

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

**PIT Colloquium Series, Arizona State University, 13Sep2022**

# **Free Access to Information - a basic human right**

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

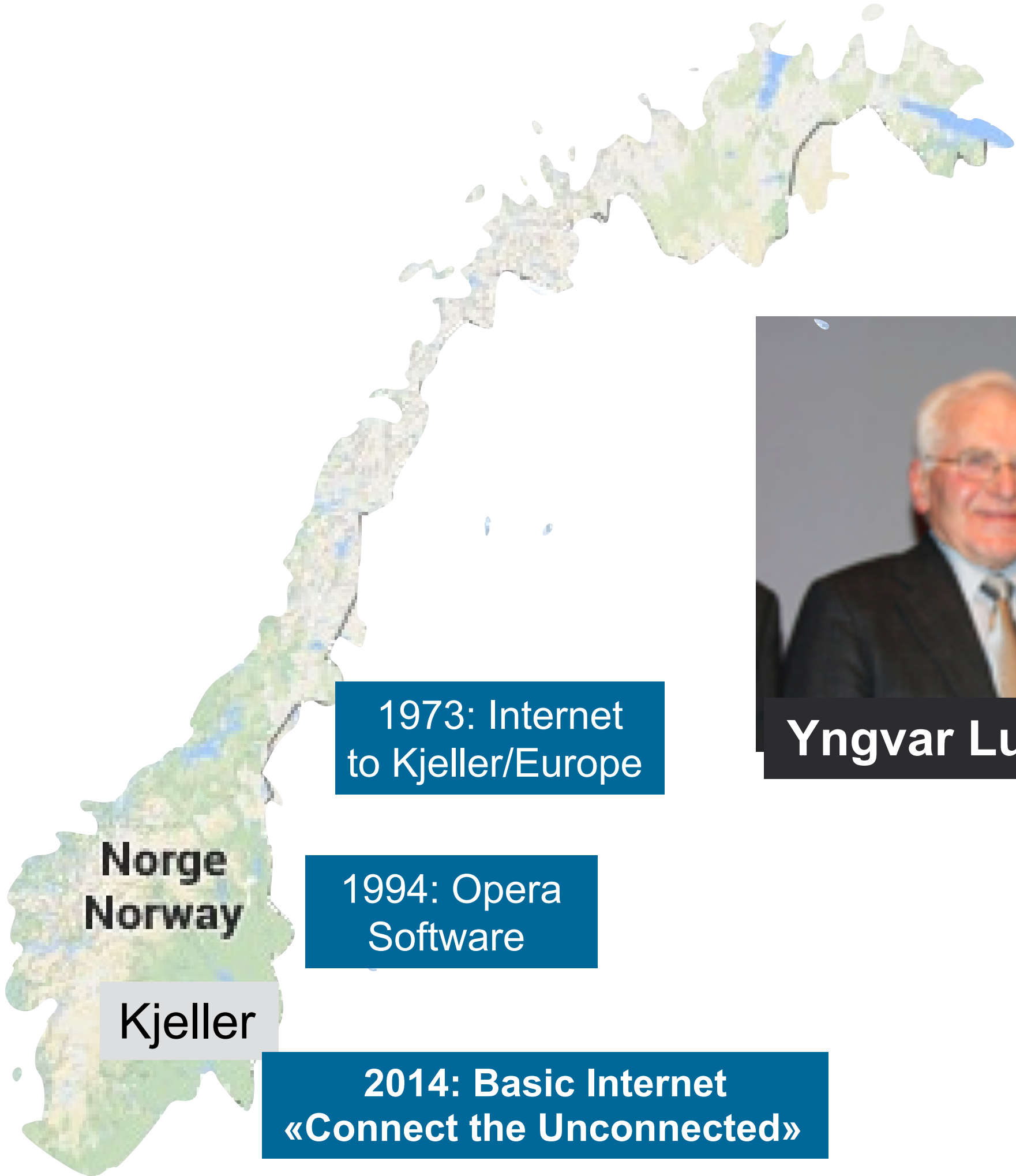
Secretary General, Basic Internet Foundation

Kjeller, Norway, m: +47 9083 8066

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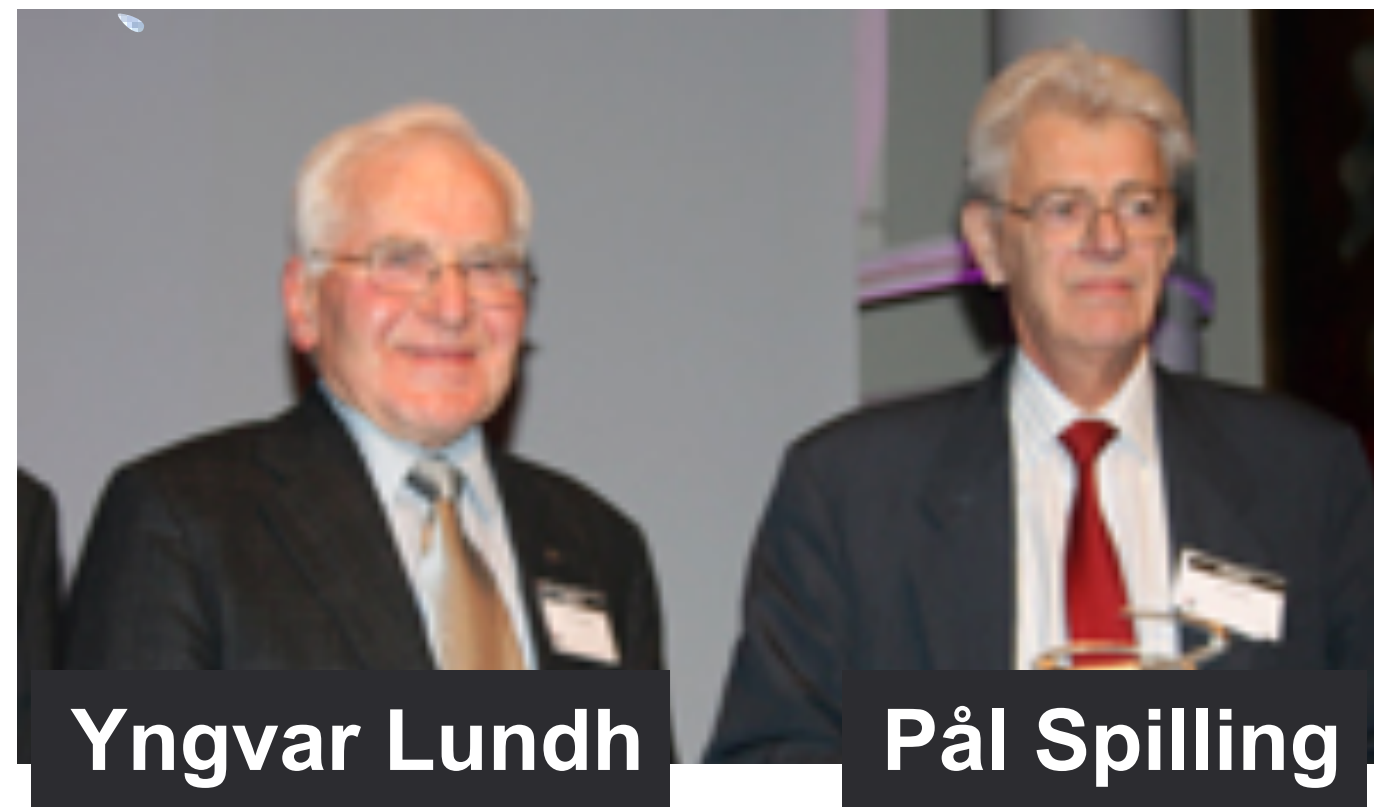
# An inclusive Next Generation Internet as basis for empowerment and value creation



