SPIDER

Technology in the Global South – Approaches, Agency and Power

Katja Sarajeva (PhD), SPIDER

Stockholm University

The goal of International Development

Strengthen the most vulnerable groups in the world so that everyone can:

- Live longer, healthier and safer lives
- Lead more economically, politically and ecologically stable and sustainable lives

Categorisation of countries

Developed/Developing, Least Developed Countries (UN)

High, Middle and Low income countries World Bank)

Categorisation of countries

Developed/Developing, Least Developed Countries (UN)

Based on the UN Human Development Index (HDI)

- Life expectancy at birth
- Expected years in school
- Gross national income

High, Middle and Low income countries World Bank)

Based on Gross National Income

- Avoids the implication that some countries are developing and others are developed
- Money you can buy most other services

SUSTAINABLE DEVELOPMENT GOALS

Based on an extensive consultation process

Accepted in 2015 valid until 2030

17 goals and 169 targets (sub-goals)

231 Indicators

Goals and targets

Goals and targets

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Target 8.5

By 2030 achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

Target 8.5

By 2030 achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

Indicators

8.5.1 Average hourly earnings of female, and male employees, by occupation, age and persons with disabilities

8.5.2 Unemployment rate, by sex, age and persons with disabilities

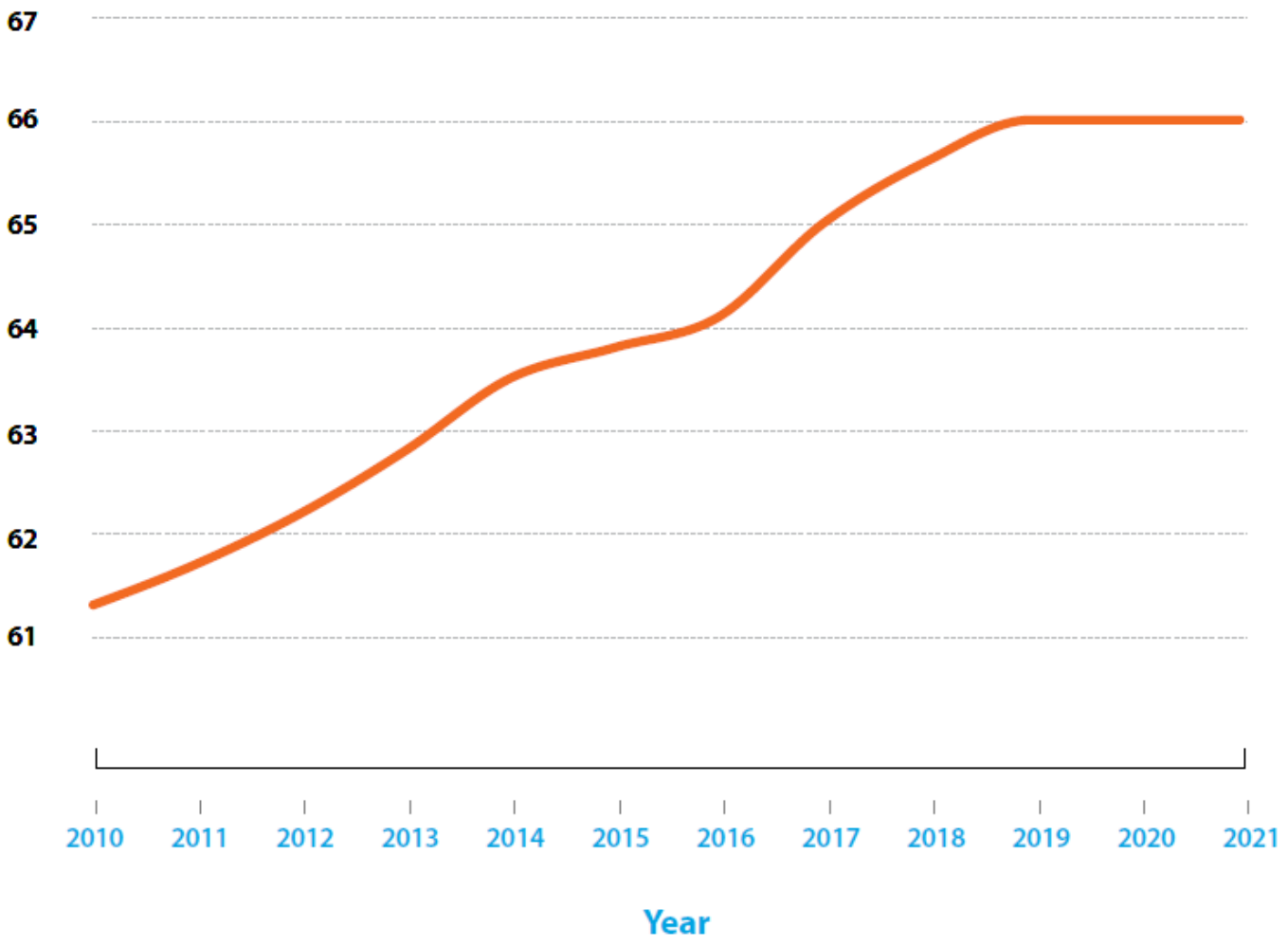
How much has been acheived?

