

UiO : **Department of Technology Systems**
University of Oslo

Networking meetings
Africa Alliance of the EU Tech Chamber (EUTECH), 29Jun2022

An inclusive Internet for empowerment and value creation

Josef Noll,

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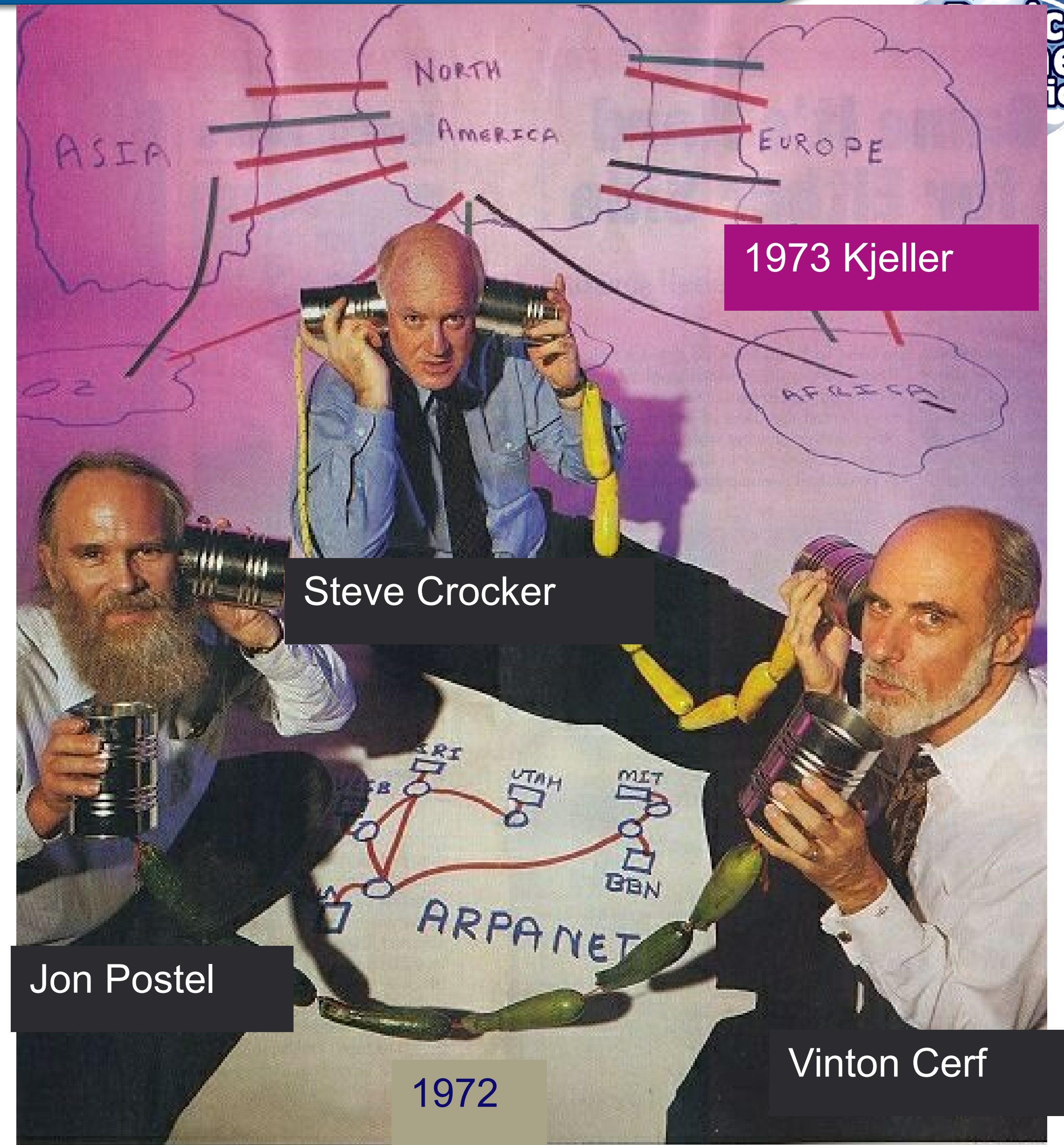
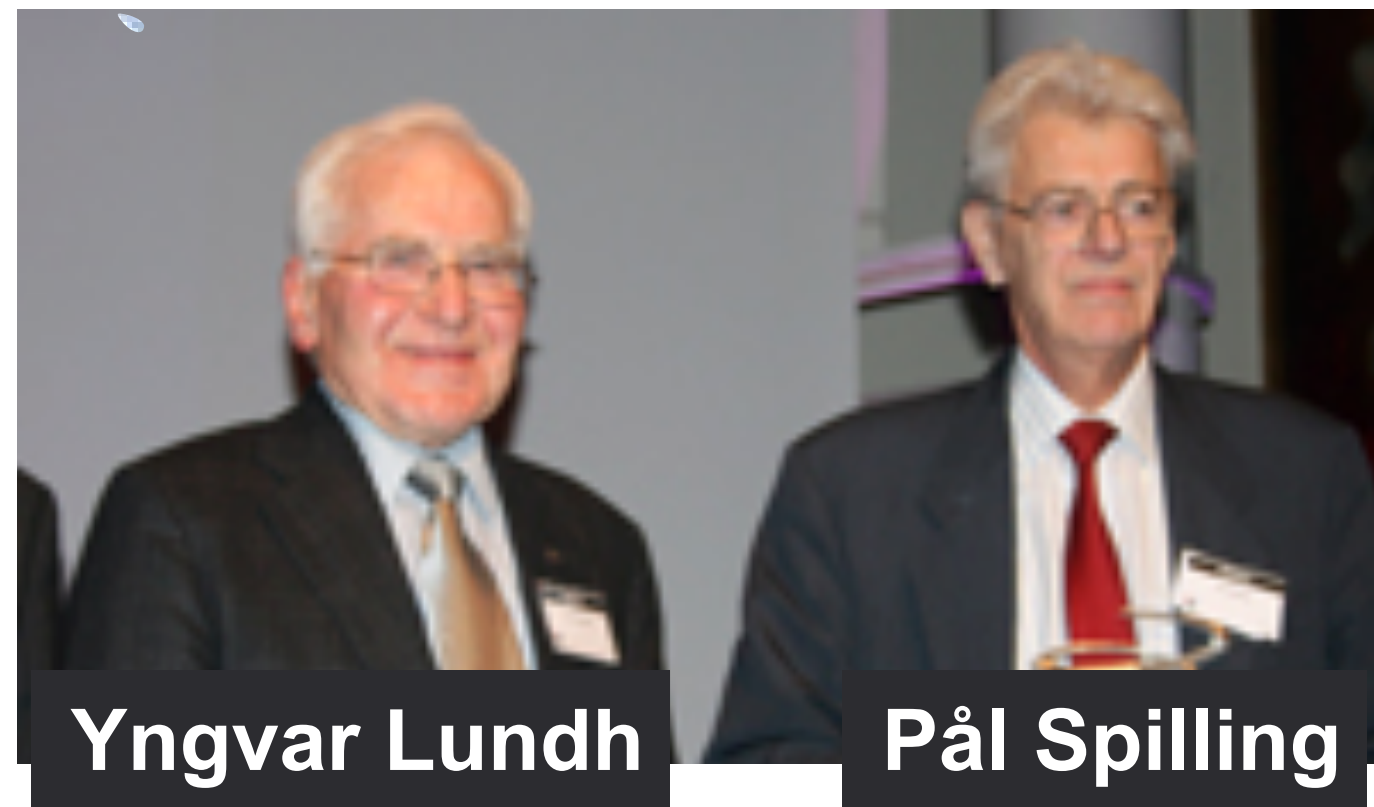
