



# Digitalisation Trends

## Govtech 2023

**BMIT**

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# BMIT helps government and enterprises make important ICT decisions

# BMIT

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Considered to be the pioneers in the SA ICT Research and Consulting Industry.

Extensive knowledge and experience in conducting Primary Research and Market Sizing + Stakeholder Engagement

Over 2500 projects done for almost every major player in the industry.

Partners effectively, when needed, for major consulting projects.

The BMIT team has over 140 years of experience collectively.

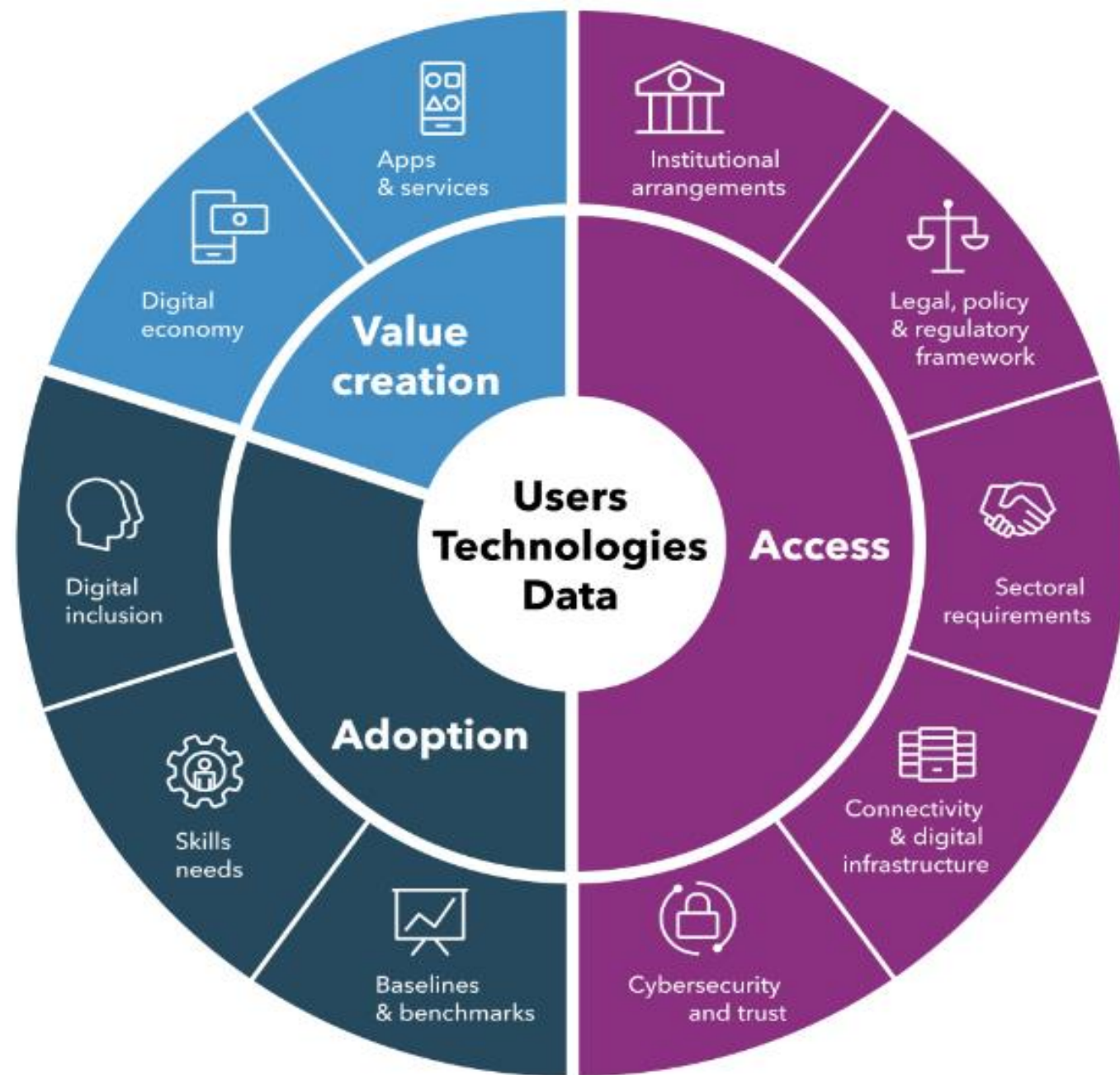
# SA's readiness for digital transformation can be assessed in terms of the 10 pillars of the ITU's BDT Wheel

I will touch on a few key metrics

But asking a different question

“Is a paradigm of abundance appropriate in digitalisation”

