



UNIVERSITY
OF OSLO



IEEE CTU 3Nov2022

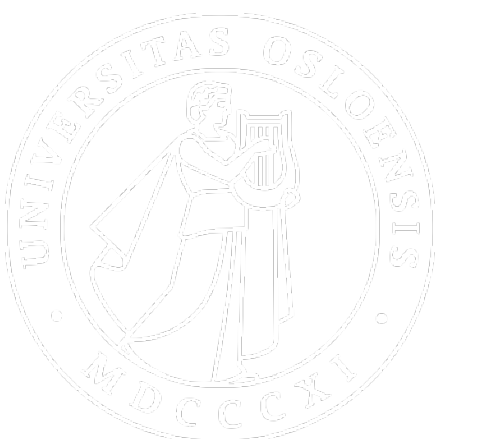
Africa and the Internet

Prof Josef Noll^{1,3} & Sudhir Dixit^{2,3}

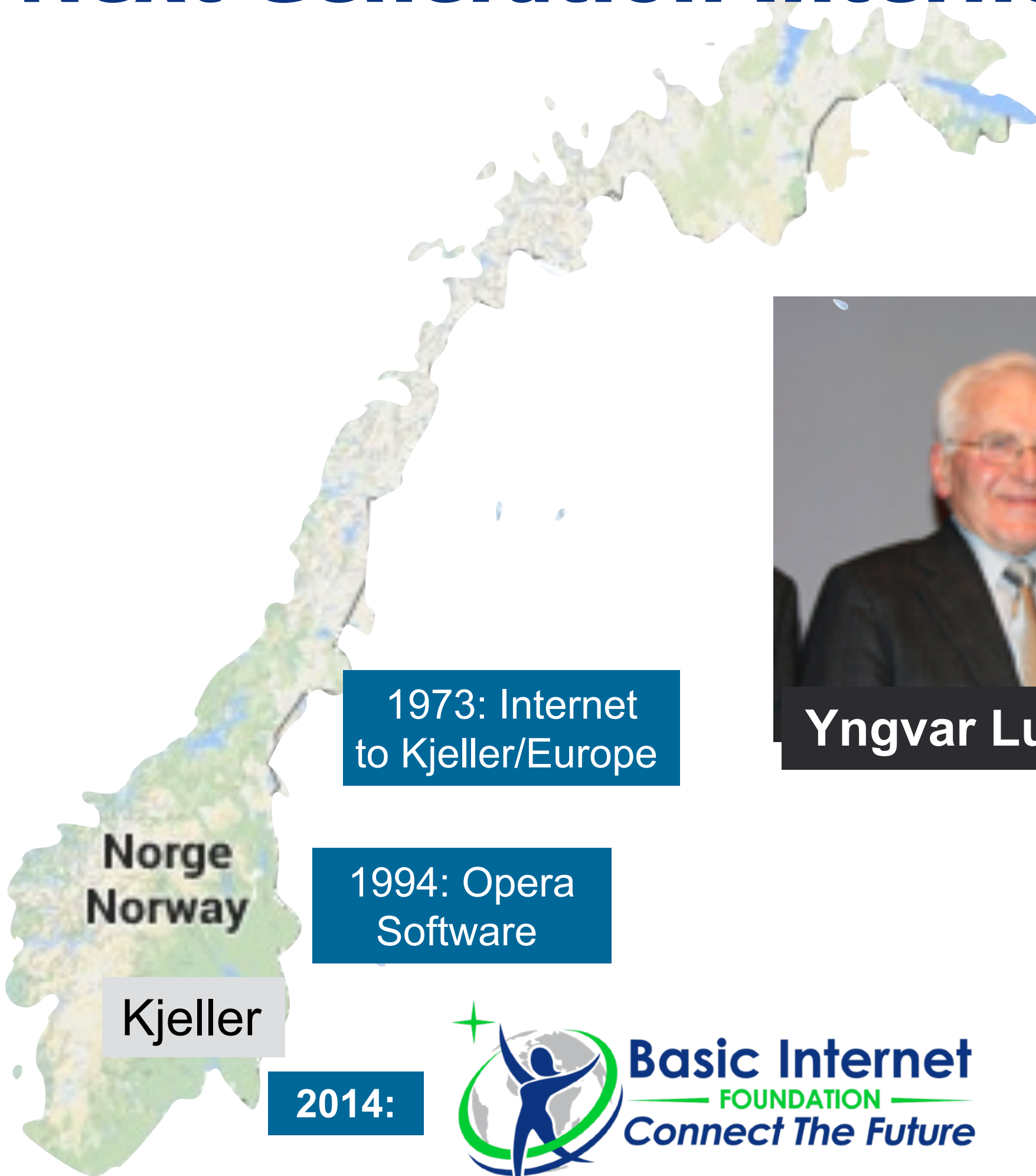
¹University of Oslo (UiO)