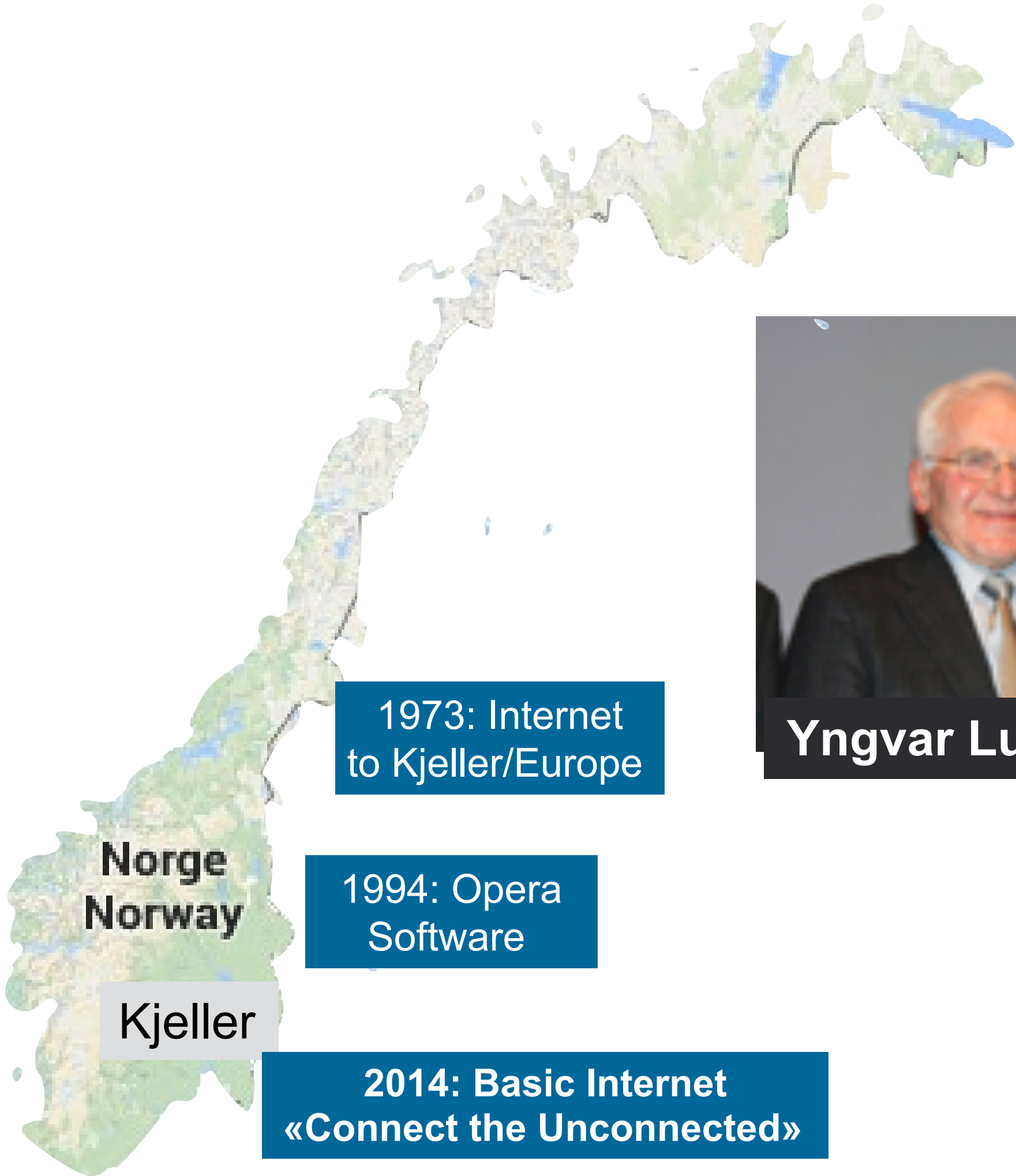
Lead: Digital Global Health, Centre for Global Health, UiO

Secretary General, Basic Internet Foundation

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An inclusive Next Generation Internet as basis for empowerment and value creation



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



Why Inclusion?

