

UNIVERSITY OF OSLO

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Africa and the Internet - let's revisit reality

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From Academia to Mobile Broadband

understanding the business

Jun1973: NO (Kjeller) & GB connected

Jun1986: RARE/TERENA...GEANT (NRENs in Europe)

1993 - **privatisation** of 2G (GSM)

1999 - 3G (UMTS): 3 x ROI expectation, Uni co-dev

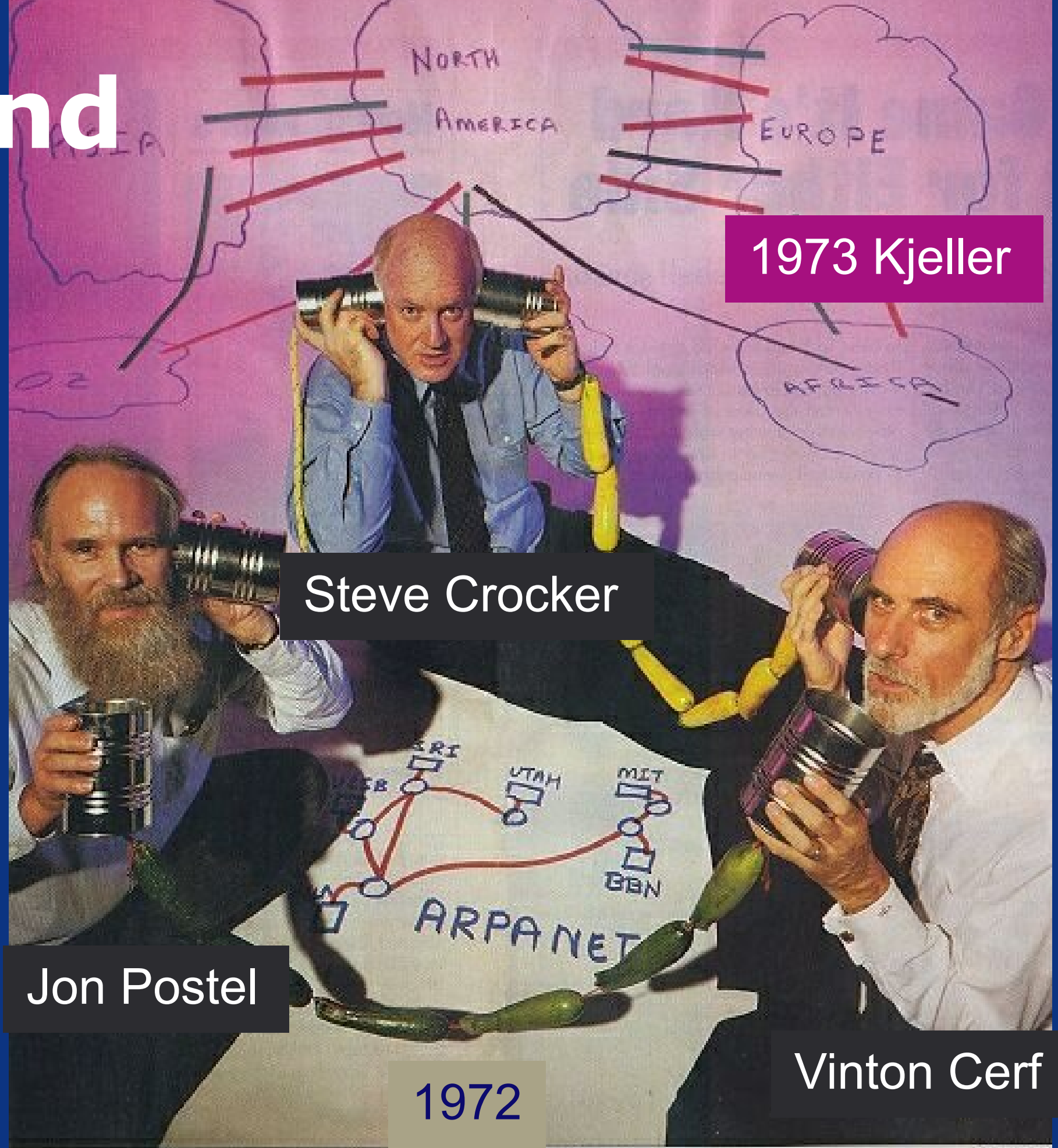
2004 - 4G (LTE): 120 km range, Supplier dev

