

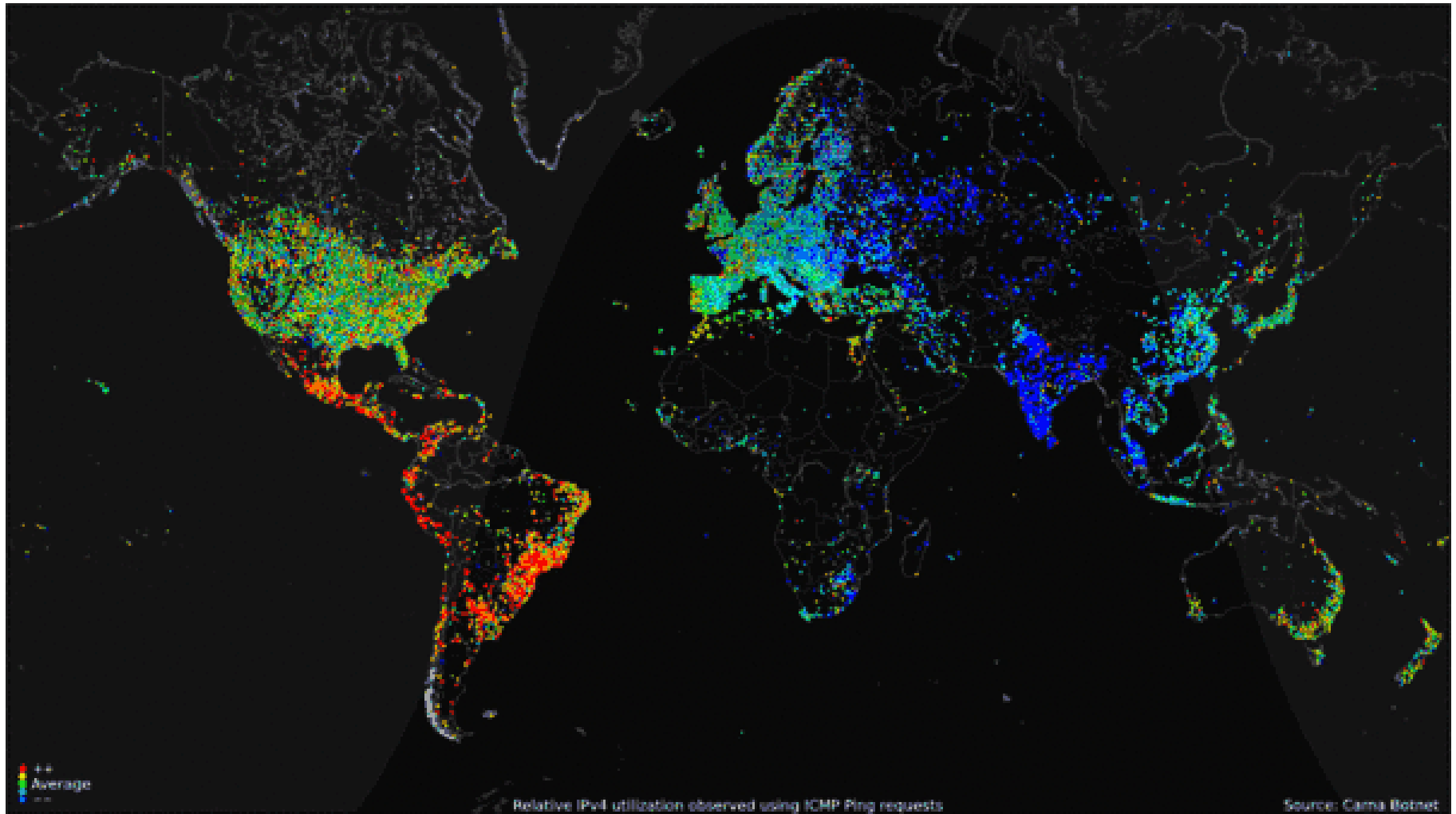
Introduction to the dimensions of digitalisation