²IEEE CTU

³Basic Internet Foundation, Norway

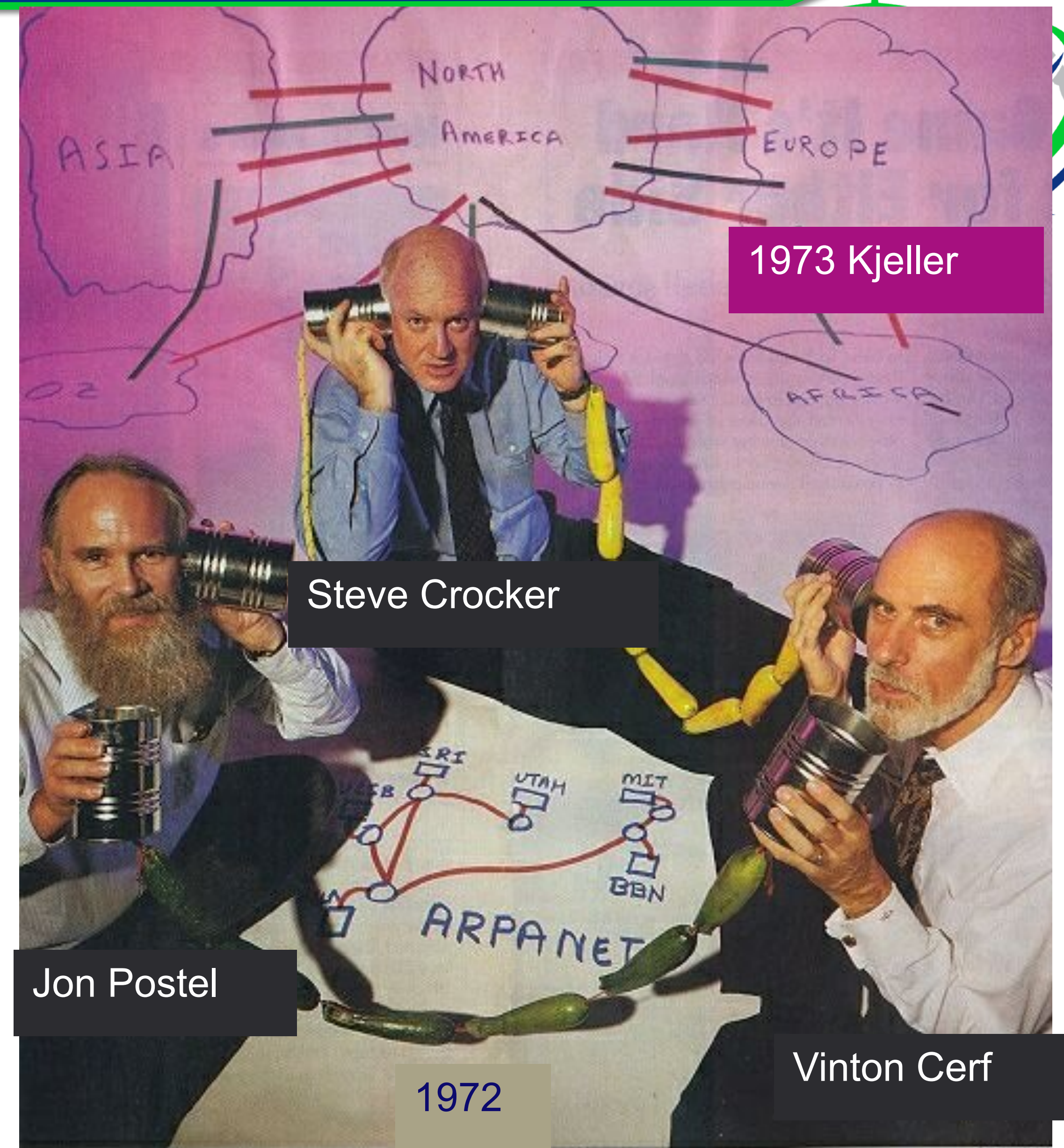


An inclusive Next Generation Internet



Yngvar Lundh

Pål Spilling



1973 Kjeller

Steve Crocker

Jon Postel

Vinton Cerf

1972

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



Mission

Framework Conditions

Partnerships



How can we “Connect The Future”?

