



**UNIVERSITY  
OF OSLO**



**Basic Internet**  
— **FOUNDATION** —  
*Connect The Future*

IEEE CTU 3Nov2022

# Africa and the Internet

Prof Josef Noll<sup>1,3</sup> & Sudhir Dixit<sup>2,3</sup>

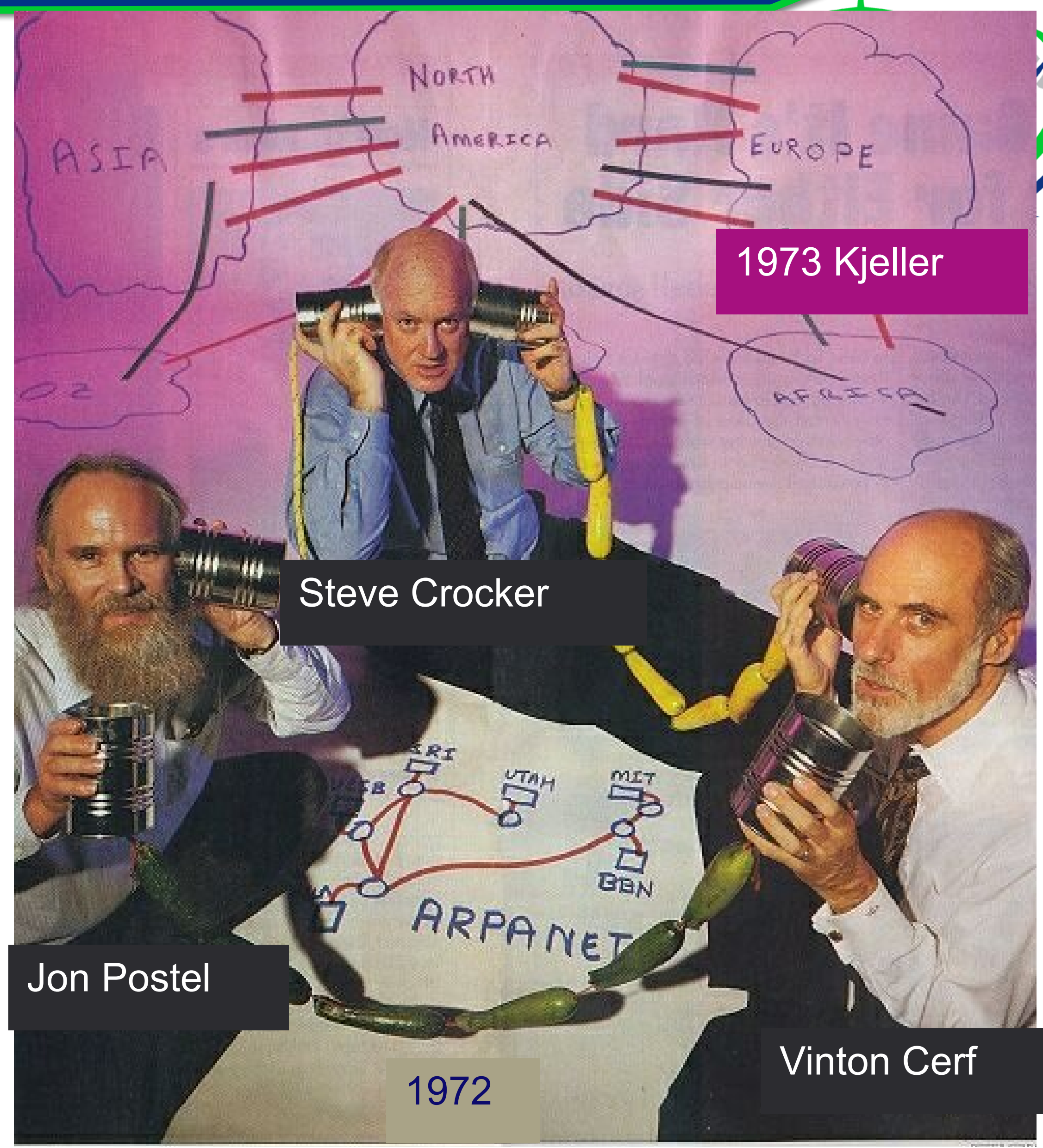
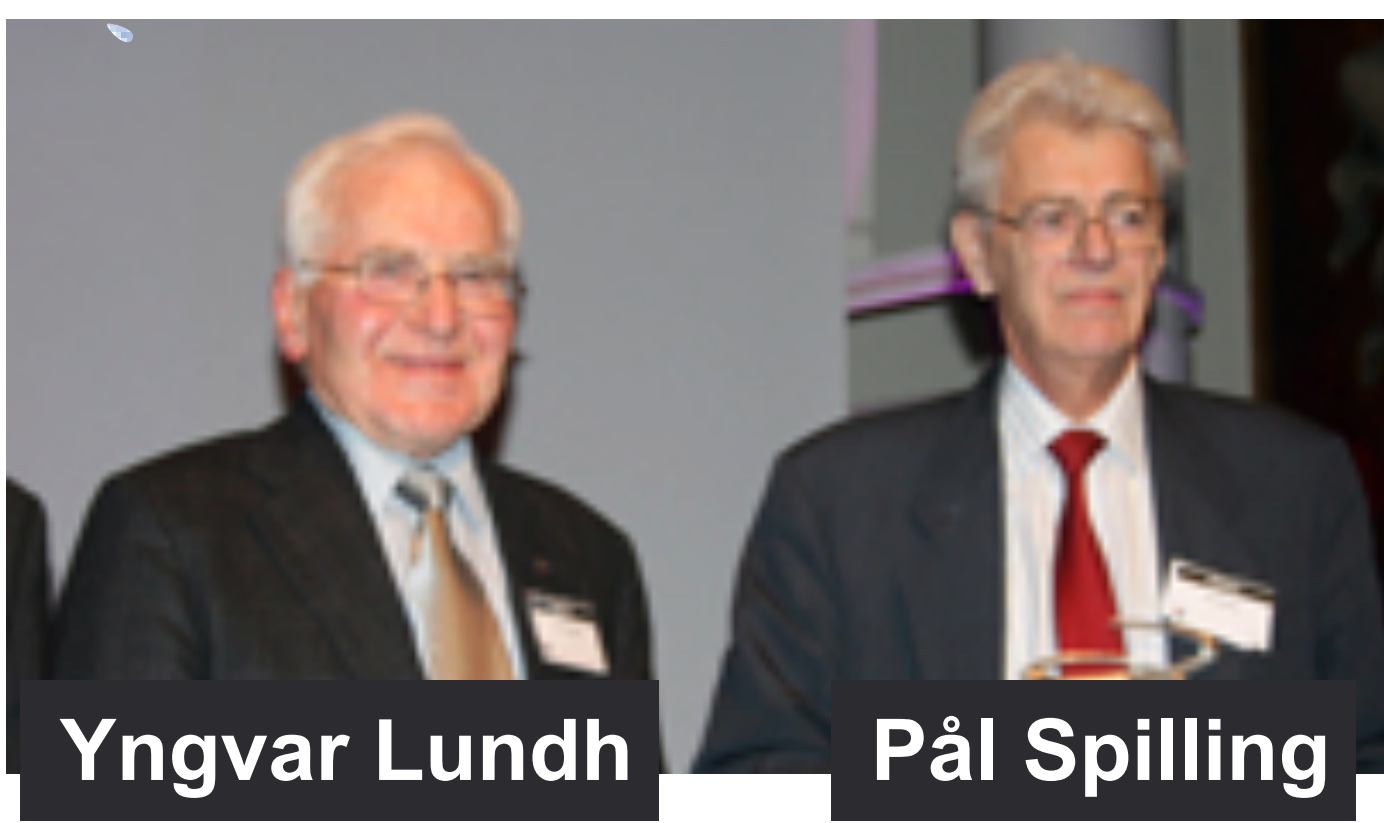
<sup>1</sup>University of Oslo (UiO)

