-as-a-Service, providing facility services to satellite operators is a potential infrastructure offering available to South African licensed operators.

3.3.6 Current State of Data Centre Infrastructure

South Africa's data centre market is experiencing substantial growth, driven by rising demand for cloud services, increased edge computing needs, and significant investments from global technology providers, positioning the continent as a key player in the African digital infrastructure landscape with South Africa leading the way with the bulk of investors being large international investors. Mordor Intelligence estimates that the South African data center market generated ZAR 8.6 billion in revenue in 2024, with an estimated market value of ZAR 20.2 billion by 2029. As per the report, the total critical IT load for all 31 South African data centers is currently at 434.86 MW, with expectations to increase to 828.93 MW by 2029, reflecting a compound annual growth rate (CAGR) of 13.8%. This growth highlights the rising demand for cloud computing and data services in the region.

Occupancy across the market averaged mid-50% in 2024 but varies by campus and tier; hyperscale halls and new AI-ready halls are pre-leased or in advanced discussions in multiple projects.

Apart from the large colocation data centres, there are many smaller data centres, both commercial and for internal organisational purposes. Moreover, South Africa is also seeing the deployment of edge data centres, which is likely to gain momentum over the next few years. Open Access Data Centres (OADC), part of the WIOCC group, has been at the forefront of this deployment. Other operators establishing edge data centres include Liquid C2, MTN and Vodacom.

A summary of key colocation data centres in South Africa is provided below. They are typically located in the three main metropolitan areas in the country – Johannesburg / Pretoria, Cape Town and Durban.

Table 4: Key colocation data centres in South Africa

City	Operator	Data Centre(s)	Notes
Johannesburg	NTT	JHB x1, CPT x2, DBN x1, Pretoria x2, Bloem x1, PE x1, EL x1	6,200m ² , 12 MW IT load, Tier III
Johannesburg	Africa Data Centres	JHB1 – Midrand, JHB2 - Samrand	Carrier-neutral, large & hyperscale
Johannesburg	Teraco / Digital Realty	JB1 – JB5 – Isando / Glen Marais	Largest campus in Africa
Johannesburg	Vantage Data Centre	JNB1 – Waterfall City, Midrand	Wholesale, hyperscale clients
Johannesburg	Equinix	JN1 – Johannesburg	Interconnection hub
Johannesburg	Business Connexion (BCX)	Midrand NDC1, NDC2, Crown Mines	Colocation, enterprise services
Johannesburg	Vodacom	Vodacom Data Centre	Operator-owned

¹⁵ Africa Digital Infrastructure Market Analysis, 2025 Report, Digital Council Africa (DCA).

Johannesburg	MTN	MTN Data Centre	Operator-owned
Johannesburg	Digital Parks Africa	Samrand	Carrier-neutral, large scale
Cape Town	Africa Data Centres	CPT1	Carrier-neutral, large & hyperscale
Cape Town	Teraco / Digital Realty	CT1, CT2 – Rondebosch / Brackenfell, Brackenfell Campus	Carrier-neutral, large & hyperscale
Cape Town	RSAWeb	RSAWeb Cape Town DC	Cloud hosting, enterprise
Cape Town	Vox Datapro	Cape Town Vox facility	Enterprise colocation
Stellenbosch	Technopark Colocation	Technopark Colocation DC	Neutral colocation
Durban	Teraco / Digital Realty	Durban (Riverhorse Valley)	Carrier-neutral, Tier III
Durban	MTN	MTN Durban DC	Operator-owned

Source: Digital Council Africa, Market Analysis, 2025

Hyperscalers are present and expanding: AWS operates the Cape Town region (multi-AZ) with local zone presence in Johannesburg; Microsoft, Huawei and Google continue regional investments and partnerships; several cloud providers announce multi-hundred-million investments over multi-year horizons. Capital flows are substantial – private and institutional investment, hyperscaler commitments and merchant colo funding are financing expansions and green-power projects to reduce reliance on Eskom and diesel generation.¹⁶

The National Data and Cloud Policy (May 2024) supports the ongoing investments in data centre infrastructure, with a focus on socio-economic development and enhancing government service delivery in South Africa through the adoption of data and cloud technologies. The policy applies broadly to government entities, the private sector, and individuals, stipulating specific requirements for data centres, such as operating locally, complying with environmental laws, and ensuring self-sufficiency in resources. It mandates that all government IT services transition to cloud platforms, allowing for private sector involvement. The implementation of the policy will involve consultations with stakeholders and aims to reinforce existing laws like the Protection of Personal Information Act (POPIA).

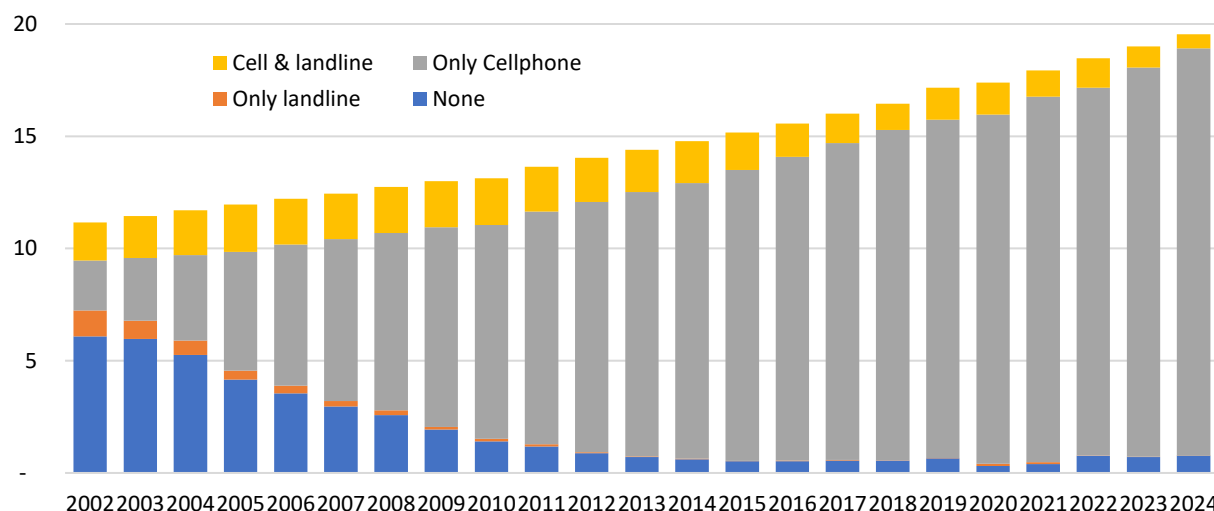
To address the very real power constraints that data centre operators face, the policy states that “Priority should be given to the self-provision of electricity and water for the operations of data centres to ensure continuous operation and reduce dependency on the national grids.” Under the DEM, a key action will be to engage with municipalities, NERSA and data centre operators to identify and resolve any power and/or construction-related bottlenecks.

3.3.7 Current State of Household Access to the Internet

The substantial infrastructure investments led by the private sector have provided millions of South Africans with access to critical communications infrastructure. With 4G connectivity covering in excess of 99% of the population, the type of connection used by citizens to connect to the Internet in South Africa is not necessarily the constraint in which citizens connect to the Internet.

¹⁶ Teraco (Digital Realty) — official announcements: JB7 & 120 MW Free State solar PV project; campus expansions and sustainability initiatives. Source: Teraco press releases and project pages (Teraco.co.za).

Figure 15: Households with functional / working mobile phone / telephone (number of households in millions)



Source: Stats SA, 2024

Infrastructure access must be complemented with the ability for households to afford broadband services. Whilst communications prices, on average, have remained stable for many years (and even declined), consumers now consume substantially more connectivity services. Furthermore, an analysis of household data shows that a key binding constraint to Internet use is the device cost.

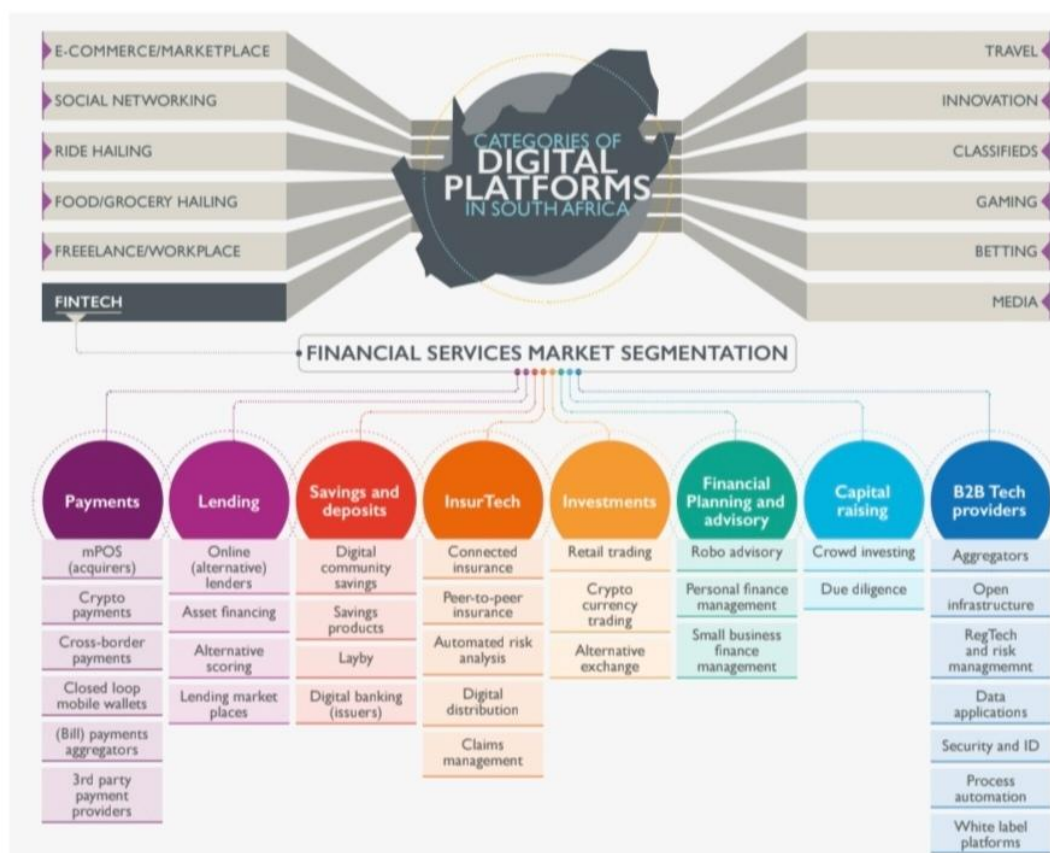
Mechanisms to address the cost of such devices have already been introduced (such as the removal of ad valorem tariffs on the importation of smartphones below the value of ZAR 2,500). The introduction of Rent-to-Buy options and Buy-Now-Pay-Later (BNPL) schemes are welcome initiatives by the private sector, having reduced the up-front cost of smartphones. However, such solutions are frequently dependent on consumers having a stable flow of income. Furthermore, while a smartphone is a critical tool for access to the Internet, productive use of the Internet typically requires that (at least households) have continuous use / access to a computer or laptop. The DEM will explore alternative funding mechanisms to reduce the cost of smartphones to households.

3.4. The Platform Economy in South Africa

Digital platforms, where businesses and consumers can seek, obtain and/or pay for services via their mobile phone or computer, are rapidly becoming the normal way of providing and paying for services. These digital transactions happen rapidly, with businesses and consumers no longer needing to be in-store, removing many of the economic barriers that prevent markets from functioning optimally and generating inclusive outcomes.

Digital platforms remove information asymmetries by digitally aggregating demand and supply, making buyers and sellers visible to one another and standardising prices. This makes locating customers or service providers quicker and easier with fewer transaction costs. Digital platforms also generate trust and credibility by screening buyers and sellers, and through crowdsourced rating mechanisms. This is transforming the generation of trust in markets from personal face-to-face interactions to decentralised and virtual systems.

Figure 16: Categories of digital platforms in South Africa



Source: MISTRA, 2024

Lastly, digital platforms can greatly improve service delivery through more efficient payment transactions and personalised services. This allows buyers to get better service for less, and for sellers to spend more time on value-creating tasks. As a business, platforms allow for the linking and facilitation of transactions between businesses, consumers and producers on a broad scale. These platforms enable value creating interactions between buyers and sellers, providing the infrastructure and rules needed for these exchanges to happen.

Broadcasting

As the digital world expands, broadcasting will increasingly become integrated into the digital platform ecosystem, migrating from analog to digital signal distribution and delivery of media (TV, radio) services using digital platforms. Integration of digital platforms will also enable easier access to various content. This is important from the point of view of providing content relevant to participation in the digital economy, including educational content.

Within this context, community broadcasters play an important role in expanding inclusivity, particularly among the under-served and marginalised communities. They are trusted local voices, deeply embedded in their environments, who:

- Provide relevant news, education and public service information, especially in underserved areas.
- Act as bridges for digital literacy and awareness, helping communities navigate digital platforms.
- Support local businesses, entrepreneurs and SMMEs through advertising, promotion and networking.
- Serve as training environments for youth, offering hands-on experience in digital content creation, audio production, social media engagement, and platform management.
- Amplify local voices, stories and languages, fostering cultural identity and social cohesion.

3.4.1 Potential Benefits of Digital Platforms to South Africa

According to the Economic Opportunity of Digital Platforms in South Africa 2024 report by MISTRA & NASPERS, the business activities of digital platforms could contribute ZAR 91.4 billion, or 1.38%, to the South African economy by 2035, elevating its share from a modest 0.02% in 2022. This impact includes a cumulative tax contribution of ZAR 10.7 billion and the creation of between 157,000 and 341,000 full-time equivalent jobs, based on monthly earnings of ZAR 12,000 and ZAR 26,000, respectively (MISTRA, 2024: pg. 91). Furthermore, the South African economy stands to gain significantly by fully harnessing untapped digital platform opportunities in sectors like gaming, e-sports and expanding opportunities for business activities in the informal economy.

All of these effects result in improvements in efficiency and reductions in cost, with three important outcomes.

The first is connecting sellers to new customers or suppliers who would never have previously met. This is particularly important for informal enterprises which can typically only access resources and market participants in their immediate location.

The second is unlocking and opening up latent demand for a broad suite of services, for both highly skilled and low-skilled services, increasing the market opportunity for all suppliers. For example, a painter/tradesman is no longer dependent on word-of-mouth recommendations, but can now also now register on multiple websites and platforms to advertise their availability and services free of charge.¹⁷

Lastly, these digital platforms provide income-generating opportunities for unemployed youth as well as those seeking to supplement their income. These opportunities assist in upskilling young people and provide them with work experience, increasing their employability in the digital economy.

In the future, these platforms are likely to become the commonplace way of consuming and providing a broad range of services. As digital platforms emerge across multiple sectors, supporting them to scale constitutes a real opportunity for inclusively growing the domestic and export economy and creating income-generating opportunities for all South Africans.

3.4.2 Availability of Relevant Services and Content

The arrival of streaming platforms and digital media has upended long-standing traditional platforms and consumption patterns. With the advent of high-speed Internet and the widespread availability of 5G, consumers now have access to a wide range of streaming services that offer on-demand content tailored to their preferences. Digital media has decimated the traditional printing houses and has also created a whole new host of issues (including misinformation). Providing high quality, locally attractive content is a key element of sustainability for the media and audio-visual industries in this environment of constant digital transformation. Local and relevant content will drive the media landscape in the future.

Digital financial solutions

Different digital payment solutions have been available in South Africa for more than a decade and this market continues to expand in terms of both service providers and solutions offered. Some 24% of South African remain unbanked but with decreasing costs of financial transactions and growing accessibility, the number of people and small businesses able to participate in the digital economy will continue to grow. Available solutions include mobile payments (mobile money and eWallets), digital banking (including lending and investment) and online financial services.

More than 20 million South Africans (about 44% of the adult population) use digital banking platforms provided by the country's major banks; some use multiple methods of digitally transacting. There are over 140 fintech start-ups in South Africa already. With their mobile money services (including international remittances, funeral

¹⁷ Employment growth in the non-tradeable sector, where local demand (e.g., for tradesmen services) is satisfied by local talent, will only occur if South Africans are suitably skilled to provide these services. SETAs across the economy play a crucial role in the development of an artisanal layer of skills to support the South African economy.

cover products and business wallets), the mobile operators are positioning themselves as a super app for financial including, particularly among populations in rural and low-income areas.

South Africa SVoD environment

Streaming online content has grown in South Africa, with six Subscription Video on Demand (SVoD) service platforms available – Netflix, Amazon, Disney+, Apple TV+, Showmax and Paramount. According to Statista, the current penetration rate of video streaming users in South Africa is 12.4% and is expected to grow to 15.3% by 2027, amounting to an estimated 9.8 million streamers.

e-Commerce and digital platforms

South Africa's e-commerce sector is experiencing rapid growth, fueled by increased Internet penetration and a shift towards online shopping. These digital platforms remove information asymmetries by digitally aggregating demand and supply, making buyers and sellers visible to one another and standardising prices. This makes locating customers or service providers quicker and easier with fewer transaction costs. Digital platforms also generate trust and credibility by screening buyers and sellers, and through crowdsourced rating mechanisms. This is transforming the generation of trust in markets from personal face-to-face interactions to decentralised and virtual systems. Lastly, digital platforms can greatly improve service delivery through more efficient payment transactions and personalised services. This allows buyers to get better service for less, and for sellers to spend more time on value-creating tasks. As a business, platforms allow for the linking and facilitation of transactions between consumers and producers on a broad scale.

All of these effects result in improvements in efficiency and reductions in cost, with three important outcomes. The first is connecting sellers to new customers or suppliers. This is particularly important for informal enterprises which can typically only access resources and market participants in their immediate location. The second is unlocking latent demand for a broad suite of services, including high-skilled and low-skilled services. By unlocking latent demand for these services, the market opportunity for suppliers of these services increases. High-skilled individuals can access higher paying buyers and low and semi-skilled individuals, who represent the majority of South Africans, can earn an income. Lastly, digital platforms provide income-generating opportunities to unemployed youth. These opportunities upskill youth and provide them with work experience, increasing their employability in the digital economy.

In the future, digital platforms are likely to become the commonplace way of consuming and providing a broad range of services because of the efficiency and cost reduction effects. As digital platforms emerge across multiple sectors, supporting them to scale constitutes a real opportunity for inclusively growing the domestic economy and creating income-generating opportunities for low-skilled South Africans.

In supporting our nation's digital transformation, the DEM must be cognizant of the fact that global digital platforms, with their scale economies, offer significant benefits to consumers (such as an increased range of suppliers and products, access to technologies etc.) but we must also be aware of how pricing strategies may contravene local and international fair trading laws.¹⁸

To address concerns about import pricing, the South African Revenue Service (SARS) has recently adjusted the *de minimis* tax rule so that all online purchases now incur the standard 15% VAT. Today, all clothing parcels incur an import duty of 45% plus VAT. This is important because previously, small business retailers were (and still are), paying the 45% plus VAT fee on imported clothing regardless of where it is sourced from.

These fair trading measures are crucial to support South Africa's SMME players, who cannot compete against the scale of international platforms. International platforms, whilst offering consumers a benefit, do not necessarily stimulate local economic activity¹⁹ and understanding how international platforms can deepen

¹⁸ The National Consumer Commission, in November 2025, launched an investigation into the consumer protection practices of two global e-Commerce platforms.

¹⁹ International e-commerce platforms have been a driving force behind the growth in the courier distribution business in South Africa and the associated increase in employment. But so too have local platforms such as Takealot and Checkers 60/60.

South Africa's local product capability is a key component of this DEM.

Lastly, a key consideration regarding e-commerce and platform services is that of a clear product category and governing framework. Currently consumers are able to import electronic devices that circumvent the legislative type approval obligations, while medical equipment devices also avoid scrutiny, posing a health and safety risk to South Africans. Improving the understanding of product categorisation in the digital platform world and developing fair trade practices in line with international obligations forms a key component of the DTIC mandate.

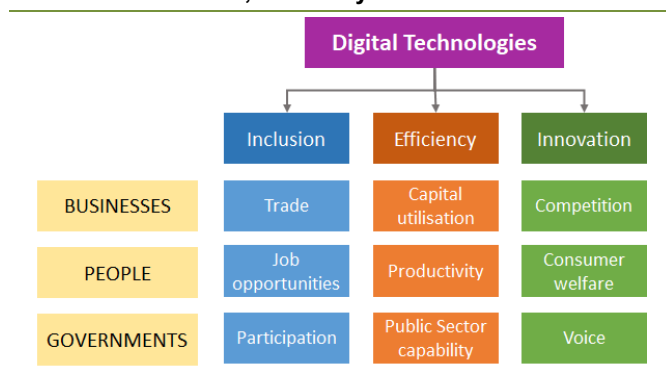
3.5. Digital Infrastructure as an Enabler

Broadband connectivity is a fundamental pillar for digital transformation, enabling private business and government services, education, healthcare, and public safety.

3.5.1 Economic and Social Benefits

Connectivity fosters innovation, entrepreneurship, and business opportunities, driving economic growth and job creation. Governments around the world recognise access to broadband as a key enabler of economic and social development. Our ability to grasp the digital opportunities will dictate our success at achieving a sustainable and inclusive long-term growth path. High-speed fixed line broadband is an enabler of social cohesiveness, and an enabler of competition, improved provision of government services and ultimately economic growth and job creation.

Figure 17: Benefits of digital technologies through increased inclusion, efficiency and innovation



Source: Kim, Y., Kelly, T., & Raja, S. (2010), Building broadband: Strategies and policies for the developing world. Washington, DC: World Bank.

The benefits of digital technologies across different segments of the society are illustrated in the graphic to the left.

The availability of high-speed broadband enables the use of digital technologies to deliver and consume digital products and services. Thus, it has tangible benefits for consumers / citizens (e.g., in the healthcare and education sectors), businesses and the government.

A study undertaken in 2020 (O'Conner, et al., 2020) shows that a 10% increase in fixed broadband penetration drives a minimum of a 0.27% increase in GDP per capita. An ITU study from 2021 demonstrates that a 10% increase in

mobile broadband penetration resulted in a 2.6% increase in GDP per capita in the Africa region. Thus, broadband connectivity is critical as the underlying enabler of the digital economy. A market study undertaken by Africa Analysis in the South African market illustrates that vertical sectors of the economy that rely the most on digital technologies show the largest potential increases in Gross Value Added over a forecast period. Further, increasing fixed broadband penetration could almost double the economic contribution of key social sectors in the country – electricity, gas and water; general government; community, social and personal services (health and education).²⁰

3.5.2 Challenges and Solutions

In order to fully participate in the digital economy and contribute to it – as a supplier of products and services, a consumer of products / services or through further digital technology development – an individual or an entity must be able to use broadband services meaningfully. That means access to infrastructure, and to affordable

²⁰ Towards a Gigabit Society in South Africa, Africa Analysis, October 2023.

devices and services.

The United Nations defines meaningful connectivity as “a level of connectivity that allows users to have a safe, satisfying, enriching and productive online experience at an affordable cost” (UN, 2022).

In South Africa, complete Universal and Meaningful Connectivity (UMC) has not yet been achieved. This results in a digital divide between segments of the society who have full UMC access and those who do not have access to affordable and reliable broadband services. For a digital economy to function optimally, it needs to be inclusive, i.e., all segments of the society must be able to participate in it.

Accessibility and affordability

South Africa is predominantly a mobile society. Many (if not most) small businesses, especially informal, also rely on a mobile device (predominantly a phone) as the primary and often only device enabling them to connect to broadband networks and the Internet. ICASA reports that smartphone penetration has reached over 70% in 2024 (ICASA, 2025), while mobile network operators report a slightly higher level. Only once all end-users utilise a smartphone can it be said that all South African's have access to high-speed broadband (excluding the possibility for device sharing between individuals).

Only 2.2% of households are not covered by mobile 4G network infrastructure. The average reported download speed using mobile networks is over 40 Mbps (MyBroadband, 2025). This small share of total households combined with the reported average download speed of greater than 10 Mbps purportedly shows that the country has mostly achieved the SA Connect 2030 objective of all South African's having access to broadband at 10 Mbps (the minimum objective).

Meanwhile, from a geographic technology penetration perspective, 5G connectivity remains confined to high-income urban centres, driven largely by market dynamics and commercial return considerations. Only 4.3% of deep rural areas have any form of 5G access, underscoring the current exclusion of low-density and economically marginalised regions from next-generation mobile services. The obligations imposed on the 2022 spectrum awards are designed to counter this current trend. The Medium-Term Policy Document also targets over 90% population coverage by 5G services by 2029, ensuring that the current geographic divide is closed.²¹

Although South Africa has achieved IMF's Universal and Meaningful Connectivity (UMC) pricing benchmark of less than 2% of monthly Gross National Income (GNI) per capita, this figure masks the substantial income disparities of South African households. Household affordability analysis undertaken in the DBSA's Beyond the Gap: Digital Infrastructure Investment Study for South Africa (2026) illustrates that at ZAR 300 a month, always-on broadband connections remain unaffordable for most households in the country. However, at ZAR 90 a month, almost all households can afford an always-on connection. The study also concludes that the core affordability constraint to achieving a digital society (and participating in the digital economy) is much more a function of the level of income earned by households in South Africa than the price levels set by the network operators.²²

While there is no specific data available on the affordability of broadband services by small businesses, and in particular informal businesses in the township economy, the affordability profile may be similar to that of households, with the proviso that businesses may be more likely to spend a higher portion of their budget on communication / broadband (or data) services, if such spend enables higher income generation.

To achieve greater UMC inclusion of the South African society, in the short to medium term, the government needs to continue working with service providers to offer “affordable” data plans and smart devices and provide free Internet access in public spaces. However, ultimately, the economy of South Africa as a whole must achieve significantly higher growth rates to improve the income potential of individuals, households and small businesses. The digital economy can be a significant contributor to such future growth, if it is based on a pro-growth policy and regulatory framework.

