

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

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Digital Health Promotion (DHP) **the Game Changer for Community Health**

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Digital in Health & SDGs

Digital Health Promotion (DHP)

Project background

Community Engagement

Key Findings

Lessons Learned

Scaling up

Health Platforms and Health Portal

→ Upstream

- Health Information Systems Platform (HISP, [DHIS2.org](https://dhis2.org))

→ Sensor on Chip

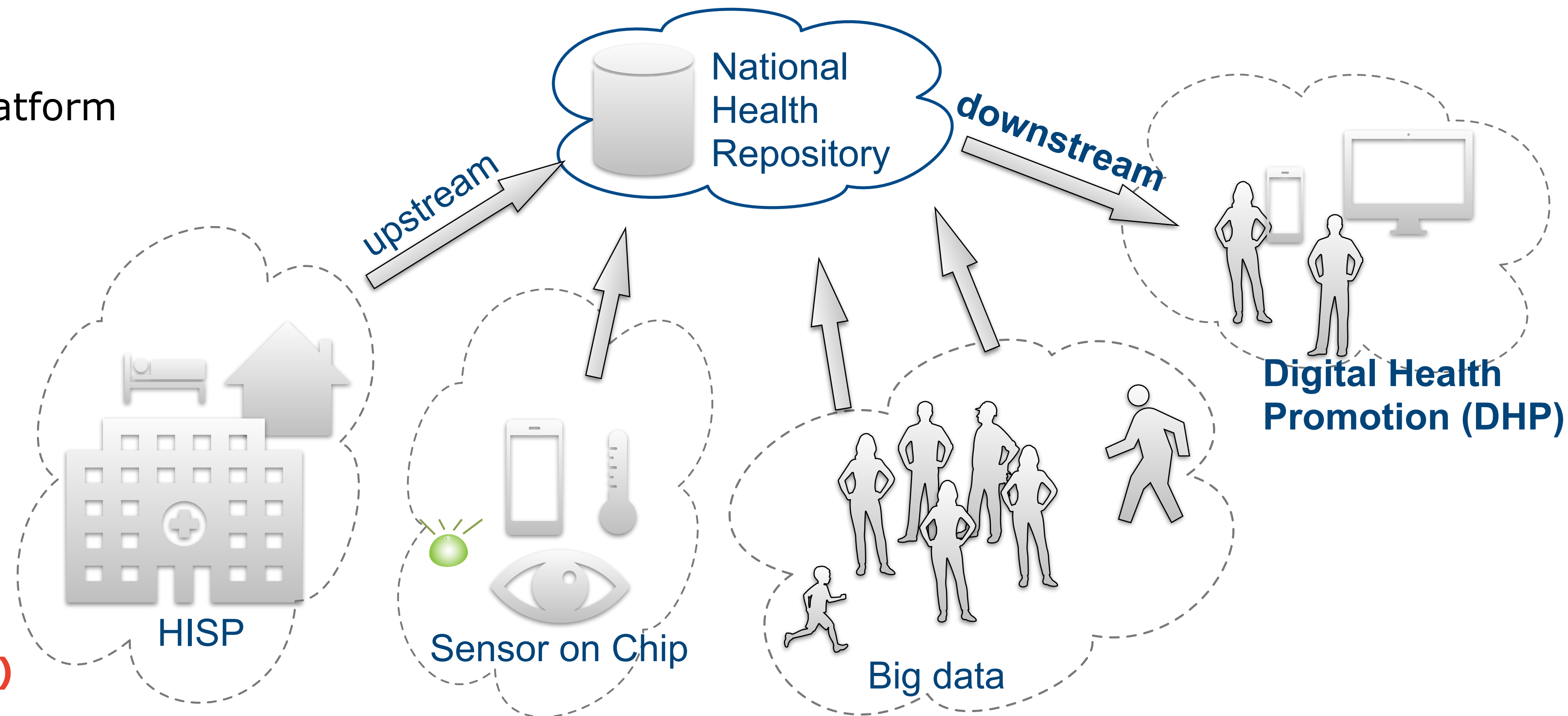
- Bio-sensor
- integrated analysis

→ Big Data

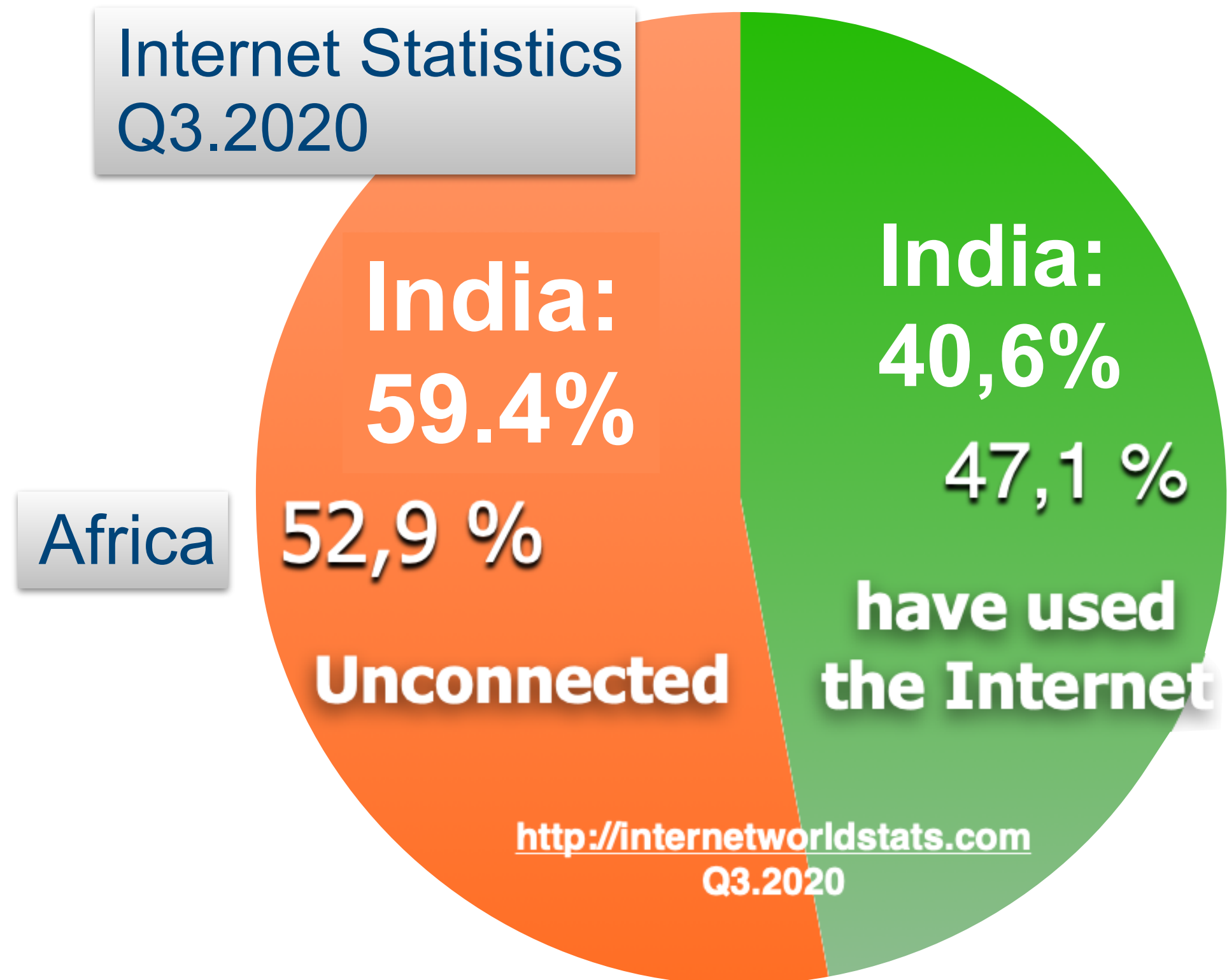
- Epidemiology
- Artificial Intelligence (AI)

→ Downstream

- Digital Health Promotion (DHP)**
- Community Health



“Connect the >50% unconnected”



Reality on the ground

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

Broadband = Mobile Broadband

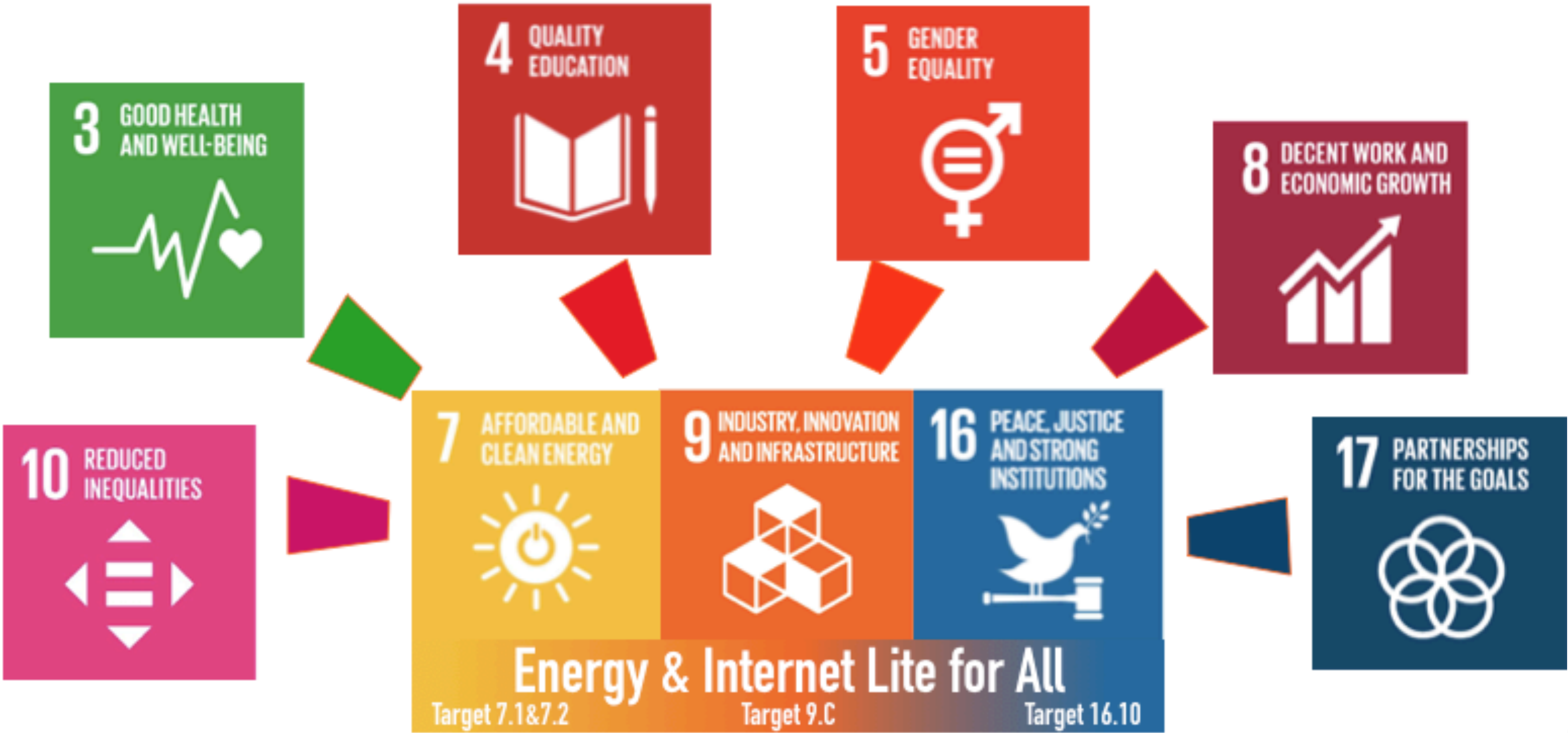
TZ: 640 USD for 4 Mbit/s
GH: 600 USD for 5 Mbit/s
KE: 600 USD for 10 Mbit/s
“every single month”

