

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

Networking meetings
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An inclusive Internet for empowerment and value creation

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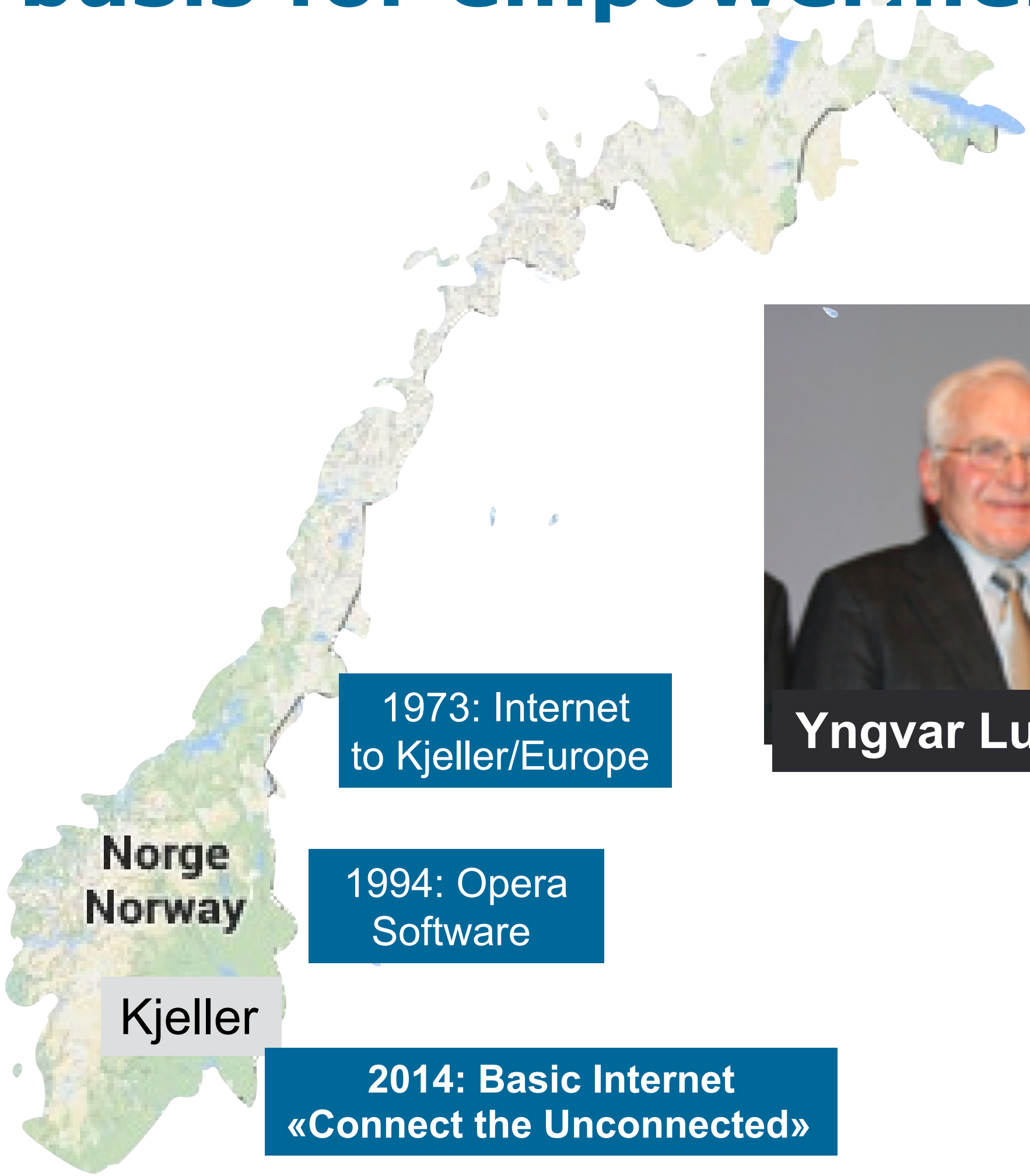
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An inclusive Next Generation Internet basis for empowerment and value



