

A digital transformation for Africa:

**Opportunities and challenges for more productive and inclusive
business-driven growth**

**Keynote address, 23rd EACO Congress
Mwanza, Tanzania
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Outline

1. The promise of Africa's digital transformation
2. What it needs to succeed
3. How to get there: regional harmonization to accelerate Africa's digital transformation
 - A Single Digital Market for East Africa (SDM) report
 - ECOWAS ICT African Regulatory Watch Initiative (ARWI) report
 - New themes
 - Create **bigger markets** with more competition
 - Increase **affordability** for poor people through subsidies

1. Why a digital transformation? Jobs!

The adoption of digital technologies can help:

- build **skills** of all people – including the lower-educated
- boost **productivity** of all enterprises – including informal ones
- create **jobs** across all sectors – agriculture, manufacturing and services

Reaching the AU's goal of universal and affordable internet coverage would:

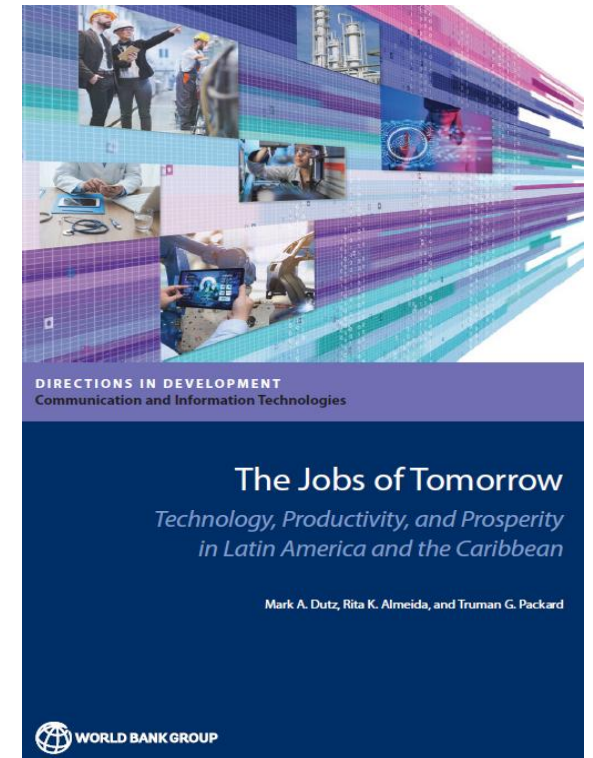
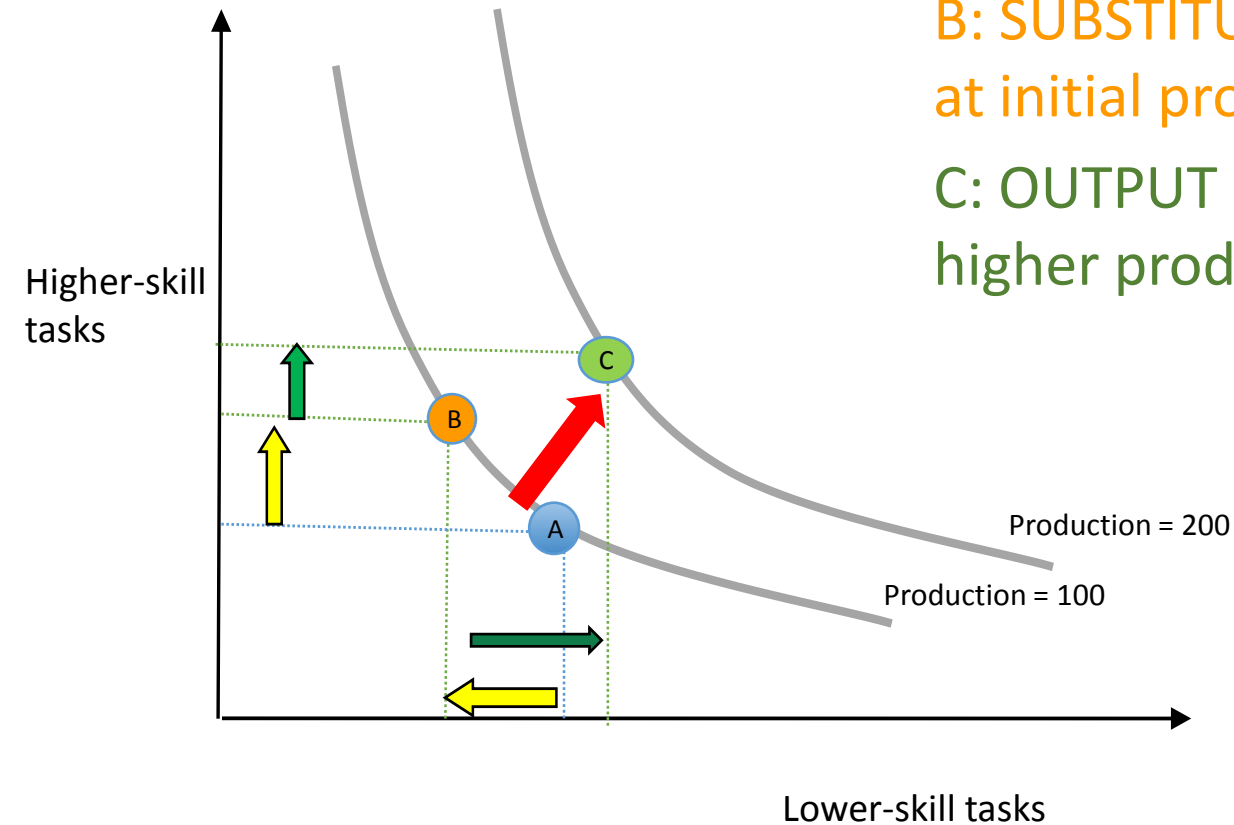
- **raise growth per capita by 2 percentage points per year**
- **reduce the poverty headcount by 1 percentage points per year**

