

DIGITAL AFRICA

TECHNOLOGICAL TRANSFORMATION
FOR JOBS

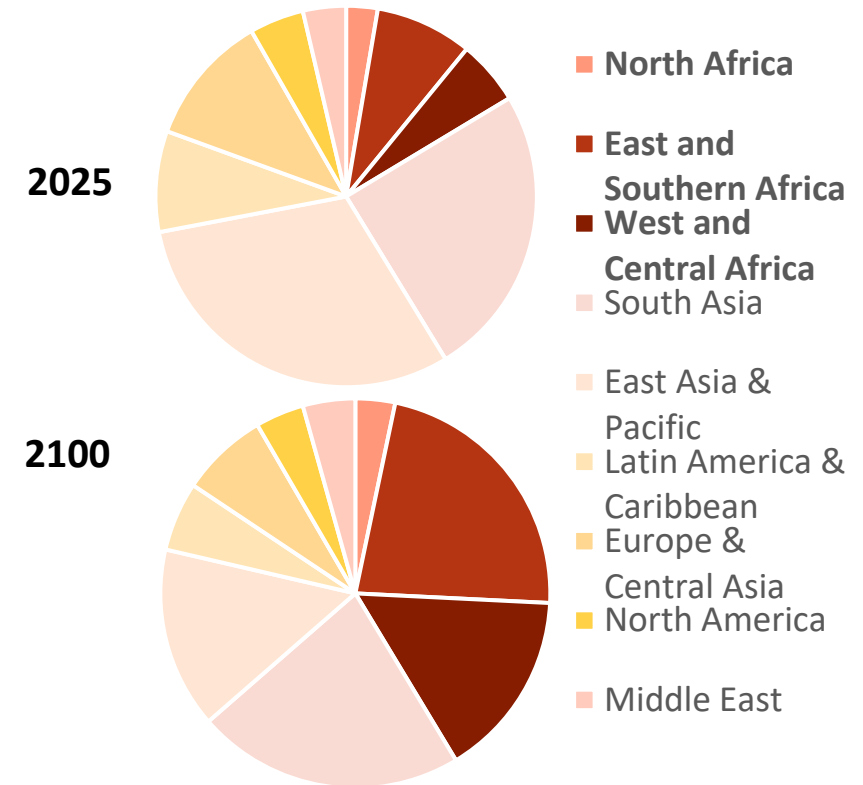
Tania Begazo, Moussa Blimpo, and Mark Dutz

ITU-D Study Group, May 2023

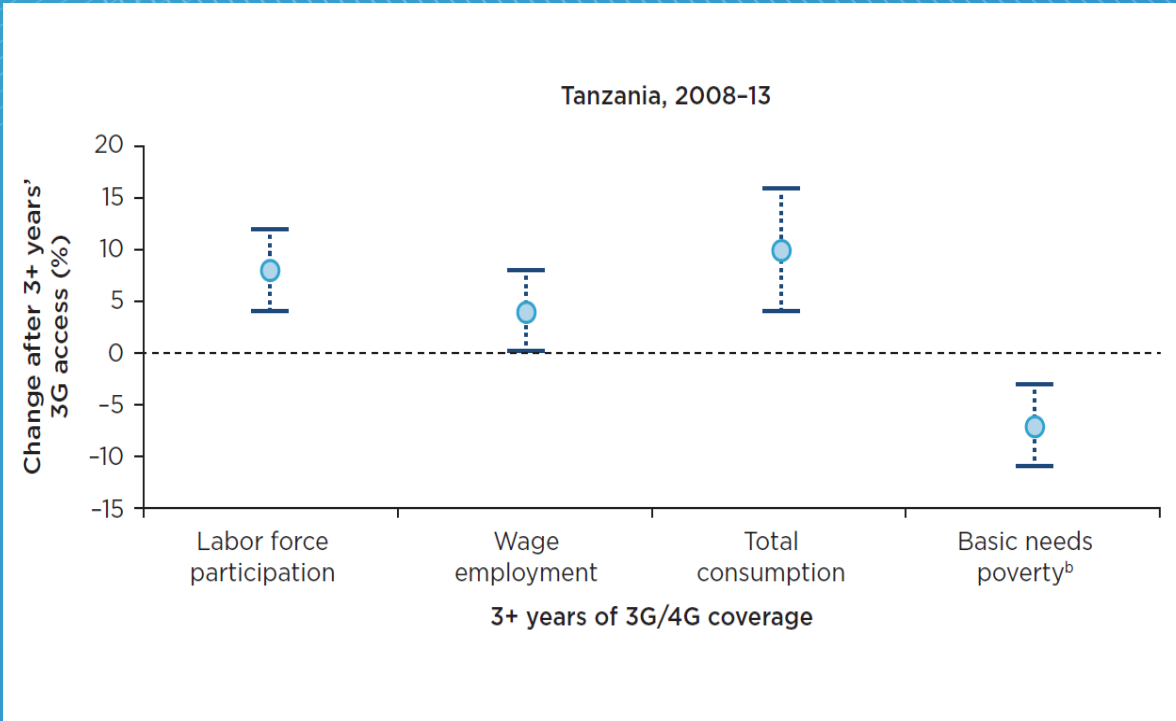
Africa's share of the global workforce is rapidly increasing

