

Digital Economy for Africa Initiative

*Every African Individual
Business and Government to be
Digitally Enabled by 2030*

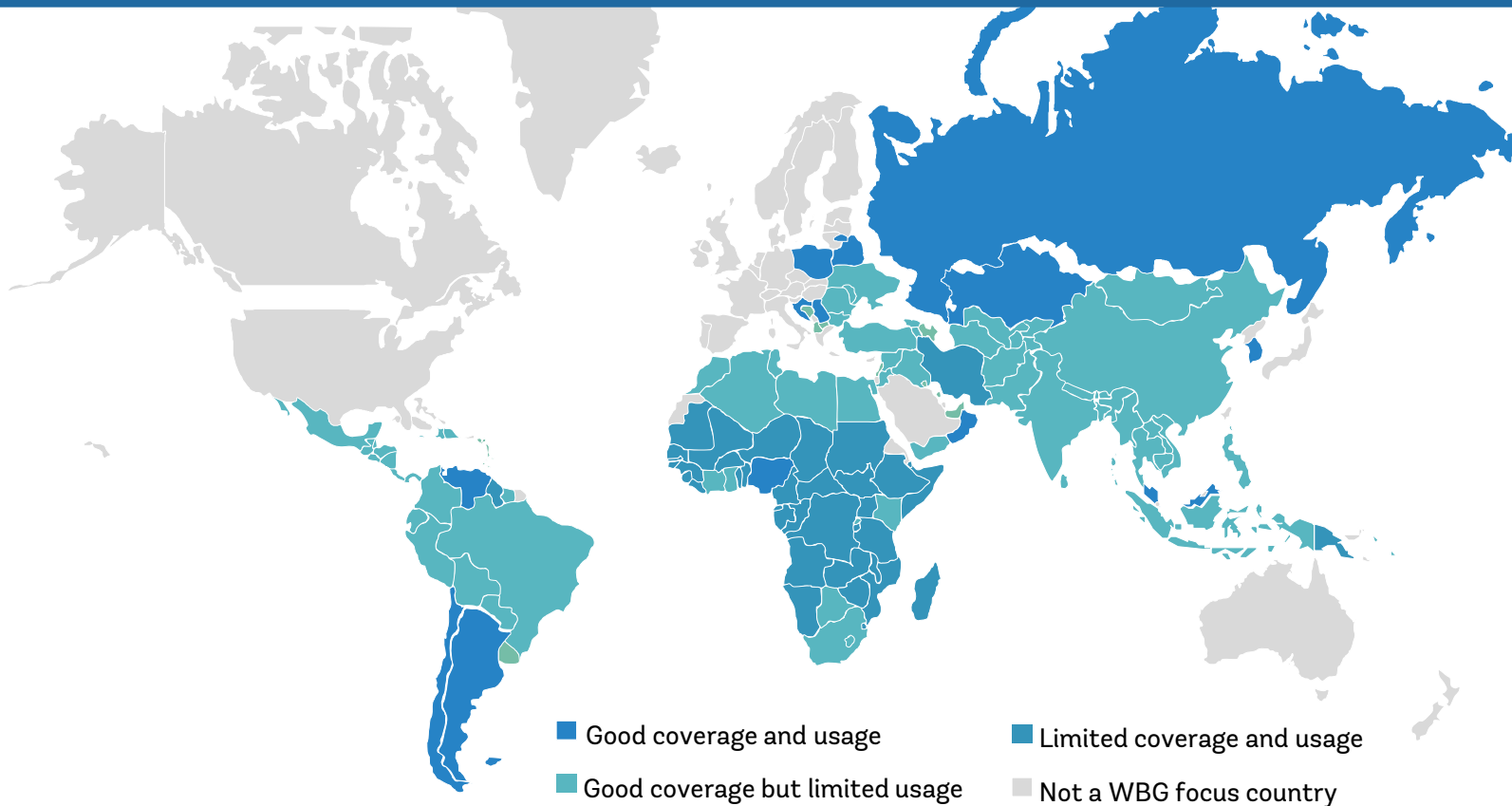
Digital Economy for Africa

➤ Digital Economy & Africa's development

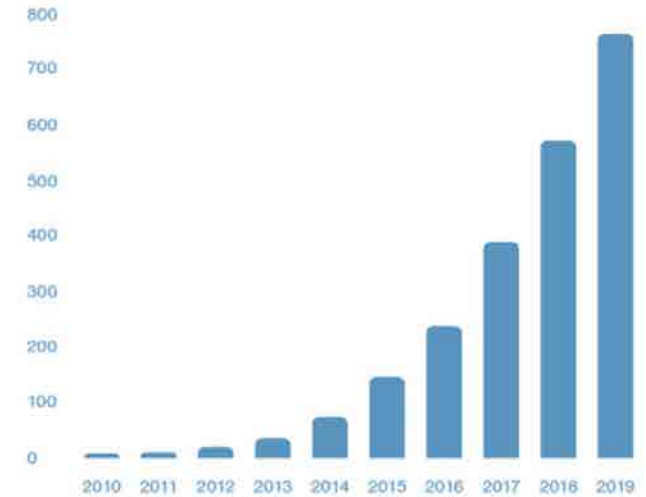
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- DE4A Approach to Digital Infrastructure
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- DE4A Approach to Digital Entrepreneurship
- The Case for a Single Digital Market
- How to get there?



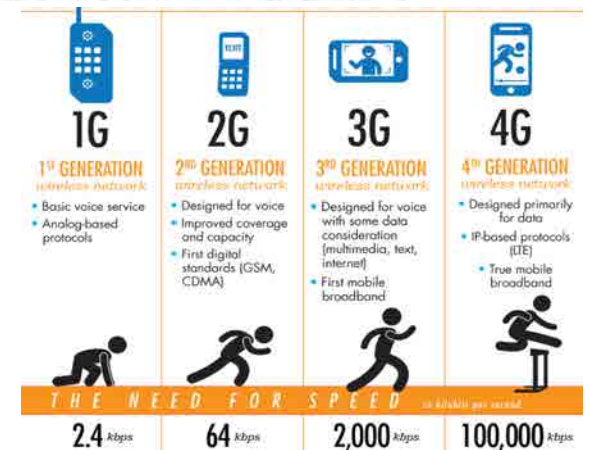
Africa's Digital Evolution Has Been Impressive, But Gradual Evolution Is No Longer Sufficient



Source: GSMA Intelligence (2017), World Bank – World Development Indicator (2017)



20X
 growth in mobile data traffic
 between 2013 and 2019



Over last 5 years, **entrepreneurship ecosystem**, through incubators, accelerators and tech hubs, has grown 10-fold in Africa.

SS Africa has the highest % of mobile money use in any region, showing that there are opportunities for leapfrogging with new financial technology.

North Africa Egypt and Djibouti have strong international connectivity links

Digital economy can unlock new pathways for inclusive growth, innovation, job creation, service delivery, and poverty reduction in Africa

- **The continent has made great strides in mobile connectivity; however, it still lags the rest of the world in access to broadband.**
 - ❑ Only 27 percent of Africa's population has access to the internet,
 - ❑ few citizens have digital IDs,
 - ❑ businesses are slowly adopting digital technologies, and
 - ❑ only few governments are investing strategically in developing digital infrastructure, services, skills, and entrepreneurship.
- **The digital transformation of Africa would foster economic growth and reduce poverty.**
 - ❑ It has the potential to create more jobs, encourage entrepreneurship among the youth, increase farmers' productivity, bring more women into the labor force, and create markets.
 - ❑ **Reaching the Digital Economy Transformation Initiative targets would raise growth per capita by 1.5 percentage points per year and reduce the poverty headcount by 0.7 percentage point per year.**
 - ❑ The potential growth benefits and poverty reduction effects are larger in Sub-Saharan Africa, and especially among fragile countries.
 - ❑ When complemented with appropriate human capital investments, these effects could more than double.
- **Access to broadband is critical but not sufficient to materialize these digital dividends.** The digital economy also requires a strong analog foundation, consisting of regulations that create:
 - ❑ a vibrant business climate and let firms leverage digital technologies to compete and innovate;
 - ❑ skills that allow workers, entrepreneurs, and government officials to seize opportunities in the digital world; and
 - ❑ accountable institutions that use the internet to empower citizens.

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DE4A initiative: the importance of adopting an ecosystem approach to reach Digital Economy

Approach principles

| | |
|-----------------------|--|
| Comprehensive | Taking an ecosystem approach that looks at supply and demand and defies a narrow silo approach in defining the requisite elements and foundations for digital economy. |
| Transformative | Aiming at a very different scale of ambition beyond incremental 'islands' of success. |
| Inclusive | Digital Economy for 'everyone, in every place, and at all times' creating equal access to opportunities and dealing with risks of exclusions. |
| Homegrown | based on Africa's realities and unleashing the African spirit of enterprise to have more homegrown digital content and solutions, while embracing what is good and relevant from outside the continent. |
| Collaborative | dealing with the digital economy requires a different flexible 'mindset' requiring different type of collaboration among countries, among sectors and among Public and private players, facilitation, retooling and encouraging risk taking. |

Digital Economy foundations

APPLICATIONS LIKELY TO DEVELOP ONCE THE FOUNDATIONAL ELEMENTS ARE IN PLACE:

- GOVTECH applications
- E-COMMERCE
- OPEN BANKING: non-banks offer tailored services
- DATA LOCKERS to access selected services



USAGE



DIGITAL ENTREPRENEURSHIP



DIGITAL FINANCIAL SERVICES



DIGITAL INFRASTRUCTURE

DIGITAL SKILLS AND LITERACY

DIGITAL PLATFORMS



Cross cutting areas:

- Strong regulatory frameworks to foster competition and MFD agenda
- Manage risks: data privacy, cyber security
- Opportunity to empower women and apply to FCV

DE4A initiative: Every African individual, business and government is Digitally Enabled* by 2030



DIGITAL INFRASTRUCTURE

Universal Internet network coverage

Affordable Internet for All at less than 2% of GNI per capita

Interim Milestone
Doubling broadband connectivity by 2021



DIGITAL SKILLS

All 15 year old students with basic 'digital skills' competencies

100,000 graduates in advanced digital skills programs annually



DIGITAL PLATFORMS

Doubling of Online Services Index rating for all Governments

All individuals are able to prove their identity digitally

At least 50% of the population regularly uses the Internet to access Government or Commercial services



DIGITAL FINANCIAL SERVICES

Universal Access to Digital Financial Services

Africa-wide payments infrastructure/platform in place



DIGITAL ENTREPRENEURSHIP

Tripling the number of new digitally-enabled businesses created annually (TBC)

Financing for Venture Capital to reach .25% of GDP (TBC)

* Being "Digitally Enabled" implies having digitally-enabled access to services, markets, opportunities.