With human capital investments, the effects could more than double

How do digital technologies create jobs?

Increased production by businesses can enable jobs for all

- A: starting point: relatively more lower-skilled jobs but few
- B: SUBSTITUTION EFFECT - shift to more higher-skilled jobs at initial production level
- C: OUTPUT EXPANSION EFFECT – more jobs for all with higher production

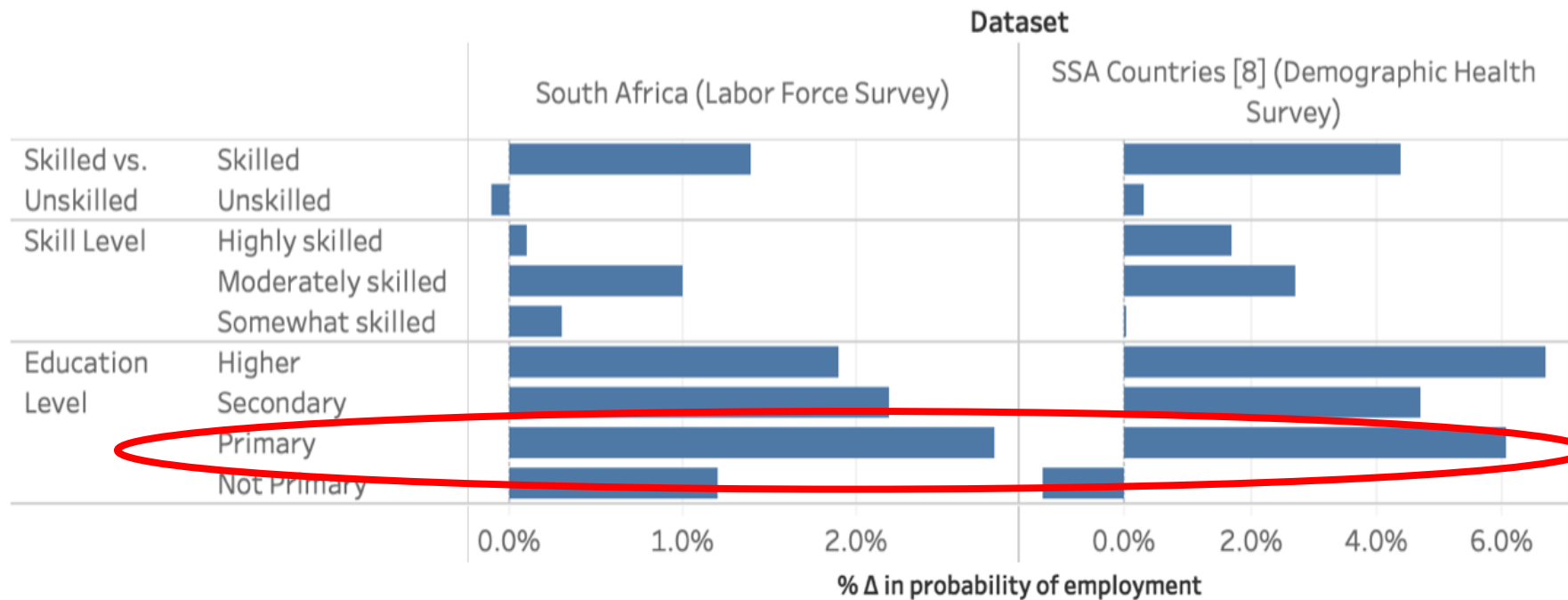


Adoption of digital technologies creates high- and low-skill jobs

COUNTRY	YEARS	SECTORS	VARIABLE	JOBS				PRODUCTIVITY
				TOTAL	HI-SKILL	LO-SKILL	GAP	
Argentina	2010-12	Manufacturing	investment in ICT capital	+	+	+	+	+
Chile	2007-13	Economy-wide	complex software use	+	0	+	-	
Colombia	2008-14	Manufacturing	hi-speed Internet use	+	+	+		+
Mexico	2008-13	Manufacturing	Internet use	+	+	+	+	+
		Services	Internet use	+	+	+	0	+
		Commerce	Internet use	+	+	+	0	+

Source: Argentina: Brambilla & Tortarolo (2018); Chile: Almeida, Fernandes and Viollaz (2017); Colombia: Ospino (2018); Mexico: Iacovone & Pereira-López (2018) – all available as World Bank Policy Research Working Papers; see Dutz, Almeida and Packard (2018)

In Africa, faster internet increases jobs across education levels



- The **likelihood that a worker is employed increases** by 3.1% in South Africa, 6.9% across 8 countries (Benin, D.R. Congo, Ghana, Kenya, Namibia, Nigeria, Tanzania and Togo)
- **Moderately skilled occupations contribute most** to the increase in jobs
- **Even the lower-educated benefit:** the increase in the jobs rate is of comparable magnitude for those with tertiary, secondary and primary education

2. What do digital technologies need to succeed?

Governments need to ensure “analog complements” are in place, including:

- **Competition**: rivalry stimulates businesses to invest in innovation
- **Capital**: not just money, also support for
 - entrepreneurial & worker skills
 - infrastructure—electricity & transport as well as internet
- **Capacity**: investment in social protection—to support:
 - risk-taking by entrepreneurs & workers
 - transitions between jobs

3.How to get there?

Regional harmonization to accelerate the digital transformation

Ongoing themes:

3.1 Increase **regulatory harmonization** through SDM initiatives: East Africa SDM report

3.2 Increase **regulatory accountability** through benchmarking: West Africa ARWI report

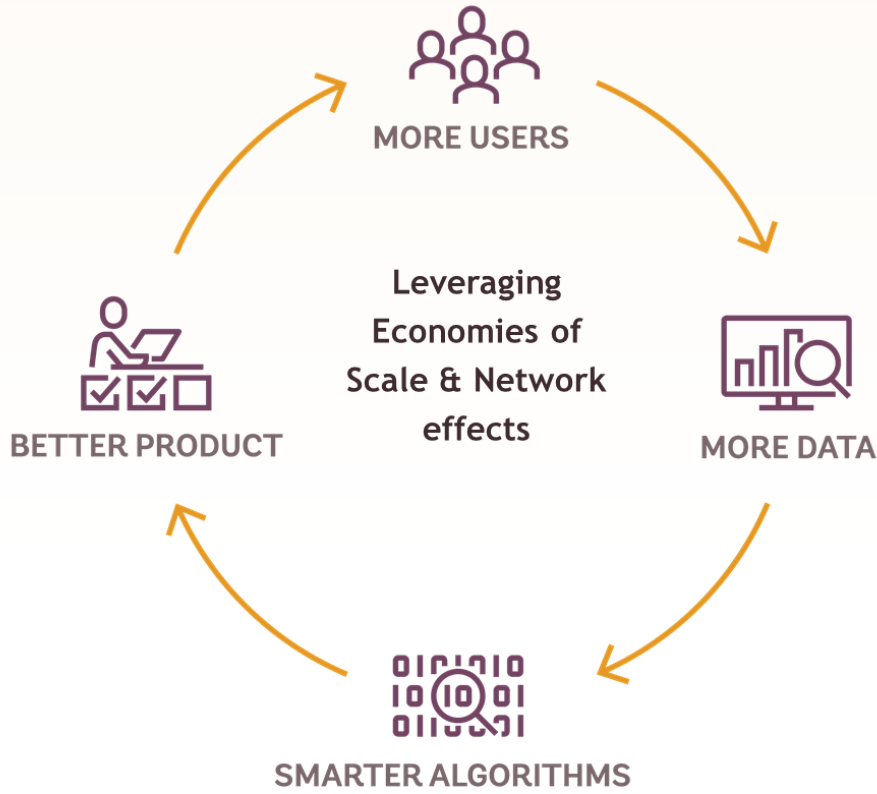