<sup>2</sup>IEEE CTU

<sup>3</sup>Basic Internet Foundation, Norway



# An inclusive Next Generation Internet



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





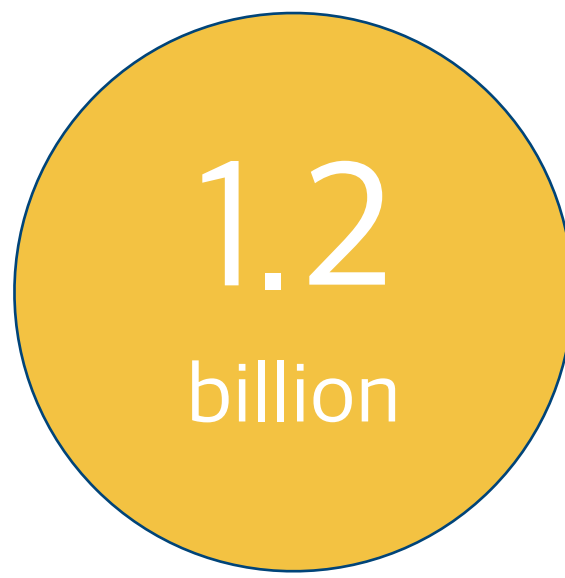
# Energy & Digital, enablers for the SDGs

7 AFFORDABLE AND CLEAN ENERGY



## People without electricity

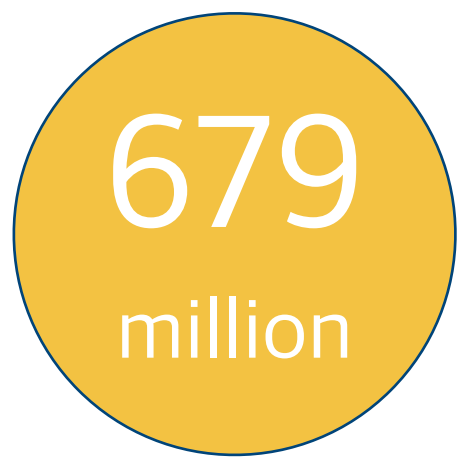
SDG 7.1 calls for universal access to ... energy by 2030



2010



2020



2030 (trend)

[WorldBank 2021]

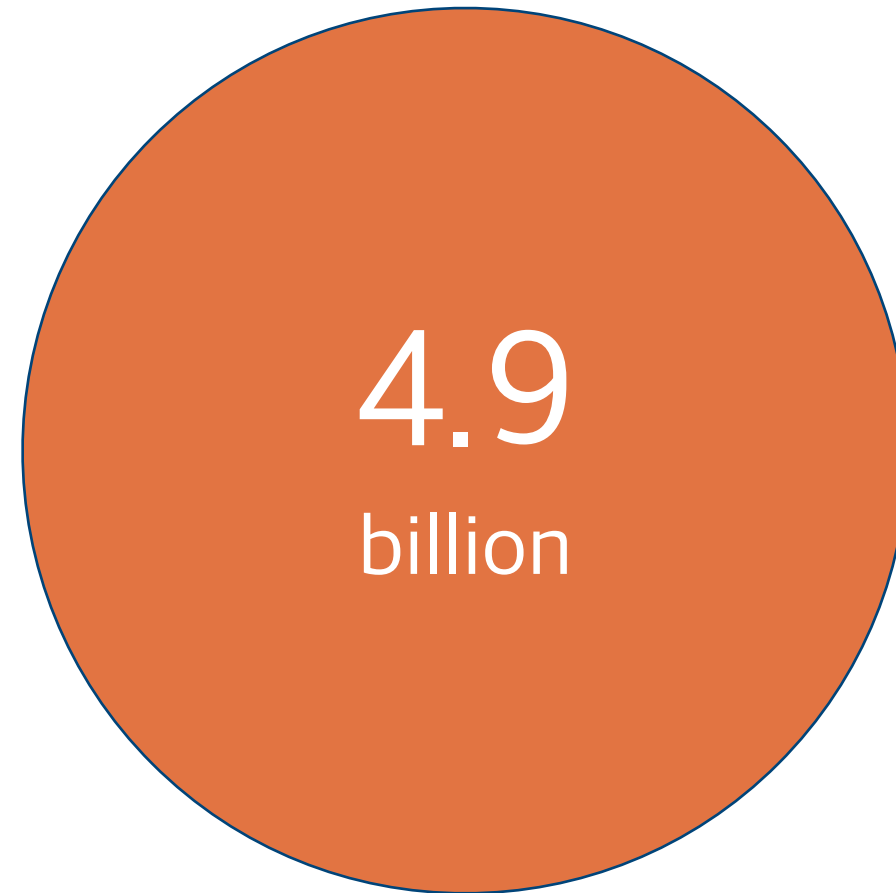
<https://www.worldbank.org/en/news/press-release/2021/06/07/report-universal-access-to-sustainable-energy-will-remain-elusive-without-addressing-inequalities>