1973: Internet to Kjeller/Europe

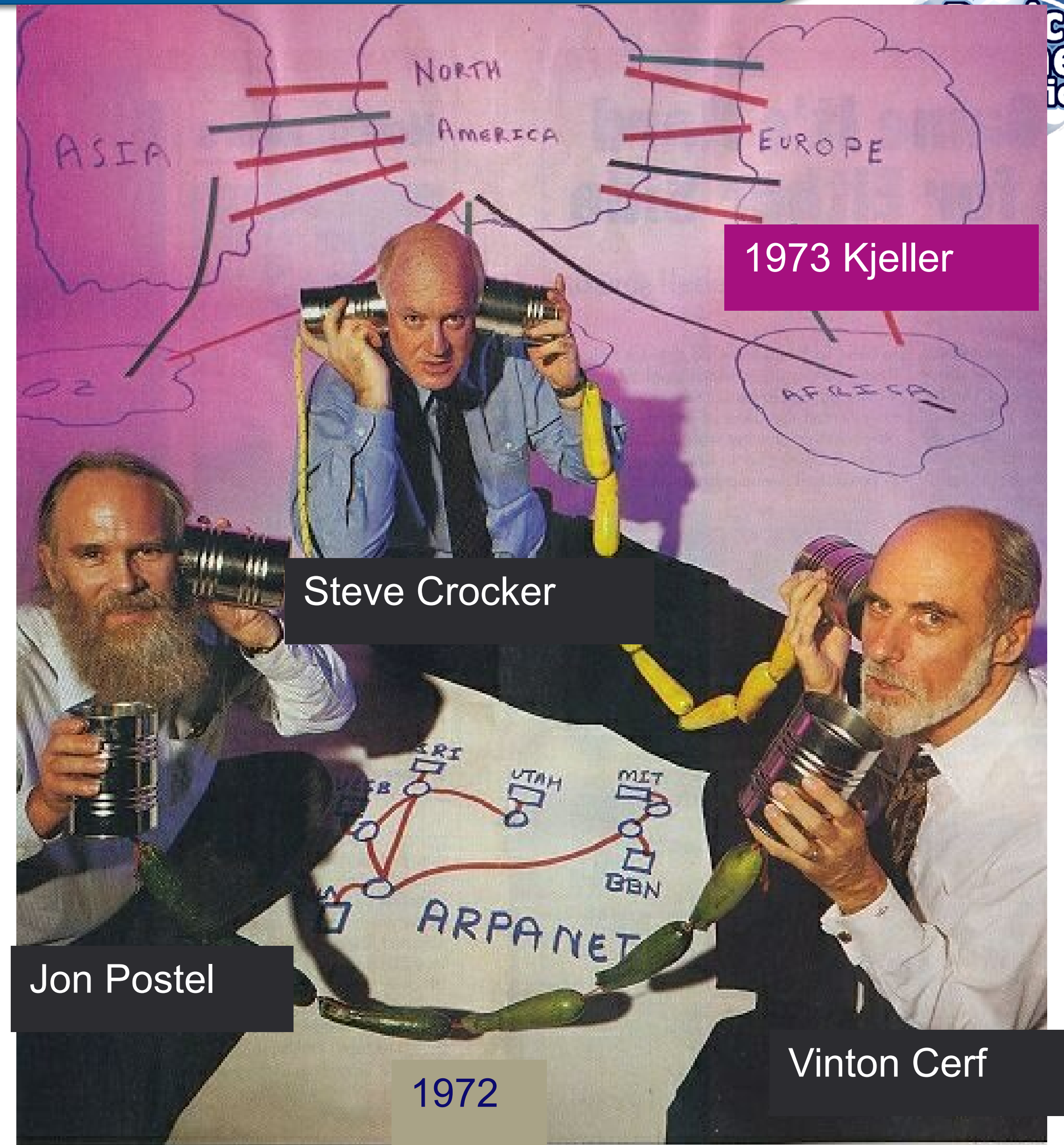
1994: Opera Software

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>



# Starting Point:

**JOSEPH E. STIGLITZ**

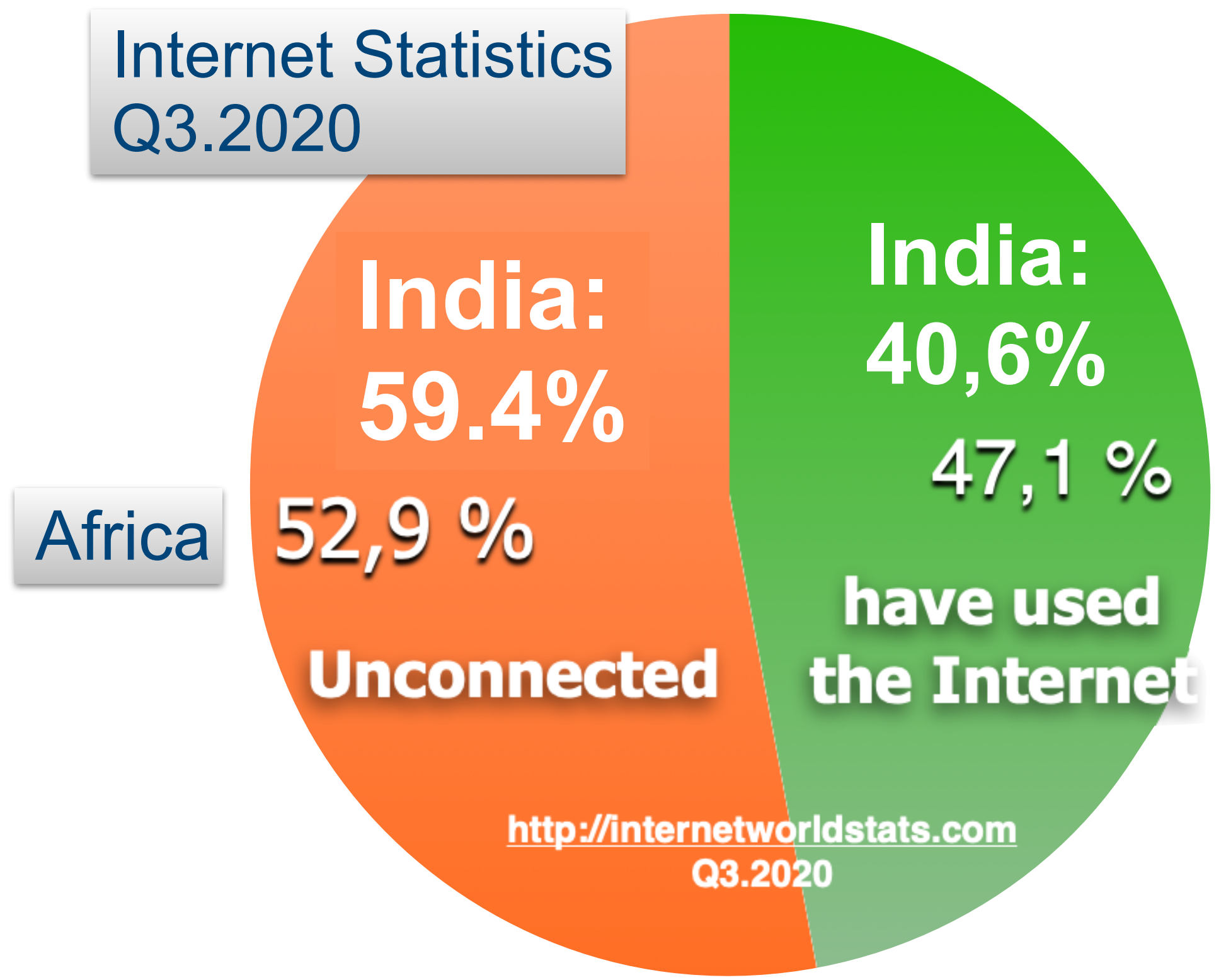
WINNER OF THE NOBEL PRIZE IN ECONOMICS



# 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

# Must secure affordable meaningful connectivity



The high