UNIVERSITY OF OSLO

C20 Environment, Climate Justice and Energy Transition Working Group (ECEWG)
with C20 Education, Digitalization, and Civic Space Working Group (EDCSWG)
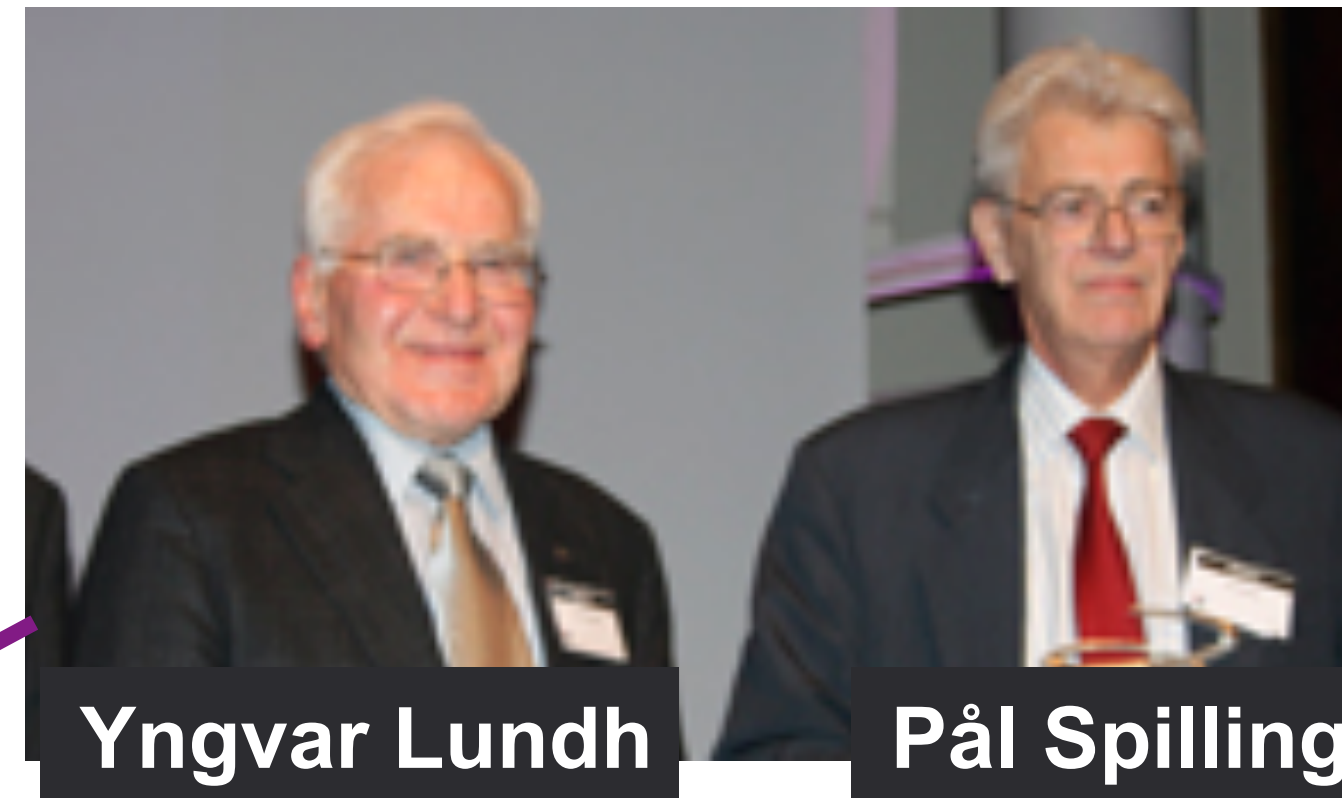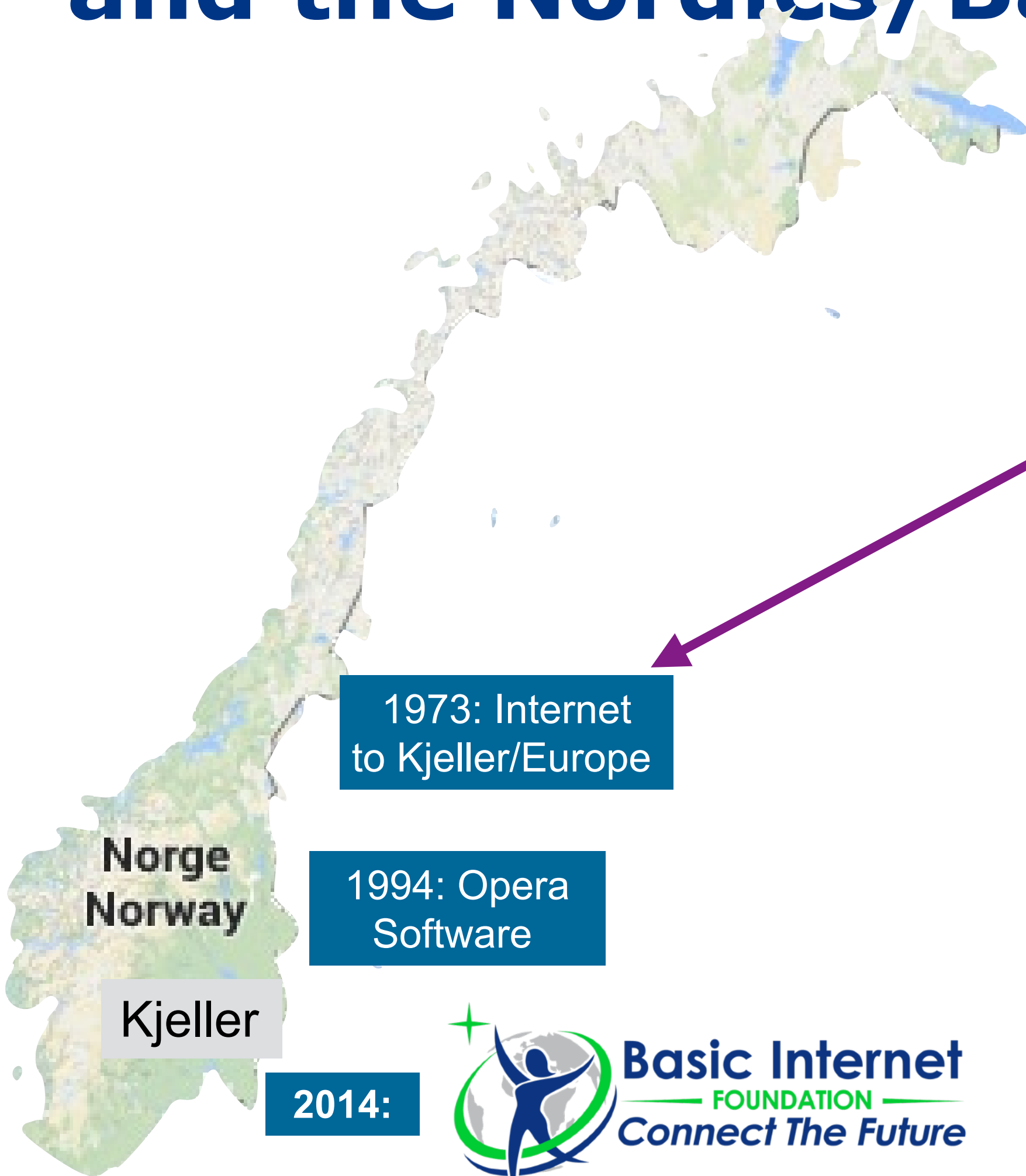1Dec2022