Aug2003: Reykjavik "Cybersecurity"

Mar2023: "Societal Security" - Digital Equity - #ConnectTheFuture



Vint & Sigrid, Nordunet 2003




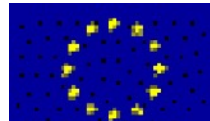
Source: <http://www.michaelkaul.de/History/history.htm>

"The mobile Internet is purely commercial"

The Business Model

Mobile Internet in SSA

→ Western World

- fixed & mobile & work - about 100-200 USD/family
-  17.000 base stations,  EU: 421.000 towers [Statista]

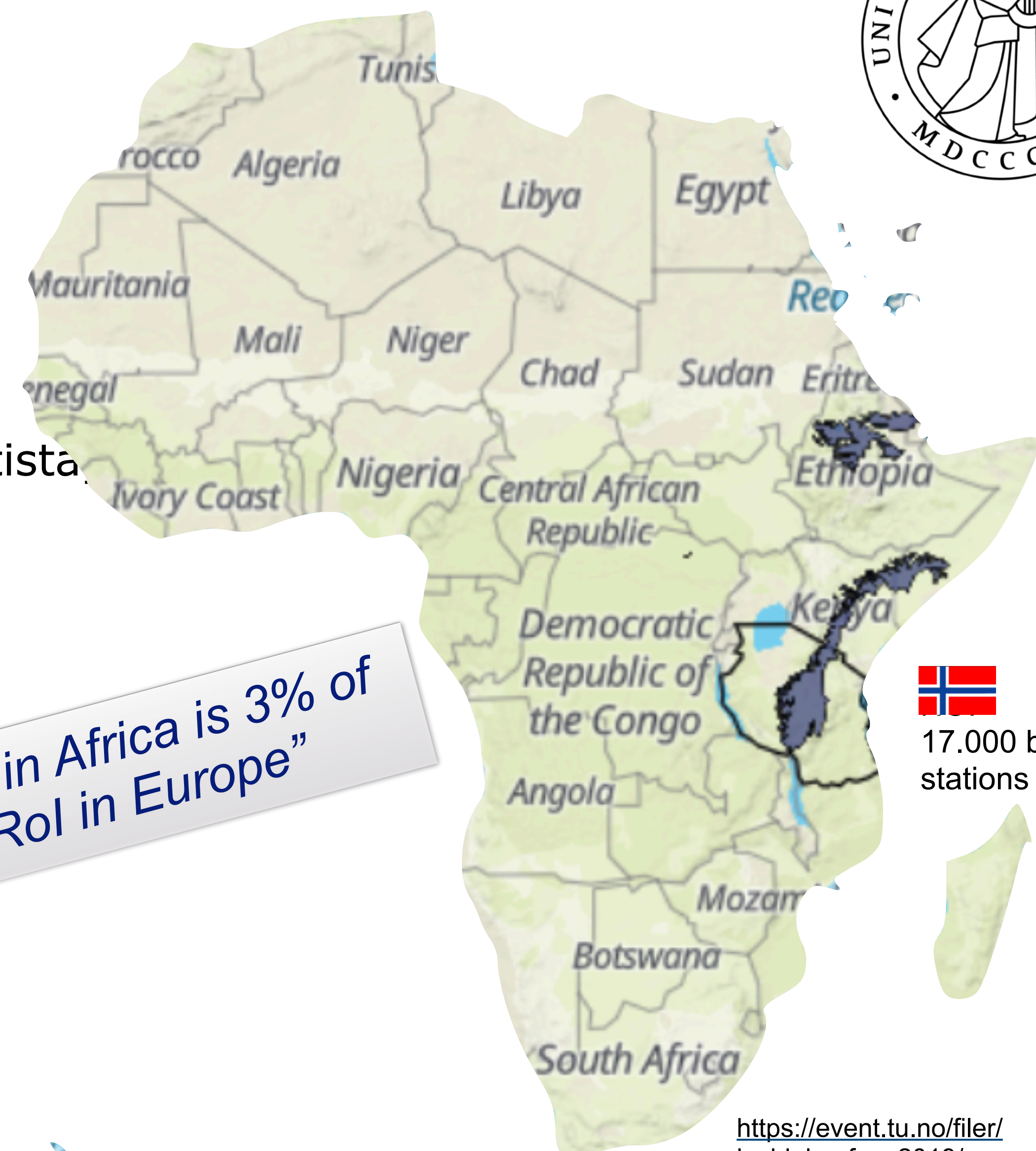
→ Example: Tanzania

- large distances (3 x size of Norway)
 - expensive access
 - negligible fixed broadband
- ability to pay: 10-20 USD/family

→ Europe vs Africa

- 6.8% vs 20% of land area