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

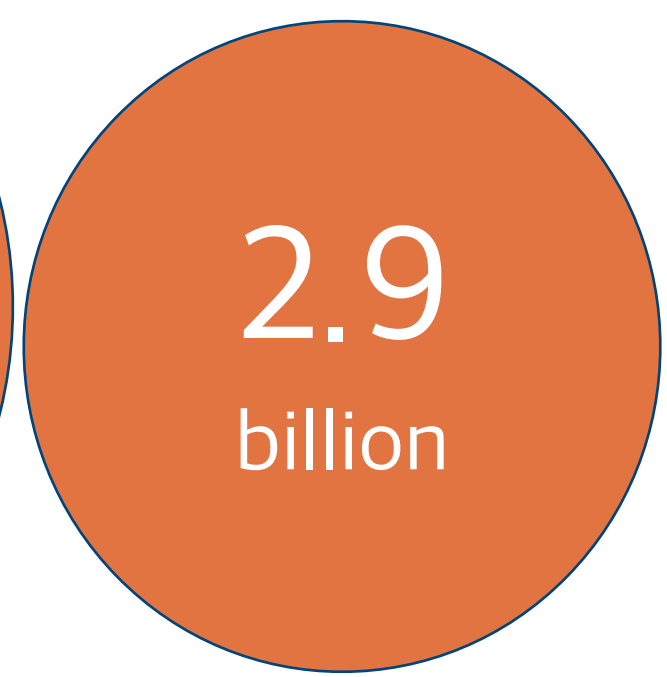


## People not using Internet

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

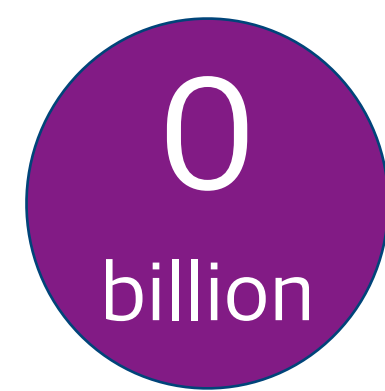


2010



2021

96% in dev countries



2030 (hope)

[ITU 2010, 2021]