The Power of Digitalisation for Climate and Energy Justice in the Global South

Josef Noll

Professor, Department of Technology Systems (ITS)
Lead Digital Global Health at the Centre for Global Health (CGH)

Inclusive digitalisation in Norway and the Nordics/Baltics (N8)

Yngvar Lundh

Pål Spilling

1973 Kjeller

Steve Crocker

Jon Postel

Vinton Cerf

1972

Norge
Norway

1973: Internet to Kjeller/Europe

1994: Opera Software

Kjeller

2014:

Basic Internet
FOUNDATION
Connect The Future

KJELLER
INNOVASJON

.php, OpenSource, Linux, Skype, Spotify
Opera Software, FAST search
Nokia, Ericsson
GSM
GovStack.global, X-Roads

Source: http://www.michaelkaul.de/History/history.htm
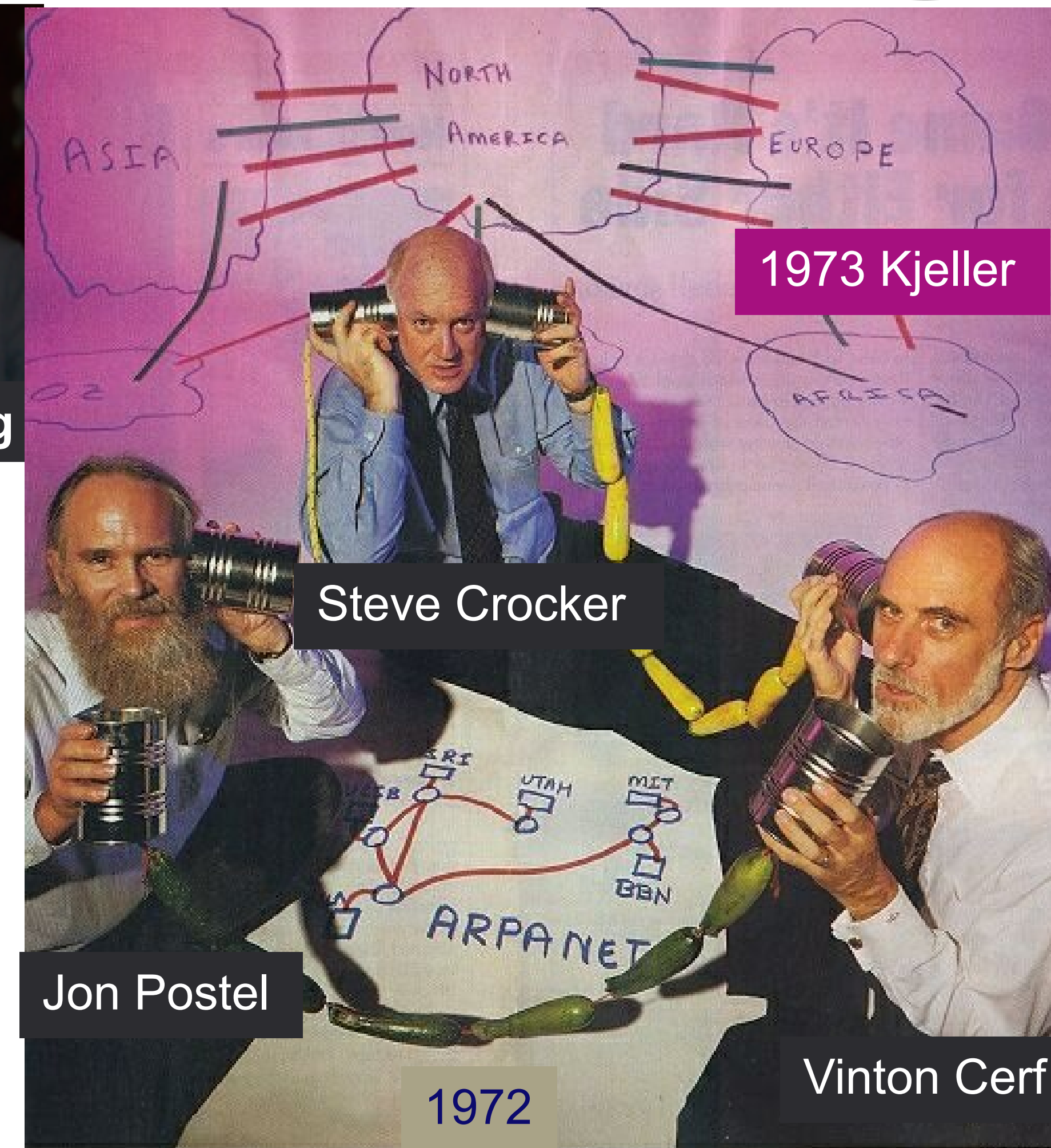
Recommendations (June 2019) United Nations High Level Panel

1A: We recommend that by 2030, **every adult** should have **affordable access** to digital networks, as well as **digitally-enabled** financial and **health services**, as a means to make a substantial contribution to achieving the **SDGs**…

1B: We recommend that a broad, multi-stakeholder alliance, involving the UN, create a **platform** for **sharing digital public goods**, ….

Energy & Digital, enablers for the SDGs

7 AFFORDABLE AND CLEAN ENERGY

People without electricity

SDG 7.1 calls for universal access to ···. energy by 2030

1.2 billion
2010

733 million
2020

679 million
2030 (trend)

[WorldBank 2021]

https://www.worldbank.org/en/news/press-release/2021/06/07/report-universal-access-to-sustainable-energy-will-remain-elusive-without-addressing-inequalities