cost to connect is excluding billions from the digital revolution:

**Nearly half of the world's population is still offline**

And a significant percentage of those online have unreliable and poor connections.

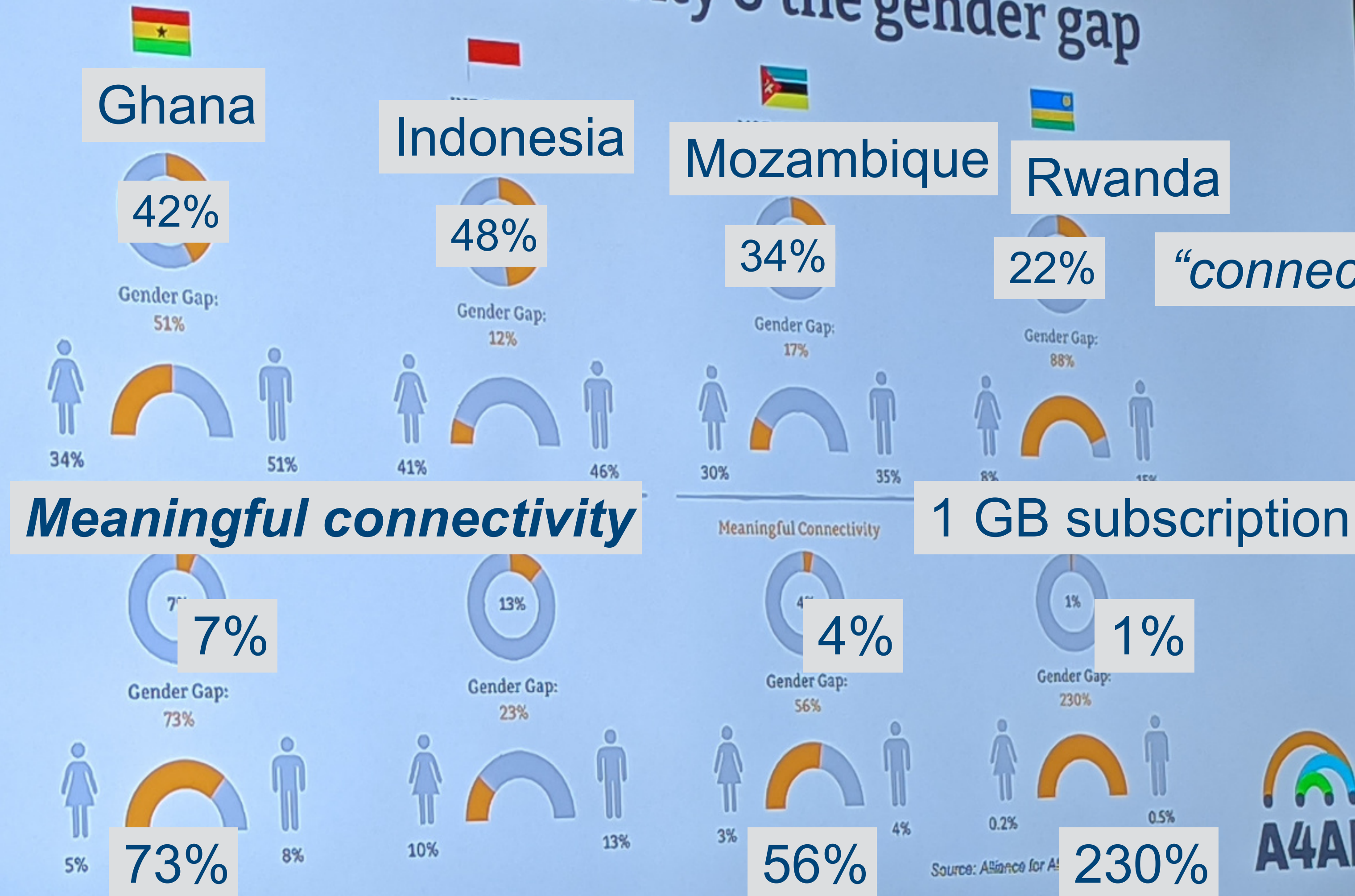
**We have meaningful connectivity when we can use the internet every day using an appropriate device with enough data and a fast connection.**