²¹ Data drawn from the Beyond the Gap: Digital Infrastructure Investment Study, DBSA, 2026

²² Beyond the Gap: Digital Infrastructure Investment Study, DBSA, 2026

3.6 Digital Economy Opportunities

Some of the key opportunities of the digital economy in South Africa are discussed in the following section.

3.6.1 Digital Technologies

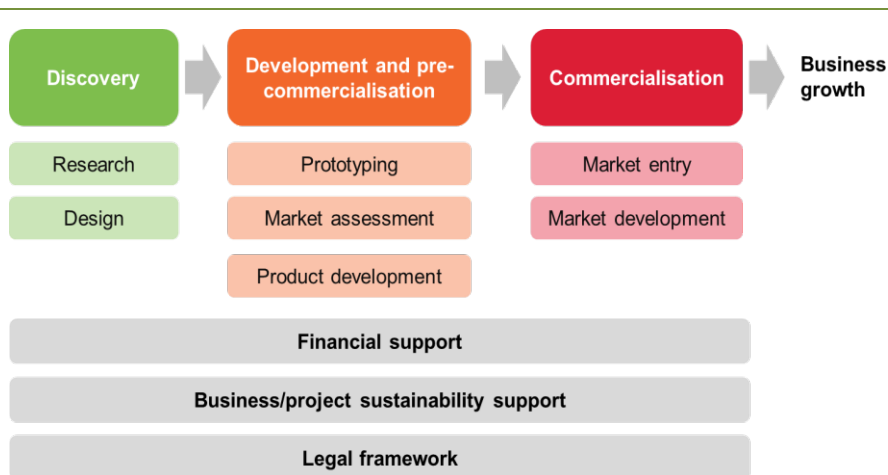
The application of digital technologies in specific industry verticals contributes to a vibrant digital economy. The process of research and development to commercialisation and scaling of transformative tech applications into local and global markets from a South African base can support growth, job creation and transformation.

The last decade has illustrated how consumer-facing industries have been reconfigured by digital applications. Primary industries such as mining and agriculture, and many business-to-business industries, are also going through significant transformation due to AI, IoT and robotics. Digitally enabled firms are reshaping markets, improving customer experience and capturing significant value. It is not irrelevant where these businesses are based. If South Africa is to gain the full benefit of the digital revolution, we should welcome global players and encourage them to locate value-adding activities in South Africa.

It is also critical for South Africa to build its own digitally enabled businesses and to do so at a far larger scale. Through such businesses, South Africa can digitally shape and contribute, not merely absorb and receive. South African businesses, and their owners and tech experts, add far more than a welcome tax base. Evidence shows that when digital businesses are developed locally, they tend to locate their back offices and key activities here, creating opportunities for a wide range of skills. Their presence has a powerful spillover effect, encouraging further innovation, beneficial competition and more start-ups.

In addition to becoming a market leader in the production of various physical technologies, South Africa also has the opportunity to apply these technologies across various economic domains. The domestic demand for transformative tech applications in these domains can be leveraged to first establish a proof of concept for scaling into the region and global markets. The development and adoption of transformative tech applications across the economy will require a pipeline of activities. This entails the full value chain of developing and commercialising transformative tech applications. It begins with research and development (R&D) of the respective tech applications among universities, science councils or private companies.

Figure 18: Process of transformative tech application development



Source: Adapted from the Technology Innovation Agency Annual Performance Plan 2020/2021

This is followed by commercialisation and scaling, which is often undertaken by start-ups or established firms. The process of connecting these firms to sources of demand and financing is important for the sustainability of these businesses. These sources of demand span government and enterprises in both local and global markets. This development process is captured in the graphic to the left.

3.6.2 Key Opportunities in Digital Platforms

There are currently over 200 platforms operating across various sectors and serving different functions in the real economy, with at least 60% being developed locally in South Africa (World Bank, 2023). Available

domestic skills has successfully supported digital transformation, but in order to avoid market erosion, we need to support the design and development of local platforms, encourage local suppliers to register on these platforms, support local platforms to expand to export markets as well as increase their global exposure to bring global business to South Africa (be it through locally traded services such as tourism or through the exporting of services to other parts of the world).

The digital platform economy spans a variety of sectors, with some sectors and functions, such as tourism, professional services, transport, food and its delivery, low skilled services and retail, being disrupted by digital platforms faster than others. Digital platforms have also changed the way consumers relate to brands as rating systems have allowed for credibility to be built and reflected to new consumers who have never interacted with the brand before. This in turn has changed the way businesses operate, as this constant feedback mechanism has resulted in improved service delivery and customer support.

Figure 19: Digital platform ecosystem in South Africa



Source: Our Digital Horizon: The Economic Opportunity of Digital Platforms in South Africa 2024

Despite the number of platforms that have emerged, most of these remain nascent. The efficiency and cost-reduction effects of demand and supply matching have not been extended to a number of low-skill service sectors, and even where it has, active platforms have struggled to scale significantly. In particular, strong competition between digital platforms operating in a particular sector has yet to form, as is the case of markets like India where platforms are achieving significant scale. This is reflective of the fact that the market for digital platforms in South Africa has yet to mature.

This is partly because digital platforms in South Africa largely cater to the relatively affluent middle- class consumer market. As such, these platforms are only providing services to a small portion of consumers and will struggle to scale significantly, especially if they have to share this consumer segment with other competing platforms. To achieve serious scale domestically in a competitive environment, digital platforms will have to develop business models that are relevant to low-income consumers. The government's role in supporting this scale is to ensure that providing digital platform services in low-income areas is safe and secure, by addressing risks of criminality as well as payment risks.

In order for South Africa to support the emergence and scaling of multiple digital platforms, it is important to first identify where these platforms have the potential to scale, what their business models look like, and their impact on supporting growth, jobs and transformation. Six areas of high potential are identified here.

Task matching platforms

Task-matching platforms reduce many of the frictions and information asymmetries in low-skilled informal labour markets, such as domestic services, gardening, painting, maintenance, and electrical and plumbing work. They do this through creating trust and providing a single platform for workers/businesses to list their

services and search for customers/employers who require their services. Many of these platforms have a screening functionality that provides background and verification checks on all jobseekers while customers and employers have to register to use the platform using verifiable details. These platforms often have central rating systems for both supply and demand-side participants. A number of these platforms also provide supply-side participants with training to improve their technical skills and customer service levels.

Transport and delivery services platforms

Platforms for transport and delivery services match demand and supply efficiently. For people seeking transport services, e-hailing platforms such as Uber and Bolt, offer services at a lower cost to traditional metered-taxi providers and offer similar efficiency gains as the task-matching platforms described above. There are also platforms providing this matching service for the delivery of commercial goods. In the product market, the cost-effectiveness of e-commerce and ease of ordering on these platforms are quickly being recognised by consumers with a rapid growth in demand. These platform types have the potential to create significant low skill earning opportunities from the demand for logistics and transport services at the end of these supply chains. In addition, ecommerce platforms are creating further opportunities for income generation at the back end of the supply chain for small-scale producers and entrepreneurs who have the opportunity to access new markets.

Food delivery platforms

Platforms that facilitate the preparation and delivery of food are reforming the restaurant industry as eating out becomes more affordable. Restaurant delivery platforms provide opportunities for low-skilled drivers to earn income. These include UberEats, Mr D, Order In, and Appetite which connect restaurants offering takeaway orders with independent drivers to customers wanting food delivered. Online food ordering in South Africa is catching up quickly to more mature markets like the US with a 64% increase in food delivery projected through to 2023. Mr D, South Africa's largest food delivery platform by customer numbers, saw a 210% growth in 2017 alone. In 2019, the platform saw a threefold rise in the number of driver partners to 3,000 in one year. Using the same ratio of downloads to drivers, Uber Eats likely has approximately 1,200 drivers.

Tourism platforms

The tourism sector is also evidencing the gains of unlocking latent demand from digital platforms. Airbnb, for example, has significantly reduced the cost of accommodation services in South Africa by allowing homeowners to rent rooms within their homes to tourists. A one-night stay at a hotel in Johannesburg starts from about ZAR 1,200, while Airbnb offers accommodation for as little as ZAR 250 per night. This has resulted in more people being able to afford travel to and within South Africa. This has created significant direct and indirect income opportunities: in 2022, Airbnb contributed over ZAR 23.5 billion to South Africa's GDP, a 115% rise from the pre-COVID contribution of almost ZAR 11 billion in 2019. The economic impact is equivalent to 50,000 job opportunities in a single year (a 75% increase from the pre-COVID numbers). Out of the ten fastest growing cities on the platform, seven are located outside of traditional tourist hotspots, indicating that these platforms are supporting local spending in less common tourist destinations. An Airbnb report states that guests spend on average R3,000 per day on entertainment, dining, and other non-accommodation expenses. More than 50% of guest spending takes place in the listing's local neighbourhood, contributing to economic growth of local communities. There are several local booking platform applications including sites like LekkeSlaap and SafariNow as well as PerfectHideAways aimed at international tourist market. As mentioned, these companies now also offer add-ons such as experiences and services related to the area you book – further opening untapped opportunities.

Job matching platforms

Job matching platforms that match youth to jobs can reduce labour market inefficiency. Digital platforms are increasingly helping connect job seekers, from informal workers to highly skilled professionals, to suitable job

opportunities. These platforms make it easier to learn about available jobs and requirements, reduce the cost of recruiting and allow youth to market themselves to a wider audience. In addition, job matching platforms generate a vast amount of data on the demand for skills. This data can be harnessed to train young people preparing to enter the job market and match their skills with job opportunities. Furthermore, digital job matching platforms have the potential to deploy their data aggregation and analytical capacity to reduce labour market inefficiency by devising more relevant assessment criteria for specific jobs, educating job seekers on market conditions and demands, and supporting career advancement through credentials and employer endorsements.

Figure 20: Examples of platforms in the key areas of South Africa's platform economy

	International platforms operating in South Africa	Local platforms, some of which operate in other parts of Africa
Low-skilled services	 PetBacker	 Domestly  SweepSouth
Transport	Uber 	 loadit 
Food and its delivery		   U COOK — COOKING MADE EASY
Tourism	 9flats.com	 SafariNow
Job Matching	 	  
E-commerce	 	  bidorbuy

Source: The authors, 2026

e-Commerce platforms

Platforms that connect informal businesses and SMMEs to suppliers and customers can reduce inefficiencies and help businesses reach new markets. E-commerce platforms have seen significant growth since the COVID pandemic when many users were introduced to the world of online shopping. This has created opportunities for businesses of all sizes and levels of formality to engage in domestic and international trade by increasing access to customers and suppliers and reducing trade costs. Additional benefits of e-commerce platforms include increased customer satisfaction, better customer retention, innovation of products and services and increased speed to market. The South African e-Commerce retail market was valued at over R130 billion in 2025, representing a 38% increase from 2024 and making up about 8% of total retail sales. (World Wide Worx, 2025) This growth is driven by increased online shopping habits, improved payment infrastructure, and the strategic expansion of omnichannel offerings by local retailers, with predictions suggesting it will become a more significant part of the total retail sector in the coming years.

As smartphone penetration increases, logistics improve and platform competition increases, e-commerce platforms have the potential to reshape the South African wholesale and retail markets and offer opportunities for informal businesses and SMMEs to scale up their operations. A particular promising opportunity is for micro entrepreneurs in the arts and crafts industry, where digital platforms represent an opportunity to aggregate products from small informal producers often in rural areas, and make them available nationally and globally.

Importantly, this potential benefit may only be realised when local craft producers are more competitive than their Asian counterparts.

Figure 21: South African digital platform ecosystem actors



Source: Our Digital Horizon: The Economic Opportunity of Digital Platforms in South Africa 2024

Given that digital platforms reduce costs through efficiency effects, this is a real opportunity in South Africa. In particular, for digital platforms to be developed across a range of service sectors and skill levels, and for these platforms to scale significantly by tapping into currently underserved consumer segments. This is an opportunity for expanding access to digital economic opportunities for many South Africans, particularly those that may otherwise be locked out of opportunities in the digital economy.

How South Africa can win in digital platforms

In order for South Africans to actively participate in the platform economy, they need access to a smart device. The costs of smart devices have acted as a barrier to entry for many South Africans. The 9% ad valorem excise duty on smartphones (valued less than ZAR 2,500) was removed in April 2025 and is expected to make an impact on consumers' ability to afford digital devices. Moreover, lower cost smartphones have become available in the market (at ZAR 1,500 or less), while MTN and Vodacom have instituted initiatives to provide subsidised low-cost smartphones to some of its low-income customers. It remains imperative to find mechanisms to include more people in the digital economy and remove the barriers of exclusion.

The opportunity to enter the platform economy by small businesses (often informal) and consumers can be further enhanced by establishment and expansion of refurbishment centres for used smart devices, which can

then be made available at lower prices, affordable to the target audience.

Incentives should be created for relevant local digital content to ensure that digital content is translated to a wider range of South Africa's official languages. This will ensure that digital platforms are accessible and comprehensible by all South Africans.

- **Support Local Platform innovation** by providing funding and incubation for home-grown platforms and applications that address local needs, e.g., fintech, health tech, e-learning and other services.
- **Invest in digital infrastructure** by expanding affordable broadband access, especially in rural and township areas, including improvement in the quality of 4G networks, where required, and wider deployment of 5G infrastructure.
- **Support local data centre development** to power cloud platforms and services.
- **Development of a competition regime that caters to digital businesses and markets.** The regime should address various risks that range from the ownership of data and data privacy to the availability of spectrum and infrastructure to increase ease of entering the digital platforms market.
- **Establish an inter-governmental coordinating mechanism** among regulators with a common interest in scaling digital platforms.
- **Develop agile regulatory frameworks through the establishment of policies and data protection, competition and platform workers and develop innovation facilitation tools** such as regulatory sandboxes and innovation hubs to promote investment in and scaling of digital platforms.
- **Drive platform use in public services** by expanding the use of e-government platforms for service delivery.
- **Provide digital literacy (basic skills training) from a young age in schools** to ensure that by the time the young population is ready to take advantage of the platform economy, they are able to do so.

3.6.3 Key Opportunities in Transformative Tech Applications

The application of digital foundations is already evident across various domains of the economy.

- In **mining** for example, the application of AI and machine learning is applied in optimising mining and mechanistic processes. Digital mining is particularly prominent in Mpumalanga where the integration of AI, IoT, machine learning and software analytics have been applied to create a “digital twin” i.e., a virtual replication of physical assets. This digital mine - Exxaro Belfast coal mine - is the first of its kind for the mining industry in South Africa. The digital twin enables better planning and simulations in order to achieve better approaches to mining, realising better outcomes and safety measures for its workers.
- Various domains in the **manufacturing** sector have adopted technology to improve production processes over the last decade. These instances include **utilities**, where Eskom developed a smart strategy to be adopted in phases. This will involve the application of an IoT system in relation to solar energy customers to assist in delivering energy according to the demand of its customers, while increasing efficiency. Moreover, municipalities have seen an increase in the procurement and installation of smart meters. Other applications of digital tools includes working towards establishing the use of tools and technologies in the **construction** domain, and in particular working towards smart city frameworks through the digitisation of building plans and processes. One such example is the Building Information Modelling (BIM) Institute of South Africa, which is working towards the national rollout of BIM in the construction sector. Its ultimate goal is promoting the use of technology as an enabler to increase quality and productivity of construction.
- **Financial services** in South Africa is amongst the most sophisticated in the world. This covers the emergence of fintech and insurtech driven by AI technology and machine learning. Financial services

also make use of blockchain technology which facilitates record keeping of transactions and the creation of digital identities and has also been utilised in relation to an interbank settlement system, endorsed by the Reserve Bank.

- **Edutech** represents one of the biggest opportunities for growth in areas such as web-based learning, virtual teaching and content and course curricula development. The shift to accessing education resources online has become more relevant for education in South Africa today. As such, investments by the government has sought to increase the roll-out of e-learning solutions.

In order for South Africa to support the process of developing and adopting transformative tech applications, it is essential to identify the domains with the greatest opportunity to scale. This Masterplan provides, in more detail, a strategic selection of domains where this process of applying transformative technology to develop digital business models holds promise. This is based on several factors including our historical economic activities (encompassing well and poor performing sectors), our current capabilities and competition in the global market. For example, China has placed AI as a strategic imperative technology to drive several applications in digital services (Lundvall, 2021). These applications are in basic service delivery, health, education, security, to mention a few. In their drive to achieve a Smart Nation, Singapore set out to train all public officers in basic digital literacy; 20,000 in data analytics and data science, and all ministries were to adopt AI in service delivery or policy making by 2023 (Smart Nation Digital Government Group, 2018).

The Masterplan identifies and explores two examples of high potential which are indicative of the many domains where transformative tech applications can unlock value. These areas are healthcare and agriculture - already defined as a priority in the Department of Science and Innovation's (DSI) bio-economy policy. The illustration of the process of R&D, commercialisation and scaling these two domains are, however, equally applicable in other sectors, i.e., financial services, mining, manufacturing and many others. As transformative tech applications are relevant for all industries, the Masterplan will identify actions that will enable all of these domain applications to be developed. However, as a starting point, the Masterplan specifically addresses agriculture, including forestry, and healthcare.

Agriculture

Digital application opportunities in agriculture have largely resided with commercial farmers who have the capacity to adopt new technologies, however, this is not the case for small-scale farmers. Digital agriculture solutions can support the scaling of emerging farmers to formal commercial farming operations by supporting the path to commercialisation. This is critical for addressing the inequality challenge in this sector. The Masterplan focuses on various opportunities to assist small-scale and emerging farmers in agriculture, including forestry, to commercialise using transformative tech. We note that large-scale commercial farming is already transforming the commercial farming sector by enabling precision agriculture.

Precision agriculture applications provide farmers with precise information for efficient food production and better management of farms, crops and herds. South Africa is seeing a higher application of precision farming, both for larger commercial farmers and smaller emerging farmers. This is because it is a highly economical farming and tech solution. Outcomes of precision farming relate to detection of harmful pests and diseases as well as arable land for growth of produce. In addition, it can measure and optimise the use of water and irrigation. Farmers therefore could access real-time information for accurate decision making.

Linkages to retail markets are crucial for the growth and sustainability of small-scale farmers. This relates to reliable access to off-takers such as grocery chains. While commercial farmers can rely on established links to off-takers, smaller farmers do not have constant supply contracts and rely on the fresh markets to sell their produce. Tech solutions that assist in providing smaller farmers with access to market can accelerate the path to commercialisation. Currently, digital platforms exist that enable this process such as **HelloChoice** a platform for the trading of produce between farmers and retailers; and **SwiftVee**, a platform that facilitates the auctioning and selling of livestock to buyers. In addition, the Khula app provides smallholder farmers with access to warehouse management facilities and on-selling of farm products to consumers through an ecommerce platform. This provides consumers who demand, and value foods organically grown by small-scale businesses

with an efficient way to access them.

An additional area of opportunity also lies in the traceability of supply chains, which are important for the tracking of livestock from birth. Small-holder livestock farmers can benefit from the use of drones and blockchains for example, for traceability, to manage and track communicable diseases as well as managing theft.

South Africa lacks a national biosecurity and crop protection system to prevent destruction of agricultural assets. This presents an opportunity to build a single national detection and diagnosis system for pests and climate events like drought. Once developed, this system should be made accessible to small-scale farmers in particular to provide open access to information on biosecurity risks which commercial farmers can typically pay for.

Agro-processing is the processing and transformation of agricultural produce. It has two important linkages, the first is to the agriculture sector and the second to the manufacturing sector. For this reason, it has been identified as a key growth area in South Africa by the Gauteng Department of Agriculture and Rural Development (GDARD). There is opportunity in agro-processing to apply IoT enabled smart farming tools to accelerate agro-processing mechanistic activities by improving its productivity throughout the value chain. In addition, the DTIC has identified key investment opportunities in agro-processing such as food processing in the milling industry. Supporting smaller farmers with the required production inputs and infrastructure, enables smaller farmers to benefit from such opportunities. Similarly, GDARD has established such support for small-scale farmers which encourages participation in the agro-food value chain.

Healthcare

The application of transformative tech in healthcare services is occurring in pockets across South Africa, with many opportunities that have yet to be scaled. There exists the opportunity to scale more broadly and export the application of the technologies to the region and beyond. The areas of opportunities in healthcare are related to the functions of diagnostics and personal treatment, and the enabler relating to information systems which underpins these functions.

Diagnostics and treatment

AI technology provides a means to address access to quality healthcare services and overcome challenges of capacity in public healthcare facilities. AI presents opportunities for static remote diagnostics. Diagnostic solutions include automated diagnostic support for medical imagery, e.g. tumors, blood conditions and viruses. An image is uploaded, and the application reverts back to the doctor regarding the likelihood of a serious condition. This enhances accuracy and is a cost reduction mechanism that broadens access to high quality services. Telemedicine also presents the ability for diagnostics through virtual communication. Patients can detail symptoms which are sent to an expert, who then provides diagnostic support back to the patient. Another version of telemedicine exists in India, where doctors in a centralised centre remotely diagnose and monitor patients in isolated areas that do not have access to doctors through telemetry.

Telemedicine can include the treatment of patients enabled by platforms and connected devices and the monitoring of such patients enabled by real-time sensors and wearables. Telemedicine presents opportunities to assist in improving the process of diagnosis to actual treatment. This includes making information available to healthcare professionals to facilitate the support of treatment to patients. **Vula Mobile** for example provides doctors in rural areas access to specialist's advice on how to diagnose and treat their patients. Vula Mobile has resulted in 1 in 3 patients being managed in rural areas without having to travel. A doctor or a nurse is able to select a listed specialty, then the specialist will receive information as input by the healthcare professional from a referral form. Based on the information the specialist will advise the doctor on how to treat or manage the patient.

Beyond AI and telemedicine, 3D printing is being applied to automatically produce medical equipment and parts. 3D printers are a valuable addition at remote primary healthcare facilities to make needed equipment on site. Vaal University of Technology is working to apply 3D printing for the design and manufacturing of

prosthetic legs. Furthermore, the University of Pretoria has used 3D printing in the case of the world's first middle-ear transplant.

Information systems

Information systems are a cross-cutting enabler for digital applications in healthcare. This includes the function of data collection and access, and supply chain management.

Integrated data management systems can provide full visibility of patient information for better insight at the level of both individual diagnosis and treatment, and at an aggregate level for managing healthcare institutions. For example, Netcare is establishing a single view of a patient. This is achieved through digitised record-keeping and centralisation of all available data relating to a patient's care across its institutions and hospital departments. This provides a single source of patient health that reflects historical treatment, diagnostics, and other health indicators that can be easily accessed and used when a patient presents for care.

The Milpark Hospital has also deployed patient monitoring IoT which serves as a further source of patient data that can be integrated. Sensors that monitor blood pressure and oxygen levels for example, offer nurses and doctors real-time data on the state of a patient. These readily accessible sources can also be monitored autonomously, freeing staff to work on more complex activities and reducing paperwork. Sophisticated, integrated systems such as these require robust security protocols and measures. The monitoring of patient and IoT data across the institution can therefore support its management by identifying capacity utilisation and supporting scheduling.

Creating an environment where health data can flow easily will better enable research and analysis. Key to this is supporting interoperable data systems and that maintain data privacy. The Bioinformatic department at WITS university is supporting this process through the development of a data de-identification process. The aim of de-identification is to work towards a process and pipeline where healthcare data can be de-identified so it no longer can be re-identified and therefore enables open data sharing.

Supply chain management is essential for the accurate and timely distribution of medical supplies. South Africa is developing a relatively sophisticated supply chain management capability. This accounts for real time monitoring of inventory and stocks, down to an institutional level, which is then operated from a central control command centre. Having visibility of institution stock levels and overlaying this with anticipated demand can support optimisation of national health inventory and resources. There is also an opportunity for support functions that enable patient services and care. This includes, for example, Iyeza Health, involved in medicine delivery, further detailed below.

3.6.4 How South Africa Can Win in Transformative Tech Applications

The potential benefits associated with transformative tech applications are immense as they enable companies to innovate, create new products, and carve out new market spaces.

AI is projected to boost global GDP by approximately 7% over the next decade, with estimates for annual productivity growth ranging from 0.3 to 1.5 percentage points, depending on the models and scenarios used. Studies on specific applications of Generative AI show significant individual-level productivity gains, such as the 66% increase in employee productivity observed in some studies and a 33% productivity increase for workers using generative AI.

We further summarise key recommendations that are required to ensure the realisation of the opportunity for transformative tech applications. These are further described in the critical enabler's discussion in Section 4. To support South African businesses to innovate, commercialise and scale transformative tech applications into global markets:

- **Map the innovation funding process for digital innovations from R&D to final launch** to understand the areas of overlap and how funding in one stage can support funding in another. This will ensure sustainability of R&D through commercialisation.

- **Reform South Africa's IP policies and patent grant system** to be more accessible and to foster innovation, which will make the legal protection of IP more accessible to emerging innovators.
- **Bolster R&D financing schemes with a centralised coordinating body** that encourage businesses to develop problem-solving digital solutions and ultimately export such products and services to the region and beyond.
- **Optimise existing special economic zones, innovation hubs and technology parks** to enable inclusive growth of digital businesses. This is essential to ensure smaller and emerging businesses can develop and commercialise their products and then scale into regional and global markets.

To ensure open data ecosystems and the sharing of the data are necessary for many of the transformative tech applications to be impactful:

- **Develop a policy that addresses data access and sharing** to supplement the current POPI Act and PAIA. Data sharing and open data access is critical for the realisation of many transformative tech applications which rely on quality data to be impactful.