- ➔ “The German coming to the Nordics”
- ➔ The Nordics & Baltics
 - Internet to Europe (1973), Pioneers: Vint, Paal, Yngvar
 - .php, OpenSource, Linux, Skype, Spotify
 - OperaSoftware, FAST Search
 - Nokia, Ericsson
 - Telenor, TeliaSonera
- ➔ “Internet to Africa” (2012)
 - Basic Internet Foundation (2014)

2014: Basic Internet
«Connect the
Unconnected»



Starting Point:

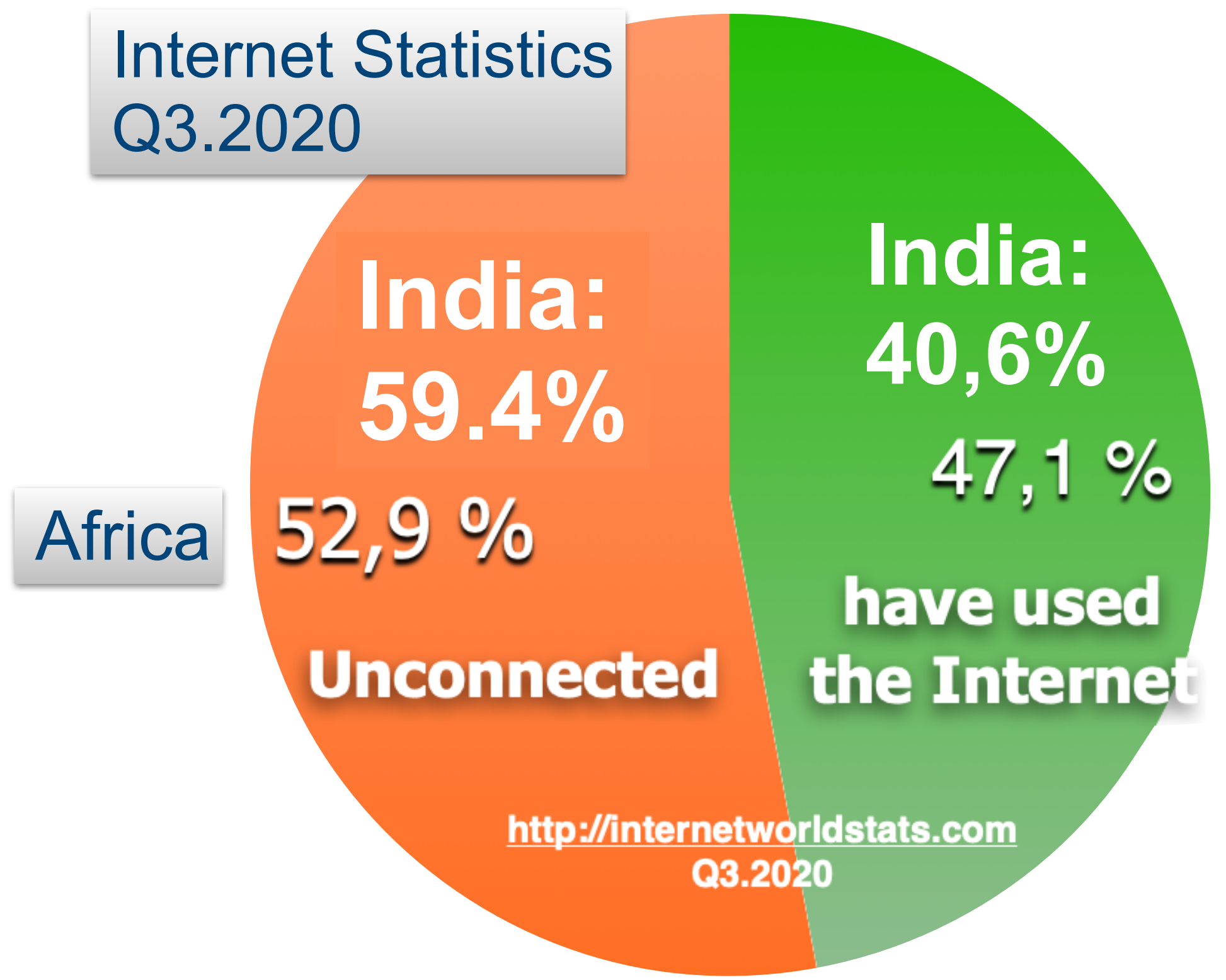
JOSEPH E. STIGLITZ
WINNER OF THE NOBEL PRIZE IN ECONOMICS



THE PRICE OF INEQUALITY

HOW TODAY'S DIVIDED SOCIETY
ENDANGERS OUR FUTURE

“Connect the >50% unconnected”



Reality on the ground

“There is no broadband in rural areas”
(in South of Sahara Africa - SSA)

Broadband = Mobile Broadband

TZ: 640 USD for 4 Mbit/s
GH: 600 USD for 5 Mbit/s
KE: 600 USD for 10 Mbit/s
“every single month”

The Buz model of operators / device manufacturer / mobile industry ...

| ASIA INTERNET USE, POPULATION STATISTICS DATA AND FACEBOOK DATA - JUNE 30, 2020 | | | | | | |
|---|------------------------|-----------------------------|----------------------------|--------------------------|--------------|----------------------|
| ASIA | Population (2020 Est.) | Internet Users, (Year 2000) | Internet Users 31-MAY-2020 | Penetration % Population | Users % Asia | Facebook 31-MAR-2020 |
| <u>India</u> | 1,380,004,385 | 5,000,000 | 560,000,000 | 40.6 % | 24.3 % | 251,000,000 |

Reality of the Digital Divide

- Internet through the mobile network
 - Mobile network is business-driven
- “Boys have the toys”
 - digital divide in both devices
 - Example Smartphone ownership:
33% male, 16% female (Bangladesh)
 - mobile broadband access



How can Internet help us?

