![Basic Internet Foundation — Connect The Future logo]

Ignite talk 6Oct2023

School Connectivity in Africa
-
"we help connecting the children of our world"

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"Our mission is
to improve the life of **every human**
through **access to basic information** on the
Internet…."

motivated by:
- Professor at Uni Oslo - "Societal Security"
- Group leader at Telenor - "3G: Always online, always connected"
- European Space Agency - "Earth Observation & Climate Change"
- SIEMENS - "Chip design"

From Academia to Mobile Broadband
understanding the business

1973 Kjeller

Jun1973: NO (Kjeller) & GB connected

Jun1986: RARE/TERENA…GEANT (NRENs in Europe)

1993 - **privatisation** of 2G (GSM)
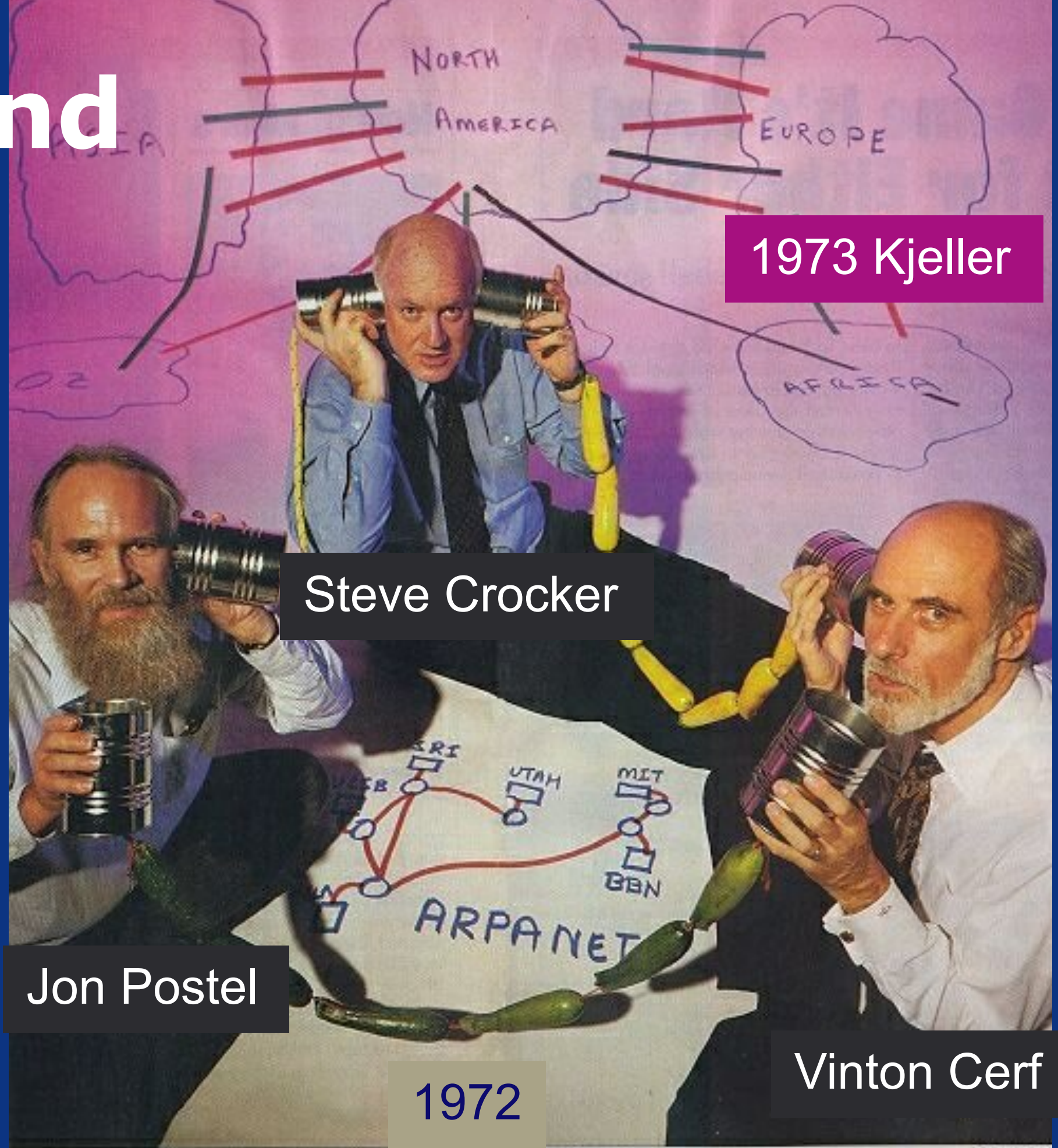
1999 - 3G (UMTS): 3 x ROI expectation, Uni co-dev