- Rising from 17% in 2025 to 43% by 2100
- Roughly 22m people between ages 15-64 join the workforce each year
- Innovation and technology central to growth and job creation

Population between ages 15-64 by region



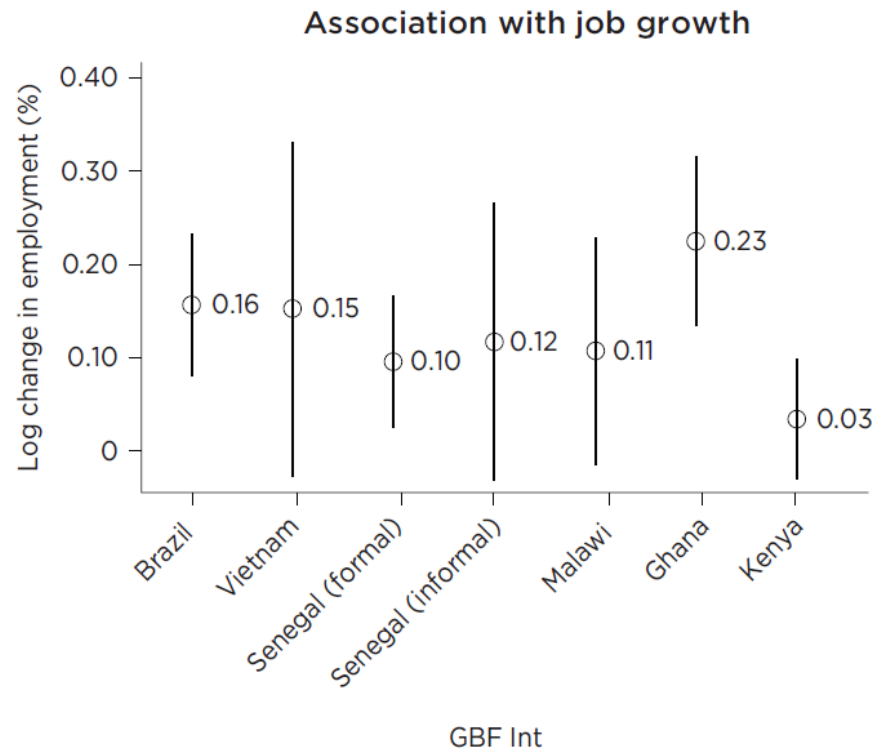
Internet availability has inclusive impacts on jobs and poverty



Inclusive effects:

- Tanzania - Labor force participation increased by 8 percentage points after 3 yrs+ of availability
- Higher welfare, especially among women-headed households with less education & lower incomes
- Similar effects in Nigeria

Enterprises that use more sophisticated DTs are associated with higher productivity and more jobs