- SDG Index and Dashboards Report
- https://dashboards.sdgindex.org/#/

SDG Indicators Report

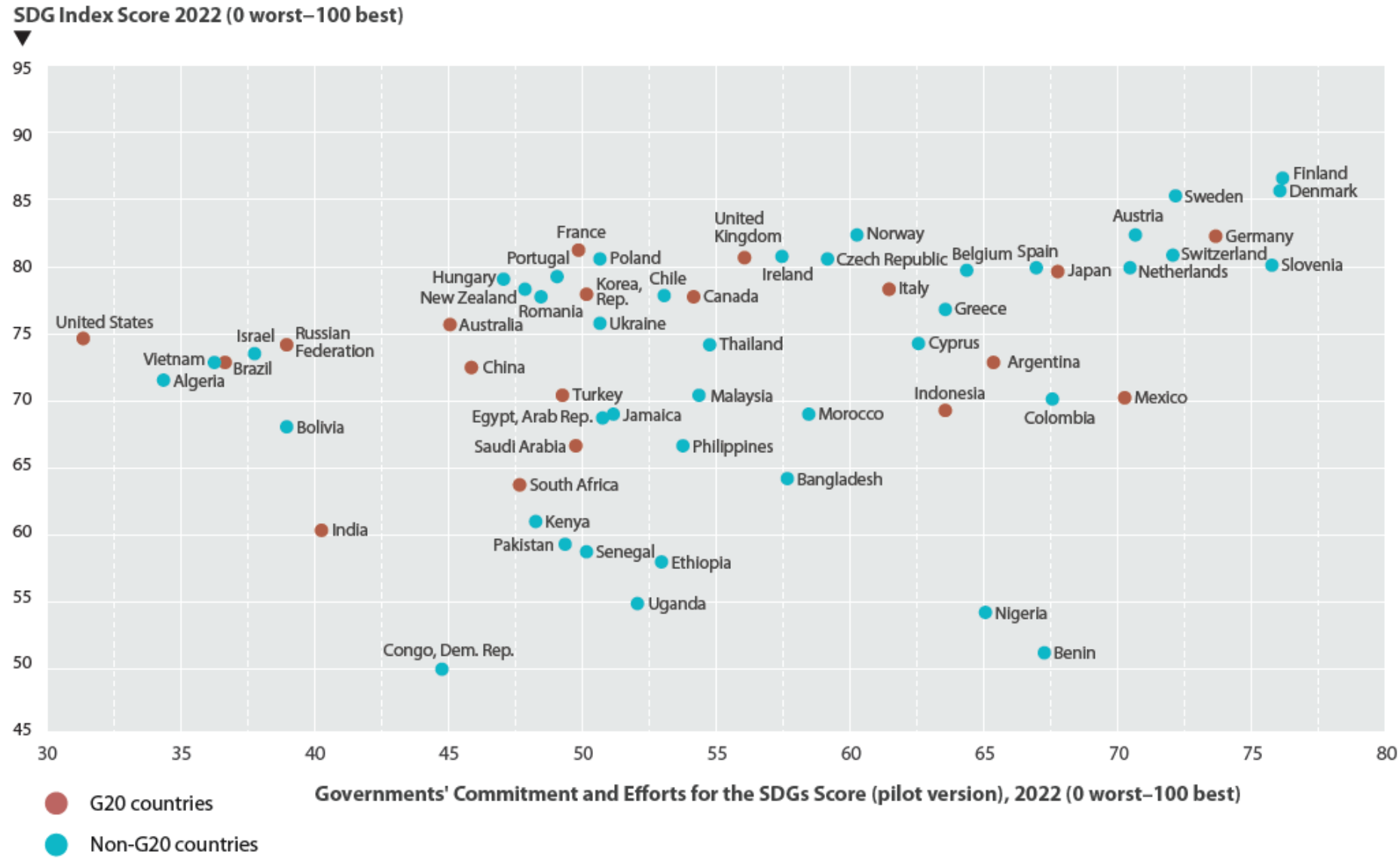
1. The world is no longer making progress on the SDGs (for the second year in a row)
2. 2015–2019, the world was progressing on the SDGs at a rate of 0.5 points per year (too slow to reach the 2030 deadline), with poorer countries making greater gains than rich countries.
3. Rich countries generate negative international spillovers (unsustainable consumption)
4. A global plan to finance the SDGs is needed (an additional 2,5-3 trillion USD are needed get to the 3.3-4.5 trillion USD per year)

SDG Index Score over time, world average (2010–2021)



Source: Authors' analysis. *Note:* Population-weighted average

Governments' Commitment and Efforts for the SDGs Score (pilot version) versus SDG Index Score



Note: G20 countries in red. The score for Ukraine reflects the situation as of January 2022.

Source: Authors' analysis. Details on the methodology and the indicators used are available on www.sdgindex.org

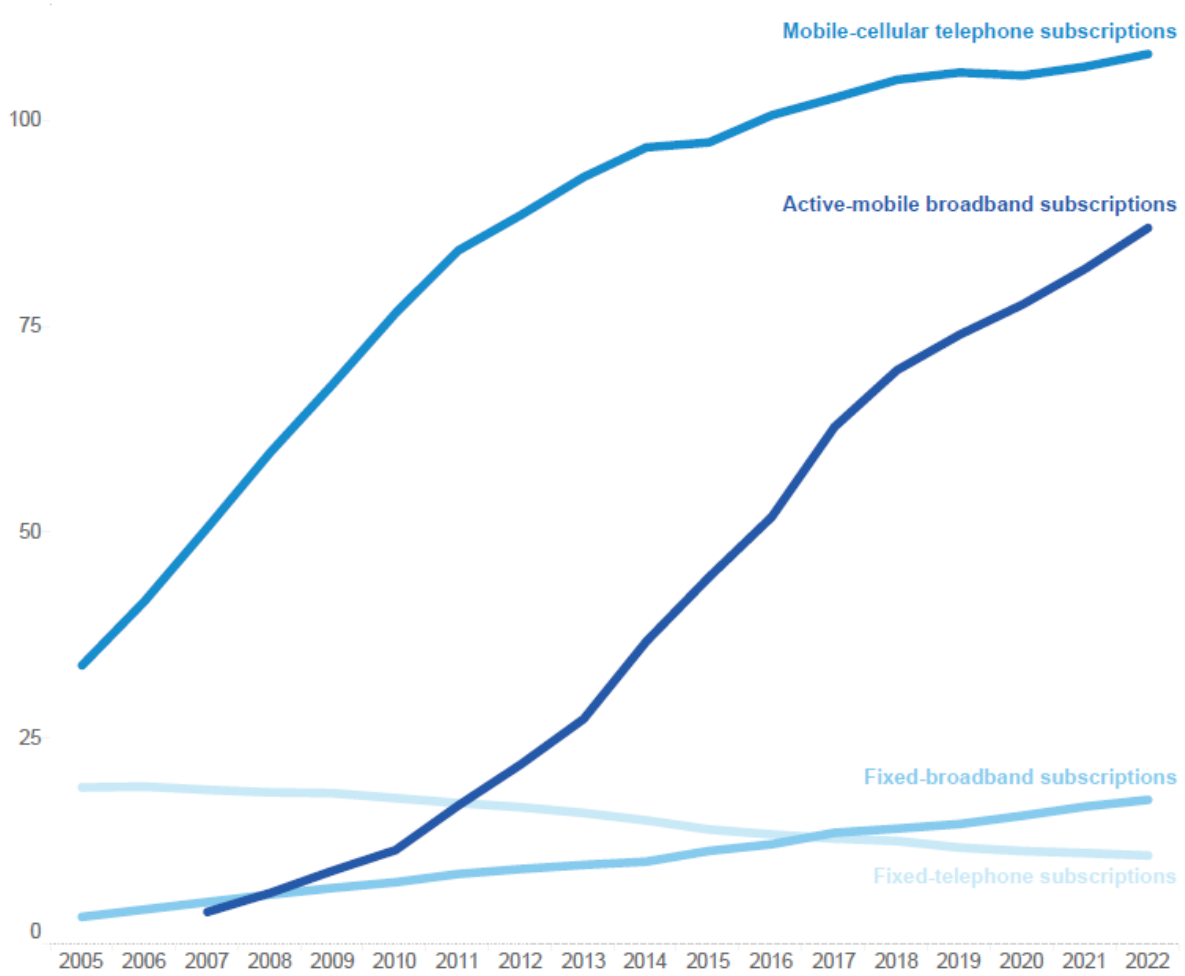
How good a country is at keeping records and counting makes a huge difference to progress on the SDGs!

SPIDER

Connectivity in developing countries

Stockholm University

Global subscriptions per 100 inhabitants



Note: The levels for fixed subscriptions are usually lower than for mobile subscriptions, because the former are usually shared within a household, while the latter are normally tied to an individual.