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

“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 5.B** Use of enabling technologies
- SDG 9.C** universal and affordable access
- SDG 16.10** ensure public access to information

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Izazi InfoSpot

Internet through mobile network
Installation time: 1,5 h



Antenna

Village office



Cysticercosis



Watch "The story of tapeworms" here, take the quiz and learn about tapeworms and cysticercosis here.

More Video

Anthrax



Anthrax costs life. Learn how to protect your family and animals here.

More Video

Tuberculosis



Tuberculosis can be avoided and cured. Read more about the disease here, and take the quiz to test your knowledge.

More Video

HIV Aids



Quality treatment, quality longer life for infected.

Cholera



Cholera is an infectious disease that causes severe

Global Health



Our mission is to improve health care and health



Background:

Results of DigI project

- ➔ Significantly higher health knowledge (12 months)
 - HIV/AIDS – 10.2% (59% vs 50%)
 - TB – 12.0% (36% vs 25%)
 - Cysticercosis (TSCT) - 31.5% (42% vs 11%)
- ➔ InfoSpot users
 - ➔ additional 7-14% knowledge increase
 - ➔ excellent knowledge retainment
- ➔ 97% “have learned”
- ➔ 74% “discussed with others”
- ➔ High acceptance of animations as a knowledge transfer tool
- ➔ Unintended educational use of the platform



[Source: Christine Holst, 2022]

Free Access to Health Information
a basic Human Right

Digital Health Promotion
“one InfoSpots in each village”

2014: Basic Internet
«Connect the
Unconnected»