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



#1 Connect the Unconnected

Target Groups in Digital Empowerment

- We bring Internet access to rural villages with **high rates of illiteracy**.
- People of all ages and genders
 - Simple solution for everyone
 - primary focus on the **young generation, especially girls and women**.
- Further stakeholders are **governmental institutions** (e.g. ministries of education, health, agriculture, rural development), **village chiefs** and other **local authorities** like school directors.



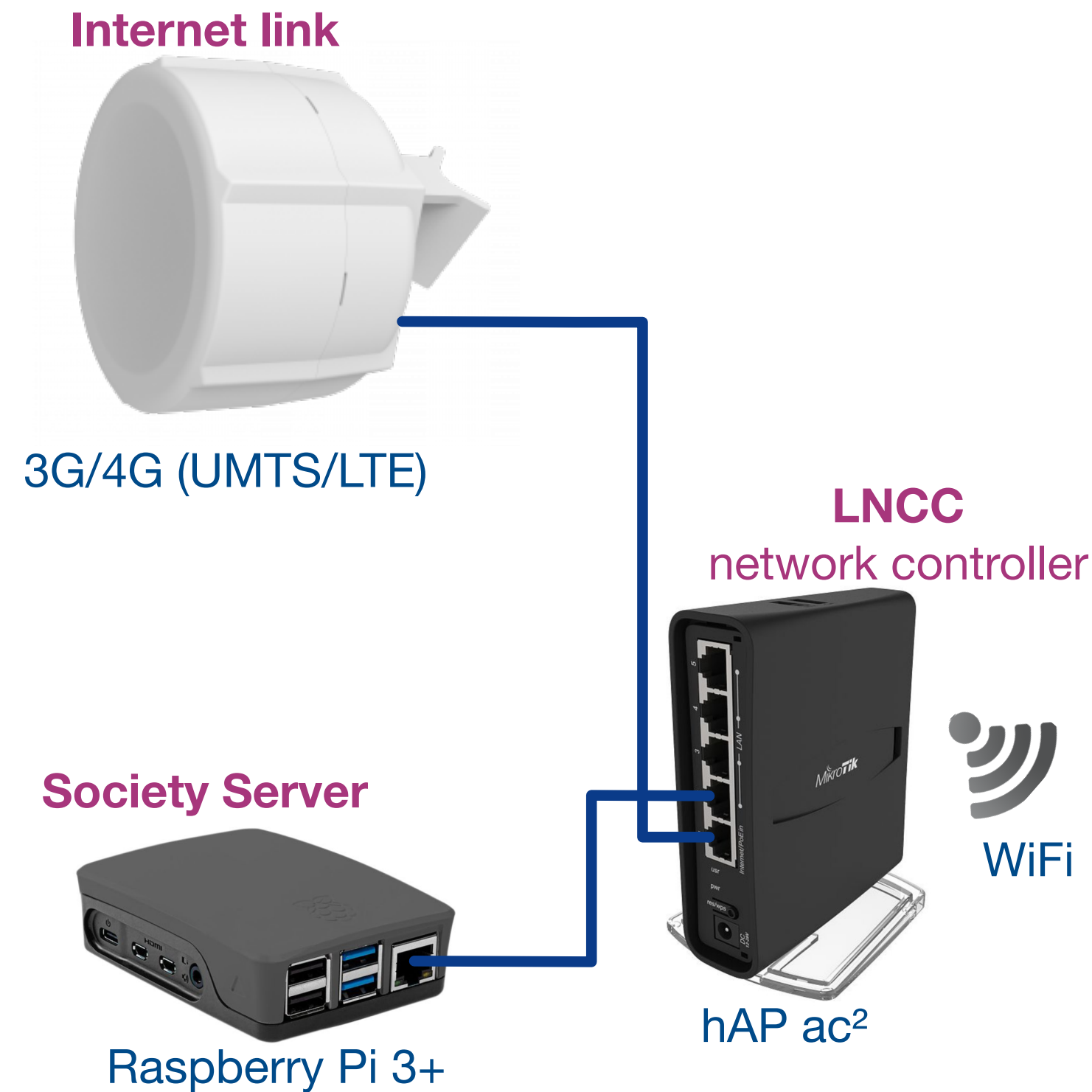
“Our vision is to improve the life of **every human** through **free access to information** on the Internet....”