The WBG's Digital Adoption Index may be a relevant indicator for measuring this, complemented by the headline measures above for the 5 foundations

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MFD Approach: Reforms and Investments Are Necessary Across the Internet Value-Chain

4

Africa's Invisible Mile

- Policy and regulatory reform Cybersecurity and nonvisible areas all require development

1

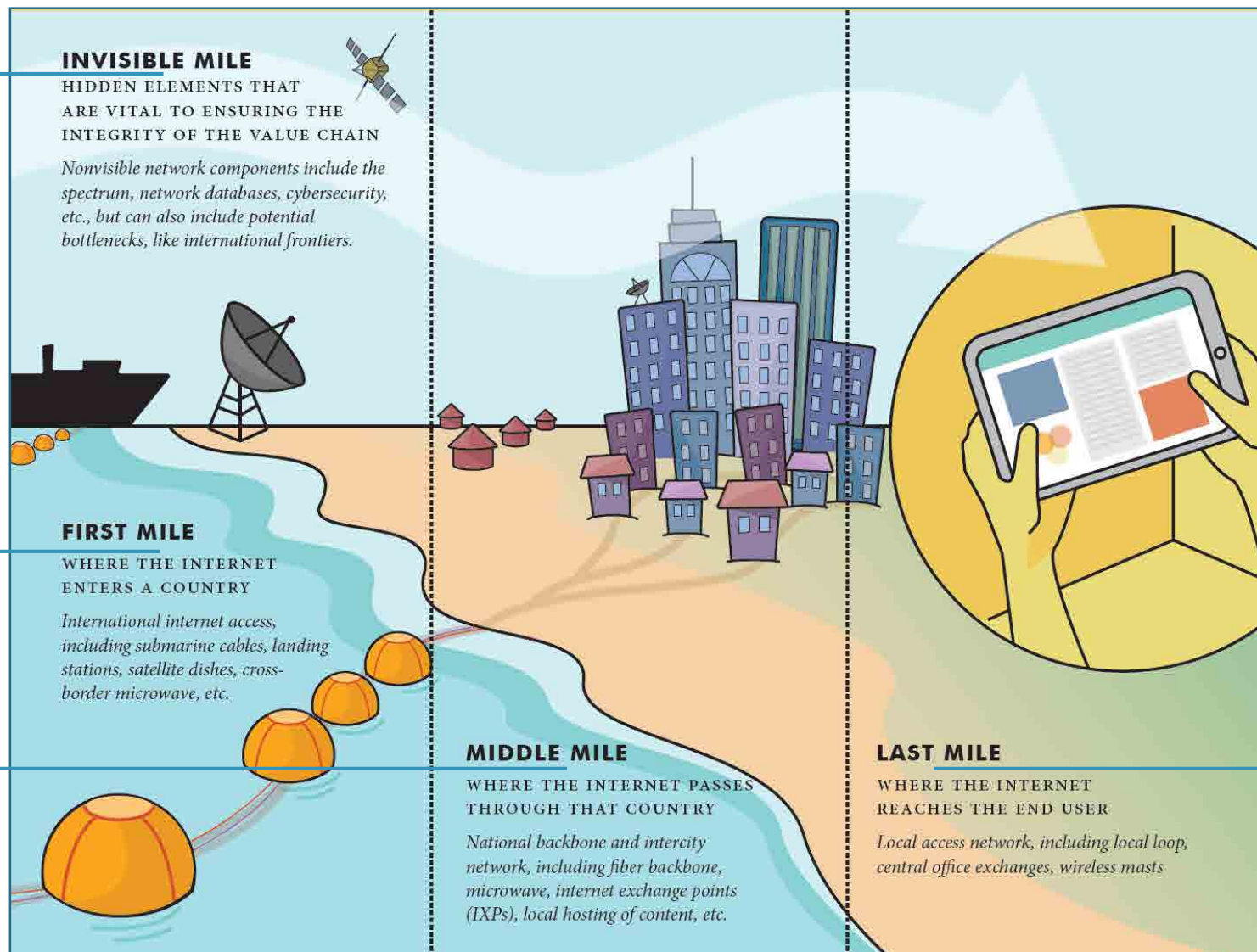
Africa's First Mile

- Most countries are now connected!
- Abundance of cable connectivity in North Africa
- WBG has been actively involved

2

Africa's Middle Mile

- Fiber backbone is an unfinished agenda for both SSA and Northern Africa



- Mobile internet is available in urban areas
- Dedicated / fixed internet for schools and offices is mostly **NOT** available
- Internet in rural areas is **NOT** available
- FTTH more advanced in Northern Africa and a long way to go for SSA

Africa's Last Mile

3

DE4A Approach to Digital Infrastructure

Business as usual not enough for doubling of broadband target: need for regionally harmonized policies to attract investment, digital infrastructure sharing regulations, new rural technologies, and new demand side applications

- **Implementing MFD/Cascade with regional approach:**
 - Policy reforms to lower entry barriers, encourage competition and investment
 - Alignment/ collaboration/ common work agenda between WB and IFC.
 - Adjust risk appetite to fund certain initiatives that are commercially viable but with high risks (e.g. FCV countries).
- **Modernizing regulatory frameworks:**
 - Infrastructure sharing, using capacity in existing infra. networks, dig & build once- Now standard requirement for all INF Projects- Part of DPO and reflected in bidding documents.
 - Competition policy, regulations, data privacy and security.
- **Deploying menu of interventions to bring digital infrastructure to rural areas:**
 - Incentive-based private sector models, more affordable taxation, licenses and rights of way, considering new promising technologies while remaining technology agnostic.
- **Supporting demand side to increase penetration and impact:**
 - Digital payments and e-commerce, work with human capital project teams on digital technologies for health and education facilities, support of government digital platforms.

Leverage new (disruptive) developments in broadband for rural and remote areas

WBG to support business models that rely on new technologies, provided they are commercially sound and address demand needs

Drones & Balloons



- Facebook & Google are piloting high-tech drones and balloons
- The solutions are lower-speed for short / medium term
- They help peri-urban and rural areas
- A commercial model at scale is yet to develop

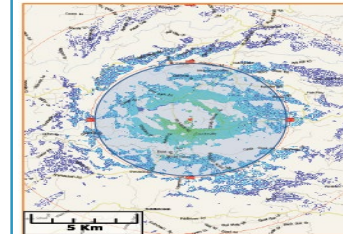
Satellites



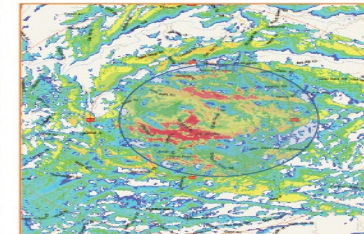
- New satellite solutions (LEO/HTS) are emerging (e.g. OneWeb)
- The solutions offer potential for higher quality and lower cost
- A commercial model at scale is yet to develop

TV White Space

Wi-Fi



TV White Space



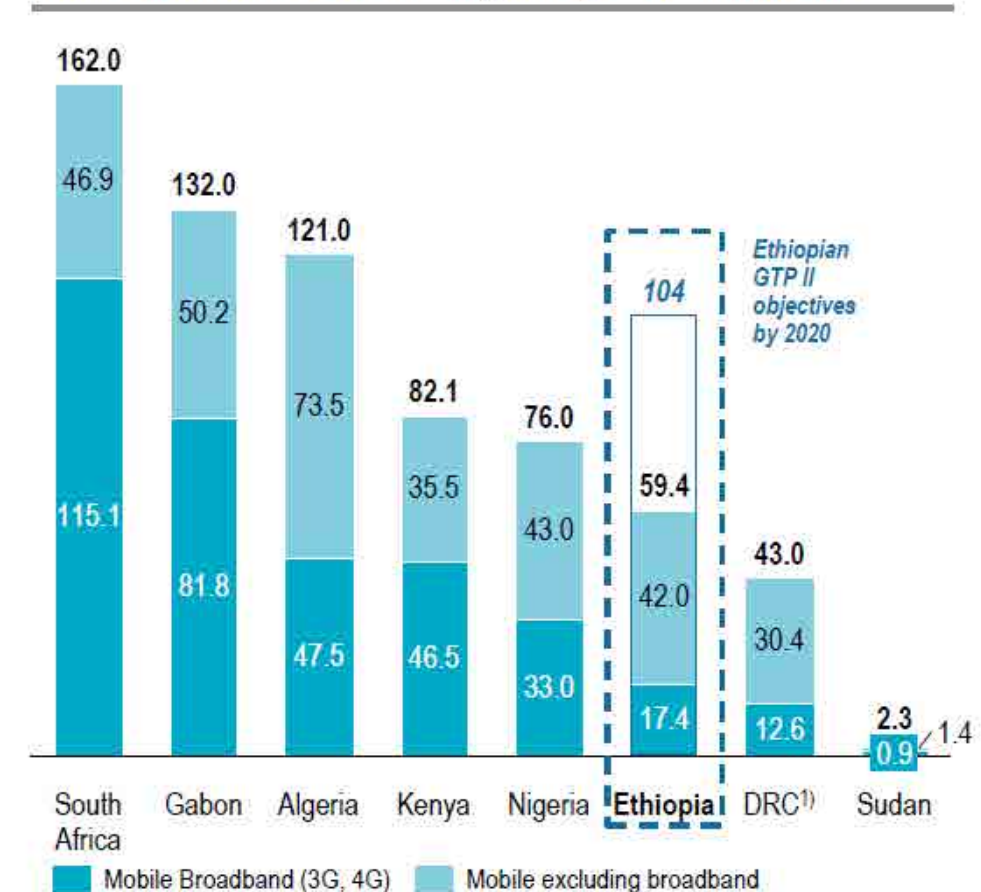
- TV white space uses unlicensed wireless spectrum for internet
- Microsoft is piloting in Peru
- The solutions offer a lower-speed solution for short term
- A commercial model at scale is yet to develop