1973: Internet to Kjeller/Europe

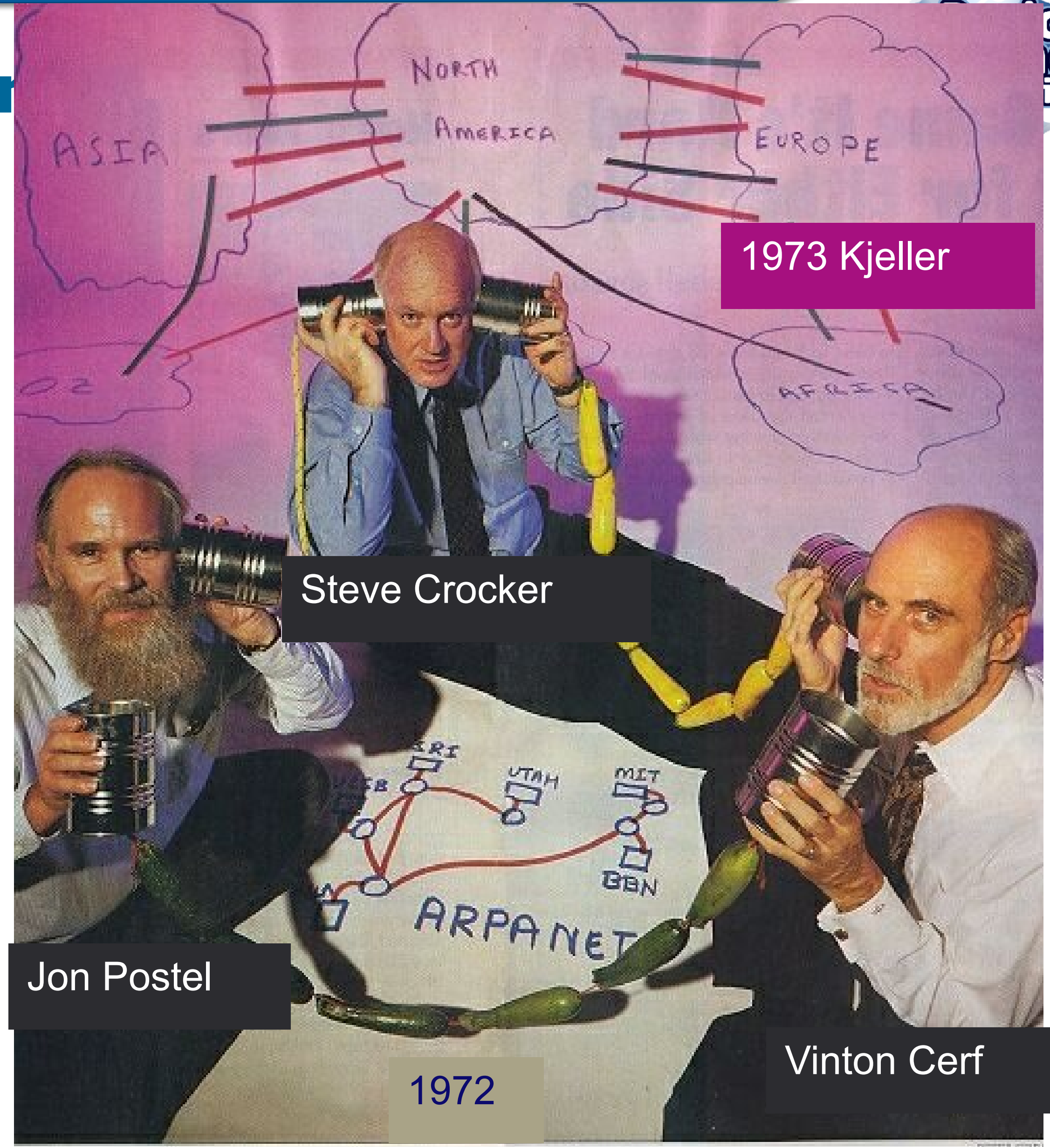
1994: Opera Software

2014: Basic Internet «Connect the Unconnected»



Yngvar Lundh

Pål Spilling



1973 Kjeller

Steve Crocker

Jon Postel

Vinton Cerf

1972



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:

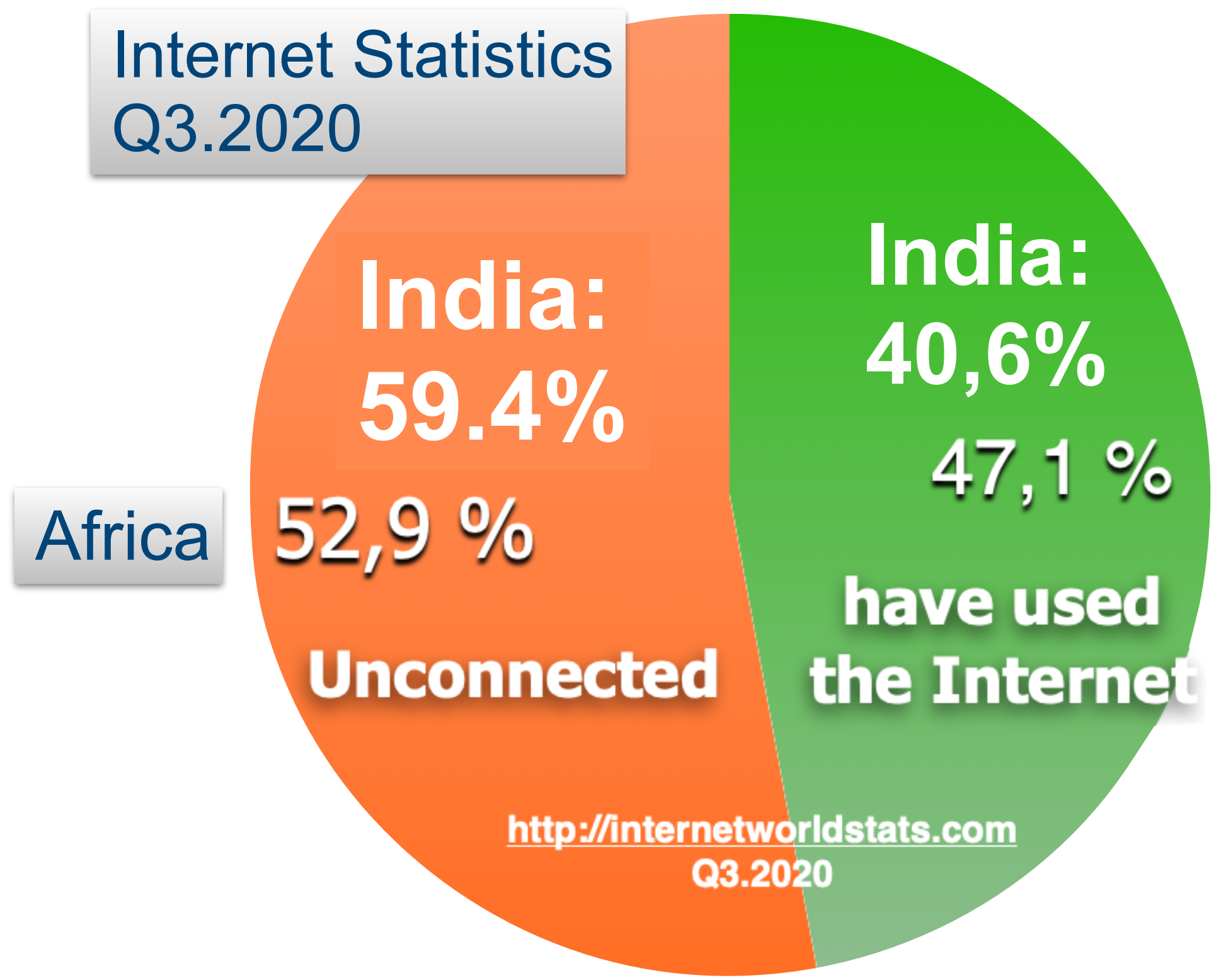
JOSEPH E. STIGLITZ
WINNER OF THE NOBEL PRIZE IN ECONOMICS