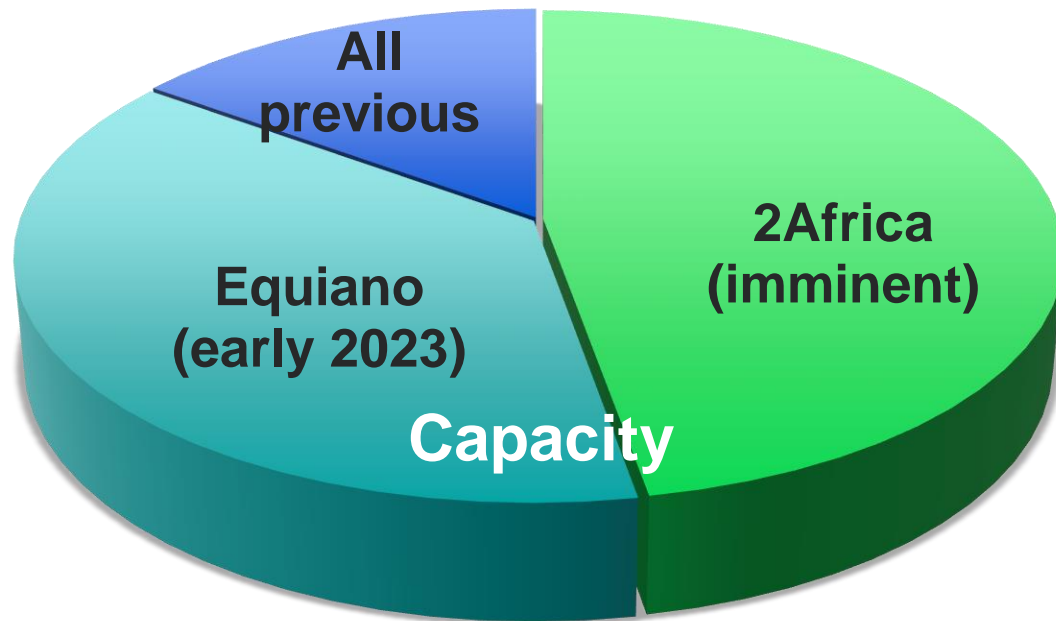
“Should we grasp the two-edge sword”



# Access - we have entered a new paradigm of international bandwidth abundance



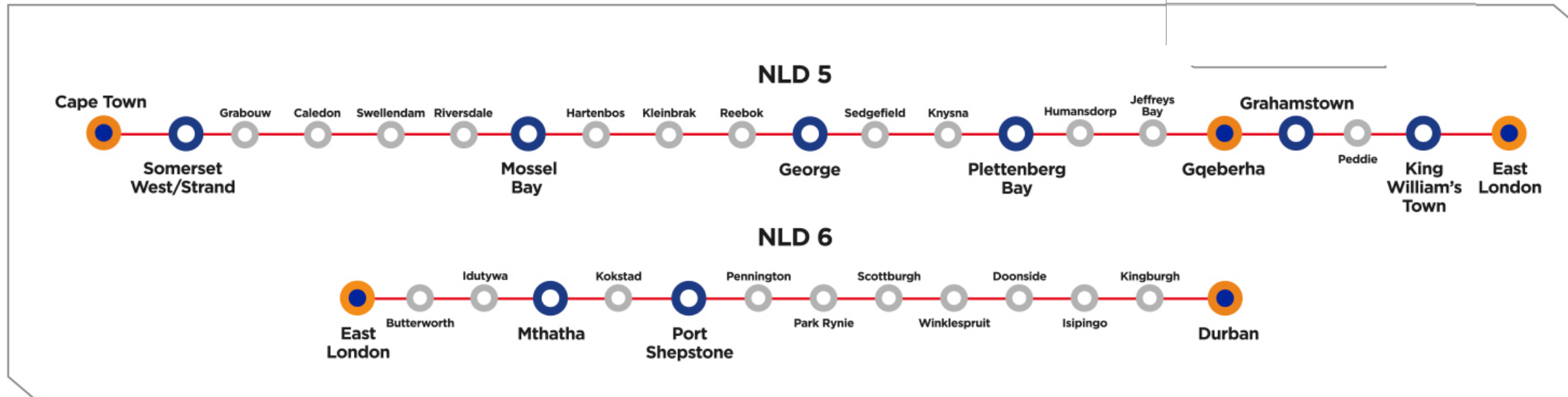
- International bandwidth is now abundant – no longer scarce
- Equiano (March 23) more than doubled capacity
- 2Africa almost doubles that again





# Terrestrial routes are seeing demand for high capacities

- National routes were, until recently, more expensive than international, but prices have dropped considerably.
- Main national routes are being sold in 10's of gigabits, rather than megabits
- With the Eastern Coastal route complete, all the main metropolises are connected (also to be connected by 2Africa)
- Many towns in between are also being connected



