



Digitalisation for the Green Deal

Webinar 2 – Introduction to Digitalisation
for Development Cooperation

February 24, 2021

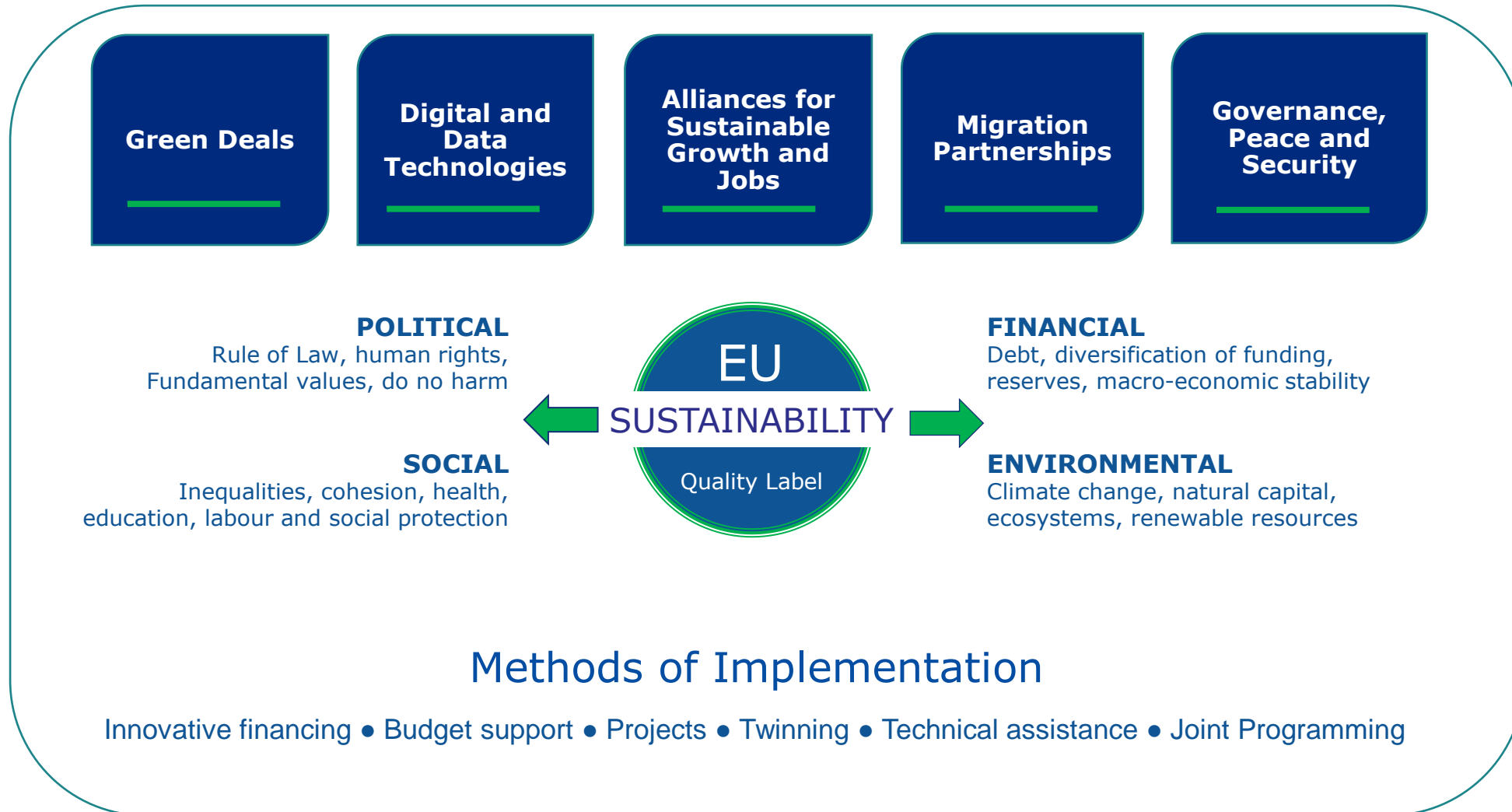
Follow up to Q&A

Andrea Leone, Team Lead Digitalisation

Key messages from webinar #1

- The climate and environmental urgency have been largely recognized by the international and European policy agenda.
- International action: SDGs and related environmental agreements, Paris Agreement, Sendai Framework on Disaster Risk Reduction,
- EU action: the Green Deal
- Digitalisation can support the Green Deal

Digitalisation & Green Deal as part of the new EU Geopolitical Commission





Poll!

Do you remember FaceApp? What do you think about it?

FaceApp Terms of use (1/2)

“You grant FaceApp a perpetual, irrevocable, nonexclusive, royalty-free, worldwide, fully-paid, transferable sub-licensable license to use, reproduce, modify, adapt, publish, translate, create derivative works from, distribute, publicly perform and display your User Content and any name, username or likeness provided in connection with your User Content in all media formats and channels now known or later developed, without compensation to you. When you post or otherwise share User Content on or through our Services, you understand that your User Content and any associated information (such as your [username], location or profile photo) will be visible to the public.”

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FaceApp: Terms of use (2/2)

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Poll!

So how about now?

Agenda for webinar #2

- Deep Dive on Digitalisation
- Introduction to Digitalisation & Development Cooperation
- Digitalisation as a strategic tool of the EU Development
- *Group Discussion*

Deep Dive on Digitalisation

Deep Dive on Digitalisation

Terms and Definitions

- **ICT:** "Information and Communication Technologies" covers any product that will store, retrieve, manipulate, transmit, or receive information electronically in a digital form (e.g., personal computers, digital television, email, or robots).

Deep Dive on Digitalisation

Terms and Definitions

- **Digitisation:** Digitisation is the process of changing from analogue to digital form” Therefore we are talking about **turning photos, movies or documents from analogue (paper based) forms into digital formats**, which is easier to replicate, share etc. It is important to distinguish digitization from digitalization.
- **Digitalisation:** One step up from digitisation and describes processes being conducted now digitally. May it be business processes or the way we interact personally and further. Example: Send emails or instant messages instead of letters.
- **Digital-Transformation:** Describing the transformative changes we see happening due to digitalization and digitization. Both lead to a complete transformation of Business Modells and the way we live and work.

(A fraction of) key technologies

- Mobile Apps
- Artificial Intelligence
- Big Data
- Internet of Things (IoT)

What do I need to know when talking about Apps?

Short Definition

- An application (commonly abbreviated to “app”) is an add-on program or piece of software for smartphones, tablets and/or desktop computers.

Examples

- Messenger (WhatsApp, WeChat), Barcode Scanner, Google Translator or Farm-Apps.



What do I need to know when talking about Big Data?

Short Definition

- Extremely large data sets and the analytical methods used to systematically evaluate the data they contain.

Examples

- Surveillance Outbreak Response Management & Analysis System (SORMAS), United Nations Global Pulse, Malaria Atlas Project.

What do I need to know when talking about Internet of Things (IoT)?

Short Definition

- The term “things” refers to a wide variety of devices like cars with builtin sensors, heart monitoring implants or smart thermostats in private homes.
- Sensors and network connectivity allow these things to: monitor their environment, report their status and location, receive instructions, execute actions based on the data they receive.

Examples

- Tracking parcels, fitness bands that transmit body data, fridges that tell us when we need to buy milk, sensors that measure the right time to sow



What do I need to know when talking about Artificial Intelligence (AI)?

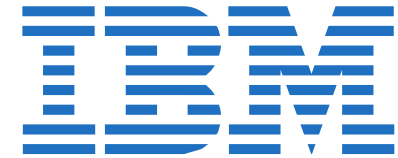
Short Definition

- AI refers to the capability of machines to imitate intelligent human behaviour. This involves performing various cognitive tasks such as: sensing; processing and translating language; reasoning; learning; making decisions.

Examples

- Self-Driving Cars, real-time translation, detect malnutrition via app

Key Actors: Private Sector



Google, Amazon, Microsoft, Facebook and IBM transformed into multipurpose data-driven allrounders shaping the future.

Value: Provide free tools and services across different work sectors and act as potential partners.

Others: SAP, Baidu | Vodafone, Safricom → **Telecommunication companies** (**GSMA** is their trade body) and **Internet Service Providers** are important actors on a national level

Key Actors: Research/Firms tracking the digital transformation

McKinsey
&Company

KPMG

Deloitte.



EY
Building a better
working world

Consultancies like **McKinsey**, **E&Y**, **Deloitte** and **KPMG**

Universities like **MIT** and **Think Tanks** research how the digital transformation is impacting society, economy and politics.

Value: Many reports and case studies are published online and provide insights in how digitalisation is shaping the world.

Key Actors: Multilaterals promoting the digital transformation



Example:
World Development
Report 2016 –
Digital Dividends



Global development banks like **World Bank** or **ADB**; Regional dev. banks like **East African Development Bank** and international Organisations like **OECD** research how the digital transformation is impacting the society, economy and politics.