Source: ITU

Internet

Internet users across the globe

- Global: 4,9 billion people or 63%
- Europe: 87%
- Africa: 33%
- Least Developed Countries: 27%

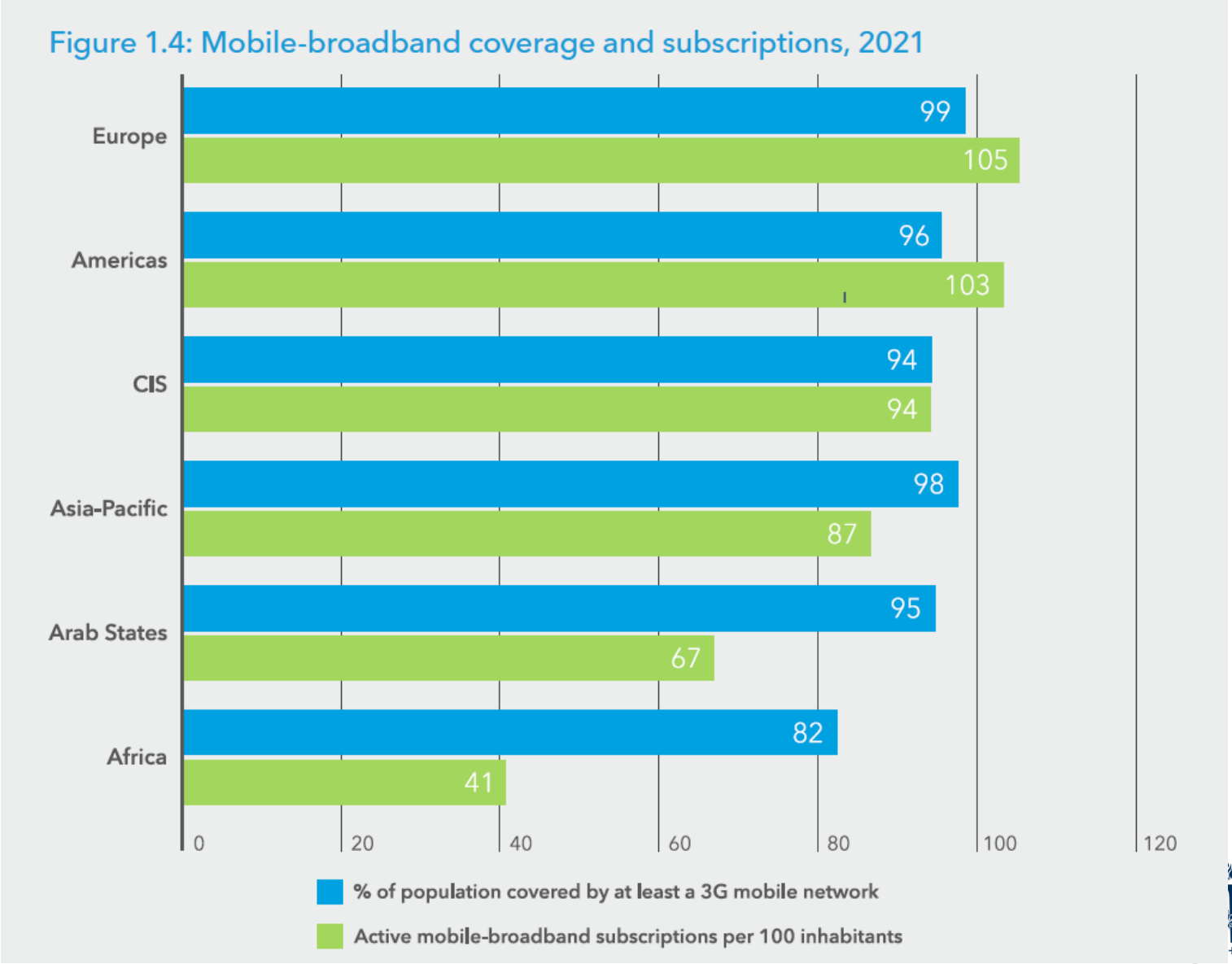


Figure 1.4: Mobile-broadband coverage and subscriptions, 2021
Europe
99
105
Americas
96
103
CIS
94
94
Asia-Pacific
98
87
Arab States
95
67
Africa
82
41
0
20
40
60
80
100
120
% of population covered by at least a 3G mobile network
Active mobile-broadband subscriptions per 100 inhabitants

SPIDER

The use of IT/ICT in low resource contexts

Stockholm University

What can you do?

Area of application	***Use of ICT***
Ministries, departments and agencies	Domains, email accounts Availability of documents, decisions, development of policy Interface with citizens, e-services
Organisation	Economy and other records keeping software Faster and better communication among staff External communication (social media etc)

What can you do?

Area of application	*Use of ICT*
Project	Communication within the project team Collection, storage and analysis of data
Target groups	Dissemination of information Collection of data Tools for better health, agriculture, livelihood etc

Examples of ICT4D solutions

Open Development Cambodia

- Open Source platform that allows actors to access, download information shared on the platform
- Was initiated to share information about land concessions in Cambodia
- Expanded into public services, information about COVID, school and healthcare coverage
- Access to accurate information about the world, services and fees is the first step to any type of action

SPIDER

Access to public service inform

https://opendevelopmentcambodia.net/profiles/access-to-public-service/

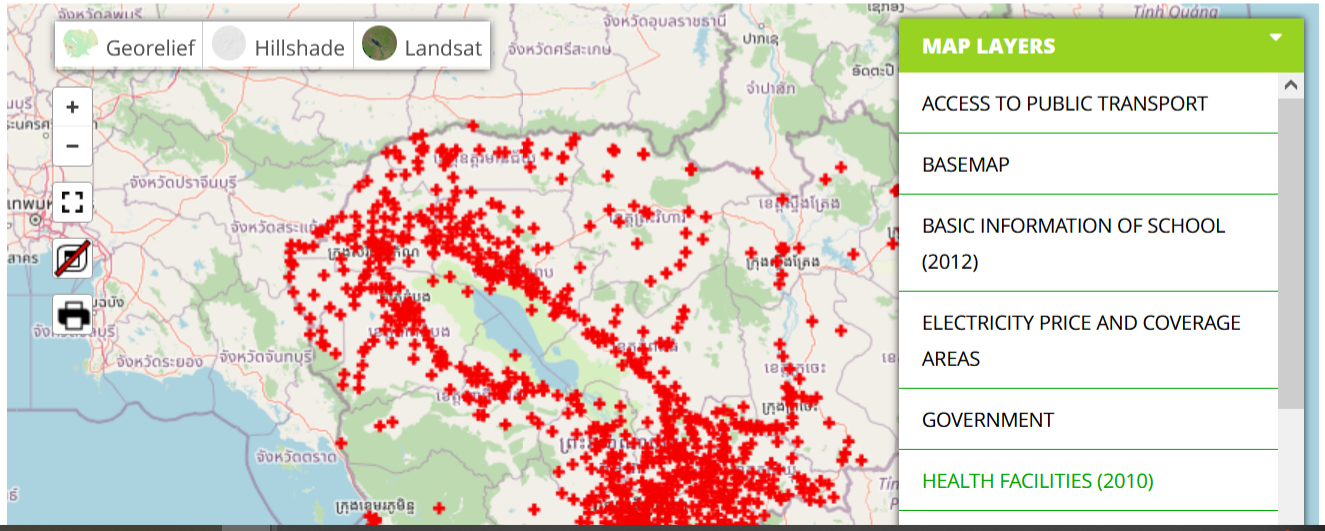
Funding sources | InternDSV | ICT News | PΦ | ResultPress | GUINNESS Africa Spec... | Sthlm FTV Sista minut... | AI | GoodDay | Other Bookmarks

Mekong | **Cambodia** | Laos | Myanmar | Thailand | Vietnam

Access to public service information

2 September 2016 | Government services

Civil status | Transportation | Health services and centers | Electricity and water | Public schools | Budget and public procurement | Service fee and contact



Related news

Minister lauds cash support to all factory worker mothers, kids

Draft law for population info database, IDs 'finalised soon'

New 'One Window Service Office' for IDs

'Single Portal' registers 22K firms

More...