# The last mile remains a very significant challenge, but there are options which could make a vast difference

Operators	Progress with last mile	What can be done
Fibre network	Aggressively connecting small towns	Aggregate demand via SA Connect
	Also testing low-income connection models on a pay-go principle (as low as R5/day)	Expedite incentives (UK, Scotland, Italy)
Mobile operators	Deploying the significant new spectrum they secured in the May '22 auction	Help reduce device prices (Italy – devices)
	Will have access to the lower frequencies very soon (the digital dividend is finally paid)	
	Will be gaining access to more spectrum soon	Include mm wave (Europe, US)
	Are able to deploy mature 5G networks	Create incentives/obligations to connect rural areas Make private spectrum available (Japan, US, Germany)
Wireless ISPs	Finally have access to significant spectrum in the 6GHz band	Double spectrum (United States)
Satellite operators	Are offering high capacity at lower prices, from their ultra-high-throughput satellites	
	Are commencing LEO services with low latency and fast connections (>100Mbps)	Encourage to South Africa (e.g Mozambique, Zambia)

# Leading countries are evolving to ‘gigabit societies’

- Benefits ‘beyond broadband’ – countries now promoting high speed, low latency, ubiquitous, affordable, reliable broadband
- Gigabit speed connections now commonplace
- SA has shifted from 2-5Mbps entry speeds, but why not 100+ Mbps speeds (at reasonable prices)
- BMIT’s own research for SA Connect : the economic benefits of fast internet were greater than for slow internet.
- Fibre, LTE-A, 5G, fixed-wireless and satellite support these.
- Peering exchanges are exchanging 4Tbps of traffic each day - with big content networks such as Google, Netflix, Akamai delivering all content into the country at no cost.
- According to Viavi, 10 countries have 90% or more availability of gigabit speeds at home (including Singapore, South Korea, Moldova, Qatar, Switzerland and then a few countries (such as New Zealand and Spain have more than 50%, with the United States and China approaching that).
- (e.g.) Schools could use at least 2Mbps per student, to access Google Classroom, YouTube Khan Academy, offline storage etc – so a school with 1,000 students could use 1-2Gbps
  - These students are our future; They will be in a digital world
- Health facilities need highly reliable internet for remote surgery and fast internet to share diagnostic information (e.g CAT scans)

## 30 Mbps Web sQuad Home Fibre

Uncapped, Unlimited Home Internet. Free to Use Dual Band Router. Native IPv6, No FUP.

## 30/30Mbps Unlimited Fibre

Unlimited & Uncapped Downloads | Free Installation | Free WIFI Router

## 40Mbps PREMIUM Uncapped Fibre

True business class fibre at home prices.

## 40/40Mbps Uncapped

Fast, Reliable Fibre. Uncapped, Unshaped bandwidth

Gigabit networks will be required, and will enable a whole range of new applications for entertainment, health and smart homes. Direct and indirect benefits of a Gigabit Society can be grouped into six categories that will ultimately positively impact the gross domestic product (GDP) of a country:

