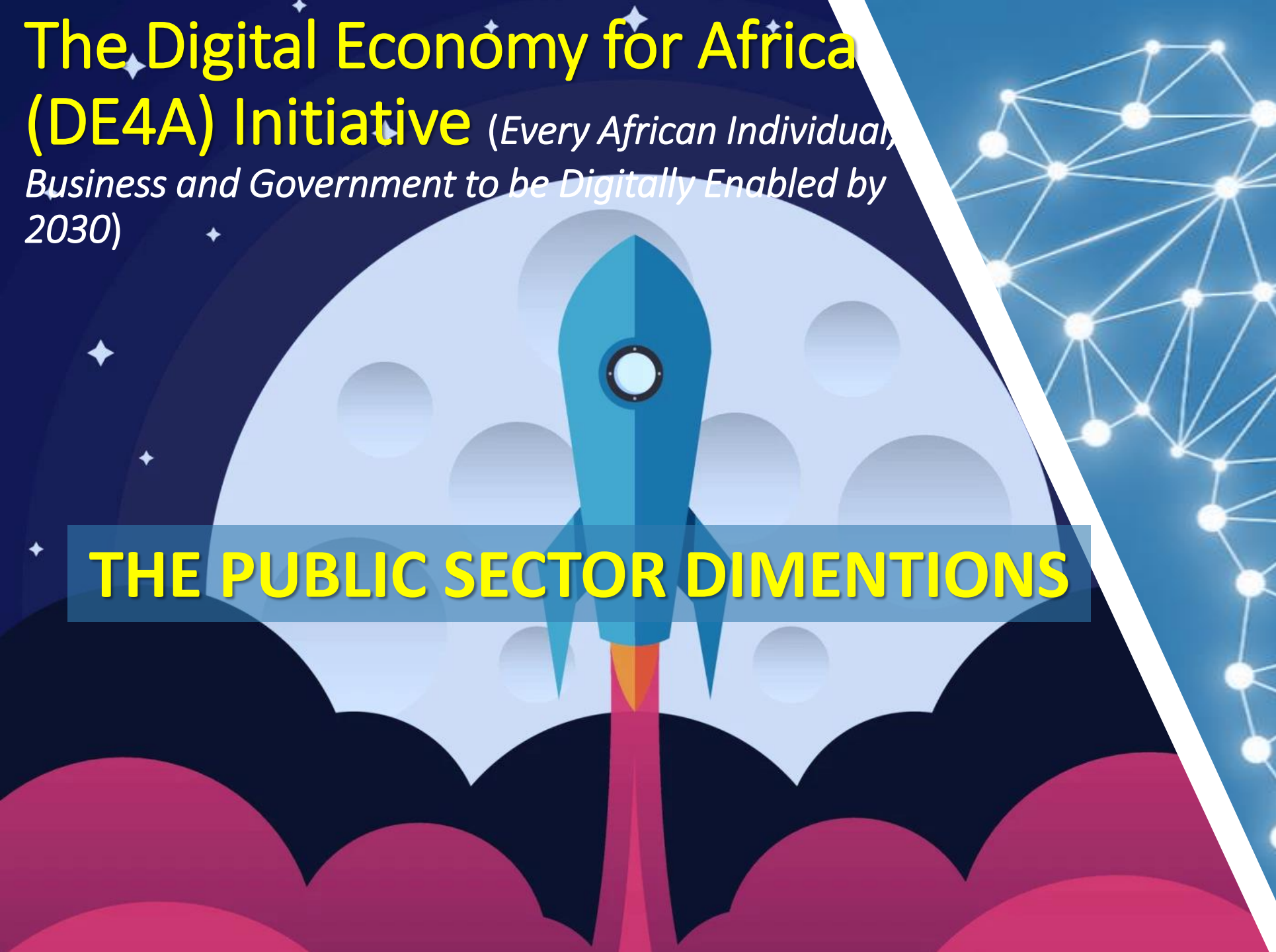
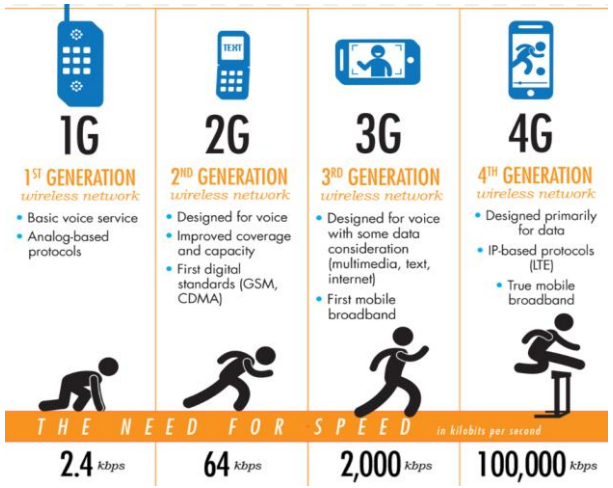
The Digital Economy for Africa (DE4A) Initiative (*Every African Individual, Business and Government to be Digitally Enabled by 2030*)

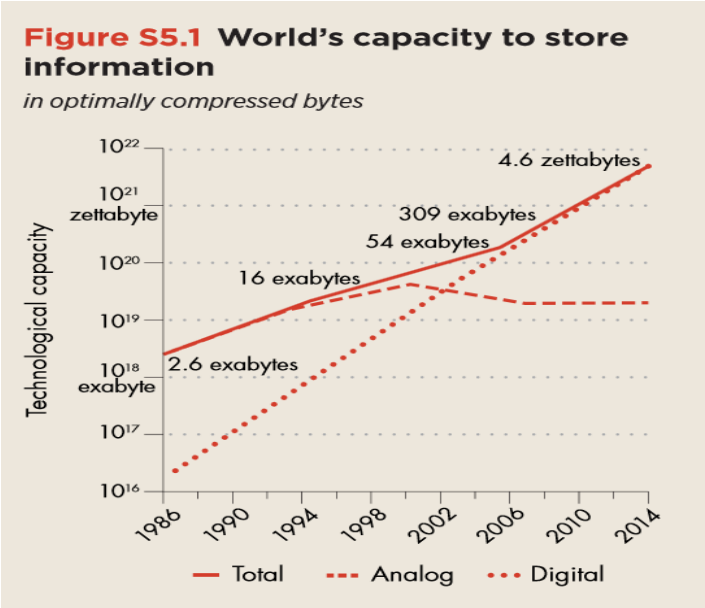


THE PUBLIC SECTOR DIMENTIONS

At a Time of Rapid Digitalization, Africa has an Opportunity to Build a Digital Economy