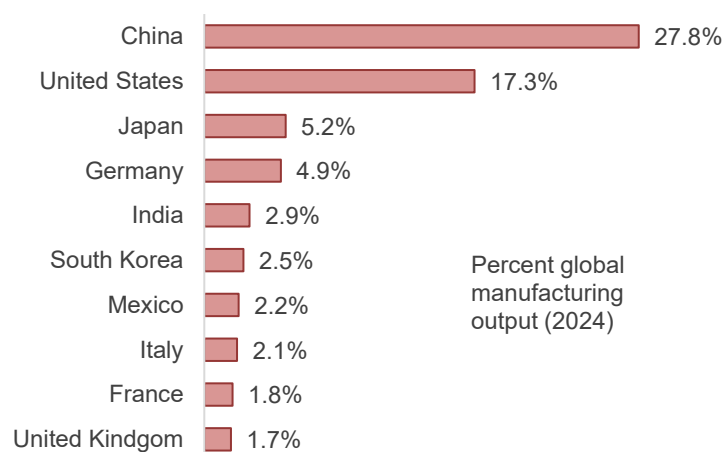
To address the requirement for a steady pipeline of skilled South Africans who can support the application of digital technologies across a variety of sectors:

- **Update the primary and secondary school curriculum** to take into account future STEM skills requirements.
- **Fund vendor-aligned curriculum for school-level early exposure** through after school programmes. With a foundation of STEM skills in place, this will be important to ensure a continuum of skills that are market related for digital application opportunities.
- **Modernise South Africa's qualifications and credentialing system** to account for new ways of learning. This would include the need to review micro-credentialing in South Africa enabling a pathway to relevant qualifications that be delivered in a short timeframe, through online platforms.

3.6.5 Physical Technology Production

With the onset of the Fourth Industrial Revolution, producing the components that make up transformative technologies is rapidly becoming a lucrative opportunity for manufacturers and a promising driver of job creation. Advances and maturity in digital technologies have since opened another window of opportunity. China has placed AI at the centre of modernising industrial activities and the economy. This has allowed China to emerge as a world leader in manufacturing output.

Figure 22: Top 10 manufacturing countries, 2024



Source: United Nations Statistics Division, 2025

According to data published by the United Nations Statistics Division, China accounted for close to 28% of global manufacturing output in 2024 (USD 4.66 trillion). This is over ten percentage points ahead of the USA, which used to have the world's largest manufacturing sector until China overtook it in 2010. (See graphic to the left.) The US economy is the least heavily reliant on domestic manufacturing among the world's top ten manufacturing countries, with the manufacturing sector accounting for around 10% of the country added value.

The World Economic Forum (WEF) identified 12 key emerging technologies, shown in the figure below, which are being increasingly deployed across the economy. In contrast with traditional production systems, new production planning and scheduling models are evolving from algorithms and automated manufacturing systems. Of these 12 technologies, two can be considered “digital technologies”:

Collaborative Sensing

Individual sensors are already widespread in our lives, but advances in technology – for example, AI – offers new, networked, opportunities. These connected sensors could change how cities operate and how organizations use data to make decisions.

Consider urban mobility. Connected traffic lights could adjust themselves based on traffic cameras and environmental sensors, allowing them to help manage congestion and cut pollution. Other use cases include mapping in mines, environmental monitoring and the analysis of storm systems.

Generative Watermarking

In an era of deepfakes and synthetic media, this technology is a welcome addition. It adds invisible tags to AI-generated content, which makes it easier to identify what’s real and what isn’t, and as a result will help fight misinformation and improve trust online.

A number of leading tech companies are increasingly integrating watermarking. However, the tech faces challenges, including uneven adoption and users attempting to remove or forge watermarks. Ethical concerns also abound, such as falsely labelling real content as AI-generated.

These digital technologies require the use of multiple physical components. For example, essential components for IoT technologies are: sensors which can measure temperature, motion, light, humidity and pressure; chips or boards like Arduino Uno and other microcontrollers; routers and communication modules; and, a power source for the smart device. All of these components can be manufactured locally in South Africa as demand for these components is set to grow.

How South Africa can win in physical technology production

The previous sections have demonstrated local innovation and capacity, and elucidated the benefits of local technology production, however production is nowhere near its potential and systems to support its development are still immature or barriers to growth still exist. For these opportunities to be unlocked, well considered industrial strategy and policy are critical. The recommendations below relate to supporting the scaling of physical technology production.

To support the competitiveness and scaling of nascent local production activities:

- **Utilise and scale up existing incentive packages for the ICT industry** that will encourage manufacturing, particularly labour-intensive manufacturing, of electronics in South Africa, such as low- cost tablets and smartphones and autonomous vehicles such as drones. This will support nascent emerging firms to be able to scale and become more globally competitive.

To improve domestic demand for physical technology production:

- **Creating incentives and an enabling environment for the establishment and expansion for data centres** based in South Africa that can service local and regional demand. This will establish strong local demand for the physical technology components and requirements of growing data centres.
- **Provide a tablet to every school learner in need** so that they can access online educational content at school and when learning from home. This national roll out of devices can be done through local procurement and provide an opportunity to kickstart local electronics production or assembly.
- **Provide performance incentives for local procurement of ICT tools, software and devices** to government agencies and departments. The process of government digitization represents an

enormous source of demand for physical ICT and digital technologies which can be sourced locally.

- **Develop a central ICT government procurement system** to manage technical scoping of required digital and ICT support within government.
- **Develop an ICT payment monitoring system** to ensure that government contracts to SMMEs are paid on time and without irregular spending.

4. Digital Economy Key Focus Areas

For South Africa to have a successful digital economy industrial policy, the country will have to place focus on a few critical areas. The value of this approach is in being able to describe concrete areas that will enable an efficient and inclusive digital economy which in turn will allow for an educated and digitised society who can productively and safely use the Internet and digital technologies. This in turn will establish an innovative mindset and if given a supportive environment for the creation of innovation. In turn all of this will require large-scale investment, all underpinned by a responsive government that develops the correct policies to drive investment.

The Masterplan will consider the areas that need to be focused on in the short term, but that will achieve the medium- and longer-term goals of developing a fully digital society.

4.1 South Africa Digital Economy SWOT Analysis

The digital economy in South Africa has a several strengths which can form the basis on which to develop future opportunities. However, it also has a number of significant weaknesses which need to be addressed, in order to improve the economy's performance and the prospect of realising the opportunities. The digital economy's strengths, weaknesses, opportunities and threats are highlighted in the SWOT analysis below.

The SWOT factors can be divided into two categories:

- Those directly related to the elements of the digital economy, e.g., access to broadband services; and
- Those not directly related to the elements of the digital economy, e.g., high unemployment rate.

Note that most of the opportunities are premised on more extensive and sustained digital skills development in South Africa, both foundational (basic / digital literacy) and more advanced IT / technical skills.

STRENGTHS	WEAKNESSES
1. Strong telecommunications (Internet) infrastructure, with high population and geographic coverage – There is a high and increasing penetration of mobile broadband services (4G & 5G) and fibre optic access. This supports infrastructure inter-connectivity and enables digital services. 2. Expanding platform economy – Online platforms (domestic and also foreign) have been expanding across all platform types, with increasing user activity. 3. Developing e-Commerce market – e-Commerce is seeing increasing competition, in tandem with adoption by buyers growing (particularly B2C). Increasing consumer trust and participation in online retail. 4. Advanced financial sector, with a fairly high access to formal banking products by consumers and businesses – SA has one of the most developed financial / banking systems in Africa, with strong digital banking platforms, mobile apps and online payment systems. The level of adoption of digital banking and fintech services is high, and digital financial inclusion expanding. 5. Growing fintech ecosystem – There is healthy growth in innovation and startup activity in financial technology, including digital payments and lending,	1. Digital divide unequal access to digital services – There is a continued gap between individuals / households and organisations in urban vs. rural areas and higher vs. lower income groups in terms of access to good quality broadband / Internet, device ownership and digital literacy. Unequal access to digital services limits full participation in the digital economy and inclusive digital growth. 2. High cost of data / connectivity for many – Mobile data costs continue to be too high for meaningful digital access for many lower income consumers. Fixed line (fibre) connectivity prices have declined for lower income users but such products are still limited in their geographic availability. High data costs restrict participation in the digital economy. 3. Skills gap and high unemployment – There is a shortage of advanced digital skills in areas such as advanced software engineering, AI and cyber security. This problem is compounded by a dearth of critical skills globally. Skills shortages slow digital innovation and growth. Lack of basic digital skills (digital literacy) excludes individuals and businesses from participation in the digital economy. 4. Global platform dominance – Global tech companies dominate parts of the platform economy, in particular social media and cloud services, and to an extent

insurtech, and blockchain. SMMEs are benefiting from digital payment solutions. 6. Innovation hubs and talent – Institutions of higher education and innovation hubs support the development of talent to build the digital economy. (However, there is a dearth of requisite skills in the market.) 7. Strong policy and regulatory environment – The digital economy operates within a defined legal framework, with strong institutions such as the SA Reserve Bank. This stability builds investor and consumer confidence. 8. Integration with global markets – Strong international trade links and digital connectivity all South Africa to be a part of global digital value chains. Membership in trade blocks strengthens this position.	content. This can limit the growth of local digital platforms and reduce domestic value creation. 5. Policy and regulatory weakness and uncertainty – Certain policies impacting elements of the digital economy are outdated or weak; regulations across different government levels may be inconsistent. This results in uncertainty, delaying innovation and limiting investment.
OPPORTUNITIES	THREATS
1. Improvement of broadband coverage and services – Driven by economic factors, government obligations and new technologies (e.g., LEO satellite), broadband infrastructure is improving in terms reach, quality and price. This includes access to devices and affordability of services. Better quality Internet can support smart cities, remote work, e-services (government and private sector), and advanced digital businesses. More accessible and affordable Internet results in greater inclusivity in the digital economy and grows it. 2. Data centre and cloud services expansion – Continued investment in data centre and cloud infrastructure, particularly with the view of accommodating AI workflows / apps, will support continuous development of the digital economy and can solidify SA's position as a regional hub for cloud and AI services. 3. Platform and gig economy growth – The range of digital platforms can continue to expand, including e-Commerce and e-Government services. The latter will result in greater efficiency. Digital platforms enable new service and work opportunities (online freelancing, ride-hailing services, food delivery etc.) which create flexible income opportunities and support small entrepreneurs (see below). 4. Increased job creation and revenue / income growth – Meaningful access to digital infrastructure, combined with digital skills, can create new work opportunities and enable expansion of existing business activities. As the digital economy grows, more job opportunities will emerge. 5. Participation in global digital trade – Closer integration into global supply chains and access to markets outside of SA can expand digital exports of goods and services (through e-Commerce, fintech). Membership in initiatives such as the African	1. Cybersecurity risks, online fraud and trust deficiency – Weak cybersecurity awareness among many individuals and small businesses increases vulnerability. Security threats reduce trust in digital platforms and services, which negatively impacts the digital economy. 2. Global technology competition – Oversees production of technology used in the digital economy may limit or negate the production of such technologies locally, if SA is not competitive. This limits the prospects for greater localisation and can result in reduced job creation or job losses. 3. Skilled professionals brain drain – Due to general global dearth of skilled IT professionals and often better opportunities in countries other than SA, a brain drain has been taking place out of the domestic market. This loss, combined with insufficient development of new digital talent locally, can lead to declining innovation, competitiveness and slower growth of the local digital economy. 4. Infrastructure vandalism and construction mafias – Vandalism of digital infrastructure (fibre optic cables, towers) directly threatens deployment of such infrastructure, while construction mafia activities result in delays and higher costs of deployment. Vandalism of electricity infrastructure also directly (negatively) impacts access to digital services and ability to operate in the digital economy. 5. Unstable electricity supply – While power supply stability has improved, regular power outages continue to take place. Moreover, the price of electricity supplied by Eskom has increasingly significantly above official inflation, hampering economic growth. Both factors are driving user to seek alternative sources of power supply, where possible. Unreliable electricity reduces productivity and investor confidence, and increases business costs.

Continental Free Trade Area (AfCFTA) can enhance that.

6. Local manufacturing / industrialisation –

Digitalisation of elements of the economy may result in South Africa's greater competitiveness globally and an opportunity to manufacture more products or components of products locally, either for the domestic and/or export markets.

7. Digital skills development – Digital infrastructure allows more efficient digital skills development (foundational and advanced), including digital entrepreneurship skills. This empowers the society to participate in the digital economy and increases employability for in-demand positions.

8. Increased financial inclusion and business funding – Fintech innovation will expand financial inclusion and enable broader participation in the digital economy for individuals and small (informal) businesses through access to financial services such as digital lending. It will also make funding new tech start-ups easier.

9. Attracting investment – A well-functioning and growing digital economy can attract further investment (domestic and foreign) which in turn will contribute to continued improvement and expansion of the digital economy.

4.2 Digital Government

Digital government offers significant value by enhancing efficiency, transparency, and citizen engagement. It streamlines public services, reduces bureaucracy, and improves access to information, ultimately leading to a more effective and accountable government.

Why is it necessary?

Firstly, most government digital operations still work with outdated paper-based systems. The lack of a uniform digital identity creates bureaucratic inefficiencies and delays. Secondly, fragmented procurement of equipment in government has led to duplicated efforts, increased costs and fruitless expenditure. Thirdly, different departments often use isolated and incompatible digital systems. This reduces the mutual benefits of digital transformation. The State IT Agency has been blamed for inefficiencies, procurement failures and questionable spending. Fourthly, South Africa's public service remains fragmented. Citizens still struggle to access government services seamlessly. They often move between departments to complete what should be a single transaction. Without a centralised system, departments operate in isolation, duplicating efforts, increasing costs and eroding public trust.

With this in mind, the DCDT, together with The Presidency (Operation Vulindlela) launched the MyMzansi project on 6 May 2025. This digitisation initiative has four main deliverables, namely: (1) Digital Identity, (2) Digital Payment System, (3) Data Exchange, (4) Single Digital Channel for accessing public services, which all aim to revolutionize public services and enhance citizen engagement across the country.



4.3 Digital Citizen

This project is a digital citizen transformation roadmap with a three-part purpose aimed at delivering a user-centric digital government. The roadmap emphasizes the development of cohesive digital infrastructure, focusing on digital identity, data exchange, digital payments, and enhanced digital services.

a) Purpose

South Africa is at a pivotal moment in its digital transformation journey, with an opportunity to introduce a coordinated, delivery-focused approach to using technology to improve service delivery, drive economic growth and foster an inclusive society. This roadmap sets out steps to deliver on the change wanted by people in South Africa. It embraces new technologies, new approaches and a culture of innovation. It is a living document that will adapt to changing needs, opportunities and limitations.

b) Mission

MyMzansi's mission is to simplify and improve how residents, businesses, and government interact by using shared technology, modern design, and collaborative delivery models.

c) Vision

To deliver a safe and inclusive future by changing how government services are designed and accessed.

4.3.1 What is Digital Public Infrastructure (DPI)?

DPI refers to foundational technology building blocks — such as identity, data exchange, payments, and trusted digital channels — that enable secure, inclusive, and scalable government services. MyMzansi uses a DPI approach inspired by global best practices from countries like India, Brazil, and Estonia.

The MyMzansi Digital Transformation Roadmap sets out the national strategy to transform government services through Digital Public Infrastructure (DPI). It provides a phased plan to improve how residents and organisations interact with government, drive innovation, and ensure no one is left behind in the digital era.

Roadmap phases:

- **Phase 1** (2025–2027): Deliver key DPI components with a focus on social protection, digital identity, and unified digital channels. Pilot the Digital ID, Data Exchange, and first government payment and service integration projects.
- **Phase 2** (2028–2030): Scale technologies developed in Phase 1 across healthcare, education, business services, and more. Introduce additional innovations and continuously improve the platform based on user feedback.

Delivery mechanisms:

- Coordination through an effective Inter-Departmental Working Group (IDWG)
- Building Digital Government Capability
- Unlocking Innovation through Non-Government Ecosystems
- Cross-Cutting Enablers (standards, interoperability, security)

4.4 Stimulating Innovation in the Digital Economy

One of the areas the government believes that it can achieve significant gains is in encouraging digital innovation to drive economic growth and job creation, focusing on startups, SMMEs, and digital platforms. To compete effectively in the global digital economy, and trade in unique and locally invented digital and ICT technologies, South Africa needs to sharpen its innovative edge and intensify its contributions to scientific, digital and technological advancement globally, regionally and nationally. This will require higher investment in research and development, efficient use of existing resources and financing schemes, and effective and

inclusive commercialisation activities. The critical enabler of innovation and competitiveness can ensure that South African businesses are empowered to create local digital products and services that can be exported globally. The following outcomes and actions, along with the required stakeholders and timeframes, indicate how the objective will be achieved.

Innovation provides new ideas, products, and services that entrepreneurs can use to create and grow businesses. Entrepreneurs are the agents of change, taking innovative ideas and turning them into real-world ventures, whether it's a new product or a new way of doing business.

4.3.2 Innovation as the Foundation

New ideas and products

Innovation fuels the creation of new ideas, products, and services. It's the driving force behind advancements in various fields.

Adding value

Innovation is about more than just creating something new; it is about adding value and making things better for customers. It drives competition and differentiation as innovative ideas are essential for businesses to remain competitive and stand out from the crowd. At the heart of this are typically SMMEs as entrepreneurs who are willing to take risks and drive change by turning innovative ideas into reality.

Innovation often creates social value, addressing societal challenges and improving lives.

However, governments and organisations play a crucial role in supporting innovation and entrepreneurship through policies and funding initiative as well as education and providing fundamental support.

In fact, creating supportive ecosystems for entrepreneurs and innovators, including access to resources, networks, and mentorship, is vital for success. In essence, innovation and entrepreneurship are two sides of the same coin, each contributing to the other's success and driving economic and social progress.

Key initiatives

- **Support for startups and SMMEs:** The government aims to expand access to venture capital, foster innovation hubs, and streamline regulatory frameworks to nurture tech entrepreneurs. The South Africa SME initiative, launched in 2016, provides financial support to high-potential SMEs.
- **Digital platforms:** The plan promotes digital platforms for e-commerce (e.g. Sixty60, Superbalist, Takealot, Bash, to name a few) and digitally traded services, facilitating partnerships with local and global buyers.
- **G20 legacy:** South Africa's 2025 G20 Presidency emphasised digital innovation ecosystems, showcasing SMME innovation and developing frameworks to measure socioeconomic impacts of connectivity.
- **Physical technology production:** The Masterplan identifies opportunities in producing semiconductors, processors, and digital devices to support local innovation.

Considerations

To foster a culture of innovation in a country, governments and societies need to create an environment that encourages creativity, supports research, and provides resources for entrepreneurs. This involves investing in education, fostering entrepreneurship, protecting intellectual property, and promoting government support and collaboration.

Impact potential

By fostering innovation in the digital space, South Africa can create thousands of jobs in the ICT sector and position itself as a regional tech leader.

4.5 Investment as an Imperative to Drive the Digital Economy

Version 2.0 of the Digital Economy Masterplan is undertaken during a time in South Africa where the country is governed through a coalition government formed by multiple parties. The Government of National Unity was formed in response to promote unity and stability. The recent formation of a GNU in South Africa following the 2024 elections involved 10 parties from across the political spectrum.

One of the aims of the GNU is to facilitate stronger investment in the economic sector. It acknowledges that for South Africa to reach its goals it will need to aggregate global investment into sectors where high economic impact can be achieved.

As part of any master plan there should be a dedicated section that considers proper strategies to attract investors to our country. Although it's a process that takes time, effort, planning, and the willingness to handle vigorous questioning and possibly rejected. But it is possible. The right investment attraction strategy will allow businesses to enter into South Africa as a foreign market and in turn add value and scope to the local economy.

At home, companies need to continually invest in digital infrastructure and the broader digital economy ecosystem. However, this means that companies need to constantly either raise capital to invest or that new entrants may choose to invest in existing companies or directly. International investors are people or companies based outside of a country that invest in a business. Entities invest in businesses based not only on the success in their own country but the projected success in an international market.

Some of these investments, known as foreign direct investments (FDI), have become a cornerstone for governments and corporations around the globe. By acquiring a controlling interest in foreign assets, corporations can acquire new products and technologies and sell their existing products to new markets. By supporting foreign direct investment, governments can create jobs and improve economic growth, resulting in FDI attractiveness.

Either way, there is an ongoing need to have a robust investment attraction strategy encourage investment. What is important is a stable and transparent legal and regulatory environment, offering investment incentives, and developing a skilled workforce. Additionally, promoting the country's strengths and opportunities through marketing and investment promotion agencies can be effective.

Additionally, economic diversity, reasonable fiscal and monetary policies, strong infrastructure development, a responsive government, and a high human development index are all indicators of a country with good economic fundamentals.

Countries with strong economic fundamentals are usually safer bets for investors. These countries' economies will, in most cases, be resistant to catastrophic external events such as market crashes and pandemics. This means that investors can be reasonably sure that their investments will be safe in the long term.

Security, as an indicator within the legal subindex, emerges as one of the most determinant factors influencing FDI. Investors prioritize nations with high levels of security to safeguard their investments against various risks, including political instability, civil unrest, and threats to property.

Attracting international investors takes a lot of effort and is the right strategy but by setting clear and attainable goals, you can take control of your business's investment attraction strategy.

Setting up an investment pipeline for each sector

Governments can establish an investment pipeline by first identifying the areas where investment is still needed and then create strategic policy objectives and determining investment opportunities aligned with those objectives. They then need to establish a central agency/working group of people who are specialists in a

specific sector to assist with investment attraction and promotion. In addition, they need to empower those people with support to coordinate practices and requirements and develop case studies for inspiration behind specific opportunities.

In South Africa it is a generally accepted fact that the continuous investment in the construction of digital infrastructure, including fibre networks (national long distance, metro and access as well as fibre-to-the-tower) will continue to attract funding. Similarly, Data Centres will need large scale investment, as well as renewable energy to the extent that it powers data centres, to name a few.

4.6 Developing a Digital Nation – Digital Skills in the Private and Public Sectors

To compete in the digital economy, countries will need to prioritize education and build the digital skills of their workforce while creating efficient safety nets to support those transitions. Developing a digitally literate society involves equipping individuals with the skills and knowledge to effectively use and understand digital technologies. This includes technical proficiency, information and media literacy, cybersecurity awareness, digital communication and collaboration, and creativity and innovation. It's a multi-faceted approach involving education, training, infrastructure, and policies to ensure everyone can participate fully in the digital world. However, a digitally enabled society is also capable of harnessing the power of the digital economy, it translates to a society that is innovative and knows how to use technology in an entrepreneurial sense.

In emerging economies where there is still large room for digital transformation to take place, there are very definitive foundational skills that require focus.

Technical Proficiency

Comfort and competence in using digital devices, software, and applications. This includes everything from basic computer skills to using online tools and platforms.

Information Literacy

The ability to find, evaluate, and use information effectively from digital sources, including recognizing reliable sources and identifying misinformation.

Media Literacy

Understanding how to critically analyse and interpret digital media, including identifying biases and recognizing manipulative tactics.

Digital citizenship

Cybersecurity awareness

Understanding online safety, data privacy, and responsible digital behaviour. This includes recognising and avoiding scams and protecting personal information.

Digital communication and collaboration

Effectively communicating and collaborating using digital tools and platforms, including email, social media, and virtual meetings.

Ethical online behaviour

Understanding and practicing responsible digital citizenship, including online etiquette and respecting intellectual property.

Applying digital skills

Creativity and innovation

Using digital tools to create and innovate, beyond just consuming information. This can include creating content, developing applications, or engaging in online communities.

Lifelong learning

Recognising that digital skills are constantly evolving and embracing continuous learning to stay current with new technologies and platforms.

Strategies for development

Education and training

Integrating digital literacy into curricula at all levels, from primary school to higher education, and providing professional development for teachers and educators.

Infrastructure

Expanding access to affordable broadband Internet and providing public access to digital resources in underserved areas.

Community engagement

Creating community technology centers and libraries that provide access to digital resources and training.

Policy and advocacy

Developing policies that promote digital inclusion and addressing the digital divide and advocating for greater investment in digital literacy initiatives.

Public awareness campaigns

Using broadcasting services to educate the public about the benefits of digital literacy and addressing concerns about technology thereby creating trust to take digital services and actively participate as digital citizens.

Digital skills for a digital economy and society

In an unequal society such as South Africa, a variety of needs must be identified to ensure that those with limited digital knowledge are brought into the digital society, but those with more advanced ability are given the necessary platforms to excel and harness and grow the abilities they already possess. Therefore, three skills categories have been identified.

Through targeted digital skills programs, the DCDT aims to empower citizens, especially the youth, to actively participate in the digital economy, whether as employees, entrepreneurs, or innovators. The National and Digital Skills Strategy, published in 2024, provides the baseline to develop and implement the digital skills initiatives necessary to elevate South Africa's digital competitiveness. This strategy follows the lead of the International Telecommunications Union (ITU) groups digital skills into three categories:

- 1) **Basic digital skills:** these are the foundational skills necessary to perform basic tasks that enable people to function at a minimum level in society, including using hardware and software and conducting basic online operations such as email.
- 2) **Intermediate skills:** which are skills for using digital technologies in more meaningful and beneficial ways, e.g., critically evaluate technology and create content, and that enable people to perform work-related functions such as desktop publishing, digital graphic design and digital marketing (i.e., job-ready skills).

- 3) **Advanced skills:** such as those required by specialists in ICT professions such as computer programming and network management, including working with artificial intelligence (AI), virtual reality (VR), big data, the Internet of Things (IoT), cybersecurity and digital entrepreneurship. A recent study assessing the skills demand and supply in the digital economy in South Africa, also included a survey of enterprises and organisations in the private as well as the public sector.