How to get there: Case study 1 – Telecom sector reform in Ethiopia

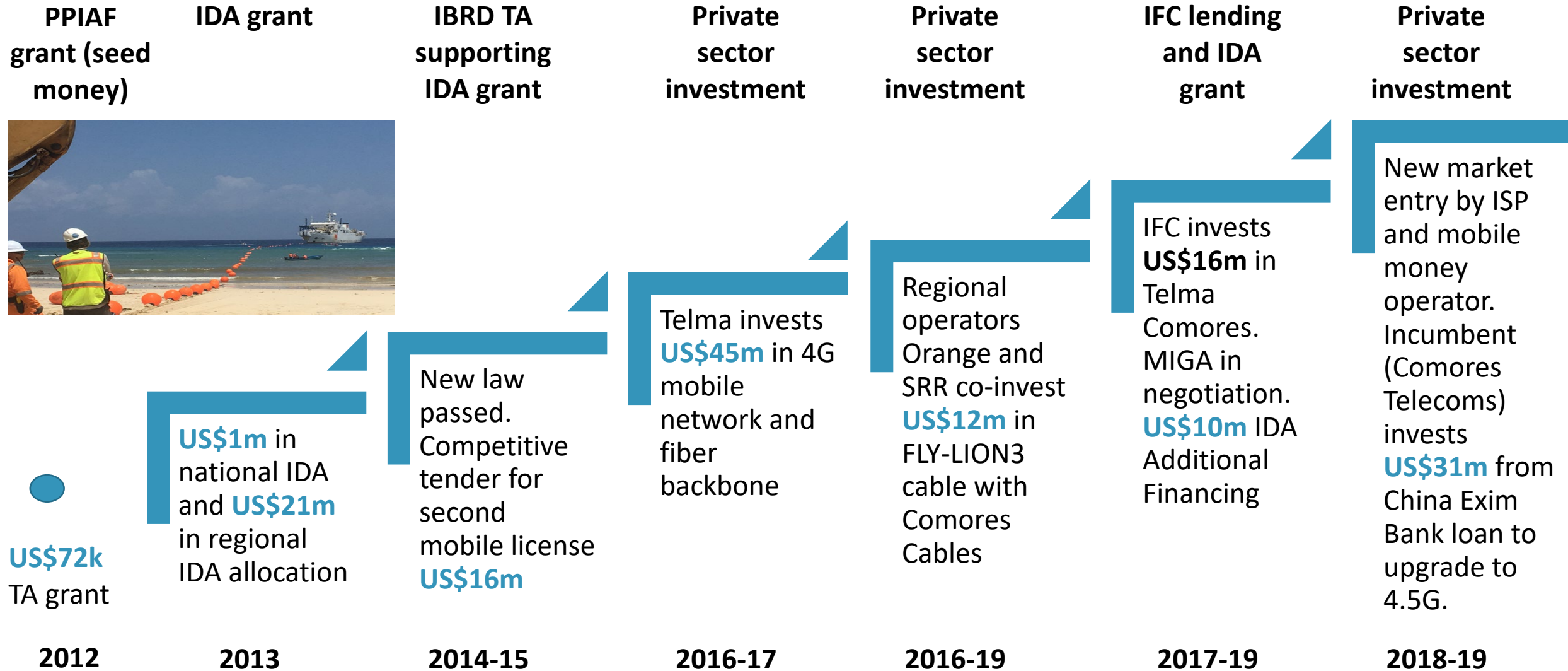
- Ethiopia is one of the last three remaining telecom monopolies (along with neighbors Djibouti and Eritrea). State-owned EthioTel faces no competition.
- In June 2018, the Prime Minister announced a new program of sector reform, privatization and market liberalization
- With WBG support, the Parliament passed on new Communications Proclamation, on 13 June 2019, which creates a framework for sector reform
- The new Act creates a new, independent sector regulator – Ethiopian Communications Authority – which will guide the liberalization process
- The Government has announced its intention to award two new full service licenses by December 2019
- EthioTel is slated for partial privatization, with plans also to separate its infrastructure and services arms

Telecom sector in Ethiopia has growth potential, esp. in mobile data and mobile money

Mobile and Mobile data subscriptions per 100 inhabitants

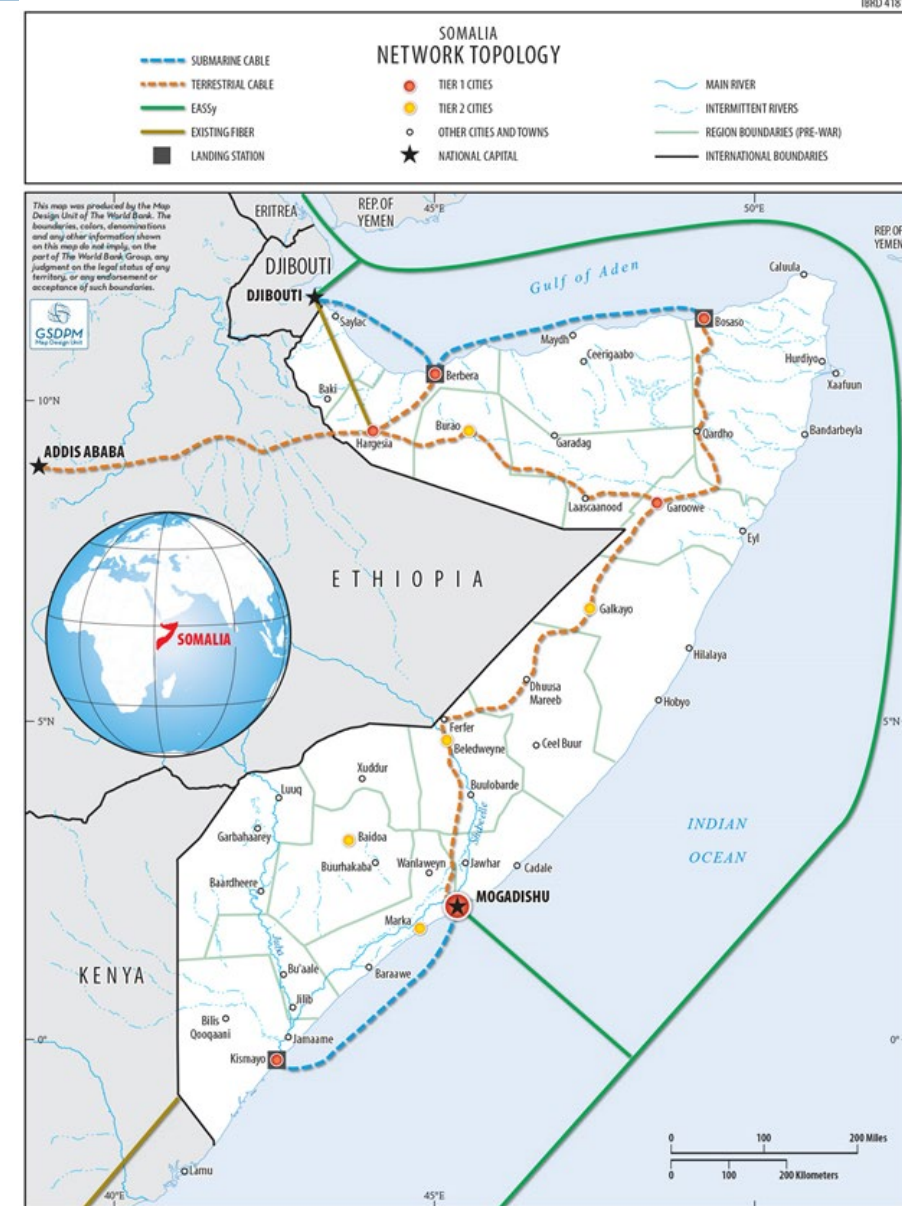


How to get there: Case Study 2 -- Mobilizing Finance for Development in the Union of the Comoros



How to get there: Case Study 3 – Infrastructure Development in Somalia

- Somalia's fixed-line infrastructure was almost completely destroyed during the period 1990-2012 when the country had effectively no Government
- Nevertheless, private operators flourished, initially using satellite, and later using cellular mobile communications. The market is dominated by HTG (sister companies, Hormuud, Telesom and Golis)
- With IFC assistance, the first international submarine cable arrived in December 2014, when Dalkom constructed a spur of the EASSy cable into Mogadishu
- Somaliland (which claims independence) is also connected through a terrestrial cable from Djibouti to Hargeisa. But elsewhere, the national backbone relies on satellite and microwave
- A new Communications Act, drafted with WBG assistance, signed by the President on 2 October 2017, creates an enabling environment for infrastructure development, and creates an independent sector regulator – National Communications Authority



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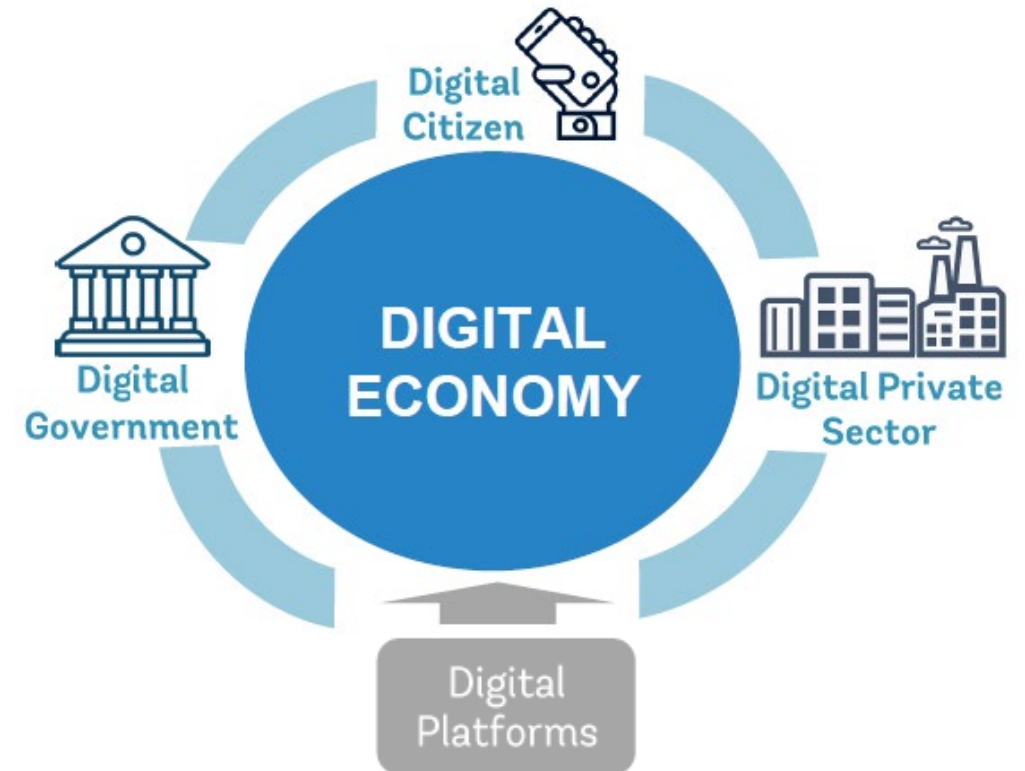