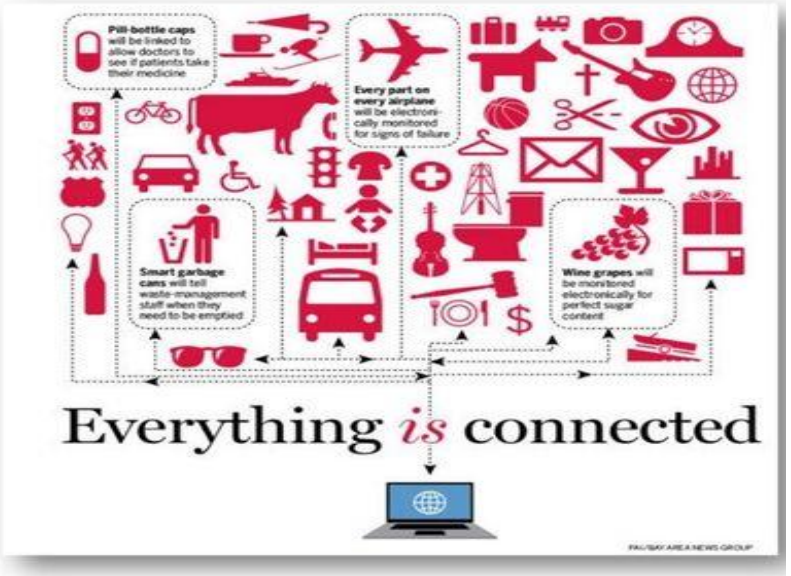
In 2016, the global digital economy was worth $11.5 trillion, or 15.5% of the world's GDP. It is expected to reach 25% of the world's GDP in less than a decade.





90% of all digital data has been created in the last 2 years.

Autonomous car will soon generate some 4,000 Gigabytes of data for each hour of driving, equivalent of daily data use of 3,000 people.



http://www.mercurynews.com/business/ci_24836116/internet-things-seen-bonanza-bay-area-businesses

By 2025, GSMA Intelligence estimates there will be 25 billion Internet of Things (IoT) connections – up from 6.3 billion in 2016 - with growth driven largely by demand in industrial segments.

And yet, these promises will remain unrealized for the 3.5B people still missing out due to lack of connectivity

Technologies are impacting individuals, businesses and governments as well as all sectors with use cases, creating new opportunities and risks …

Challenges

- Conflict & Displacement
- Youth Bulge
- Unemployment
- Economic Growth
- Gender & Social Inclusion
- Low productivity
- Infrastructure Gaps

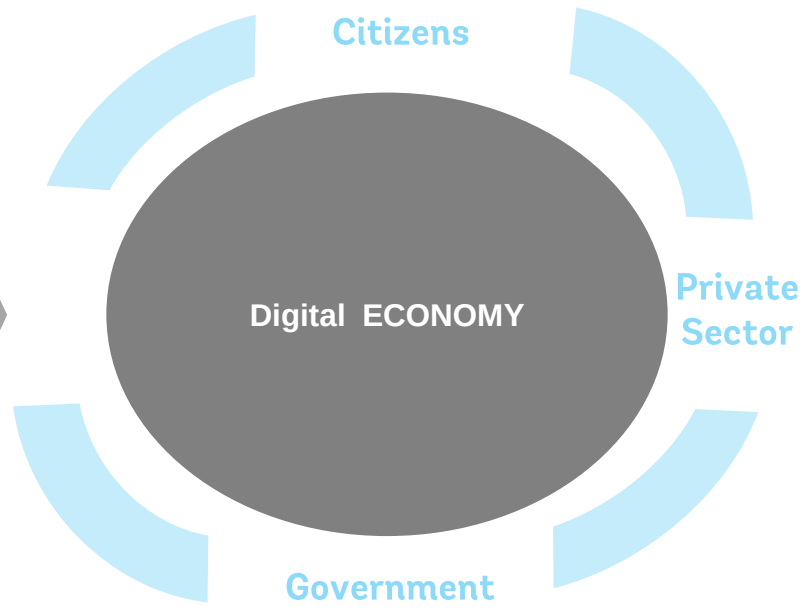
DE Building Blocks

5 Foundations of the DE4A

- Digital Infrastructure
- Digital platforms
- Digital Finance and Fintech
- Entrepreneur-ship
- Digital skills

Sectoral applications

Opportunities & Risks



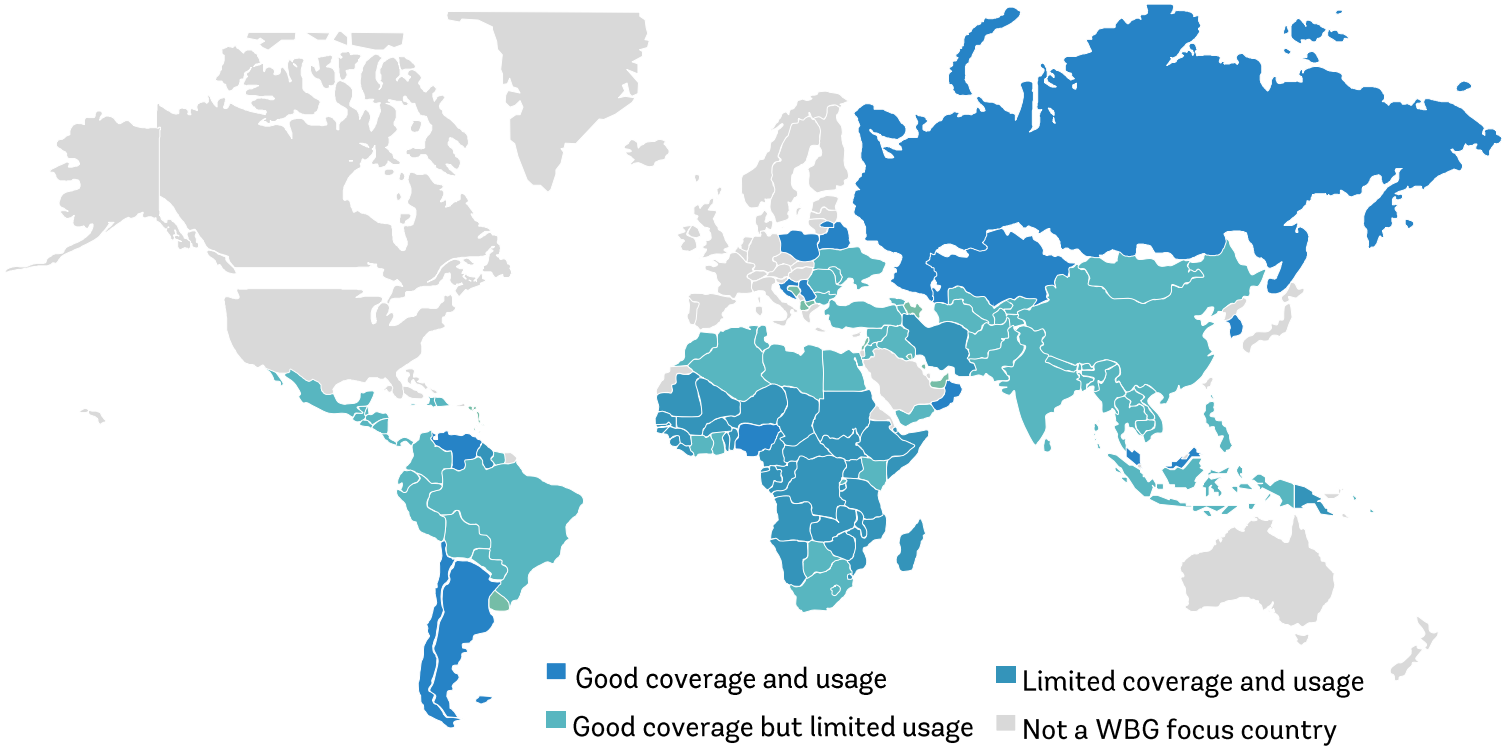
E.g. of risks: Cyber threats, Digital divide and inequalities, Rapidly changing landscape, data privacy and consumer protection, Uncontrollable and / or unregulated technologies