Collaboration

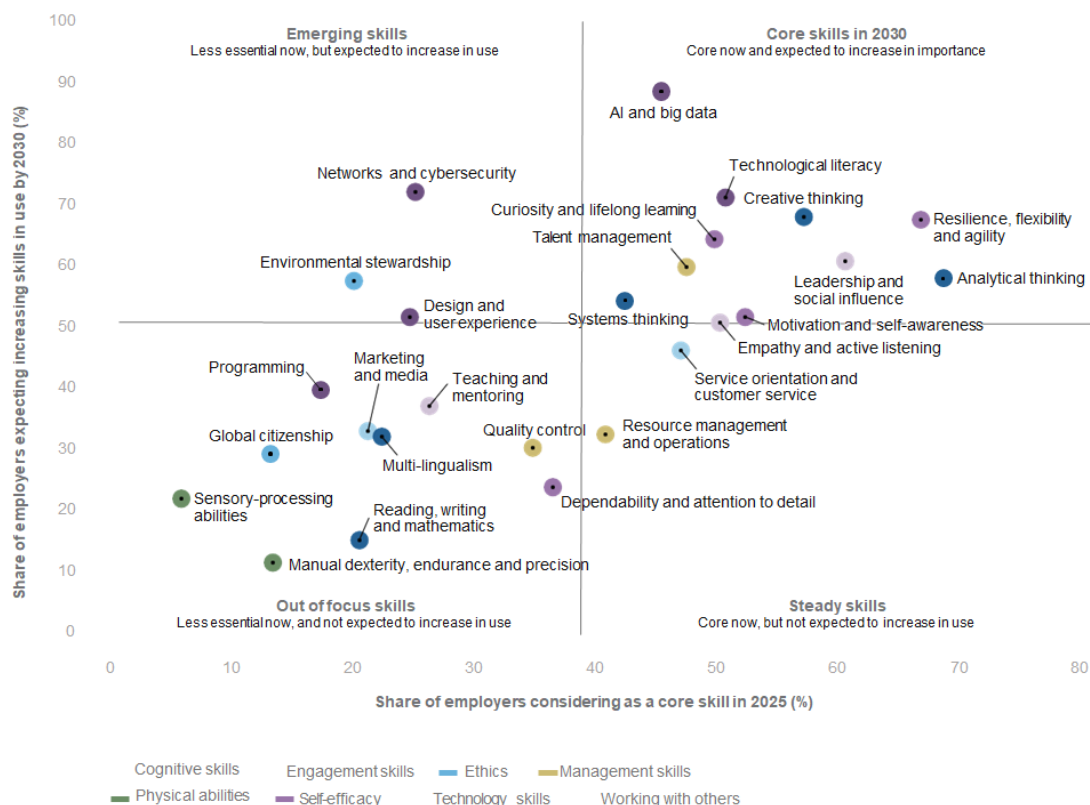
Partnering with the private sector, civil society organisations, and international agencies to share best practices and scale up digital literacy initiatives with the end in mind. Therefore, the objective is to establish an education and skills development ecosystem that provides all South Africans with the skills required to create and participate in the economic and social opportunities in the digital economy.

In order to achieve this objective, it needs to build on the work done in the National Digital and Future Skills Strategy and adopts a life-cycle approach to skills for work and identifies outcomes that are targeted at three levels of South Africans – (1) individuals in the basic education system, (2) individuals in the tertiary education system, and (3) individuals in the labour market. This approach will ensure that all South Africans are equipped with the skills that allow them to develop, utilise and complement technology in order for digital economic opportunities to scale opportunities for employment.

Working with organisations such as the Collective X, whose mission is to double South Africa's digital workforce, can also assist to develop a collaborative digital ecosystem that meaningfully connects the supply and demand of South African digital skills by facilitating the right training, at the right time, for the right price, to impact our future in the right way.

The graphic below illustrates the expected evolution of skills requirements by 2030. This expectation is based on the share of employers considering skills to be a core skill in 2025 and expecting skills to increase in importance by 2030, as represented in the Future of Jobs Survey 2024 by the World Economic Forum.

Figure 23: Core skills in 2030



Source: Future of Jobs Survey 2024, World Economic Forum, 2025

Digital skills training

Investing in digital skills training programs can empower individuals to participate fully in the digital economy.

Digital skills for reshoring work

Exporting digital skills presents a significant opportunity to boost the country's digitally traded services. Many South African businesses rely on these markets to provide services such as software and application development due to their clear talent and cost advantages. In fact, it is projected that about 10,000 jobs in the areas of testing and application development are being outsourced by South African corporates to India alone. In total, it is estimated that over 28,800 jobs have been outsourced to foreign markets. In the longer term, South Africa may be able to scale capabilities in digitally traded services such as data storage, analytics, artificial intelligence solutions and cyber security. To make this happen, the country needs to build and implement sustained skills for work programmes that create scalable and sustainable pipelines of talent that are qualified and experienced to fulfil these ICT services. Moreover, financial and non-financial incentives are required to compel these organisations to re-shore work back to South Africa.²³

Digital transformation in the context of SMMEs

In terms of opportunities for SMMEs, the latest estimate of the number of SMMEs active in South Africa is provided by an IFC study in 2019 which sized the SMME market in South Africa at approximately 5.78 million, including both formal and informal businesses.

SMMEs' contribution to South Africa's GDP is estimated at around 34%. They also employ between 50% and 60% of the total workforce in South Africa.

The report also details how this represents a very diverse mix of SMMEs, with the bulk comprising very informal and micro survivalist enterprises. The Global Entrepreneurship Monitor (GEM) further estimates that roughly half of the emerging businesses have little to no technology orientation, while 50% consider technology access a challenge to growth and have insufficient skills for use.²⁴ This half of the SMME stock in South Africa – approximately 2.8 million – must be the target of this Masterplan to be able to accrue basic opportunities and advantages from digital technology.

4.7 Responsive Governance

The pace of innovation in the digital economy is resulting in the emergence of entirely new business models. Regulations are often slow to adapt, which means they can either stifle innovation from scaling or fail to adequately mitigate the risks presented by these new business models. This critical enabler aims to develop regulatory frameworks that are forward-looking and enable innovation and growth, while protecting consumers from potential risks. The rise and adoption of, for instance, Artificial Intelligence, Electronic Communications Act overhaul. Responsive public governance requires responding efficiently and effectively to a sector's needs. This entails a resolve to anchor policies, strategies, programmes, activities and resources, considering expectations, with particular attention paid to local variations and ambitions.

A responsive government therefore is important as it ensures that government actions align with the needs and expectations of the people. This responsiveness fosters trust in government, strengthens democratic participation, and improves the overall quality of public services. A responsive government can also lead to more effective governance and better outcomes for companies participating in and investing in its economy.

Trust and accountability

A responsive government is more likely to be trusted by its citizens, as it demonstrates a willingness to listen to and address their concerns. This trust is crucial for the legitimacy and effectiveness of the government.

²³ Genesis Analytics, 2019 South Africa in the Digital Age (SADA), *Pathways to Digital Work: A Strategy Primer for South Africa's Digital Economy*, p.16

²⁴ GEM, 2017. *A South African Perspective on Entrepreneurship*

Democratic participation

When citizens feel heard and that their voices matter, they are more likely to participate in the political process. A responsive government encourages active citizenship and fosters a more democratic society.

Improved service delivery

A responsive government is more likely to prioritize the needs of its citizens and deliver services efficiently and effectively. This can lead to improved quality of life and greater satisfaction with government services.

Effective governance

By responding to the needs of the people, a government can better address challenges and achieve its goals. This can lead to more sustainable development and improved outcomes for society.

Access to information

A responsive government is also more likely to be open and transparent, providing access to information that citizens need to make informed decisions and participate effectively.

Adaptability and agility

In today's rapidly changing world, a responsive government must be adaptable and agile, able to respond quickly to emerging challenges and opportunities. This requires a willingness to embrace new technologies, strategies, and partnerships.

By identifying, coordinating and tracking policy and regulatory initiatives required by the sector, and addressing those through the relevant channels, it results in an equal competitive market

5. DIGITAL ECONOMY MASTERPLAN FOR SOUTH AFRICA

The South African government has been utilising sector-specific Masterplans as a significant instrument to promote inclusive economic growth and tackle unemployment. The purpose of the masterplans is intended to convene key stakeholders across government, private sector and labour in a particular sector to identify a common development vision and agree to a shared action plan for achieving this vision. The masterplan then becomes the guiding plan setting out responsibilities and actions for each group of stakeholders.

Masterplans are action-oriented sector-wide implementation documents targeted towards boosting local jobs and developing local value chains. A range of industrial policy tools are utilised aimed at growing and developing export capabilities, regaining domestic market share as well as creating and sustaining employment in the economy.

What sets the Digital Economy Masterplan apart is the fact that the digital economy is not a sector in the traditional definition of the word. **Rather the digital economy is transversal, impacting every sector in the economy.** As such, Masterplans are developed through extensive consultations with stakeholders that are both directly involved in digital technology development and its applications across the economy.

Masterplans are 'living documents and require on-going sector consultation and alignment as the sector grows, especially in fast-growing economies such as the digital economy. The Digital Economy Masterplan should be updated every three (3) to four (4) years to ensure that it remains valid.

This DEM is formulated by the Department of Communications and Digital Technologies with consultations and inputs from its stakeholders. The objective is always for it to be both cross-governmental and tripartite in setting out shared objectives and responsibilities for achieving an inclusive, growing economy that creates jobs and transformation.

5.1 Vision and Objectives

5.1.1 Vision

The Masterplan's vision is for all South Africans to be digitally empowered to create and participate in tech-enabled opportunities that drive economic inclusiveness, employment and economic transformation across all cities, towns and provinces.

This vision is broken down into the following parts:

- For all South Africans, irrespective of where they live or how much they earn, can benefit from transformative connectivity and digital platforms that enable them to meaningfully work, collaborate and participate in the global-to-local digital village.
- Have access to affordable locally produced devices.
- Existing businesses, new entrepreneurs and SMMEs can invent and create innovative products and services that solve local challenges with digital solutions that can be traded internationally to enable South Africa to rise up the value chain and gain its share of the global digital economy.
- The correct skills exist in both public and private sectors to harness the opportunities of the digital economy.

5.1.2 Objectives

The objectives of the DEM were determined through a process of input and analysis of the role the digital economy can play in realising South Africa's development vision as set out in the National Development Plan 2030 (NDP). The NDP states that *"South Africa's principal challenge is to eliminate poverty and inequality. Raising living standards to the minimum level proposed in the plan will involve a combination of increasing employment, higher incomes through productivity growth, a social wage and good-quality public services. All*

of these challenges are interlinked. Improved education, for example, will lead to higher employment earnings, while rapid economic growth will broaden opportunities for all and generate the resources required to improve education”.

Achieving this vision will require South Africa to deliver on four crucial objectives:

- Economic / GDP growth
- Job creation,
- Education / skills development, and
- SMME support.

These objectives will have a three-pronged focus:

- Short-term gains – effective and efficient use of digital platforms for economic benefit (ensuring ubiquitous, affordable connectivity, and access to affordable smart devices).
- Medium term – effective and efficient use of digital platforms for improved government service delivery to its citizens.
- Long-term value that the digital economy may contribute to raising GDP (innovation and production).

Given that the Masterplans are principally industrialisation plans, the focus of a DEM should align with the National Development Plan (NDP) objectives of increasing employment and productivity growth in a way that transforms the structure of the digital economy to be more inclusive and equal.

While this plan considers the process of stimulating local demand and job creation from an industrial policy lens the provisions will first and foremost consider the role of accessibility and affordability which in turns act as a fundamental enabler of the broader digital economy.

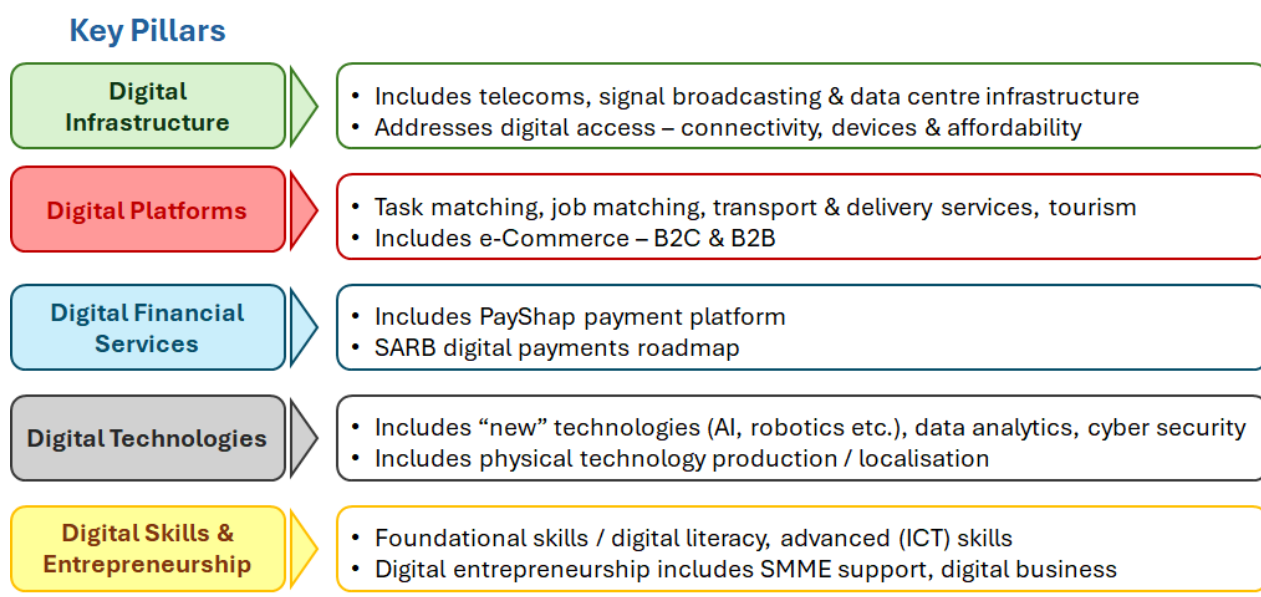
Connectivity, particularly broadband Internet access, and the ability to utilise it effectively, is a cornerstone of digital societies, enabling digital transformation and fostering economic and social development.

5.2 Digital Economy Key Pillars

For South Africa to have a successful digital economy industrial policy, the country will have to place some digital economy pillars. These must be based on sound principles and evidence-based research but also be inspired by the creative imagination of where South Africa’s digital economy could be. The value of this approach is in being able to describe concrete areas of economic opportunity that are already emerging in the digital economy but have the potential to significantly scale. In doing so, this Masterplan can be much more specific about figuring out where the actual opportunities lie and how best to support them.

However, it may be risky to do this at the level of specific firms, or even sectors, given how quickly technologies and market structures in the digital economy can shift. Rather, a digital economy industrial policy should place bets on economy-wide phenomena that impact multiple sectors. Five (5) processes have been identified in the digital economy which form the foundations of a digital economy, and which offer concrete opportunities for generating inclusive growth, jobs and transformation across multiple sectors. They are shown in the diagram below and are elaborated on in the sections that follow.

Figure 24: Key pillars of the digital economy



Source: The authors, 2026

5.2.1 Digital Infrastructure

Digital infrastructure underpins the digital economy. This is the foundation which allows digital activities to take place for the digital economy to function and grow. Digital infrastructure enables digital products and services to be created and delivered. Without it, elements such as online business / e-Commerce, digital financial services and remote work are not possible.

Digital infrastructure includes:

- Telecommunications network infrastructure across all geographies – international, long-haul national, metro backhaul, access / last mile (broadband) and on-premises or in-building reticulation (e.g., cable or Wi-Fi infrastructure brought to every classroom in a school, not only to the administrative office). This infrastructure consists of various technologies – cable / wireline, wireless / mobile and satellite.
- Tower infrastructure to support the installation of wireless / mobile networks.
- Data centre brick and mortar facilities, with accompanying power and cooling systems.
- Broadcasting signal distribution infrastructure.
- Hardware (servers, routers etc.) and software which create active networks that deliver services and which house platforms, tools and applications used in the digital economy.

Although South Africa already has extensive population coverage by telecommunications networks (mobile 4G broadband coverage stands at over 99% and the fibre footprint continues to expand), a lot of work remains to achieve ubiquitous high-quality connectivity for everyone – individuals, households, businesses, as well as government and non-governmental organisations.

- Telecommunications last mile infrastructure** – The quality of the broadband coverage is not uniform everywhere. Many peripheral urban areas and rural areas require better quality broadband services. Most of the public schools either do not have broadband connectivity or have only a single connection point on the premises without further on-premises network reticulation.

- **National long-haul and metro backhaul infrastructure** – As the use of data-bearer services grows and traffic volumes increase, and more applications in the future will require low latencies, additional backhaul infrastructure will need to be built, while the existing infrastructure will need to be continuously upgraded.
- **Regional and edge data centres** – Even as more investment continues to be committed to the large (national) data centres, new technologies relying on extensive data analysis and quick turnaround time from “raw” data inputs to analysed outputs will require greater proximity of computing power to their locations. This will result in a build-out of edge data centres and also more regional data centres – a process that has already begun.
- **Broadcasting signal distribution** – With the migration from analogue to digital signal distribution and the growing use of digital platforms to provide content to audiences, much more investment will need to take place on both the supply-side and the demand-side to deliver and receive digital programming by all members of the society.

The above illustrates that a significant amount of investment is still required to ensure an optimally functioning digital economy, while continuous upgrades and improvements will be required from then on, as digital technologies evolve.

As part of Digital Access, this pillar also considers the affordability of services and devices, in particular by the lower income groups of the society and small / informal businesses. Good quality connectivity alone does not enable meaningful participation in the digital economy. Just as important are affordable adequate devices, such as smartphones, and affordable data – mobile or inexpensive fixed connectivity with a large monthly cap or unlimited. Initiatives and interventions in this regard are already taking place, but they need to address all segments of the society.

5.2.2 Digital Platforms

Digital platforms facilitate commercial interactions between actors, destroying many of the economic barriers, preventing markets from functioning optimally and generating inclusive outcomes. Digital platforms remove information asymmetries by digitally aggregating demand and supply, making buyers and sellers visible to one another and standardising prices. This makes locating customers or service providers quicker and easier with fewer transaction costs. Digital platforms also generate trust and credibility by screening buyers and sellers, and through crowdsourced rating mechanisms. This is transforming the generation of trust in markets from personal face-to-face interactions to decentralised and virtual systems. Lastly, digital platforms can greatly improve service delivery through more efficient payment transactions and personalised services. This allows buyers to access better service for less, and for sellers to spend more time on value-creating tasks. As a business, platforms allow for the linking and facilitation of transactions between consumers and producers on a broad scale. These platforms enable value-creating interactions between buyers and sellers, providing the infrastructure and rules needed for these exchanges to happen.

Digital platforms include e-Commerce, as well as business websites used to digitally order services which are delivered physically (e.g., plumbing services). Types of different digital platforms included are illustrated below:

- **Task Matching Platforms** (e.g., Takers, SweepSouth) – These platforms connect individuals looking for work (taskers) with those needing services (clients), ranging from micro-tasks and online freelancing to local, in-person errands and specialised skilled labour.
- **Job Matching Platforms** (e.g., Pnet, CareerJunction) – These AI-driven platforms pair specific skills, experience and personality (talent) with available / listed work positions (full-time and part-time). Candidate vetting is often performed by these platforms as well.
- **Transport Platforms** (e.g., Bolt, Uber) – These platforms focus on app-based provision of transport services, either for individuals / consumers (e-hailing services) or businesses, including moving of good.

- **Delivery Services Platforms** (e.g., The Courier Guy, Bob Go, courier companies) – This is a mix of traditional courier services, smart lockers, and on-demand, app-based solutions focusing on last-mile, same-day, and e-Commerce delivery.
- **Food Delivery Platforms** (e.g., 60/60, Uber Eats) – These are similar to the transport and delivery services platforms but focusing specifically on the delivery of perishable goods, whether meals ordered from a restaurant or groceries ordered from a store.
- **Tourism Platforms** (e.g., Lekkeslaap, Airbnb) – These are digital marketplaces connecting travelers with accommodation, transport and experiences.

Both business-to-consumer (B2C) and business-to-business (B2B) platforms are taken into account, as both are critical for the digital economy, even though B2B has been leveraged to a limited degree in South Africa to date. The former (B2C) denotes the retail sale of products and services by businesses to consumers, while the latter (B2B) represents sales from one business to another, typically on a wholesale basis.

5.2.3 Digital Financial Services

Financial services in South Africa are amongst the most sophisticated in the world. With the migration of activities online in a digital economy – communications, services, commerce – so does finance. Digital financial services are the backbone of a digital economy, facilitating inclusion, speed of transaction, transparency, innovation and growth. As the digital economy expands and becomes more inclusive, the scale of the use of digital financial services and products available will expand as well to become more specialised and personalised.

Furthermore, digital financial services enable more savings and investment options, and reduce operational costs. The range of digital financial services considered includes:

- Fintech services
- Mobile money / wallets
- Digital lending
- Digital insurance
- Online banking
- Credit and debit cards

In the case of SMMEs, digital payments mechanisms are already widely used in South Africa, but the use of other digital financial services needs to grow, for example access to credit. Leveraging digital financial services allows small businesses to improve their operations through, inter alia, access to online marketplaces (e-Commerce, wider market reach), lower operational costs, quicker payments and improved cashflow, better access to funding, greater security. It also formalises informal businesses by bringing them into the mainstream financial ecosystem.

5.2.4 Digital Technologies

Digital technologies are key to the digital economy, as they enable the functionality of the underlying infrastructure through:

- **Improvement in communication** between different actors within the local economy and across borders.
- **Online business** – e-Commerce and other platforms facilitating sale / purchase transactions of products and services.
- **Increase in productivity and efficiency** through the use of digital tools and automated systems, as well as better decision-making based on collected and processed data.

- **Support of innovation** of new products, services and business models (e.g., digital finance / fintech, online education, digital entertainment).
- **Improved access to services**, including government services, healthcare and education, saving time and costs.
- **Creation of new job opportunities** through the growth of the digital economy in technical and non-technical fields.

With respect to the last bullet point above, digital technologies can have a transformative impact on the local work environment and the job market through their application to:

1. Build the services industry through empower of businesses and individuals to be more competitive globally, enabling them to remotely perform work for non-South African entities, but remaining domiciled in South Africa. This further builds a local skills base and generates revenue flowing into the country. Conversely, digital services that may have been imported into South Africa, could now be rendered locally.
2. Build the manufacturing industry (localisation of production) by enabling the production of either complete products or product components for the domestic or foreign markets which would not have been feasible without digital technologies.

Support for SMMEs and entrepreneurs can ensure that these entities also have an equal opportunity in leveraging digital technologies to grow in areas where it is feasible for them to do so.

5.2.5 Digital Skills and Entrepreneurship

Digital skills are critical to a digital economy. If the society within which the digital economy operates does not have the skills to function within that economy and the skills to continue building it, then a digital economy cannot exist.

In a modern (digital) society, digital skills must be learned from a young age through formative education – the school system at primary, secondary and tertiary education level – as well as courses outside of the formal school curriculum, offered either physically or online through a range of further training and educational institutions.

In turn, command of at least basic digital skills – such as use of the Internet, communication tools (e-mail and online conferencing platforms), and work tools (e.g., the Microsoft office suite) – allows learners to access a greater diversity of quality education and training programmes.

Digital skills can be divided into three main categories:

- **Basic skills** – These are the foundational digital skills necessary to perform tasks in a digital environment for personal, educational and work purposes. They consist of digital literacy required to confidently, safely and effectively use technology, software and the Internet in daily life.
- **Intermediate skills** – These are skills which allow the use of digital technologies in a more meaningful and beneficial way, including for work-related functions such as digital marketing and content creation.
- **Advanced skills** – These are skills used in continuous building of the digital economy through its various elements. They range from ICT infrastructure development and integration (such as networking / network management) to the creation and improvement of new digital products, services, apps and tools (e.g., programming or coding).

Over time, the types of skills required will continue to evolve and increase in quantity, as digital technologies become ever more woven into daily tasks. Even foundational skills required will expand, particularly in the work-related environment, e.g., from the use of digital tools for communication and collaboration purposes to AI literacy – using AI tools to assist with various work functions for greater efficiency and productivity.

Digital proficiency, at least at the foundational level, is becoming essential to the improvement of a person's

employability or ability to successfully run a (small) business. Use of new technologies for digital marketing and content generation, project management, communication and collaboration with customers, suppliers and partners will become indispensable in business.

Digital Entrepreneurship speaks to creating an ecosystem that supports new ventures and the development of new digital products and services. It focuses on existing entrepreneurs, and specially SMMEs (including the township economy) and empowers them to grow their businesses through participation in the digital economy.

Most importantly, skills and technical requirements change rapidly, far faster than in any previous revolution. Therefore, every digital skills policy initiative must be both agile (and capable of adapting rapidly), as well as flexible to allow for changes or opportunities that may occur at short notice. The digital skills training and education environment must be allowed to lead the pace at which traditional education evolves, rather than traditional education systems and management practices constraining the development of digital skills.

6. ENSURING THE SUCCESS OF THE DEM

This Masterplan sets out the key areas of opportunity and imperatives for action for South Africa to deliver on the objectives and achieve the vision of a Digital South Africa.

To deliver the objectives of inclusive growth, job creation and transformation, the Masterplan identifies six imperatives which offer the greatest chance for realising dramatic transformation of a digital South Africa.

However, there are several critical enablers which must be put in place for these imperatives to be realised. Given the complexity of the digital economy and the many stakeholders that have a role in its development, the Masterplan aims to provide concrete delivery mechanisms for coordinating the ecosystem of stakeholders responsible for implementing this plan.

What it will take for South Africa to be a digital nation?

The transformation to a digital economy is an urgent imperative for South Africa and failure to develop a clear and coherent plan to do so will further increase the digital divide and limit the potential for economic growth, job creation and transformation. Despite the advancements that South Africa has already made, significant challenges remain. Although good progress has been made in the disparity between urban and rural connectivity, it has not been solved completely and remains a pressing concern, threatening to leave many rural communities without reliable and high-quality Internet access. This digital divide poses a substantial barrier to economic opportunities and hampers inclusive growth. Bridging this gap is crucial for empowering marginalised communities and unlocking their potential in the digital economy.