Module 2.2:
Deep Dive: The digital divide

Agenda

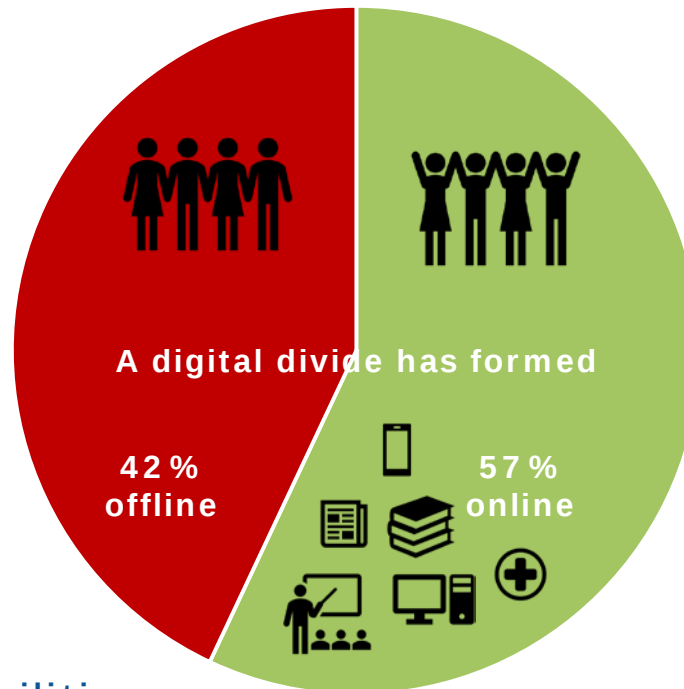
Module 2.2: Deep Dive – The digital divide

- Introduction and Status Quo: The digital divide
- Focus: Rural Access



The Digital Divide(s)

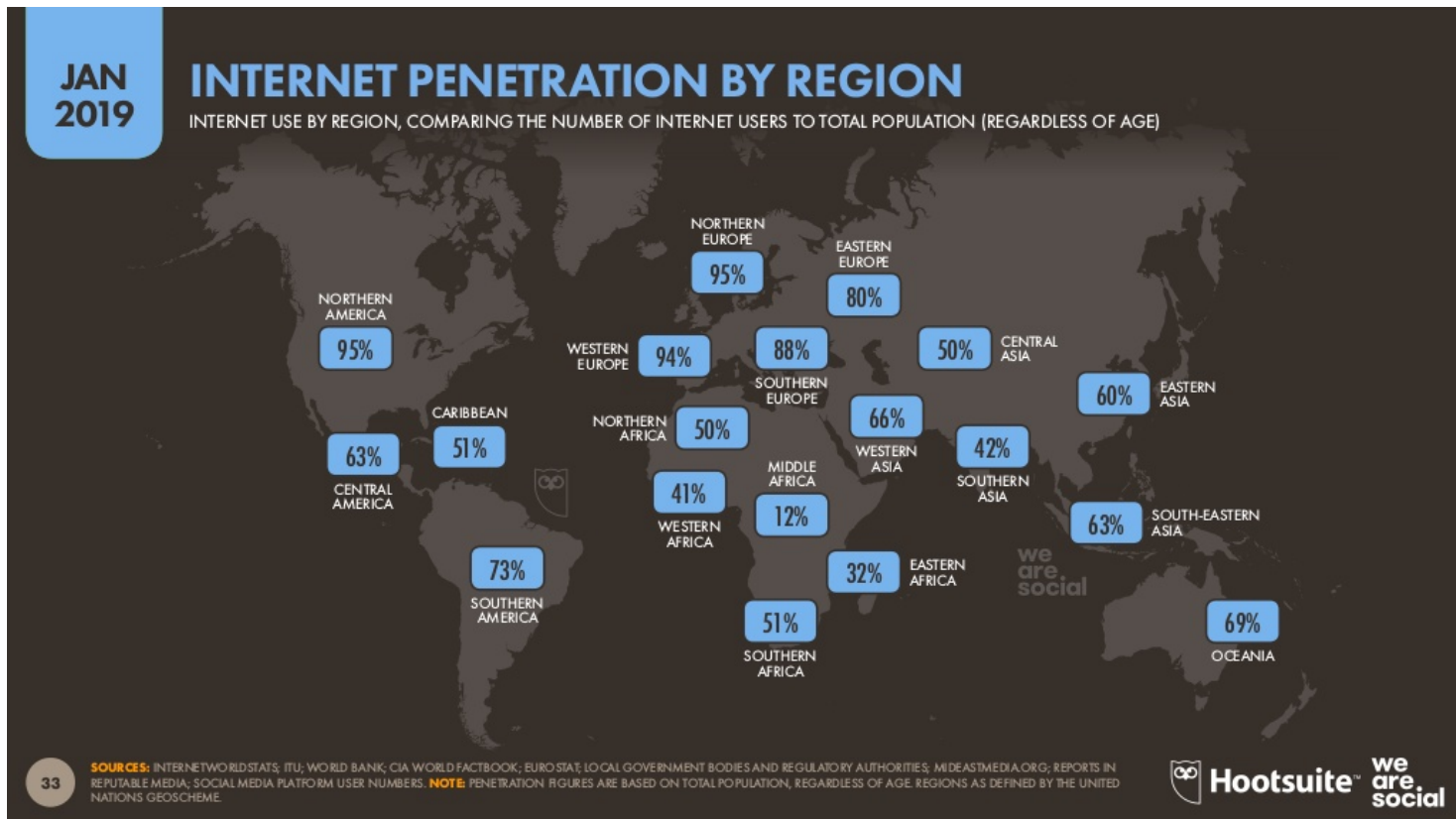
Still ~3.5 billion people do not use the internet