- 746 million vs 1.3 billion (2018)
- 112 vs 43 people/km² [Worldbank, Statista]

“RoI in Africa is 3% of RoI in Europe”

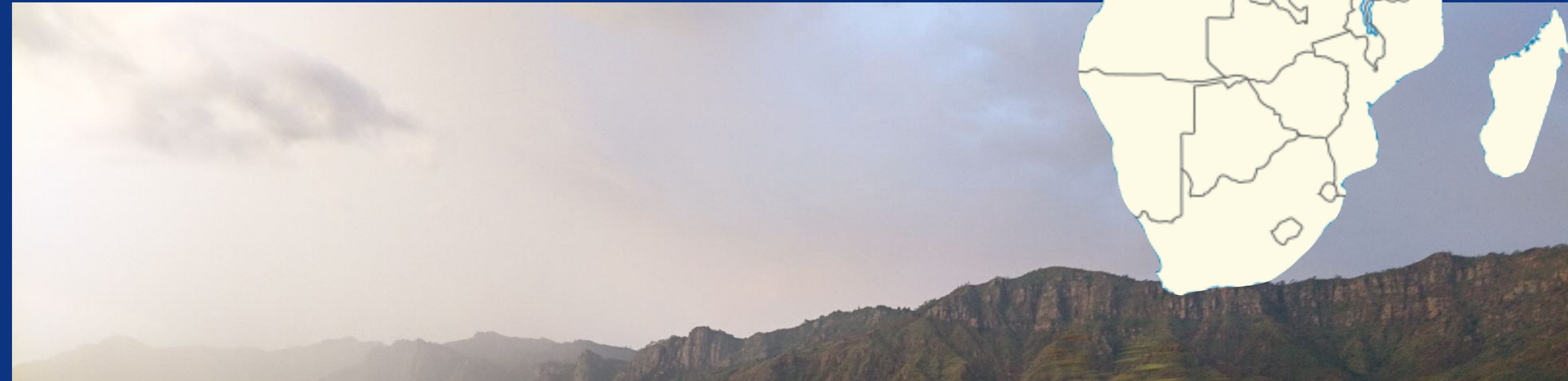


https://event.tu.no/filer/insidekonf_v_2019/Eivind_Mikkelsen_Trenger_Norge_100.000_basestasjoner.pdf

How can we “Connect The Future”? and what are the roles of the Universities

“Internet had the ability to dismantle the divide.
Internet failed miserably, the divide is bigger than ever.”
Kate Gilmore, Human Rights, UNOG, 2017

Empower
my dreams



AfricaConnect3 project is co-funded by the European Union

The AfricaConnect3 project receives funding from the European Union under Grant Contract DCI-PANAF/2019/411-583.



What if ...