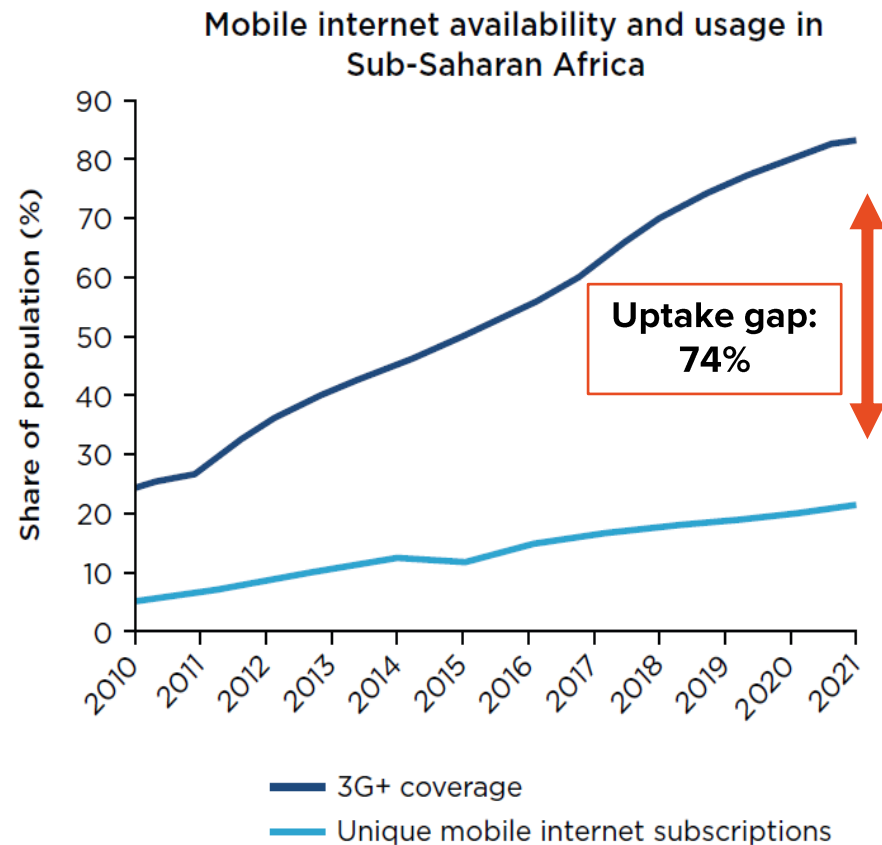


Inclusive effects:

Benefits for

- microenterprises
- informal firms
- low-skilled workers

Despite positive effects, most Africans don't use internet, even where it is available



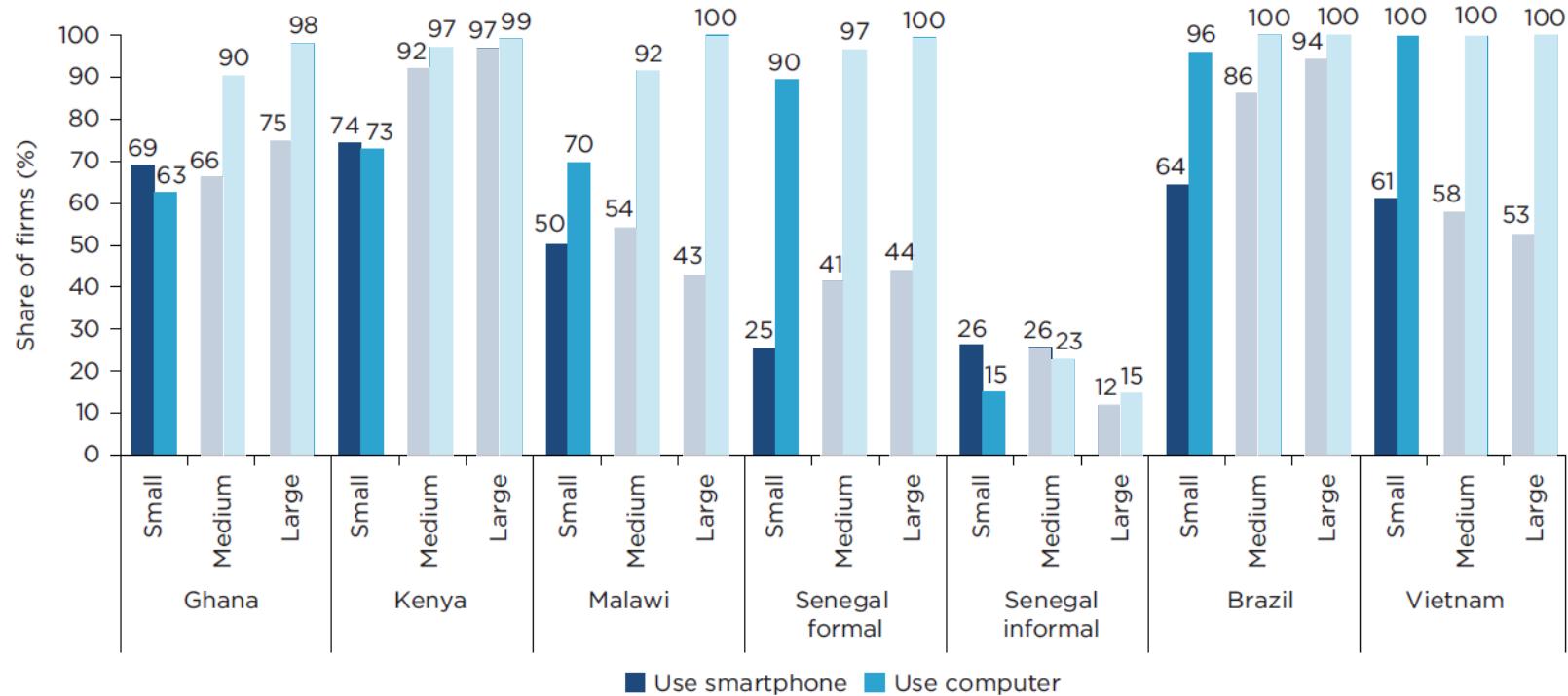
Africa has 84% mobile internet availability (3G+) but only 22% use