DE4A Approach to Digital Platforms

Two main categories of digital platforms

| Digital public platforms | Commercial digital platforms |
|--|--|
| Digital public platforms—provided by the government or in partnership with the private sector—serve as a layer on which multiple public and private sector organizations can build new or better services, solutions, and applications. Government agencies can then leverage this platform to transform front-end service delivery and back-end processes to improve convenience for users, reduce costs, increase efficiency, and support the social contract by making governments more transparent, responsive, and accountable. | Commercial digital platforms include multisided marketplaces that enable producers and users to create value together by interacting with each other and facilitate matching, searching, exchanging, transactions, etc. Commercial platforms' value proposition relies on removing costly intermediation, the exploitation of network effects and economies of scale by leveraging cloud computing technologies. |

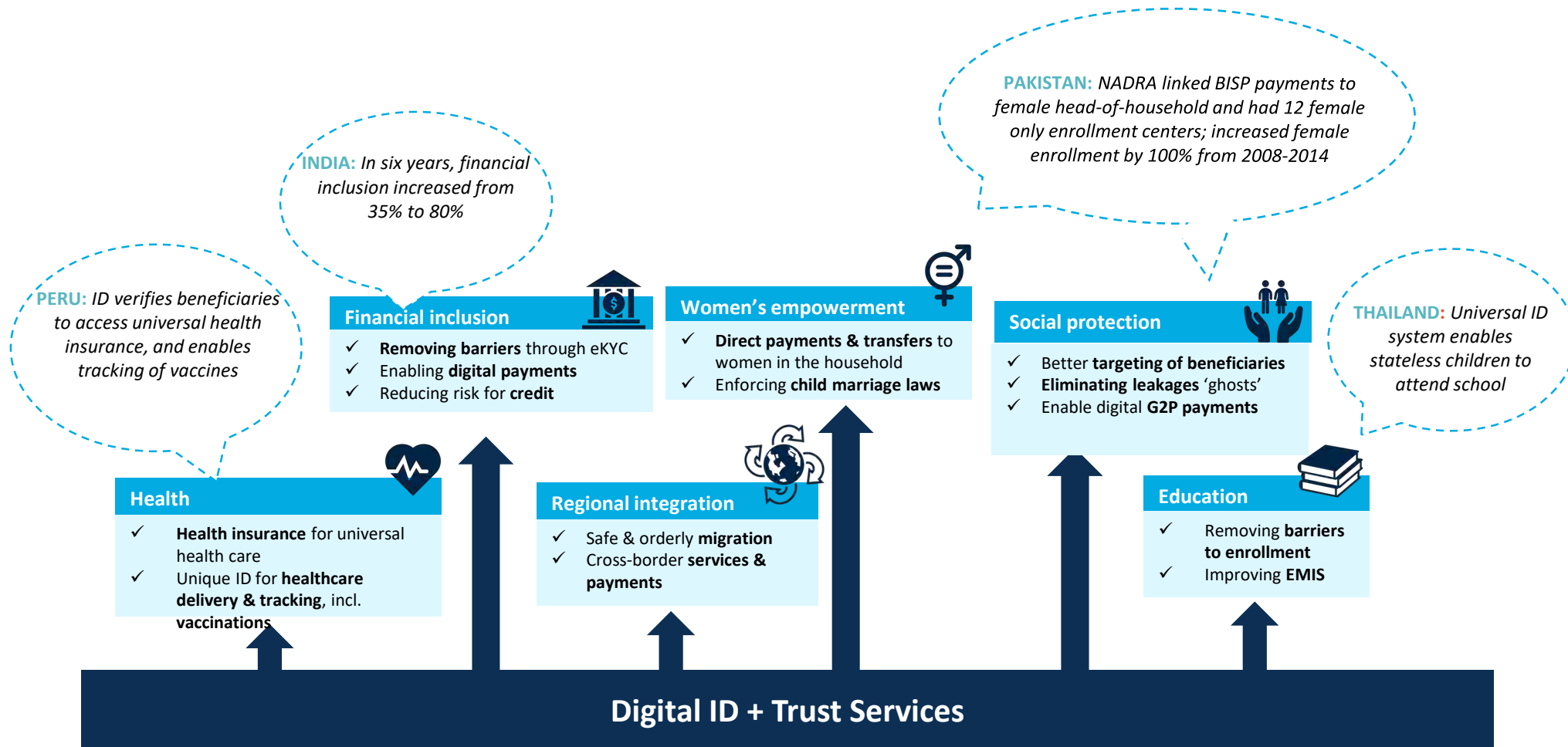
Digital platforms are the nucleus of the digital economy.



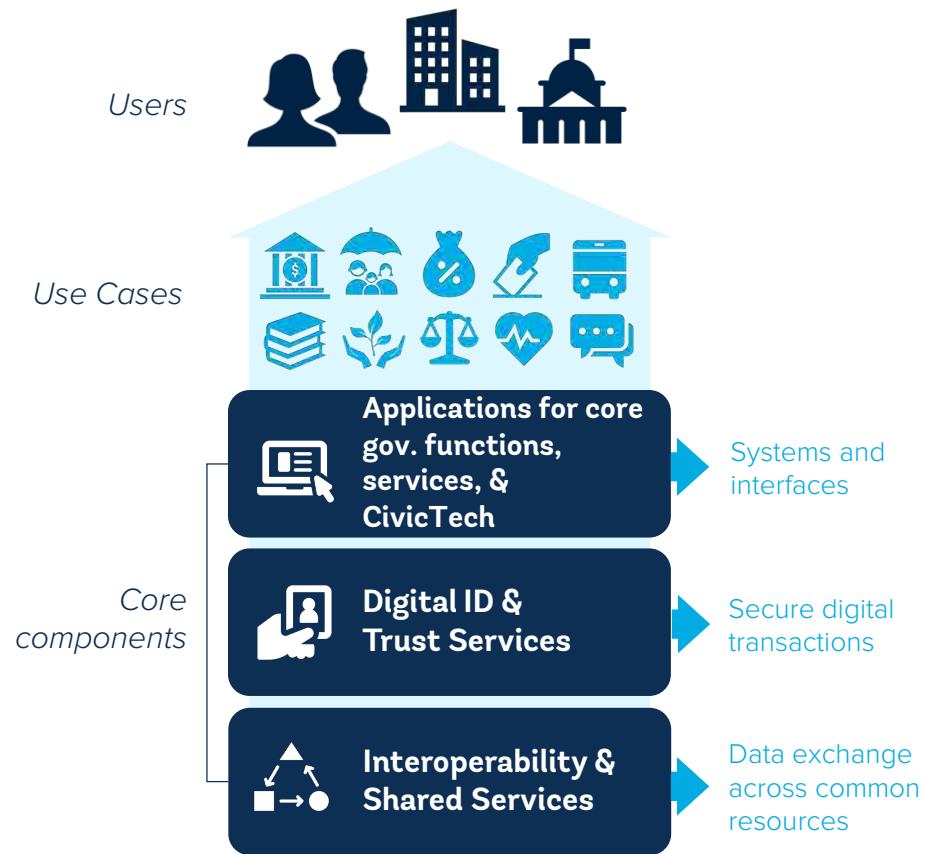
- ❑ Digital platforms provided by the public and private sector—and through hybrid models—can serve **people, businesses, and government** agencies in all aspects of life, including healthcare, education, commerce, tax filings, transportation, or public benefits.
- ❑ By providing **trusted venues and resources for digital transactions and connections**, these systems, applications and services have the potential to transform the way people, governments, businesses, and civil society **interact with each other**.
- ❑ The platform value proposition relies primarily on **removing costly intermediation and transaction costs, increasing convenience, cost savings and economy of scale**.