- SDG 1.4** Equal access to basic services
- SDG 4.A** Education facilities for effective learning for all
- SDG 5.B** Use of enabling technologies
- SDG 9.C** universal and affordable access
- SDG 16.10** ensure public access to information

Solving the challenge of access

- wireless information spot (InfoSpot)
- Reaching out >20 km to mobile network
- Affordable solution: OPEX <20 USD/month



#1: Every village needs a wireless Information Spot with free access to information

Framework Conditions - the Integrated Approach

Access

- Wireless information spot
- Rural areas

Skills

- Decentralised Internet
- Local School Server
- Trusted information

Regulations

- Authority contacts
- Internet Lite
- Freemium (free + premium) model

Inclusion

- Girls & women
- Special Needs

“Connect the Unconnected” Izazi

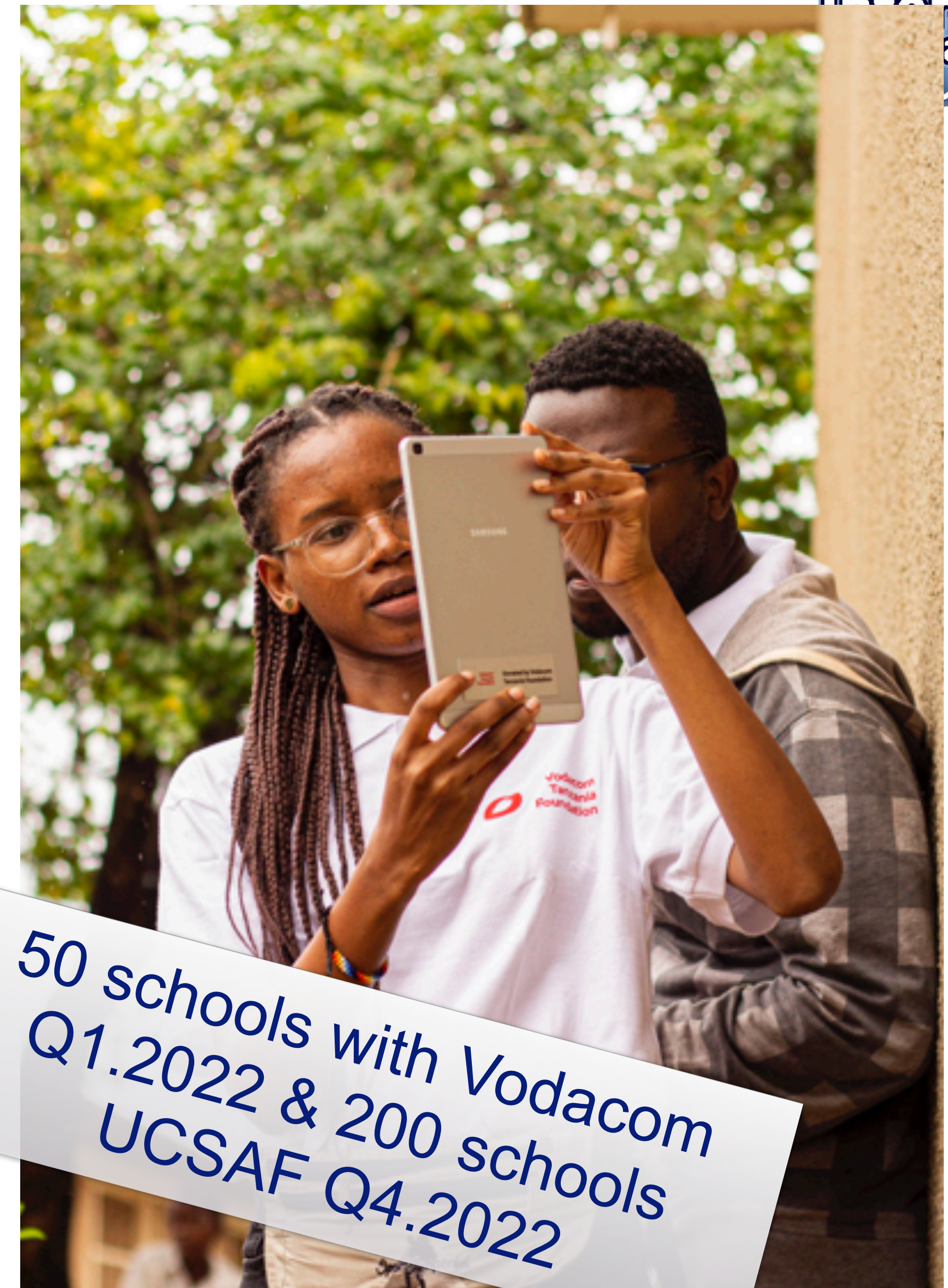
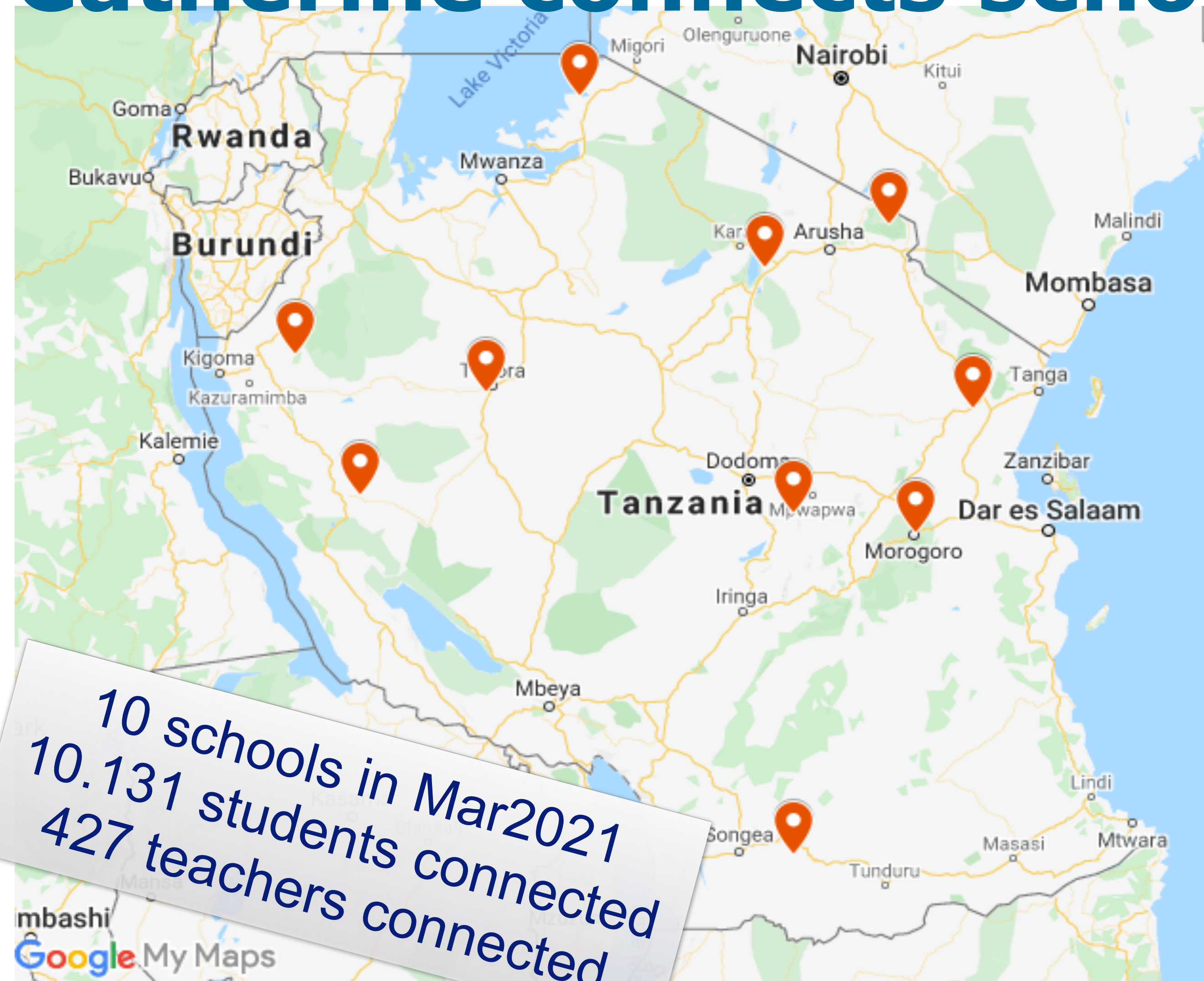