Outcomes

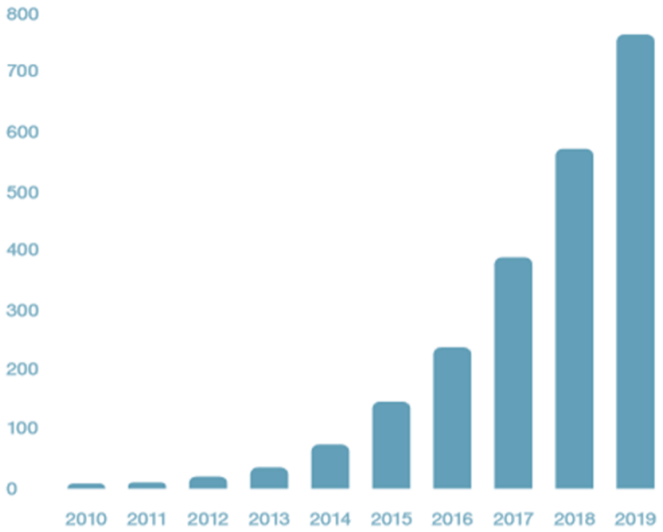
- **Inclusive Growth** — The scale and speed of disruption is affecting traditional sectors.
- **Jobs** — Changing how we collect, store, access, analyze and present data.
- **Competitive Economy** — Improving production techniques to increase efficiency, affordability, and speed.
- **Efficiency** — Transforming how we interact with the world and deliver/ receive services.

Technological transformation requires policies to prevent social/economic divides

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

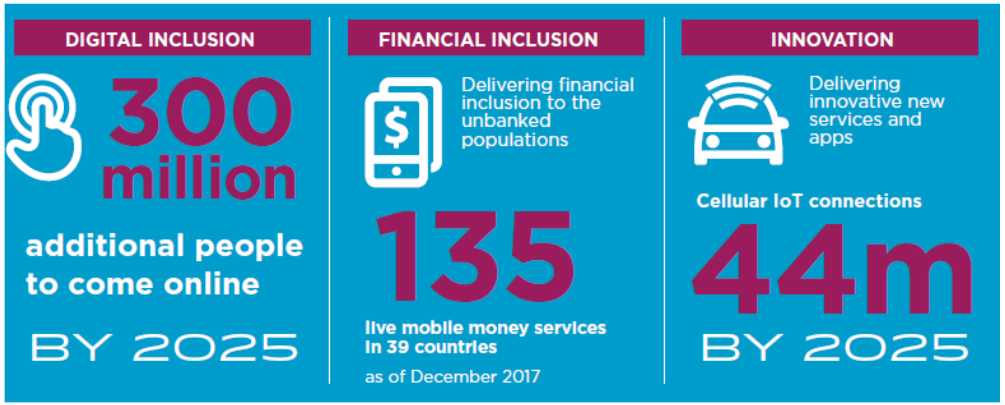


Source: GSMA Intelligence (2017), World Bank – World Development Indicator (2017)



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

Africa-wide Initiative:
Digital Economy Moonshot

Every African individual, business and government is Digitally Enabled* by 2030 with interim milestones by 2021

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

Financing for Venture Capital to reach .25% of GDP

* 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

Partnerships are Critical to Achieve the Moonshot

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

- EAC, WAEMU/BCEAO, CEMAC, SADC,
- UMA, Arab League
- UNECA; Smart Africa

Private Sector Tech Leaders

Donor Partners

Interventions will be tailored to where each country is in its progress towards technological transformation

Comprehensive support to countries to achieve Digital Transformation of Society, Business and Government

Jobs, Economic Diversification, Service Delivery and Inclusion

- Pairs digital technology investments + 'analog' complements such as skills and institutions
- Phased approach targeted at countries at different stages of digital development

Phase I: Digital Foundations → **Phase II: Digital Acceleration** → **End Goal: Digital Transformation**

"Emerging" Countries

- Most AFR Countries

"Transitioning" Countries

- Ex.) Kenya, Nigeria, Ghana, South Africa, Rwanda, Seychelles, Botswana, Tanzania

"Transforming" Countries

- Among African countries, only Mauritius is close to reaching the 'transformation' stage

Africa Requires an Ecosystem Approach to Building the Digital Economy

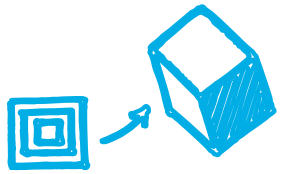
MACROECONOMIC ENABLING ENVIRONMENT

- Macro-economic stability
- Financial sector stability and integrity
- Enabling Tax policy Enabling Trade policy

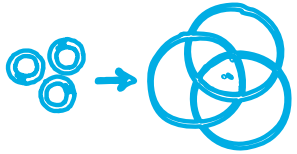
DE4A is consistent with the WBG's 'Boost-Build-Broker' approach for Disruptive Technologies and a key element for the Human Capital