Digital ID and trust services

Digital ID and trust services provides verified identities, digital authentication and e-signatures for secure transactions



Digital Public Platforms



Benefits

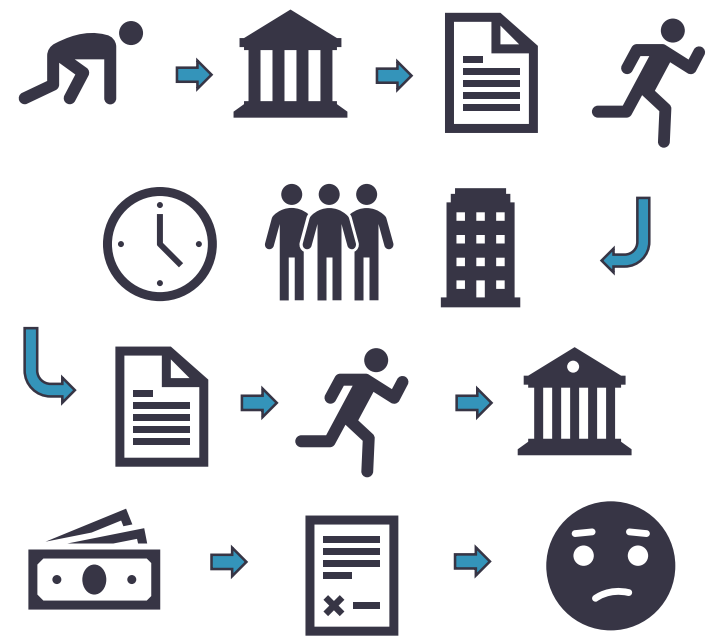
- ✓ Increase people's access to rights and services and improve their and end-to-end experiences with services
- ✓ Improve core government functions, governance and program administration
- ✓ Increase public engagement, accountability, and responsiveness
- ✓ Facilitate trade and economic integration
- ✓ Support private sector development

Requirements

- ❑ Design that is outcome- and context-based, user-centric, and uses open principles
- ❑ Strong legal, regulatory, and operational frameworks
- ❑ Whole-of-government approach
- ❑ Investment in digital skills and literacy

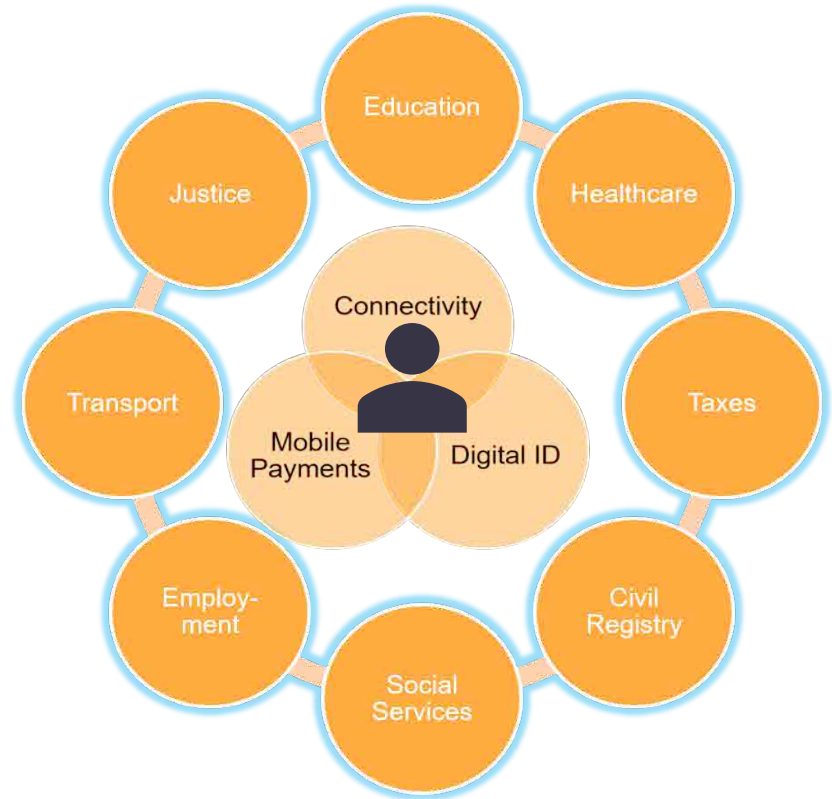
A whole of Government & Citizen Centric Approach to Applications for Government Services, Functions and CivicTech

From cumbersome/costly access to services to Citizen Centric, Transparent and Accessible services



RWANDA: E-procurement verifies tax register to confirm company's tax standing and company register against list of debarred firm

MADAGASCAR: Identified 100,000 unregistered potential tax payers following interoperability between tax and pension registers



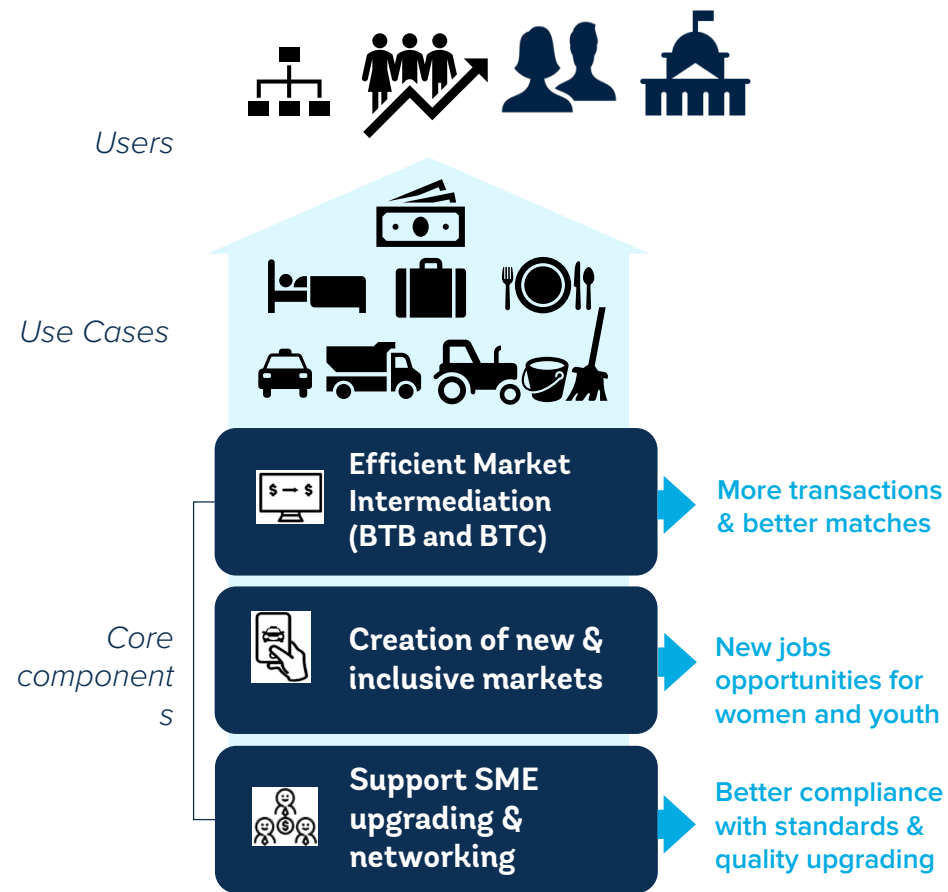
Service delivery platforms (GtoC/GtoB)

Core Government back-end systems (GtoG)

CivicTech (CtoG)

Interoperability + Shared Services

Digital Commercial Platforms



Opportunities

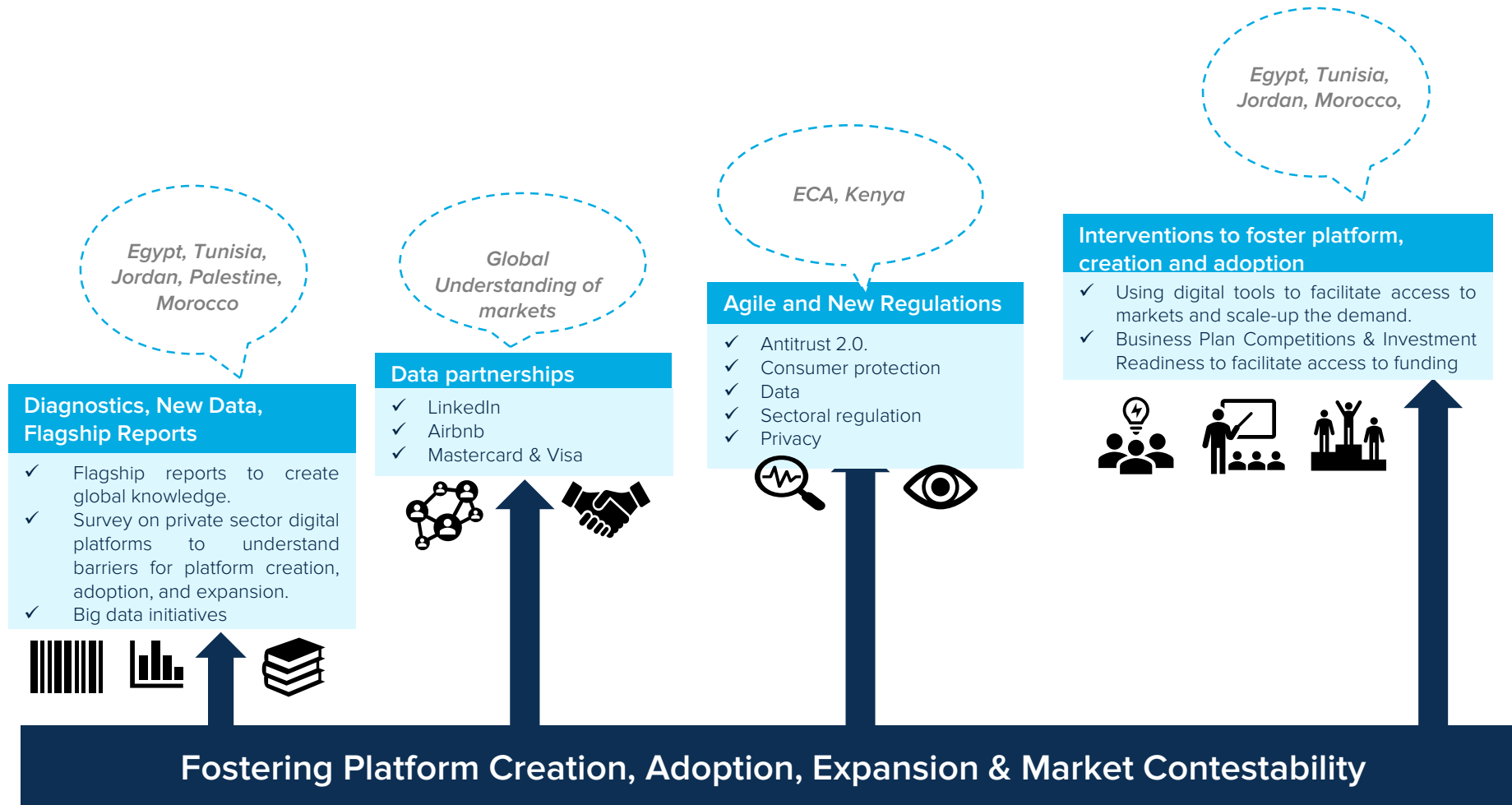
- ✓ **Reallocation of economic activity:** lower transaction costs, lower search costs, lower prices of intermediate and final goods, better quality of products and services.
- ✓ **Creation of new activities:** tap into spare physical or human capacity and identify new market niches. Thus, they create new jobs, improve financial inclusion, and increase women labor force participation.
- ✓ **Support to government by sharing data/SMEs lifting:** (i) fighting tax evasion, (ii) making formal the informal, (iii) helping SMEs upgrade quality of their products/services and better comply with sector specific standards

Risks

- ❖ **Growing dominance of one platform** due to indirect network effects and the “winner-takes-all” characteristic of the market.
- ❖ **Anticompetitive practices** like exclusion of competitors warrants regulator’s attention.
- ❖ **Spontaneous deregulation despite the need to build trust.** Platforms often tend to be in tension with existing regulatory frameworks.
- ❖ **Use of data as a new source of market power.** The increased collection and use of data can also result in negative welfare effects if it is used to exclude rivals from the market to the detriment of consumers.