Josef Noll @josefnoll · Jun 2

Amazing opening by @ITU @ITUsecGen Houlin Zhao, setting the scene for connecting every single human by 2030, and @meilinfung, addressing the history of the Internet and #NRENs to connect schools. We're in @CateKimambo @RosalynnMworia @UcsafT @AheriNet @cisskisumu @WSISprocess





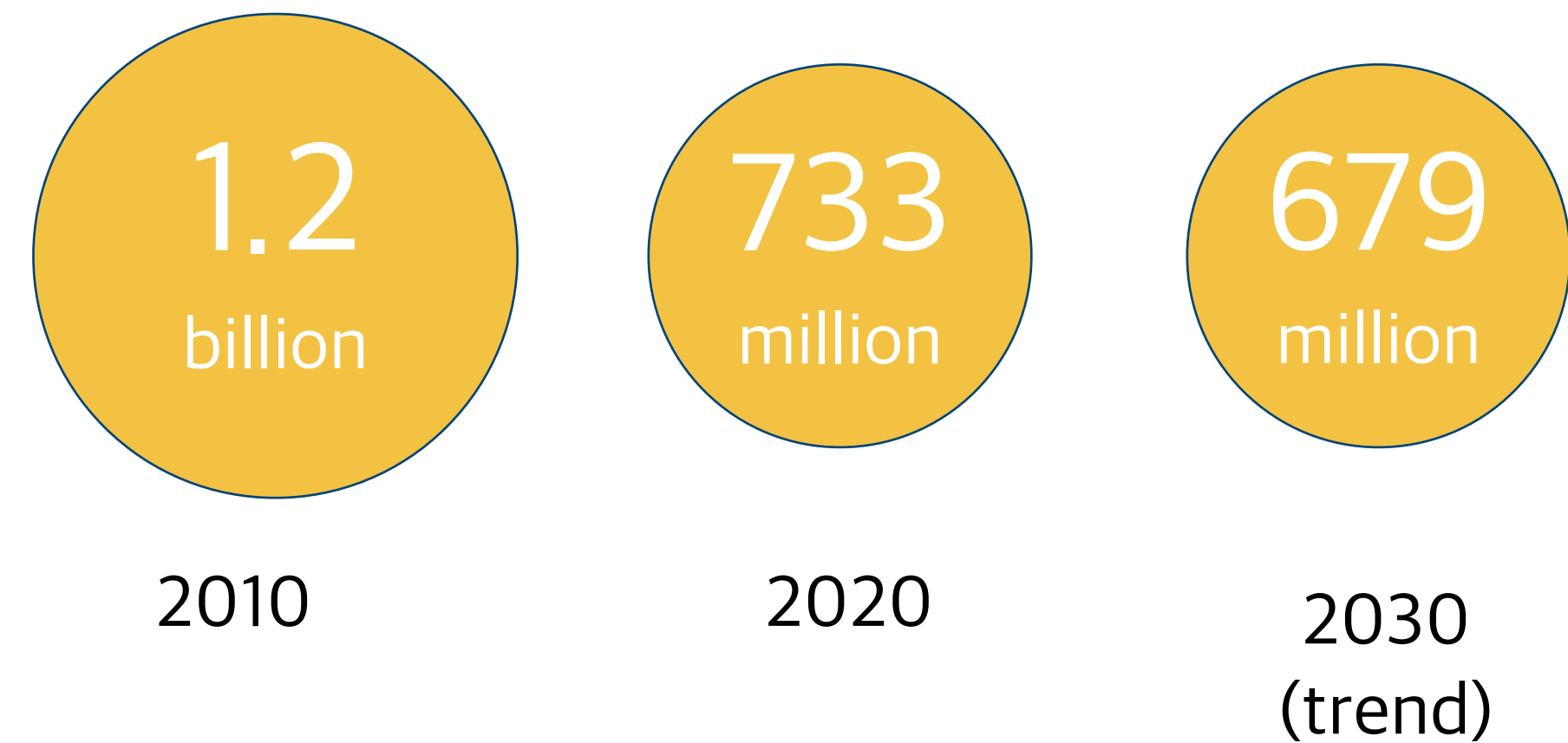