2004 - 4G (LTE): 120 km range, Supplier dev

Steve Crocker

Jon Postel

Vinton Cerf

1972

Source: http://www.michaelkaul.de/History/history.htm

Aug2003: Reykjavik "Cybersecurity"

Mar2023: "Societal Security" - Digital Equity - #ConnectTheFuture

Vint & Sigrid, Nordunet 2003

"The mobile Internet is purely commercial"

3

How can we "Connect The Future"?
and what are the roles of the Universities

Empower my dreams

"Internet had the ability to dismantle the divide. Internet failed miserably, the divide is bigger than ever."

Kate Gilmore, Human Rights, UNOG, 2017

What if …

We revisit access

We decentralise the Internet
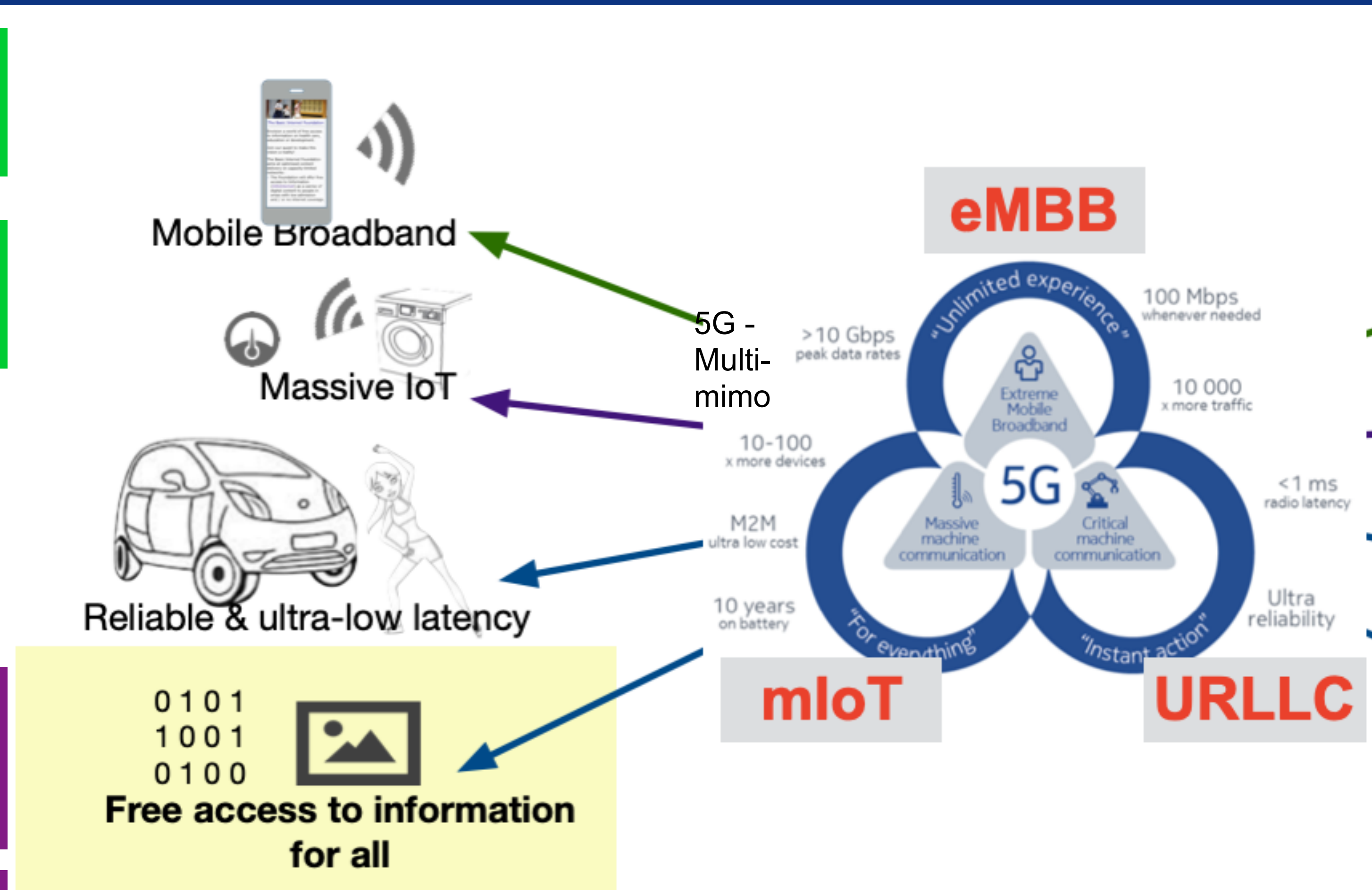
We use Universities to connect