We revisit access

We decentralise the Internet

We use Universities to connect

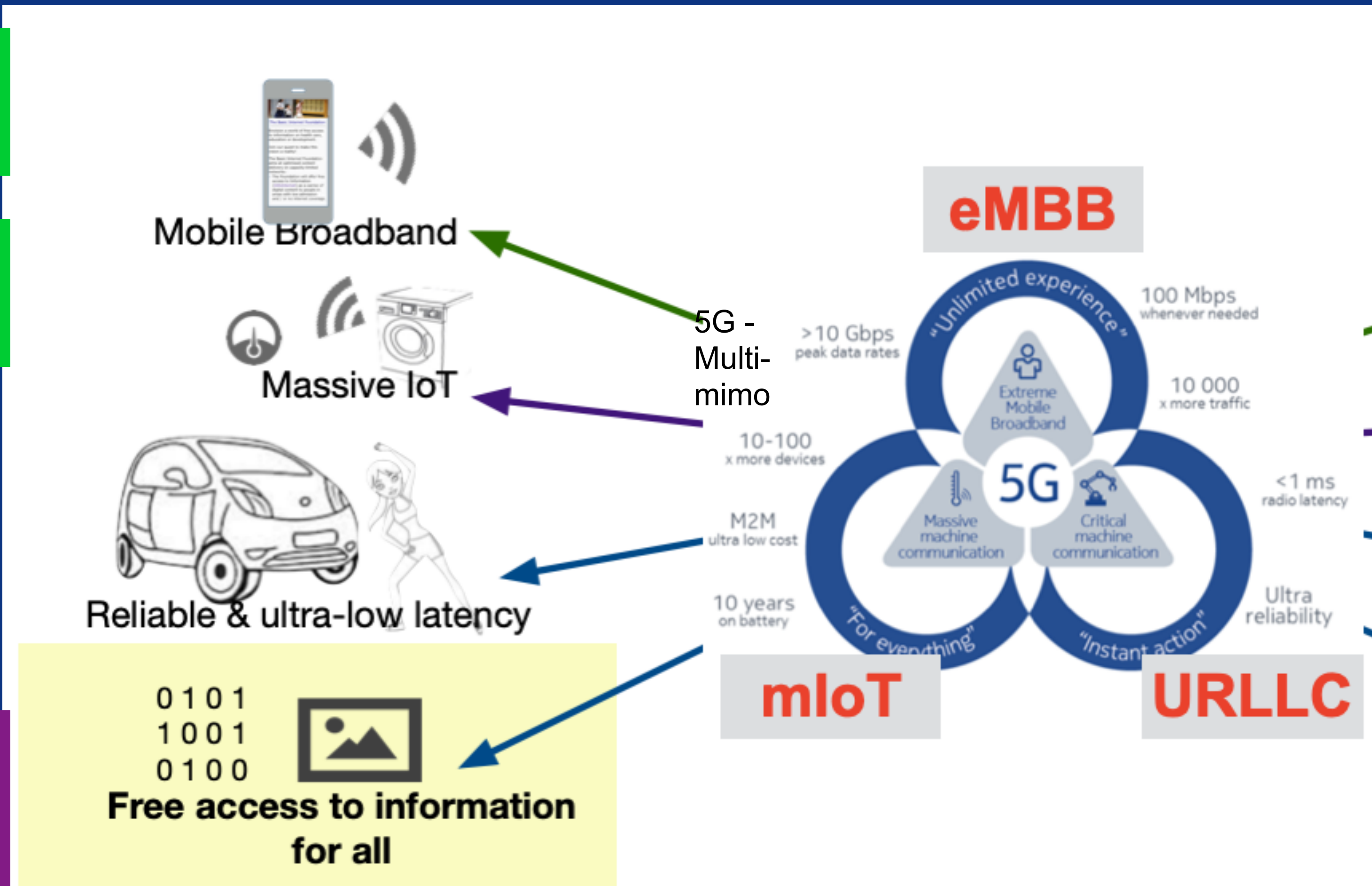
Revisit Access

Road model: pedestrians & cyclists

Digital pedestrians, digital cyclists vs digital cars (broadband)

Internet Lite
as a Digital Public Good (DPG)?