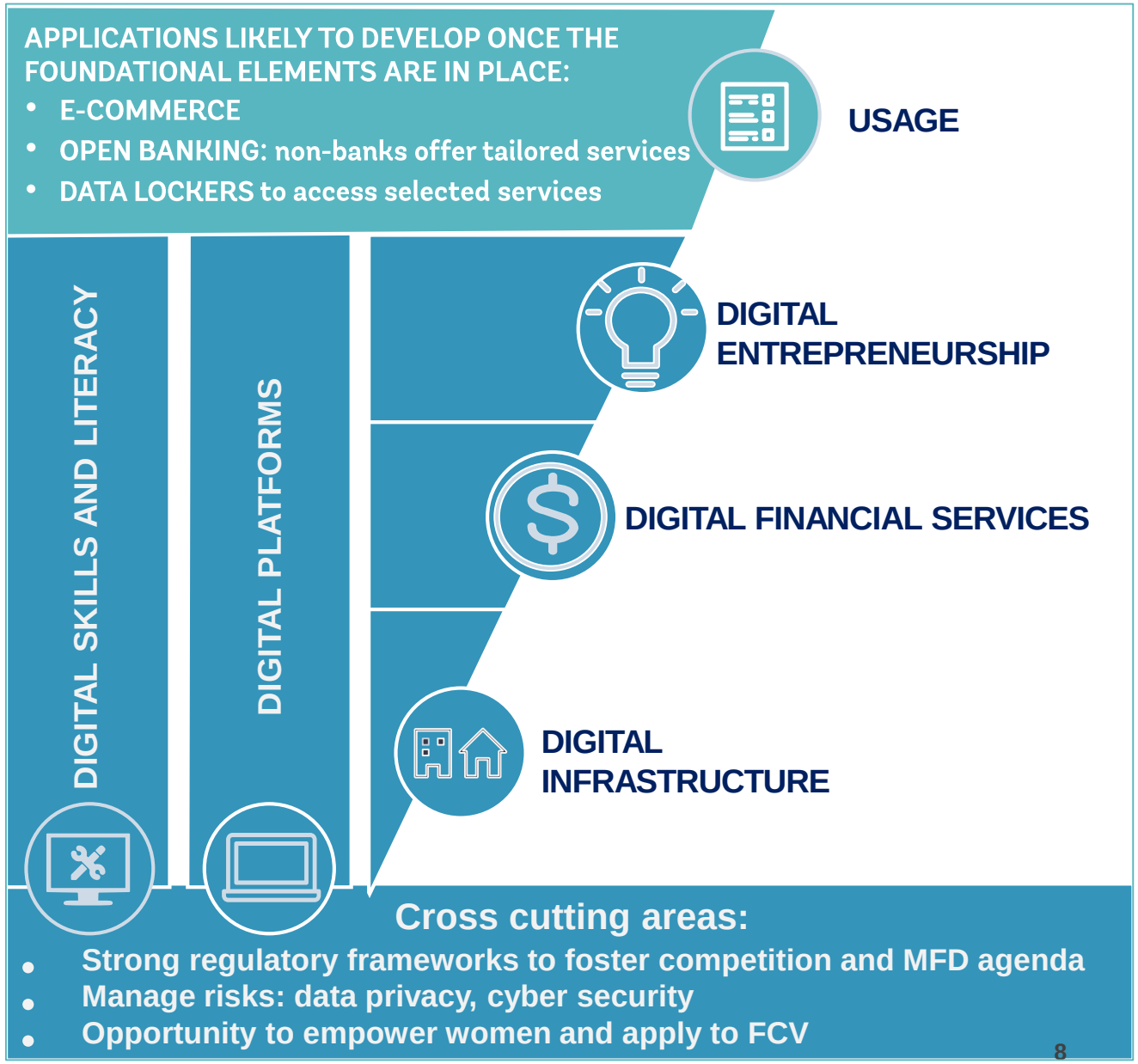
Build: Develop the foundational building blocks for sustainable, technology-led economies

Boost: Expand the capacity of people and institutions to thrive in a resilient society in the face of disruption



Broker: Harness disruptive technology, data, and expertise to solve development challenges and manage risks





The Public Sector as a Digital Platform

- Pressures on governments to be more efficient, responsive and transparent, e.g. constrained resourcing environment; rising citizens' expectations, amplified by social media

- Technology can help governments respond to these challenges

- Without the public sector digital platform of DE4A, there is a risk that many countries will be left behind in:
  - Service delivery (G2C, G2B)
  - Core government systems (G2G)
  - Data for policy making, citizen engagement and private sector value creation (G2G, G2C, G2B)
  - GovTech ecosystems (G2B)
  - Regulation of technology (G2B, G2C, G2G)

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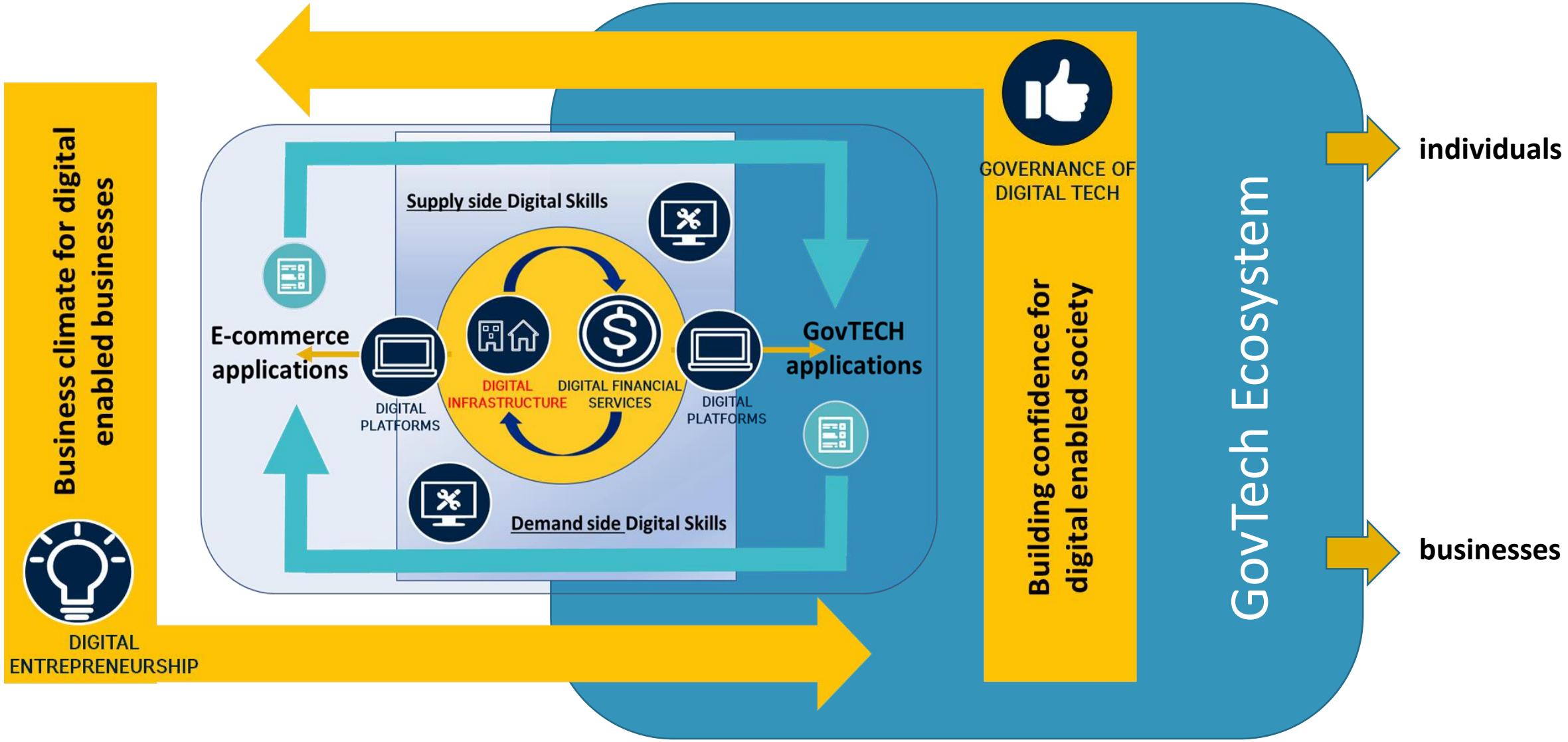
GovTech: a public sector platform for the digital economy



GovTech

Putting people first

Through life events/moments approach to providing services to people and businesses