Energy & Digital, enablers for the SDGs



7 AFFORDABLE AND CLEAN ENERGY

People without electricity

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



[WorldBank 2021]

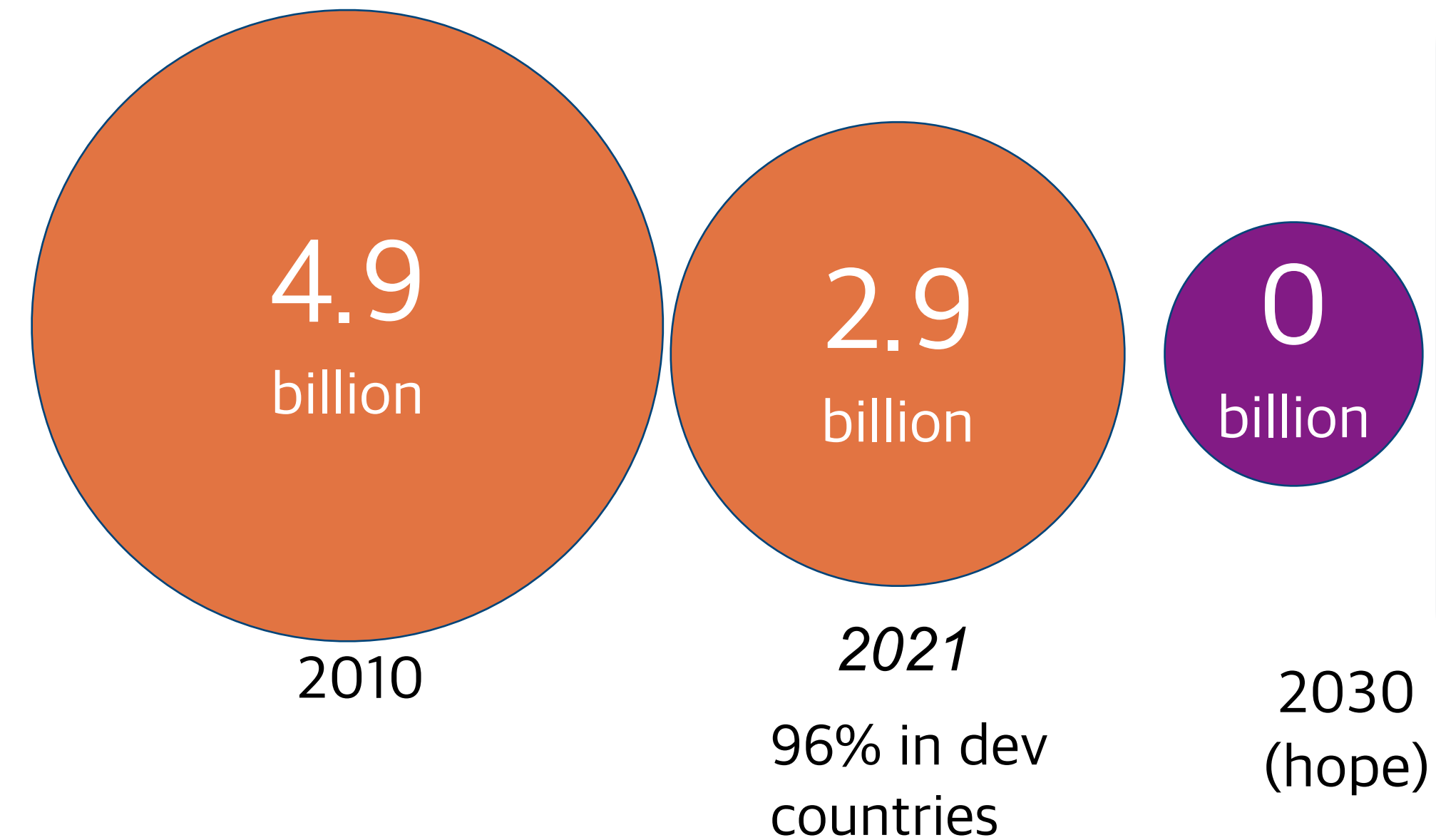
<https://www.worldbank.org/en/news/press-release/2021/06/07/report-universal-access-to-sustainable-energy-will-remain-elusive-without-addressing-inequalities>