Revisit Access

Road model: pedestrians & cyclists

Digital pedestrians, digital cyclists vs digital cars (broadband)

Internet Lite
as a Digital Public Good (DPG)?

& 5G large cells

Mobile Broadband

Massive IoT

5G - Multi-mimo

Reliable & ultra-low latency

0101
1001
0100

Free access to information for all

eMBB

>10 Gbps peak data rates

100 Mbps whenever needed

10 000 x more traffic

«Unlimited experience»

Extreme Mobile Broadband

10-100 x more devices

5G

<1 ms radio latency

M2M ultra low cost

Massive machine communication

Critical machine communication

Ultra reliability

10 years on battery

«For everything»

«Instant action»

mIoT

URLLC

The Game Changer

205 schools
(Q2.2023)

184 000 students
(Q2.2023)

USD 1200 per school
ready installed
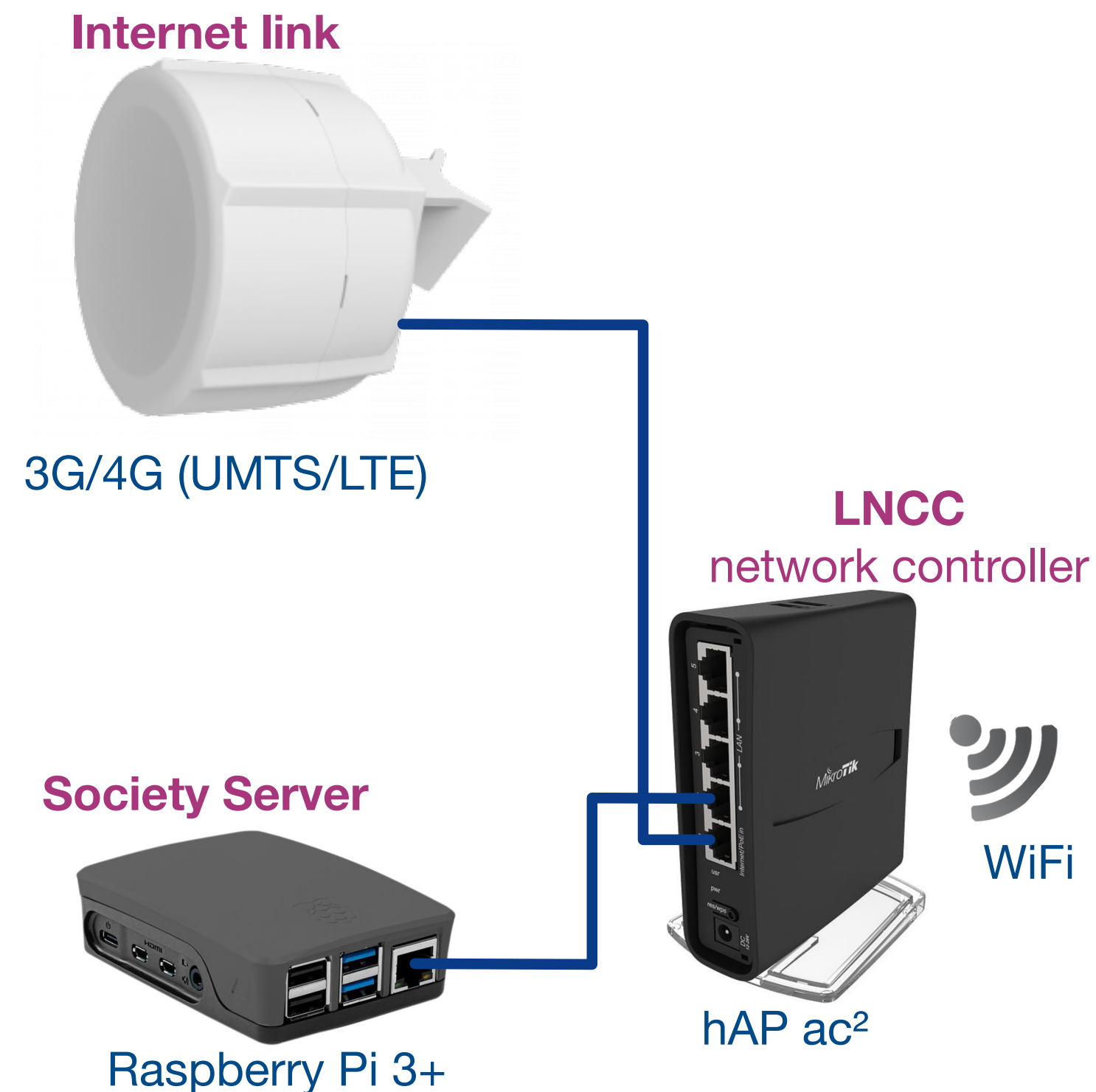
Participation in the Internet Society