1. Better healthcare

4. Positive social impact

2. Better education

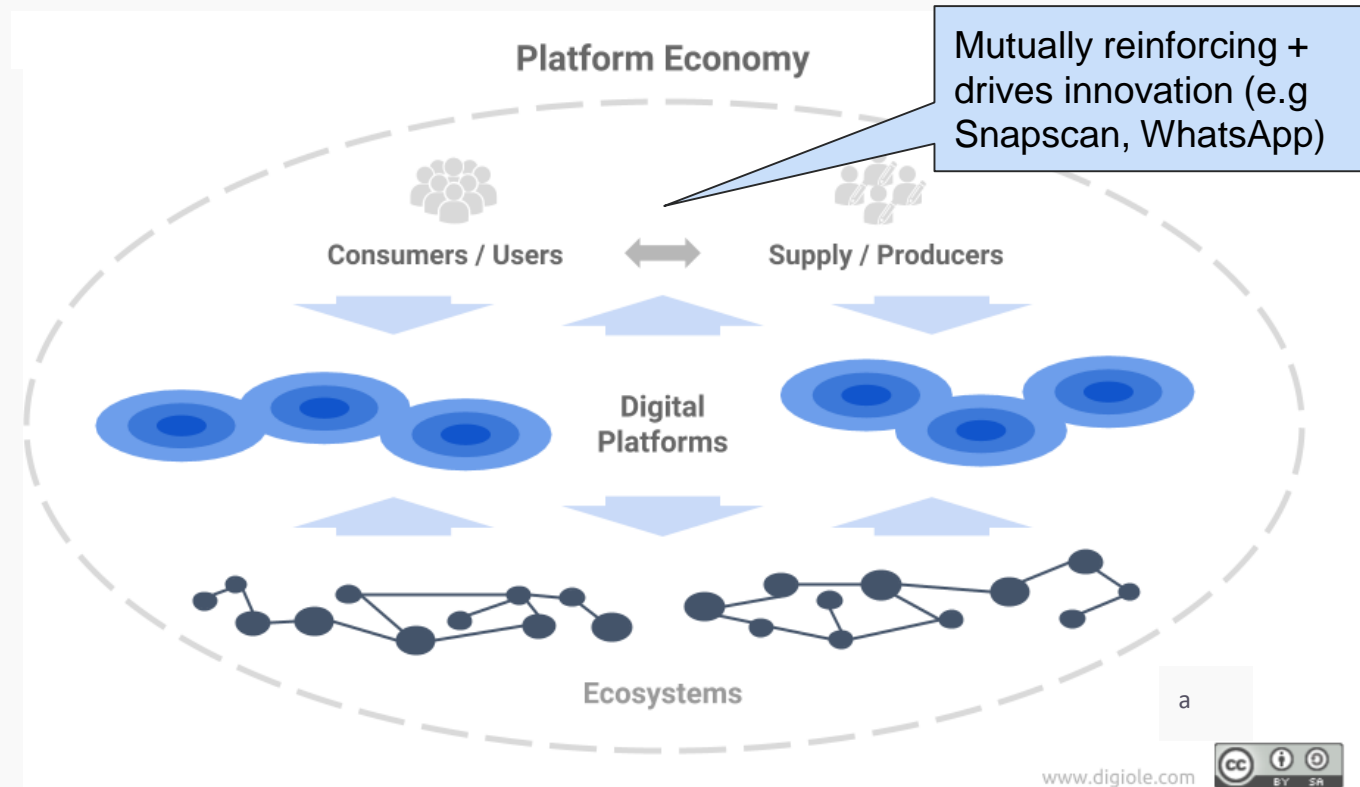
5. Positive impact on the environment

3. Increased security

6. Increased employment.

# Does the (digital) platform economy also promise 'abundance' for South Africa

- Digital platforms add value by bringing communities together to create value, rather than by selling products
- "transaction platforms", or "digital matchmakers". Examples of transaction platforms include Amazon, Airbnb, Uber, and Tinder
- "innovation platforms", provide a common technology framework upon which others can build - sometimes called "API platforms"
- The platform economy is the economic and social activity facilitated by these platforms.
- Digital platforms have dominated the value creation business for over 10 years now





# Digital platforms can create substantial economic value

- **Build (useful) communities** of buyers and sellers
  - Harness network effect: The more buyers, the more sellers, and the more sellers, the more buyers.
- **Drive innovation.** Platforms enables solutions not intended by the platform creators
  - Often meeting niche needs
- **Enable use of spare capacity** (e.g AirBnb)
  - although less so than previous
- **Extract value from data collection and analytics** (manifesting the ‘information age’)
  - Recommendations, insights etc
- **Disrupt** established industries
  - Uber vs taxis; AirBnB versus Hotels; Amazon vs Department Stores; Netflix versus video stores; Google Maps versus Tom Tom.

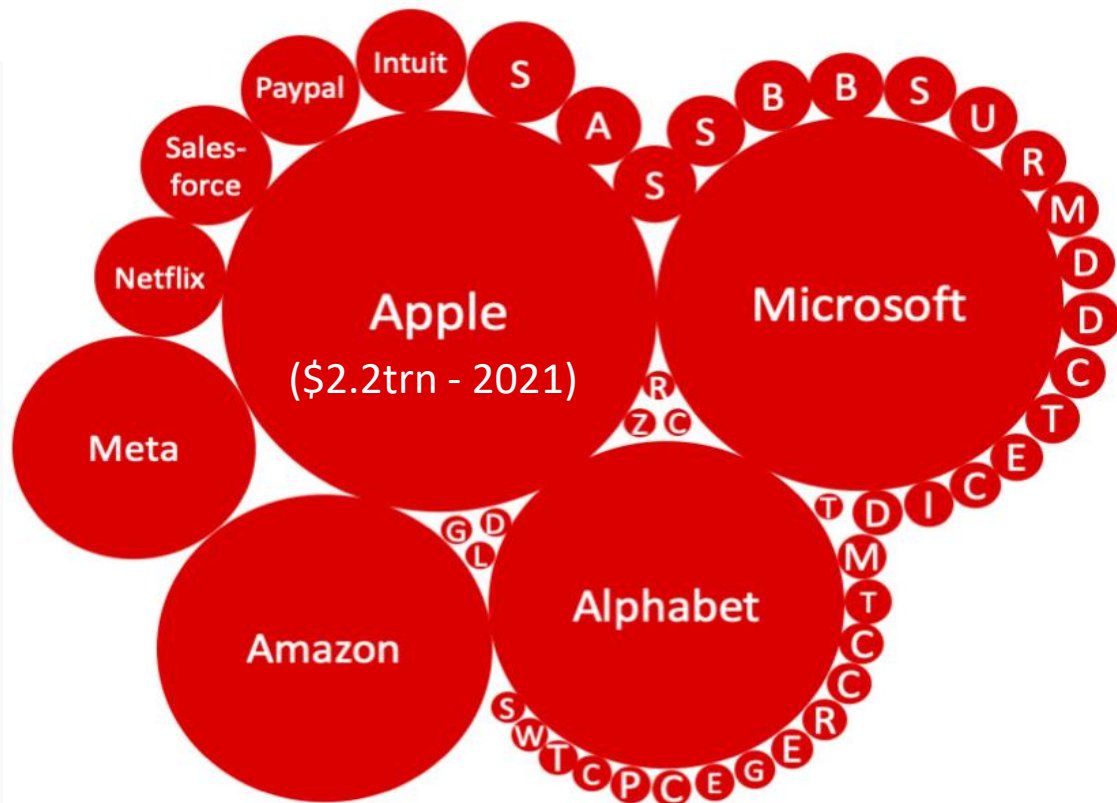
10 years ago : 12 of the top 30 brands and 3 of the top 5 US companies by market cap were platforms