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

People not using Internet

SDG 9c calls for universal, affordable internet access by 2020

4.9 billion
2010

2.9 billion
2021

96% in dev countries

0 billion
2030 (hope)
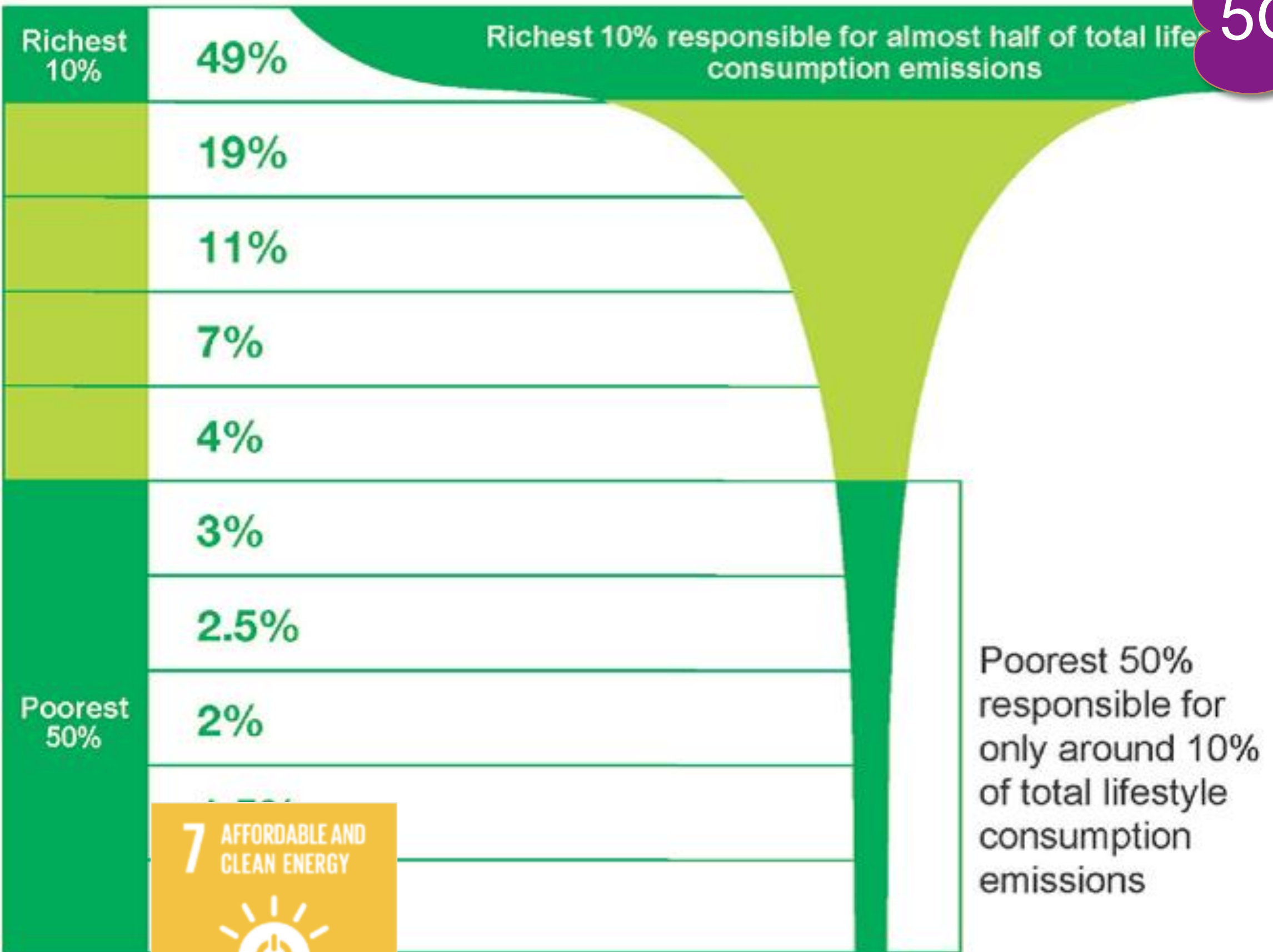
WSIS Forum 2022

[ITU 2010, 2021]