Source: Eleanor Sarpong, A4AI, Mar2021

# Reality in Africa

## Meaningful connectivity & the gender gap



*“connected to the Internet”*

**Meaningful connectivity**

**1 GB subscription**



Ana Maria Rodriguez, A4AI

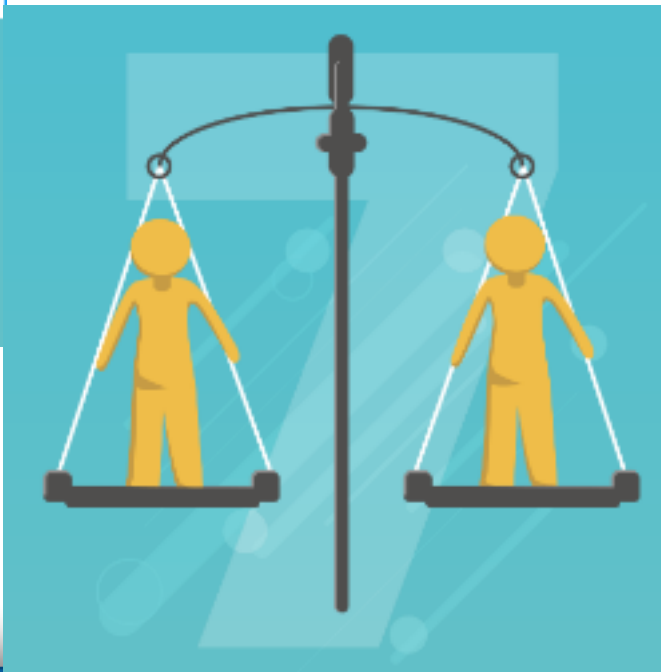
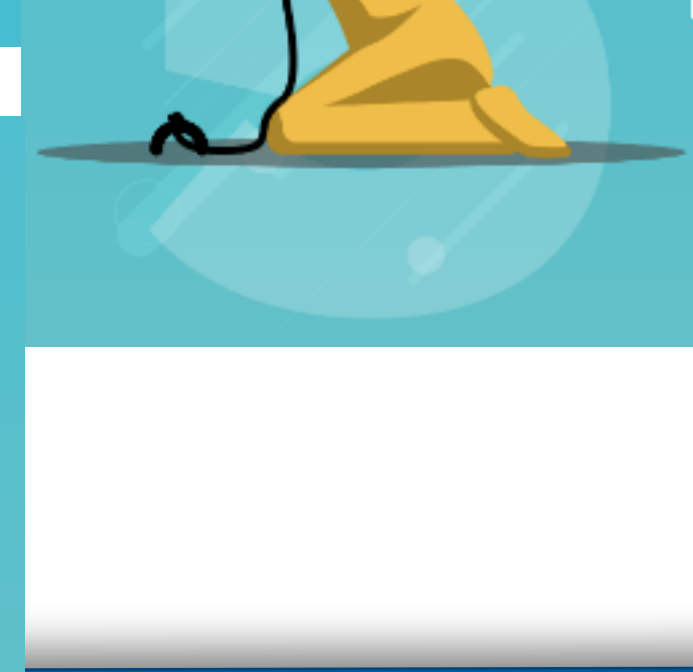
IGF 2021, Katowice

# The Internet failed

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

# Universal Declaration of Human Rights - digital world perspective

- ➔ Article 1. Free and **equal**. ...
- ➔ Article 2. Freedom from **discrimination**. ...
- ➔ Article 3. Right to **life** and to live in freedom and **safety**
- ➔ Article 4. Freedom from slavery. ...
- ➔ Article 5. Freedom from torture. ...
- ➔ Article 6. Right to recognition before the law. ...
- ➔ Article 7. Right to **equality before the law**. ...
- ➔ Article 8. Access to **justice**.





## Rights

7. (1) This Bill of Rights is a cornerstone of democracy in South Africa. It enshrines the rights of all people in our country and affirms the democratic values of human dignity, equality and freedom.
- (2) The state must respect, protect, promote and fulfil the rights in the Bill of Rights.

## Equality

9. (1) Everyone is equal before the law and has the right to equal protection and benefit of the law.

## Human dignity

10. Everyone has inherent dignity and the right to have their dignity respected and protected.

## Access to information

32. (1) Everyone has the right of access to—
- (a) any information held by the state; and
  - (b) any information that is held by another person and that is required for the exercise or protection of any rights.
- (2) National legislation must be enacted to give effect to this right, and may provide for reasonable measures to alleviate the administrative and financial burden on the state.

digital world

# The Constitution

OF THE REPUBLIC OF SOUTH AFRICA, 1996



As adopted on 8 May 1996 and amended  
on 11 October 1996 by the Constitutional Assembly



# What if?

- We adopt the model of the road?
  - free for pedestrians and cyclists // text & pictures
  - premium for cars // broadband
- We establish Digital Information Spots ("InfoSpots")
  - in every village
  - solar power, Wifi hot-spot, phone charger, light
- InfoSpot design and realisation
  - Health, Education, Agriculture, Digital,...