& 5G large cells



Academic fundamental values



Department of Political Science
University of Oslo

The ESGs and fundamental values

- The Rome Communiqué defined fundamental values as important elements of the EHEA:
 - Institutional autonomy
 - Academic freedom & integrity
 - Participation of students & staff in governance
 - Public responsibility for and of HE
- Except for academic freedom no definition and even academic freedom not fully agreed upon

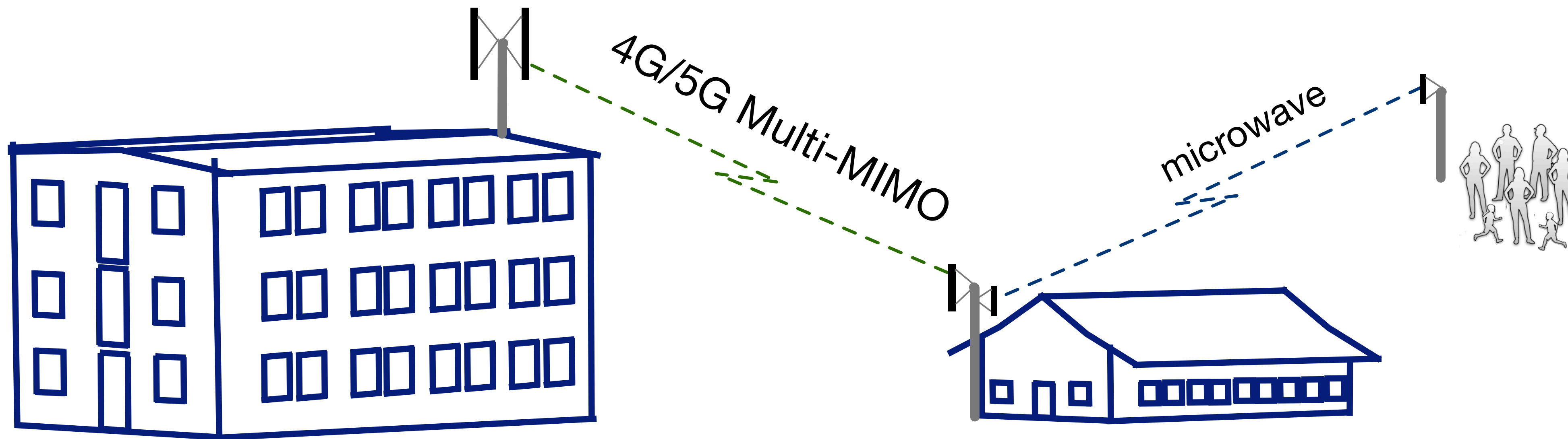
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ESGs European Standards and Guidelines (Standards and Guidelines for Quality Assurance in the European Higher Education Area)
EHEA European Higher Education Area
HE Higher Education

The role of Universities

Societal impact & non-profit services

- Inclusive societies
- Access to GovStack and Digital Public Goods
- Regional Competence Centres (RCCs)
- Connect Schools & Communities
- Non-profitable content at School-/Community-Centres