https://www.itu.int/hub/2021/11/facts-and-figures-2021-2-9-billion-people-still-offline/
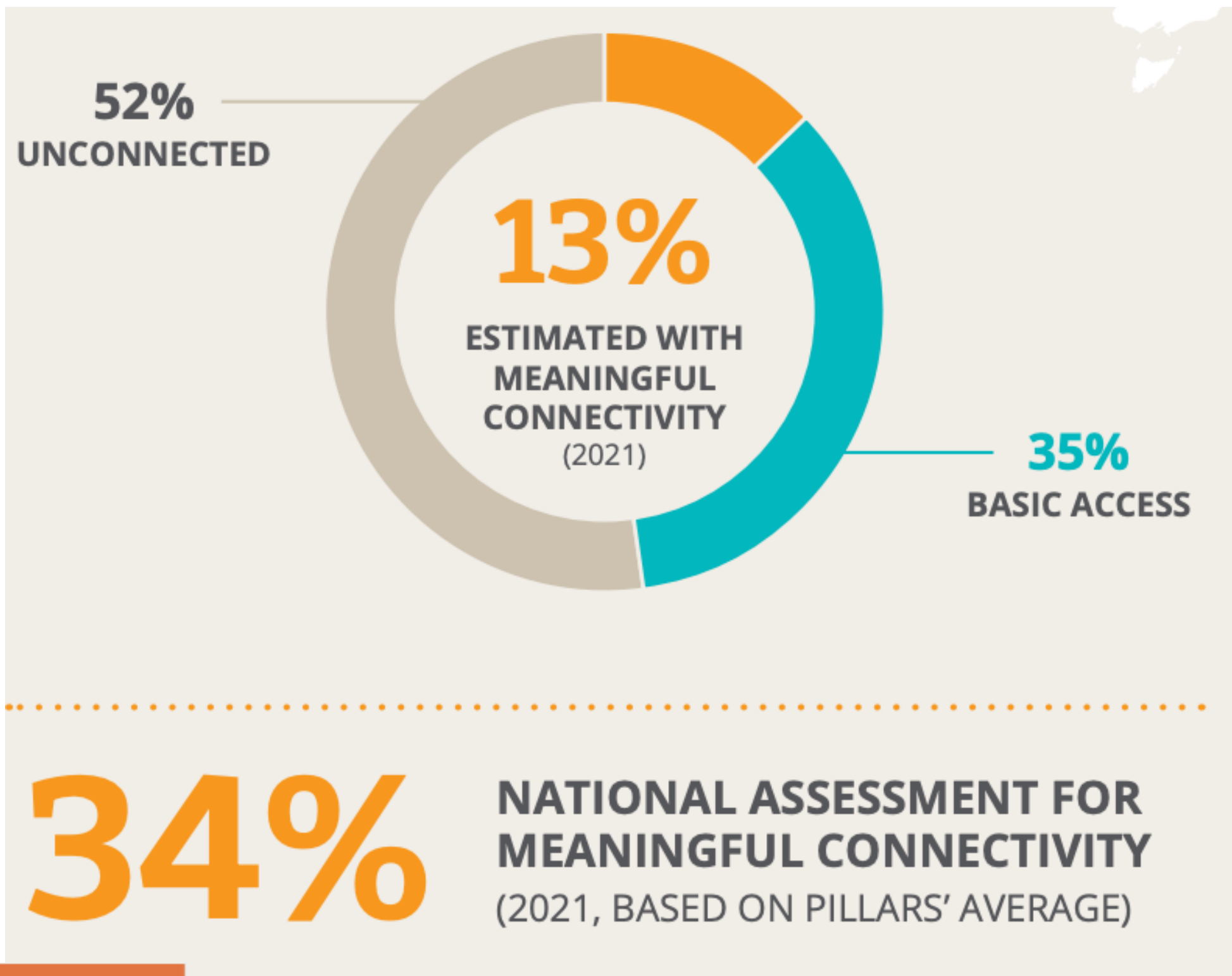
Inequality in Energy & Digital Access