3.3 New themes:

(1) Create bigger markets: through asset sharing & trading while ensuring more competition

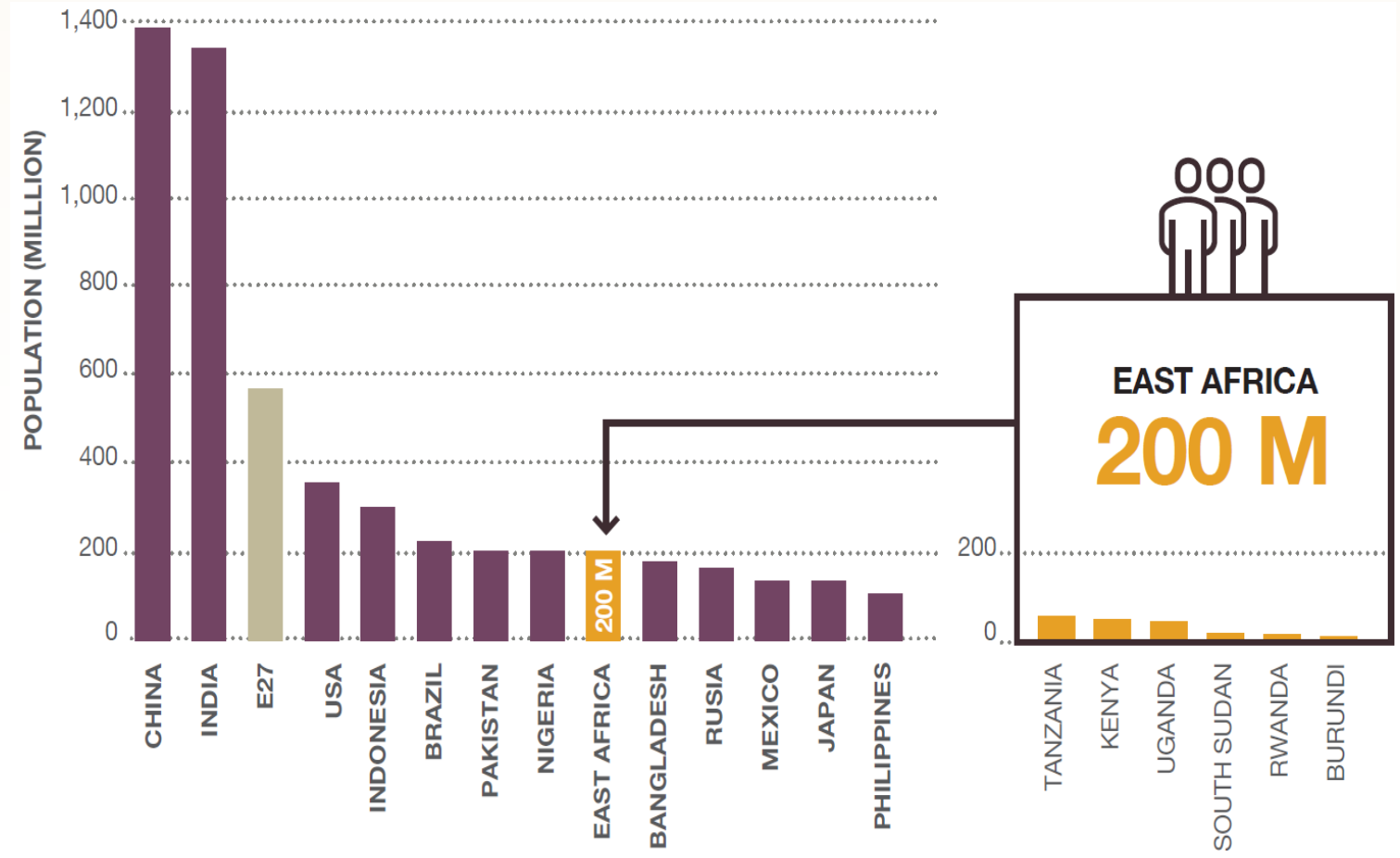
(2) Increase affordability: through efficient subsidies, lower costs for unconnected