Value: Many reports, toolkits and case studies are published online and provide insights in how digitalisation is shaping the world.

Key Actors: Multilaterals setting the agenda of digital transformation



International actors like the **ITU**, **Broadband Commission for Sustainable Development** and the **World Intellectual Property Organization** tackle challenges including infrastructure, property rights, international policy frameworks and standard setting. **ICANN** coordinates the Internet's system including IP addresses. The UN established a **High-level Panel on Digital Cooperation** to advance cooperation on Digital Cooperation, and through agencies like **UNCTAD** provide support to countries in the area of digital economy.

Value: In-depth reports and indices (ICT4Development Index), highlevel conferences including ICT4D Conference, agenda/policy setting.

Key Actors: Startup ecosystems, empowering innovators



Global networks are essential key actors that spur (grass-roots) innovation and thereby often find local solutions for global challenges. **Startup Ecosystems** can provide the supporting **infrastructure** to do so.

Value: Harnessing innovation sometimes even on a grassroots level and therefore providing the appropriate infrastructure: **networks, capital, tools** (3D-Printers in Fab Labs)

Key Actors: Civil Society Organizations



Actors like the **World Wide Web Foundation**, **Alliance for Affordable Internet**, **Internet Society**, **Net Hope** and **Open Knowledge Foundation** tackle global „digital“ challenges from a user perspective and on a global, regional and national scale.

Value: Privacy, access, open and free internet, gender divide, democracy and human rights need the same attention like taxation, regulation and digital economy. These NGOs provide case studies, advocacy and in-depth reports

Key Actors: National institutions promoting the digital transformation



**National Ministry of
Communication**



**National Ministry of
Infrastructure**

National political actors are the **National Ministry of Communication**, **National Ministry of Infrastructure** and **visionary processes** and stakeholder linked to them (like Rwanda Vision 2020)

Value: First hand information on telecommunication and telecommunication infrastructure in respective context, can provide open data, can provide overview of other actors e.g. digital economy, startup hubs etc.

Word Cloud

What do you think digitalisation will bring to our world?

Introduction to Digitalisation & Development Cooperation

Digital Transformation affects all parts of our lives

Development Cooperation is no exception

- Digital Transformation changes work and stakeholders of global development



Digital Transformation: opportunities



Digital Transformation: opportunities

Facts & Figures




66% of people in Africa will own a smartphone by 2025.

Productivity in developing countries could increase by up to **25%** in the long term if access to the Internet would be at the level of industrialized countries. This would create **140 million** jobs.



264 million people worldwide do not go to school.
1.4 billion textbooks and learning materials and many training courses are freely available on the Internet and offer educational opportunities.

Digital Transformation: challenges



the digital divide
between those
who have access
and those who
don't



electrical waste is a
catastrophe for nature
and humanity



misuse
compromises
people's privacy
(data security)



Work is reshaped by
digitalisation also
threatening jobs

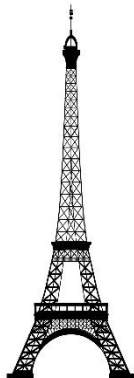
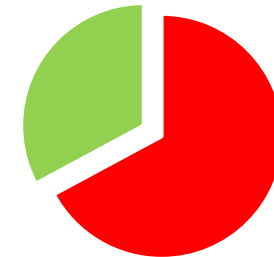
Digital Transformation: challenges

Facts & Figures



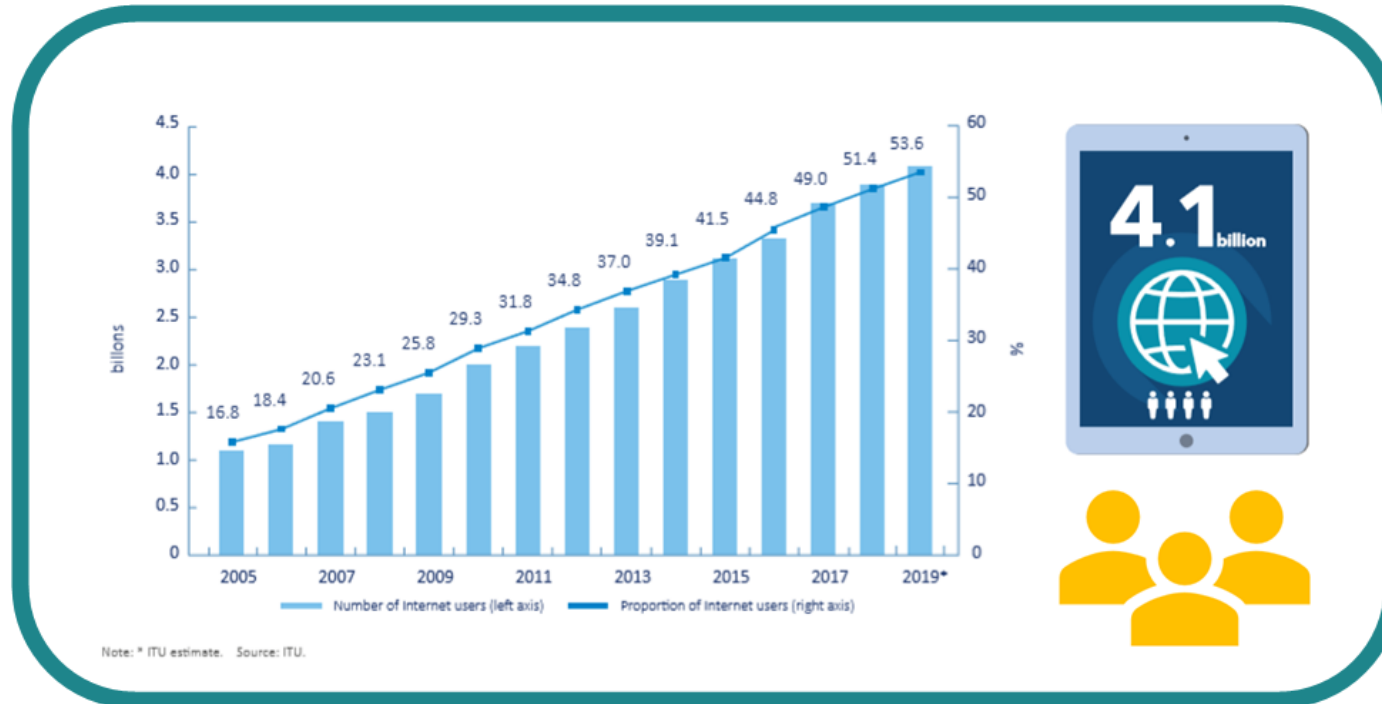
80% of the people in the least-developed countries are not using the Internet. Worldwide the proportion of women using the Internet globally is **48%** per cent, compared to **58%** of men.

Up to **2/3** of all current jobs in developing countries could disappear through digitally driven automation.



In 2016, **44.7 million** tons of e-waste were generated. This corresponds to about **4.500 Eiffel Towers**. Only **20%** of these devices contaminated with toxic substances are properly disposed of and recycled.