*To what extent is government itself a platform – or a curator of platforms*

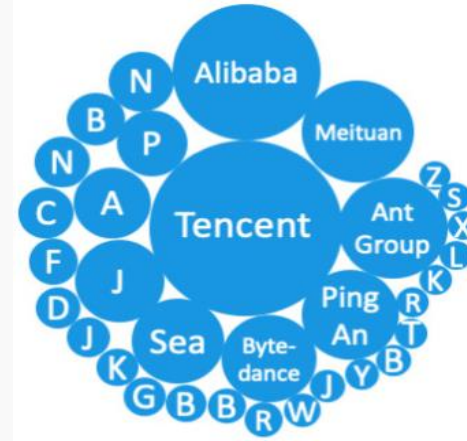
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# The top digital platform companies are heavily skewed to America and Asia/Pacific

## United States



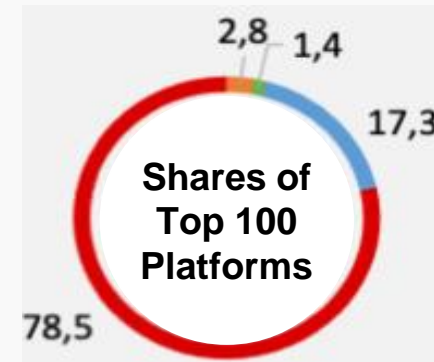
## Asia Pacific



## Europe



## Africa



- Apple marcap is currently \$2.8 trn.
- Tencent is worth \$390bn
- Since 2021, the US moved up from 41 to 48 platforms in the top 100, whilst Asia dropped from 45 to 36 and Europe sits at 10, down from 12.
- Africa has 2, of which Naspers (N) derives most of its value from Tencent) Prosus is Netherlands based, worth about \$125bn. It also very well supported by shares in Tencent, as well as Auto Trader, Udemy, Olx, Property 24 and international businesses.

# Where South Africa can tap into that value creation (selected examples)

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1. Sectoral transformation
2. Smart Government
3. E-Government



# Technology in Finance as a Case Study

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The evolution of Fintech in SA has been remarkable on 2 counts

- financial services
- technology development perspective.

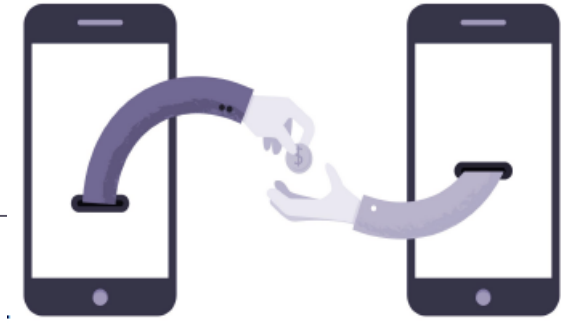
This evolution has been embraced by the Reserve Bank and National Treasury, and has seen significant support from local and international venture capital.

South Africa is recognised as having some of the most respected banking and financial services industries in the world.

The dual (formal and informal) economy still provides for significant fintech opportunities:

- Cash still represents 80% of daily transactions by volume (although not by value)
- A very large part of the population is dependent on social grants
- A high number of people are employed informally, with a significant migrant population
- Self-employed, Small and Micro enterprises are increasingly the source of employment (and need a supporting enviro.)

# Technology in Finance - opportunities

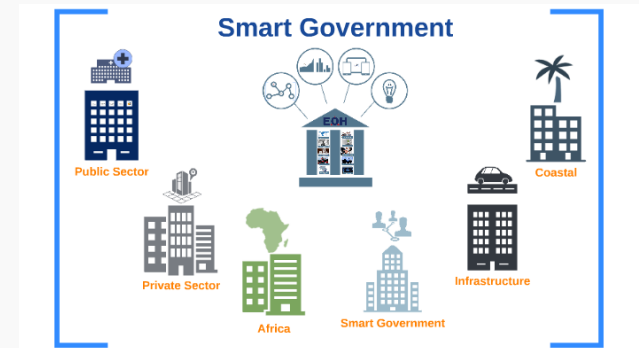


- There is high mobile penetration - albeit with 60% of users still making use of 2G
- Most people have a bank account - but low levels of financial inclusion if measured by usage
- Township economies are strengthening: ranging from informal retail to a range of services provided on a cash basis, whether they be car services or haircuts.
- Significant demand/opportunity for person to person and cross border money transfers, prepaid services, whether prepaid mobile or prepaid electricity and utilities, as well as the critical role of the taxi industry in public transport, which quite literally forms a key part of the life blood of the economy and transport/commuting solutions
- Covid Pandemic created an inflection point for e-commerce as well as tap-and-go card payments, the opportunity for leveraging the momentum for growing the use of mobile wallets and other mobile centric financial services is significant. Although this still only represents a small percentage of the “market value”
- Fintech enabled transactions will continue to grow and become the default method of participating in the financial services market for a significant part of the population, particularly the younger generations.
- **The rapid convergence between the traditional mobile, financial services, and retail sectors, will likely be the strongest driver for the adoption of fintech**