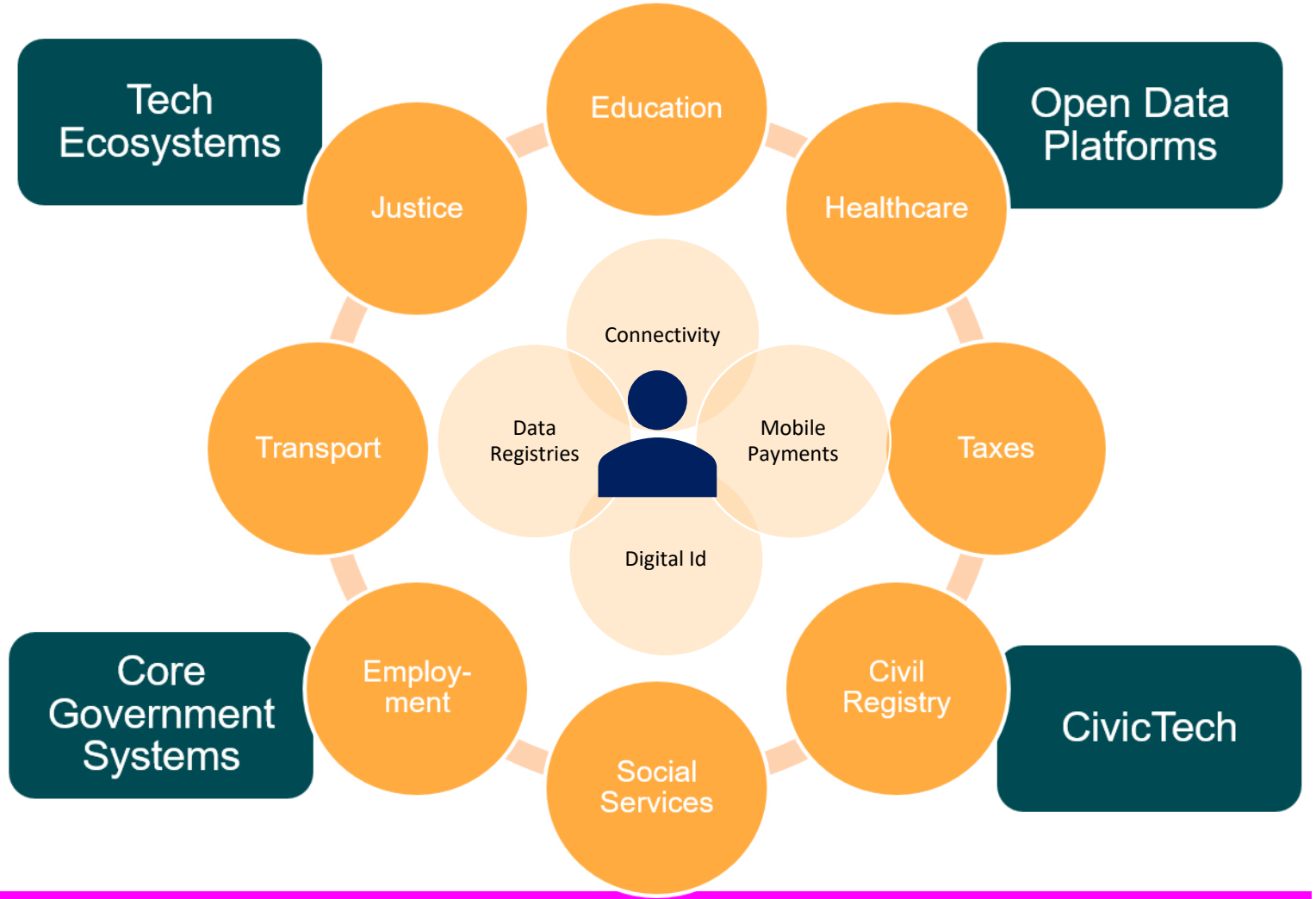
- Designing human-centered services that are simple, transparent, and universally accessible.
- Engaging citizens to increase participation, foster transparency and accountability and build trust.
- Transforming core operations to bring government into the 21st century.
- Making public data available for policy making, citizen engagement and private sector value creation

WORLD BANK GROUP

Digital Governance: GovTech

Getting a Service Today…

Tomorrow: Integrated, Human Centered, Responsive Services



Reduce the Digital Divide Through Citizen-Centric, Transparent, Simple and Efficient Services to Citizens and Businesses

An Overview of a GovTech Platform

Integrated Digital Solutions (Government Cloud)

Government Systems *
FMIS, Tax, Customs, Health, Education, Social Protection, Pensions & more

FMIS | Tax/Cust | HRMIS | Operational Databases | Soc Sec | Edu | Health

System Management
Data Center Operations, Help Desk, Disaster Recovery, Information Security & more

Data Warehouse (Open Data)

Information Management
e-Mail, Content Mgmt, Records/Doc Mgmt, Knowledge Mgmt, Master Data Mgmt & more

e-Gov Portal & e-Services

G2G G2E Institutions

G2C Citizens

G2B Businesses

Single Sign-on | One-Stop Shop | Single Window

Shared Services
- Civil Registration + e-ID Services
- Functional Registries
- e-Payment Services
- Digital Signature & PKI Services

Public Sector Institutions
national, sector and sub-national levels

Society > Citizen Participation & Feedback on e-Services

Citizens, NGOs, Businesses

A simplified model of integrated Digital Solutions for connected e-Services

GovTech
Putting people first

* Government Systems cover the integration (interconnectivity & interoperability) of sector applications, back office systems, as well as the improvement of institutions, capacity, regulations, processes, information management, and more (National Enterprise Architecture, e-Gov Interoperability Framework, Single Window, and One-Stop-Shops).

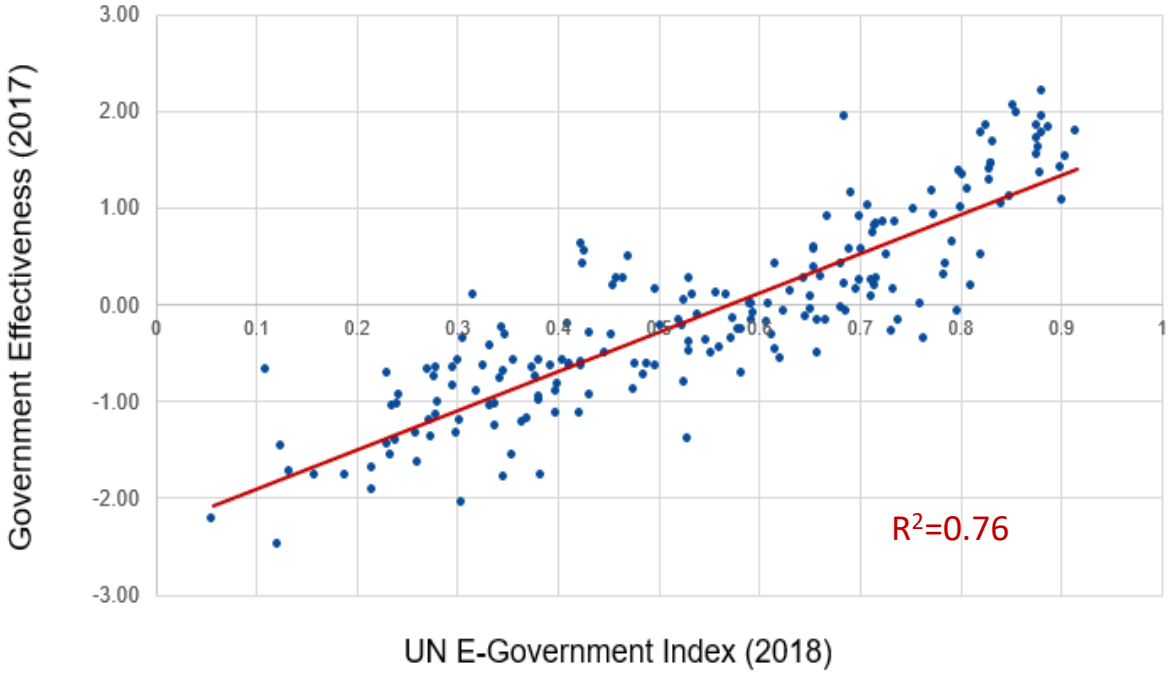
Images: jscreationzs / FreeDigitalPhotos.net