- Increase **regulatory capacity** through regional hubs

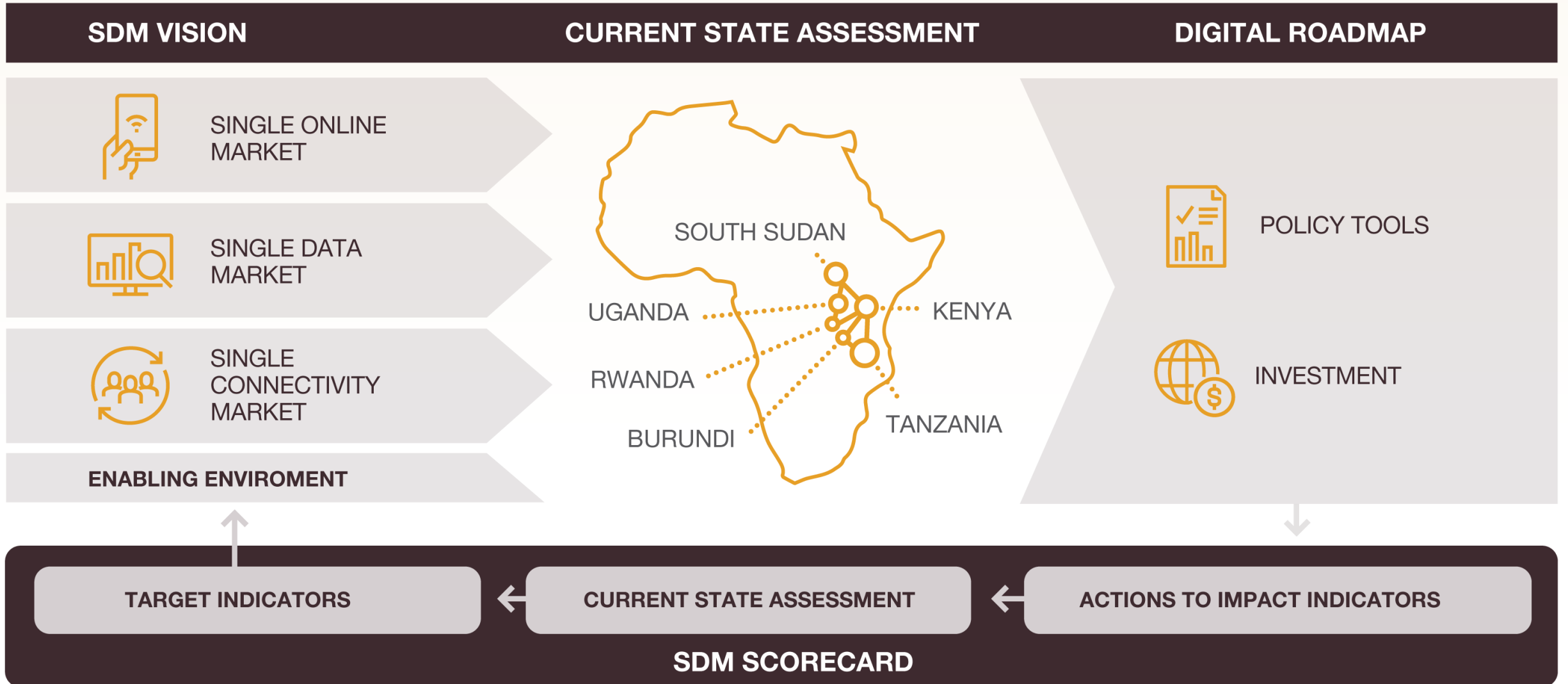
3.1 East Africa SDM: Integration is critical for digital economies to reach their full potential