Percentage of CO₂ emissions by world population

5G,6G

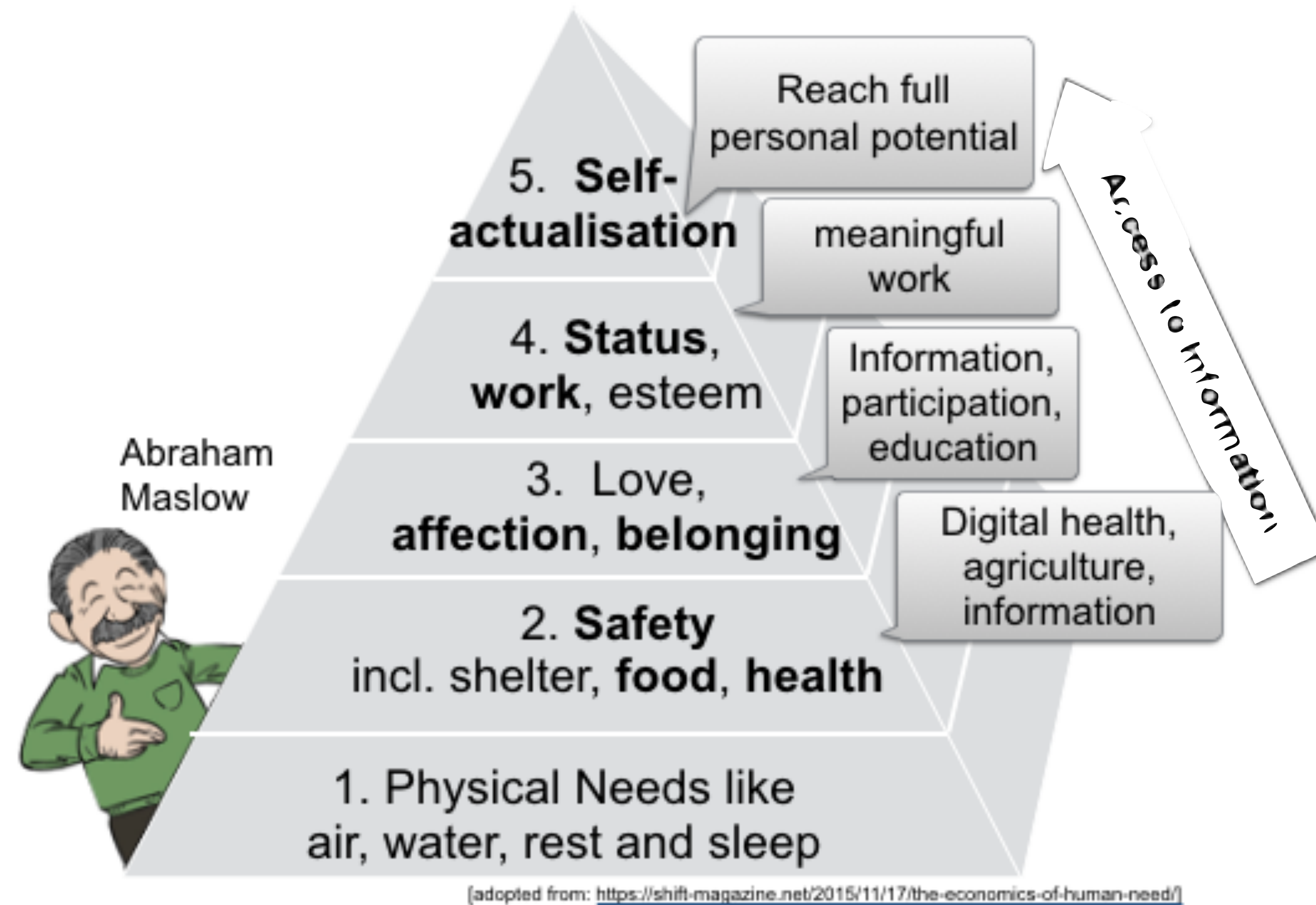World population arranged by income (deciles)