Digital in Health & SDGs

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Project background

Community Involvement

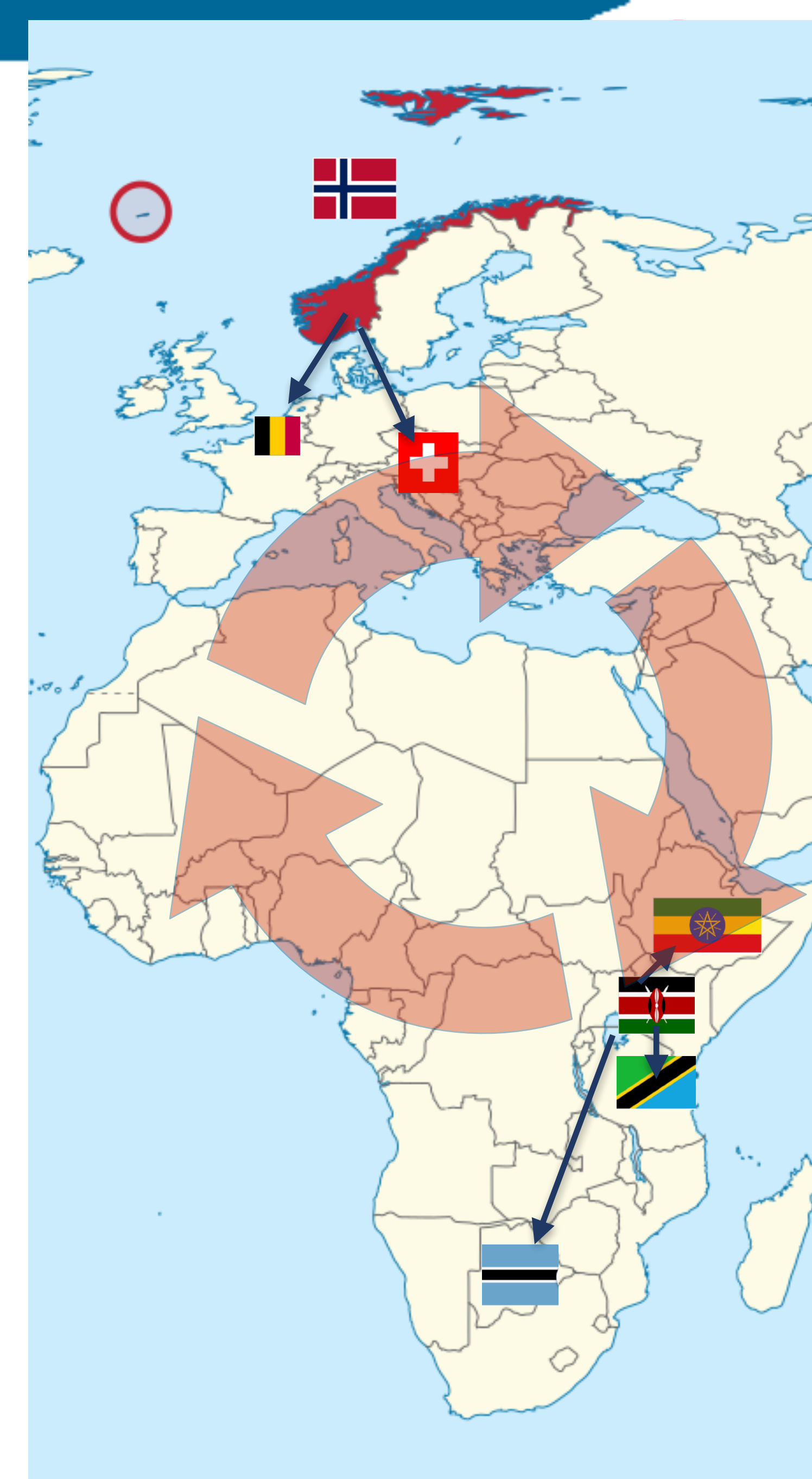
Key Findings

Lessons Learned

Scaling up

Digital Health promotion in the Global South (ProDHP)

- ➔ Applying the Methodology in two new domains
- ➔ Building the Community
 - Creating Awareness, e.g. WHO
 - UiO & Centre for Global Health
 - Global South
- ➔ Impact on the ground
 - Projects, Activities



ProDHP Methodology

8+2-step DHP Creation

1. a local needs assessment;
2. identification of government-approved health promotion materials in a non-digital format;
3. identification of key health messages for each of the five relevant domains (prevalence, cause/transmission, signs/symptoms, treatment and prevention);
4. creation of a practical and engaging story, easy to understand for the general public;
5. drafting of a storyboard for an animated video with review, feedback and revisions;
6. forward and backward translation from English to Swahili;
7. audio recording of the story in both languages;
8. finalisation and presentation for the animations;
9. Development of relevant quiz questions related to the health messages in each domain; and
10. Development of web and mobile applications to access the digital health messages.