No access
= no access to possibilities
= falling behind even further

access
= access to benefits
= faster development

The Digital Divide(s) by region



The Digital Divide(s)

by selected countries

JAN
2019

INTERNET PENETRATION RANKING

BASED ON INTERNET PENETRATION IN COUNTRIES / TERRITORIES WITH POPULATIONS OVER 50,000

#	HIGHEST PENETRATION	%	NO. OF USERS	#	LOWEST PENETRATION	%	NO. OF USERS
01=	ANDORRA	99%	76,242	216	NORTH KOREA	0.08%	20,000
01=	ARUBA	99%	104,803	215	ERITREA	1.4%	71,000
01=	BERMUDA	99%	60,342	214	CHAD	5.0%	779,188
01=	ICELAND	99%	335,781	213	CENTRAL AFRICAN REP.	5.4%	256,432
01=	QATAR	99%	2,692,181	212	BURUNDI	5.4%	617,116
01=	U.A.E.	99%	9,515,733	211	DEM. REP. OF CONGO	6.2%	5,301,224
07	NORWAY	99%	5,311,892	210	GUINEA-BISSAU	7.8%	150,000
08	DENMARK	98%	5,649,494	209	SOMALIA	9.7%	1,500,000
09	KUWAIT	98%	4,138,590	208	MADAGASCAR	9.8%	2,608,390
10	LUXEMBOURG	98%	580,760	207	NIGER	10%	2,325,421

The Digital Divide(s)

Several divides exist



The Digital Divide does not only form between countries, but also between regions and socio-economic groups of the population. E.g.