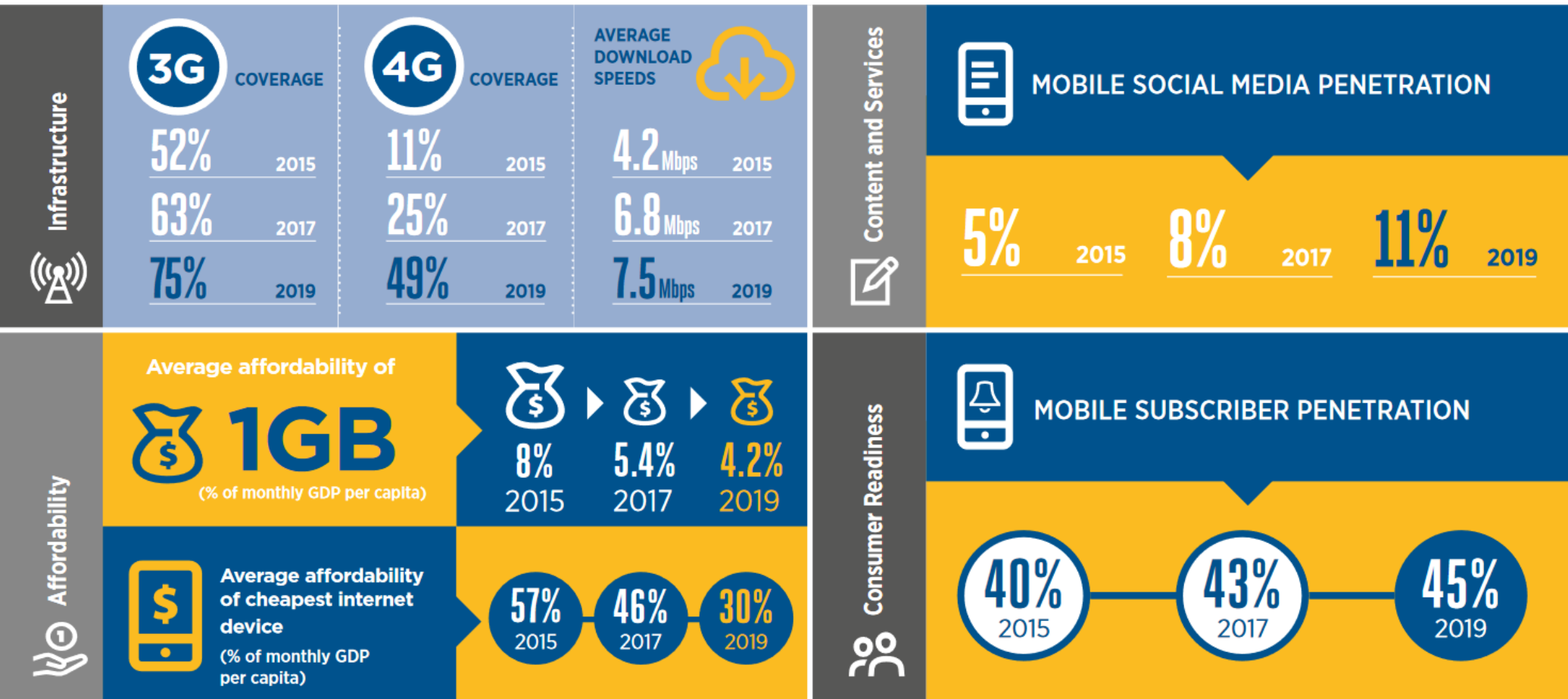
Why should we focus on Digital Development?



Productivity in developing countries could increase by up to **25%** in the long term, if access to the Internet would be at the level of industrialized countries.
This would create **140 million** jobs.

Source: Deloitte

Why should we focus on Digital Development?

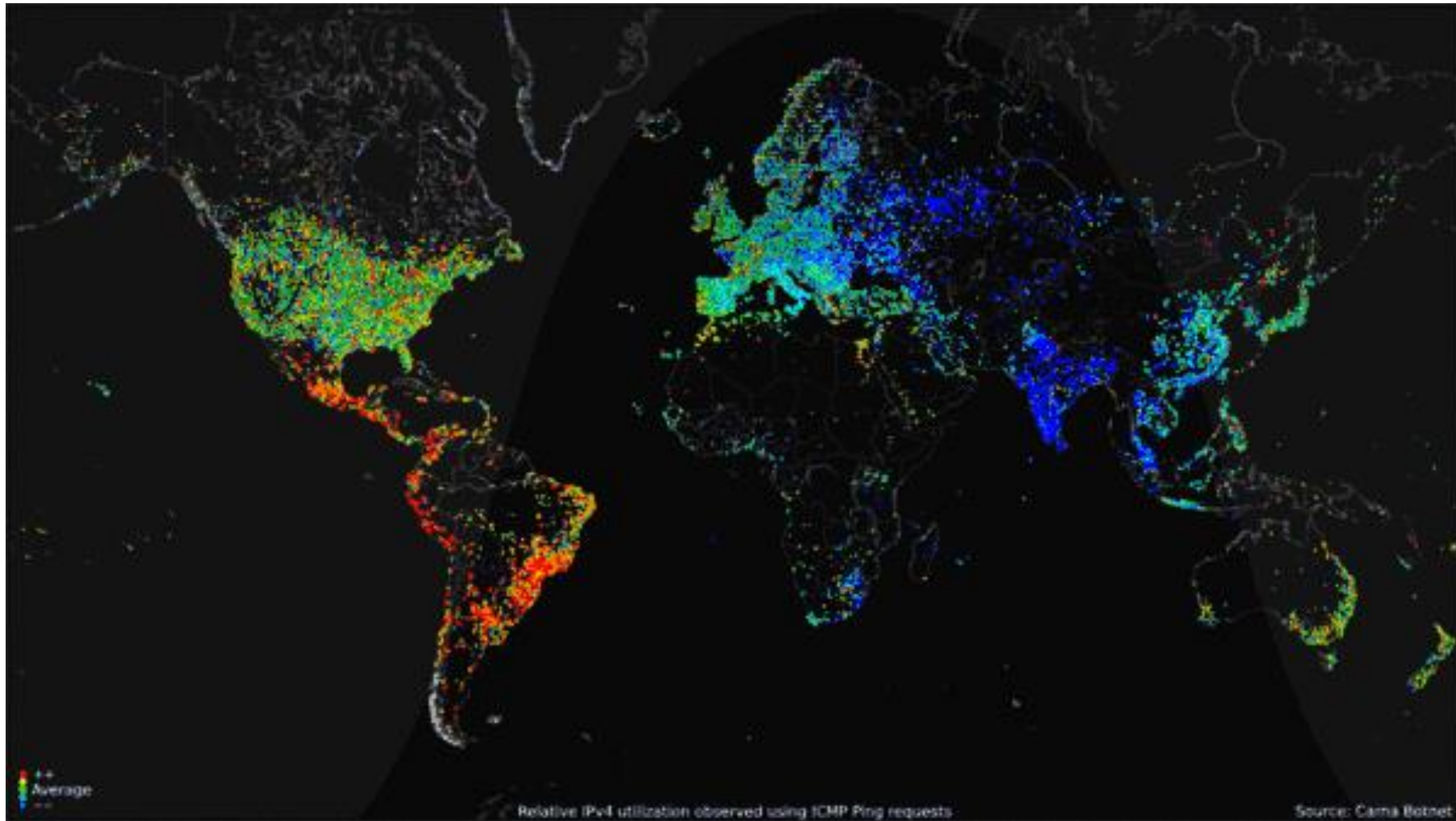


Sub-Saharan Africa

Key growth in mobile connectivity

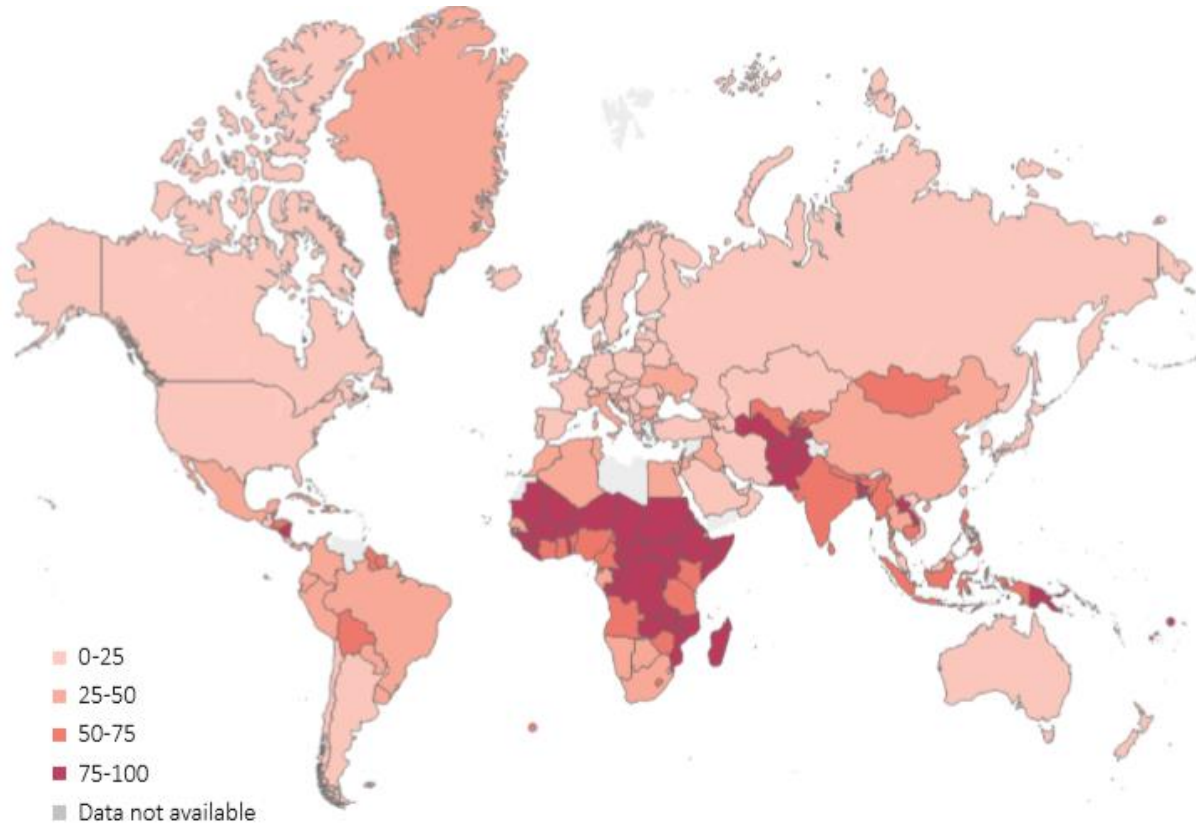
→ Growing potential for increased access to public digital services and financial inclusion

Is Digitalisation accessible to all?