Digital Commercial Platforms: Balancing Opportunities & Risks...

How? Some examples



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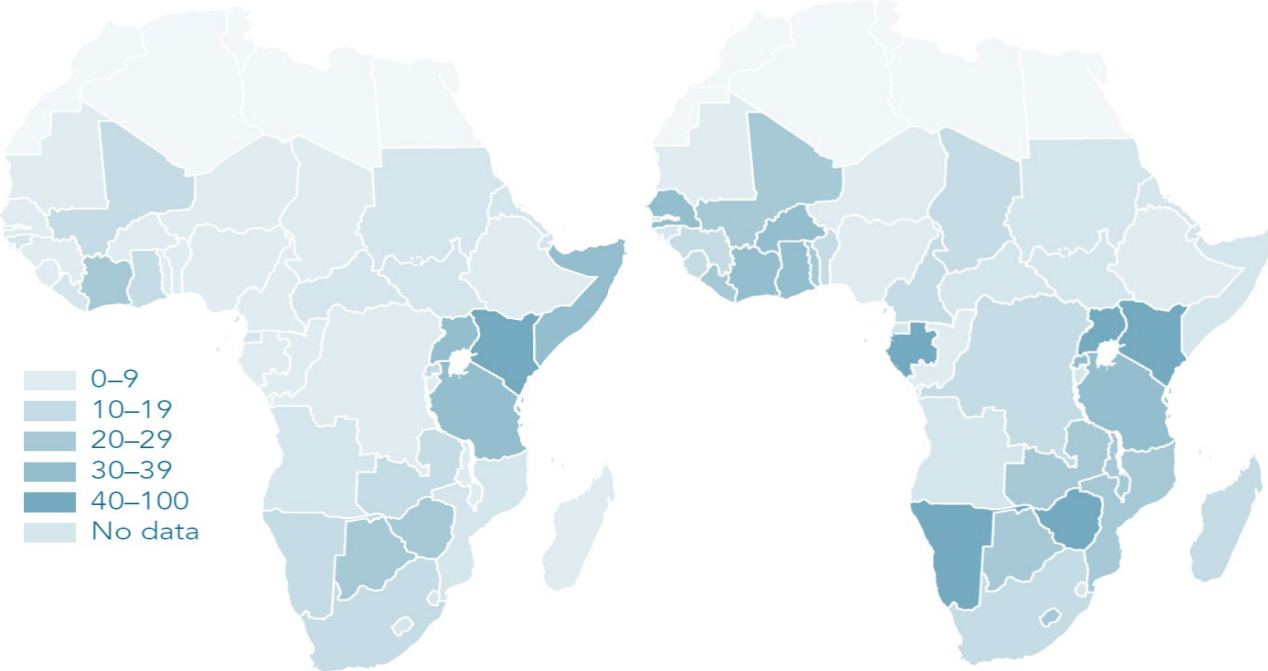
Digital Financial Services open up opportunities in the Digital Economy

FinTech innovations and services (such as digital credit through ecommerce, P2P lending, mobile payments, and tailored products offered through APIs) are transforming the business model for reaching the un/under served.

Adults with a mobile money account (%)

2014

2017



The share of SSA adults with a mobile money account doubled since 2014—to 21%. This is the **highest % of mobile money** use in any region.

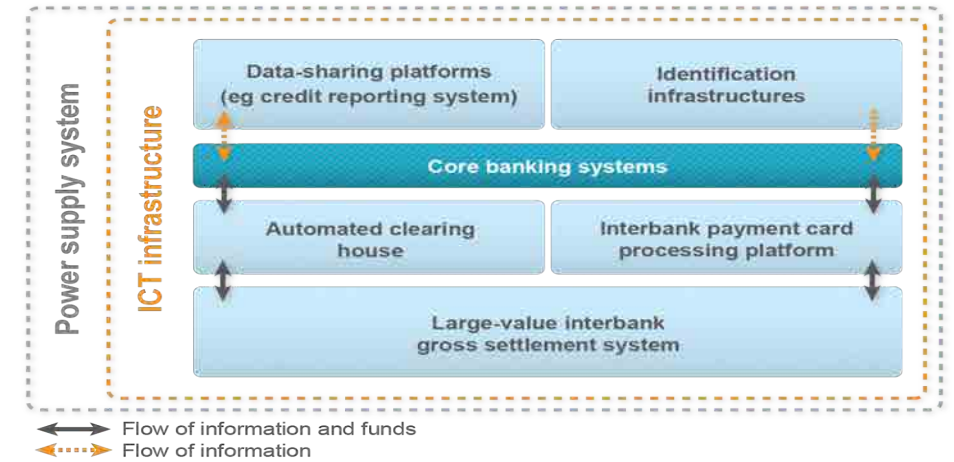
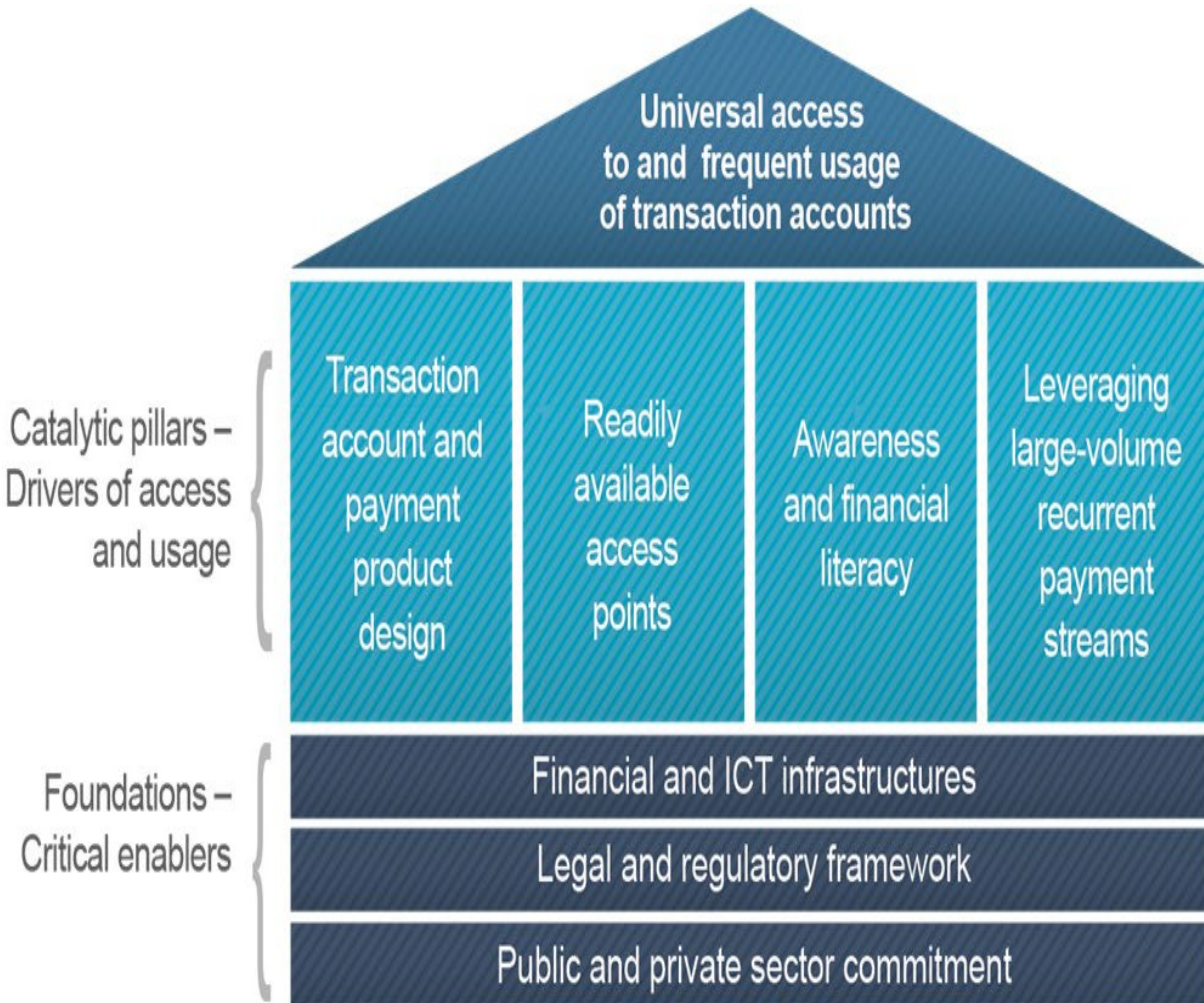
Half of unbanked adults in SSA (160 million) **own a mobile phone**, so there is significant potential growth.

28% of the unbanked in Africa indicated that a **lack of ID was a barrier** to opening an account.

Digitizing government payments, remittances, SME payments, and value chain payments, enables participation in the digital economy, and drives progress towards the goal of **Universal Financial Access by 2020**.

Source: Global Findex database.
Note: Data are displayed only for economies in Sub-Saharan Africa.

Role of Fintech in the DE4A initiative



More people who have an account are using it for digital payments

Adults with an account (%)



Source: Global Findex database.