Related announcements

Press release: USAID launches online

10°C Överväg. soligt | SWE | 15:30

Stockholm University

SPIDER

SDGs and ICT

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Stockholm University

SPIDER

SDGs and ICT

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

ICT complement

- ID system to ensure that subsidised food reaches the right people
- Digital systems to register and food stock, quality and outages
- Satellite mapping and other sensors to keep track of the state of roads

Stockholm University

SPIDER

Ensure healthy lives and promote well-being for all at all ages

Stockholm University

SPIDER

Ensure healthy lives and promote well-being for all at all ages

ICT complement

- Health Information Management Systems (Health records and patient files are often still manual)
- Reminders to take medication or check-ups through sms
- Track incidence of infectious diseases
- Use Internet+Radio+Mobile phones to spread information to remote or marginalised communities

Stockholm University

SPIDER

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Stockholm University

SPIDER

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

ICT complement

- Provide teachers with digital teaching materials as printed books are often too expensive to print and distribute
- Continuous teacher training for more and better teachers

Stockholm University

SPIDER

Challenges

ICT in low resource settings

Stockholm University

General limits of ICT

ICT CAN improve gathering, analysis, management, transmission and storage of information (and data)

BUT

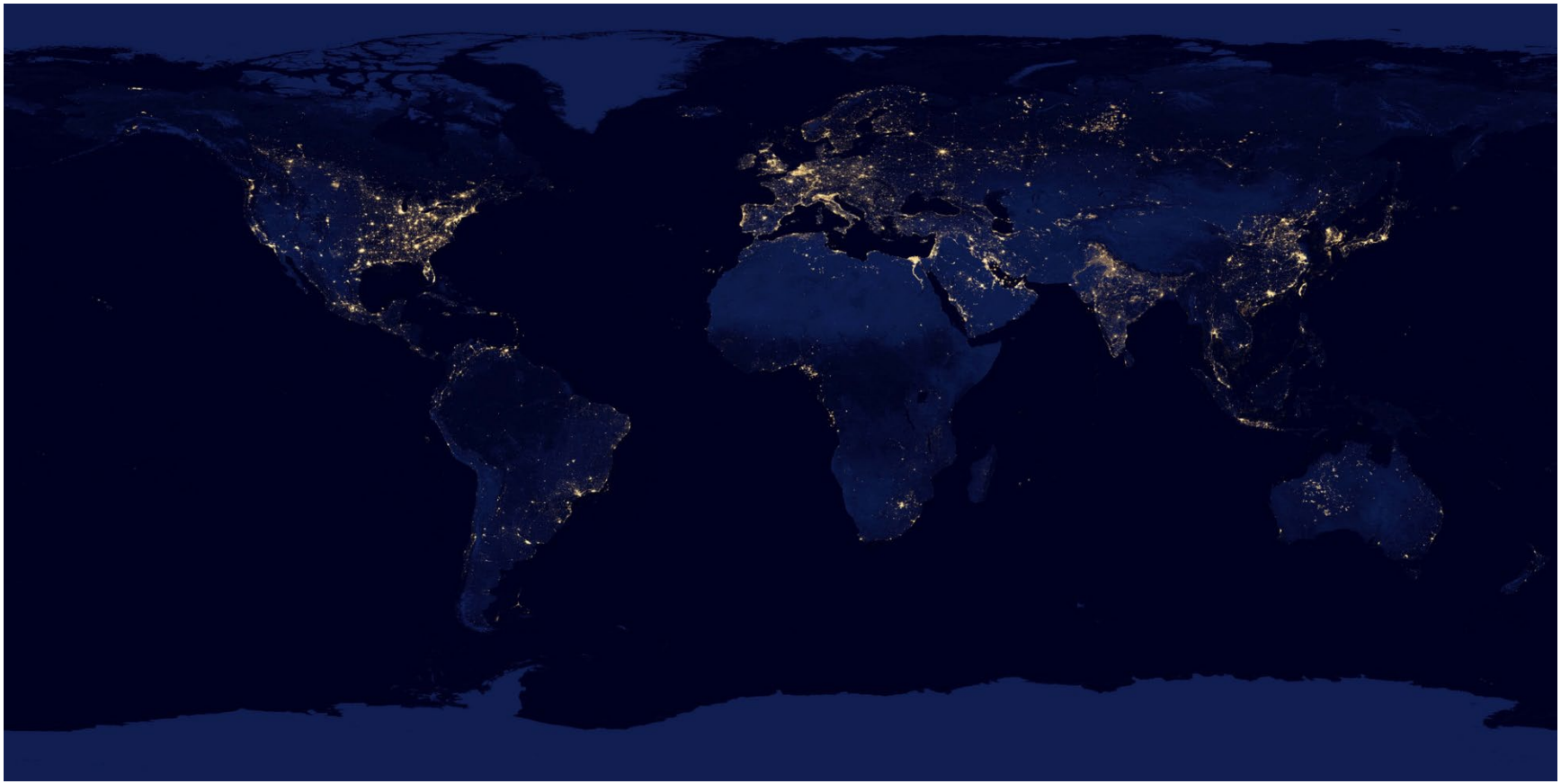
ICT CANNOT fix a system that is underperforming for other reasons (because people are not using it or cannot do their job for other reasons)

1. Poor infrastructure
2. Cost
3. Literacy & languages
4. ICT skills and access
5. Relevant content
6. Cultural factors
7. Unrealistic expectations/Fear

What does this mean?