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

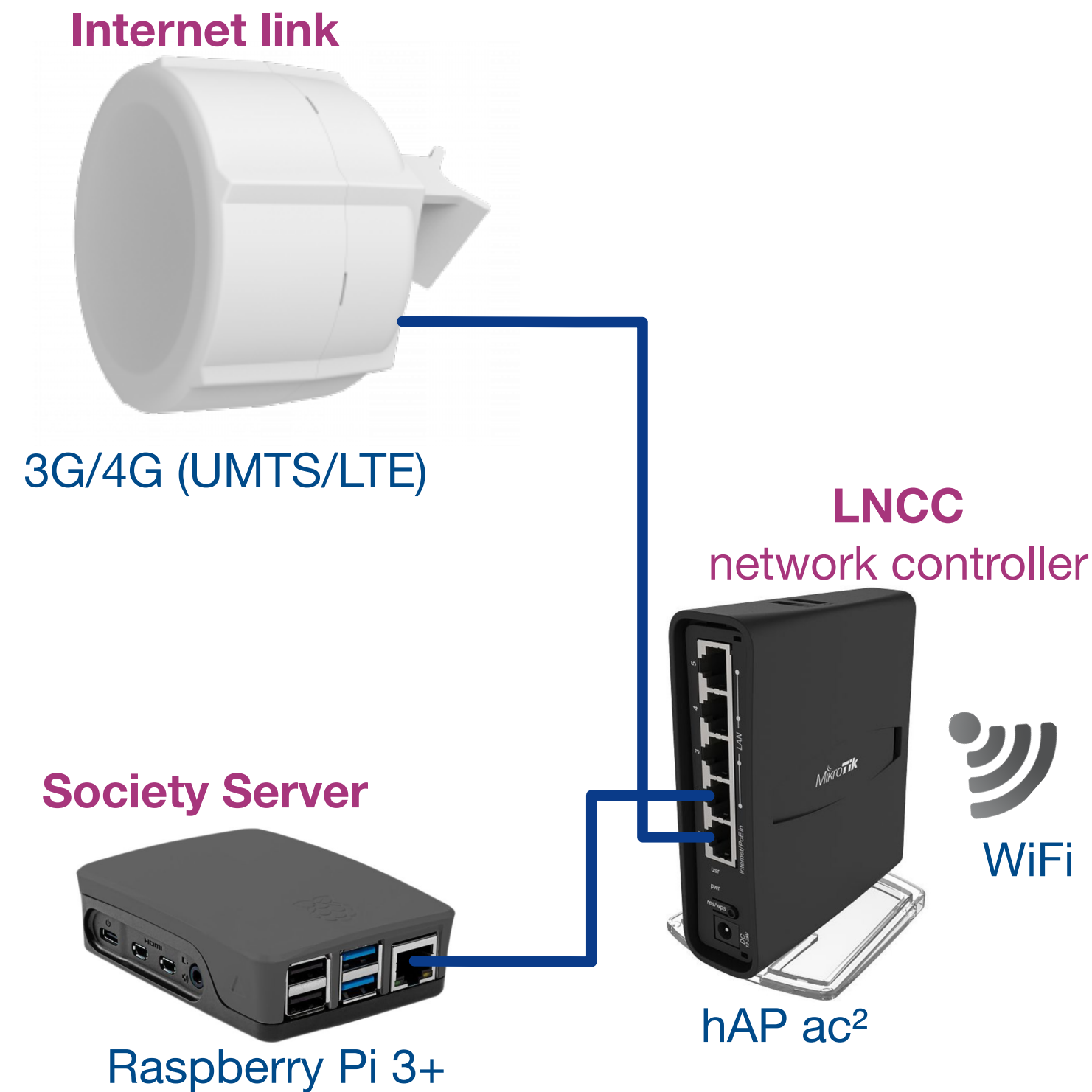
SDG 5.B Use of enabling technologies