SSA's **uptake gap** of 74% (non-users as a share of those with availability) is the highest in the world

and is not receding

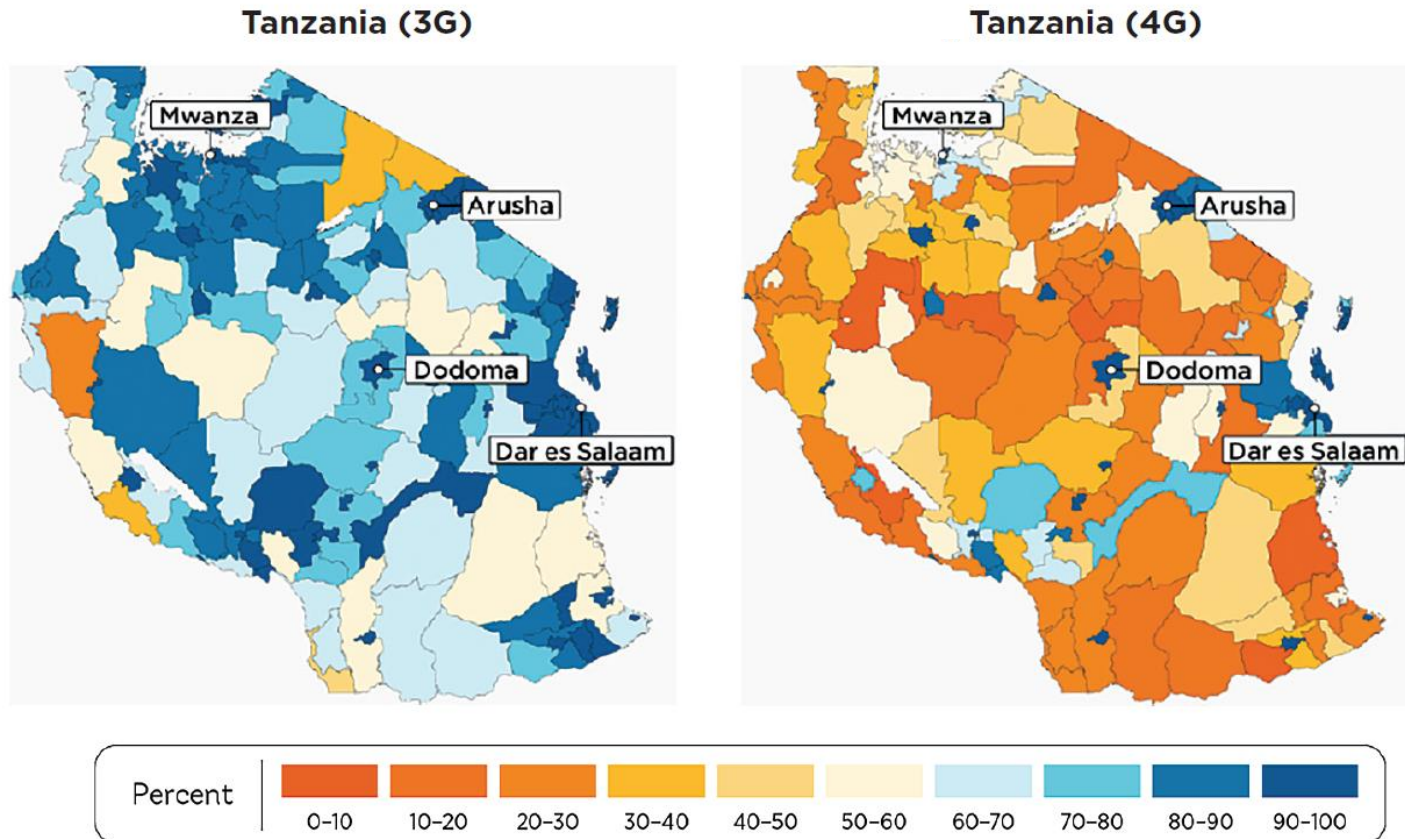
Adoption is behind potential even by enterprises