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

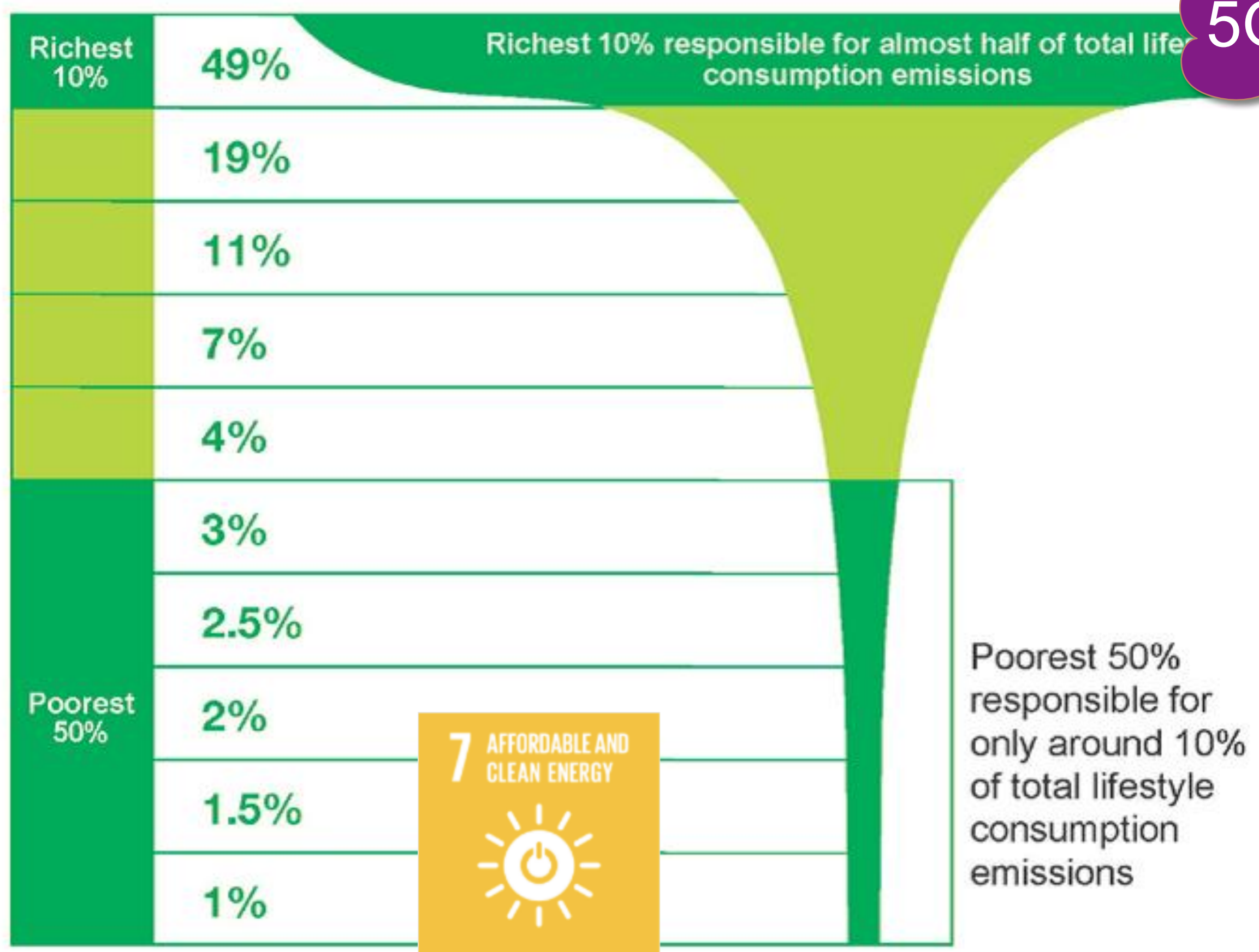


WSIS Forum 2022



# Inequality in Energy & Digital Access

Percentage of CO<sub>2</sub> emissions by world population



**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