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

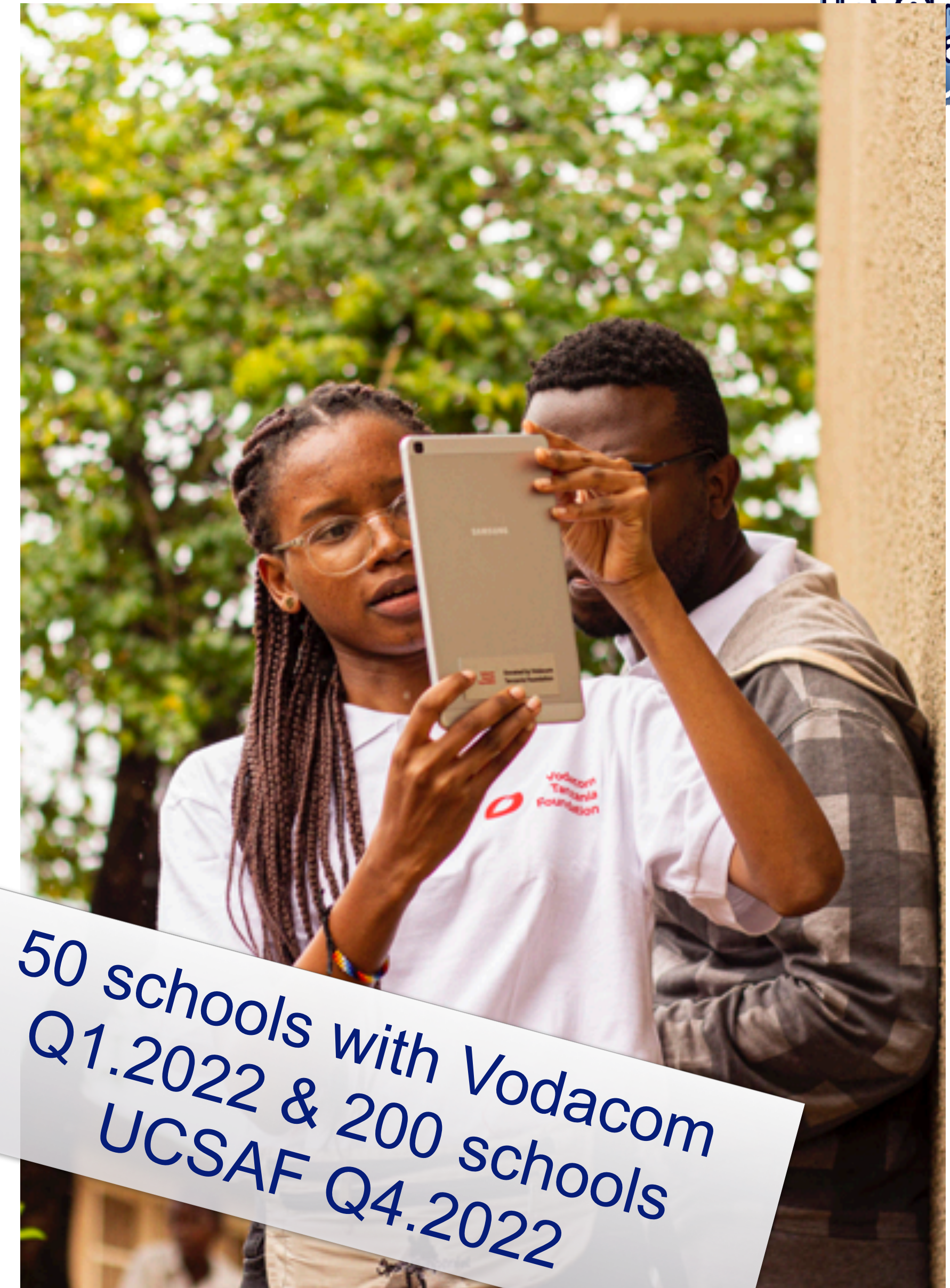
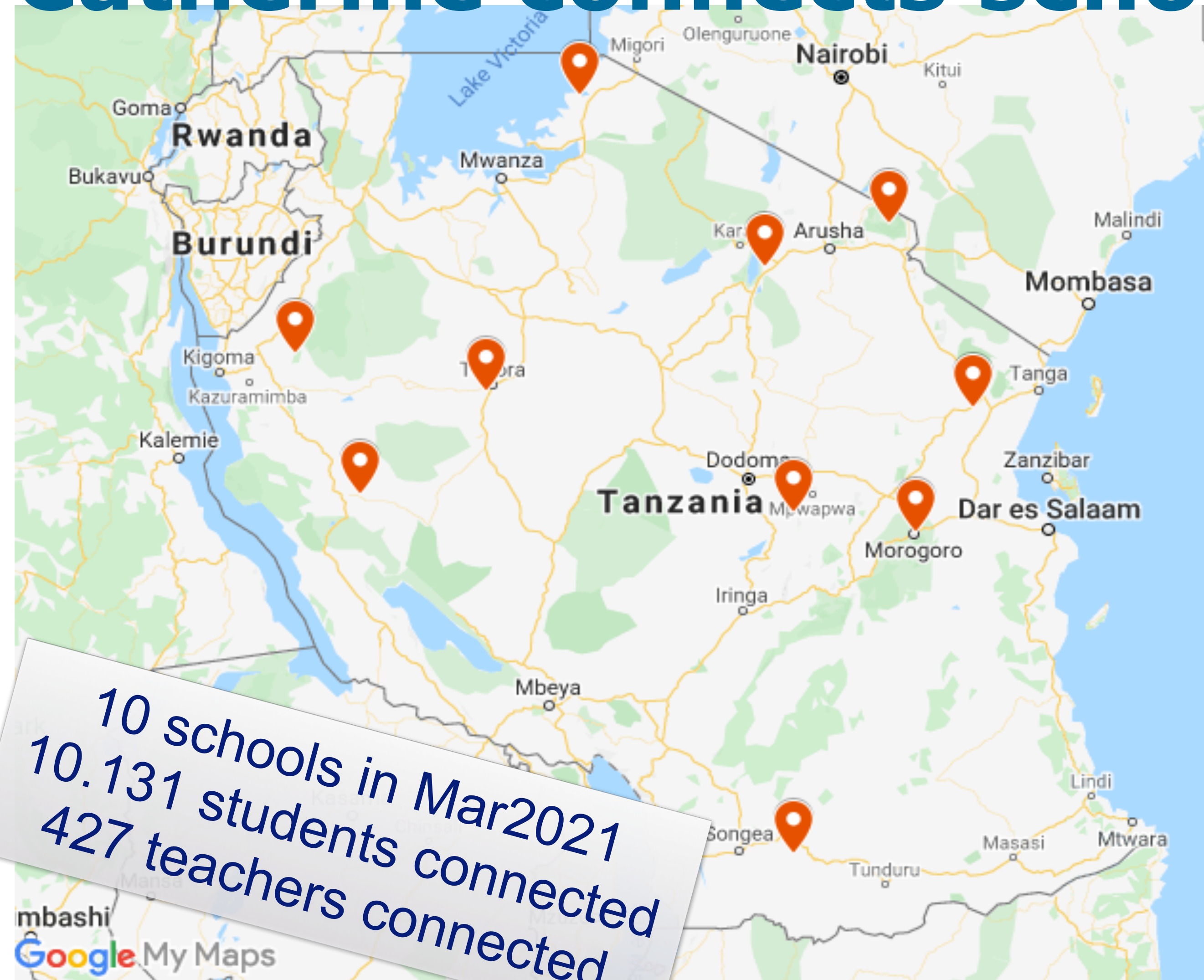
- Girls & women
- Special Needs