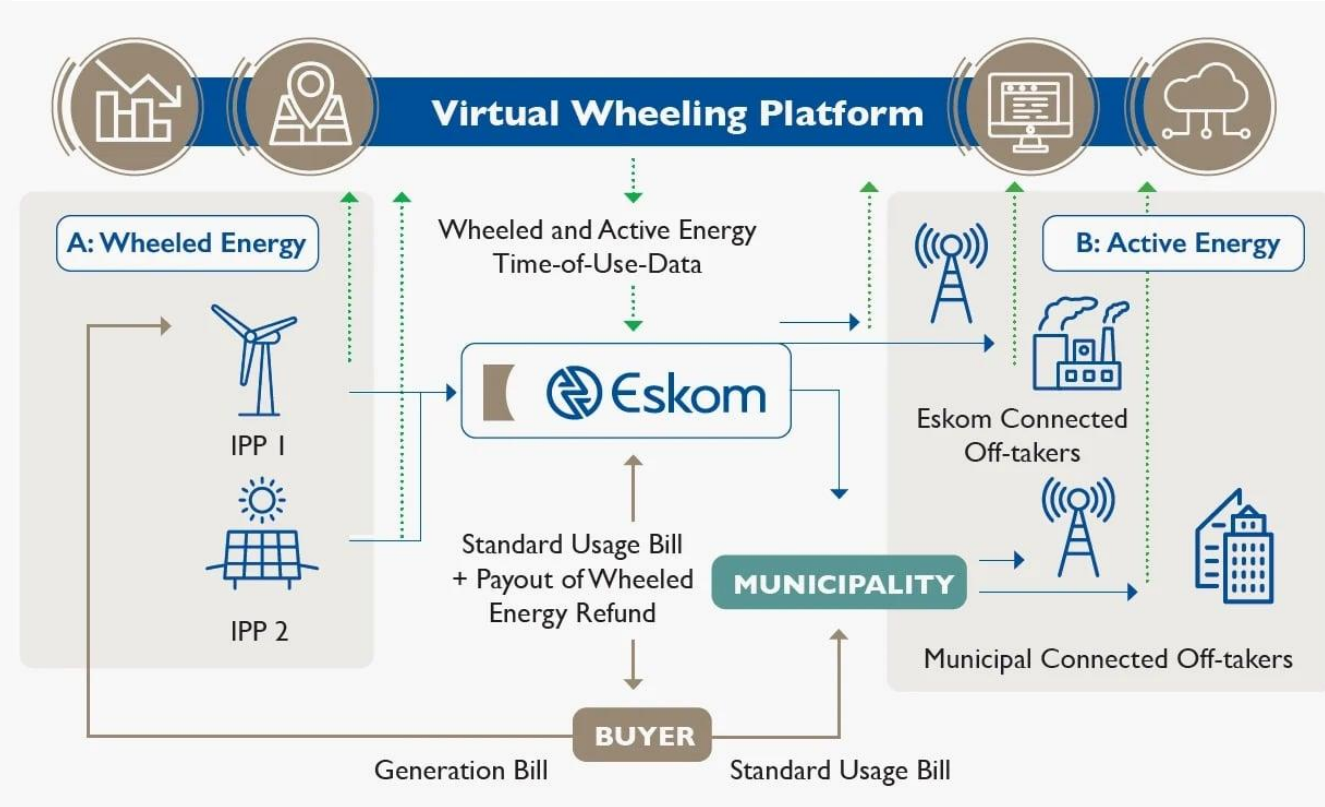
# Smart Government – Starting at Local

- Urgent Drivers for going smart
  - Rapid urbanisation – SSA is fastest in the world
  - Diminishing Resources – burgeoning populations; shrinking budgets
  - Threats of climate change – need for sustainability and climate risks
- Requirements
  - Over-arching, integrated plans
  - Budget allocations to projects
  - Procurement mind-shift – innovation versus accountability
  - Planning mind shift – core functionality versus innovative edge



# The platform mindset in action

- Old paradigm : provide a product - Power
- New paradigm (Eskom, municipalities): provide an enabling platform for multiple generators, multiple consumers
- Helps solves a current crisis
- Brings together government and the private sector
- Adds resilience
- Unlocks value
- Uses spare capacity
- Promotes value creation
- Allows a response to sustainable generation mandate