Realising the digital economy opportunities will require a concerted effort and, therefore, a few critical enablers must be put into place. These enablers will ensure (1) that South Africa achieves ubiquitous affordable access to digital networks and infrastructure, (2) that people are empowered through knowledge and skills to tap into those networks to leverage the benefits of connectivity both from the private and the public sector, (3) that there are appropriate skills and resources available to safely support the emergence and scaling of innovative products and services, and (4) that the country is well positioned to regulate the digital economy and that the regulatory environments are consistently revisited, identifying policies that will enable investment and protect consumers.

These enablers are addressed below. For each critical enabler, a specific objective is identified with supporting outcomes, actions, responsible stakeholders and timeframes. Given the cross-cutting nature of these enablers, they will require actions from multiple government departments and stakeholders across the private sector and the civil society, with the DCDT playing the key role of lead coordinator.

6.1 Setting of Active Targets to Achieve Goals

For any plan to be successful, it needs to have targets set against the objectives. This DEM is no different and, therefore, it will set out specific goals against the objectives it would like to achieve. Targets will be carefully monitored on an ongoing basis to ensure that gains are made towards achieving them.

6.1.1 Universal Access

The expected universal access drive outcomes are discussed in this section.

The DBSA's Beyond the Gap: SA Digital Infrastructure Investment Study report, completed in 2025, contains a detailed analysis of infrastructure and investment requirements to achieve ubiquitous population, business and government facilities coverage with high-speed, high-quality broadband infrastructure. The study identifies existing gaps in South Africa's broadband access infrastructure and evaluates the most suitable technologies for achieving universal access to affordable, high-speed broadband services with the lowest possible investment requirements. It also outlines the instruments the government should use to implement universal service policies and monitoring systems, and provides a blueprint to guide the Executive Oversight Committee

and the relevant Working Groups as they commence their work.

Outcome 1

The objective of the South African government is to achieve universal broadband coverage in the country, as evidenced by the SA Connect programme (the Broadband Policy) and various initiatives to deliver broadband services to areas that remained under-served and unserved. The SA Connect programme provides specific targets for broadband connectivity through 2030. Although the original targets of the SA Connect programme were not met, the national objective remains to achieve universal broadband connectivity by 2030.

Universal access to high-quality broadband services should be “meaningful”. This means that it needs to be sufficient to allow individuals, households, businesses, government offices and other organisations to fully participate in the digital economy (and the digital society). It may mean different broadband solutions for different users that adequately suit their needs. To this extent, it does not need to be prescriptive, but rather flexible to readily accommodate all eventualities.

The actions required to achieve this outcome include:

- **Improve the national backbone (backhaul) infrastructure to cover remote areas.** This action is in progress under the SA Connect programme, access network deployment obligations placed on the mobile operators who were assigned spectrum in the spectrum auction of 2022, and continued private sector deployments – fixed wireline and wireless. SA Connect aims to aggregate the demand for broadband connectivity among government facilities, such as post offices, schools, clinics, police stations, libraries and other sites. This is undertaken by the DCDT infrastructure branch.

To date, the implementation has been carried out by Broadband Infraco (BBI) and the State Information Technology Agency (SITA), with private sector participation, including SMMEs (ISPs), to roll out part of the last mile infrastructure to SA Connect facilities and underserved communities. The Broadband Access²⁵ Fund financing this deployment is managed by BBI. Deployment requires the upgrade of some backhaul infrastructure. Therefore, the networks are regularly upgraded to accommodate the increase in network traffic as private sector operators deploy and expand their own networks.

The ability for the government to shift online will support the MyMzansi projects, seeking the digitisation of government services. It will also generate efficiency and cost reduction benefits, as well as create demand for digital services in the local market. The outcome should be addressed within the ambit of the SA Connect programme which will include the roles of DCDT, DBSA and participation of private sector players.

- **Provide funding to the private sector for the rollout of public broadband connectivity** solutions such as Wi-Fi hotspots. While Wi-Fi hotspots alone cannot be deemed a connectivity solution, since they only provide connectivity when people are within a hotspot signal range, they could facilitate some form of connectivity for those people who do not yet have connectivity at their homes, and this could be the only form of connectivity available. However, there are Wi-Fi solutions available which can be used to deploy a Wi-Fi “cloud” over an area, thus providing more comprehensive coverage within a community than only hotspot locations.
- **The public infrastructure rollout addressed by the SA Connect programme is essential for last-mile connectivity by the private sector.** This is because once the government facilities are connected, the private sector can use the same infrastructure to provide connectivity to the surrounding communities. Funding is necessary to cover some of the deployment capex of these connections in the lower-income communities. Extensive consultation should be entered into to engage the private sector on where and how government will connect its own buildings next.

²⁵ The Broadband Access Fund, which forms part of the SA Connect Phase 2 project was created through the Presidential Employment Stimulus to provide partial subsidies to ISPs to connect 50,000 households and 3,000 community Wi-Fi hotspots. Source: <https://www.gov.za/news/media-statements/minister-mondli-gungubele-launches-broadband-access-fund-28-nov-2023>

Outcome 2

Ensure that South Africans have access to affordable smart devices that allow for streaming content and making transactions in the digital economy. Access to broadband services is meaningless if South Africans do not have devices to make use of the connection.

There are already various initiatives being undertaken which make smart devices more affordable. However, more can and needs to be done. The mobile network operators are making low-priced smartphones available to members of low-income communities, as the MNOs move towards shutting down 2G and 3G networks, and migrating all users to the 4G and 5G networks. Moreover, with the increased production of smartphones globally, prices have been decreasing and low-end smartphone models can be purchased for as little as ZAR 400²⁶. Various payment plans are offered to consumers for the purchase of smartphones, which enable even the lower income earners to acquire smart devices.

The actions required to achieve this outcome are to:

- **Establish device recycling and refurbishing centres for second-hand devices.** This action has tremendous potential for South Africa and is yet to be started. This can be done through a challenge fund mechanism which supports disruptive and innovative business models that leverage old devices from the local market, as well as redundant stock SLOB (Slow and Obsolete Products) from device retailers. It also acts in an environmental capacity to ensure that old devices are disposed of responsibly, as they are taken in and placed back into the system by being sold at minimal costs to people who would not be able to own a smart device any other way. Consumers are given an option to donate an old device, and device retailers can incentivise the donation of devices. Retailers can act as collection points to collect damaged, donated or old devices before they are transported to an area where they can be refurbished to a usable state for the second-hand market.

It is important that such devices are of good quality and made available for sale to low-income consumers at prices significantly below the retail prices for new devices. The DCDT can play a key coordinating role in establishing the challenge fund, possibly under the planned Digital Development Challenge Fund (DDCF). Moreover, this opportunity allows for the establishment of device refurbishment plants in townships, which will create opportunities for local development. According to the South African Mobile Devices Distributors and Repairers Association (SAMDDRA), there are large-scale job opportunities attached to this activity. The MICT SETA already has a certified course for device repairers.

- **Upgrade or develop shared public facilities** which are well placed near points of interest such as schools, universities or libraries that offer the public use of digital devices and broadband connections for free or at a low pay-per-use fee. A number of community centres already exist which can be upgraded to provide computing and smart device facilities with an Internet connection. This is being considered as part of the President's Youth Employment Intervention.
- **Utilise and scale up existing incentive packages for the ICT industry that will encourage manufacturing of electronics** in South Africa, such as low-cost tablets, computers and smartphones, as well as autonomous vehicles such as drones. South Africa already has some local manufacturing capacity for laptops and computers. However, currently the trend has been to move manufacturing to other countries (often China) where electronics can be manufactured at a (much) lower cost than in South Africa. This has been the case with the local mobile phone producer Mobicel, for example.

The action to scale up existing incentive packages has yet to be started but has great potential. This may be addressed by organisations such as the Small Enterprise Development Agency (SEDA) or the Small Enterprise Finance Agency (SEFA), and assisted by existing financing institutions in South Africa, such as the IDC, PIC and others. This includes a requirement for further development of the Preferential Procurement Policy Framework Act (2017) by the DTIC which specifies the minimum amount of local content used in manufacturing to ensure that government procurements support local industry. However,

²⁶ MyBroadband article, 18 March 2026, which can be accessed here: <https://mybroadband.co.za/news/gadgets/634006-south-african-smartphone-for-r399.html>

the Act does not specify a framework for how much support the government should give to local industries and firms as an offtaker. This can be incorporated and harmonised with DTIC's manufacturing incentives structure.

Outcome 3

Local and relevant content is available that benefits and appeals to all users.

Access has to translate to usage. Meaningful usage is related to the level of digital literacy and foundational competences and, therefore, relates to how South Africans perceive the benefits received from the use of ICT infrastructure and related services. This is driven by whether there exists relevant content or services such as eCommerce services, online learning and e-Government services that are beneficial and appeal to consumers. In particular, content and services must appeal to lower income users and poorer communities which exhibit lesser appetite for usage due to irrelevant content. The actions required to achieve this outcome are:

- **Establish the Digital Development Challenge Fund and define the scope of the DDCF to include applications for developing digital ecosystems.** The DDCF has absorbed entirely the Universal Service and Access Agency of South Africa (USAASA), as outlined in the ICT White Paper Policy, to address ICT access. The fund will ultimately support the financing of infrastructure and demand stimulation projects, and will support emerging SMMEs to link them to related market opportunities. The DDCF comprises an investment framework to guide the Minister of the DCDT, as well as a technical committee to identify the application and tech-relevant projects that address infrastructure challenges.

The DDCF should explicitly seek applications from informal sector players, such as taxi associations, to develop inclusive digital ecosystem with relevance to informal sector segments. The types of applicants to this fund would be stakeholders such as the Greater Alberton Taxi Association (GATA) that are looking to develop this kind of ecosystem but require funding to get it off ground.

- **Provide more and better targeted funding for research into Natural Language Processing (NLP),** which offers the possibility of automated translation at a lower cost. These NLP systems require significant volumes of data (i.e., written content) in the languages the system aims to translate. This funding should be used to scale local expertise in automated translation research. This could take the form of post-graduate bursaries or direct financing of entities in the translation community. This action could be undertaken by CSIR and the Department of Higher Education and Training (DHET), with coordination by the DCDT.
- **Create new training data through the translation of publicly accessible government documents and services.** Scaling the availability of training data is a pre-requisite for supporting automated translation research. These NLP systems are data intensive and require input (i.e., training data) to learn new languages. This would not only provide researchers with more data but also improve individual access to government documents and services. The translation community detailed above would be a critical facilitator of this process.
- **Support the coordination in the transition and language research and the services ecosystem.** The automated translation community and other interested parties will be key in unlocking the tools for translating content to all South African languages. While there are ongoing efforts to align the work of this community, there remains room for improvement. A permanent working group of researchers, advocates, translators and others would help to provide visibility of capabilities and support collective efforts. This working group could be housed under and convened by an entity such as the Pan-South African Languages Board (PanSALB) and the South African Centre for Digital Language Resources (SADiLaR). The costs of this work could be carried by the government, for example by the Department of Arts and Culture.

A policy intervention in this area includes adopting strategies that will enable SMMEs' open access to data, in order to develop their applications. This is in line with The Centre for High Performance for Computing (CHPC) in the CSIR, and Dell's establishment of HPC, the fastest in Africa. This was established with the intention to

increase access to computer resources for previously constrained or excluded users, as well as the expansion of research capabilities, with increased capacity to also expand the private sector user base.²⁷

6.1.2 Skills for Work

The objective for skills for work is to establish an education and skills development ecosystem that provides all South Africans with the skills required to create and participate in the economic and social opportunities in the digital economy. To achieve this objective, this enabler builds on the work done in the National Digital and Future Skills Strategy and adopts a life-cycle approach to skills for work and identifies outcomes that are targeted at three levels of South Africans: individuals in the basic education system, individuals in the tertiary education system and individuals in the labour market. This approach will ensure that all South Africans are equipped with the skills that allow them to develop, utilise and complement technology, in order for digital economic opportunities to scale.

Building a scalable pipeline of skills will require the following outcomes and actions.

Outcome 1

South Africans exiting primary and secondary schooling are equipped to participate in the digital economy and take up tertiary digital skills training opportunities.

This outcome aims to close the digital divide by building foundational digital literacy skills across the population and increasing student interest and participation in digital tertiary education. Critical to this is facilitating access to digital tools and devices and providing a platform for alternative, creative learning. Similarly, updating the curriculum and ensuring higher uptake of STEM subjects will support digital user skills, digital specialist skills and digital business skills. This requires teachers who are trained to navigate these new approaches and effectively transition students to tertiary education.

The actions required to support this outcome are:

- **Developments undertaken by the Department of Basic Education (DBE) to review and update the curriculum should be strengthened** in accordance with international best practice and aligned to current and emerging digital concepts. The STEM education curriculum should further enhance students' skills and knowledge of emerging technologies. This must be complemented by increased participation in STEM subjects, as increased exposure to STEM in school will increase the proportion of students who pursue careers in digital technologies and related fields. This action can be driven forward by the DCDT, along with the DBE, Umalusi, the Department of Science and Technology and University Education Departments.
- **Ensure teachers are trained to effectively deliver the curriculum.** A formal approach for upskilling teachers is critical to ensure harmonisation between teachers' skills and students' curriculum. This includes training on the use of digital tools and devices. This action should be considered by the DCDT, alongside the DBE, the South African Council for Educators and Teachers Unions.
- **Fund vendor-aligned curriculum for school-level early exposure** through after school programmes. SiMODiSA Association is planning to pilot a digital hubs programme in 20 high schools in the Western Cape that provide vendor-aligned training to students in an afterschool programme. This programme will provide students with more complex digital skills, increase awareness and interest in pursuing digital careers and provide students with vendor certification that will increase the likelihood of accessing work or other school leaver programmes. Funding must be allocated to fund this pilot across high schools in South Africa. This action must be a partnership between the DCDT and the SiMODiSA Association, with support from the Project Management Office (PMO) on Youth Employment in the Presidency, and other interested stakeholders that can contribute resources or knowledge by 2030.

²⁷ CSIR (2016), CSIR's Centre for High Performance Computing Unveils the fastest Computer in Africa,

Outcome 2

South Africa's tertiary training ecosystem provides a scalable pipeline of demand-driven candidates who are prepared to take up work in the digital economy.

This outcome aims to ensure that the tertiary education ecosystem is responsive to the pace of technological change and the nature of digital work.

By promoting an environment that incrementally and consistently helps students learn and relearn, and changing the incentive structure for training, this outcome aims to ensure that South Africans in the tertiary education ecosystem are equipped with the relevant skills for the digital marketplace. Concurrently, it should also enable inclusive access to training for students in remote areas and economically disadvantaged communities.

The actions required to support this outcome are:

- **Reform the SETA funding model from being output-based to being outcome-based**, so that funding is prioritised for training that is most likely to result in job creation. This model allocates funds for training on the basis of whether the training has helped students acquire a job. Job placement rates are primary indicators in an outcomes-based funding model. A 70% placement requirement is advised, accompanied by an update of the content of the training and informed by industry demand. This will ensure that resources are prioritised on training that is needed to fill demand gaps in the market, rather than on any training that is related to the sector. The DCDT can support this as part of the ongoing work of the Department of Higher Education and Training, the various SETAs and other education and labour stakeholders.
- **Identify and prioritise relevant digital skills and occupations** responsive to industry requirements, as proposed in the National Digital and Future Skills Strategy. This strategy sets out many layers at which digital skills should be given attention, and many mechanisms for advancing digital skills. The next step involves specifying and prioritising specific digital skills and occupations that will be in demand, and revising these on a regular basis as the nature of skills demand and supply changes. This action must be undertaken by the DCDT, the DHET and The Collective X.
- **Modernise South Africa's qualifications and credentialing system** to take into account new ways of learning which include micro-credentials. In addition to traditional ICT qualifications, micro-credentials (whereby learning is typically developed in a short online format) should be formally recognised. A framework that enables this learning would have to recognise credentials that are granular and stackable, with a flexible, demand-led approach to learning that creates job opportunities. Formally accrediting micro-credentials would ensure that they can be offered as part of formal university curricula. It would further increase the pace of reskilling and ensure students adapt faster to the pace of technological change and remain competitive. This must be taken forward by the DCDT, along with the DHET, the South African Qualifications Authority, and other education and labour stakeholders.
- **Establish digital apprenticeship centres** that absorb newly trained digital skills candidates and provide them with practical work experience and mentorship before being absorbed by the labour market. SiMODiSA Association is currently prototyping digital apprenticeship centres which would fund new trainees. These centres will focus on absorbing candidates and offering digital services currently outsourced offshore with two important outcomes. The structured mentorship and apprenticeship programme would provide trainees with work readiness skills, facilitating a better transition into the workplace and allowing trainees to be absorbed by the private and public sectors. This action must be undertaken by the DCDT in partnership with the SiMODiSA Association and with support from the PMO on Youth Employment Creation in the Presidency. It should also include partnership with digital incubators or alternative academies, such as those offered by SEDA.
- **Ensure all SETAs incorporate digital skills planning in the sector skills plans**, taking note of the specific applications of digital technologies and digital process innovation in their respective sectors. MICT SETA will, thereafter, develop digital skills planning, informed by the plans of other SETAs. It is critical that

specific attention is paid to skills development for low skilled workers as this will ensure that the gains of the labour market participation in the digital economy are equitably distributed. This action must be taken forward by the DCDT, along with the DHET, in partnership with the various SETAs.

- **Set aside discretionary SETA funding that is not subject to accreditation approval for micro-credentials.** Discretionary grants are currently paid out for skills development projects linked to scarce and critical skills. Reallocating this funding to micro-credentials will expand the capacity of micro-credentialing institutions, thus increasing the supply of students with skills in demand. This action must be taken forward by the DCDT, with the DHET, in partnership with the various SETAs.
- **Establish formal measures to provide for mutual recognition of qualifications across all tertiary institutions.** Structured arrangement must be introduced to remove the divisions between vocational training and academic education, so that these are seen as complementary and mutually reinforcing stages within the overall digital skills continuum. This will encourage students to obtain micro-credentials and digital qualifications, in addition to academic qualifications, allowing them to gain multi-disciplinary skills that will enable students to effectively participate in the digital economy. This action must be driven by the DCDT, with the DHET, Universities South Africa and the Council on Higher Education.
- **Ensure curricula across all disciplines in TVET institutions are designed to provide students with relevant skills that enhance digital literacy.** This requires a review of current curricula in TVET institutions to ensure that graduates are prepared to engage with digital concepts as they relate to their sectors. This also involves the review of the ICT and digital skills curricula to ensure that they are relevant to the needs of the labour market. This is critical in ensuring digital fluency for all disciplines. Key in this reorientation is focusing on opportunities for the practical application of skills during studies. This action must be undertaken by the DCDT, with the DHET, SETAs, TVET institutions and the Council on Higher Education.

Outcome 3

South Africans that are already employed, or unemployed South Africans looking for work opportunities, can access reskilling and upskilling to take up work in the digital economy.

The short lifespan of technologies coupled with the rate of change requires that individuals in the labour market adapt fast and are provided with upskilling and reskilling opportunities. By increasing the visibility of future skills requirements and providing “close the gap” interventions, this outcome will reduce the pace at which South Africans in the labour market are skilled and increase the placement rate of individuals in work opportunities in the digital economy. The actions required to support this outcome are:

- **Establish an industry-wide mechanism for reskilling and upskilling** for the future skills required in the digital economy. This comprises a sector skills digital learning platform that supports agile and intuitive digital learning, combined with a knowledge platform that complement the National Pathway Manager and share skills records and credentials. The platform will be accessible throughout the skills development lifecycle, from school to the workplace, and will support learning at all levels of work. This action must be carried out by the DCDT, with support from The Collective X, with funding provided by the President’s Youth Employment Intervention.
- **Implement large scale integrated workplace learning solutions** across the country for excluded youth that include profiling, matching and sourcing, work readiness training, and integrated workplace learning. This action will accelerate the employment of excluded youth for BPO, digital / IT reshoring. It will comprise a workplace learning programme, where learning interventions are provided based on the individual’s education and experience, and ensure that individuals are consistently reskilled. This action must be undertaken by the DCDT, with demand-led industry bodies, with support from the PMO on Youth Employment in the Presidency.

6.1.3 Responsive Governance

The pace of innovation in the digital economy is resulting in the emergence of entirely new business models. Regulations are often slow to adapt which means they can either stifle innovation from scaling or fail to adequately mitigate the risks presented by these new business models. This critical enabler aims to develop regulatory frameworks that are forward-looking and enable innovation and growth, while protecting consumers from potential risks. The following outcomes and actions, along with the required stakeholders and timeframes, indicate how this objective will be achieved.

Outcome 1

South Africa's data access and sharing regulation is updated.

There is a need for the development of a policy that addresses data access and sharing that supplements the current Protection of Personal Information (POPI) Act. The custodians of this intervention will be the DCDT, along with various stakeholders, regulatory bodies and authorities, such as the Competition Commission and others.

The following outcomes and actions, along with the required stakeholders and timeframes, indicate how this objective will be achieved.

- **Current developments in this process pertain to access to data and cloud.** Access to non-sensitive data is essential for uses that span scientific research, innovation and advancement of capabilities that address societal and developmental needs. Forward-looking categorisation of information for access purposes is needed to encourage the development of the digital economy. Policy interventions in this regard span matters of data sharing, data sharing and interoperability, ownership, data sovereignty, economic rights, integrity and quality, open data platform, open big data brokers and a digital trust framework. This is underpinned by the recommendation to have all public data captured in a digital format; and a National open data strategy that will lead to an Open Government Data action plan.
- **Developments in this policy area also address data security needs** regarding the safe-keeping of data from unauthorised access and distribution. Policy interventions include: storing data in the HPCDPC which aligns with security measures defined by the Minister of State Security; reviewing the current Minimum Information Security Standards (MISS) and Protection of State Information legislation that enables data protection in the context of digital markets; government use of private cloud for sensitive data, in line with the Promotion of Access to Information Act (PAIA), and the processing of personal and non-personal data to comply with existing data protection policies and legislation – POPI Act and PAIA.

The DCDT's data regulation and cloud policy includes policy interventions that relate to matters of the competition regime, in South Africa, regarding data-driven competition. The DCDT, in consultation with the relevant regulatory bodies, recommends policy interventions that address competition relating to the "free, accessible, interoperable and reusable" (FAIR)²⁸ principles of data. Competition-enhancing interventions will support an open data strategy that ultimately supports the use of data for development. This open data strategy will enable the development of a regulatory framework that encompasses data trading, sharing and portability, as well as interoperability and exportability. These recommendations address the lack of existing legislative and policy frameworks to address all areas of digital regulation relating to data, such as consumer choice, privacy, data access, trade laws and others. It will also account for issues of the concentration of data ownership.

The outcome to update and develop the competition regime can be addressed by various stakeholders, such as ICASA, the Competition Commission, the National Consumer Commission and the DTIC.

²⁸ Based on discussion with the DCDT, data regulation and cloud policy branch.

Outcome 2

Sector regulators are empowered to adopt agile approaches to regulation and enable business experimentation with new technologies.

With the rapid pace of change in business models and market structure, as a result of technology, regulators at all levels of government in South Africa will need to adopt a flexible and forward-looking approach to regulation. This includes monitoring how the sector or area within the regulator's mandate is evolving and actively unblocking regulatory obstacles to the scaling of digital businesses. This will require the following actions:

- **Regulators must identify the key regulatory blockages to the scaling of digital businesses and formulate an action plan for addressing this.** This applies to national sector regulators and regulatory bodies within provincial and municipal governments. This may require extensive consultation with the private sector. Regulatory authorities must be held accountable by their shareholder ministries on the formulation and delivery of these action plans.
- **South Africa's legislative framework must be updated or amended to take into account the emerging opportunities and risks presented by 4IR technology application.** The 4IR not only requires new approaches to regulation but also creates frictions with current regulatory and legislative frameworks that need to be resolved. These frameworks – designed to fit a 3IR world – need to be harmonised with emerging trends and safely manage the use or deployment of these technologies in businesses, innovators and consumers. The establishment of a Responsive Government Working Group can advise on legislative gaps that must be closed to adequately enable the application of new technologies while protecting individuals.

Outcome 3

Different regulatory authorities collaborate and harmonise policy and regulatory approaches and strategies.

The nature of digital businesses is such that they span multiple sectors – technology is being applied in various sector domains. Therefore, application of digital technologies in business suffers from regulatory overlaps, whereas a business may be responsible to multiple different regulatory authorities with no one main regulator responsible for that business's operation. For example, towercos are subject to multiple legislative systems which may fall outside of the DCDT visual. These already place cumbersome processes and procedures in place and, therefore, further legislation may deter investment.

There will be many instances where competition, data, consumer protection and sector regulators will have to work together to create a streamlined regulatory framework. This will require the following actions:

- **Establish inter-governmental coordinating mechanisms** among regulators with a common interest in digital transformation. For example, regulators in the financial sector created the Inter-governmental Fintech Working Group (IFWG) to jointly explore the regulatory impediments to fintechs in South Africa and implement co-created regulatory solutions. In the case of the digital economy, a number of regulators will need to join in a similar fashion to scale other kinds of digital businesses. For the drone economy, this may include the DCDT, ICASA, SACAA and the DTIC. For other kinds of digital businesses, such as digital platforms, this may include the DTIC, the DCDT, the Competition Commission, and a number of sector regulators such as the Department of Transport and the Department of Tourism to begin with.
- **Develop a methodology for measuring the size and nature of the digital economy.** South Africa currently cannot account for the size of the digital economy or its compositive activities in its system of national accounts and statistics and, therefore, has no way of accurately measuring how the digital economy is changing or impacting the rest of the economy. The DCDT should partner with Statistics SA to develop a methodology for accurately measuring the size and nature of the digital economy going forward.