Changing the lives of many

Solving the Access

➡ wireless information spot (InfoSpot)

➡ Reaching 20 km+ to mobile network

➡ Affordable solution: OPEX <20 USD/ month

Internet link

3G/4G (UMTS/LTE)

Society Server

Raspberry Pi 3+

LNCC network controller

WiFi

hAP ac²

Bishop Okoth Girls Mbaga Sec
1 750 girls

Ulafu Mixed Sec
450 girls & boys

Obama Mixed Secondary
550 girls & boys

Kisumu county

Malele Mixed Sec
575 girls & boys

Siaya county

Ratta mixed sec
780 girls & boys

Ratta mixed sec
780 girls & boys

**45 schools,
27501 students connected Sep/Oct 2021**

sponsored by our
premium partner

Kolweny Kingsway Sec
342 girls & boys

Homebay county

Bishop Linus Okok Girls
High School, 1660 girls

St. Paul Oriang
380 boys & girls

"Connect The Future"
Selela Market Place

antenna →

Serengeti
Selela
Tigo Tower
Mto wa Mbu
Lake Manjara

- Antenna in 6 m height
- Reaches Tigo tower > 20 km away

"Connect the Future"
Izazi

antenna

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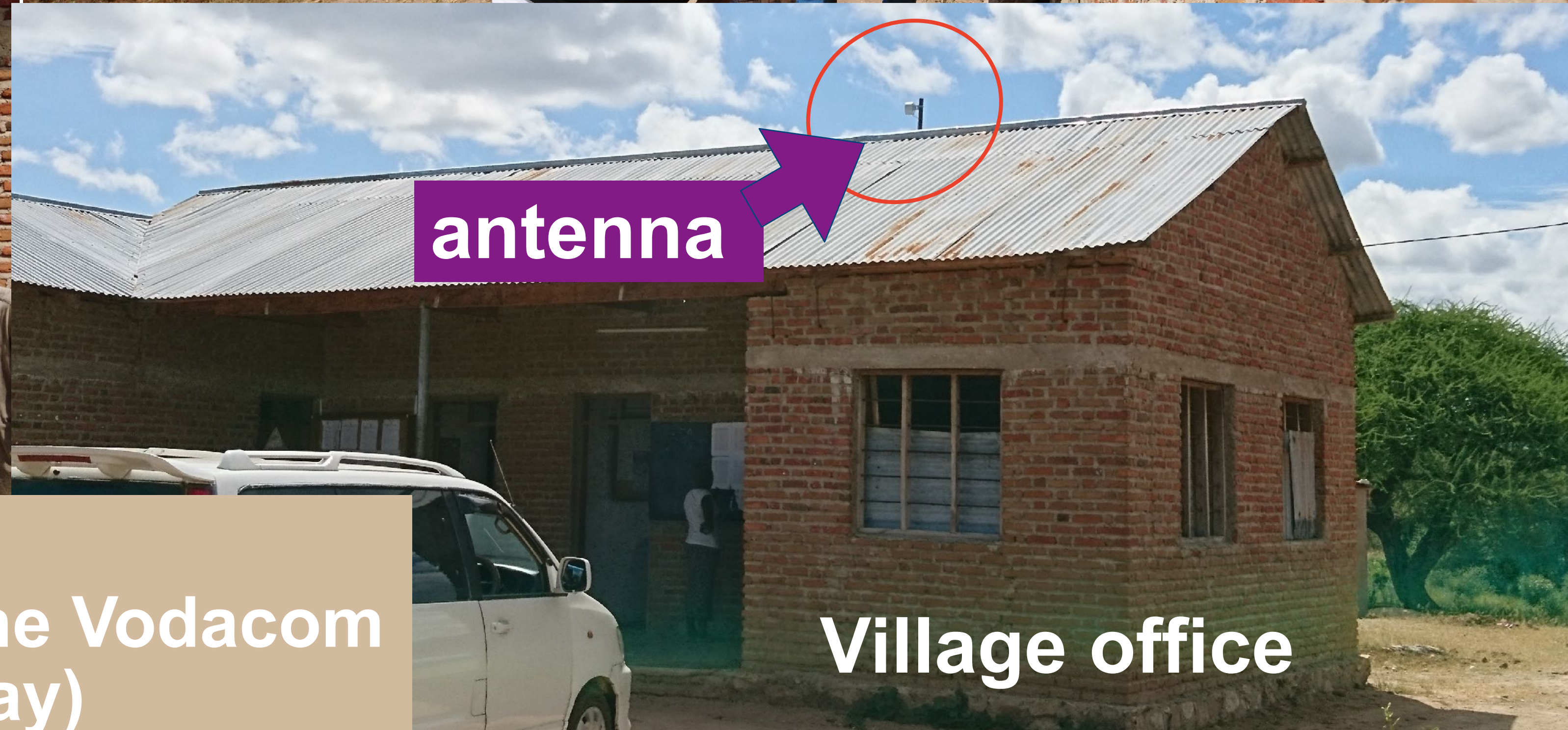
Installation time: 1,5 h
catching the signal from the Vodacom
tower in Migoli (~10km away)