# Mindset and skillset

1. Open-ness.
  - a. Open to ideas, open source, open access, open standards. Minimal dependency on proprietary solutions
2. Partnerships
  - a. Build partnerships. Learn to work together and value partners (often difficult if you are in a big organisation with power over suppliers)
3. Know when to deliver, when to enable
  - a. Understand the multiplier effect of enabling
4. Break down silos
  - a. Foster effective coordination and communication between ministries, departments, divisions



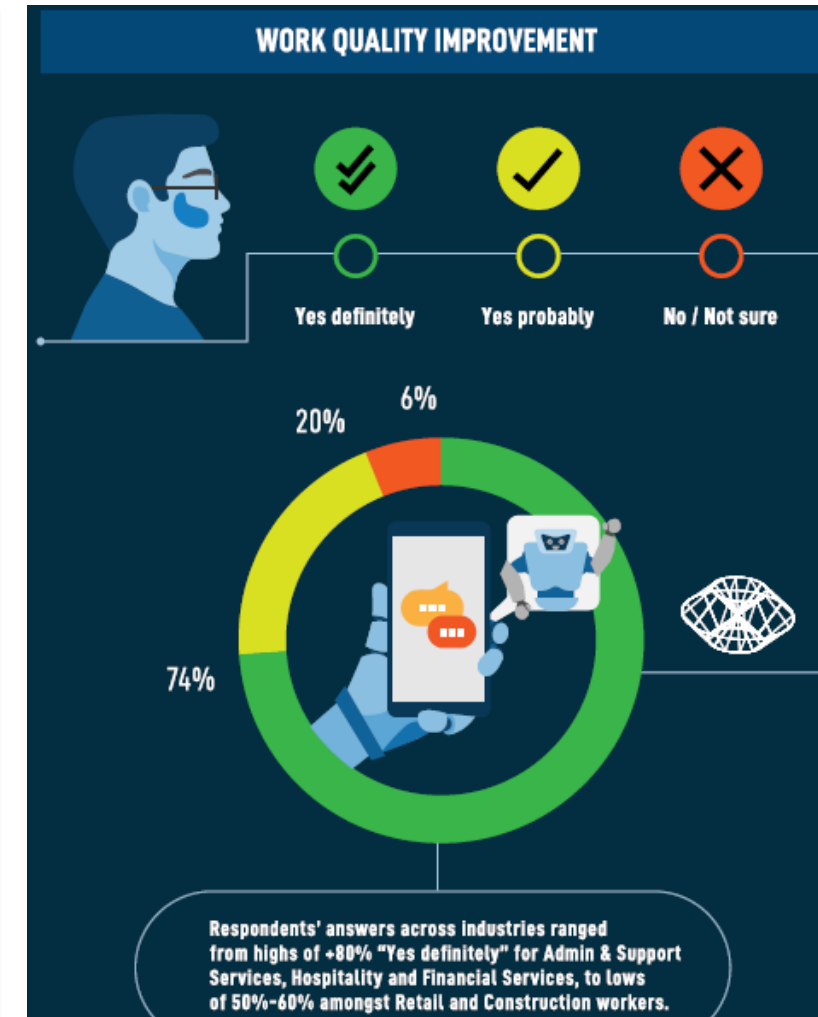
5. Long term planning with short term flexibility
  - a. Long term : objectives (e.g to build a digital economy : need to put in place policy, regulations, partnership building, access to finance, appropriate subsidies)
  - b. Short term : sandboxing, proof of concept
6. Strong governance and regulation but agility
  - a. Sandboxing, proof of concept
  - b. Enabling regulation versus controlling and doing
  - c. Flexibility but accountability
  - d. Define governance framework; adopt agile practices, foster a risk-aware culture
  - e. Continuous improvement processes
  - f. Notice increase in use of the word 'curated' rather than produced

# National Government – Cradle to Grave Digitisation

- A high number of people are potentially 'engageable' – esp via phones, due to
  - Covid-immunisations – individual engagement
  - Government grants – 50% of the population on some type of social welfare
  - General fintech developments
- We under-state what was achieved with Covid vaccinations: education, notifications, booking management etc
- Initiatives to promote digital inclusion could build on success and enrich the potential e.g with smartphones
- So many citizen digitization developments underway
  - IJS (integrated justice system) - the whole cluster, birth to death. ("who am I").
  - Incorporates travel, integrating with border system (under tender). Makes it easier for regular travellers - keeping track. All digitised. Tender out to project manage the first 5.
  - Also includes e-docketing, electronic trail, police to courts, to prisons and rehabilitation : the linkage. 'Citizen record', link. Linked to child support, abuse, tracking etc.
  - Masters office digitized
  - Driver's licences etc are digitised : enables use of post offices etc,
- Integration of systems and information sharing across government is essential
- IFMS : should be the backbone, every department, every tier of government. A project of at least 10 years and very critical.
- Potential procurement platform: Efficiency, transparency, consistency. Follow the examples of Digital Marketplace in Australia, GeM in India, BuyandSell in Canada, G-Cloud in the UK, Merzell in Nordic countries – to name a few