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

People not using Internet

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



[ITU 2010, 2021]

<https://www.itu.int/hub/2021/11/facts-and-figures-2021-2-9-billion-people-still-offline/>

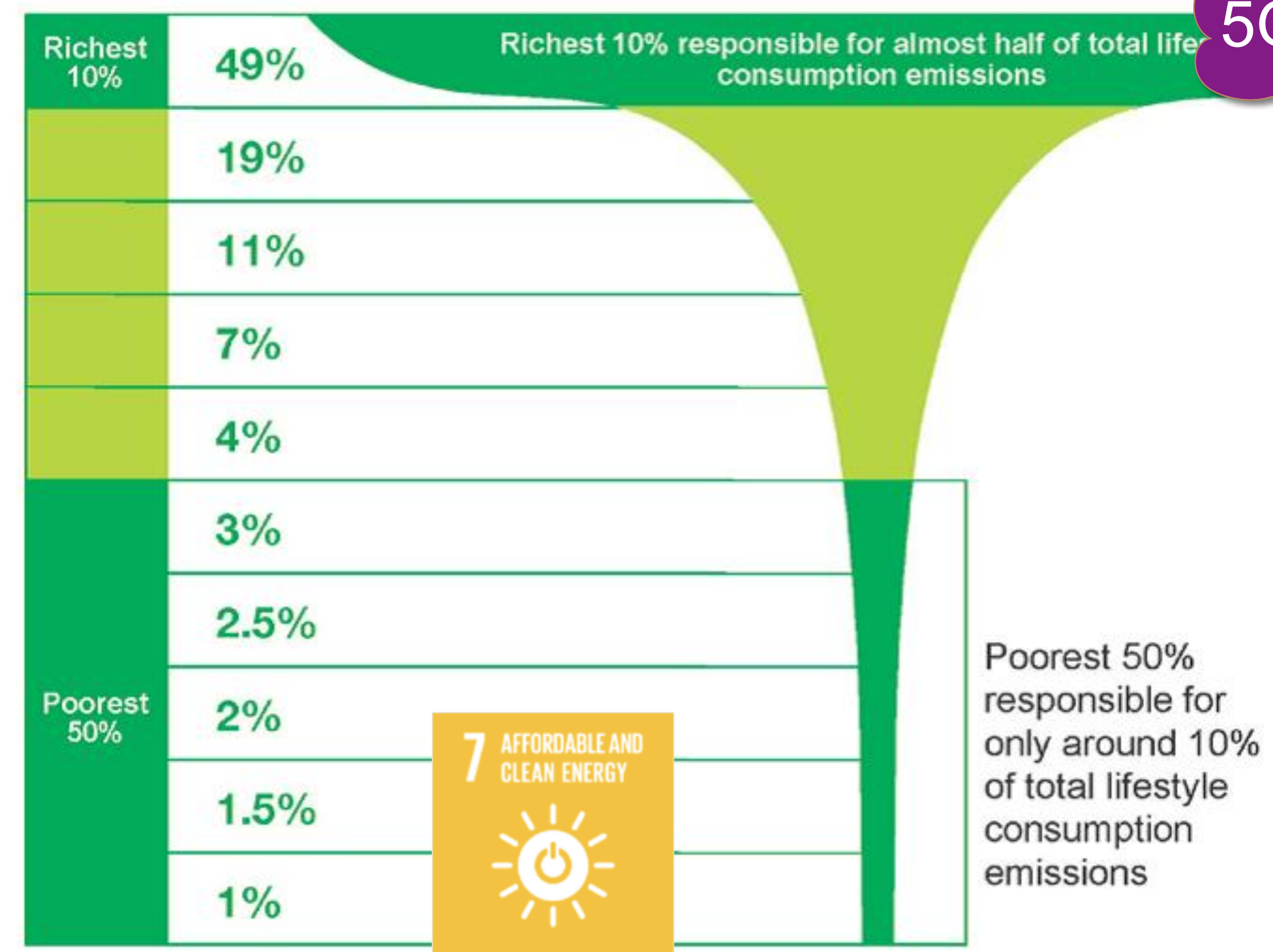


WSIS Forum 2022



Inequality in Energy & Digital Access