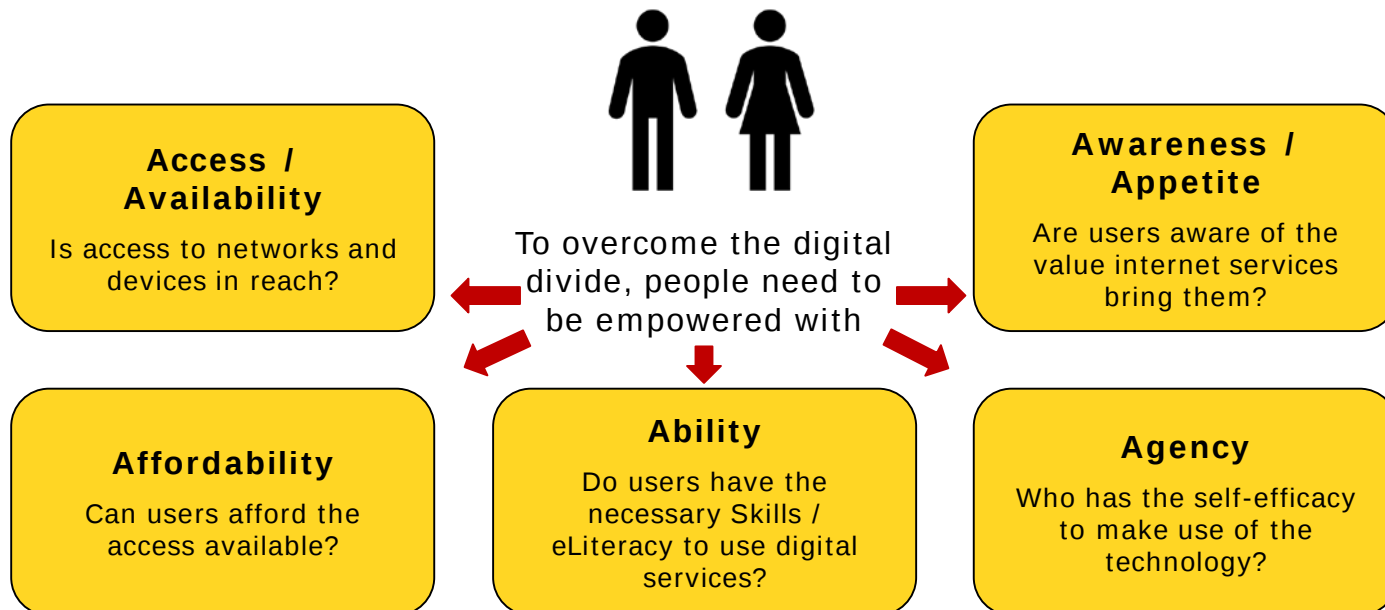
- Young vs. old
- Rich vs. poor
- Urban vs. rural
- Male vs. female

The Digital Divide(s)

Barriers to internet use

Five barriers (As) to internet use have been identified – Digital Divide is „**not binary**“

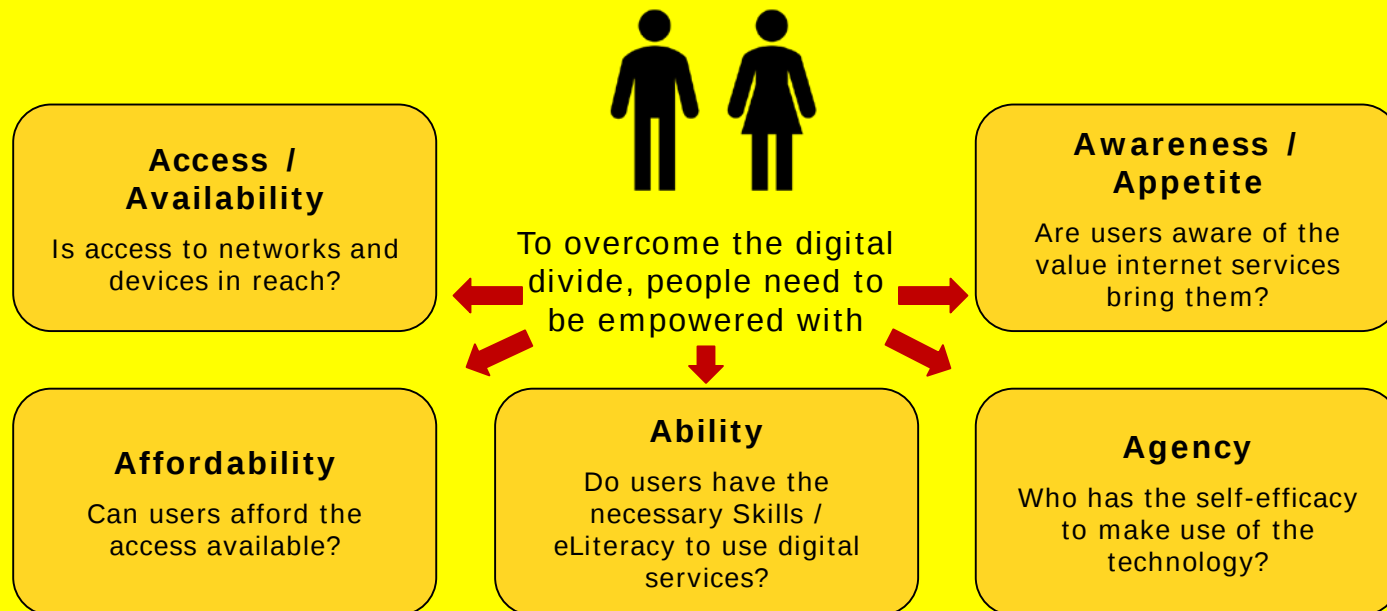
- Not only **access** to ICT and its **cost** presents a barrier to internet adoption
- **Capabilities**, **awareness** or **prejudices** pose barriers as significant