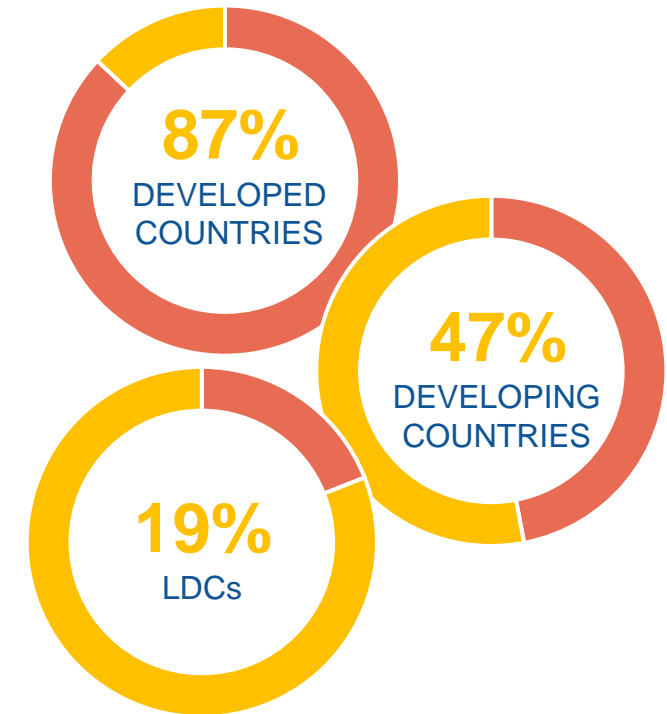
Digital Divide

Who is not connected to the Internet?



Note: * ITU estimate. Source: ITU.

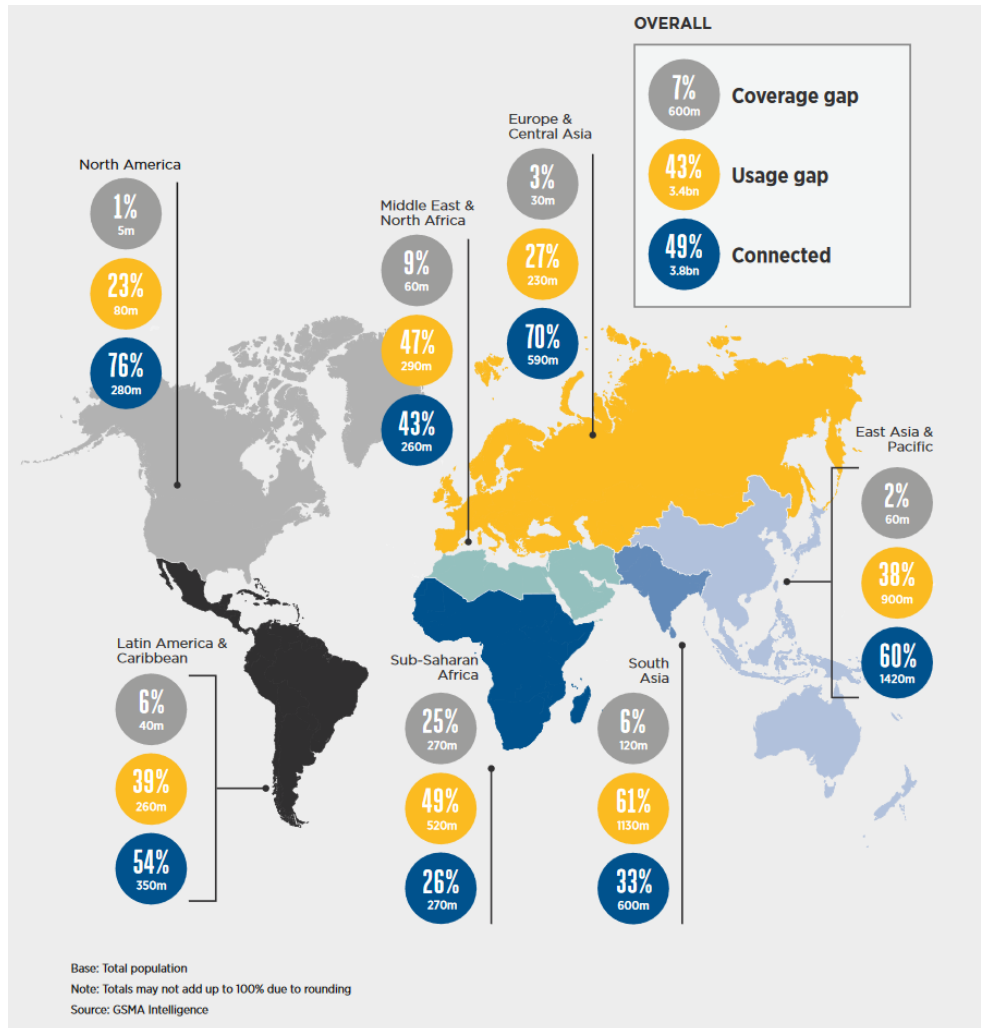
Internet users by country (2019)



Internet users by status (2019)

Digital Divide

Mobile Internet connectivity



Connected

Mobile internet penetration, which is the number of unique users who have used internet services on a mobile device.

Usage gap

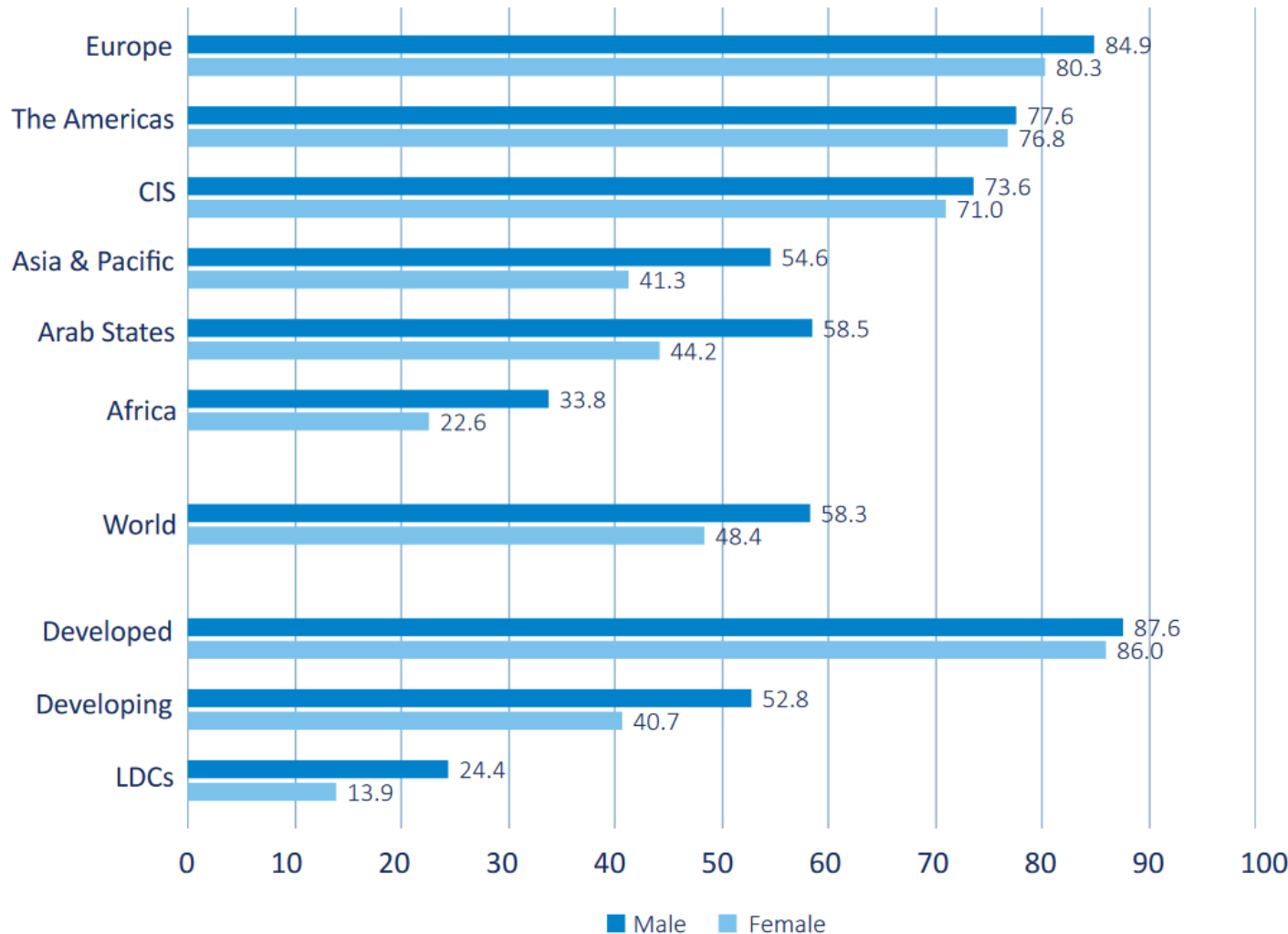
Those that live within the footprint of a mobile broadband network but are not using mobile internet.