- **Establish and execute a national strategy for the development and application of digital technologies in priority domains.** The inter-government coordinating mechanism must formulate and execute a national strategy to clearly understand how the application of emerging technologies, such as Artificial Intelligence, will impact South Africa's development challenges and with clear responsibilities among different government departments. This must be established within one year.
- **Develop agile regulatory frameworks and innovation facilitation tools**, such as regulatory sandboxes and innovation hubs, to promote investment in and scaling of digital businesses. This should be executed over a period of five years by the inter-governmental coordinating mechanism within the priority focus areas identified in this Masterplan.

6.1.4 Innovation and Competitiveness

To drive domestic innovation in digital and ICT technologies to support the development of the digital economy and make South Africa more competitive, a range of actions is suggested to be undertaken over the next several years. These are enumerated below.

Outcome 1

There are innovative financing schemes and reforms that enable businesses to create digital products and services.

As such, the development and invention of home-grown and locally produced digital solutions that solve economic, social and infrastructural problems in South Africa should be nurtured, funded and promoted. The actions required to achieve this outcome are:

- **Map the innovation funding process for digital innovations from R&D to final launch** to understand areas of overlap and how funding in one stage can support funding in another. Notably, this will enable various financing schemes, investors and funders to pool resources (financial and otherwise) and provide funding, at scale, to inventive and revolutionary digital products and services that create real impact. This has already been implemented, to some extent, by the Department of Science and Innovation (DSI) and should continue with lead coordination from the DCDT and other stakeholders.
- **Reform South Africa's IP policies and patent grant system** to be more accessible and to foster innovation. By enhancing the implementation of the company and IP law, South Africa can achieve the DTIC's objectives of (1) "creating a fair regulatory environment that enables investment, trade and enterprise development in an equitable and socially responsible manner" and (2) "facilitating the transformation of the economy to promote industrial development, investment, competitiveness and employment creation". As such, the Companies and Intellectual Properties Commission (CIPC) is already migrating South Africa's IP regulatory system from a depository to a search and examination system which should be complete within the next three years. This initiative should include collaboration and partnerships with the DCDT, the DSI and the DTIC.
- **Bolster R&D financing schemes with a centralised coordinating body** that encourages businesses to develop problem-solving digital solutions. Importantly, these solutions (including digital products and services) can realise the dual goals of (1) solving critical economic, social and infrastructural challenges and then (2) exporting these solutions to other countries to help them address the same issues. Already, the DCDT, in collaboration with the International Telecommunication Union (ITU), is working towards operationalising the African Centre for Digital Transformation which aims to address the lack of coordination and integration of the innovation ecosystem.

In addition, the DSI has created the Converging Technologies Platform (CTP) that is designed to grow and strengthen existing nationally coordinated research and innovation programmes in a range of areas such as blockchain (South African National Blockchain Alliance), artificial intelligence (Centre for Artificial Intelligence Research), additive manufacturing (Collaborative Programme in Additive Manufacturing), IoT (IoT factory), cybersecurity, quantum computing, robotics, and photonics. As such, CTP aims to draw on

these nationally coordinated programmes to support identified application areas in healthcare, mining, agriculture, and other key vertical industries. The CTP, and other R&D schemes, should be bolstered and broadly implemented within three years.

- **Nurture alternative and innovative start-up financing schemes** for start-ups, entrepreneurs and SMMEs. As such, there are already non-profit organisations such as the South African Business Angel Network (SABAN) that are dedicated to facilitating and growing angel investing in South Africa. This includes seeding angel groups / projects in major economic hubs, lobbying for regulatory improvements and capacity building backed by research and accreditation initiatives. Therefore, this action should be accelerated by the DCDT and the DSI, in collaboration with SABAN and other innovative financing schemes.
- **Cultivate grass roots innovation schemes** for township and rural economies. Enabling youth and entrepreneurs in tier 2 and tier 3 cities and towns to innovate and invent digital and ICT products will not only uplift their lives but the communities and people that surround them. Initiatives of this nature can help South Africa to address socioeconomic challenges and developmental issues by integrating digital and township economies. The Technology Innovation Agency (TIA) already has a grassroots innovation programme in place and has launched the Scale Out for Impact (SOFI) Programme that aims to build partnerships between innovative UK small and medium enterprises and suitable South African innovators or enterprises. Notably, this includes the use of digital technologies and social technology platforms, such as IoT, AI, analytics, virtual reality (VR) and blockchain. These grassroots schemes can be scaled with DCDT support.
- **Establish investment and commercialisation activities** that support and enable investment in local companies or invest directly, or take South African opportunities to scale, market and trade globally.
- **Create public-private deal making teams** that match-make and facilitate investment and partnerships with global buyers of tradeable services. Backed by international marketing and investor engagement, these teams should take a very strategic, coordinated and deliberate approach to identify opportunities and facilitate one-on-one interactions between potential buyers in key source markets and suitable service providers in South Africa. This must be undertaken by the DCDT, along with the DTIC, DCA, InvestSA and the Department of Home Affairs.

Outcome 2

There are smart incentives and enablers that ensure global competitiveness and job creation.

By enabling and influencing key business and economic levers which include incentive schemes, special economic zones (SEZ) and industrial parks, South Africa can compete effectively on the global digital stage.

- **Provide standardisation ranking and pre-testing initiatives for digital products and services that are exported.** Oftentimes digital and ICT technologies that are exported are subject to global standards, compliance and regulations that require certification. These certification and standards auditing processes can be cost-prohibitive for SMMEs. As such, innovation hubs, industrial and technology parks could provide much-needed assistance to SMMEs to rank and pre-test their digital services and products against internationally accepted standards and certifications. This can be undertaken as part of the optimisation of innovation hubs, industrial and technology parks.

Outcome 3

Through MyMzansi there is a mass digitisation project of back office and paper-based government processes and functions.

By digitally transforming local, provincial and national departments, South Africa can address youth unemployment and enterprise development while ultimately providing downstream opportunities. The actions required to achieve this outcome are:

- **Create digital bureaus that enable youth and SMMEs to clean and analyse government data.** Enterprises with proven ICT experience will be contracted to employ unemployed youth and create digital bureaus. Training will be provided, enabling youth to be employed on the project and gain relevant work experience. The training provided will combine technical digital skills training with soft skills and work-readiness training, improving the employability of youth. Enterprises will provide data cleaning and digitisation services to government departments. This action is already being undertaken by the DCDT, along with the PPGI ICT working group, the Department of Public Works and ICT, and government stakeholders, and will see the creation of nine digital bureaus over the next two years.
- **Digitise manual records across key government departments.** The aforementioned nine digital bureaus will create sustainable employment opportunities in the form of 10,000 new jobs for young graduates by digitising manual government documents. As such, there are three government cluster areas that will pilot this mass digitisation project, including the Justice Cluster (Policing, Justice and Correctional Services), the Social Cluster (Health), and the Planning Cluster (the Deeds Office). This action is already being undertaken by the PPGI ICT working group, the Department of Public Service and Administration (DPSA), the relevant departments / clusters identified for the pilot programme and other ICT stakeholders. GTOC and the State Information Technology Agency (SITA) are being onboarded to integrate with the existing initiatives. The project has been gazetted and phase two is in process which includes the formalisation of a business plan and setting up the digital bureaus, culminating in the digitisation of records over the next two years. This provides the basis for the pooling and analysis of electronic data across government departments.

Outcome 4

There is a measured, consistent and ethical focus by the government to procure digital services and products from SMMEs.

Directing opportunities towards South African businesses can help support the emergence of broader digital skills and a business base in South Africa. This outcome is a critical mechanism for supporting the emergence and scaling of local businesses and the use of digital technologies. It will further aim to present businesses with the opportunity to deploy and curate their service offering while supporting the government in achieving its digitisation objectives. The actions required to achieve this outcome are:

- **Provide performance incentives for local procurement of ICT tools, software and devices** to government agencies and departments. Ongoing discussions requiring that a proportion of the total value of ICT procurement be allocated to local SMMEs should be mandated and incentives should be applied against these requirements. This action must be executed by the DCDT, SITA and the Department of Cooperative Governance and Traditional Affairs.
- **Expedite the development and finalisation of the Public Procurement Bill** that will enable procurement of local innovation and increase commercialisation of local IP. The Public Procurement Bill proposes loosening the rules to facilitate good purchasing practice while strengthening mechanisms of contract management, including mechanisms to incentivise private enforcement of contracts, to ensure delivery of goods and services purchased, and build the capacities in South African businesses. There is already a draft bill that has been published for public comments by National Treasury. However, it needs to be reviewed to more clearly take into account the procurement of digital services and products from SMMEs and effective and transparent regulatory oversight.
- **Develop a central ICT government procurement system** to manage technical scoping of required digital and ICT support within government. A principles-based, strategic, and developmental procurement system will centralise information and automate verification, digitise and centralise tender information and complete the procurement process digitally. This action will improve the competitiveness in the tender and procurement process, increase transparency of procurement and contribute to digitising interaction between South

African business and government. It will further increase the cost effectiveness of ICT procurement and promote the South African ICT sector. This action must be executed by the DCDT and SITA.

- **Develop an ICT payment monitoring system** to ensure that government contracts to SMMEs are paid on time and without irregular spending. This action will ensure that South African businesses remain capacitated to deliver on their contractual obligations and promote their growth and development. This action must be executed by the DCDT and SITA.

6.2. DEM Implementation Structure

A structure has been developed to execute the implementation of the Masterplan. It consists of nine Working Groups addressing different elements contributing to the development of the digital economy, and tied to the key pillars, overseen by the Executive Oversight Committee (EOC). The EOC will work closely with the Policy Advisory Council.

The ongoing monitoring of the DEM targets will be conducted through the **Executive Oversight Committee** to ensure that progress is made and feedback is reported.

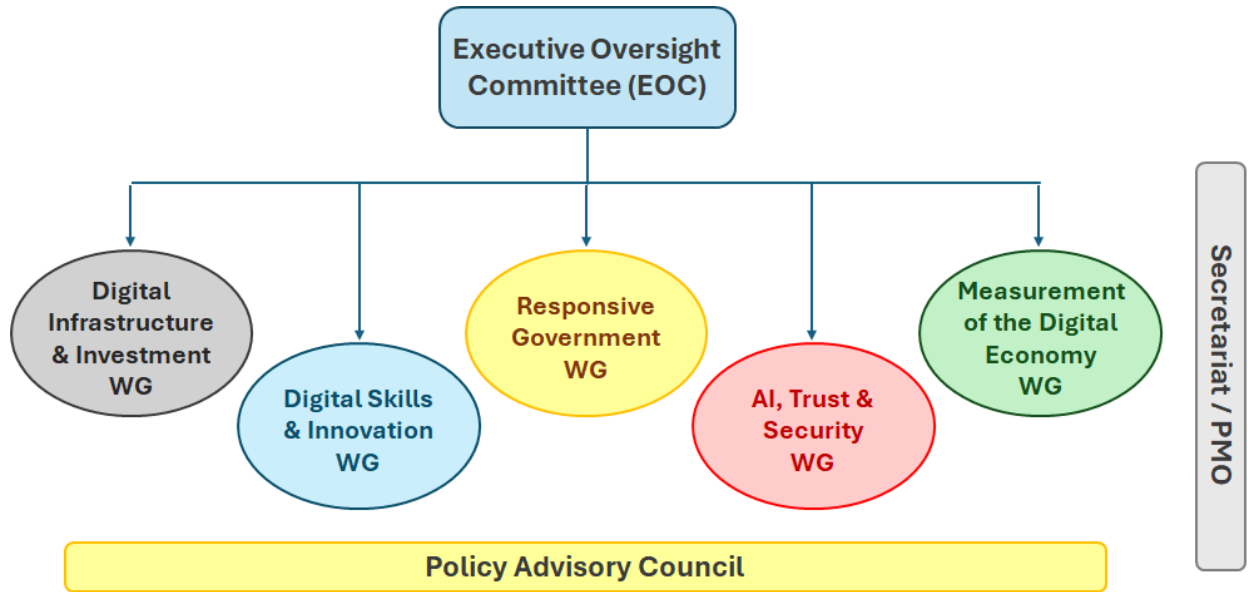
Working Groups – Established under the respective priority areas, members of the respective working groups will discuss issues, recommend solutions and measure the pace at which the digital economy is moving to achieve its goals. Feedback on this will be provided to the EOC.

In addition, the EOC and the Working Groups will be supported by the Policy Advisory Council through in-depth policy discussions regarding prospective policy changes, should such be required.

The Secretariat and the Project Management Office (PMO) will play coordinating and supporting roles for the EOC and the Working Groups, as well as between these entities and the DCDT and the Ministry.

The DEM implementation structure is illustrated below.

Figure 25: DEM implementation structure



Notes: WG – Working Group

Source: The authors, 2026

6.2.1 Executive Oversight Committee

EOC functions

The functions of the Executive Oversight Committee will be:

- Oversee the updating of the Digital Economy Masterplan.
- Finalise, adopt and act as a custodian of the EOC Terms of Reference.
- Sign off the Digital Economy Masterplan.
- Track the overall progress of the Masterplan and the initiatives (actions) included in the DEM implementation plan.
- Consider implementation bottlenecks flagged by the Working Groups and provide guidance and recommendations to unblock those bottlenecks.
- Consider recommendations from the Policy Advisory Council and the extent to which they address policy and legislative constraints to the successful implementation of the DEM.
- Consider and review progress on impact metrics.
- Further examine, and where necessary, identify and recommend other digital economy-related issues that may need to be taken into consideration during the implementation of the DEM.
- Ensure the establishment of a Project Management Office (PMO) to drive day-to-day implementation oversight.
- Ensure the development and sign-off of a monitoring plan for the DEM.
- Agree on an approach to replacements and quorum limits for meetings (EOC and Working Groups).

Monitoring and evaluation

- The EOC will be responsible for ensuring that a robust monitoring and evaluation framework is in place for the DEM. This includes:
- Approving a monitoring plan for the DEM, developed with support from the PMO and the Working Groups.
- Reviewing progress against key performance indicators and impact metrics at each quarterly meeting.
- Ensuring that implementation blockages and risks are tracked through the PMO dashboard and escalated appropriately.
- Commissioning independent external evaluations of the DEM as and when the EOC considers this necessary.

6.2.2 Working Groups

Working Groups Functions

The functions of the Working Groups will be:

- Each Working Group will serve as the primary interface with the industry on each critical digital economy enabler.
- Further expand on and develop the first 12-to-18-month priority action plan, if needed.
- Clarify roles and responsibilities of Working Group members in delivering the 12-to-18-month action plan.
- Develop priority action plans for all phases of the DEM. Work on this is to commence within six months of implementation.

- Develop monitoring plans for the Working Group and table these plans with the EOC for approval.
- With support from the Ministerial PMO, put in place monitoring systems and mechanisms to ensure access to accurate information at frequent intervals.
- Develop detailed budgets and funding options for the first 12-to-18-month plan, and other phases, when required.
- Track and review progress of government and stakeholder initiatives relevant to its critical enabler, flagging and helping to resolve implementation bottlenecks.
- Promote a “whole-of-society” and “whole-of-government” approach by identifying collaboration opportunities between stakeholders and their initiatives.
- Working Group chairpersons will be able to invite officials from relevant government departments, state-owned enterprises, organisations, unions and associations to participate in the Working Groups.
- Make recommendations and advise on recommendations related to their relevant critical enablers.
- Place policy discussions on the agenda of the Policy Advisory Council.
- Track and review how policy discussions and recommendations from the Policy Advisory Council are addressed in final policy documents.
- Escalate budget or human resource challenges to the EOC.
- Coordinate with the individual Ministerial PMO, providing data and any updates for progress and other reports.
- Provide input into progress reports prepared by the PMO.
- Disputes among members of the Working Groups, which cannot be resolved internally with the participation of the group chairperson, can be referred to the EOC chairperson for resolution.

Working Groups Objectives

Each of the Working Groups will have specific focus areas on initiatives aimed at unblocking existing blockages preventing more efficient development of the digital economy, and enablers of faster growth of the digital economy. These are encapsulated in the objectives of the different Working Groups and guidelines as to what they should focus on.

1) Digital Infrastructure & Investment Working Group

Objective:

1. Coordinate and track initiatives that can enable all South Africans to enjoy meaningful connectivity – coverage, quality of service and affordability through a focus on continued infrastructure expansion and improvement. This underpins the digital economy and:
 - Is fundamental to enabling full participation in the digital economy.
 - Requires good quality (broadband) connectivity, as well as affordability of devices and data.
2. Support the government in ensuring an environment conducive to investment through effective policies and measures, to simplify regulations for investment, promoting a stable and predictable business environment, and which can further enhance South Africa's attractiveness to foreign investors as an investment destination. Digital investment targets elements of the digital economy, including investment in infrastructure, services and opportunities. This includes identification of policies and frameworks that are outdated and not conducive to investment in the modern ICT space.

2) Digital Skills & Innovation Working Group

Objective:

1. Coordinate and track initiatives which ensure that all South Africans have the skills to meaningfully participate in and create the digital economy. At a high level, these skills can be divided into:
 - Basic skills – necessary to perform tasks in a digital environment for personal, educational and work purposes.
 - Intermediate skills – needed to use digital technologies in more meaningful and beneficial ways, enabling users to perform work-related functions.
 - Advanced skills – required to develop elements of the digital economy, e.g., apps (programming / coding).
2. Identify requirements to create an environment conducive to innovation and technology production through policies and regulations, reduce market risks for emerging technologies, and support implementation of new methods for policymaking to assist with market access.

Digital technologies must be adopted and applied in a strategic manner to improve business operations, create new products or services, enhance customer interactions, and meet evolving market demands.

3) Responsive Government Working Group

Objective:

1. Coordinate and track policy and regulatory initiatives that ensure ease of doing business and an operating environment conducive to investment and innovation in the ICT sector. This includes:
 - Moving from reactive regulation to proactive guidance.
 - Creation of an enabling environment for the digital economy to grow and thrive.
 - Considering policies that will unblock the deployment and development of digital infrastructure and support an operating environment that is a level playing field for all operators from an operational and competitive environment through the strengthening of governance, protecting intellectual property, and ensuring fair competition.
 - Creation of an environment supportive of digitally traded services.
2. Coordinate and track initiatives that support the development of a 'digital-first society' and increase access to digital goods and services. This includes focus areas such as digital public infrastructure, e-Government and e-Commerce.

4) Artificial Intelligence, Trust & Security Working Group

Objective:

1. Assess the adequacy of measures governing the use of AI (and in particular superintelligent AI) in the digital economy and recommend additional measures (including further policy measures) to address potential gaps. Explore the possibility of co-developing AI in South Africa, taking into account local requirements and capabilities – infrastructure, skills availability, resources constraints and advantages (areas of focus already emerging).

AI is recognised as cross-cutting and increasingly present across all elements of the digital economy. Proper governance and risk oversight of AI must be ensured.
2. Identify areas requiring improvement in trust and security in the digital environment in South Africa to create a safer operational environment in the digital economy of South Africa. Consider industrial policies for the digital economy to maintain trust and security, and whether the current policies in South Africa meet

the necessary criteria or require updating. Assess standards available in South Africa for ethical development and use of digital technologies and whether these should be revised, based on global best practice.

The digital economy can only reach its full potential if individuals and businesses have confidence in their ability to interact and transact securely online.

5) Measurement of the Digital Economy

Objective:

Identify metrics to be measured, in order to accurately estimate the size of the digital economy in South Africa, understanding what steps Stats SA is already taking in this domain and what data SARB collects in terms of digital payments. Explore efficient and effective means of collecting the required data. Measure progress in growing the digital economy in South Africa against a set of developed targets.

Accurate data gathering is important to illustrate the performance (growth) of a sector for the purposes of investment, support, job creation etc.

6.2.3 Policy Advisory Council

The functions of the Policy Advisory Council will be as follows:

- The EOC and the Working Groups will be supported by a Policy Advisory Council to enable in-depth policy discussion and consultation on high priority issues.
- The Policy Advisory Council will convene at least once a month to enable discussion on key industry topics. The Committee may amend the frequency of meetings based on the workload and other related matters.
- The Policy Advisory Council, supported by the Project Management Office (PMO) and secretariat, will prepare brief discussion documents ahead of each discussion and summary policy memos after each discussion.
- Policy discussions convened by the Policy Advisory Council shall allow for widespread industry input.
- A live calendar of monthly policy discussions should be shared and kept up to date to enable interested stakeholders to plan their attendance and contributions accordingly.
- Policy discussions must be communicated to stakeholders at least 10 (ten) calendar days in advance.

6.2.4 Project Management Office

The Project Management Office (PMO) will oversee and manage the monitoring and administrative functions across the EOC, the Working Groups and the Policy Advisory Council. This includes maintaining an impact and implementation dashboard, drafting issue briefs and other documents, scheduling meetings, preparing agendas and minutes, and organising meeting logistics to ensure smooth operations.

The PMO will be responsible for supporting and streamlining the processes of all Working Groups, ensuring that their activities align with the overall objectives and timelines of the EOC.

6.2.5 The Secretariat

The Secretariat will render support to the PMO and act as an interface between the EOC and the Working Groups, and the DCDT.

The Secretariat will assist in bringing in additional capacity from relevant branches in the DCDT where needed to support the work of the EOC, the Working Groups and the Policy Advisory Council through the relevant chairpersons. Where DCDT officials are invited to participate in meetings, the Secretariat will provide support in scheduling and securing the relevant officials.

6.2.5 Mapping Working Groups to Key Pillars and Strategic Priorities

The Working Groups are designed to address various elements of the digital economy across the Key Pillars. The graphic below illustrates which of the Working Groups focus on which of the Key Pillars in their work. The mapping indicates which Key Pillars are primary (main) vs. secondary areas of focus for each of the Working Groups. A Key Pillar which is of primary relevance to a Working Group should attract the most focus from that Working Group but it does not mean that other Key Pillars ought to be neglected. Key Pillars of secondary relevance should also be addressed.

Each of the Working Groups addresses multiple Key Pillars.

Figure 26: Mapping Working Groups to Key Pillars

No.	WORKING GROUPS	KEY PILLARS				
		Digital Infrastructure	Digital Platforms	Digital Financial Services	Digital Technologies	Digital Skills & Entrepreneurship
1	Digital Infrastructure & Investment					
2	Responsive Governance					
3	Digital Skills & Innovation					
4	AI, Trust & Security					
5	Measurement of the Digital Economy					

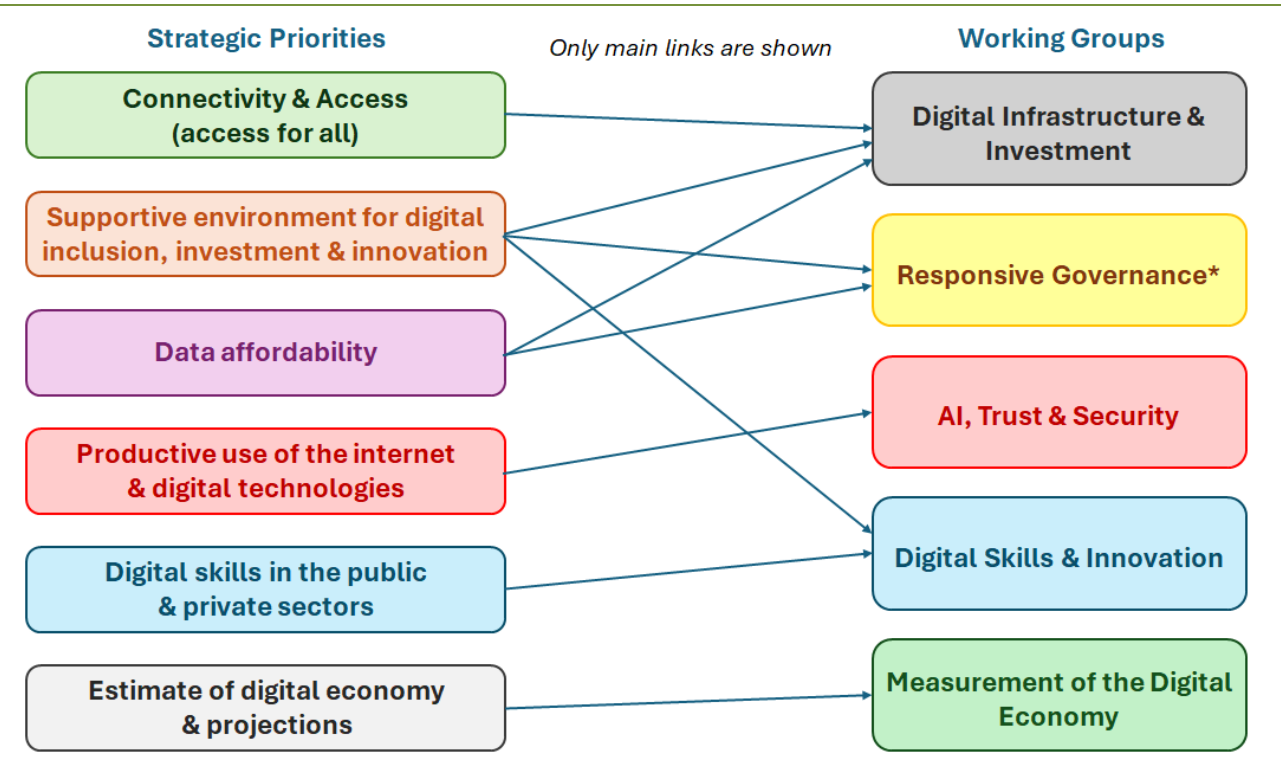
Legend: primary relevance secondary relevance no direct relevance

Source: The authors, 2026

The Department and the Ministry of Communications and Digital Technologies have defined a set of strategic priorities which serve as objectives guiding the department's work over the medium-term strategic plan (2025 – 2030).