Technological sophistication is very low, the gaps are greater for small and informal firms: **30-75% of small African firms (5-19 workers) lack basic enablers (smartphones & computers)**



There are urban-rural disparities

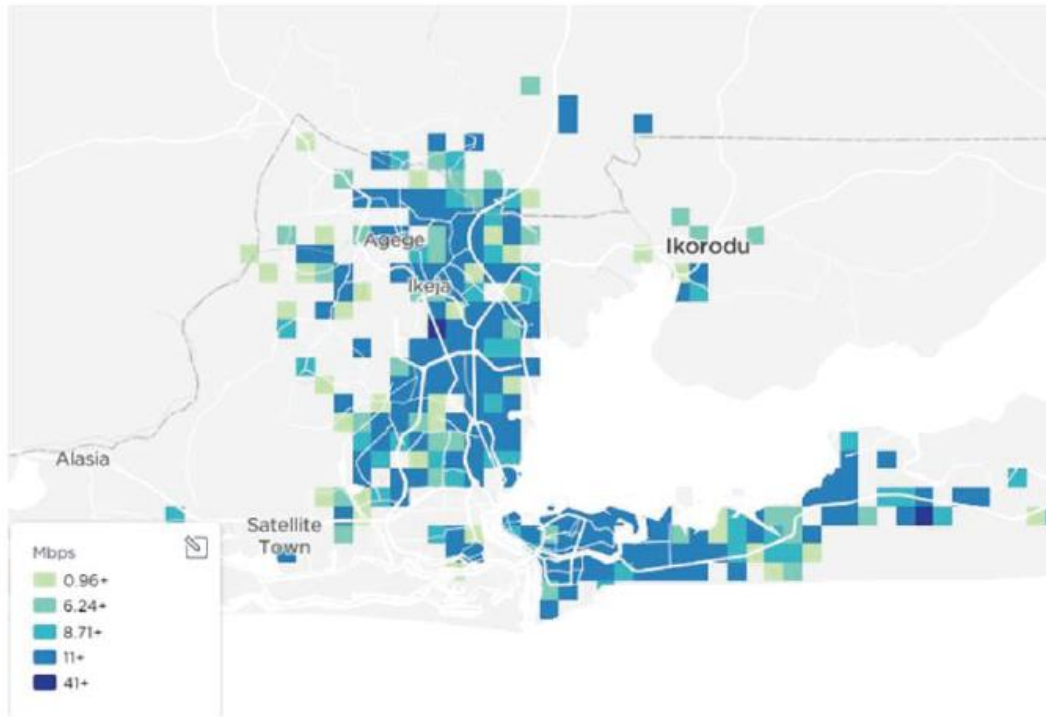
4G is available mainly in cities and download speeds are higher in urban areas.