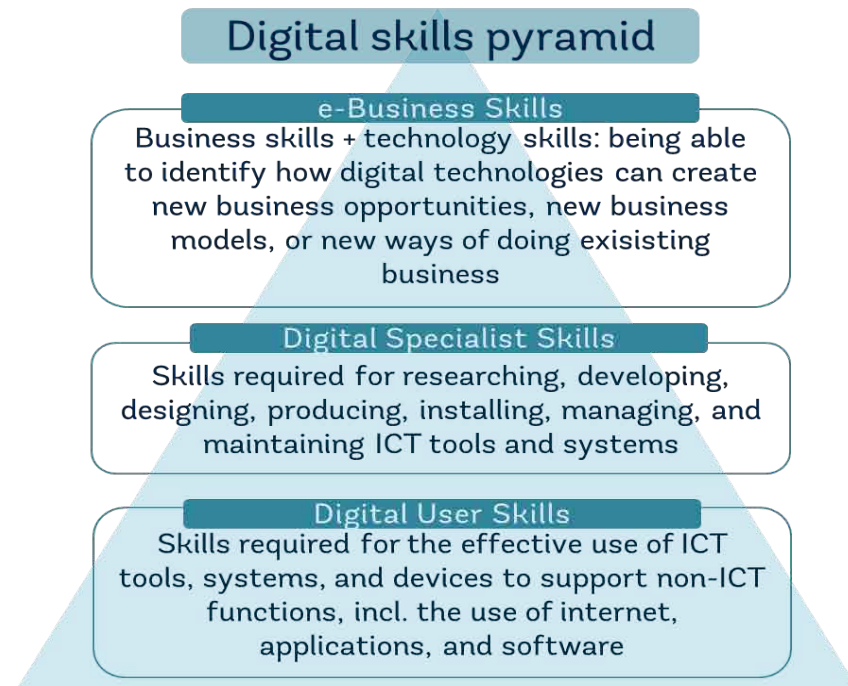
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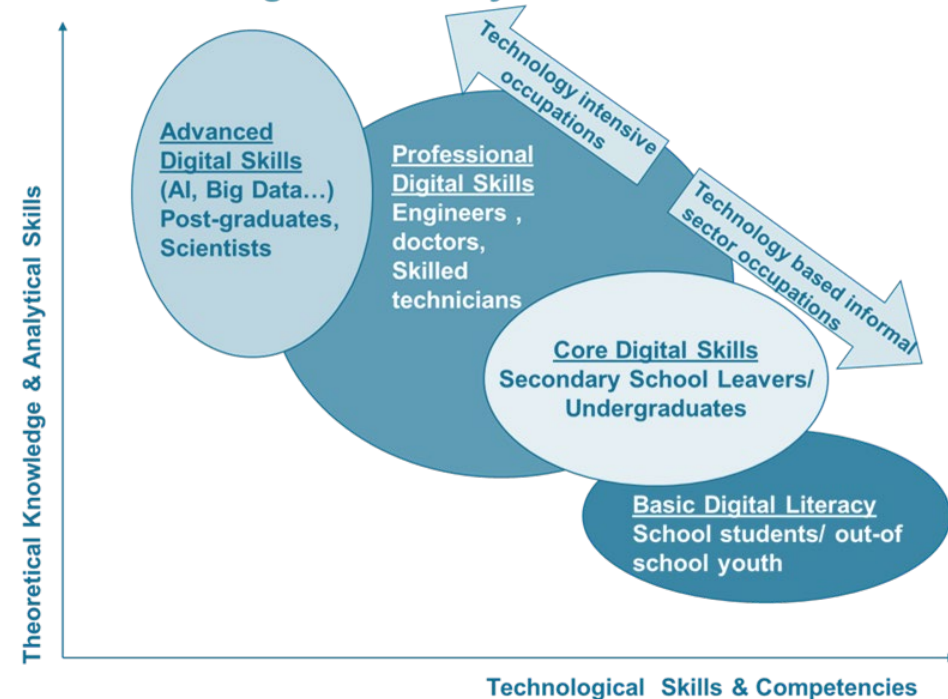
Human Capital: Building Digital Skills of Tomorrow Can Fuel the Digital Economy

- Employers across Africa note **skill gaps** as a major constraint to their ability to compete in the global digital economy. A shortage of technical talent impedes **productivity and innovation** in African businesses.
- **Technological adoption** and **innovation** depend on tech-savvy skills to help drive innovation.
- Enrollment in education has increased in Africa, but basic numeracy and literacy indicators remain low.
- **Could HCI could be expanded to cover Digital Literacy/Skills?**



Source: Entrepreneurship in the Digital Economy Report (WB, 2017)

Skills for the Digital Economy



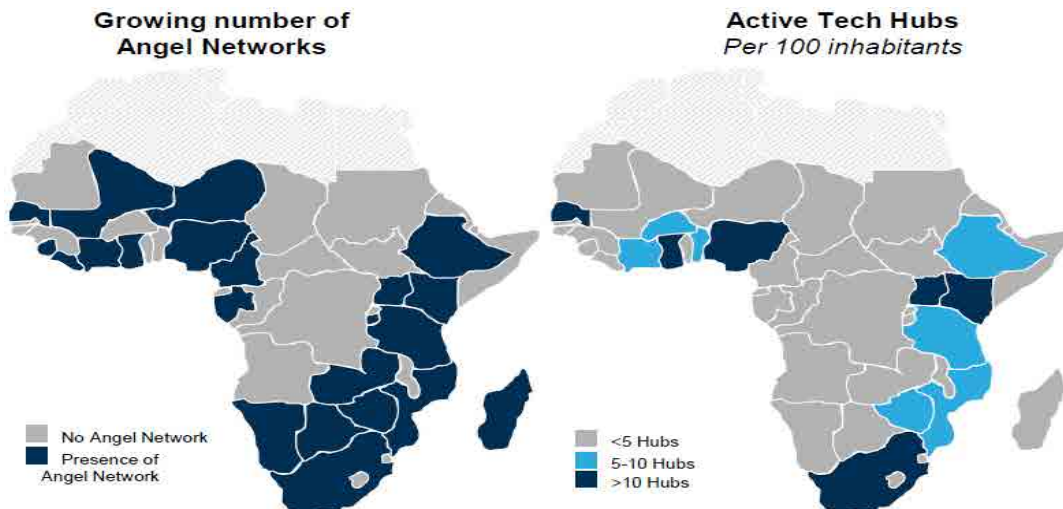
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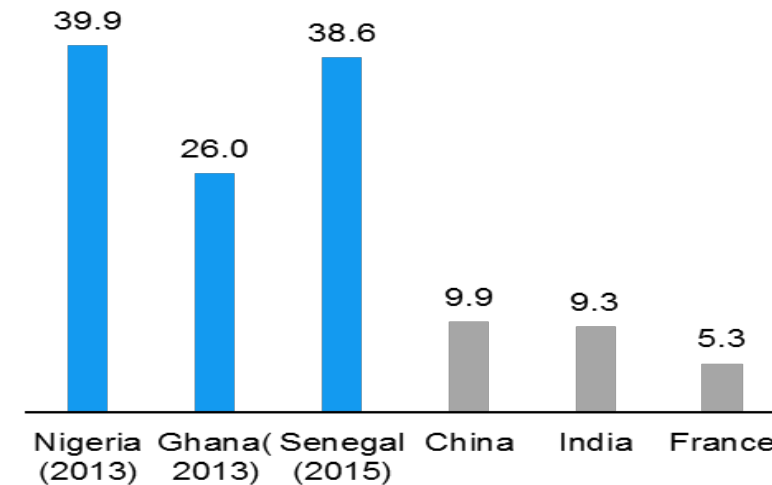


Digital Entrepreneurship to bring the Digital Economy to life

- African entrepreneurs are using digital technologies to create **innovative** solutions to development problems.
- African countries have the **highest Total Early-stage Entrepreneurial Index**, well above developed & emerging countries.
- Over last 5 years, the **entrepreneurship ecosystem**, through incubators, accelerators and tech hubs, has grown 10-fold in Africa.
- Yet, **digital entrepreneurship ecosystem** in Africa is still nascent.
- Entrepreneurs cite lack of **access to venture finance** as the biggest impediment.
- Entrepreneurs operate in a weak **business environment** that includes unclear and complex laws and regulations, cumbersome procedures and unnecessary costs.







Growing number of Angel investor networks and Active Tech Hubs per 100 inhabitants. Source: GSMA 2016 Data, ITU 2016 Data.



Total Early-stage Entrepreneurship Index, Global Entrepreneurship Monitor

Digital Entrepreneurship Ecosystem Support Policy Actions

Policies are not directly transferable; they need to be adapted to ecosystem's local (urban/regional) needs/gaps and circumstances

| Policy Area | Nascent Stage | Advancing Stage |
|---|---|--|
|  <p>Community: Developing and strengthening community of entrepreneurs</p> | <ul style="list-style-type: none"> • Competitions, meetups, promotion • Networking spaces: Co-working; Accelerators | <ul style="list-style-type: none"> • Scale-up spaces • Industry-startup labs/co-creation hubs |
|  <p>Skills: Increasing skills pipeline for founders and teams</p> | <ul style="list-style-type: none"> • Tech and Business rapid skills trainings; bootcamps • Increasing university-level technology and business skills/graduates | <ul style="list-style-type: none"> • University-industry matching apprentices platforms • Advanced R&D/frontier technology centers and labs |
|  <p>Supporting Infrastructure: Increasing quantity and quality of accelerators and mentors</p> | <ul style="list-style-type: none"> • Strengthen accelerators • Attraction of mentors; creating networks of mentors • Retention of experienced founders | <ul style="list-style-type: none"> • Industry open innovation and vertical accelerators • Increase quality and volume of experienced founder mentors |
|  <p>Funding: Creating and expanding seed and scale-up funding</p> | <ul style="list-style-type: none"> • Creating and attracting VC funds and angel networks • Redirecting Corporate VCs | <ul style="list-style-type: none"> • Increase competition and volume at ladder of investment levels • Increase scale-up funding; expand public/private capital markets |

Examples taken from technical activities planned or implemented in Colombia, Chile, Egypt, Kenya, Lebanon and West Bank & Gaza, Practices from the members of the World Bank Network of Cities' Innovation Hubs, and World Bank (2016) New York: Transforming a City into a Tech Innovation leader, <https://openknowledge.worldbank.org/handle/10986/25753>