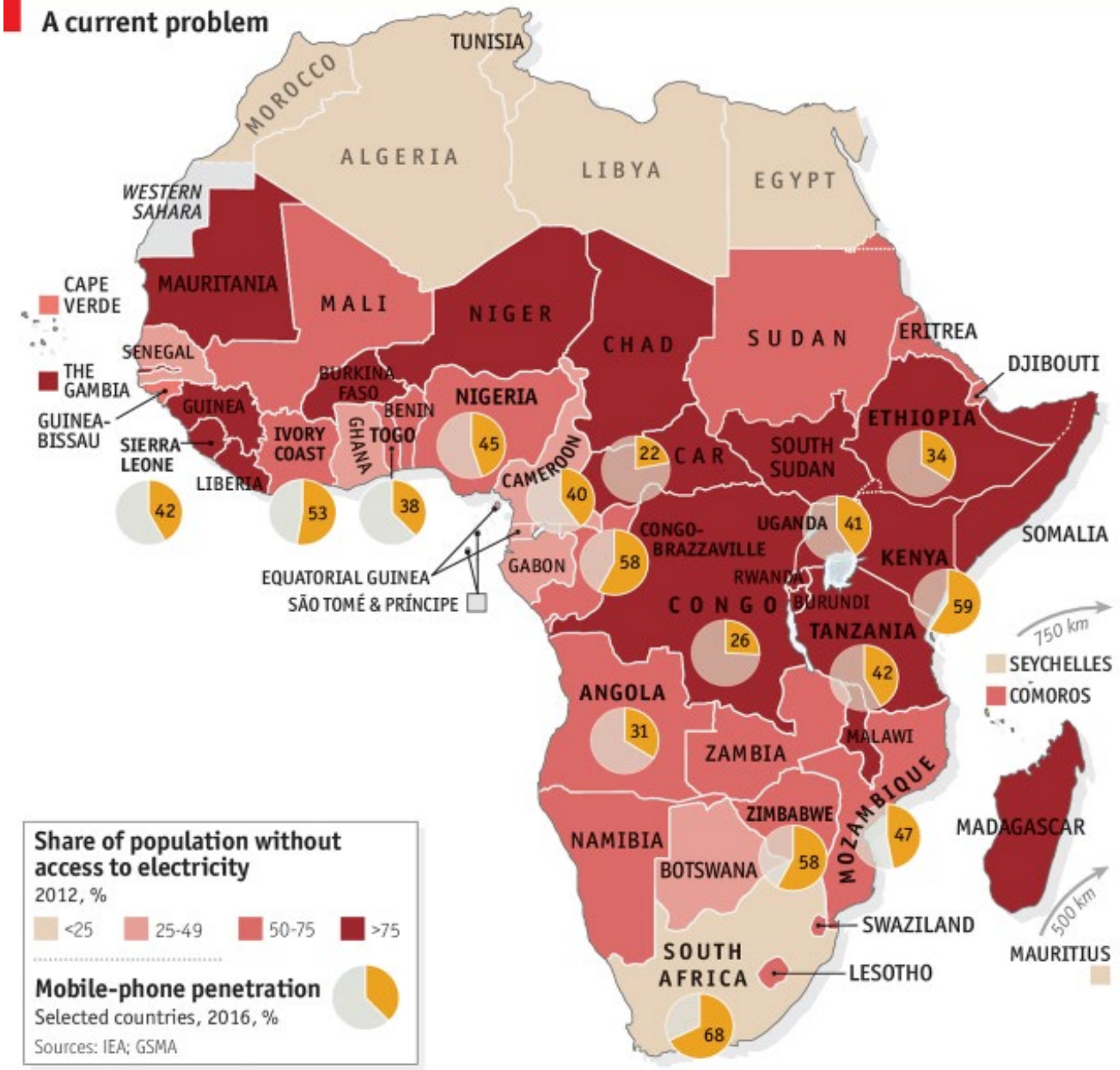
1. Poor infrastructure

- Poor roads
- Electricity is not available or reliable
- The telephone network is not well developed
- Mobile coverage is incomplete (this is improving)
- Internet is not available or too expensive (this is improving as well)



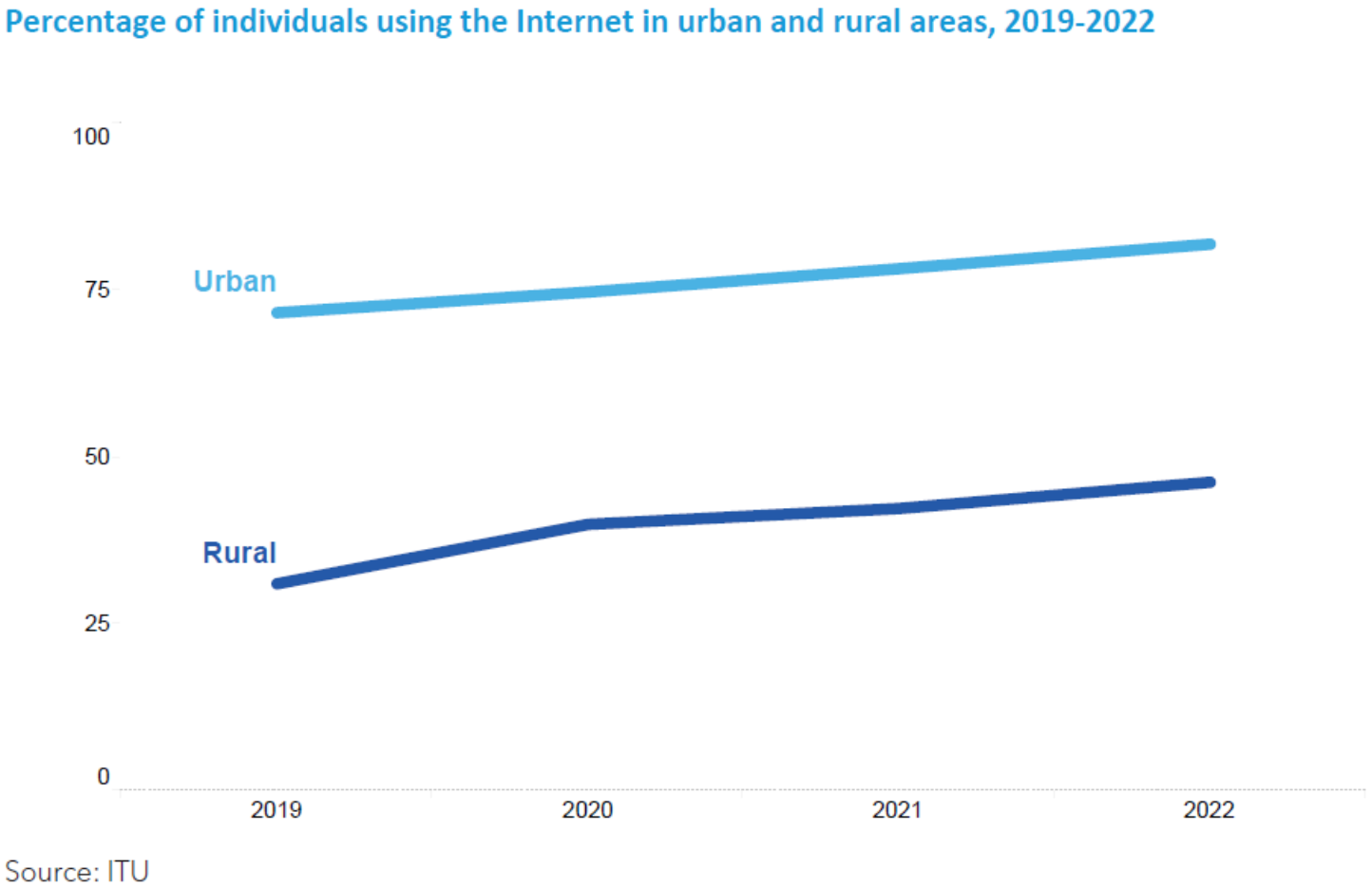
Electricity may not be available or it may not be reliable