Richest 10%	49%
	19%
	11%
	7%
	4%
	3%
	2.5%
	2%
Poorest 50%	

Richest 10% responsible for almost half of total lifestyle consumption emissions

Poorest 50% responsible for only around 10% of total lifestyle consumption emissions

7 AFFORDABLE AND CLEAN ENERGY

[Source: Oxfam.org, 2015]

52% UNCONNECTED

13% ESTIMATED WITH MEANINGFUL CONNECTIVITY (2021)

35% BASIC ACCESS

34% NATIONAL ASSESSMENT FOR MEANINGFUL CONNECTIVITY (2021, BASED ON PILLARS' AVERAGE)

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

[https://webfoundation.org/docs/2022/02/MC_Indo_FS_Screen_V1.pdf]

How to we reach every single human?

[adopted from: https://shift-magazine.net/2015/11/17/the-economics-of-human-need/]

➡ Digital Public Goods (DPGs) & GovStack
  - ▪ decentralised DPGs
  - ▪ digital transformation
  - ▪ GovStack for local governments
  - ▪ digital health empowerment?

Community involvement
for meaningful access tailored towards the needs & capabilities

➡ WIR vs ICH (*we vs me*)

- **W**erte (*values*)
- **I**nclusivität (*inclusivity*)
- **R**esilience

Self-actualisation
Entertainment

Empowerment, Work
Digital Transformation
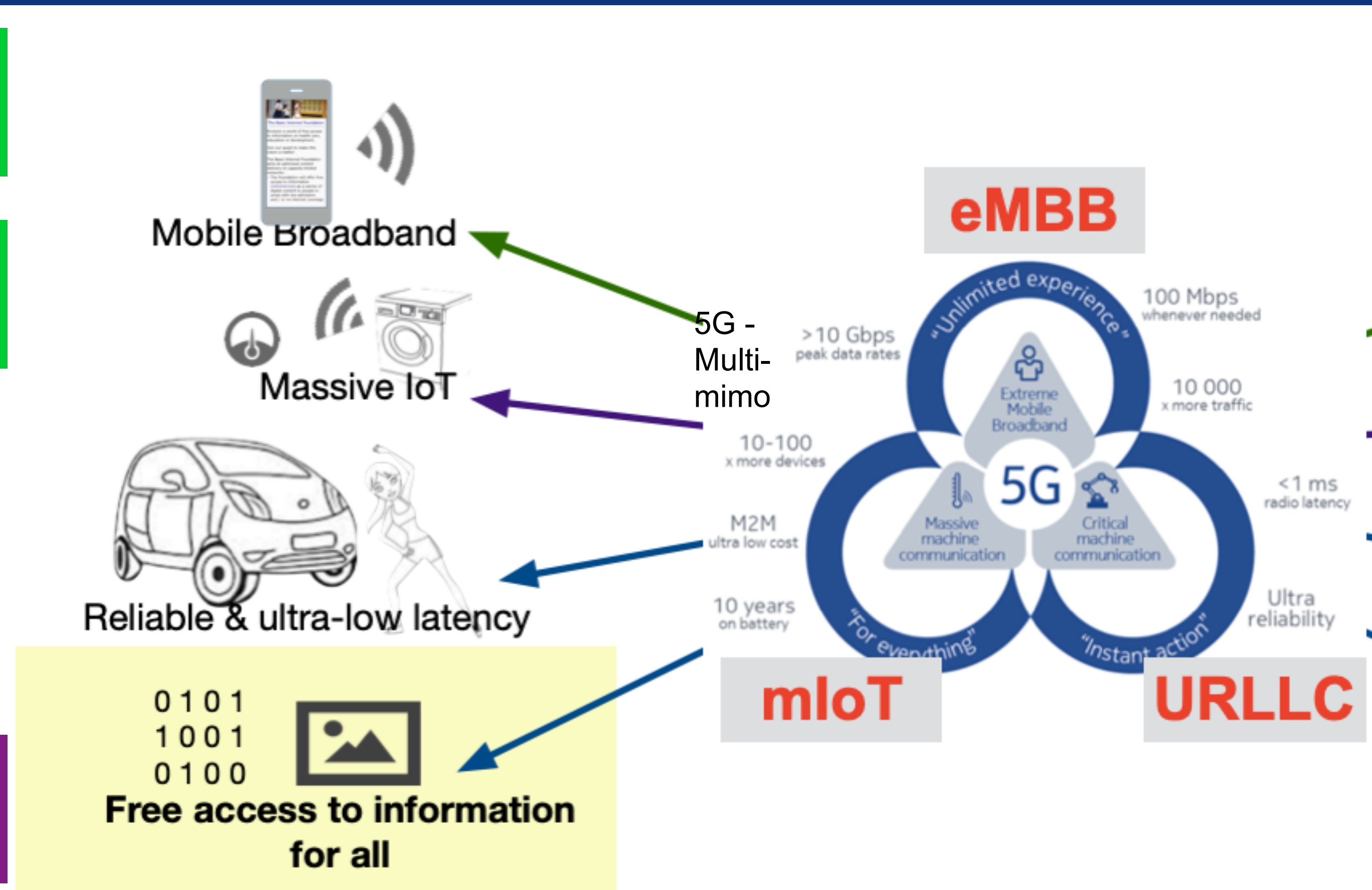
Explore, Affection
Opportunities

Value creation
Trust & confidence

Need to change?

Road model: pedestrians & cyclists

Digital pedestrians, digital cyclists vs digital cars (broadband)
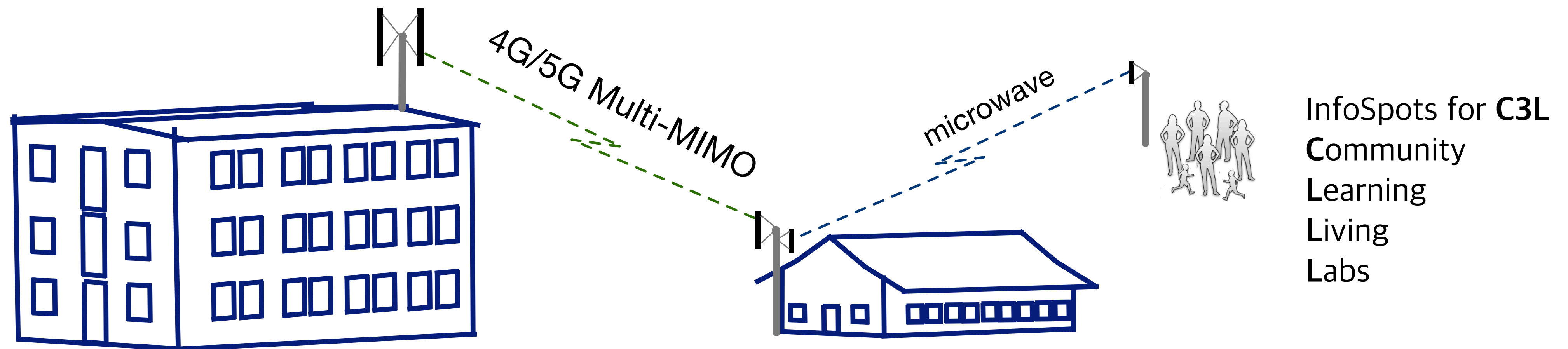
Internet Lite

The role of Universities
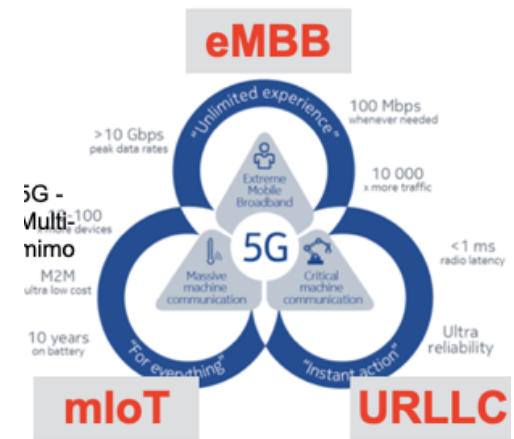# "more toys for boys - or societal impact?"