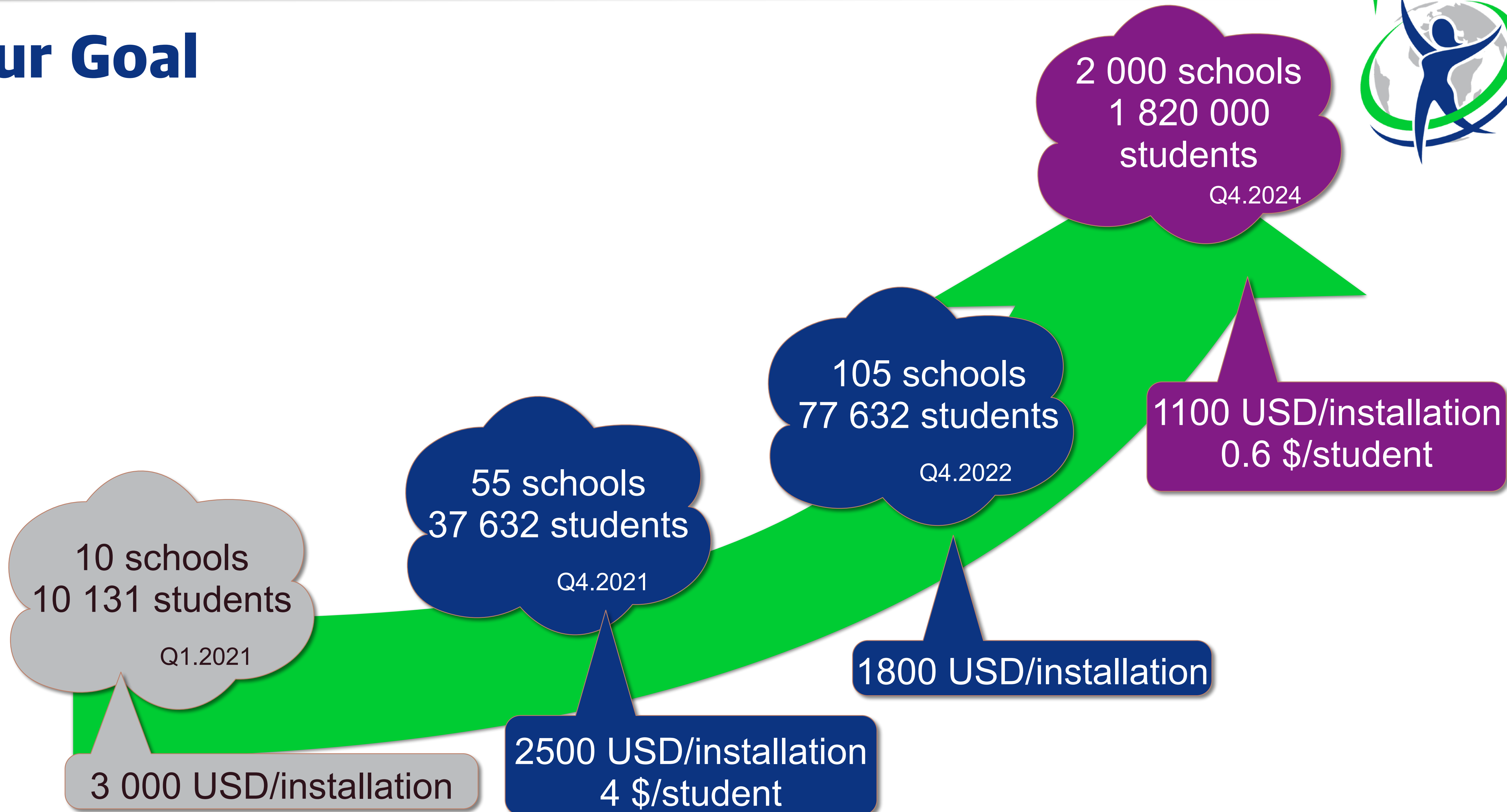
ESTIMATED TO HAVE DAILY INTERNET USE

[Source: Oxfam.org, 2015]

[[https://webfoundation.org/docs/2022/02/MC\\_Rwanda\\_FS\\_Screen\\_V1.pdf](https://webfoundation.org/docs/2022/02/MC_Rwanda_FS_Screen_V1.pdf)]