**Internet Lite**  
free access to information



**for every single human being**

“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

# Framework Conditions

## “free access to basic information”

### Access

- Wireless information spot
- Rural areas

### Skills

- Decentralised Internet
- Local School Server
- Trusted information

### Regulations

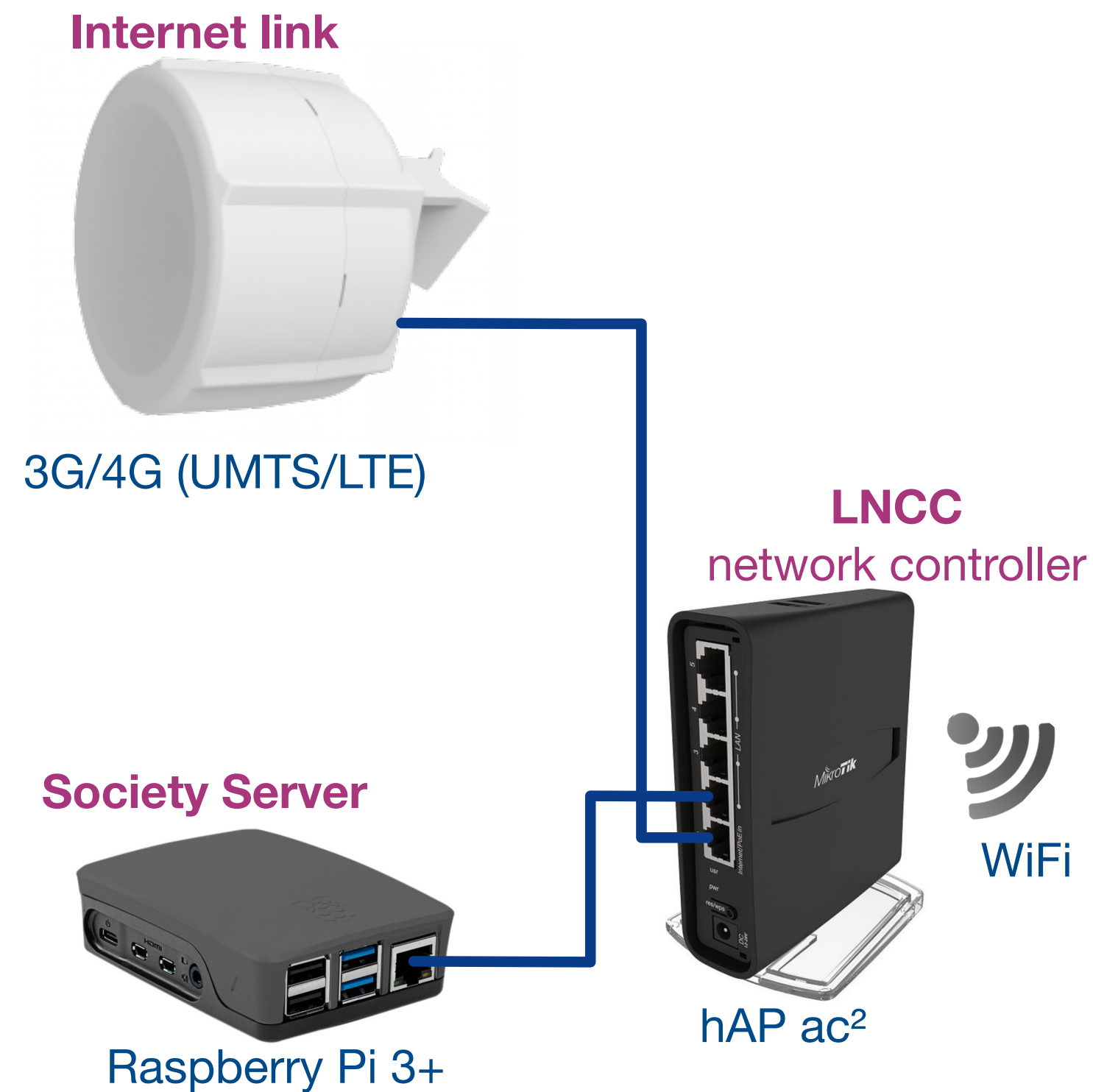