InfoSpots for **CL3**
Community
Learning &
Living
Labs

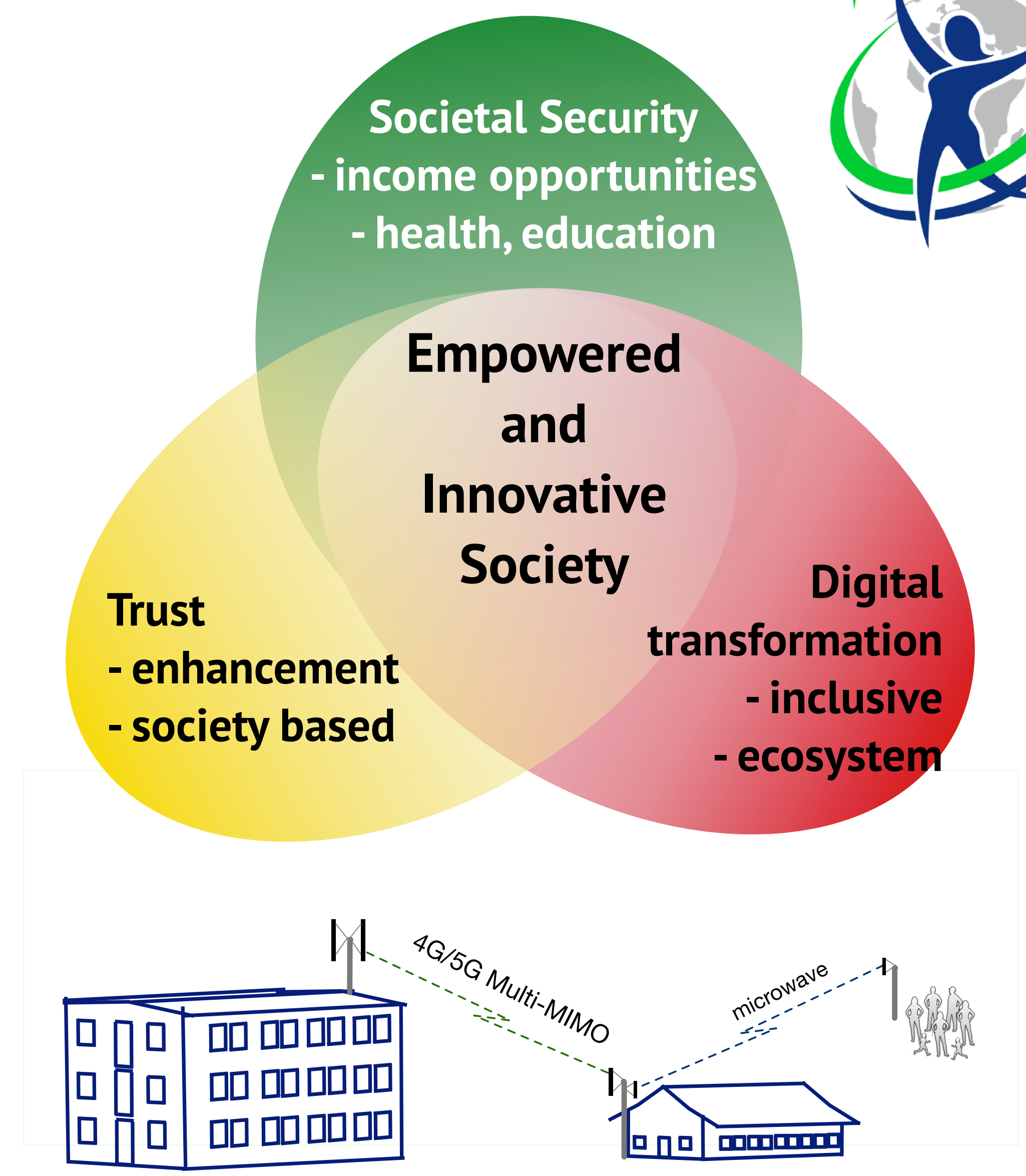


National Research & Education Networks (NRENs)



Conclusions

- ➔ “Revisit the access to Internet” in SSA
 - Decentralised (as the Internet)
 - Local knowledge
- ➔ Community Learning & Living Labs (CL3)
 - from NRENs to Schools to CL3
- ➔ Collaboration
 - 5G Multi-MIMO for School Connectivity
 - Internet Lite, 5G large cells
 - Framework conditions



Join us & “Connect The Future”



10 schools
10 131 students
Q1.2021

3 000 USD/installation

55 schools
37 632 students
Q4.2021

2500 USD/installation
4 \$/student

105 schools
77 632 students
Q4.2022

1800 USD/installation

2 000 schools
1 820 000 students
Q4.2024

1100 USD/installation
0.6 \$/student



BasicInternet.org