➡ Inclusive and empowered (digital) societies

➡ From NRENs to Schools and Communities

➡ Regional Competence Centres (RCCs) for
- the Digital Transformation
- Connect Schools & Communities
- practical experiences

4G/5G Multi-MIMO

microwave

InfoSpots for **C3L**
Community
Learning
Living
Labs

Digitalisation as Enabler

WIR

IoT

5G/6G

Machine Learning

Artificial Intelligence

Blockchain
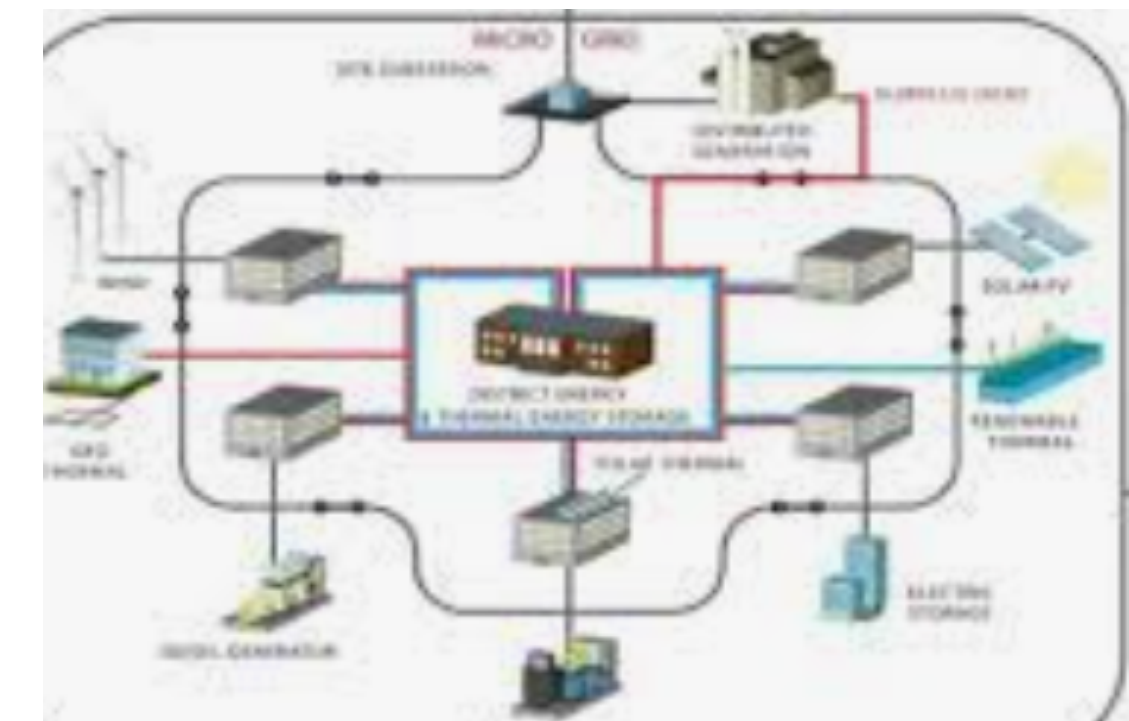
Wind, PhotoVoltaics

geothermal
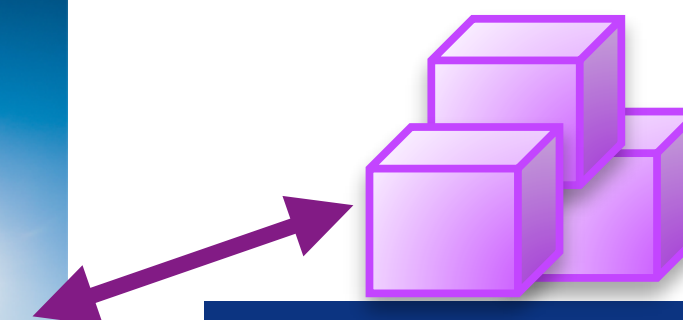
battery

waste 2 energy

MicroGrid

electrical vehicles

Digitalisation as enabler for Climate and Energy Justice

➡ Digitalisation as enabler
- KISS: Keep it simple, stupid
- Decentralised
- Community Learning Living Labs (C3L)

➡ Renewable energy
- micro-grid, decentralised
- production <> consumption balance
- empowerment for communities

➡ Self-sustained communities
- Building blocks for job-creation, educating, energy
- Values, Inclusivity, Resilience

Histories

"My mobile is more important than a weapon"

Head of Mbaash, TZ

Catherine R Kimambo connecting her first village

https://vimeo.com/368147538 - 2020

Mount Kenya - our cultural heritage

Usingo Secondary School, KE