Coverage gap

Those that do not live within the footprint of a mobile broadband network.

Digital Divide

A focus on gender digital divide



Internet penetration rate for men and women (ITU, 2019)



23%
of women in
Sub-Saharan Africa
use the Internet
compared to **34%** of men

A study on the gender digital divide in the region has recently been contracted by C5 to identify specific challenges and solutions

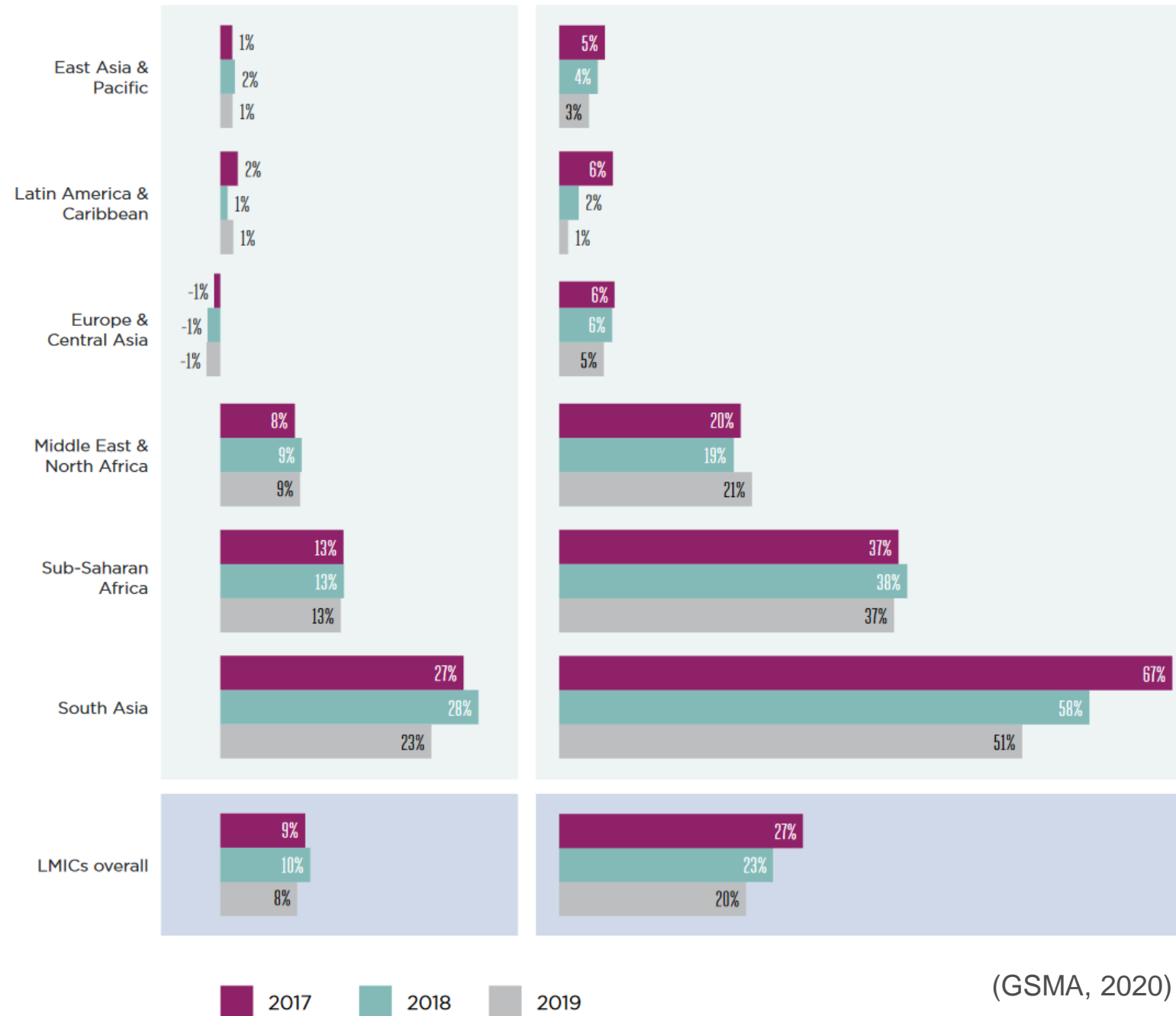
Digital Divide

A focus on gender digital divide

- 54% of women in LMICs now use mobile internet
- Gender gap is narrowing.
 - Over 300M fewer women than men accessing the internet on a mobile.
 - Still, women are 20% less likely to use mobile internet than men (down from 27% in 2017)
 - Gender gap widest in South Asia (51%)
- Women across LMICs are 8% less likely than men to own a mobile phone (=165M fewer women than men owning a mobile)

REGIONAL GENDER GAPS IN
MOBILE OWNERSHIP 2017-2019

REGIONAL GENDER GAPS IN MOBILE
INTERNET USE 2017-2019



(GSMA, 2020)

Frameworks & Principles

- Digital plays a role in the achievement of most of the SDGs.. Although it is explicitly named in the SDGs 4 times only

4.A.1 Proportion of schools with access to the Internet for pedagogical purposes



5.B.1 Proportion of individuals who own a mobile telephone, by sex

9.C *Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.*



8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors.



...but play a significant role for all goals

Frameworks & Principles

- The Principles for Digital Development can help to ask the right questions



- The **Principles for Digital Development** provide straightforward, intuitive guidance on how to choose and use appropriate technology to promote development objectives
- <https://digitalprinciples.org/>

Exercise

Identifying the missing Principles for Digital Development

Example of Failed Digitalisation for Development Project

OLPC: One Laptop Per Child



Actual production costs were more than 200\$



No connection ports for local classrooms



Limited assistance with software issues



Lack of existing infrastructure including power supply and broadband connection



Project conceived and designed at the MIT, later deployed to partners



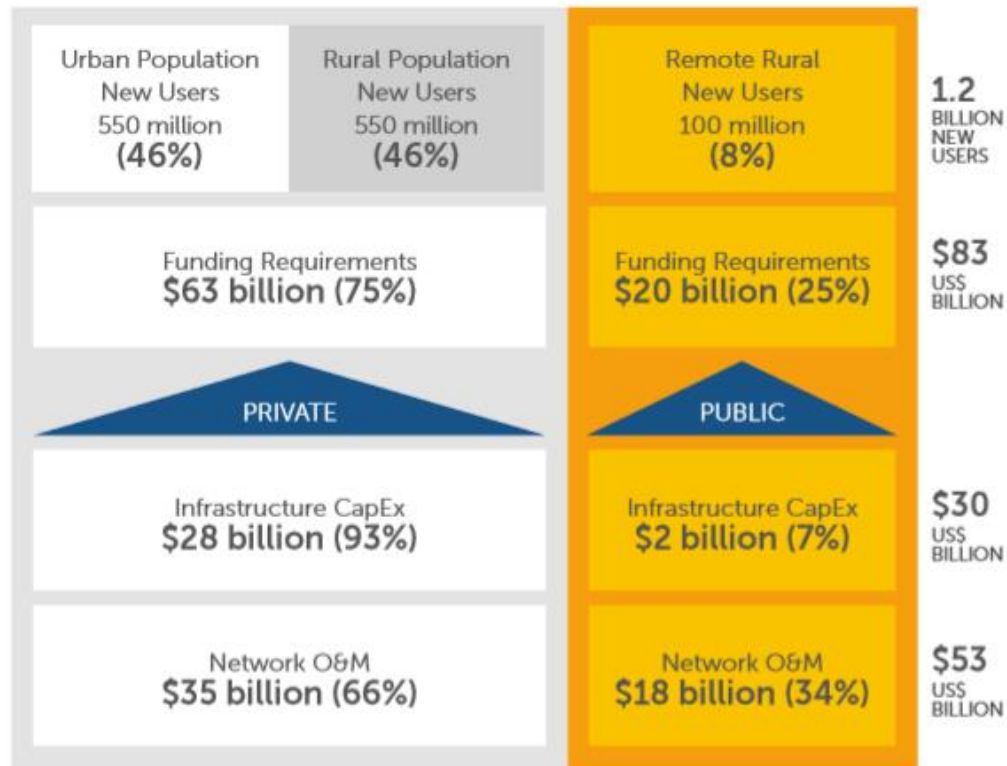
Exercise

Which Principles for Digital Development were missing?