Percentage of CO₂ emissions by world population



5G,6G

9%

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



ESTIMATED TO HAVE 4G SPEEDS



ESTIMATED TO OWN A SMARTPHONE



ESTIMATED WITH UNLIMITED ACCESS

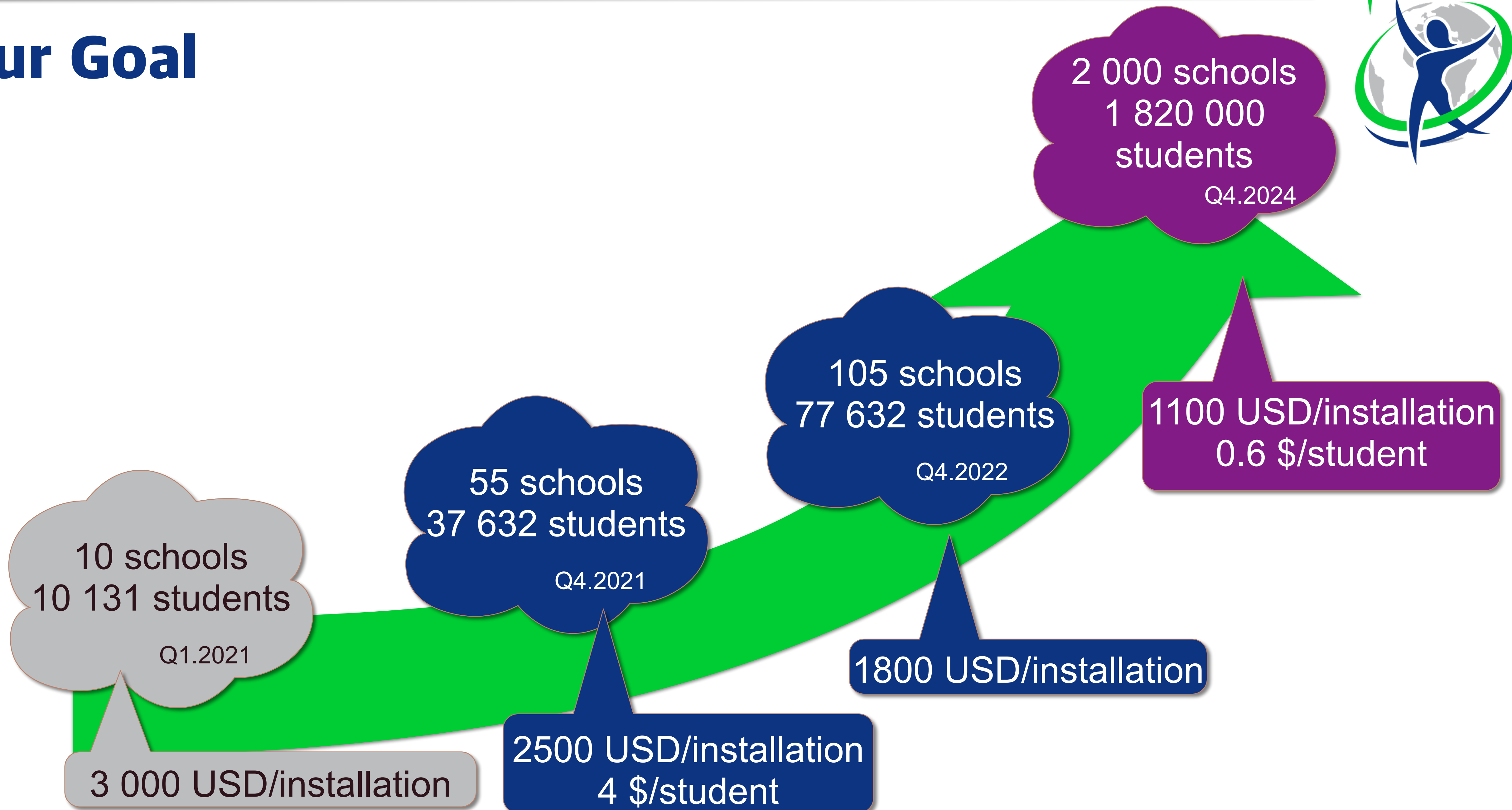


ESTIMATED TO HAVE DAILY INTERNET USE

[Source: Oxfam.org, 2015]