“Connect the Unconnected” Izazi

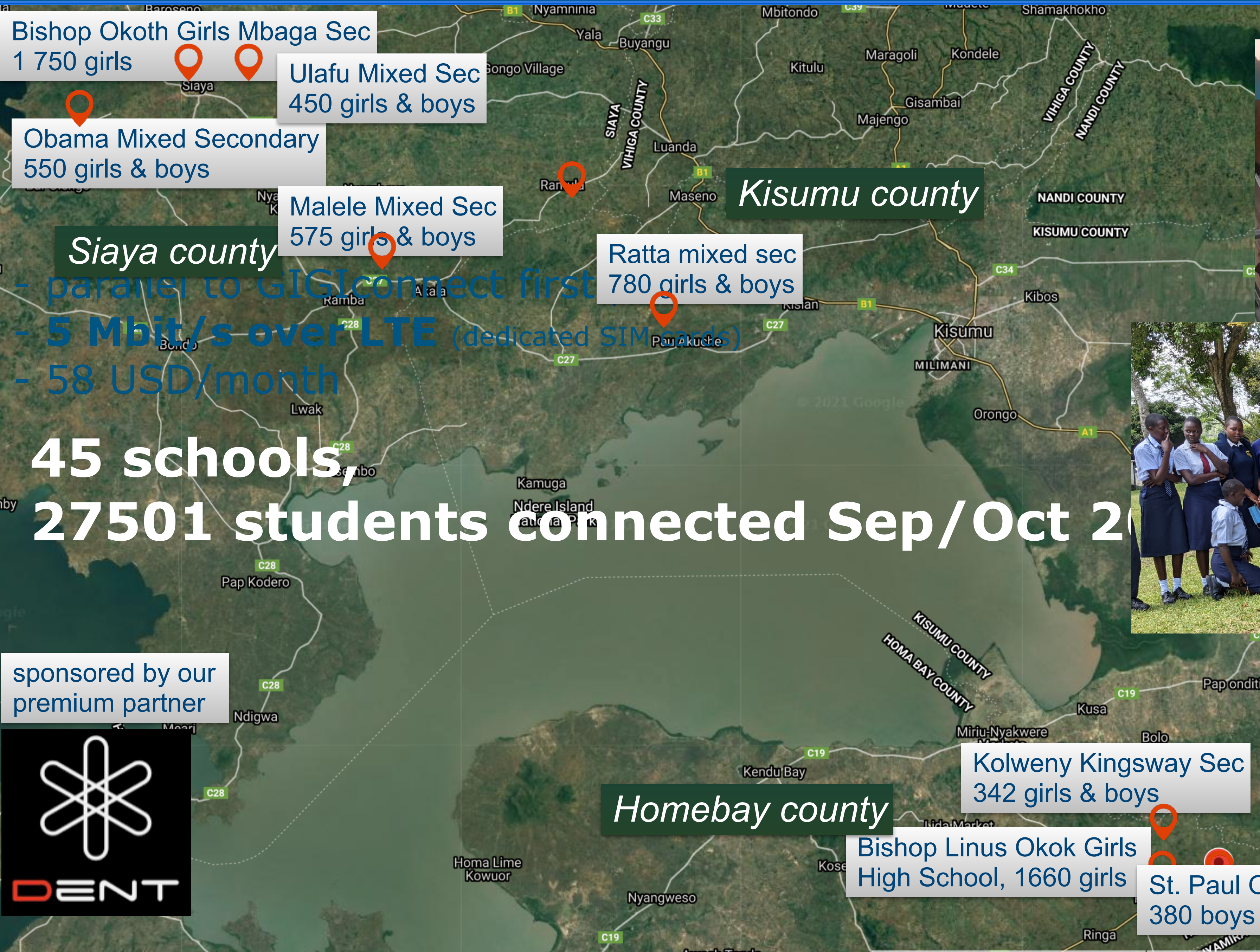


Installation time: 1,5 h
catching the signal from the Vodacom
tower in Migoli (~10km away)

Scale-up Tanzania Catherine connects schools



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