The Digital Divide(s)

Barriers to internet use

Challenge: propose an example of barriers



Focus on: (Rural) Access



- What are reasons for lack of Access?
- What are the strategies to promote Access?
- What role do policy-actors play?

Focus on: Rural Access

Connecting rural areas



The Digital Divide(s)

Status Access

- **Isn't there network everywhere?**
 - 90% of the global population live within the reach of a mobile broadband network (ITU 2019)
- **but:**
 - Bandwidth: Broadband = 3G
 - Affordability: 11-25% (1-2% in global north)
 - Reliability? Throughput?
- **Also: Specifics of internet use in developing countries:**
 - Only 7% of households have fixed line broadband access
 - Only 9.2% have a computer at home

Focus on: Access

The market will take care of it!

Challenge: No or too costly access for many. Market does not cater to low profit areas.

Goals: Policy actors have recently recognized need to act and set ambitious goals



„Significantly increase access to information and communication technologies and strive to provide universal and affordable access to the Internet in least developed countries by 2020” (9.c)



Bridge the digital divide and provide broadband for all (15% of household in LDCs should have access to the internet) (Connect 2020 Agenda, Goal 2)



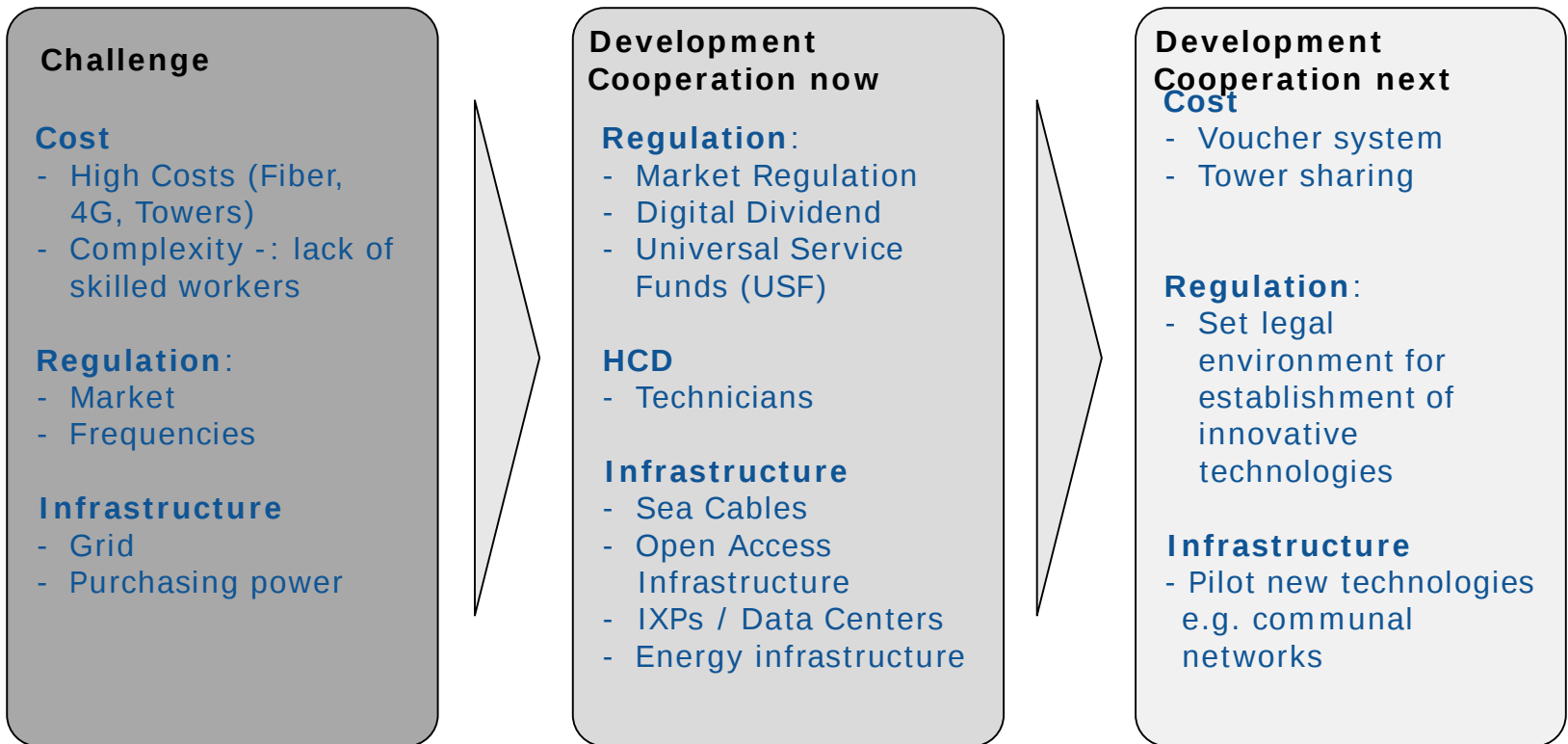
1GB of mobile internet is available for 2% or less of average monthly income (1 for 2 target)