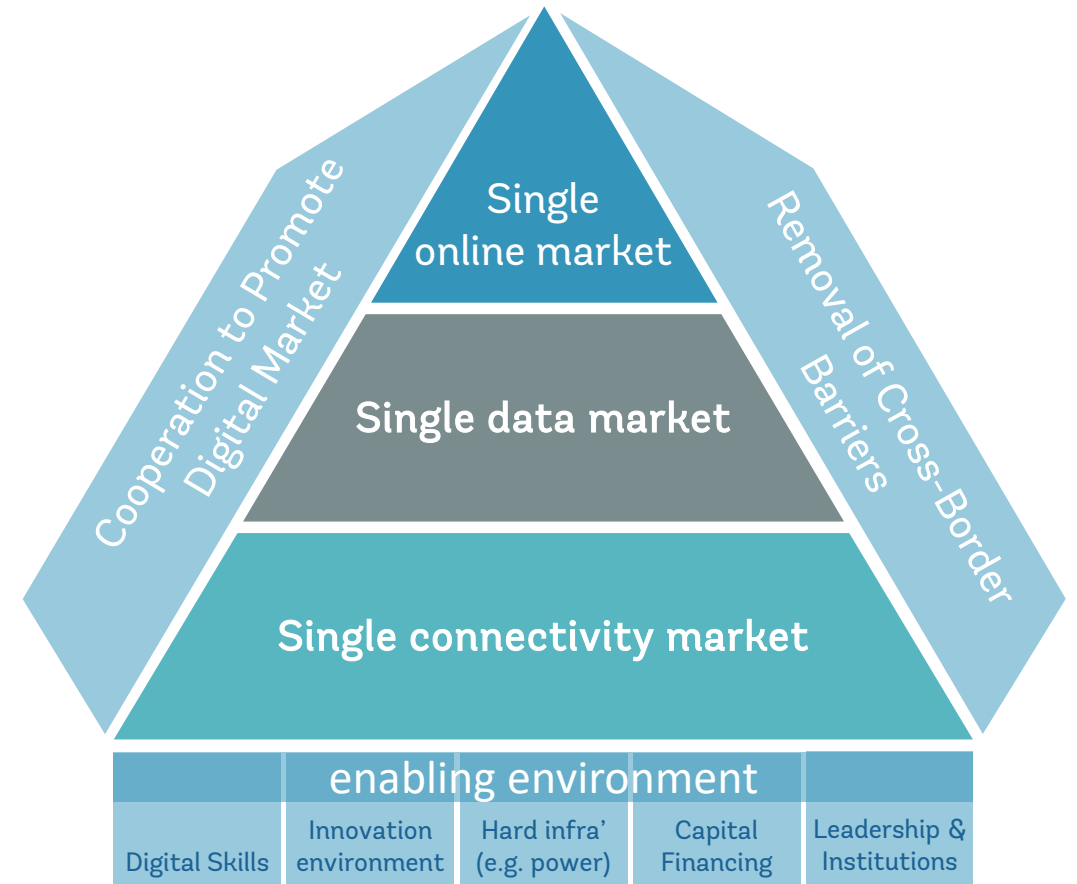
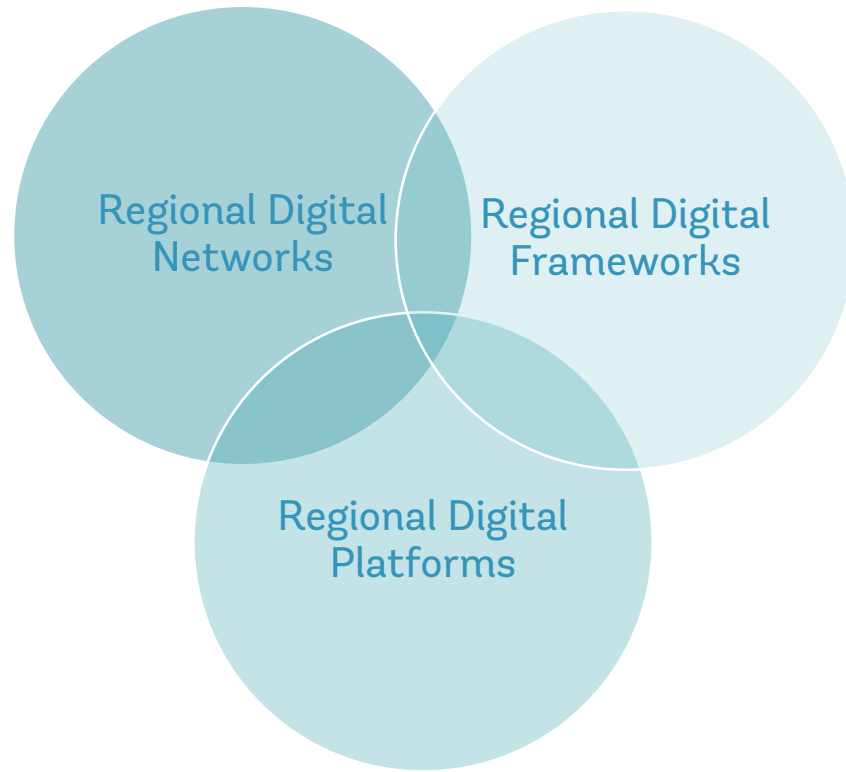
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Thinking Big: The Case for Digital Integration and Cooperation Towards Single Digital Market

Greater Cooperation + Market Integration to build a seamless, dynamic, and competitive regional digital ecosystem and unlock the potential of African Digital Economies



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How to get there: Leveraging WBG Instruments and Convening Power to ignite the DE4A initiative

Digital Reform Program:

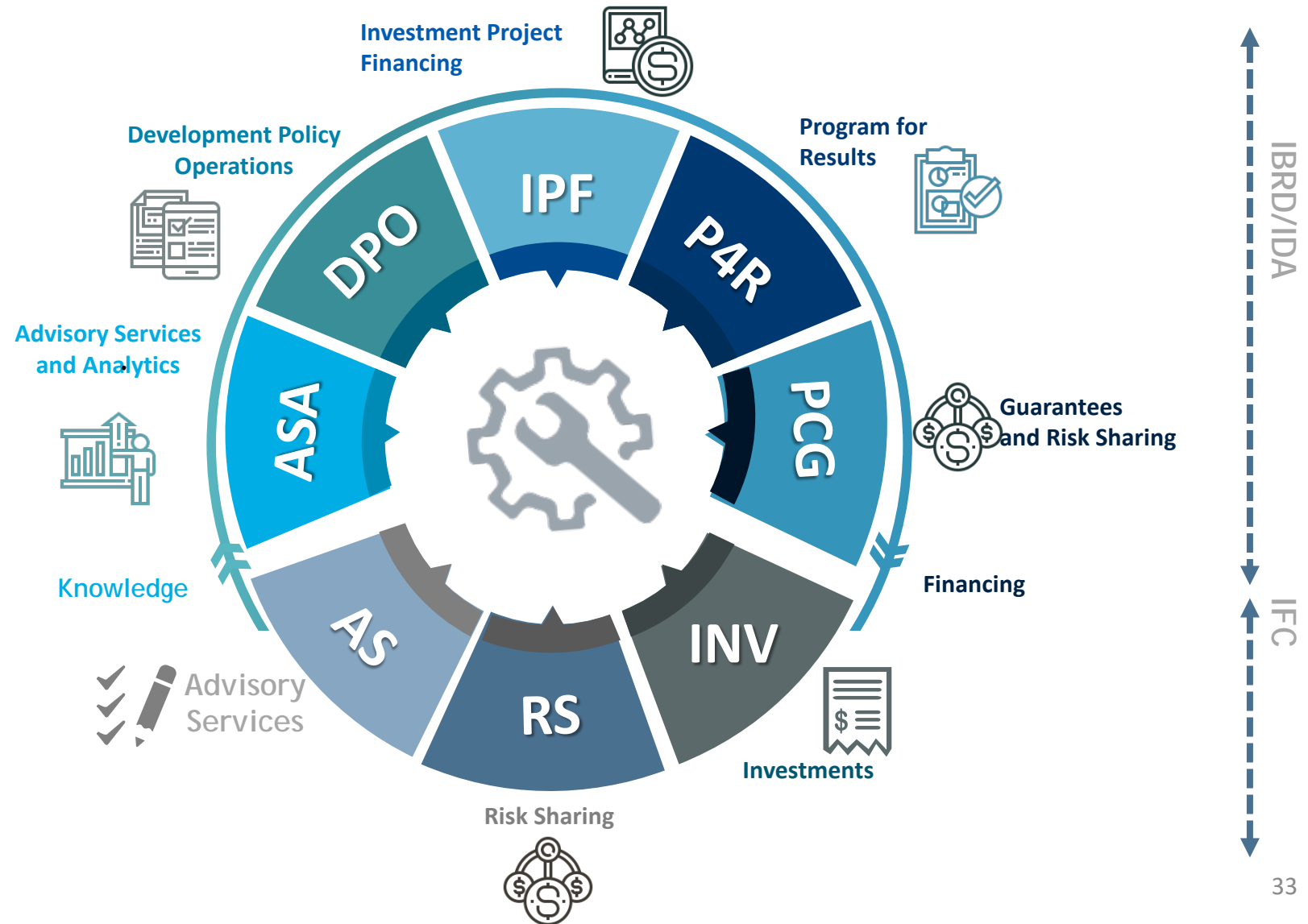
Technical Assistance and Development Policy Operations (DPOs) at national and regional levels to address critical legal, policy and regulatory bottlenecks holding back development of the digital economy.

Digital Investment Program:

Financing to address gaps in the digital economy foundations at national level and market integration at the regional level through a Multi-Phased Approach (MPA) IPF. MFD would be emphasized to leverage private sector investments.

Thought Leadership and Donor Coordination:

Supporting development of the DE4A Initiative Action Plan and mobilizing donor support for individual elements of the plan; DE4A country diagnostics. publication of an annual flagship DE4A report.



All Hands on Deck: Partnerships Are Critical to Achieve the DE4A objectives

African Union, Regional Institutions

- Partnership at the level of Heads of State through African Union, in line with moonshot goal.
- Identifying regional champions based on commitment, demand, and potential impact



Private Sector Leaders



Partners