Breast Feeding

AMR animation

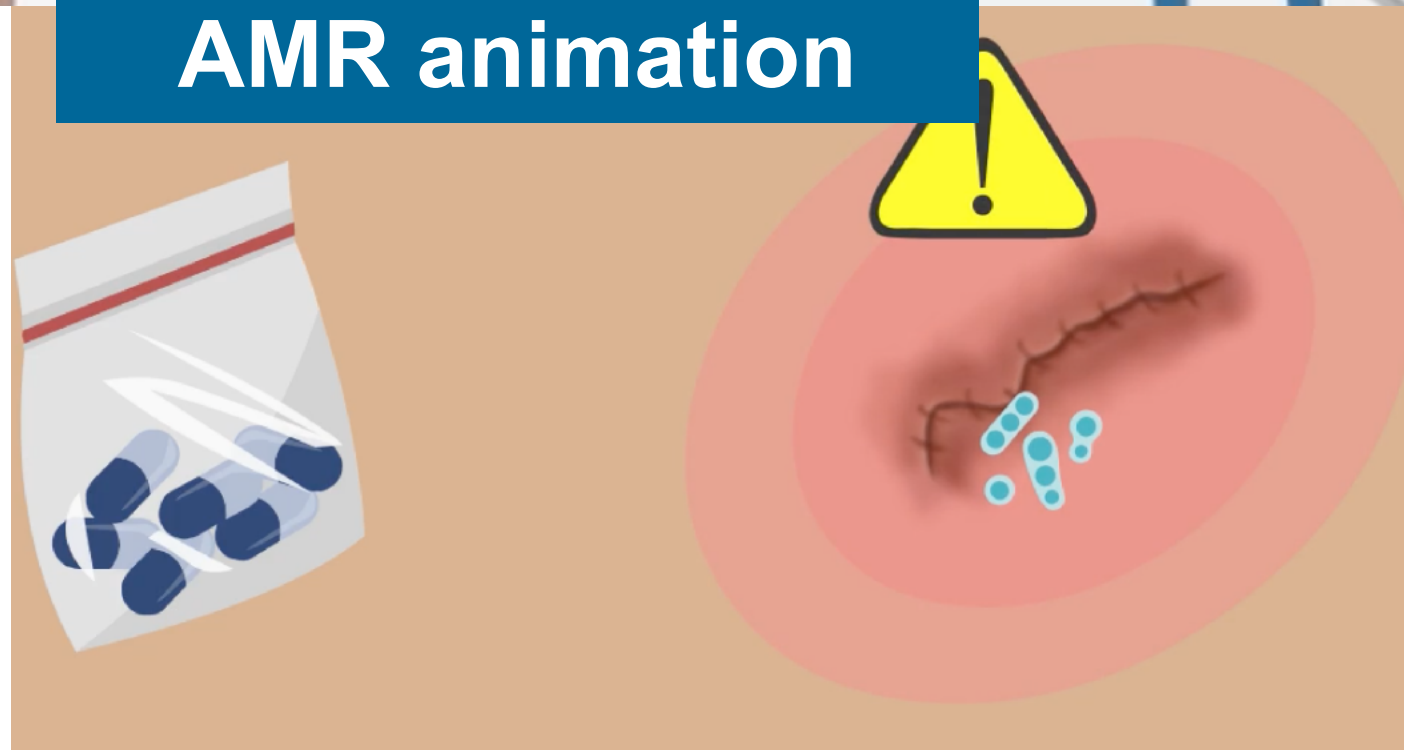
COVID-19

(Sexual Violence)

ProDHP animations



AMR animation



COVID-19



Breast Feeding



(Sexual Violence)

Ethiopia did it!

- COVID-19 response
 - “free access to health & education”
 - “zero rating”
 - Health (MoH): MoH.gov.et
 - Ephi.gov.et & Covid19.et
 - Education: National Digital Library NDL.ethernet.edu.et
- follow-up from discussions after African Innovation Week (AIW2019)

ኢትዮ ቴሌኮም የከፍተኛ ትምህርት ተቋማት ተማሪዎች እና መምህራን ትምህርታዊ መረጃዎችን ከ <http://ndl.ethernet.edu.et/> በነፃ ማግኘት እንዲችሉ አደረገ

በአገራችን የኮሮና ቫይረስ (COVID-19) ወረርሽኝን ለመከላከል በመንግስት በኩል በርካታ እርምጃዎች እየተወሰዱ ሲሆን ከእነዚህም መካከል የገፅ ለገፅ ትምህርት በማቋረጥ ተማሪዎች ቤታቸው እንዲቆዩ መደረጉ ይታወቃል።

ከዚሁ ጋር በተያያዘ ኩባንያችን ከግንቦት 21 ቀን 2012 ዓ.ም ጀምሮ የከፍተኛ ትምህርት ተቋማት መምህራን እና ተማሪዎች ከትምህርት ጋር ተያያዥነት ያላቸውን አጋዥ መረጃዎች ከ <http://ndl.ethernet.edu.et/> በነፃ ማግኘት እንዲችሉ በማድረግ የመማር ማስተማሩ ሂደት እንዲቀጥል የበኩሉን አስተዋፅኦ ማድረጉን በደስታ ይገልፃል።

በተመሳሳይ ሁኔታ ኩባንያችን ስለወረርሽኙ ወቅታዊ መረጃ ለህብረተሰቡ እየሰጡ የሚገኙትን የጤና ሚኒስቴር <http://www.moh.gov.et>፣ የኢትዮጵያ ህብረተሰብ ጤና አገልግሎት <http://www.ephi.gov.et> እንዲሁም የተቀናጀ የኮቪድ 19 መቆጣጠሪያ ስርዓት ድረ-ገፅን <http://www.covid19.et> በነፃ እያቀረበ መሆኑ ይታወቃል።