[https://webfoundation.org/docs/2022/02/MC_Rwanda_FS_Screen_V1.pdf]

Our Goal



Mission

Framework Conditions

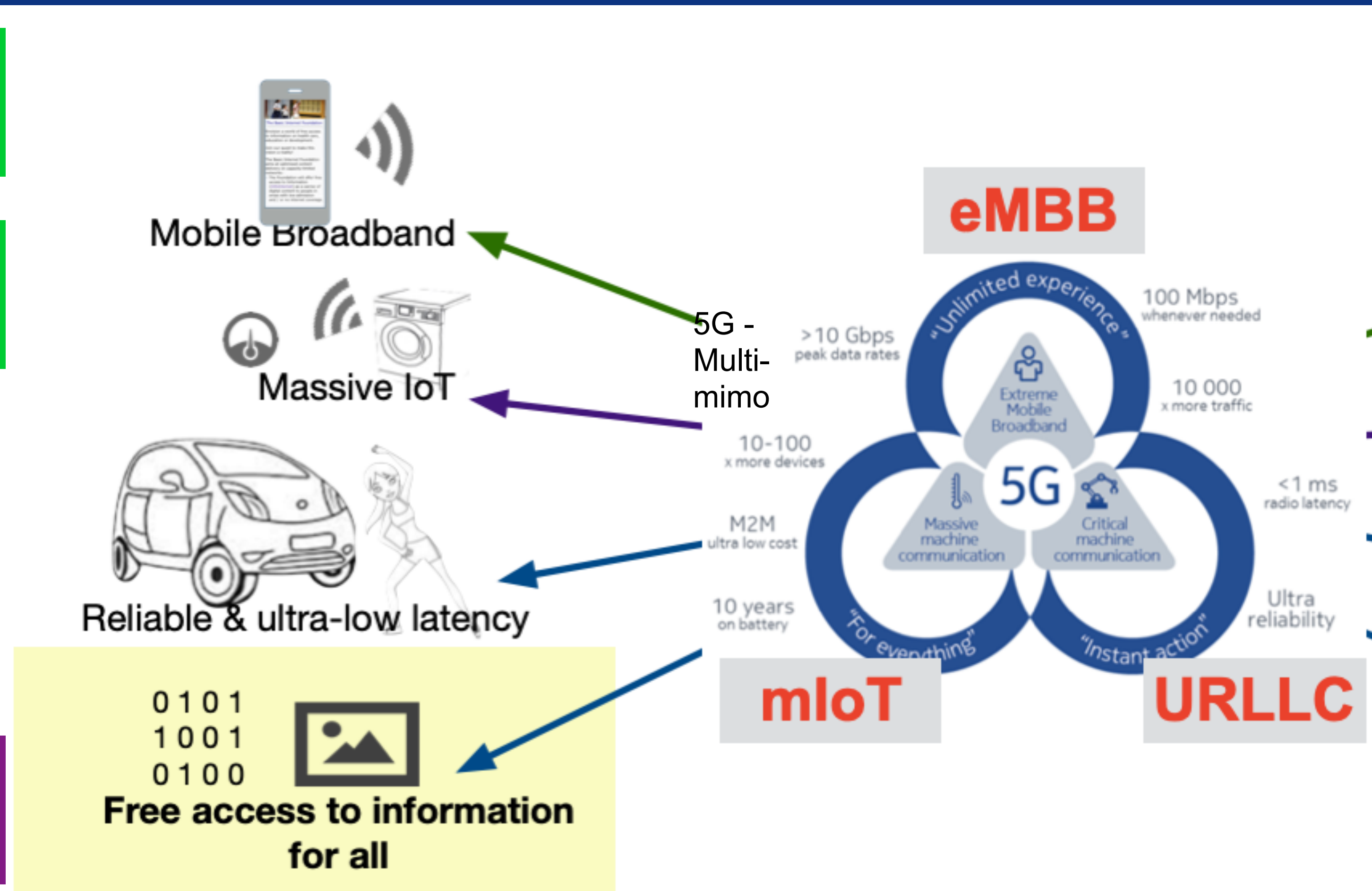
Partnerships

Digitalisation (5G/6G)