The Working Groups are also designed to address these Strategic Priorities. The mapping between the two is illustrated below. Note that only the main links between the Strategic Priorities and the Working Groups are illustrated, but the work undertaken by the individual Working Groups will relate to more Strategic Priorities than show. For example, the "Supportive environment for digital inclusion, investment and innovation" can also be linked to the AI, Trust and Security Working Group.

Figure 27: Mapping Working Groups to Ministerial Strategic Priorities



Source: The authors, 2026

7. ECOSYSTEM COORDINATION IN THE DIGITAL ECONOMY

Putting in place the enablers identified in the preceding section will require an enormous and collaborative effort across government, the private sector and labour. The complexity of the digital economy and the fact that it touches on every sector across the economy means that mechanisms for aligning stakeholders, coordinating actions and delivering implementation with appropriate resources and focus is an imperative.

This section sets out proposals for three areas where this ecosystem coordination must happen if South Africa is to successfully grow its digital economy inclusively. These areas are elaborated on in the following sections.

7.1 Government Coordination

South Africa will require a government-led coordinating mechanism that prioritises, allocates responsibilities and executes on nationally relevant digital strategies and interventions. This mechanism will ensure continuity and evolution of South Africa's ICT and Digital Economy Masterplan while creating the means for efficient and effective execution.

The proposed mechanism must overcome common collective decisioning complexities that coordinating entities in government face. These are the principles upon which this mechanism is designed:

- **A “whole of government” approach** to ensure that all relevant government entities are responsible for collective decision making and implementation of the programme of work required to realise the national imperative of digital empowerment. Providing for this allocation of responsibility across government will ensure that digital economy objectives and considerations are embedded across government operations and decisions.
- **Avoidance of duplication of efforts** where stakeholders may be striving to achieve similar objectives or outcomes along different avenues.
- **Improving efficiency and representation** by providing a single platform that represents not only the public sector, but also the private sector, donors, civil society and others.

In addition to the options above, every national government department must appoint or hire a senior representative in a dedicated digital economy role. These representatives will collectively make up a government digital economy forum, meeting quarterly, to align priorities between government departments, ensure no duplication of effort, and promote knowledge sharing and collaboration across the government. The digital economy representatives must also be primarily responsible for scoping out and driving implementation of digital projects within their respective government departments, since digital technologies and their applications hold immense potential for every sector and government entity in South Africa.

7.2 Public-Private Solutioning

There are multiple players across the public, private and civil sectors that need to come together if we are to realise the total benefit of the digital economy. There are many different stakeholders that need to be coordinated for the identified opportunities to be realised and scaled significantly.

South Africa must replicate the formation of adequately funded ecosystem convening institutions if it is to achieve the same impacts from digital economy development. This can be achieved by channeling government funding for digital economy development – including digital infrastructure deployment, digital skills development and digital job creation initiatives – through special purpose vehicles (SPV) that can adequately convene and coordinate the necessary private sector and civil society players to execute these projects. These SPVs should be set up as not-for-profit entities that work closely with the government to identify the right stakeholders for execution, manage the flow of funding, monitor implementation and ensure technical quality.

7.3. Open Data Sharing

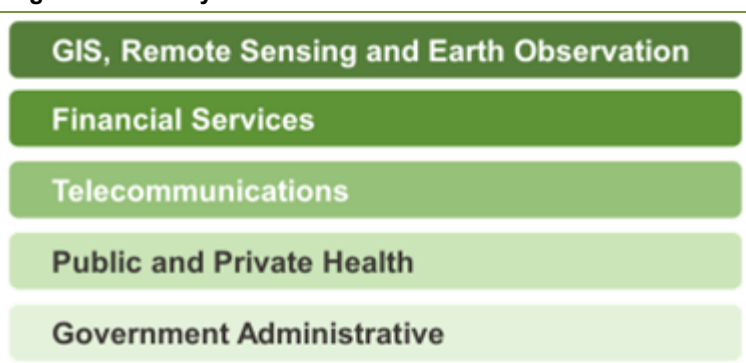
Data must become a national asset used to accelerate innovation for economic and social good. This recognises the core role data plays in the digital economy and its subsequent role in enabling the public and private sectors. A well-functioning data ecosystem will help South Africa reap its national data dividend by supporting the emergence of new products and services, enhancing planning and intelligence, and deepening national competitiveness.

Executing on and scaling the big bets detailed in this Masterplan requires the availability of a range of high-quality data sources, often contained in independent silos. Data is an asset owned by businesses and individuals. This ownership means it is often protected and put to use for a narrow set of commercial purposes.

Creating mechanisms for sharing this data can lead to innovations and the emergence of new products and services. For example, research into AI enabled diagnostics requires access to individual data often stored across different institutions, while overlaying data from banks and satellite imagery can support the design of new products and services for farmers or be analysed to understand current and future farmer wellbeing.

South Africa's data ecosystem requires facilitation to support the growth of widely accessible domestic data stocks. Achieving the two objectives of deeper stocks and improved flows will unlock large volumes of high-quality data. Increasing the stocks of available data should be achieved by deploying new and alternative solutions for data acquisition, transforming existing paper-based or analogue information into machine-readable formats, or purchasing new sources from service providers. However, increasing the volume of data is not enough; improving the flows of data to enhance open access and sharing are needed to overcome boundaries between data siloes.

Figure 28: Priority data clusters



Source: The authors, 2026

While effective facilitation should support the maturity and performance of the entire data ecosystem, there are a number of clusters that are a priority. These clusters are detailed in the figure on the left and host rich pools of data generated directly or as a by-product of business and government operations, and which when combined offer tremendous value through new insights.

A well-developed data ecosystem would see shared use within and between these clusters. Achieving this would mean these sources could be used and re-used for a broader range of functions and overlaid with other sources to yield its analytical potential and unlock the latent and unutilised value that data siloes prevent.

A coordinated and formalised approach to enabling the data economy is a critical first step. The cross-cutting nature of this ecosystem requires a consolidated approach that engages both the public and private sectors. An advisory council or working group with representation from the public and private sector would be key in supporting the development of a coherent approach to data standards, governance, regulatory frameworks and others. This would be effectively paired with the design and rollout of a national data policy and strategy oriented around national objectives of enhanced domestic stocks and flows. This policy and strategy would be critical in harmonising the approach to these objectives with current regulatory and legislative frameworks.

While a coordinated approach can bring coherence to national efforts, some mechanisms can be focused on improving the availability of data or enabling data sharing. These mechanisms are detailed in the following two sections.

7.3.1 Increasing Data Stocks

Timeous and high-quality earth observation data is unaffordable for South African innovators. While there is a range of open sources of satellite imagery, most of these lack the resolution and spectrums needed by innovators or are only available for historical periods. SANSA currently has a high-quality earth observation feed provided by the SPOT satellite. SANSA has also deployed a data cube which allows users outside of SANSA to run computationally demanding analysis on this data without their own infrastructure. However, access to this data is contractually limited to government entities, private sector players supporting government, or research.

Drones are another source of remote sensed data which should be unlocked in South Africa. Drones can be used in more targeted areas of remote sensing to support specific industries or operations. South Africa has a highly committed drone council aimed at overcoming blockages to the scaling of this industry. These blockages are detailed in preceding elements of the Masterplan. Resolving these blockages is a priority, given the significance the industry could play in creating new sources of data.

Strategically critical sources of local data should be available for national planning regardless of source. This relates to data on the scale, quality and location of natural resources. Given the importance of this source, it should be co-owned between the private and public sector, if the private sector has committed funding to its acquisition.

7.3.2 Improving Data Flows

Promoting data sharing within and between clusters can be facilitated by a variety of technical and non-technical mechanisms. Technical mechanisms such as data standards and the deployment of secure APIs provide for easy access. Incorporating and designing access controls and security are key in ensuring that data that is shared is done so securely and accessed solely by those intended. Non-technical mechanisms are wide-reaching. This includes elements of data governance frameworks and training that promotes a data first mindset and approaches to data management and oversight. These activities enhance institutions' willingness and capacity to engage in sharing. A well-functioning regulatory and legislative framework is equally critical to ensuring that institutions sharing data have confidence that usage of data beyond agreed to purposes will incur swift corrective action.

Institutions designed to facilitate data sharing are innovative mechanisms for supporting enhanced flows for public and private benefit. These data institutions can take many forms and are known by many terms. For example, data collaboratives are repositories of private sector data used to support the public sector, while data trusts are entities designed to ensure that a repository of pooled data is used in accordance with the objectives and principles required by its stakeholders. These institutions are objective custodians of data and are contractually and legally obliged to ensure data is used in accordance with agreed purposes and by agreed parties. Intelligent institutional design and an enabling legislative framework can help to ensure that data providers (including individuals) are confident that the data that they share is not used in a way that can either disadvantage or compromise the provider.

Government should support the emergence of data institutions that operate within and between clusters. These institutions may be founded by the private sector, public sector or a combination of both. Supporting the emergence of these institutions in strategically critical areas could be facilitated by innovative challenge funds that target the objective of data sharing.

These technical and non-technical mechanisms have application in both the public and private sector. Although these mechanisms are cross-cutting, there are nuances to their appropriateness and scope of application. The following details how these mechanisms can be used to promote data sharing in the public and private sectors.

Facilitating access to data for good

Sector regulators should take the lead in supporting data sharing. Regulators should be empowered to drive data sharing objectives and formulate industry data standards. While empowering regulators to promote data sharing gives them the capacity to do so, including these objectives as an element of their mandate can motivate execution on this capacity. However, regulators should be cautious not to be heavy-handed in their approach and should initially identify narrow areas of opportunity or require the standardisation of a narrow range of priority data sets and sources. Regulators can drive businesses to enhance processes for accessing data by deepening the granularity of reporting required from businesses. Achieving this will require businesses to roll out protocols for effectively accessing and communicating this data.

A successful data trust pilot can help to identify the complexities of cross-cluster data sharing and confirm the feasibility of safe execution. For example, the overlay of a range of private and public sector data can be used to identify and understand pockets of need and enable precision welfare. This trust should be designed to restrict access to dedicated and contractually bound analysts, and have a clear mandate in terms of purpose. Furthermore, it could have a finite lifespan. The pilot would help to identify the conditions required by the private sector for sharing. This might relate to participation in trust decisions, oversight of trust activities, return for support and the need for adjustments to legislative or regulatory frameworks. It could also relate approaches to data aggregation and de-identification, or others. The technical costs incurred for analysis, de-identification or aggregation should be onboarded by the pilot.

Support should be targeted at research into emerging approaches that maintain privacy while allowing analysis of data in independent silos. While data sharing traditionally requires data to be pooled into a shared repository, emerging methodologies can allow for analysis of this data without explicitly moving or sharing it. For example, federated learning is an emerging field that allows for an AI model to be built using data from multiple parties located in disparate siloes. The methodology and associated encryption layers mean participating parties only have a view of the model outputs and their own data; data remains securely under the custodianship of its owners. Some commercial entities globally are experimenting with this methodology within data partnerships to derive shared value of the outputs while avoiding the risk of sharing. Academics and institutions researching this technical alternative to sharing should be financially supported through grants and incentives to create local capacity to explore these solutions.

8. IMPLEMENTATION OF THE DIGITAL ECONOMY MASTERPLAN

The DEM implementation plan consists primarily of a Priority Action Plan which provides a guide for the Implementation Structure bodies (EOC, Working Groups and the Policy Advisory Council) as to the recommended actions over the short-term (next 12 to 18 months) and the longer term.

A detailed implementation plan will be developed for the various priority action items once the Working Groups have begun addressing them.

8.1 Priority Action Plan

This Masterplan has set out a vision for a truly digital South Africa. Ensuring that we deliver on this will require intense amounts of work that remains to be done to realise and scale the opportunities presented to South Africa in the digital age. Given the breadth of activity and stakeholders, and considering the cross-cutting nature of the digital economy, the ecosystem coordinating mechanisms proposed will be critical to delivering the actions required to realise the digital economy big bets identified in this Masterplan.

The DCDT will be the lead coordinator for all of these actions, as the custodian and government implementer of this Masterplan. Many of the actions identified are best implemented by the DCDT and its regulatory authorities, given the department's mandate to drive digital economy development and the 4IR in South Africa. Where other partners in other government departments, or in the private sector or civil society, are required, DCDT will play the important role of lead coordinator through the development of working groups and clusters of knowledge that can support the Masterplan.

Given the scope of work that lies ahead, prioritising effort and resources will be crucial. Fortunately, some of the actions identified are already underway or are currently being planned for. This means that part of the work of the ecosystem coordinating mechanism will be monitoring projects that are ongoing or implementing planned projects. In addition, a number of the proposed actions have clear implementation stakeholders identified but funding has yet to be secured. In other cases, the proposed actions do not yet have any clear implementation stakeholders identified to drive the implementation, nor funding which needs to be secured.

This categorisation of the proposed actions provides the starting point for an implementation plan stemming from this Masterplan. The actions are grouped into four categories, depending on whether they are currently being implemented, have a clear implementation stakeholder identified or have funding secured. Therefore, the work of the DCDT and its partner stakeholders in the private sector and labour will be to **monitor** ongoing projects, **implement** planned projects, **fund** projects that require resources, and **plan** for projects that do not yet have resources or an implementation stakeholder allocated. These actions are shown in the figures below.

8.1.1 Monitor

A large number of the actions identified in this Masterplan already have implementation champions identified and are adequately budgeted for. The DCDT's and the EOC's first priority will be to become fully informed in respect of these actions and then continue to monitor their implementation and provide support should any obstacles arise. The implementation champions for these projects should be invited to report back to the EOC or its implementation structures to provide updates on the implementation progress. The list of actions which fall into the "monitor" category is provided in the annexure to this Masterplan.

8.1.2 Implement

Similar to the monitor category, there are a number of actions highlighted in the Masterplan which have implementation champions identified and are adequately budgeted for, but these actions have yet to be implemented. The role of the DCDT and the EOC in these cases will be to support the implementation champions to begin implementation quickly. These stakeholders should also be invited to feed back to the

EOC or its implementation structures regularly to keep track of the implementation progress. The list of actions which fall into the “implement” category is provided in the annexure to this Masterplan.

8.1.3 Fund

There are some actions highlighted in this Masterplan which have a clear implementation champion identified, yet which do not have funding to begin implementation. The role of the DCDT and the EOC in this case should be to assist with the identification of financial and human resources to fund these activities and assist in raising the required funds. While there are several actions identified in this Masterplan that fall into this category, practical delivery considerations require a priority selection based on an assessment of implementation costs and the expected impact of these actions. The priority actions identified in this “fund” category are listed in the annexure to this Masterplan.

The implementation of the Masterplan will be aided by the formation of a digital economy transformation fund to pool financial resources from the private sector’s enterprise development, supplier development and BBBEE equity equivalence programme spend. This is based on a model that was developed for the automotive sector masterplan in South Africa. The Auto Industry Transformation Fund is currently being established after an agreement among the large OEMs to pool their supplier and enterprise development obligation under the BBBEE equity equivalence programme²⁹ to execute impactful interventions to grow black-owned SMME participation in the export-oriented auto sector. Replicating this in the digital economy sphere will provide an opportunity to fund several of the interventions proposed in this plan. With aggregated BBBEE spending, more impactful activities focused on empowering black-owned SMMEs operating in the digital economy and upskilling the millions of South Africans that need to be empowered to successfully participate in the digital economy can be funded.

8.1.4 Plan

There are some remaining actions identified in this Masterplan which have neither an implementation stakeholder identified nor funding secured. For these actions, the final leg of work for the DCDT and the EOC will be to convene the relevant stakeholders that can play a role in the implementation and to identify appropriate sources of financial and human resources. The priority actions in this category have been identified in the annexure to this Masterplan, given the need to allocate scarce resources across various activities.

8.2 ACTIONS IN THE PRIORITY ACTION PLAN

DCDT is the primary coordinating entity for implementation of the action plan. However, various stakeholders are leading (and will lead) multiple initiatives to digitally transform South Africa. The tables below identify key actions, lead implementors and partner stakeholders per Key Pillar.

In order for the action plan to be implemented effectively, each action plan item must be costed, with a monitoring and evaluation matrix associated with it.

A key task that should be undertaken at the outset of the Masterplan recommendations implementation is a thorough audit of all initiatives related to the digital economy in South Africa. This includes initiatives and interventions undertaken or planned by government departments, governmental agencies and institutions, non-governmental organisations, industry associations and private sector entities. An audit of this nature will enable the implementation team to more accurately develop targetted approaches to the action plan points, leveraging existing initiatives and strengthening their impact.

²⁹ The equity equivalence programme is an initiative with the DTIC to allow multinational companies investing in South Africa to earn BBBEE points without needing to divest ownership of the entity by investing in enterprise development and supplier development programmes.

Notes to the priority action plan tables below:

- Budget and Human Resources requirements (Yes / No indicator) – Yes means that there is a budget / HR requirement; No means that there is no budget / HR requirement.
- Action Plan items in each of the tables are divided into two phases; (1) Initial items which can be completed in the short term (next 12 to 18 months); and (2) subsequent items which require coordination of a greater number of stakeholders and are expected to take longer, be undertaken in the medium to long-term. These latter items are shaded in light red colour.

Key Pillar 1: Digital Infrastructure

Associated Working Groups (Primary):

- Digital Infrastructure and Investment
- Responsive Governance

Associated Working Groups (Secondary):

- AI, Trust and Security
- Digital Skills and Innovation
- Measurement of the Digital Economy

Blockage	Action	Lead Stakeholders	Partner Stakeholders	Timeline	Budget Requirement	HR Requirement
Limited knowledge of geographic location and capacity of ICT networks in South Africa. Lack of evidence of network coverage to inform under-served areas.	Implement recommendations of the Rapid Deployment Policy by developing the GIS map of ICT infrastructure.	ICASA	Licensees, DCDT	12 months	TBC	TBC
Lack of / slow approval of new sites for tower infrastructure results in slow improvement of broadband coverage where needed.	Use / implement existing municipal Standard By-laws with respect to processes for site leases (including site lease agreement templates).	Government agencies (ICASA, CAA)	Industry associations (DCA, SALGA), industry, local government (municipalities)	12 months	TBC	TBC
Slow wayleave approval process and high wayleave costs in some municipalities stymie quicker telecoms infrastructure deployment.	Standardise wayleave applications across municipalities. This can be stratified by type of municipality (e.g., large vs. small). Pricing for wayleaves is to be a “cost-oriented”, as per the Rapid Deployment Policy.	Government departments (CoGTA)	Industry associations (DCA, SALGA)	18 months	TBC	TBC
Sub-optimal content delivery mechanisms for lower income groups. This includes access to educational content.	Review signal distribution infrastructure pricing structure and revise as required.	Government department(s) & agencies	SOEs	18 months	TBC	TBC

High cost of data (for some segments of the society) restricts participation in the digital economy (and society).	Amendment of the Electronic Communications Act to implement recommendations of the data services market enquiry.	Government department(s)	Government departments & agencies	12 months	No	No
Lack of data on the size of the digital economy hinders progress in building the digital economy and limits visibility of investment opportunities.	Develop proposed metrics for the measurement of the digital economy and its contribution to the national GDP.	Industry, industry associations	Government departments & agencies	12 months	No	No
The unfinished digital broadcasting switch-over process prejudices segments of the society, particularly low-income, and does not allow them to fully participate in the digital society (including access to educational content).	Finalise the digital switchover for digital content distribution.	Government department(s)	Industry, SOEs, industry associations	12 months	TBC	TBC
Constraint in the quality of mobile / wireless broadband, particularly in under-served areas.	Expedite spectrum auctioning and expand allocation beyond large MNOs.	ICASA	Industry	18 months	TBC	TBC
Constraint in the quality of broadband services, with the view of growing use of digital services going forward.	Improve the national telecommunications backbone (backhaul) infrastructure to cover remote areas (including SA Connect).	Government department(s) & agencies	Industry	3 – 4 years	TBC	TBC
Ineffective infrastructure sharing frameworks result in limited infrastructure sharing, increasing operational costs, limiting competition, and resulting in higher retail prices of services.	Improve and enforce infrastructure sharing regulations, among telecoms operators and infrastructure entities where infrastructure can be used for telecoms network deployment.	ICASA, government department(s) & agencies	Industry	1 – 2 years	TBC	TBC
Inadequate access to sovereign, secure satellite communications.	Development of space and satellite infrastructure.	Government department(s) & agencies	Government departments, SOEs	5+ years	TBC	TBC
Lack of readily accessible infrastructure in public spaces increases costs for broadcasters and limits the ability to transmit content from events for public good.	Deploy and maintain infrastructure (such as scaffolding, generators) in public areas (e.g., stadia) for content generation and transmission.	Government department(s) & agencies	Industry associations (broadcasting), SOEs	3 – 5 years	Yes	Yes

Key Pillar 2: Digital Platforms

Associated Working Groups (Primary):

- Digital Infrastructure and Investment
- Responsive Governance
- AI, Trust and Security

Associated Working Groups (Secondary):

- Digital Skills and Innovation
- Measurement of the Digital Economy

Blockage	Action	Lead Stakeholders	Partner Stakeholders	Timeline	Budget Requirement	HR Requirement
High transaction costs may make local platform services providers less competitive against larger, global providers, thus disadvantaging the domestic industry.	Support implementation of the SARB Digital Payments roadmap Review and lower costs associated with the use of platform services levied by the government and the banking sector, e.g., cross-border payments or “card not present” fees and identify instances where changes need to be made due to e.g., outdated policy. Make recommendations to government bodies regarding changes.	Industry associations, industry, SARB, DTIC	Government departments & agencies	2 years	No	No
Insufficient access to relevant content by segments of the society (including small / informal businesses) hinders digital inclusion and participation in the digital economy.	Identify requirements for and potential sources of funding for digital content production, streaming, podcasting and social media integration for community radios.	Industry associations, industry	Government departments & agencies	12 months	No	No
Lack of data on the size of the digital economy hinders progress in building the digital economy and limits visibility of investment opportunities.	Develop proposed metrics for the measurement of the digital economy and its contribution to the national GDP.	Industry, industry associations	Government departments & agencies	12 months	No	No

Insufficient support of private sector and public organisations in expanding into foreign markets with products and services for additional revenue generation.	Mobilise digital, ITO and ICT companies to participate in export market opportunities.	Government department	Government departments & agencies, industry associations	2 – 3 years	TBC	TBC
Fractured approach by the government to guiding and regulating the platform economy results in uncertainty and lack of a clear direction, leading to poorer economic performance.	Develop a policy on the platform economy, leveraging the e-Commerce strategy, that will provide a comprehensive blueprint for growing the platform economy in SA.	Government department	Industry, industry associations, government departments & agencies	2 years	No	No
Various compliance requirements administered by different government entities (often overlapping) create a burden on businesses from a compliance administrative perspective. This detracts from focusing on business activities.	Adopt a “whole of government” approach for interaction between disparate government departments / agencies and platform providers for compliances purposes. Establish a dedicated unit with one of the government departments or an agency dealing specifically with the platform economy (one stop shop).	Government department(s)	Government departments & agencies, industry associations	2 years	Yes	Yes
Lack of full transparency in government procurement processes can lead to corrupt practices, misuse of public funds and a trust deficit in government by the society.	Establish a blockchain-based e-Procurement platform for the government, across the three levels of government.	Government department(s) & agencies	Industry	3 years	Yes	Yes
Most of government services are consumed at local government level but they are not considered when developing national e-Government services. This creates inefficiencies in the delivery and consumption of e-Government services.	Develop a comprehensive e-Government services platform which will include the national, provincial and local levels as much as possible. The MyMzansi platform could be used as a basis on which to build. (Confirm whether this matter is being addressed through the Digital Transformation Roadmap process under Operation Vulindlela.)	Government	Government (national, provincial, local)	3 – 5 years	Yes	Yes
Lack of effective data sharing mechanism retards delivery of more effective and efficient digital services in the public and private sphere.	Continued implementation of a policy that addresses data access and sharing that supplements the current Protection of Personal Information (“POPI”) Act.	Government department(s)	Government departments	3 – 5 years	TBC	TBC

Key Pillar 3: Digital Financial Services

Associated Working Groups (Primary):

- AI, Trust and Security

Associated Working Groups (Secondary):

- Responsive Governance
- Digital Skills and Innovation
- Measurement of the Digital Economy

Blockage	Action	Lead Stakeholder	Partner Stakeholders	Timeline	Budget Requirement	HR Requirement
Lack of established clear progression path towards open data in digital finance and related fields (e.g., e-Commerce) may hinder development of strong open finance infrastructure and ability to leverage AI without fragmentation or lack of trust.	Develop the sequencing and governance work detail of Open Banking to Open Finance to Open Data to ensure that the necessary building blocks and interdependencies are mapped out.	Industry associations, industry	Government departments & agencies	12 months	TBC	TBC
Lengthy process of licensing foreign companies wishing to operate in SA hinders more efficient financial / business transactions, particularly in the growing fintech sector, and ultimately negatively impacts economic growth.	Identify jurisdictions in the world which could enable regulatory (compliance) reciprocity between SA and those jurisdictions to expedite the licensing of new fintech companies wishing to operate in SA. Make recommendations to the relevant government departments and agencies.	Industry associations, industry	Government departments & agencies	12 months	TBC	TBC
Lack of access to funding, including through lack of information on processes, stifles innovation and limits the number of startups which could progress to commercial phase.	Map the innovation funding process for digital innovations from R&D to final launch.	Government department(s)	Government departments & agencies	12 months	TBC	TBC

Lack of data on the size of the digital economy hinders progress in building the digital economy and limits visibility of investment opportunities.	Develop proposed metrics for the measurement of the digital economy and its contribution to the national GDP.	Industry, industry associations	Government departments & agencies	12 months	No	No
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Key Pillar 4: Digital Technologies

Associated Working Groups (Primary):