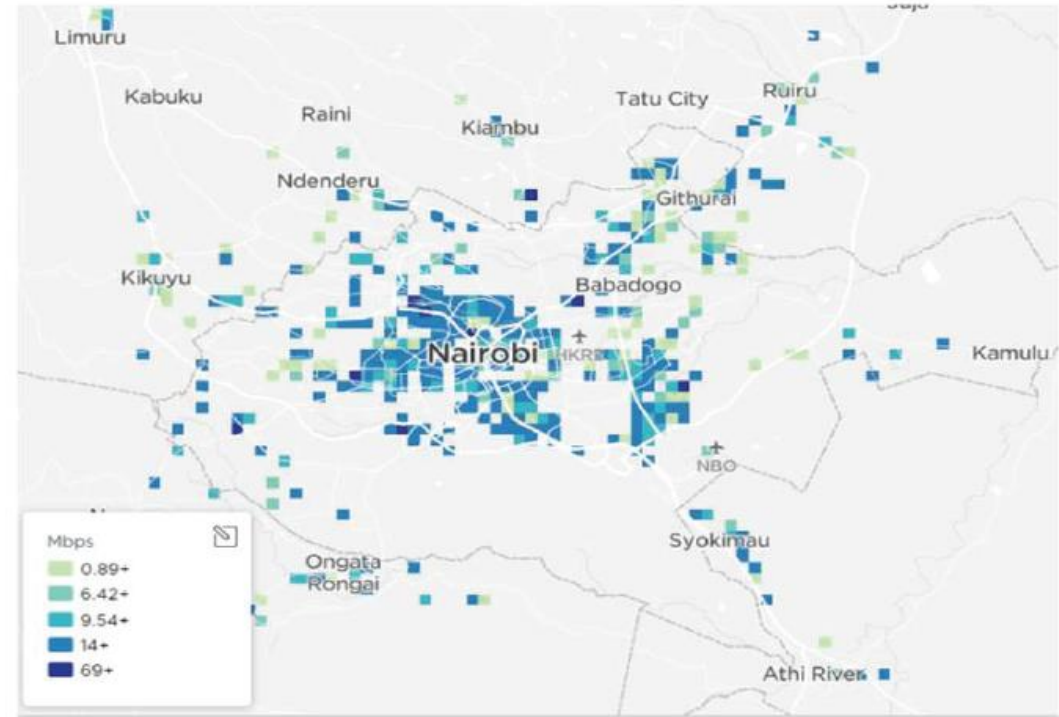
And disparities within cities

Areas with very high download speeds of more than 50 Mbps are often very close to those with speeds below the country average.