Energy, Access & Information

antenna

Connect The Future
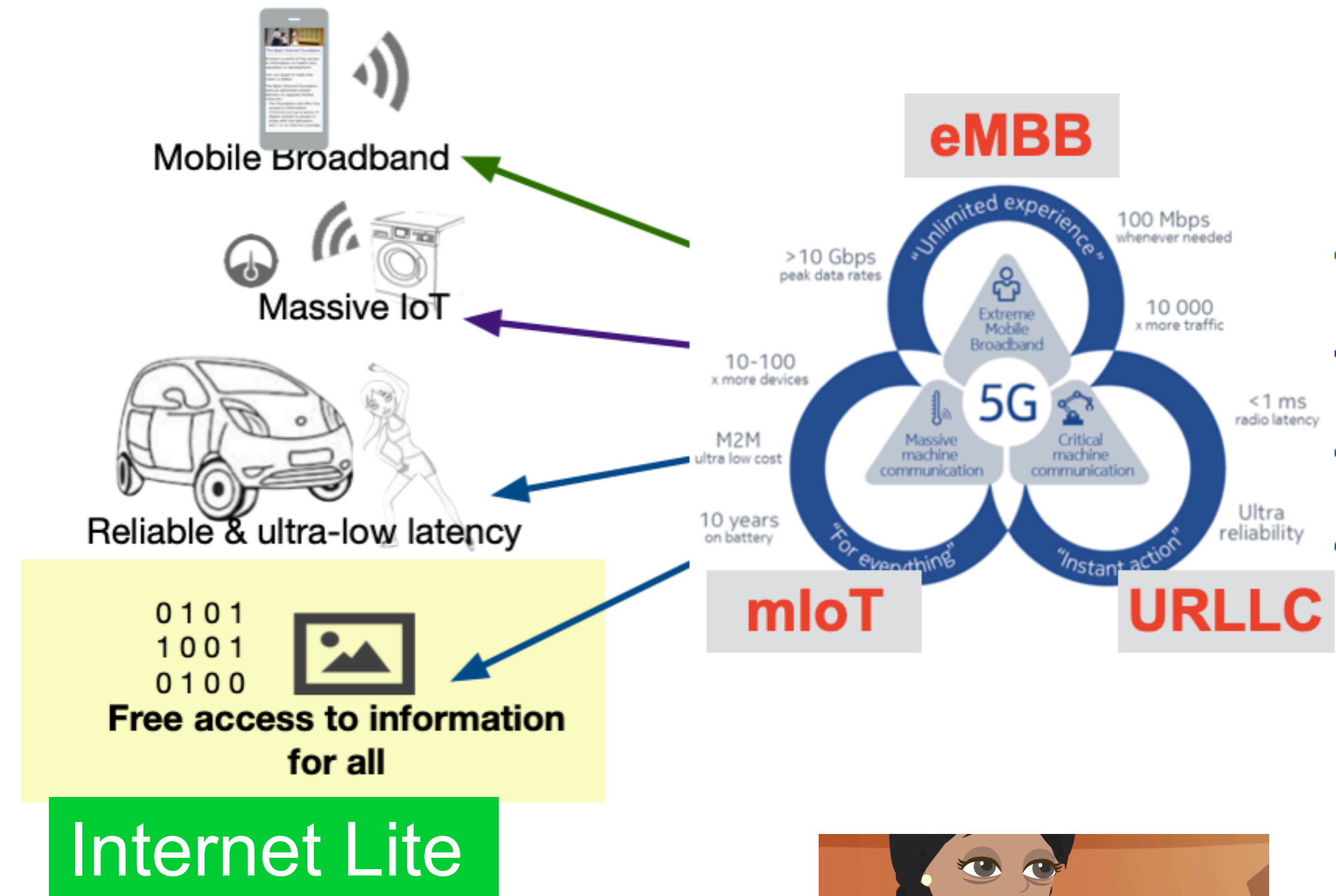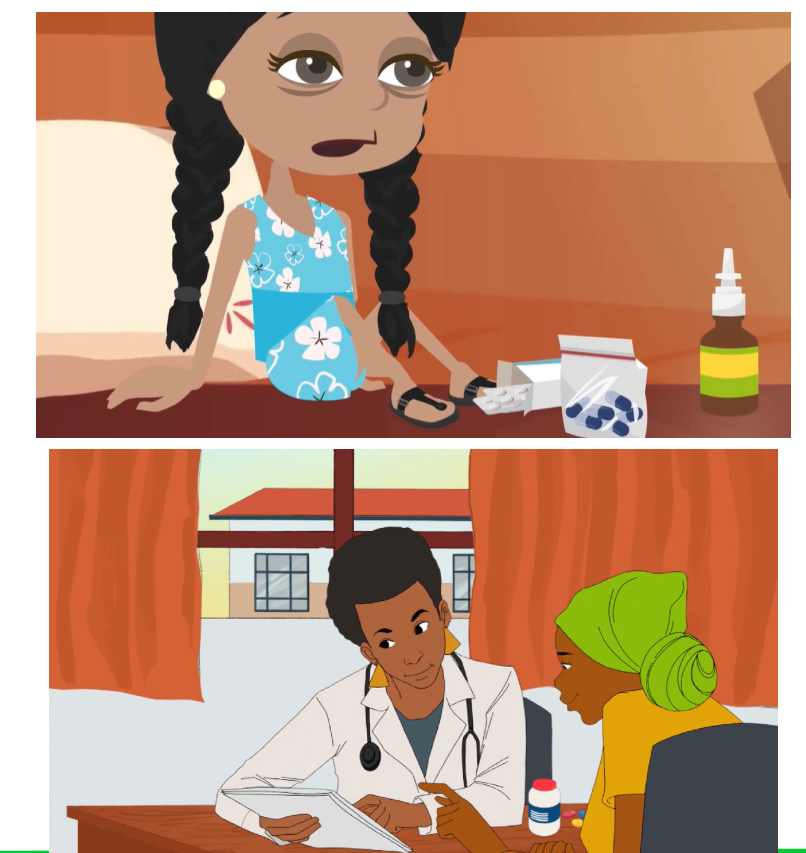
Doreen Bogdan
Secretary General ITU

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Community Learning & Living Labs (CL3)

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