Antenna

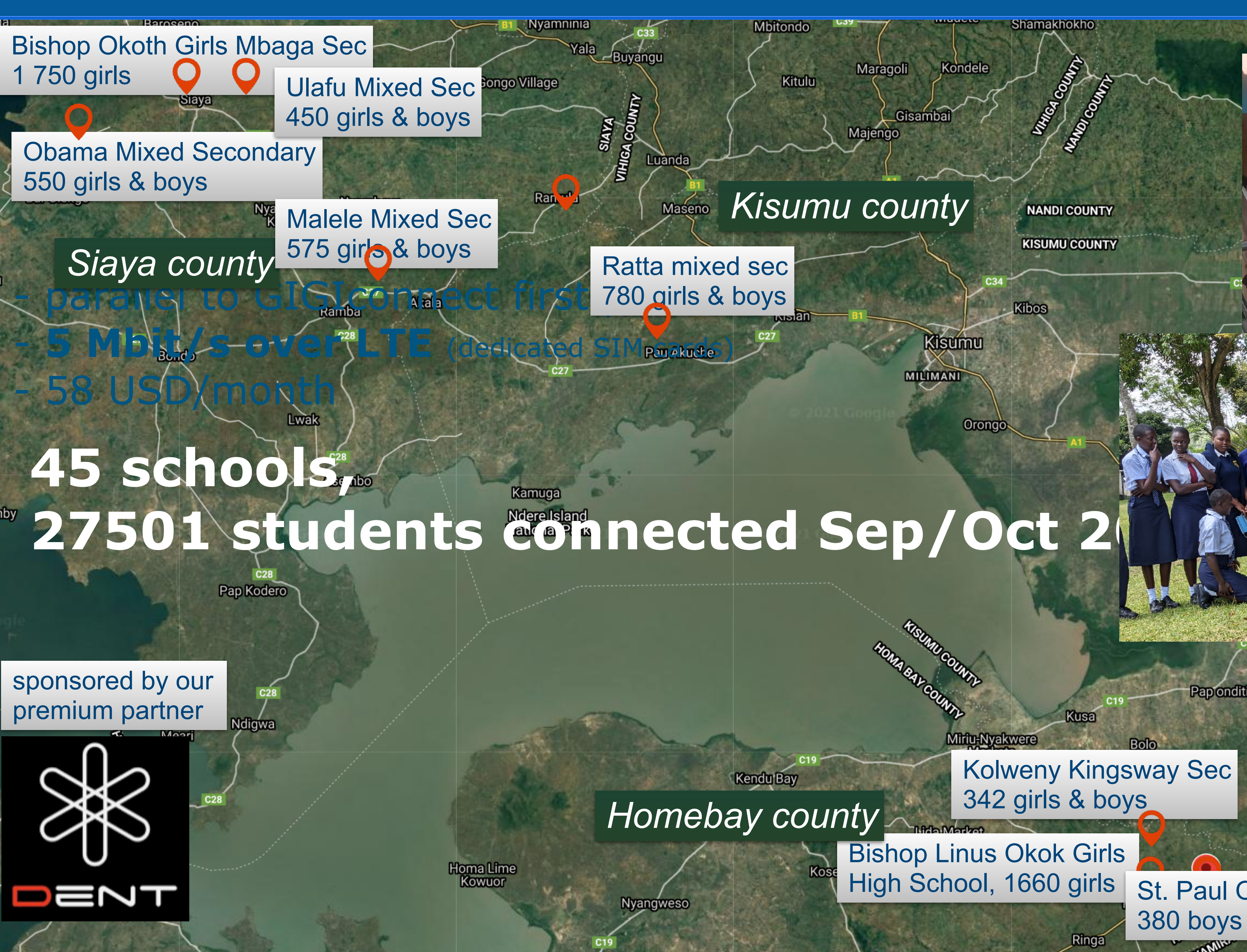
Village office

Installation time: 1,5 h
catching the signal from the Vodacom
tower in Migoli (~10km away)