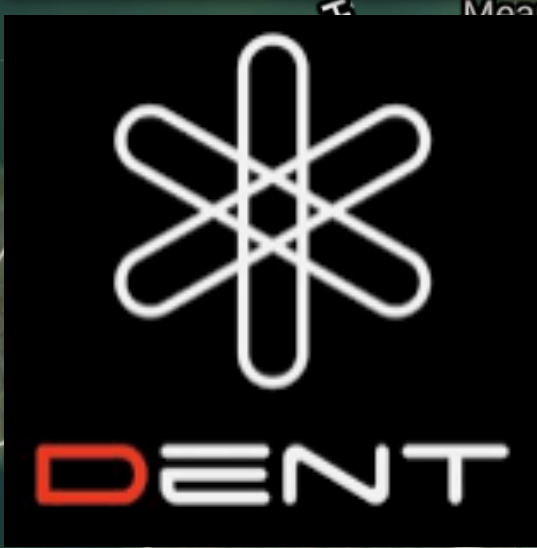
Ratta mixed sec
780 girls & boys



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

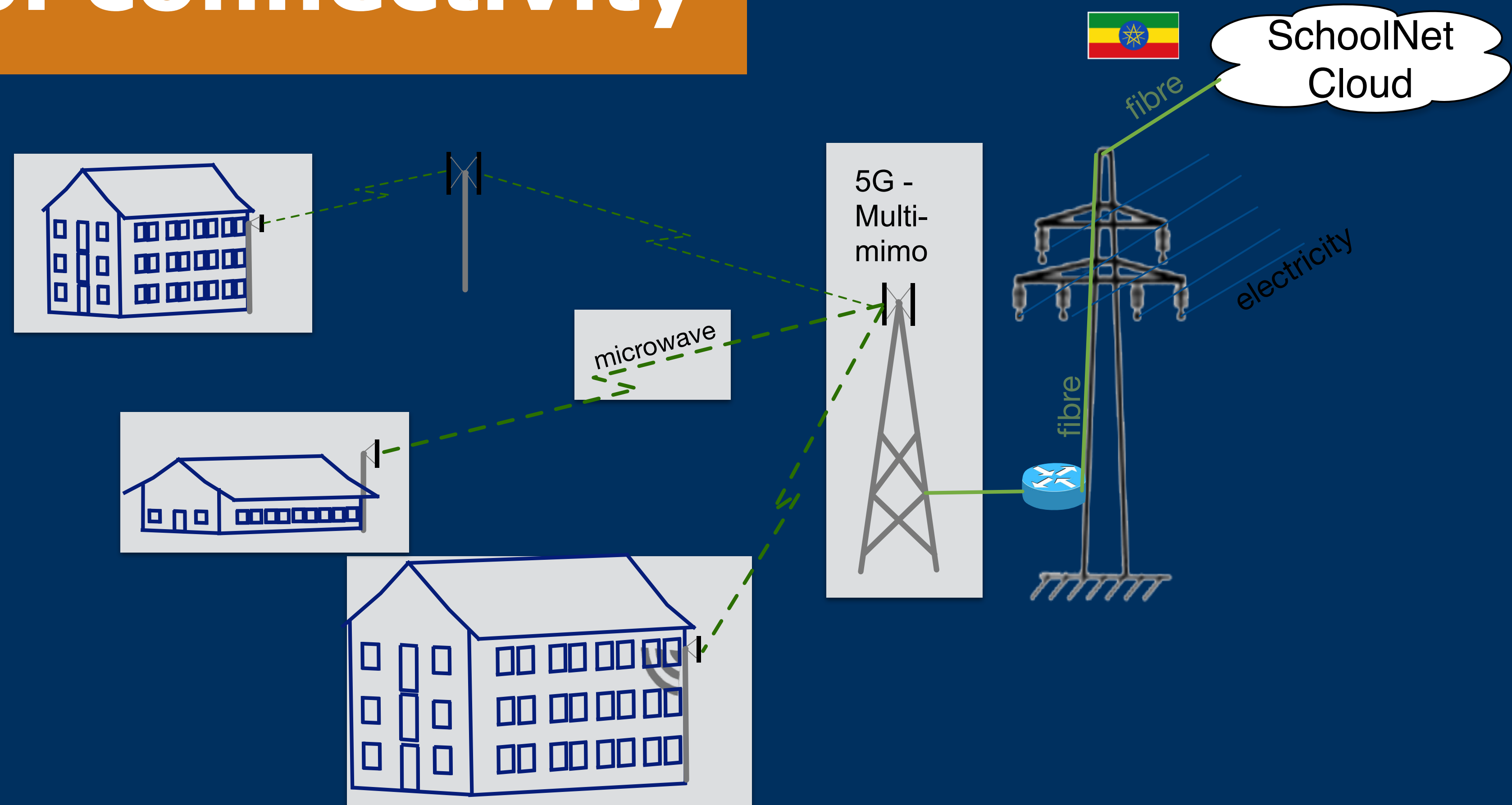
45 schools,
27501 students connected Sep/Oct 2022