# Artificial Intelligence – Another 2-edged sword

- Many were stunned when free generative AI tools were suddenly made available.
- Uses ranged from creating content (video, art, essays, articles, e-mails) to research, training, and software coding.
- Anyone who has used it knows the results can be stunning.
- 74% of work users in SA said it improved their quality of work
- Behind the scenes, AI is quietly but extensively being imbedded into processes and systems.
- Key concerns are replacing jobs, compromising sensitive data and doomsday scenarios - undermining the very fabric of society.
- Developed countries have already developed policies. They will be exploiting the opportunities, not suffering the consequences

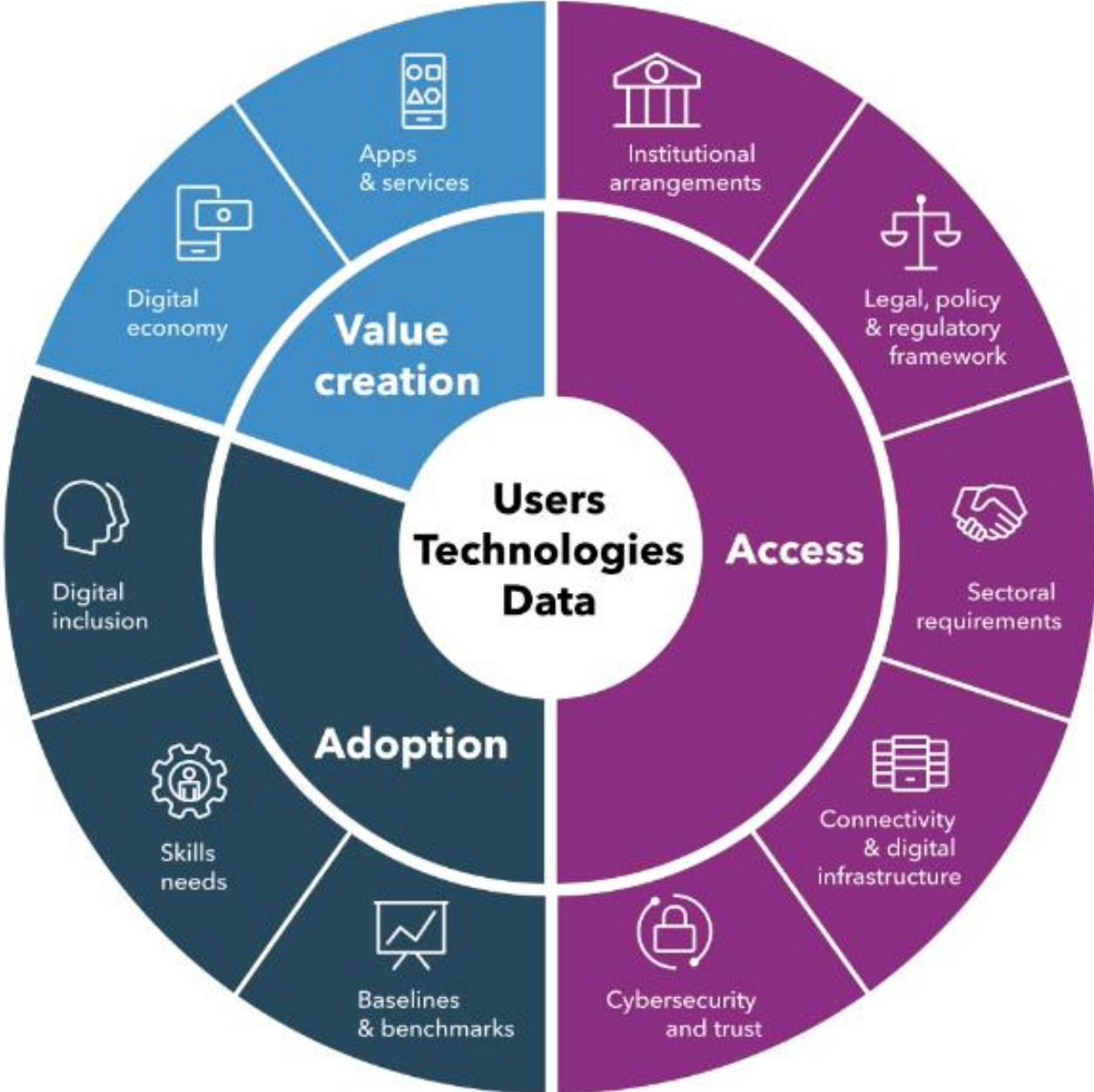




# Let's drive readiness across the wheel

Let's shift to an abundance paradigm

Whilst understanding and appreciating the possibilities and the challenges



# Thank you

**Christopher Geerdts: Managing  
director, BMIT**

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