A current problem



Economist.com

Rural – Urban divide ITU numbers

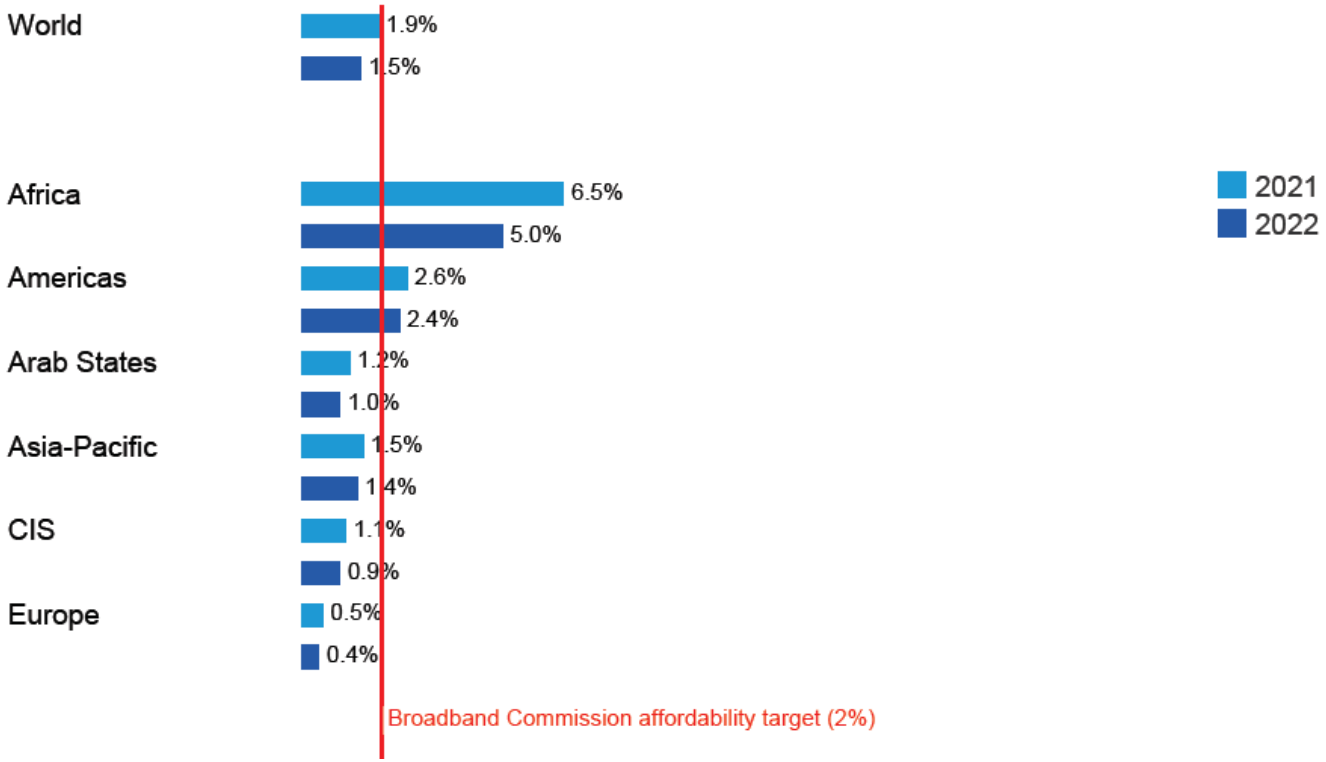


2. Cost

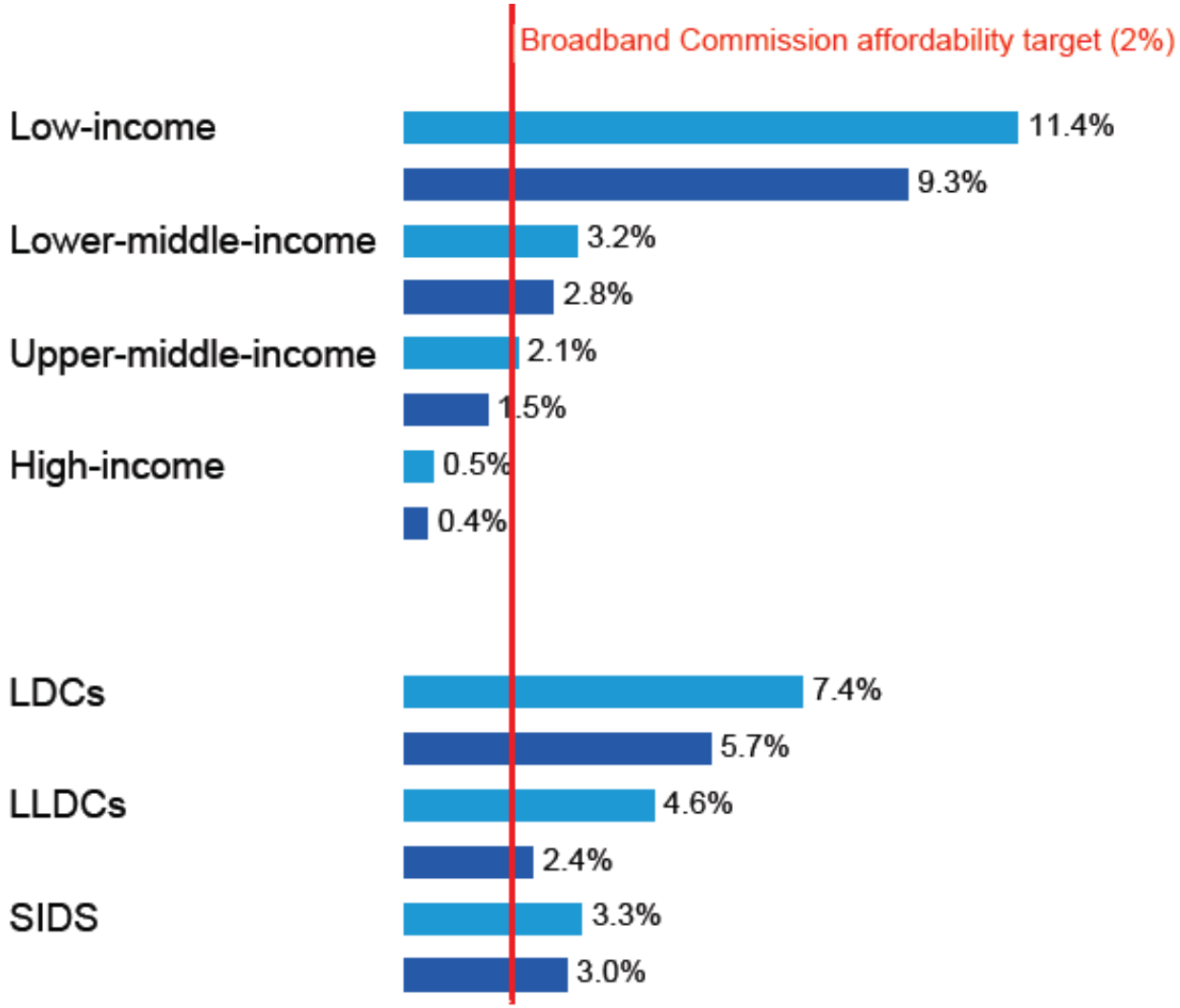
- Hardware costs money to buy and maintain
- Software costs money to buy and maintain
- Airtime and broadband cost money
- Electricity may cost money