- Authority contacts
- Internet Lite
- Freemium (free + premium) model

### Inclusion

- Girls & women
- Special Needs

# Solving the challenge of access

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



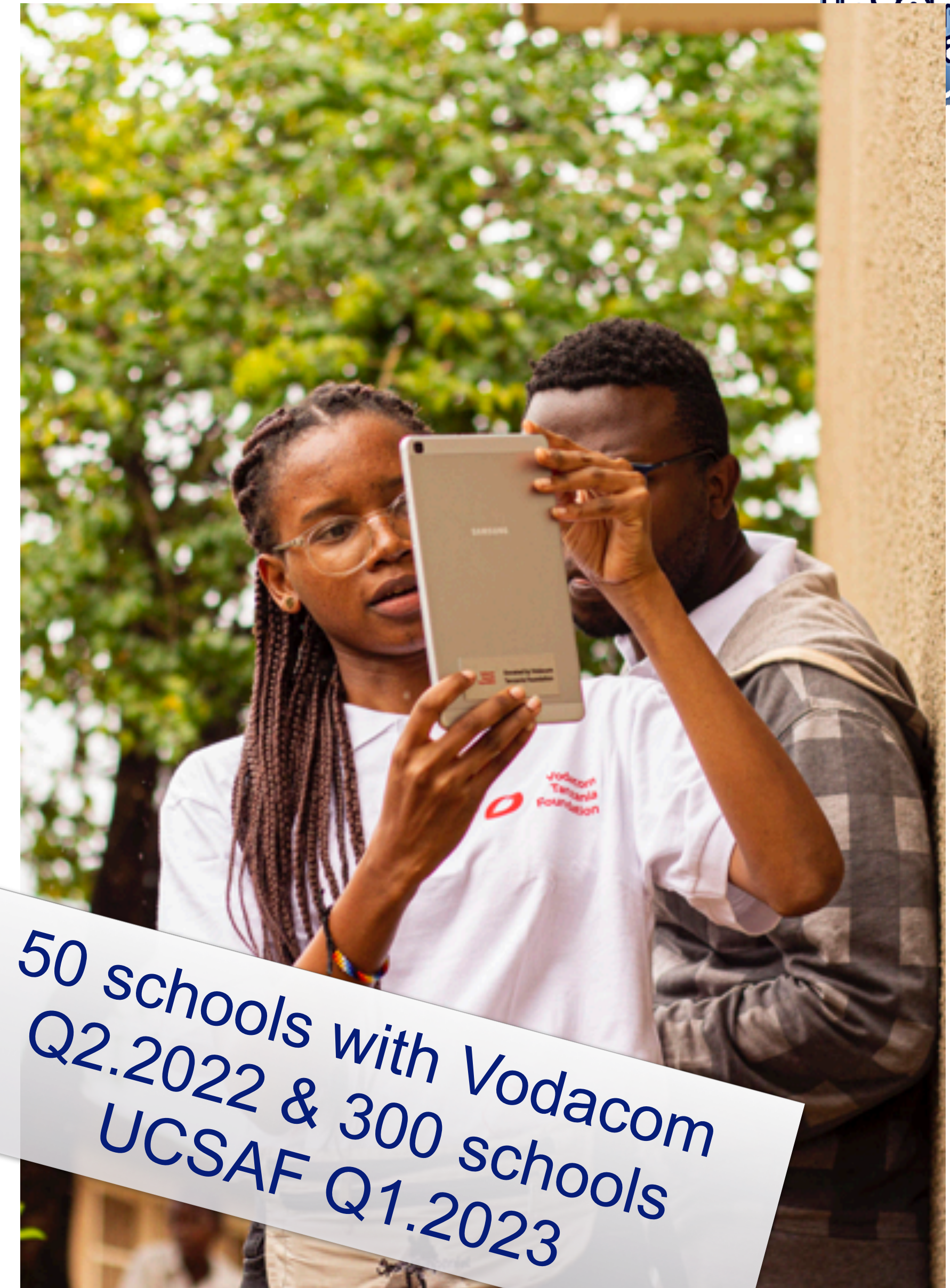
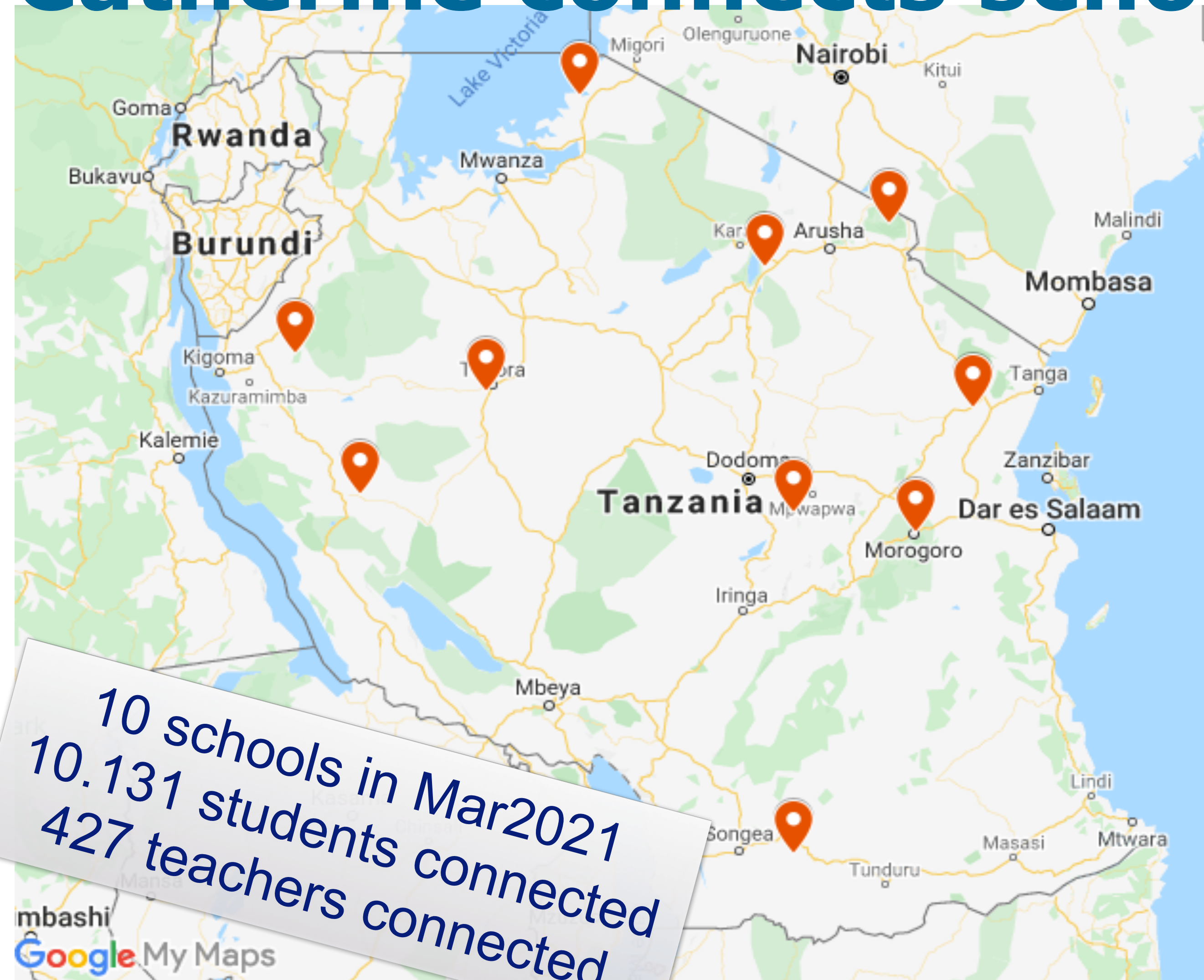
**#1: Every village needs a wireless Information Spot with free access to information**