Outlook:

- **SDG Goal 9.c will be missed by at least 20 years** (According to A4AI)
- Also the industry (GSMA) recognizes the rate of bringing people online is slowing. New approaches need to be identified if to bridge the divide.

Focus on: Access

Approaches for Development Cooperation



Focus on: Rural Access

Technological Options

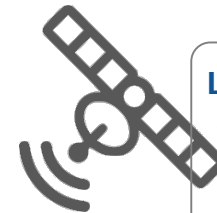
Balloons, Drones

- **Pro:** Less need for infrastructure, can reach all areas
- **Con:** Capacity? Business Model? Technical viability?
- **Challenges:** Technology, regulation



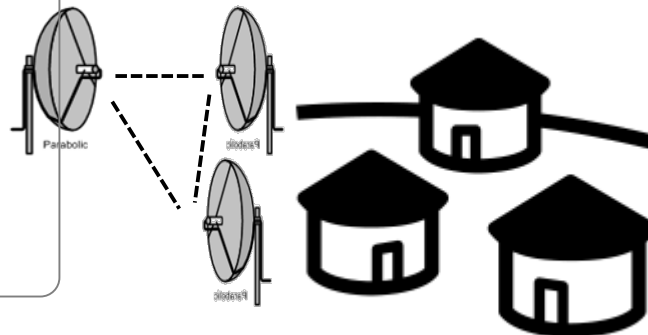
Low Orbit Satellites

- **Pro:** little ground infrastructure needed
- **Contra:** Cost? Business Case? Space is full? Capacity?
- **Challenges:** Business Case, Technology



Mesh / Directional Radio

- **Pro:** low cost, decentral communal networks
- **Contra:** Challenging regulatory environment
- **Challenges:** Regulation, access to infrastructure, lack of finance options, trust



3G / 4G (5G not rural option)

- **Pro:** proven technology
- **Contra:** Frequency costs
- **Challenges:** Business Case for Rural if quality access to be provided



Fibreoptic Cable:

- Best technological option, but too expensive to reach every village any time soon
- Used for backbone network and backhaul in more urban areas

Rural Digital Divide Quiz

True or false?



5 min

Question: For each person accessing the Internet in rural Africa, there are 2.3 persons in urban areas

TRUE!

Question: In all OECD countries, the proportion of households with Internet in urban areas is higher than in rural areas

FALSE!

Question: In Latin America, Colombia and Brazil are the countries with the lower divide between urban and rural households with access to the Internet

FALSE!