Outreach

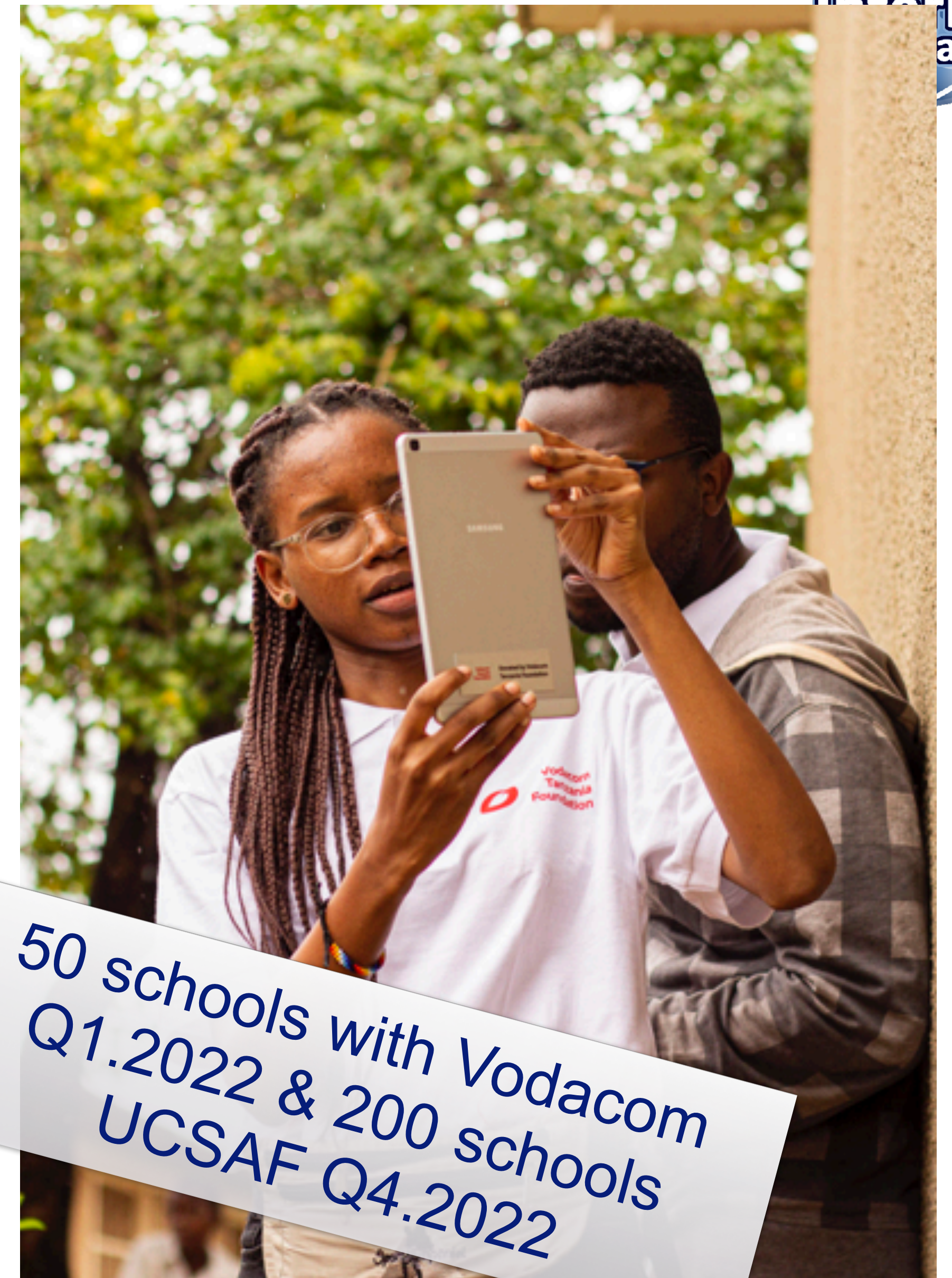
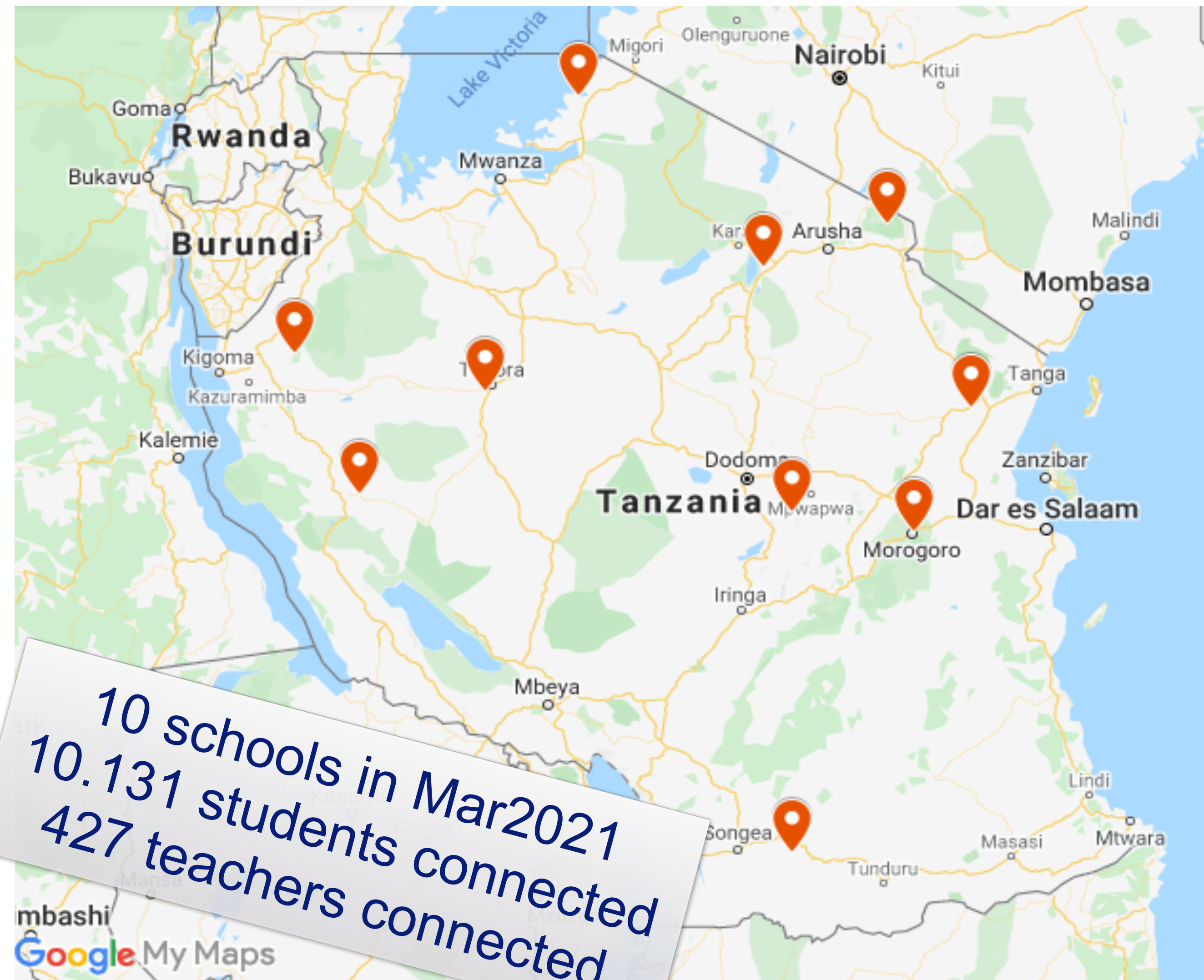