# “Connect the Unconnected” Izazi

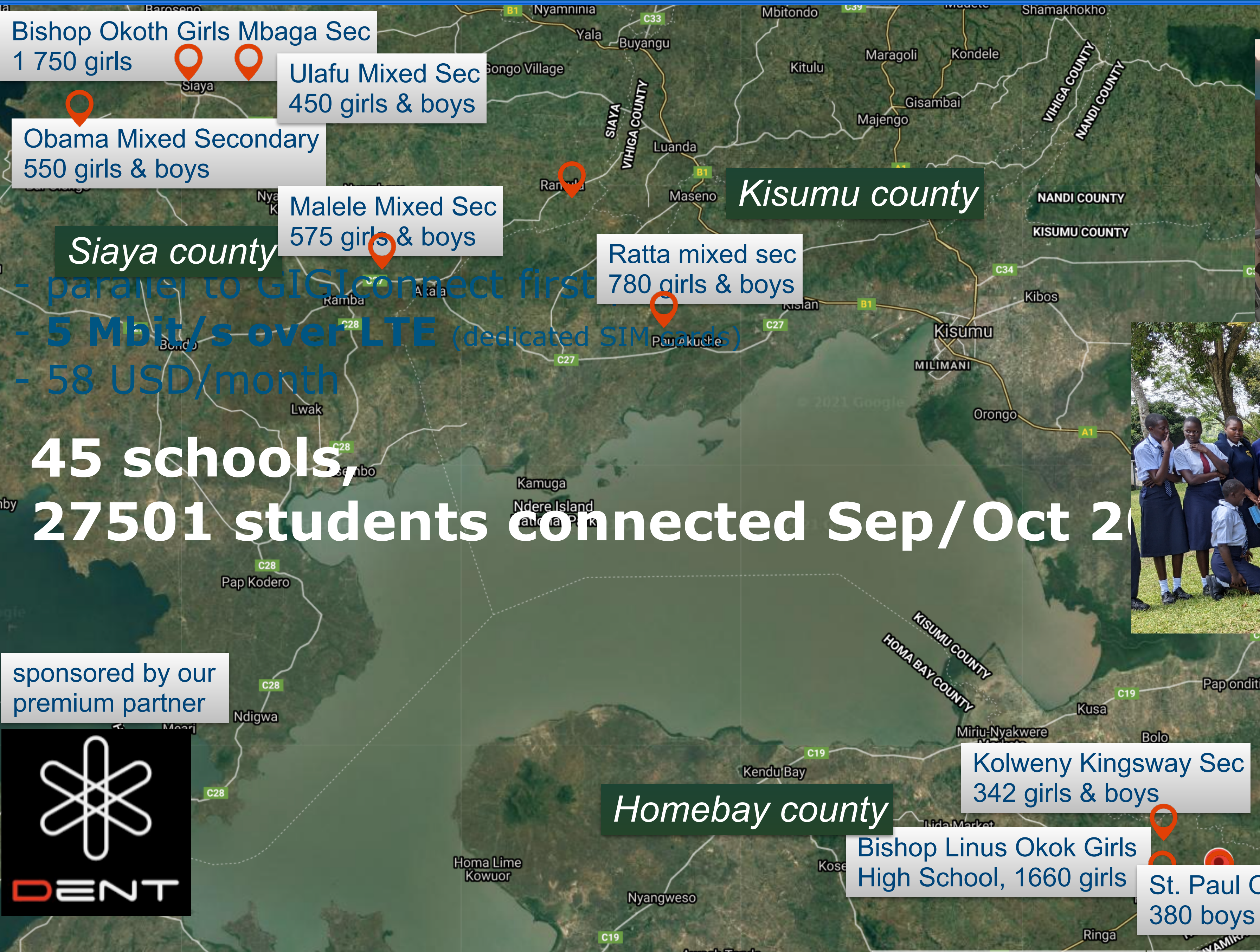


Installation time: 1,5 h  
catching the signal from the Vodacom  
tower in Migoli (~10km away)

# Scale-up Tanzania Catherine connects schools



50 schools with Vodacom  
Q2.2022 & 300 schools  
UCSAF Q1.2023



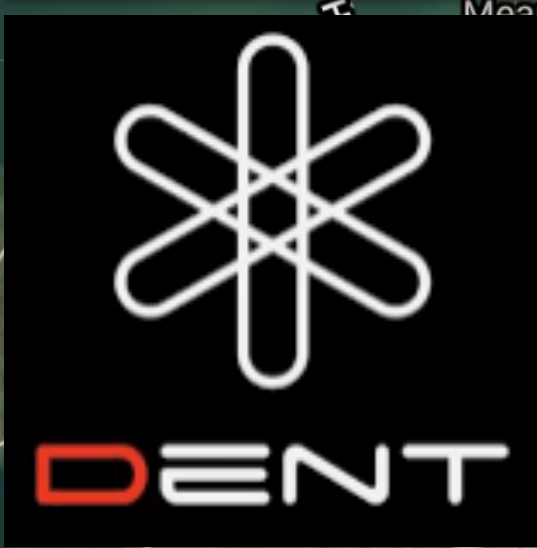
Ratta mixed sec  
780 girls & boys



**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





# Digital Antimicrobial resistance (AMR)

UiO:Health Relight funded (Arunima Sehgal Mukherjee)

- part of [DigitalGlobalHealth.eu](https://DigitalGlobalHealth.eu)
- Digital Health Promotion (DHP) and community involvement
- here: AMR study with video as intervention



Figure 1: Scene from Antimicrobial resistance (AMR) animation

# ⚡ What is SESA?

SESA is a collaborative project between the **European Union and nine African countries** (Kenya, Ghana, South Africa, Malawi, Morocco, Namibia, Tanzania, Rwanda and Nigeria) that aims at **providing energy access technologies and business models** that are easily replicable and generate local opportunities for economic development and social cohesion in Africa.