East Africa is the 9th largest market globally by population



East Africa SDM Report



SDM Strategic Framework

PROMOTE THE DIGITAL MARKET

- Digital ID
- Digital payments
- E-transactions
- Consumer protection
- Digital public services
- Trade and customs
- Logistics



REMOVE CROSS-BORDER BARRIERS

- Ensure e-commerce, digital services and the functions that support them all work across borders
- Remove trade and customs barriers for goods purchased online

- Data protection and privacy
- Cybersecurity
- Content regulation



- Ensure the data protection and privacy laws allow for cross-border data transfers
- Share cybersecurity resources in the region

- Infrastructure
- Services



- Remove cross-border barriers to infrastructure and connectivity (wholesale and retail)

ENABLING ENVIRONMENT

DIGITAL SKILLS

INNOVATION ENVIRONMENT

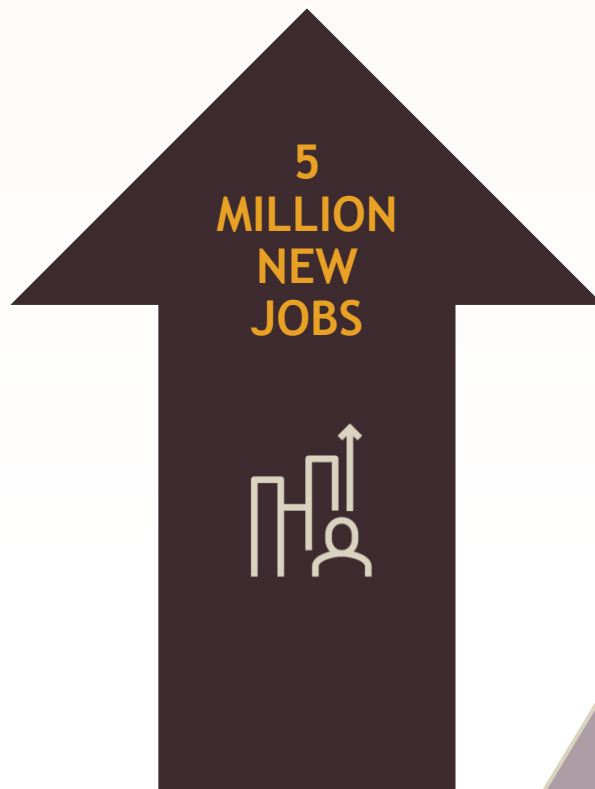
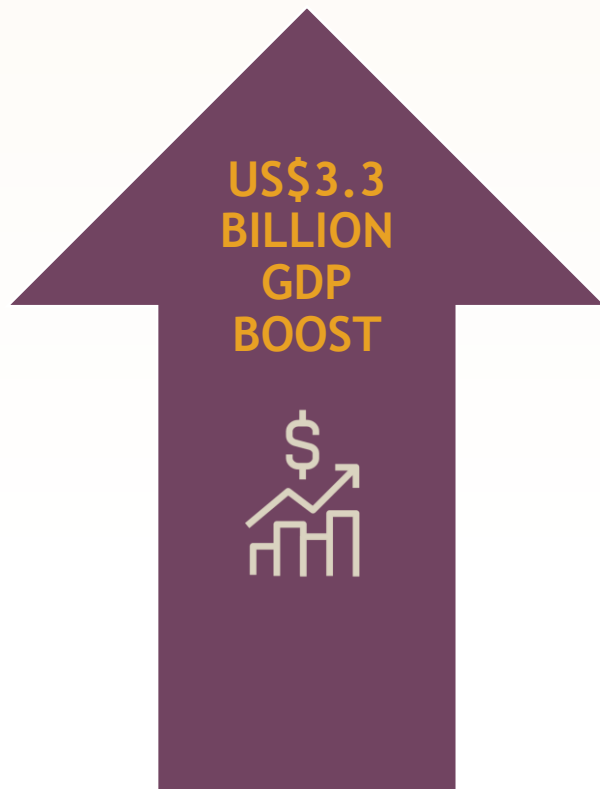
HARD INFRA' (E.G.POWER)