Cost of mobile internet 1

Data-only mobile broadband basket prices as % of gross national income per capita, 2021-2022

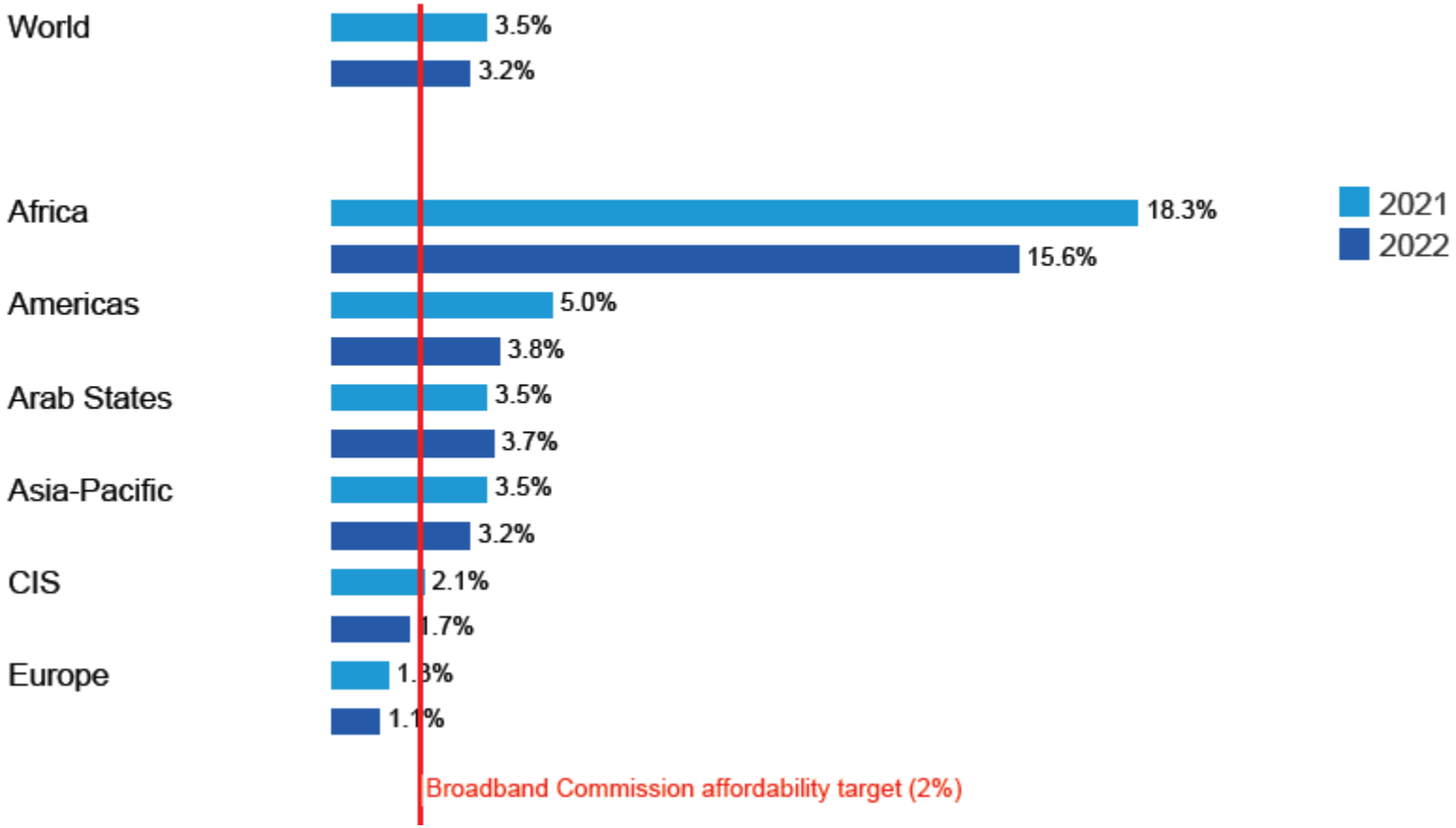


Cost of mobile internet 2

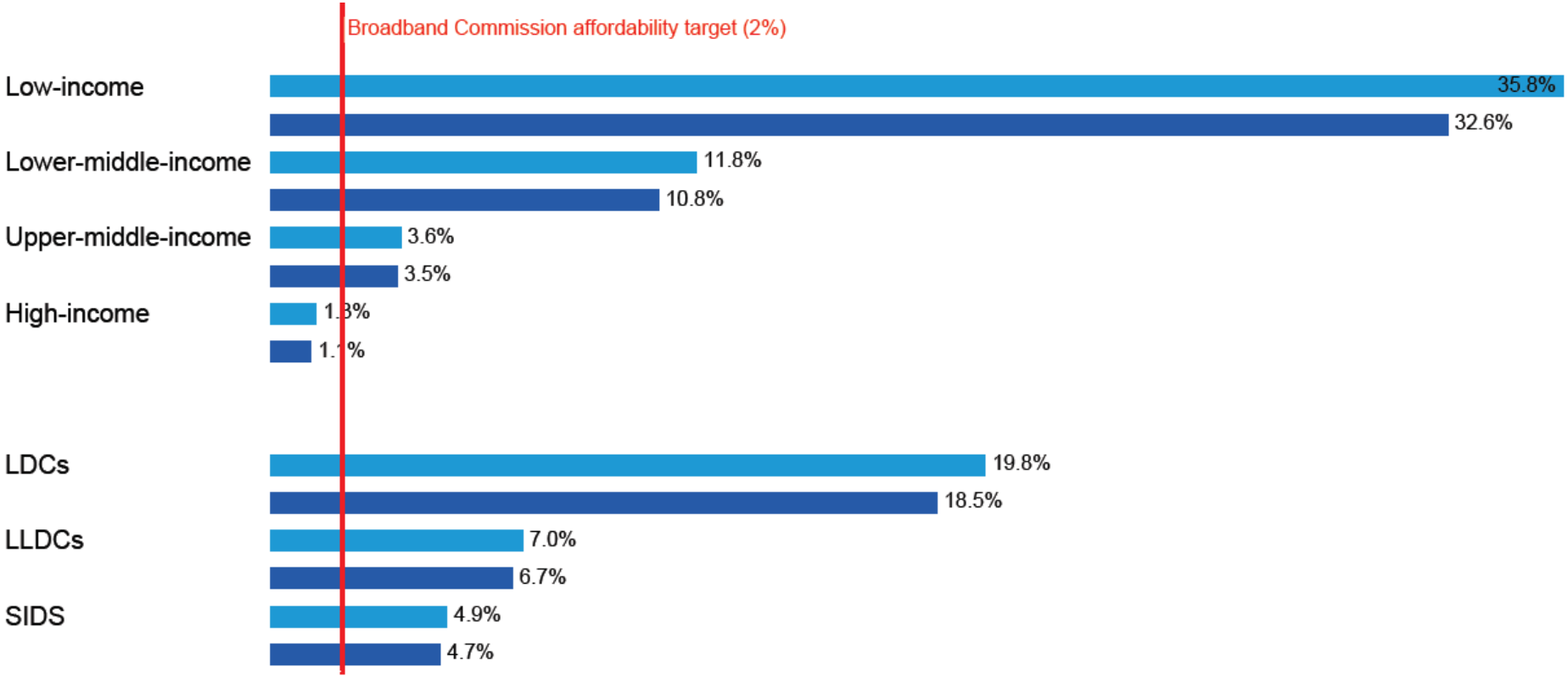


Cost of fixed Internet 1

Fixed broadband basket prices as % of gross national income per capita, 2021-2022



Cost of fixed Internet 2



The cost of connectivity

"Compared to median prices that are paid in high-income economies, the basket costs nearly 10 times as much in lower-middle-income economies and nearly 30 times as much as in low-income economies, after adjusting for differences in GNI per capita."