- Koye Secondary and Preparatory School
 - connected as part of African Innovation Week 2019
 - DigitalHealthPromotion.eu
- Norhead II: NURTURE project
 - eHealth lab at Univ of Gondar



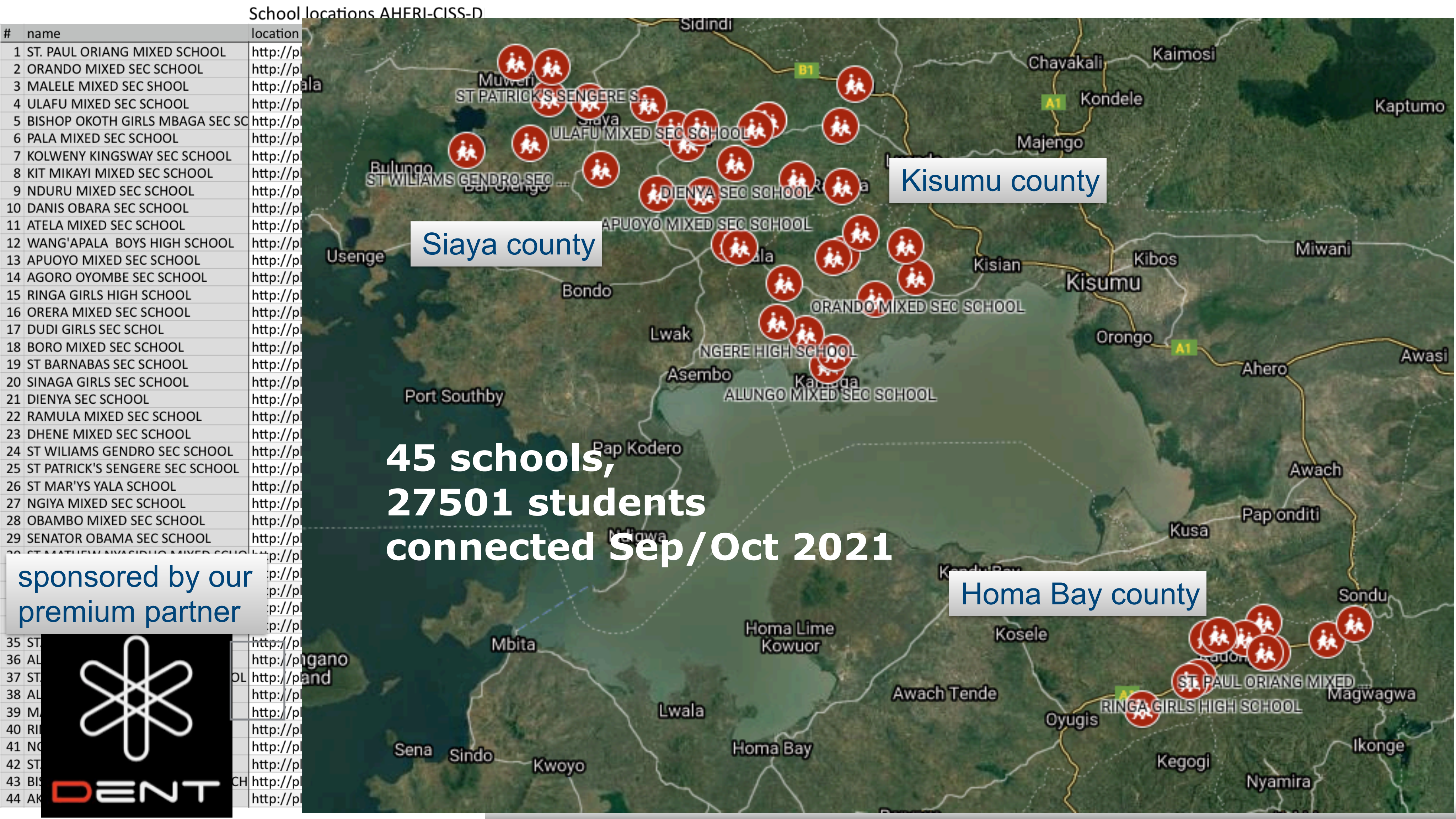
Scale-up Tanzania

Catherine connects schools



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

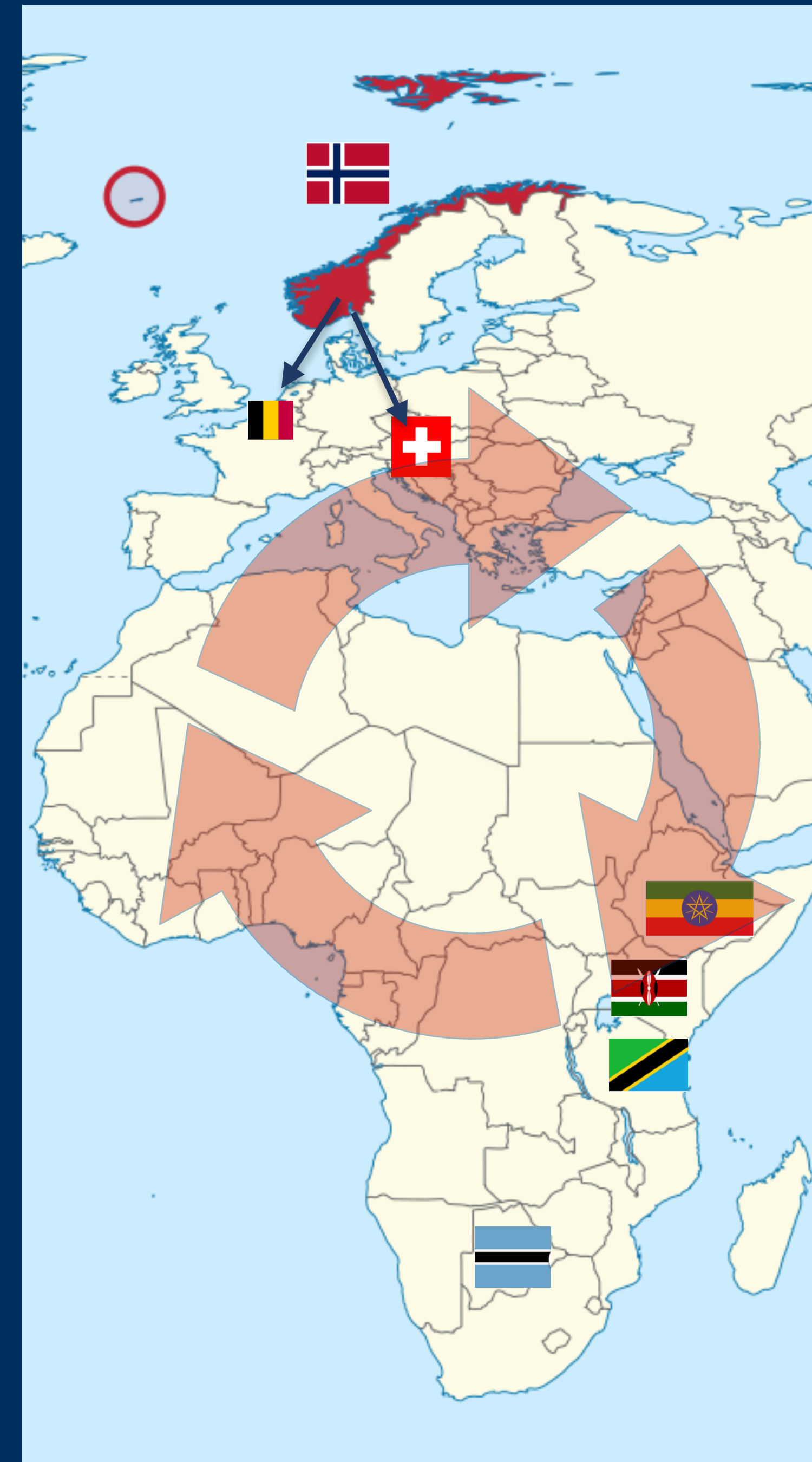
45 schools connected Sep/Oct 2021



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

Lessons learned

Opportunity and Challenges



Summary

Achievements & Challenges



Applying the Methodology in three new domains

- AMR, Breastfeeding, COVID-19

→ Building the Community