Scale-up Tanzania Catherine connects schools



50 schools with Vodacom
Q1.2022 & 200 schools
UCSAF Q4.2022



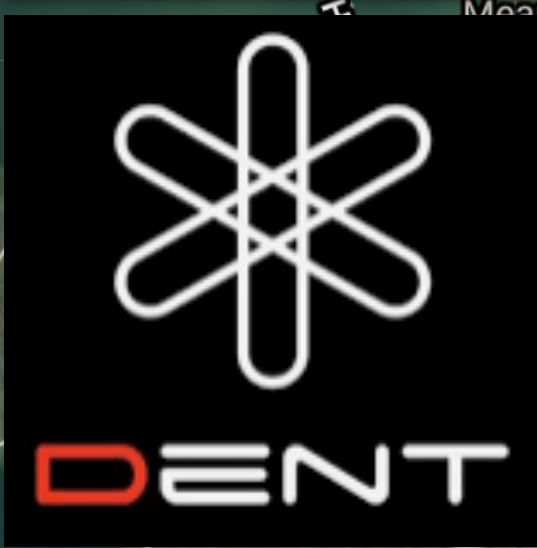
Ratta mixed sec
780 girls & boys



Siaya county
- parallel to GIGIconnect first
- **5 Mbit/s over LTE** (dedicated SIM cards)
- 58 USD/month

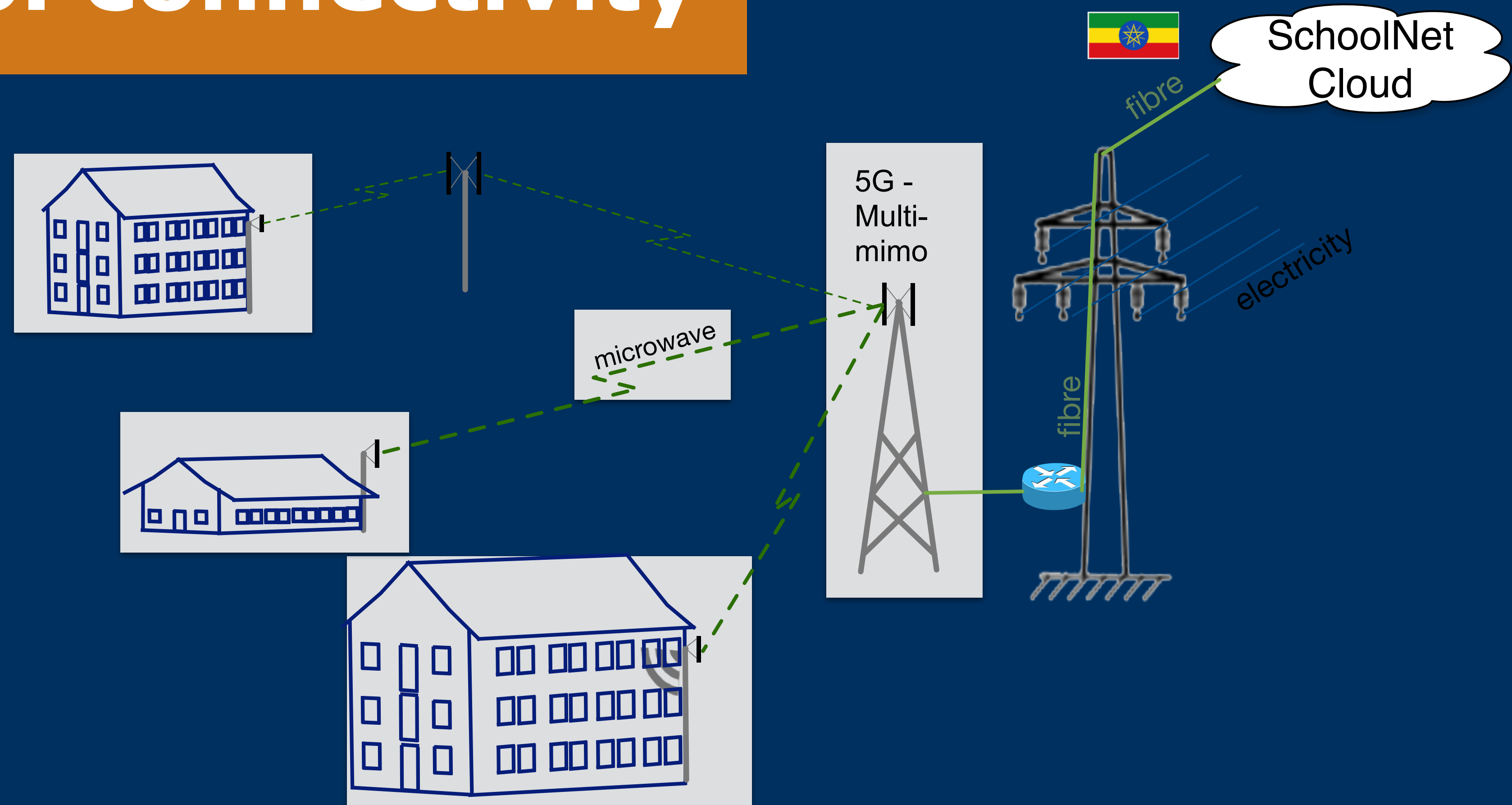
45 schools,
27501 students connected Sep/Oct 2022