# Our Goal



**Mission**

**Framework Conditions**

**Partnerships**

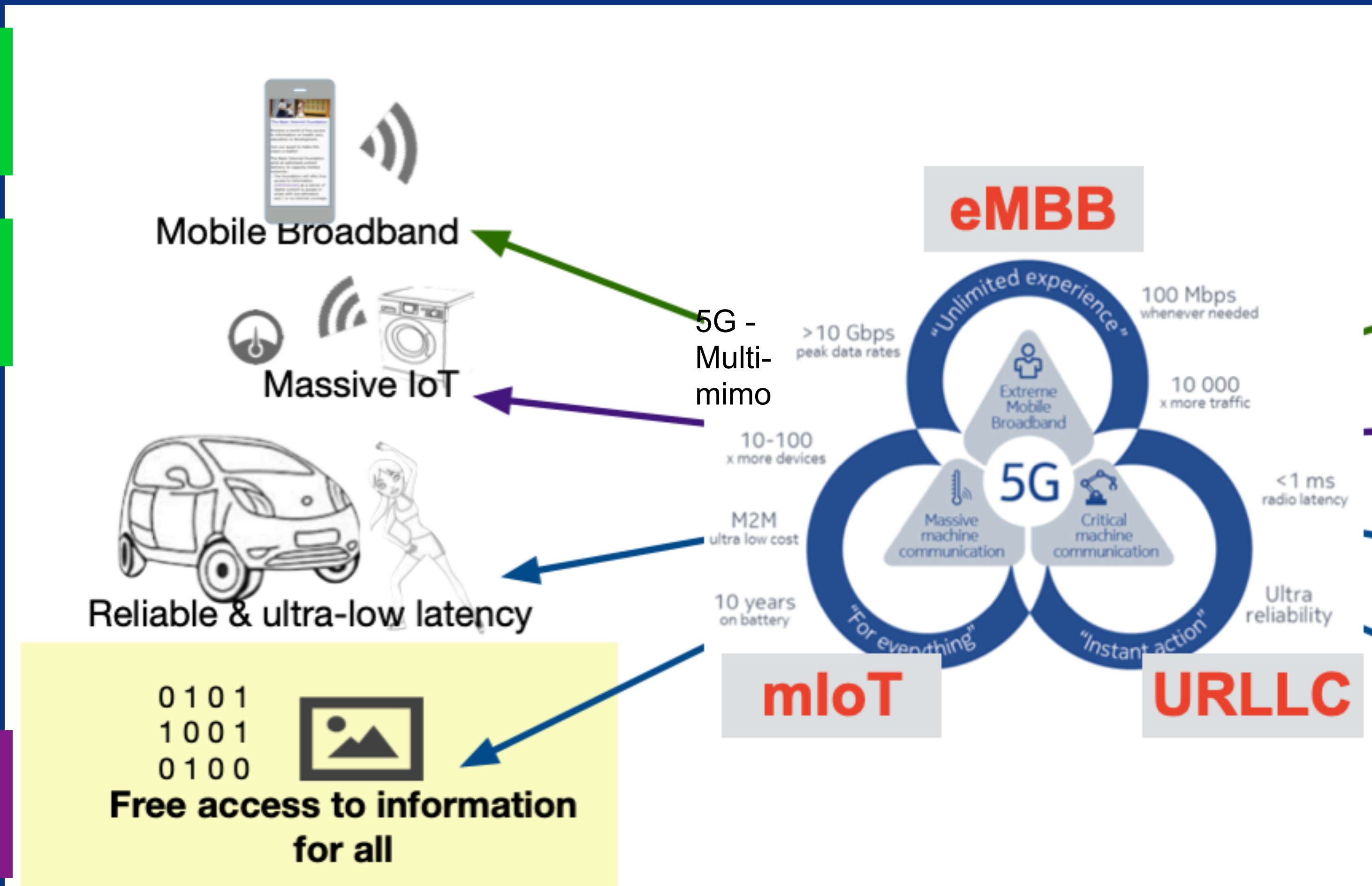


# Digitalisation (5G/6G)

Road model: pedestrians & cyclists

Internet: text & pictures

Internet Lite



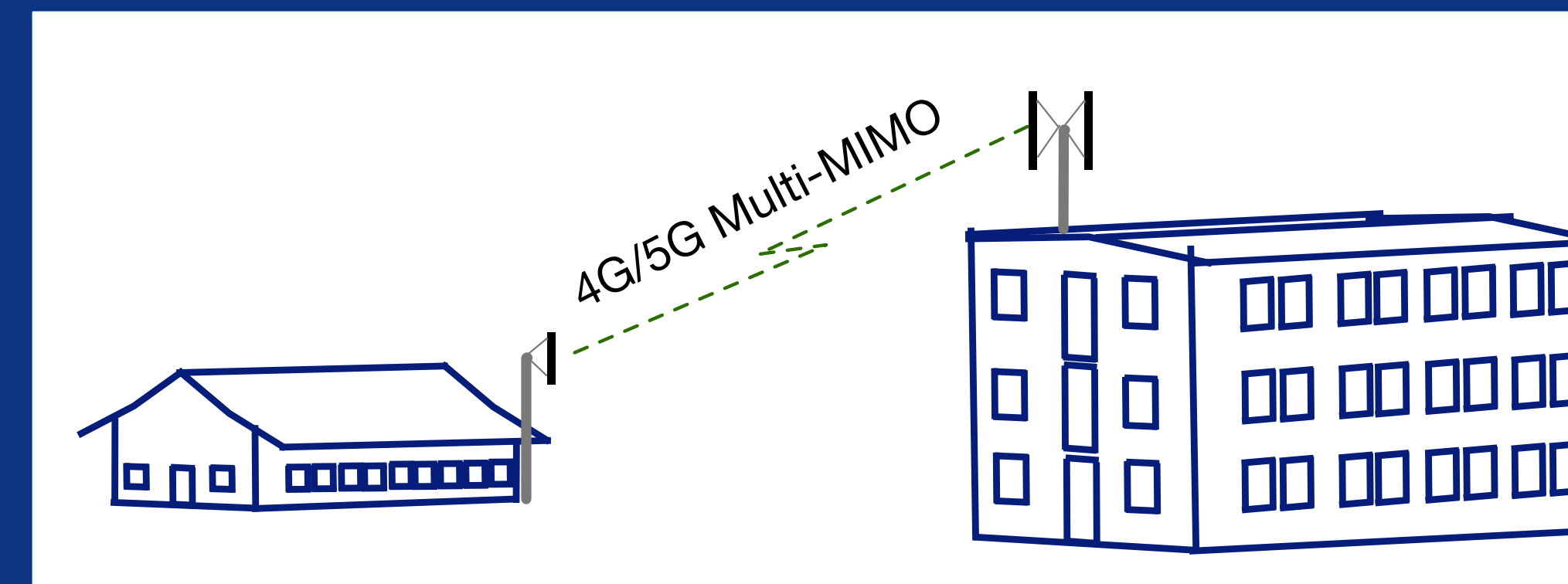


AfricaConnect3 project is co-funded by the European Union

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**





# COVID-19 HAS LED TO THE FIRST RISE IN EXTREME POVERTY IN A GENERATION

AN ADDITIONAL **119-124 MILLION PEOPLE** WERE PUSHED BACK INTO **EXTREME POVERTY** IN 2020



### THE PANDEMIC IS LIKELY TO REVERSE PROGRESS MADE IN REDUCING INCOME INEQUALITY SINCE THE FINANCIAL CRISIS

COVID-19 ESTIMATED TO INCREASE THE AVERAGE GINI FOR EMERGING MARKET AND DEVELOPING COUNTRIES BY 6%

### THE PANDEMIC HAS LED TO THE LOSS OF THE EQUIVALENT OF 255 MILLION FULL-TIME JOBS

ABOUT 4X THE NUMBER LOST DURING THE GLOBAL FINANCIAL CRISIS (2007-2009)

### COVID-19 HAS WIPED OUT 20 YEARS OF EDUCATION GAINS

AN ADDITIONAL 101 MILLION OR 9% OF CHILDREN IN GRADES 1 THROUGH 8 FELL BELOW MINIMUM READING PROFICIENCY LEVELS IN 2020

### ECONOMIC RECOVERY IS UNDER WAY

GLOBAL REAL GDP PER CAPITA (2017-2022)

BUT FOR MANY COUNTRIES, ECONOMIC GROWTH IS EXPECTED TO RETURN TO PRE-PANDEMIC LEVELS ONLY IN 2022 OR 2023

# 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)