- Digital Infrastructure and Investment
- Digital Skills and Innovation

Associated Working Groups (Secondary):

- AI, Trust and Security

Blockage	Action	Lead Stakeholder	Partner Stakeholders	Timeline	Budget Requirement	HR Requirement
Lack of stronger industrialisation drive results in fewer job opportunities, slower SMME development and economic growth.	Identify technologies and sectors where SA could competitively either manufacture entire products (digital or digitally) or components of products as part of a global value chain. Consider the township economy as a part of this opportunity identification process.	Industry, industry associations	Government departments & agencies	12 months	TBC	TBC
Lack of stronger industrialisation drive results in fewer job opportunities, slower SMME development and economic growth.	Implement a programme to support industrialisation through e-Waste recycling.	Government department(s)	Industry, government departments	18 months	TBC	TBC
Weak focus on technology development and commercialisation, and poor regulatory framework, detract from investment in technology innovation and production locally.	Implement the Technology Innovation & Commercialisation Strategy.	Government department(s)	Government departments, SOEs	2 years	TBC	TBC
Insufficient protection of local IP and patents discourages investment in innovation in SA and negatively impacts potential product commercialisation.	Reform South Africa's IP policies and patent grant system.	Government department(s)	Government departments	3 – 5 years	TBC	TBC

Lack of access to digital files / data retards effective and efficient delivery and use of e-Government services.	Develop national government record digitisation programme to digitise and verify government data (can facilitate youth employment).	Government	Government departments, industry associations	3 – 3 years	TBC	TBC
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Key Pillar 5: Digital Skills & Entrepreneurship

Associated Working Groups (Primary):

- Digital Skills and Innovation
- Digital Infrastructure and Investment
- AI, Trust and Security

Associated Working Groups (Secondary):

- Responsive Governance
- Measurement of the Digital Economy

Blockage	Action	Lead Stakeholder	Partner Stakeholders	Timeline	Budget Requirement	HR Requirement
Dearth of data on bottlenecks in individual vertical sectors in respect of matching job opportunities with talent hinders the development of a comprehensive strategy on how to meet such demand with supply.	Gather data from various organisations managing digital skills development initiatives (e.g., Yes, Collective X) to determine what the bottlenecks are in specific industries in terms of connecting skilled youth with job opportunities.	Industry associations	Industry, digital skills development organisations, labour	12 months	No	No
Lack of a comprehensive, cross-sectoral understanding of bottlenecks preventing skilled individuals (especially youth) in securing jobs which require their skills results in higher unemployment.	Develop a mechanism concept for more effective matching talent with job opportunities across different sectors to overcome the bottlenecks. This could be housed in a government department / agency or private sector agency.	Industry associations, industry	Government departments, digital skills development organisations, labour	18 months	TBC	TBC
Lack of coordinated action across public and private sectors in re-skilling and up-skilling results in mismatch between job requirements and talent available.	Establish an industry-wide mechanism / framework for re-skilling and up-skilling for the future skills required in the digital economy.	Government department(s) & agencies	Government departments & agencies, academic institutions, industry associations, labour	18 months	TBC	TBC

Lack of data on the size of the digital economy hinders progress in building the digital economy and limits visibility of investment opportunities.	Develop proposed metrics for the measurement of the digital economy and its contribution to the national GDP.	Industry, industry associations	Government departments & agencies, labour	12 months	No	No
Inability of SETAs to fund courses completed within the SFIA framework reduce organisations' options for training employees to their requirements. This may result in greater requirement-talent mismatch and higher unemployment.	Enable the SETAs legally to use the SFIA framework for non-accredited courses which we be recognised by the Qualifications Standards Committee (QSC).	Government department(s)	Government departments & agencies	18 months	TBC	TBC
Poor digital skills development (teaching and learning) is negatively impacting participation in and further development of the digital economy.	Coordinate implementation of the Digital & Future Skills Strategy.	Government	Government departments & agencies, industry associations	18 – 24 months	TBC	TBC
Inadequate supply of advanced digital skills in the market will prevent the digital economy from growing to make a positive impact on the high-level objectives.	Building a 4IR Digital Army – training on key digital skills such as data science, coding, apps development, AI and digital marketing.	Government department(s)	Government agencies, universities, online training platforms	2 – 3 years	Yes	Yes
Dearth of requisite digital skills in the workplace (at various levels) negatively impacts productivity and competitiveness at public and private sector organisations.	Implement large-scale integrated workplace learning solutions.	Government	Digital hubs, government departments, demand-led industry bodies	2 – 3 years	Yes	Yes
Lack of or limited cooperation between different government entities and private sector organisations results in inability to generate synergies for more effective funds utilisation for skills development. This results in suboptimal job opportunity matching.	Create an inter-departmental group on priority digital skills which would identify and document digital skills required in the public and private sector and assist in allocating government funding to various digital skills development activities.	Government	Government departments & agencies, training organisations, industry associations, industry	2 years	Yes	Yes

9. IMPACT OF IMPLEMENTING THE MASTERPLAN

The purpose of the actions set out in the preceding sections is to create a focused approach to deal with matters that will create an enabling environment for the digital economy to scale inclusively. Through the creation of this environment, the implementation of the Masterplan will achieve its objectives by supporting the emergence and growth of digital industrial applications that create inclusive growth, job creation and transformation.

9.1 Job Creation

The digital economy can create upwards of at least one million new jobs over the next 10 years. This will be a mix of formal jobs, as we traditionally understand them, and new sources of income-generating work in the gig economy which is providing work for South Africans across a range of skills.

Digital platforms have been able to tap into a broad base of unskilled labour. This is particularly important for South Africa, which has an unemployment rate of 31.9% (in Q3 2025)³⁰. These platforms provide new employment opportunities at scale within the domestic economy. As result of increased job creation, income is generated, and more households are supported. Almost all of the 119 platforms operating in South Africa have been able to provide employment through strengthening market linkages. For example, e-hailing services provide income to around 20 000 drivers, while cleaning services (such as Sweep South) have created 3 000 income opportunities for previously unemployed and underemployed domestic workers in a year alone. South Africa's largest retailer, Takealot Group employs over 6 500 people. Furthermore, Takealot's ecosystem, including marketplaces, SMEs, and delivery couriers, has created around 33 000 jobs, the majority of which are delivery courier drivers. Industry stakeholders estimate that digital platforms will create 60 000 income-generating opportunities in the next three years and 80 000 income-generating opportunities in the next ten years.³¹ Additionally, job matching platforms estimate that they will provide digital skills and work readiness training to 500 000 South Africans.³²

The digital economy is projected to create over 300 000 jobs and potentially contribute nearly 20% to South Africa's national GDP by 2028. If the digitally traded services sector is able to resolve short-to-medium term scale constraints, it can create 100 000 net new jobs in five years. This number can scale significantly to 500 000 globally traded jobs over a ten-year period (2020-2030).³³ Achieving this growth will depend on reputational gains from the first five years of growth and driving greater innovation into new areas of global and digitally traded, personalised and social services. Moreover, it will rely on the successful reshoring of ICT work and contracts back to South Africa, while the country consolidates and maintains its impact sourcing and inclusive hiring initiatives that include locating outsourcing centres directly in low-income communities and launching virtual outsourcing models and digital platforms.

The adoption and development of transformative technology applications is creating key areas of employment opportunity. This is because adoption of technologies in these sectors is about enhancing functionality rather than replacing jobs. The adoption of emerging technologies will reshape how sectors like agriculture, healthcare and many others operate. This will unlock new forms of production and create new employment opportunities across a diverse range of industries and across businesses of varying maturities. A local capability can help deepen industry adoption and help to fully realise the economy-wide employment opportunities presented by these technologies.

AI's impact on jobs is complex, involving both displacement and creation of new opportunities. AI's impact on jobs will likely vary across sectors and job types. While some tasks and even entire jobs may be automated,

³⁰ Stats SA: Beyond the Unemployment Rate: A Broader Look at Labour Utilisation (<https://www.stats SA.gov.za/?p=19007>). The expanded unemployment rate (labour underutilisation) stood at 44.9% in Q3 2025, while youth unemployment (ages 15 to 24) was 58.5%.

³¹ Stakeholder consultations with industry stakeholders in the e-Commerce and digital platforms sector.

³² BPESA, Digital Empowerment Plan

³³ Genesis Analytics | 2019 South Africa in the Digital Age (SADA), *Pathways to Digital Work: A Strategy Primer for South Africa's Digital Economy*, p.13

AI also drives the demand for new roles focused on AI development, maintenance and application. The overall effect will likely be a transformation of the job market, with some roles becoming obsolete, others being augmented by AI, and entirely new ones emerging.

A more detailed discussion of this topic is presented below.

1. **Automation and Job Displacement:** AI excels at automating repetitive, routine tasks, potentially leading to job losses in job categories such as data entry, manufacturing and some customer service roles. Some studies suggest that a significant percentage of jobs globally could be impacted by AI, with a potential for both job losses and the need for reskilling and upskilling. Occupations involving complex social interactions or requiring uniquely human skills, such as empathy and creativity, may be less susceptible to AI automation.
2. **Job Creation and Augmentation:** AI also creates new job opportunities in areas such as AI development, data science, machine learning and AI ethics. AI-related roles are growing rapidly and there is a shortage of skilled professionals to fulfil these roles. AI can augment human capabilities, increasing worker productivity and allowing workers to focus on higher-level tasks requiring creativity, critical thinking and emotional intelligence. For example, generative AI can assist teachers with tasks such as grading and lesson planning, and can enable them to focus on personalised student interaction and feedback.
3. **Reskilling and Upskilling:** The changing nature of work due to AI necessitates a focus on reskilling and upskilling programmes to prepare the workforce for new roles and enable them to adapt to the evolving job market. New skills will allow workers to remain employable, particularly in industries heavily impacted by AI. Education and training institutions will need to adjust their curricula to equip individuals with the skills needed for the future.
4. **Need for Collaboration and Policy:** Addressing the challenges and opportunities presented by AI requires a collaborative effort involving governments, businesses, educational institutions and individuals. Policies and initiatives are needed to support workers in transitioning to new roles, promote equitable access to AI technologies, and mitigate potential negative consequences of AI in the workplace.

9.2. Transformation

The digital economy can contribute to economic transformation in South Africa by re-skilling and up-skilling at least 500 000 South Africans in the next five years and providing opportunity to at least 2.8 million SMMEs. This is based on three transformative impacts: (1) opportunities to improve broad-based black economic empowerment, (2) improving SMME opportunities, and (3) connecting the township and rural economies to the formal economy.

Improving broad-based black economic empowerment

- **The technology production sector has already shown some indicators for transformation which can be further enhanced.** For example, the IoT council membership is currently at 45% BEE for small companies, 21% for medium size companies and 34% for large companies. Overall, 37% are black owned, and 29% were minority black owned.
- **Transformative tech applications provide an opportunity to break incumbency in South Africa considering the long history of market concentration and large corporates that monopolise industries.** These tech-based innovative challengers tend to be more inclusive – they play better with other players in the value chain, are often themselves SMEs and have much lower barriers to entry, amongst other factors. This is especially true if South Africa can encourage start-up development and entrepreneurship.
- **A number of digital platforms are recognising the importance of upskilling supply-side participants with training in a variety of forms.** In more mature markets like India, skills development has become a core business of digital platforms because of the higher rates of inter-platform competition. As such,

upskilling supply-side participants to improve their technical and soft skills has become a commercial imperative to improve customer experience and satisfaction among the platform's customers. Since most of these supply-side participants have limited face-to-face interaction with the platforms after being onboarded, the platform's app becomes the primary channel of communication and delivering training content. Some of the platforms have 'gamified' training content to make it more appealing and relevant to supply-side participants.

- **This Masterplan has proposed a digital economy transformation fund that pools financial resources from the private sector's enterprise development, supplier development and BBBEE equity equivalence programme spend.** With aggregated BBBEE spending, there is a possibility of more impactful activities focused on empowering black-owned SMMEs operating in the digital economy and upskilling the millions of South Africans that need to be empowered to successfully participate in the digital economy.

9.3. Improving SMME Opportunities

The digital economy provides the opportunity for SMMEs to expand their horizons beyond the immediate market and tap into broader domestic and global markets for the sale of goods and services. It also creates opportunities for collaboration between companies across regions and sourcing of competitive inputs into product manufacturing and service delivery.

- **Digital platforms have the power to enable market access both domestically and internationally.** Aggregators such as Jumia and Taobao have enabled small businesses to sell their products through online retail stores in Nigeria and China respectively. However, South Africa is lagging behind when it comes to using digital platforms to provide market access to SMMEs. For example, Jumia enables small businesses that produce a range of goods, from clothing to electronics and homeware items, to sell their wares on the Jumia platform. This creates larger markets for small businesses whose target market is often restricted to their geographic location. Jumia not only acts as an aggregator but also provides logistic support to courier goods between producers and consumers. Another example is Soko, an online jewelry store where jewelry made in Kenya is sold in foreign markets, thus extending market access beyond the domestic market, enabling greater earning potential for producers.
- **Township and village enterprises in Tier II and Tier III cities and towns can also benefit greatly from digital trading platforms and IT-enabled SMME development programmes.** Digitisation can broaden access to the supply chain, retail and platform distribution models. This includes the ability for township-based retail stores to link with urban retail chains, or mobile apps that connect township spaza shops with customers. There are opportunities to enable more township enterprises through programmes such as the SMME Clearing House. This market-making platform provides opportunities within corporate value chains, opportunities to convert to franchises and a range of other enterprise and supplier development opportunities.³⁴

Connecting the township and rural economy with the formal economy

- **Locally developed platforms are focused on solving for domestic problems that predominately occur in rural areas or townships where service delivery is limited.** Identified problems include crime being committed without any recourse, lack of early warning systems needed in densely populated areas, and financial solutions such as investment and savings products not met through conventional financial channels. As such, some of the platforms that have been developed locally are solving for problems faced by low-income households. In order to generate buy-in and adoption of these services, developers have identified core needs that are currently not being met by existing businesses and are creating digital solutions to address such requirements. It is the hope that these are relevant to a larger portion of the population which would enable their widespread usage. Solving for domestic challenges allows for the

³⁴ Gauteng Department of Economic Growth and Genesis GBS / Knowledge Executive | 2019 | Gauteng Digital and ICT Market Quantification Report, p.172

development of technologies that could also be relevant in foreign markets (e.g., elsewhere in Africa), providing export opportunities for such products.

9.4. Inclusive Growth

The size of the digital economy in South Africa is currently not known. Stats SA has begun the process of calculating the size of a number of elements of the digital economy but no idea is available as at the time of updating this Masterplan. Once this exercise has been completed, it will be possible to develop targets, from the established base, for growth of the digital economy in nominal terms and as a percentage of the national gross domestic product (GDP).

The current estimate is that the digital economy in South Africa contributes between 7% and 8% to the national GDP. This amounts to at least ZAR 600 billion, based on the expected 2025 GDP of approximately ZAR 7.8 trillion (at market prices). However, some estimates are even higher, similar to the global average of 15% of the GDP.

Globally, the average contribution of digital economy to GDP globally was 15% in 2024 (World Bank, 2025) or around USD 16 trillion. This is expected to increase to 17% by 2028.

10. GLOSSARY AND ACRONYMS

4IR	Fourth Industrial Revolution
AI	Artificial Intelligence
AR	Augmented Reality
BBBEE	Broad-based Black Economic Empowerment
BBi	Broadband Infraco
BPESA	Business Process Enabling South Africa
BRICS	Brazil, Russia, India, China, South Africa (intergovernmental organization to promote economic cooperation)
CAGR	Compound Annual Growth Rate
CIPC	Companies and Intellectual Property Commission
COGTA	Cooperative Governance and Traditional Affairs
CPE	Customer Premises Equipment
CSIR	Council for Scientific and Industrial Research
CTP	Converging Technologies Platform
DBE	Department of Basic Education
DBSA	Development Bank of Southern Africa
DCDT	Department of Communications and Digital Technologies
DDCF	Digital Development Challenge Fund
DEM	Digital Economy Masterplan
DFFE	Department of Forestry, Fisheries and the Environment
DHET	Department of Higher Education and Training
DPSA	Department of Public Service and Administration
DPWI	Department of Public Works and Infrastructure
DSBD	Department Small Business Development
DSTI	Department of Science, Technology and Innovation
DTIC	Department of Trade, Industry and Competition
EOC	Executive Oversight Committee
FDI	Foreign Direct Investment
GATA	Greater Alberton Taxi Association
GDP	Gross Domestic Product
GITO	Government Information Technology Officers (Council)
GVA	Gross Value Added
ICT	Information and Communication Technologies
IDC	Industrial Development Corporation

IDCA	International Data Center Authority
IFWG	Inter-governmental Fintech Working Group
IMF	International Monetary Fund
IoT	Internet of Things
IP	Intellectual Property
ITO	Information Technology Outsourcing
ITU	International Telecommunications Union
IXP	Internet Exchange Point
MICT	Media, Information and Communication Technologies (SETA)
MISS	Minimum Information Security Standards
MNO	Mobile Network Operator
NEMISA	National Electronic Media Institute of South Africa
NIPMO	National Intellectual Property Management Office
NLP	Natural Language Processing
OECD	Organisation for Economic Co-operation and Development
OEM	Original Equipment Manufacturer
PAIA	Promotion of Access to Information Act
PanSALB	Pan-South African Languages Board
PIC	Public Investment Corporation
PMO	Project Management Office
POPI(A)	Protection of Personal Information (Act)
PPGI	Public-Private Growth Initiative
R&D	Research and Development
QES	Quarterly Employment Statistics
QSC	Qualifications Standards Committee (of the Umalusi Council)
SABAN	South African Business Angel Network
SADiLaR	South African Centre for Digital Language Resources
SAMDDRA	South African Mobile Devices Distributors and Repairers
SANSA	South African National Space Agency
SARB	South African Reserve Bank
SAQA	South African Qualifications Authority
SEDA	Small Enterprise Development Agency
SEFA	Small Enterprise Finance Agency
SETA	Sector Education and Training Authority
SEZ	Special Economic Zone
SITA	State Information Technology Agency

SLOB	Slow and Obsolete Products
SMME	Small, Micro and Medium Enterprises
SNA	System of National Accounts
SOE	State-Owned Enterprise
SOFI	Scale Out for Impact
SPOT	Satellite Pour l'Observation de la Terre (<i>French</i>) – <i>Satellite for observation of Earth</i> . This is a commercial high-resolution optical Earth observation satellite system operating from space.
SPV	Special Purpose Vehicle
STEM	Science, Technology, Engineering and Mathematics (educational subjects)
SUT	Supply and Uses Tables
SVoD	Subscription Video on Demand
Tbps	Terabits per Second (1 Tbps = 1 000 Gbps)
TIA	Technology Innovation Agency
UMALUSI	Council for Quality Assurance in General and Further Education and Training (South Africa)
UN	United Nations
UNCTAD	UN Trade and Development (formerly; United National Conference on Trade and Development)
USAASA	Universal Service and Access Agency of South Africa
VR	Virtual Reality
WOAN	Wireless Open Access Network

11. ANNEXURE 3: SOUTH AFRICA'S SYSTEM OF NATIONAL ACCOUNTS

The System of National Accounts (SNA) is used to quantify the digital economy by incorporating the contribution of Information and Communication Technology (ICT) activities and related services to GDP gross value added (GVA). GDP measures the size of the economy and its growth rate over time and is the most familiar and widely recognised feature of the national accounts.

Stats SA, together with the South African Reserve Bank (SARB), collaborate closely in producing the country's national accounts. SARB provides Stats SA with crucial inputs for compilation of the GDP and is responsible for the many dimensions of the national accounts that lie beyond GDP.

The international gold standard for national accounts compilation is the System of National Accounts 2008 (SNA 2008), published jointly by the European Commission, the International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD), the United Nations and the World Bank. SNA 2008 is the foundation and primary methodological source for Stats SA in calculating South Africa's GDP.

SNA 2008 describes itself as 'a statistical framework that provides a comprehensive, consistent and flexible set of macroeconomic accounts for policymaking, analysis and research purposes.' Although it is extraordinarily detailed, it cannot possibly address the individual circumstances of each and every country, which is why Stats SA has produced a sources and methods document specifically for South Africa. This document covers the supply and uses tables (SUT), the approaches to GDP (production, expenditure and income), the provincial GDP and other related topics.

Because prices and economic structures change over time, the base year for the national accounts must be updated and the GDP estimates must be benchmarked using the latest available socio-economic surveys, some of which are only conducted at intervals of several years. Rebasings and benchmarking, along with the introduction of new sources and methods, are essential activities for maintaining GDP as a reliable measure of economic performance.

Satellite Account

In the SNA, ICT is measured within a satellite account; specifically the ICT satellite account.

A satellite account (a supplementary set of statistics that complements national accounts, focusing on specific sectors / topics) is the measurement of economic phenomena that are not explicitly shown in the core set of accounts. In South Africa, the ICT sector is not directly measured within the core SNA framework and a separate satellite account is used to capture the specific details of ICT's economic impact.

The 1993 SNA recommends using satellite accounts to measure economic phenomena that are not explicitly covered in the core national accounts. The ICT satellite account focuses on the economic aspects of ICT, including the products, industries and activities related to information and communication technologies.

12. REFERENCES

References for the DEM are listed below.

Africa Analysis, October 2023: Towards a Gigabit Society in South Africa White Paper.

Craffert, L., Keating, L., Katunga, N., Blignaut, R., Khanye, F., Padmanabhanunni, A., Ponnet, K., De Marez, L., Keddie, J., Van Audenhove, L., Grove, W., Mange, S., 2025: *Digital engagement in South Africa: Current landscape and readiness outlook in four provinces*. CoLab for e-Inclusion and Social Innovation, University of the Western Cape. Available at: <https://www.wcapecolab.org/desa>

Collective_X & Harambee, 2026: <https://www.thecollectivex.org/wp-content/uploads/2026/02/The-Work-Integrated-Learning-Toolkit.pdf>

DBSA, Development Bank of Southern Africa, 2026: The Beyond the Gap Report: SA Digital Infrastructure Investment Study

DCA, Digital Council Africa, December 2025: Africa Digital Infrastructure Market Analysis, 2025 Report.

DCDT, Department of Communications and Digital Technologies, 2016: The National Integrated ICT Policy White Paper. Government Gazette No. 40325. Available at: Electronic Communications Act: National Integrated ICT Policy White Paper

DTIC, Department of Trade, Industry & Competition, 2026: Trade statistics. Available at: https://tradestats.thedti.gov.za/ReportFolders/reportFolders.aspx?sCS_referer&sCS_ChosenLang=en

ICASA, Independent Communications Authority of South Africa (2025): The State of the ICT Sector Report of South Africa. Available at: <https://www.icasa.org.za/legislation-and-regulations/state-of-the-ict-sector-in-south-africa-2025-report>

IMD, 2018-2025: Digital Competitiveness Reports. Available at: <https://www.imd.org/centers/wcc/world-competitiveness-center/rankings/world-digital-competitiveness-ranking/>

ITU, International Telecommunications Union, 2025: The revised SADC toolkit on universal access funding and universal service fund implementation. Available at: <https://www.itu.int/hub/publication/d-sadc-toolkit-2025/>

Maleka, Stevens. (2025). Evaluating the Impact of Digital Transformation on Socioeconomic Development in South Africa: An Empirical Assessment of the ICT and Digital Economy Masterplan. Available at: https://www.researchgate.net/publication/395592428_Evaluating_the_Impact_of_Digital_Transformation_on_Socioeconomic_Development_in_South_Africa_An_Empirical_Assessment_of_the_ICT_and_Digital_Economy_Masterplan

MISTRA, Mapungubwe Institute for Strategic Reflection & NASPERS, 2024: Our Digital Horizon: The Economic Opportunity of Digital Platforms in South Africa. Available at: <https://mistra.org.za/wp-content/uploads/2024/08/Our-digital-horizon-report-the-economic-opportunity-of-digital-platforms-in-south-africa.pdf>

MyMzanzi, 2024: Desktop diagnostic on the state of digital transformation of the public sector in South Africa. Available at: https://www.mymzansi.gov.za/static/resources/IDWG_Preliminary_Diagnostic_20250114.pdf

Stats SA, Statistics South Africa, 2025: Quarterly Employment Statistics. Available at: https://www.StatsSA.gov.za/?page_id=1854&PPN=P0277&SCH=74044

2024: General Household Survey. Available at: https://www.StatsSA.gov.za/?page_id=1854&PPN=P0318&SCH=74038

2025: Gross Domestic Product. Available at: https://www.StatsSA.gov.za/?page_id=1854&PPN=P0441&SCH=74258

UNCTAD, 2015: International Trade in ICT Services and ICT-enabled Services Proposed Indicators from the Partnership on Measuring ICT for Development. Technical Note No. 3 (TN/UNCTAD/ICT4D) Available at: https://unctad.org/system/files/official-document/tn_unctad_ict4d03_en.pdf

WEF, World Economic Forum, 2025: Future of Jobs Report 2025. Available at: https://www.weforum.org/publications/the-future-of-jobs-report-2025/?gad_source=1&gad_campaignid=22228224717&gbraid=0AAAAAoVy5F7IbNW1GofKug4BgEW-MCHJUo&gclid=Cj0KCQjwve7NBhC-ARIsALZy9HV0PI2ZI74ANxl9qCsP-Bjo_EMhEzOdVPe2V6cDhLnLfclKZQQUe9waAvlfEALw_wcB

World Bank, 2026: World Development Indicators. Available at: World Development Indicators | DataBank

World Bank, World Bank & International Finance Corporation, 2023: South Africa Private Digital Platform Assessment. Available at: <https://documents1.worldbank.org/curated/en/099060723023040194/pdf/P1718550a6e900570be020c4853b34846e.pdf>

World Wide Works, 2025: South Africa's Online Retail set to surpass R130-billion in 2025. Available at: <https://www.worldwideworx.com/onlineretailsa2025/>

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