sponsored by our premium partner



5G for reaching the villages

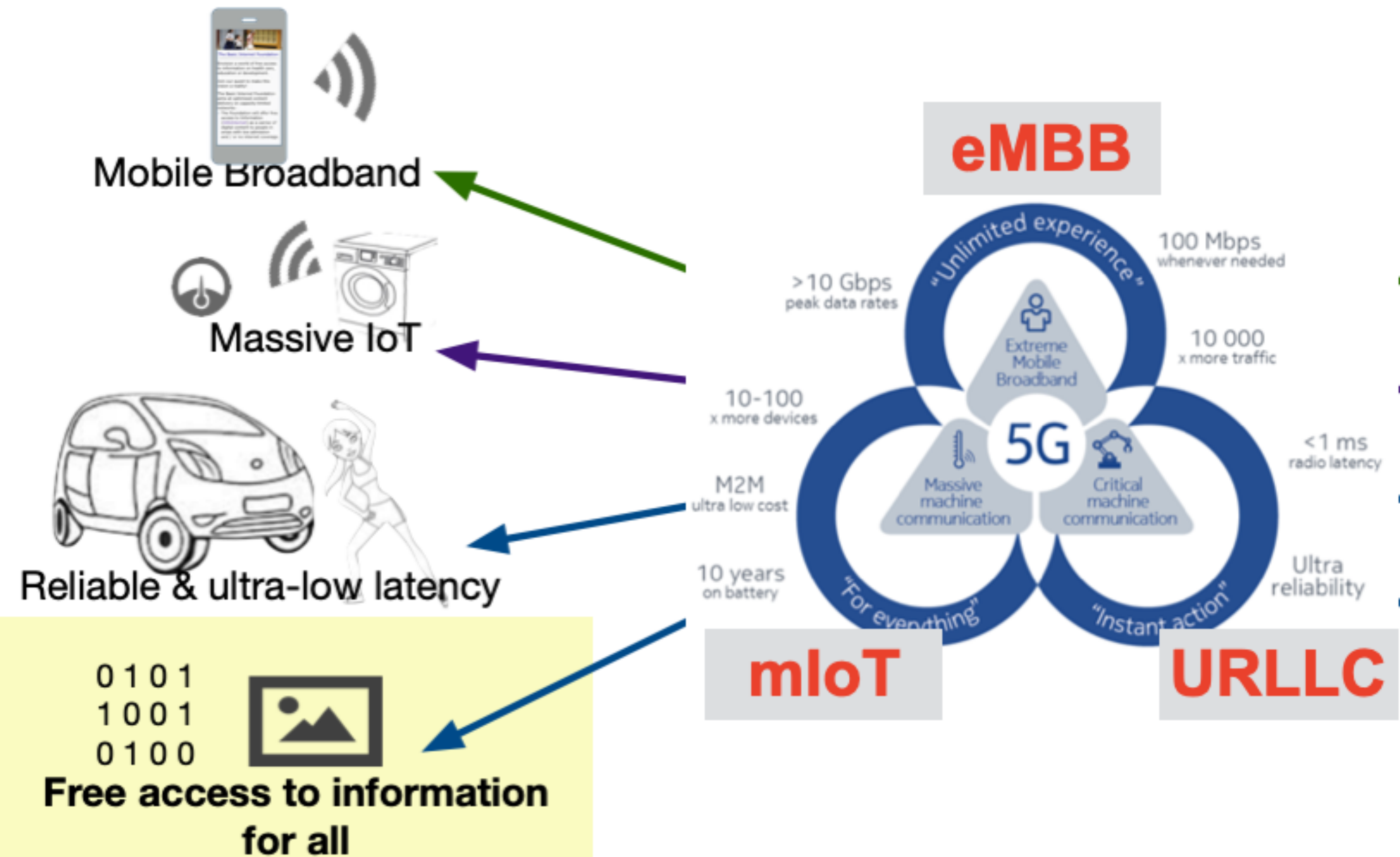
5G for school connectivity



5G network layer

Road model: pedestrians & cyclists

Internet: text & pictures



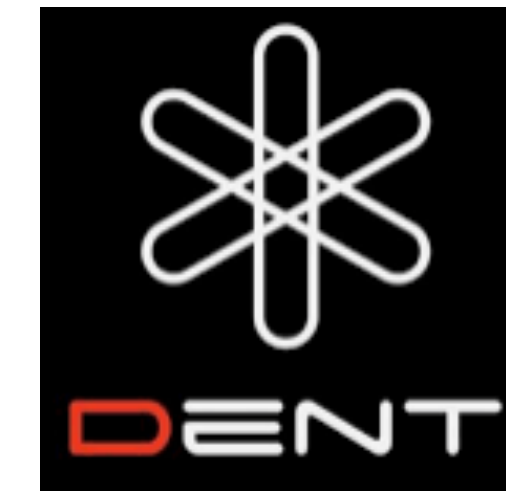
Addressing the Work Streams in the Africa Alliance

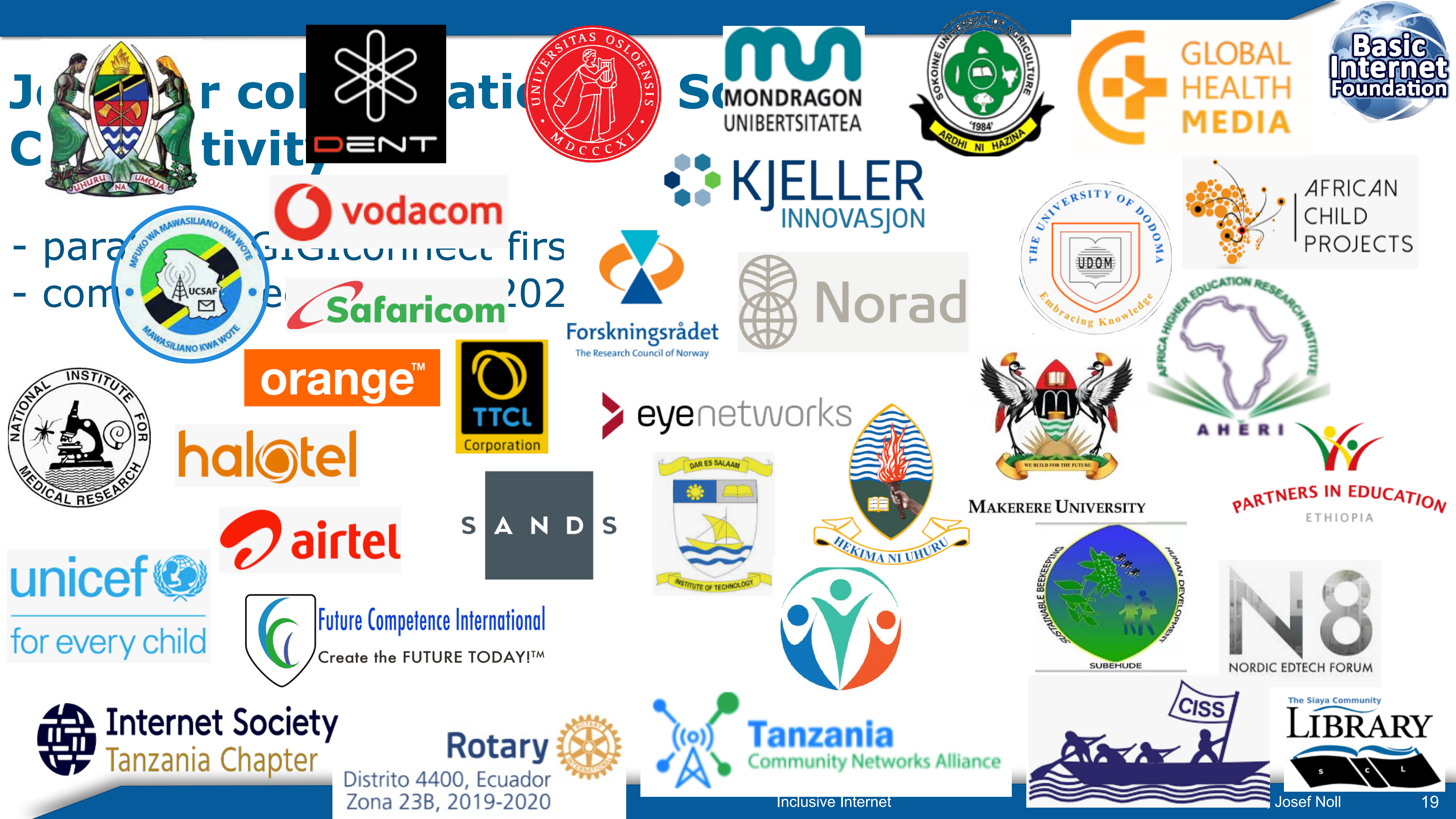
- Competitiveness
 - ➔ New(?) technology:
 - ➔ Internet Lite (the free access to information)
 - ➔ Inclusive society
 - ➔ 5G for inclusion
 - ➔ Africa's transformation:
- Sustainability
 - ➔ SDG 1.4 Equal access, SDG 4.A Education, SDG 5.B enabling technologies, SDG 9.C universal access, SDG 16.10 public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





Joint
Co-activit

- para
- com



MAKERERE UNIVERSITY