GovTech: Potential to Yield Positive Gains in Governance

E-Services and Corruption Perceptions

Note: 2016 data for egovernment; 2015 data for corruption perceptions.
Sources: UN E-Government Development Index; Transparency International Corruption Perceptions Index.

E-Government and Government Effectiveness



Source: World Governance Indicators (2017), UN E-Government Index (2018), World Bank Staff Calculations

GovTech
Putting people first

Results of GovTech – a country example

Albania Citizen Centric Service Delivery

- Using re-usable applications (APIs) connected to the Government Gateway, transactional e-services increased from 10 to over 570 in four years
- 230,000 registered users on the e-Albania portal obtaining online services
- SMS-based Citizen Feedback System contacted 187,000 citizens - 189 corruption complaints investigated
- Service passports available for all services online
- Incorporating technology reduced the time to deliver old age pensions by 92%

How?

Analytics

- Baseline surveys
- Service inventory and review
- Process mapping

Roadmap Strategy

- e-Government strategy and Action Plan
- Convening stakeholders
- Strengthening institutional coordination

Imple-mentation

- Solution development, piloting and roll out
- Change management
- Monitoring and evaluation

GovTech
Putting people first

The World Bank Group has convened key stakeholders to align towards a common vision for GovTech amongst Governments around the world.

GovTech
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Thank You

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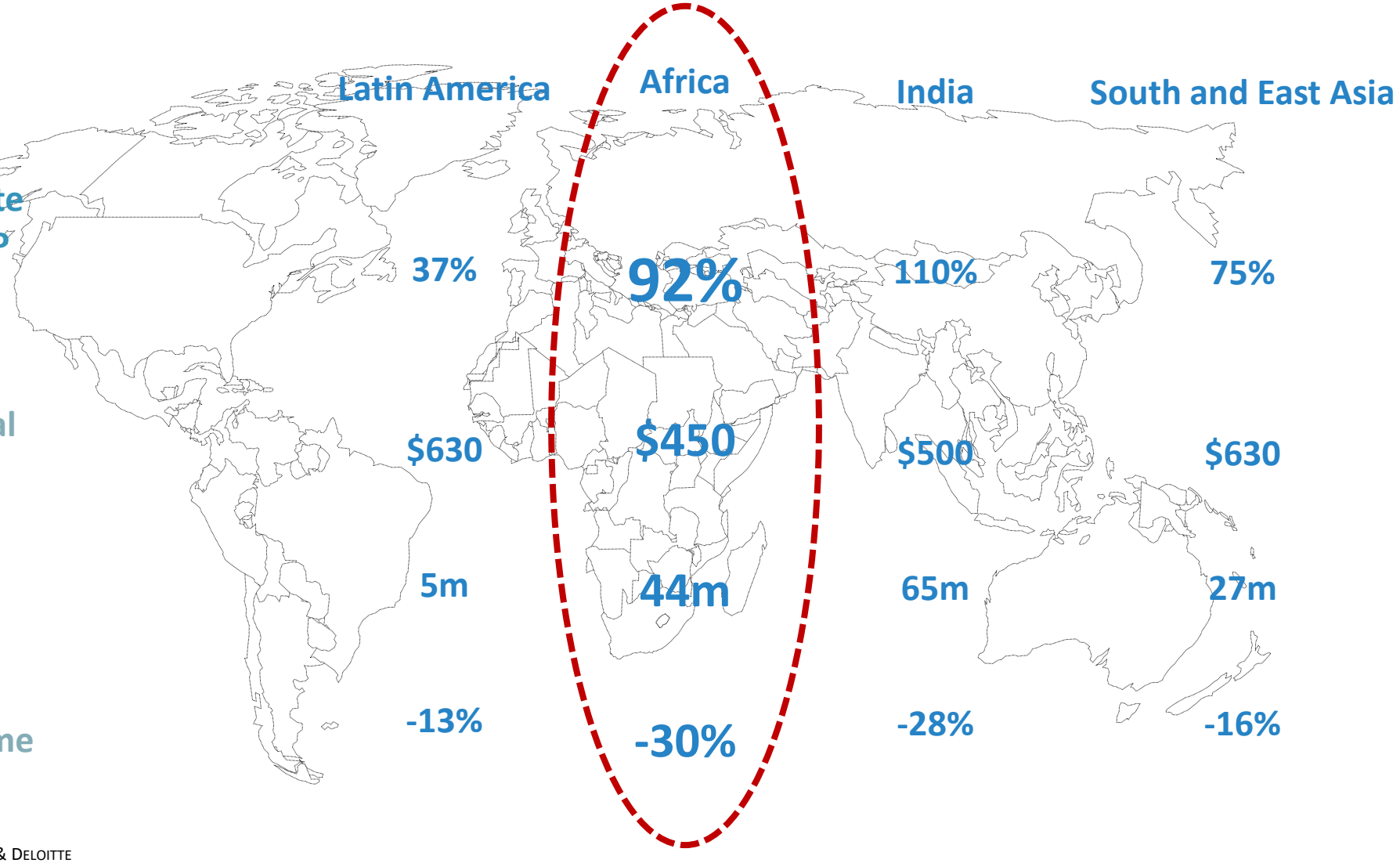
ANNEXES

Digital Infrastructure:
Hitting the Accelerator To Drive Development of Digital Economy



SOURCE: IMF, WORLD BANK & DELOITTE

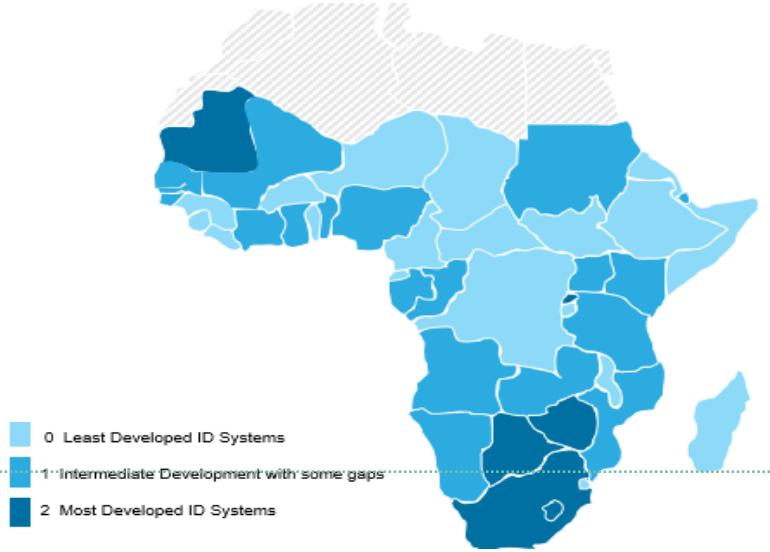
Digital Platforms facilitate development of the Digital Economy and service delivery