Digitalisation as a strategic tool of the EU development

Investment needs in digital connectivity infrastructure

- Overall estimate of **\$109 billion** in investments needed to achieve the **2030 target** of **universal access to affordable and good quality broadband**.



Note: New users in remote rural area are estimated at ~100m (~15%-20% of the rural population). This represents the low-density areas out of reach of traditional mobile networks.

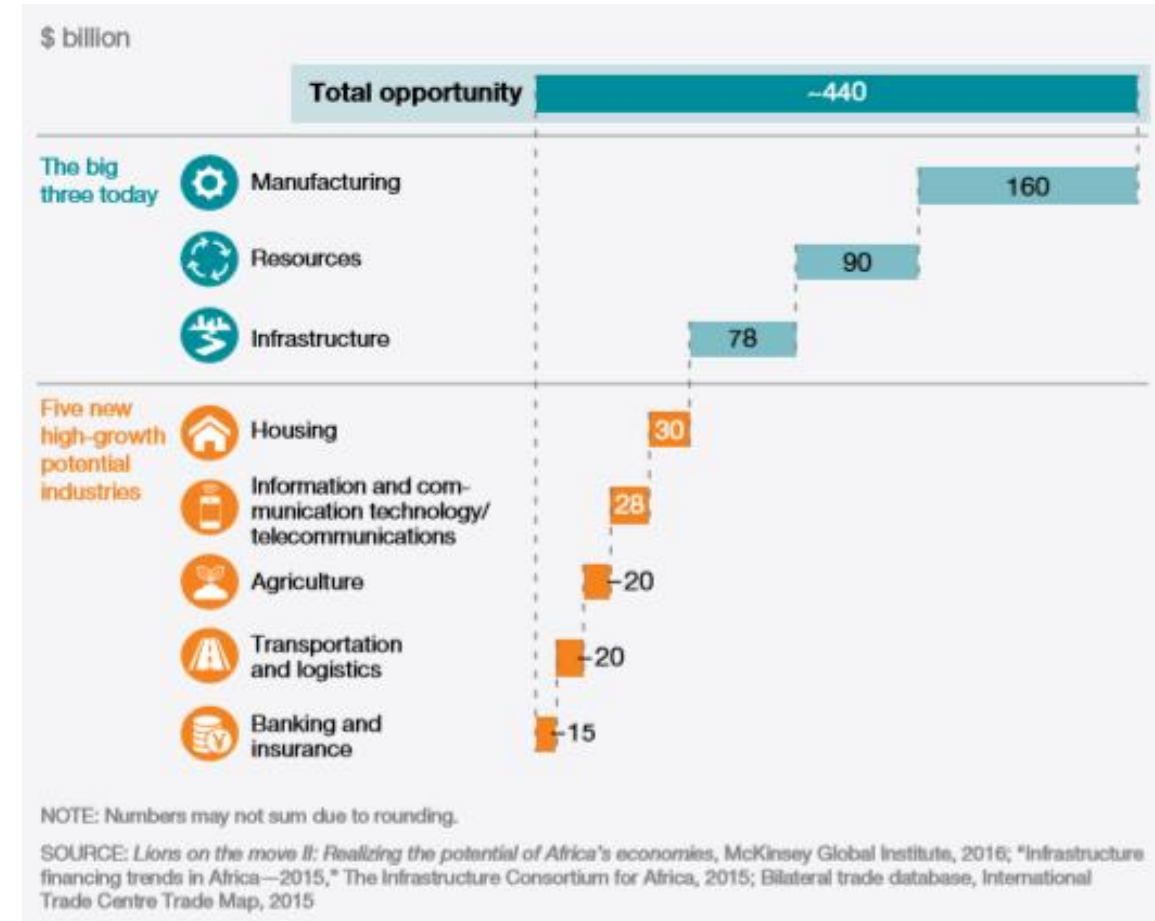
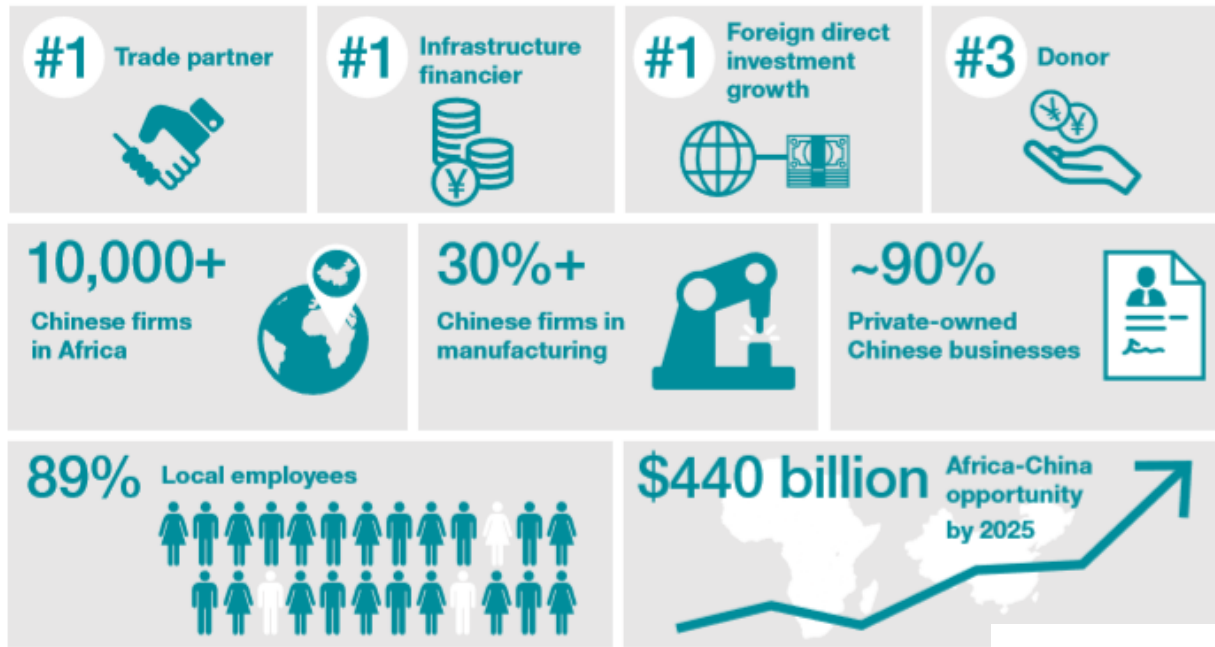
Key actors

- African Union and RECs
- African governments, public investment agencies
- Sector regulators
- MDBs, RDBs
- EU-AITF
- UN/other
- Private Sector
- NGOs

Indicative distribution of cost sharing between the public and the private for infrastructure capital expenditure (CapEx) and network operations and maintenance (O&M). Another significant aspect of the MFD approach demonstrates that public investment participants (e.g. MDBs, bilaterals and other development aid agencies) will channel investments in areas that the private sector sees as non-commercially viable.

China is going digital in Africa

General China-Africa Investment



China is going digital in Africa

China's Digital Silk Road in Africa

Data centers and Smart City initiatives

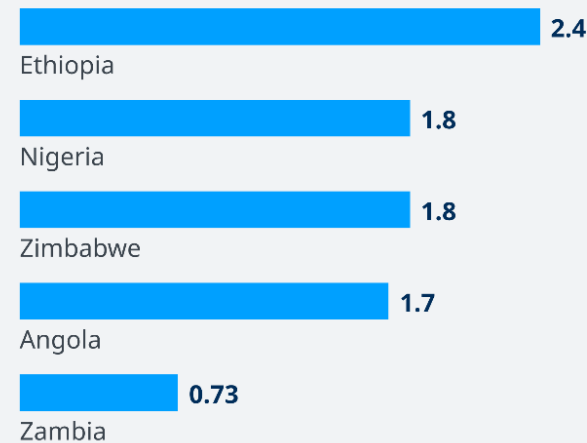


Source: Australian Strategic Policy Institute

© DW

Digital silk road projects

The top 5 countries (in billion \$)



Source: RWR Advisory Group/Bloomberg

© DW

A gigabyte of data costs an average of 8% of a monthly income in Africa, according to A4AI.

But while Chinese tech connect Africa, experts argue African countries could adopt Chinese internet censorship model. For example, most of the smart city projects that involve Chinese financing and companies in African countries aimed at making cities safer through technologies that allow surveillance.