sponsored by our premium partner



5G for reaching the villages

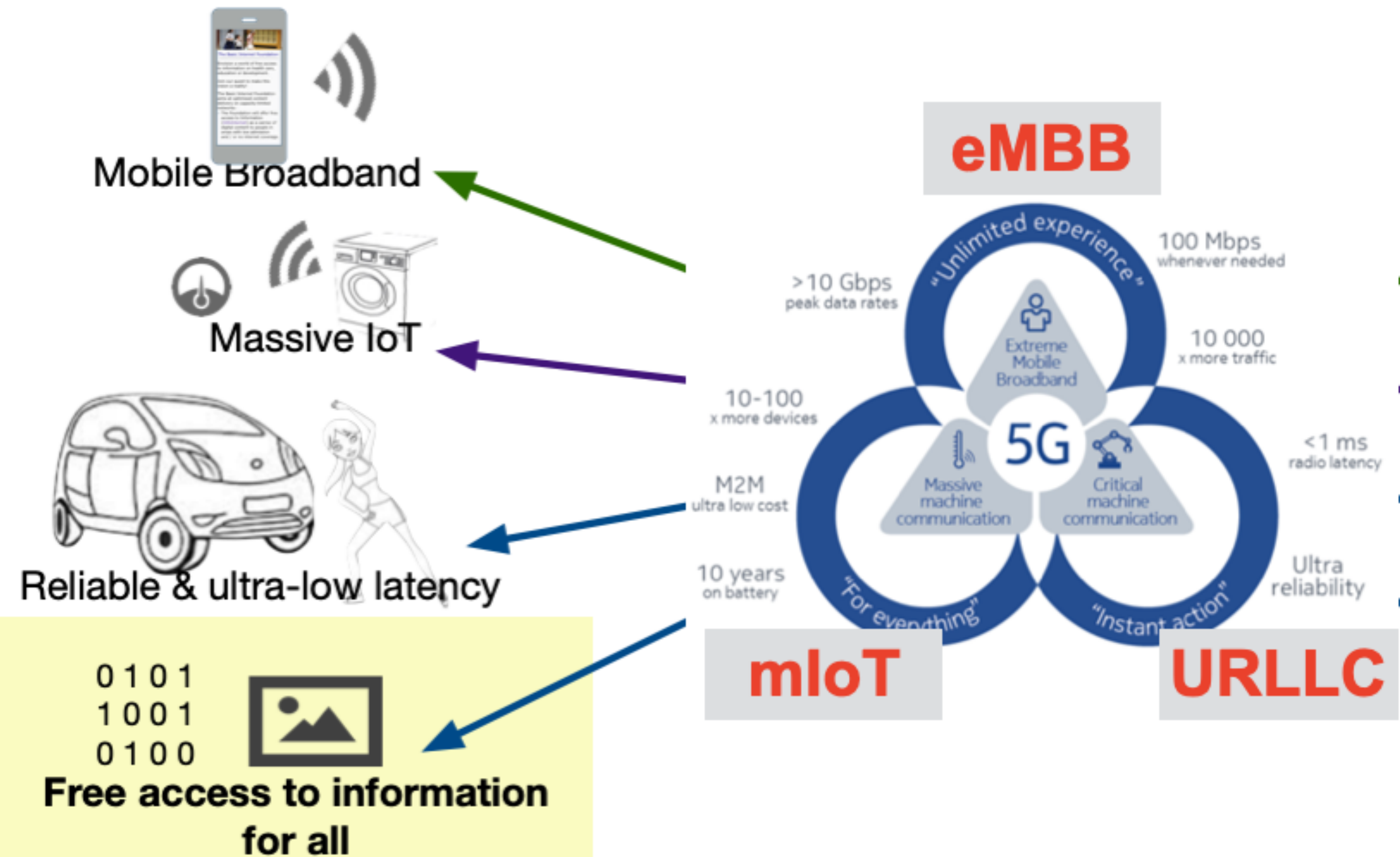
5G for school connectivity



5G network layer

Road model: pedestrians & cyclists

Internet: text & pictures



Addressing the Work Streams in the Africa Alliance

- **Competitiveness**
 - ➔ New(?) technology:
 - ➔ Internet Lite (the free access to information)
 - ➔ Inclusive society
 - ➔ 5G for inclusion
 - ➔ Africa's transformation:
- **Sustainability**
 - ➔ SDG 1.4 Equal access, SDG 4.A Education, SDG 5.B enabling technologies, SDG 9.C universal access, SDG 16.10 public access
- **Growth**
 - ➔ Fintech exchange EU-Africa
 - ➔ Visibility: Corporate identity & CSR



Join our collaboration on School Connectivity

- Create visibility
 - ➔ DENT Wireless: 27.501 students connected
- Acquire future customers
 - ➔ Vodacom TZ: 3-year contract to connect 200+ schools
 - ➔ Orange: Project partner for “connecting the unconnected”
- Doing good
 - ➔ support your SDG, CSR and Value programs
- Bring value to you employee program
 - ➔ Meaningful work, contributing
 - ➔ Join us on field trips to Africa
- Lift your reputation
- Get involved, Become a Partner





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Inclusive Internet



Josef Noll