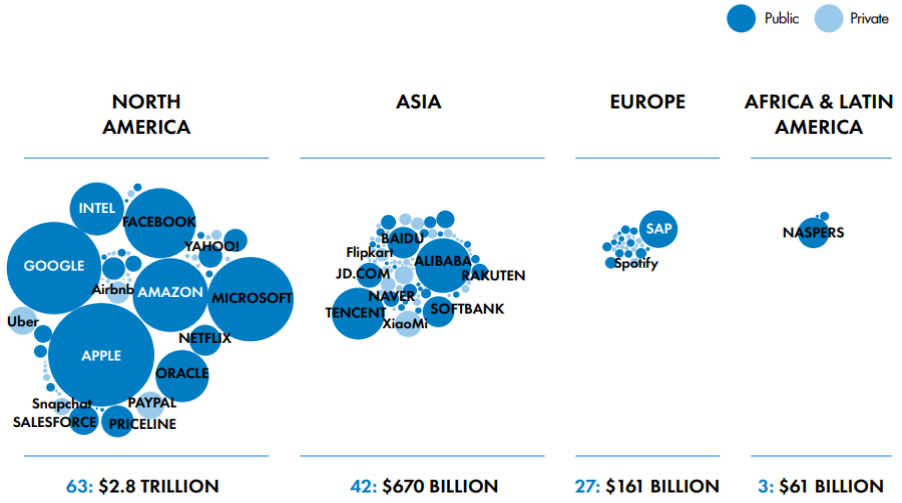
Government platforms are important to improve service delivery and to enhance transparency, efficiency, citizen voice, and accountability (FMIS, e-procurement, HRMIS, Tax & Customs, etc)

Digital ID allows people, business and governments to transact and access and deliver services online. In Africa, about 45% of the population lack a national ID.

The benefits connected to re-usable public data, especially open data, are diverse and yet largely untapped in Africa.

Status of National ID Systems in Sub-Saharan Africa





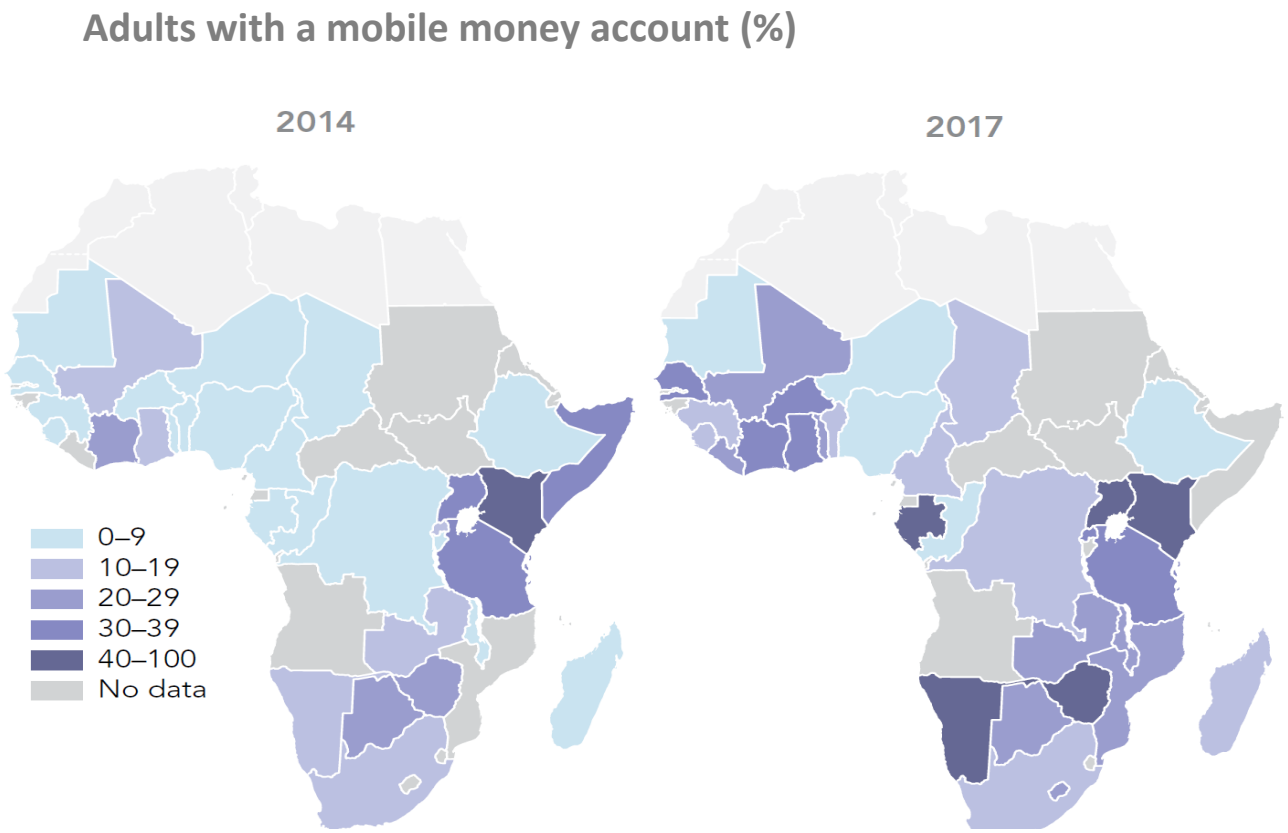
Geographical concentration of digital multinational enterprises with revenue in excess of US$1bn, by region, 2016

Private sector platforms: Digital economy can lead to locally developed applications, platforms and content.

Many e-services in Africa originate outside of the region.

Most popular e-commerce websites are also registered with an international, not a local domain name.

Digital Financial Services open up opportunities in the Digital Economy



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

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.

alf 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.**

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.