AI Surveillance and Data

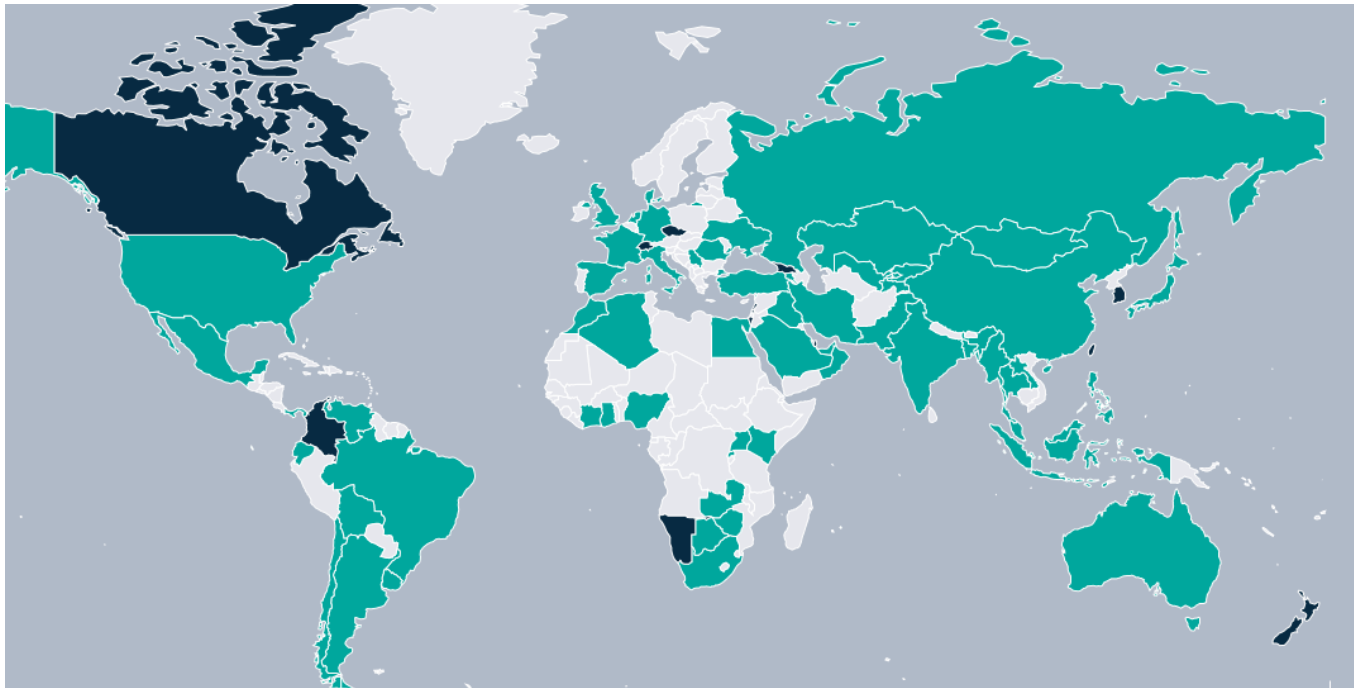
The geopolitical importance of digital

Technology enables several sensitive systems/services: Smart city/safe city platforms, Facial recognition systems, Smart policing

- **China** is a major driver of AI surveillance worldwide.
- Technology linked to Chinese companies—particularly Huawei, Hikvision, Dahua, and ZTE—supply AI surveillance technology in sixty-three countries, thirty-six of which have signed onto China's Belt and Road Initiative (BRI).
- Huawei alone is responsible for providing AI surveillance technology to at least fifty countries worldwide.
- The **US** are also big providers of this technology.

AI Surveillance and Data

The geopolitical importance of digital



Countries that use Chinese companies to supply their AI surveillance technology. Source: Carnegie Institute

Chinese product pitches are often accompanied by soft loans to encourage governments to purchase their equipment. These tactics are particularly relevant in countries like **Kenya, Laos, Mongolia, Uganda, and Uzbekistan**—which otherwise might not access this technology.

Ongoing EU actions

Policy Framework

2017

SWD on Digital4Development

Mainstreaming Digital Technologies and Services into EU Development Policy

Council Conclusions on Digital4Development

welcoming the D4D approach and asking for implementation

2018

European Parliament Resolution

Digitalisation for Development: Reducing Poverty through Technology

2019

New Africa-Europe Digital Economy Partnership

Report of the AU-EU Digital Economy Task Force



Partnerships

MultiStakeholder Forum

EUMS, public and private stakeholders

D4D Coalition

EUMS and European private sector

AU-EU Digital Economy Task Force

EUMS, African and European public and private sector

Global D4D Hub

MS and private sector (starting in 2020 only for Africa)

COMM: Shaping Europe's Digital Future

- Three objectives to ensure the digital transformation



COMM: Shaping Europe's Digital Future

- International Dimension



The EU will:

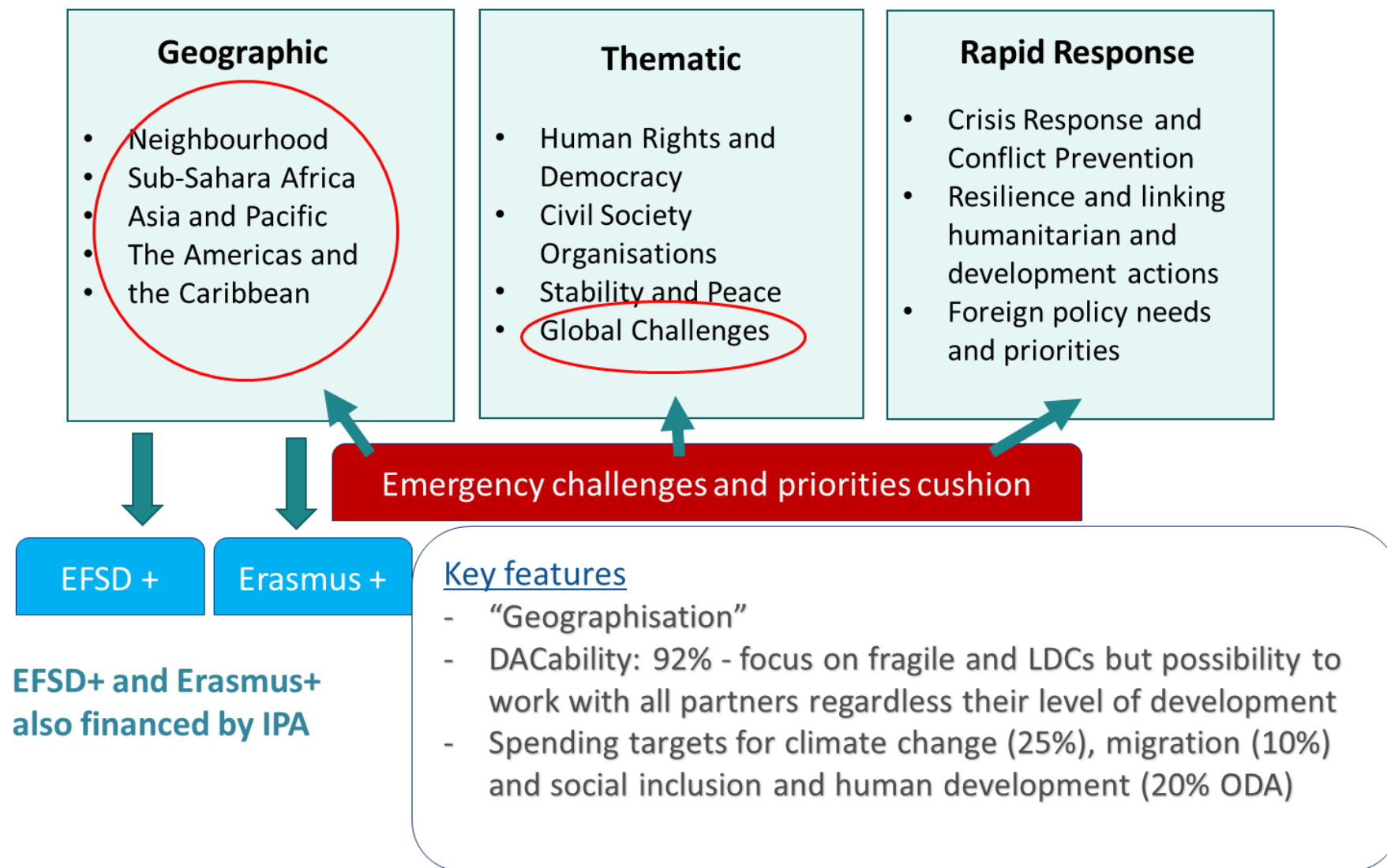
- ◆ aim to become a **global role model** for the digital economy;
- ◆ **support developing economies** in going digital;
- ◆ develop **digital standards** and promote them internationally.