Road model: pedestrians & cyclists

Internet: text & pictures

Internet Lite



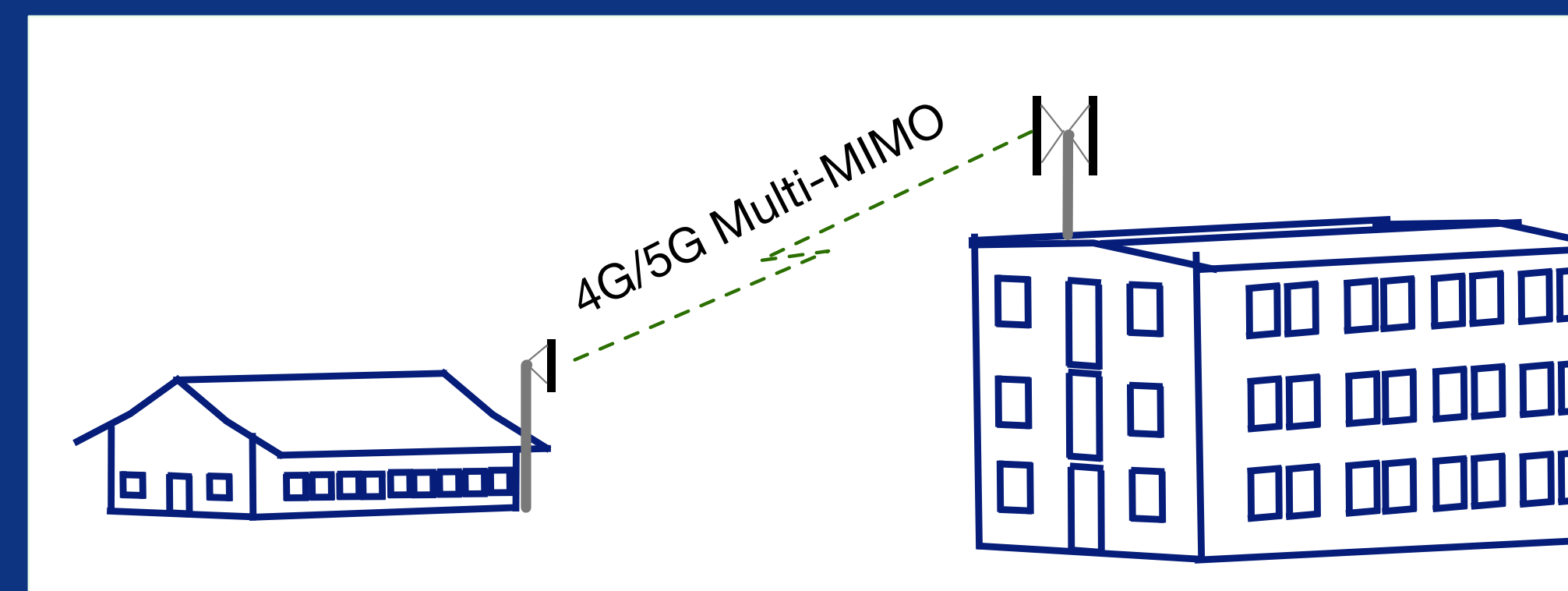


AfricaConnect3 project is co-funded by the European Union

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



- **Research for the (digital) Society**
- **Competence for the Digital Transformation**
- **Connect Schools & unconnected Communities practical experiences**
- **Real world search based on needs from the communities**



Conclusion

Partnership for Connectivity

2 000 schools
1 820 000
students
Q4.2024



- Universities
 - Real-world knowledge
 - Decentralised, empower the communities
 - Knowledge4Africa, 5GforPeople
- Community Networks
 - extension of NRENs?
- Commercial actors
 - Mobile operators: Research with 5G as backbone
 - ISPs, satellite
- Government, ITU, UNICEF, UNESCO, ...
 - Framework conditions (spectrum, Internet Lite)