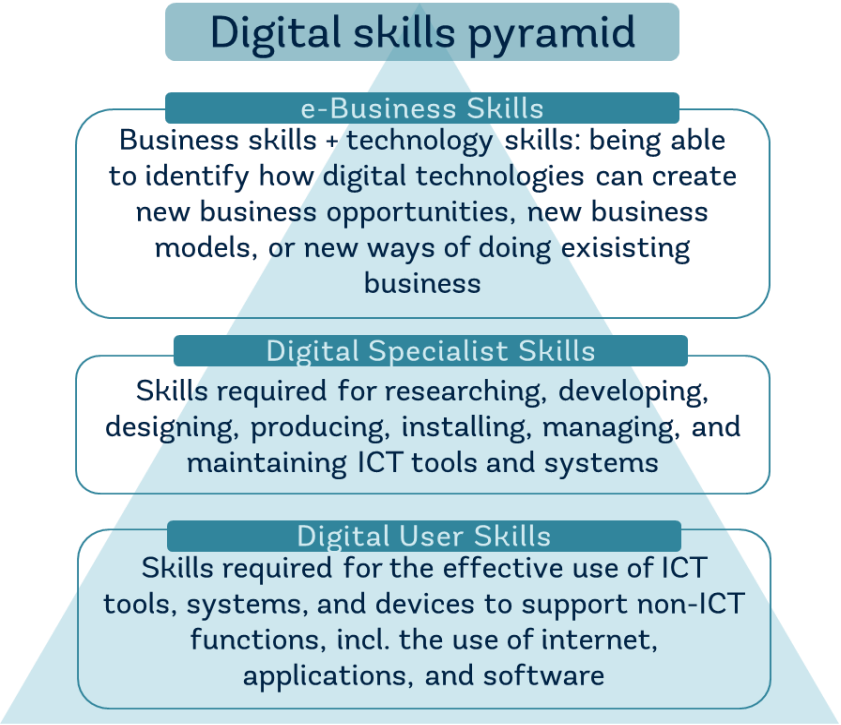
Human Capital: Building Digital Skills of Tomorrow Can Fuel the Digital Economy

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.

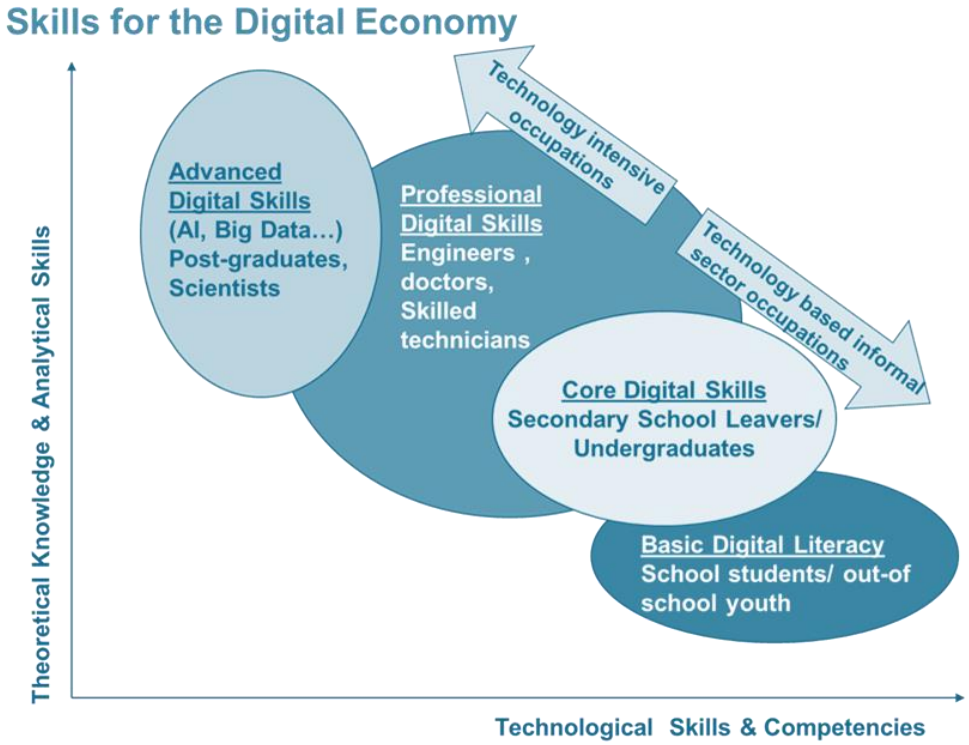
Technological adoption and innovation depend on tech-savvy skills to help drive innovation.

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)



Digital Entrepreneurship to bring the Digital Economy to life

African entrepreneurs are using digital technologies to create innovative solutions to development problems.

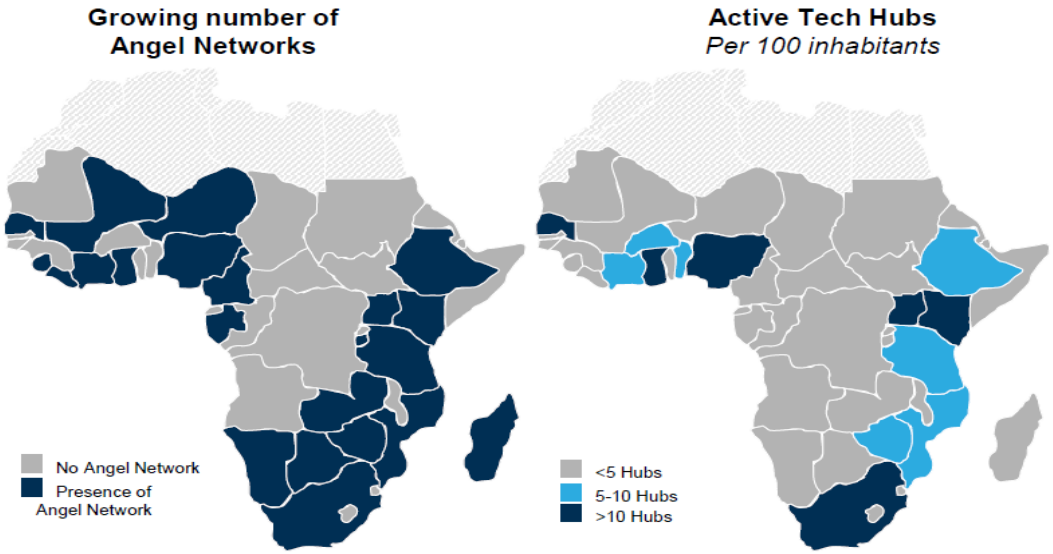
African countries have the highest Total Early-stage Entrepreneurial Index, well above developed & emerging countries.

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

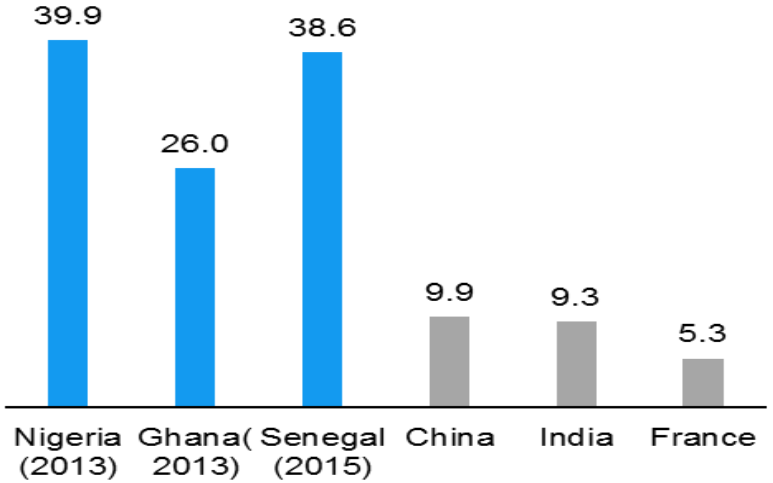
Yet, digital entrepreneurship ecosystem in Africa is still nascent.

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