COMM: Shaping Europe's Digital Future

International Dimension: Key Actions:

- White Paper on an instrument on foreign subsidies
- Mapping of opportunities and action plan to promote the European approach in bilateral relations and multilateral fora
- A strategy for Standardisation
- Global Digital Cooperation Strategy
- Digital for Development Hub

Digitalisation in the NDICI



New Commission and next programming

Policy strands and main areas of action



Governance, including policy regulatory frameworks and data protection



Digital connectivity, including key enabling infrastructure, such as power and broadband



Skills, entrepreneurship and access to finance



eServices, both public and private, including eGovernance



Projects
Grants
Blending
EFSD Guarantees

Mainstreaming
Mapping of over
200 DEVCO projects
with digital components

New Commission and next programming

Policy strands and main areas of action

Digital connectivity and infrastructure

- Investment in connectivity infrastructures
- Promote affordable access to broadband
- Connect underserved areas and populations



Digital Single Market
GDPR
COPERNICUS
GALILEO

Governance, policy and regulations

- Improve the regulatory framework for a conducive business environment
- Capacity building and promotion of EU standards and policies
- Strategic Partnership between EU and national and regional actors
- Human-centred approach for digitalisation with a focus on inclusion and gender dimensions
- Data protection



GDPR
Digital Single Market
Cybersecurity
EU Human Rights Policies
Artificial Intelligence
eIDAS

New Commission and next programming

Policy strands and main areas of action

Digital skills and entrepreneurship

- Digital literacy and digital hygiene
- Skills in education and VET
- Skills for professionals across all sectors
- Capacity building support for the digital start-up eco-system
- Foster access to funding for MSMEs, start-ups and social enterprises
- Investment in connectivity




EU Consumer Protection Legislation
EU Intellectual Property Rights standards
EU Human Rights policies
Digital Single Market

Digital services (eServices)

- eHealth
- eEducation
- eCommerce
- eAgriculture
- eGovernance
- Fintech and financial inclusion
- Digital and Energy




Digital Single Market
GDPR
COPERNICUS
EU Human Rights policies
Artificial Intelligence
GALILEO

D4D Hub

- Concretise the D4D policy and action framework on EU/AU strategic, regional and national level
- Participation of 5 Heads of States and Government of Germany, France, Belgium, Estonia and Luxembourg
- 6 more EU MS (Finland, Lithuania, The Netherlands, Portugal, Spain, Sweden) signed the Letter of Intent to join the D4D Hub together with public institutions, industry, civil society and academia.

3 Objectives:

Joint initiatives for mainstreaming D4D at national and regional level

Piloting innovative D4D methodologies/ partnerships and share best practices

Multi-stakeholder dialogue for policy and regulation at regional and national level

Thematic Support

INTPA HQ and EU Delegations

- Training Modules
 - Introduction to digitalisation
 - Digitalisation for Agriculture
 - Digitalisation Infrastructure
 - Digitalisation for Human Development
 - Startup, Copernicus, eCommerce, regional, etc.
- D4D TOOLKIT for Delegations
- Preparation of specific guidelines
 - eGovernance, eAgriculture, eEducation
- Study on Digital Gender Divide in Africa
- Strategic assessment on SSA
- Digital Internal Marker
- Results framework on digitalisation
- Support at country level
 - ToR, Studies and TA

Ongoing work in the area of Digitalisation & Development Cooperation

Africa Connect: Support of the creation, development and use of regional education and research communication networks.



Policy and Regulation Initiative for Digital Africa (PRIDA): Aims to foster universally accessible and affordable broadband across the continent by facilitating efficient and harmonised spectrum utilisation.



Cyber Resilience for Development: Aims to increase the security and resilience of critical information infrastructure and networks supporting the adoption and implementation of a comprehensive set of policy, organisational, and technical measures that will increase their cybersecurity and preparedness.



The Multinational Trans-Saharan Backbone (TSB) Optical Fiber Project will lay optical fiber cables to interconnect Algeria, Niger, Nigeria and Chad

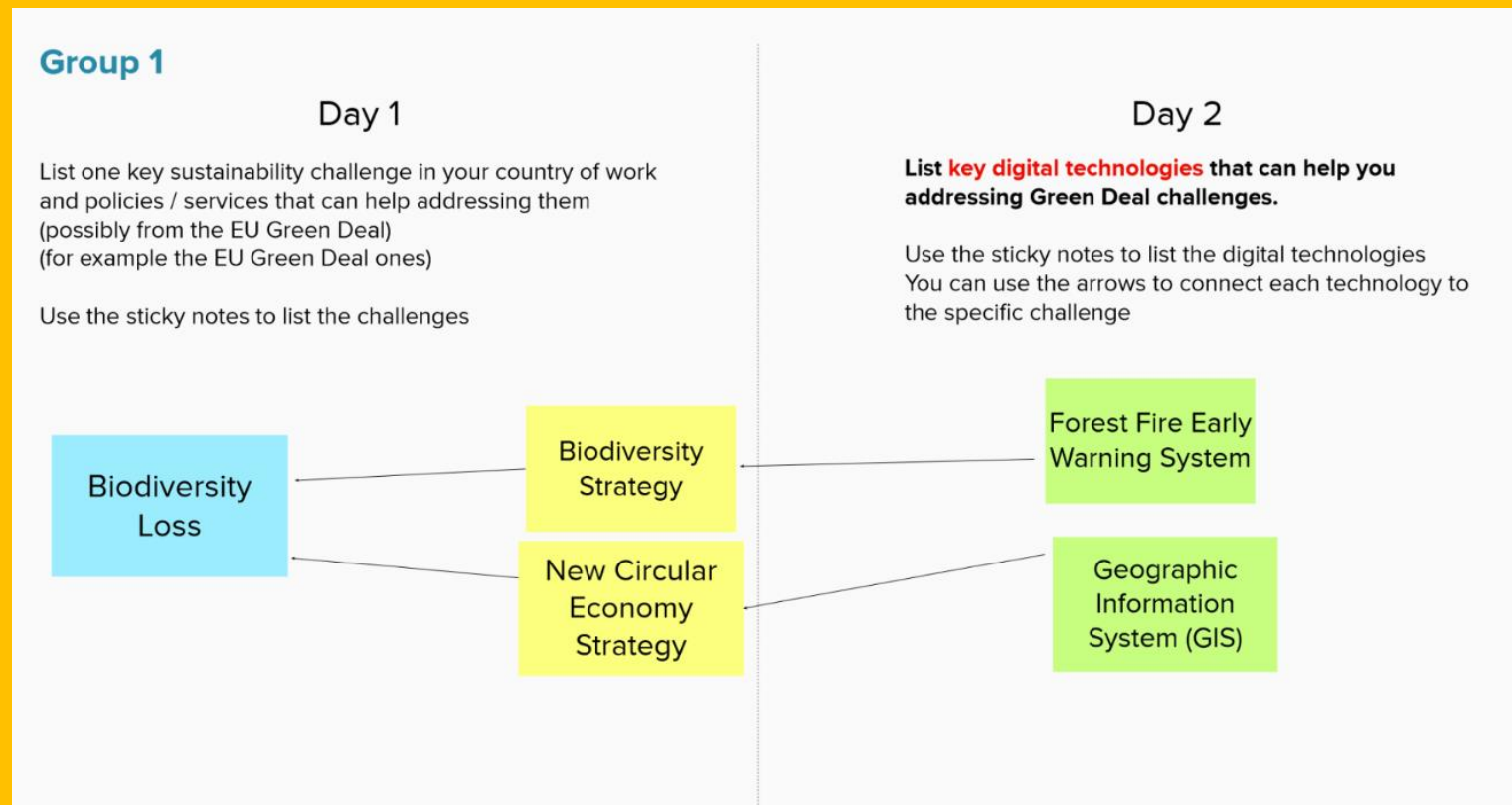


Group Discussion!

Each participant will propose key digital technologies that can help solving the key sustainability challenges identified in webinar #1

Group Discussion!

- Each participant will propose key digital technologies that can help solving the key sustainability challenges identified in webinar #1



Q&A

- Any questions? Comments? Remarks?

Conclusion

- Wide spectrum of digital technologies and a diversity of actors
- Digitalisation is already transforming Development Cooperation
- Digitalisation is a geopolitical tool, and it can be a strategic one to promote EU values
 - Technology that works for people
 - Fair and competitive economy
 - Open, democratic and sustainable society

Thank you... and see you on March 2 for our 3rd webinar!

Contact: simone.sala@gmail.com



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Slide 17: picture, source: Gary Stevens, Hosting Canada; Slide 33, 36: picture, source: ITU, Measuring digital development (2019); Slide 34, 37: picture, source: GSMA, Mobile Internet Connectivity 2020; Slide 38: picture, source: GSMA, The Mobile Gender Gap Report 2020; Slide 43: picture, source: Mike McGregor, <http://www.mikemcgregor.com>; Slide 46: pictures, source: Broadband Commission; Slide 47: pictures, source: McKinsey Global Institute; Slide 48: pictures, source: Deutsche Welle