Lagos, Nigeria



Nairobi, Kenya

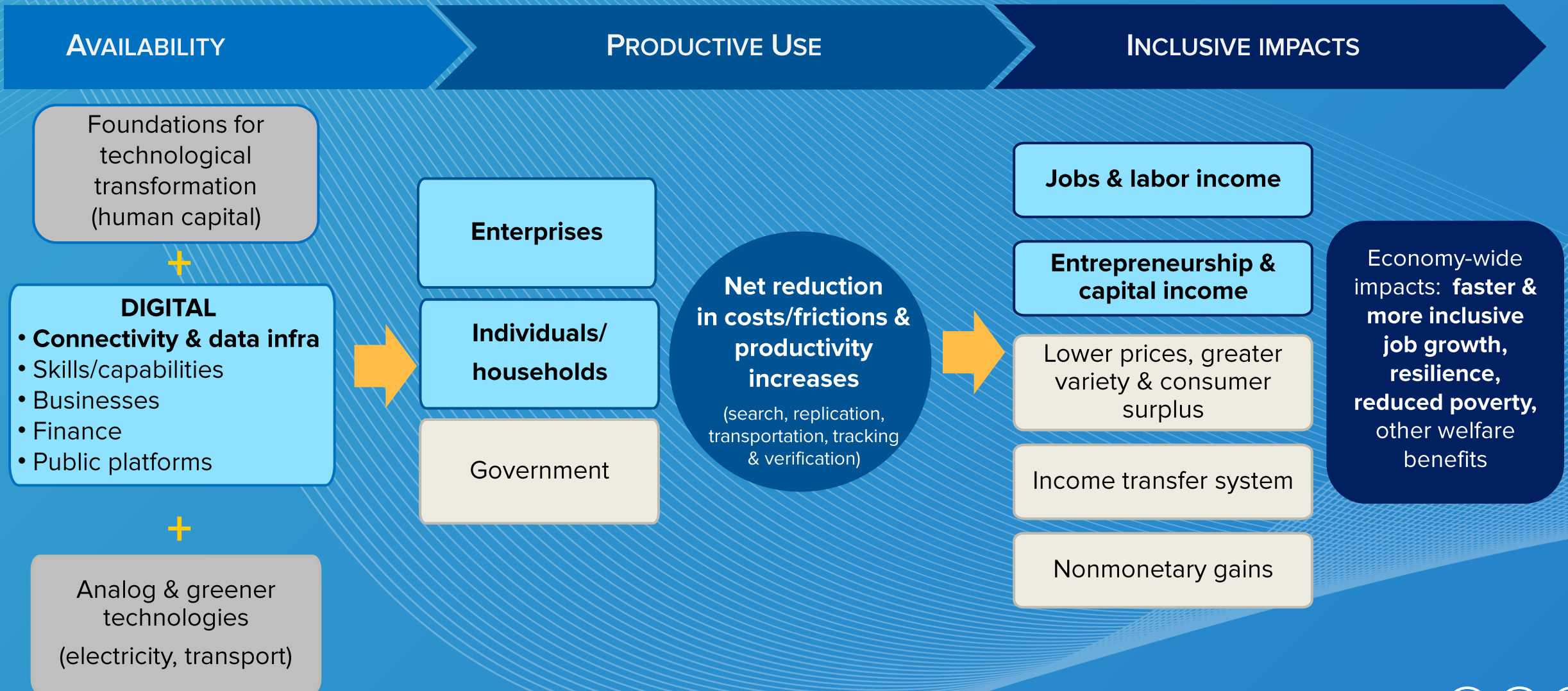


Re-thinking digitalization:

How can we move
from availability of DTs
to productive use for more and better jobs for all?

How to ensure meaningful connectivity?

Bottlenecks are preventing DTs from enabling inclusive jobs



For individuals

Affordability, general skills and attractiveness

- Ability to pay: price, complementary productive assets (electricity)
- General capabilities: linked to awareness & education
- Attractiveness: friends using internet



For enterprises



Ability to pay, capabilities and attractiveness

- Access to finance
- Manager's education, size of business
- Links to larger firms, multinationals

Africa needs activist policies...