CAPITAL FINANCING

DIGITAL LEADERSHIP

- Where relevant, create scale for these analogue complements across the region

Estimating the Impact





SDM Roadmap: Single Connectivity Market

Objective: Stimulate connectivity infrastructure development

- Regionally coordinate reduction in taxes, fees, and procedures for infrastructure deployment
- Investigate the feasibility of a single regional 4G or 5G license (including coverage obligations for each country)

Objective: Lower regional transit costs for landlocked countries

- Establish a low-cost, open access regional backbone interconnection regime
- Ensure that ISP licenses and IXP policies enable regional connectivity and traffic exchange at any IXP in the region

Objective: Improve affordability and quality of services

- Coordinate update of market competition regulations and policies in each country based on best practice
- Coordinate regional elimination of import and services taxes for consumer devices and connectivity services
- Extend One Network Area (ONA) coverage to data services in all countries

3.2 ECOWAS ICT African Regulatory Watch Initiative

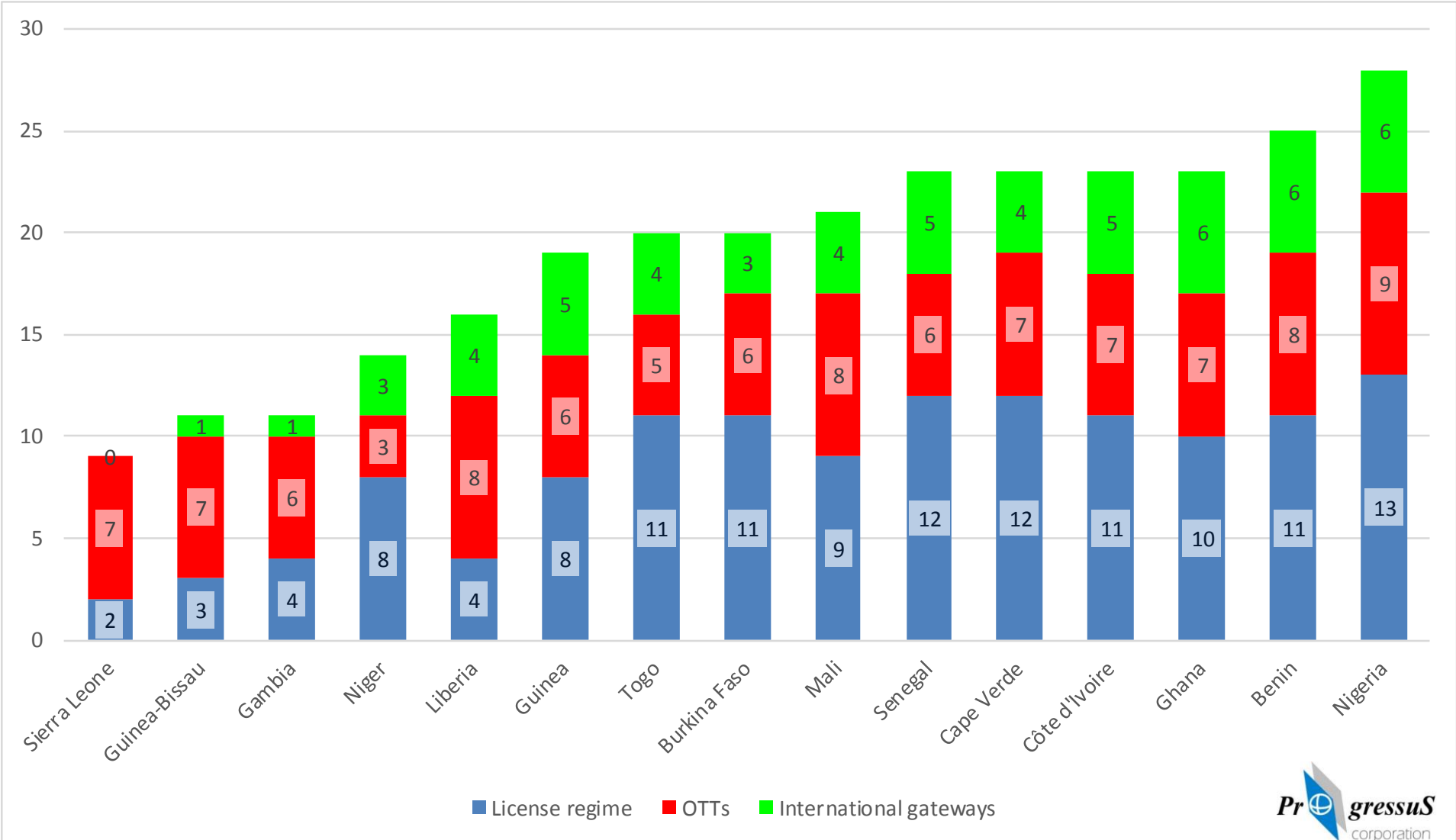
METHODOLOGY

- **3 specific areas**
 - Licensing regimes: 8 indicators
 - OTTs: 6 indicators
 - International gateways: 4 indicators
- **5 steps methodology**
 - Conduct a regulatory and competitive assessment
 - Identify main regulatory bottlenecks and remedies
 - Model ARWI to capture regulatory bottlenecks: maximum score of 36
 - Benchmark and disseminate ARWI
 - Evaluate ARWI through an M&E framework

METHODOLOGY

Cluster	Indicator
License Regime	Openness
	Clarity and transparency
	Infrastructure licensing
	Market Data Published by Regulator
	Mobile Number Portability in Force
	Dominant Operators Identified under SMP system
	Public Wholesale Reference Interconnection Offers Required
	Competition Law & Authority 2016
Over the Top (OTT) Services	Favorable Regulation
	Data Protection Legislation
	VoIP / Virtual Numbers (DIDs) support 2018
	Favorable Sector Specific Tax Burden 2015
	USF Levy 2016
	Consumer Taxes 2015
International Gateway Liberalization	Competitive/ Open Access International Capacity
	International capacity pricing included in RIOs
	Access to International / National Connectivity