The cost of connectivity

After adjusting for differences in GNI per capita the basket costs

- nearly 10 times as much in lower-middle-income economies
- nearly 30 times as much as in low-income economies

Compared to median prices that are paid in high-income economies

Infrastructure: Rural – Urban divide

- The urban-rural gap has been essentially bridged in Europe (ratio of 1.1)

- In Africa, 64 per cent of urban dwellers use the Internet in 2022 compared with 23 per cent of people in rural areas, a ratio of 2.8; but that is down from nearly 4 in 2019

2. Literacy & languages

- Weak literacy
- Big differences between different groups (urban/rural, men/women and young/old)
- Multilingual
- A language may not have a digital font
- A language may not have the necessary terminology for an understandable UI

3. ICT skills and access

- Many people have never seen or used computers
- Hardware and software is expensive
- An organisation only has a few computers with poorly updated software
- IT staff has only moderate skills
- Software updates can be too expensive
- Maintenance and support is not budgeted for and the services are far away

Access and use

- You may have a phone, **but**
  - you may not be able to use all functions,
  - not afford many calls
  - have to travel and/or pay to charge your phone

Access and use

- You may have a phone, **but**
  - you may not be able to use all functions,
  - not afford many calls
  - have to travel and/or pay to charge your phone

- You may not have your own phone **but**
  - you may be able to share one or
  - borrow one when needed

Access and use

- You may have a phone, **but**
  - you may not be able to use all functions,
  - not afford many calls
  - have to travel and/or pay to charge your phone

- You may not have your own phone **but**
  - you may be able to share one or
  - borrow one when needed

but

Access and use

- You may have a phone, **but**
  - you may not be able to use all functions,
  - not afford many calls
  - have to travel and/or pay to charge your phone

- You may not have your own phone **but**
  - you may be able to share one or
  - borrow one when needed

but

- This imposes other limitations
  - Privacy
  - Accessibility

5. Relevant content

If you fix the electricity, the connectivity, the cost of hardware and software for a poor farmer in Uganda can go online

but

if there is no relevant information online in an accessible language, all the work has accomplished very little (in terms of your direct project goal).

5. Relevant content

If you fix the electricity, the connectivity, the cost of hardware and software for a poor farmer in Uganda can go online

but

if there is no relevant information online in an accessible language, all the work has accomplished very little (in terms of your direct project goal).

Meaningful connectivity!

6. Cultural factors

- Expensive technology is reserved for people with high positions
- Women are assumed to not know, be interested in or benefit from technology
  (Who in an household do you ask to make you a sandwich and who do you ask to fix the stereo
- Various ethnic groups may have limited access to desirable items (technology)

SPIDER

Technical Development

International Development

Stockholm University

	Technical Development	International Development
Who:		
Focus on:		
Have a tendency to miss:		
Motto:”		

Technical Development

Who: engineers etc (”techies”)

Focus on: the (best) technical solution for the problem at hand

Have a tendency to miss:

the cultural and social context

Motto:”if we just make the right technical solutions available to the people, it will work itself out”

International Development

Technical Development	International Development
Who: engineers etc (”techies”)	**Who:**
Focus on: the (best) technical solution for the problem at hand	**Focus on:**
Have a tendency to miss: the cultural and social context	**Have a tendency to miss:**
Motto:”if we just make the right technical solutions available to the people, it will work itself out”	**Motto:**

Technical Development

Who: engineers etc (”techies”)

Focus on: the (best) technical solution for the problem at hand

Have a tendency to miss:

the cultural and social context

Motto:”if we just make the right technical solutions available to the people, it will work itself out”

International Development

Who: development workers

Focus on: the development impact to be acheived within the cultural context

Have a tendency to miss:

how available technology can be used **strategically** in development projects

Motto: ”understand and meet the needs in the local context”

7. Unrealistic expectations/Fear

Symbolic: Computers are often a symbol for ”being modern” or ”keeping up with the times”. This leads to the desire to get more technology with no clear purpose.

Positive: ”Everything will work out if we have [insert technology].”

Negative: ”We do not want any computers, if we get computers we will loose our jobs.”

Example

If an organisation or team does not have a functioning system or process:

- Poor case management/documentation
- Unclear goals and guidelines
- Poor communication between staff

Digitalisation will NOT improve it.

A post colonial perspective

- Tiny intro of post-colonialism
- The report about EU offer to Africa
- The Concept note about GDPR an personal data in Africa

Postcolonialism is

(according to Wikipedia)

"The critical academic study of the cultural, political and economic legacy of colonialism and imperialism, focusing on the impact of human control and exploitation of colonized people and their lands."

"Aimed at disempowering theories (intellectual and linguistic, social and economic) by means of which colonialists "perceive," "understand," and "know" the world."

Is this post-colonial?

- "Towards a digital development partnership that meets African Interests" – by Heinrich Böll Stieftung

- From Data Protection to Data Justice - Concept Note from Research ICT Africa

Towards a digital development partnership that meets African Interests

What was your impression?

What does it talk about?

HOW does it talk about it?

My impression

- A overview of the investments of US, EU and China into various areas of digitalisation in Africa (to meet actual needs)
- Africa is also a playing field where larger geopolitical and ideological battles take place.
- An underlying “tone” of Africa as a continent that is “up for grabs”

From Data Privacy to Data Justice

What was your impression?

What does it talk about?

HOW does it talk about it?

(background)

- EU has implemented the General Data Protection Regulation (GDPR)
  - The right to your own personal data
  - The right to be informed of breaches
  - The right to be forgotten

- To provide digital services to the EU the country must:
  - have a legislation equivalent to the GDPR
  - be able to enforce this legislation

- To get EU funding for development projects it is good to have (matching) data protection legislation in place

(background)

- A lot of record keeping in Africa is still manual
- Many African governments are struggling with data and statistics (collection, quality etc)
- Digital processes are based on the analogue ones
- If a country is good at keeping count of things (as Sweden is) they will be ahead when it comes to digital records

Data Protection and Data Justice

My take:

- To have a strictly individualistic approach to data protection would get in the way of African governments using the data that they can collect for development of the country.

Digitalisation & post-colonialism

- African countries need external investments into digital infrastructure and development. These investments come at a price

- Are these investments post-colonial?
  - can we look at this process as an attempt to maintain colonial influence?
  - Is this different than simply “market shares”?

- Is GDPR (personal data protection) post-colonial?

Questions!

katja@spidercenter.org