Affordable availability policies

- Inclusive ability to pay

Attractiveness and capability policies

- Inclusive willingness to use DTs

Strengthen competition in markets

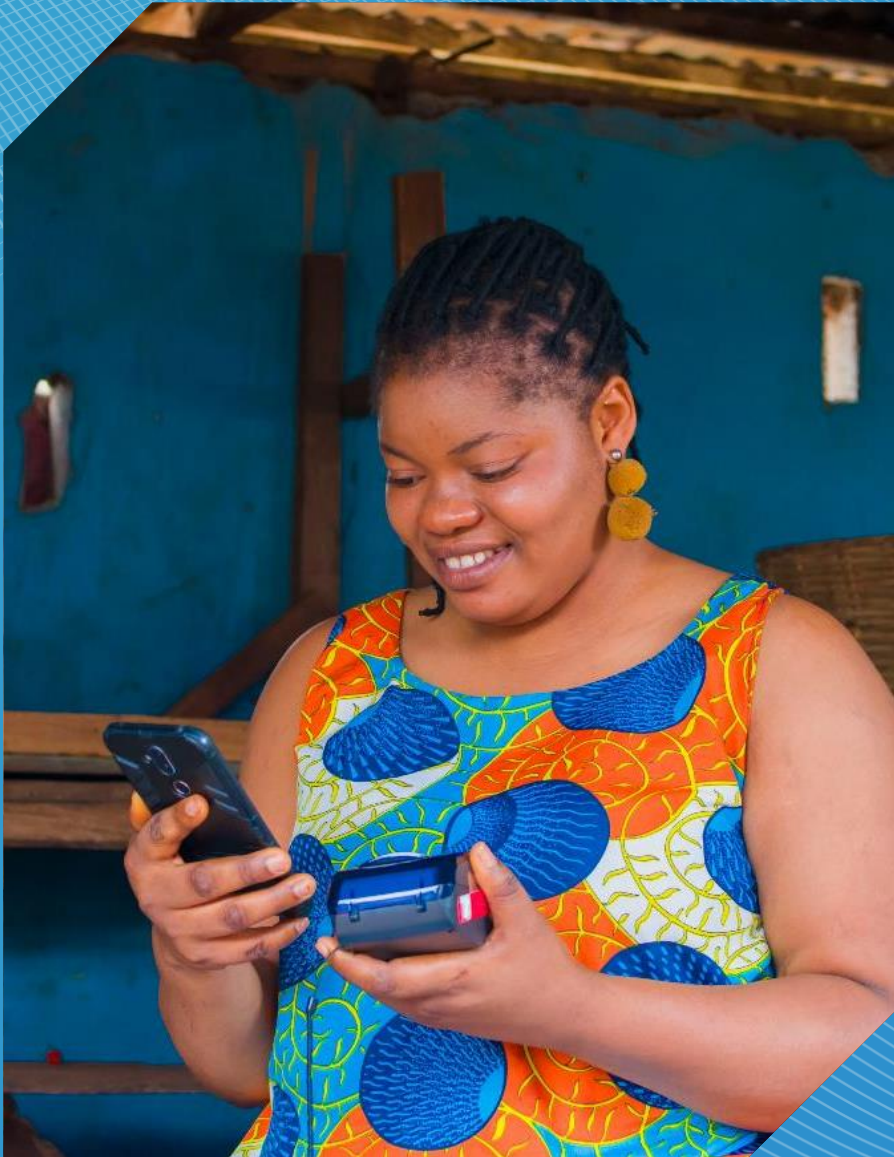
- Market concentration in retail, wholesale fiber networks and international gateways
- Vertical integration of dominant providers
- SOE presence in bottleneck infrastructure

Market structure variable	Upstream infrastructure layer		Middle infrastructure layer		Downstream infrastructure layer		Digital services		
	International connectivity (submarine cables, gateways)	Passive infrastructure (towers)	Fixed wholesale (fiber backbone)	Mobile wholesale (roaming, MVNO, sharing)	Fixed retail	Mobile retail	Mobile money	Data and cloud services	Digital platforms
Concentration (HHI) ^a	AFE	●	●	●	●	●	●	●	5,000+ digital firms headquartered in Africa
	AFW	●	●	●	●	●	●	●	
	NA	●	●	●	●	●	●	●	
Market structure ^b	Monopolies	●	●	●	21 countries allowing for MVNO but no entry	●	●	●	—
	Duopolies	●	●	●		●	●	●	—
New entry (2017-20) ^c	All Africa	●	●	●	●	●	—	—	●
State presence (majority, minority) ^d	SOE	●	●	●	●	●	●	●	—
	SLE	●	●	●	●	●	●	●	—



Improve sector regulation, focus on implementation

- Pro-competition rules:
spectrum, licenses, dominant
operators
- Cost-reduction enablers:
neutral spectrum,
infrastructure sharing, (excise)
taxes



Complement with demand-side interventions

- Targeted subsidies (vouchers), social tariffs
- Financing for devices and applications
- Availability of digital solutions and analog complements for income generation
- Programs to expose users to digital technologies



Boost capabilities & attractive DTs

- National strategies for productive use of DTs: what DTs? what complements?
- Innovation and technology policies: how to adopt & create DTs for African needs?
- Data policies and regulations for new apps and trust
- Capability support programs for enterprises and individuals



Looking ahead

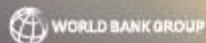
Take advantage of benefits from **deeper regional integration** (single digital markets for connectivity, data and digital services/apps)

Adopt more **environmentally friendly DTs for climate action**, especially for social and economic resilience

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**Access the book in English and
overview in French here**

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