	Govt Surtax on International Incoming Voice Traffic (SIIT/IGMS)

RESULTS PER COUNTRY



NEXT STEPS

- **Update** data collection
 - Index to be calculated every year => track link with concrete regulatory changes
- Extend to **more subjects** to explore broader effects of regulation
 - spectrum regulation, taxation, mobile payment, cybersecurity, data protection...
- Extend to **more countries**
 - EAC, COMESA...

3.3. New themes (1) Bigger markets: Pro-competition regulation

Harmonized policies can attract more private investment and support network coverage:

- What are the **benefits of asset sharing** while ensuring competition?
 - Facility-sharing oligopolies with regulation of the sharing prices: operators can evolve into non-regulated competitors as demand deepens
 - Wholesale Open-Access Networks
- What are the **benefits from national best-practice & harmonized rules** for:
 - spectrum trading
 - more pro-competition spectrum auction design
 - better use of under-utilized public and alternate networks
 - better coordination of investments in border regions
- How to best ensure that entry is enabled for **new and smaller local players**?

(2) Poverty reduction: Subsidization to connect the unconnected

Subsidies are required. **What are the benefits of a regional approach?**

- What to do with existing USFs (focused on broadband with 3rd parties to manage them)?
- What role for “play vs pay” in USF approaches?

To what extent are subsidies for supporting universal access required:

- to address **inadequate purchasing power** of poor people
- to boost **skills and local content**?

Should subsidies be of demand or of supply?

- **Demand subsidies:** monopoly power that could absorb the subsidies must be controlled
- **Supply subsidies** can be linked to spectrum licensing or allocated on a competitive basis

Summary: Success requires policy design and implementation supported by data and analyses

The promise of Africa's digital transformation: Economy-wide benefits

- Build **skills**
- Boost **productivity**
- Create **jobs**

Success requires: Analog complements...

- **Competition**
- **Capital**
- **Capacity**

...supported by further regional regulatory harmonization

- Create **bigger markets** with more competition
- Increase **affordability** for poor people through subsidies