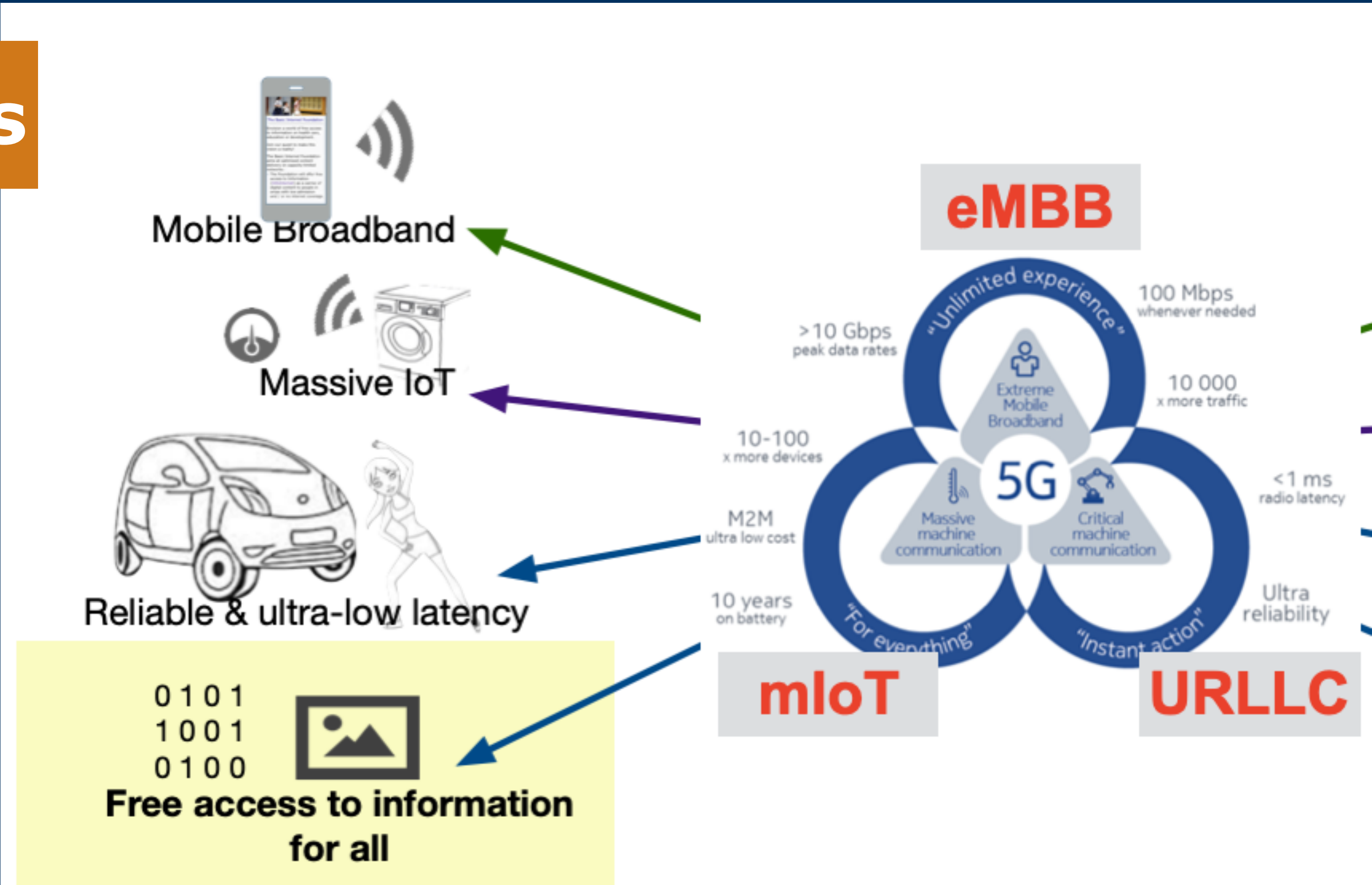


# 5G network layer

challenge existing business models

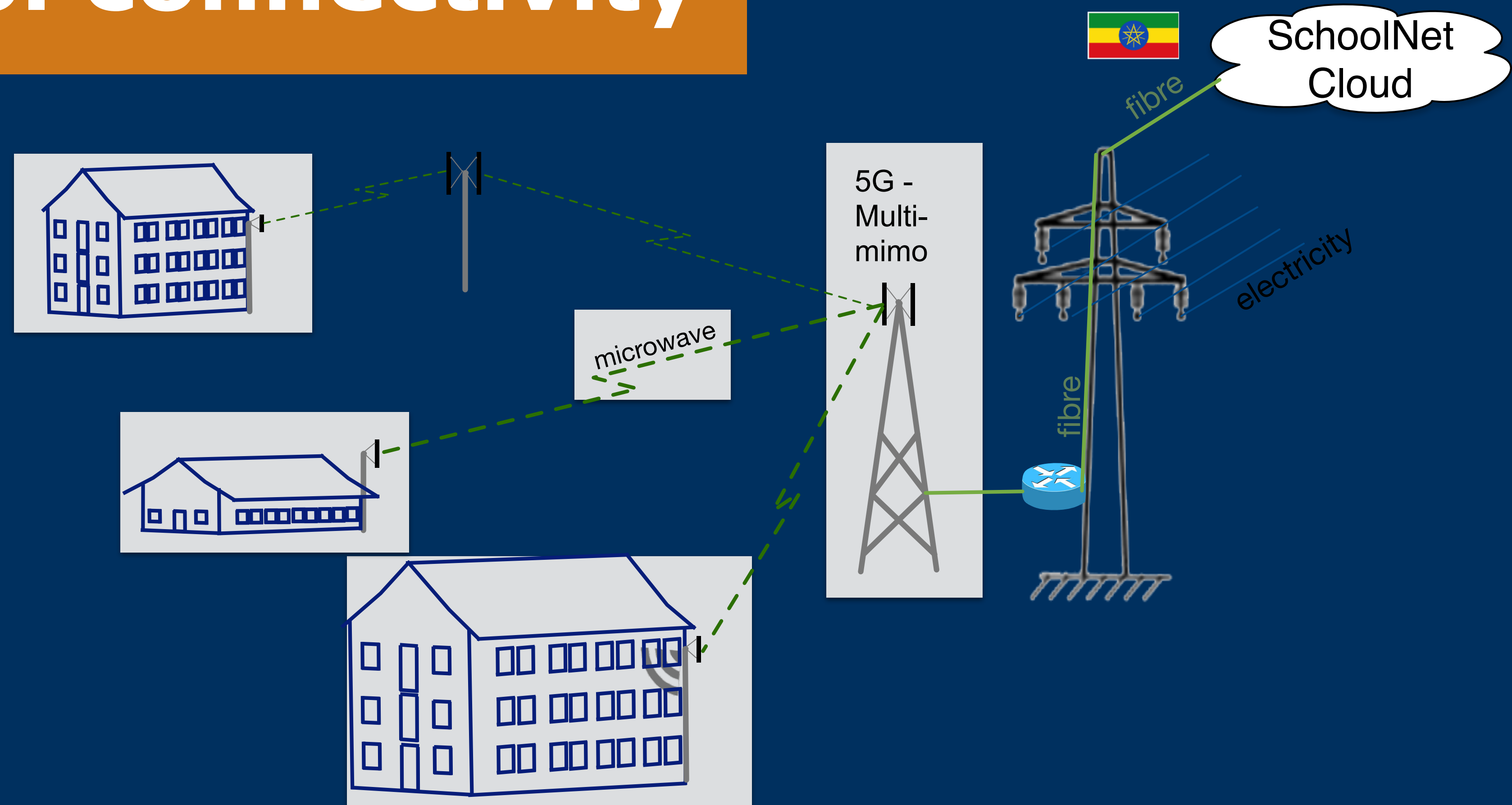
Road model: pedestrians & cyclists

Internet: text & pictures



# 5G for reaching the villages

## 5G for school connectivity



# Conclusions: What if...

- Freemium Model,
  - Internet Lite, AMP, other lightweight
  - Realisation: whitelist, DNS,
  - Opera Mini
- School/Village Communication
  - 4G/5G MIMO, cell size
  - Communication to LTE antenna
- InfoSpot design
  - Internet of Things (IoT) for rural usage
  - Usage monitoring
  - Remote update, Scripts on LNCC

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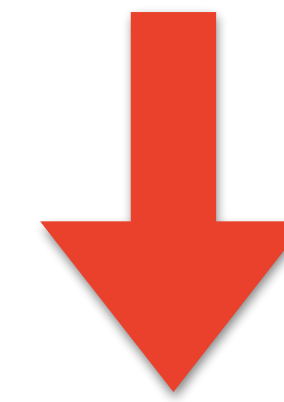
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2

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  - in every village
  - solar power, Wifi hot-spot, phone charger, light

3

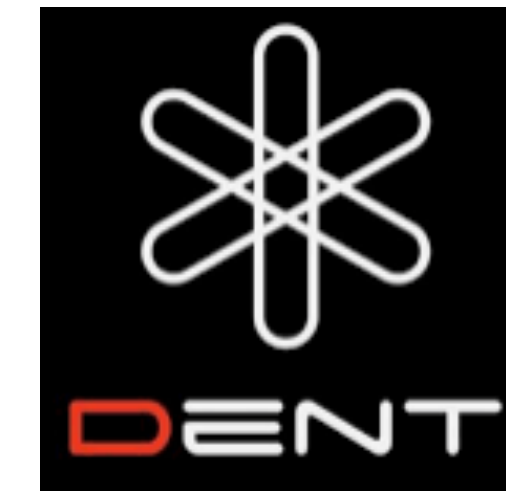
- InfoSpot design and realisation
  - Health, Education, Agriculture, Digital,...



Access to Information -  
a basic Human right

# Join our collaboration on School Connectivity

- Create visibility
  - DENT Wireless: 27.501 students connected
  - Vodacom Foundation & UCSAF: 43.700 students connected
- Acquire future customers
  - Vodacom TZ: 3-year contract to connect 300 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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ETHIOPIA



Rotary  
Distrito 4400, Ecuador  
Zona 23B, 2019-2020