- Awareness: WHO, CGH
- Global South: Ethiopia

→ Impact on the ground

- School Connectivity: 55 Schools, 37.362 students (Q4.2021)
- Projects: H2020 SESA, Digital AMR



Default outcome in all medical domains

Awareness: UiO, The Guild, Norad



Impact vs Research

Research Group

Core people of our DigI team (11 partners from 9 countries)



Christine Holst
UiO - Norway



Dr. Bernard Ngowi
NIMR - Tanzania



Prof. Josef Noll
BasicInternet
UiO - Norway



Prof. Andrea Winkler
UiO - Norway



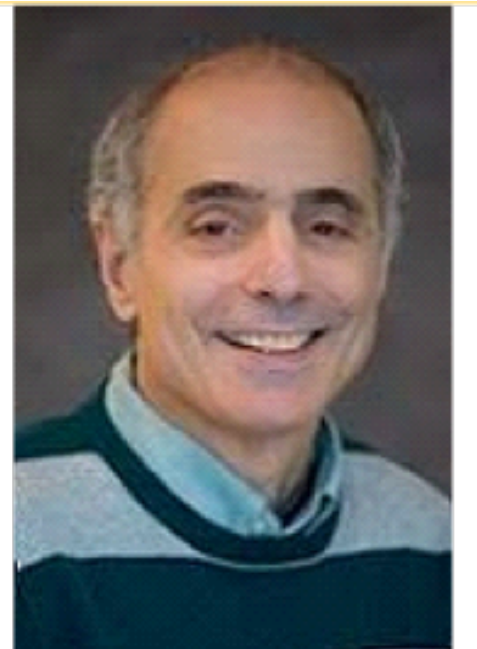
Prof. Helena Ngowi
SUA - Tanzania



Mr. Erwan Le Quentrec
Orange - France



Dr. Maurice Isabwe
FCI - Rwanda



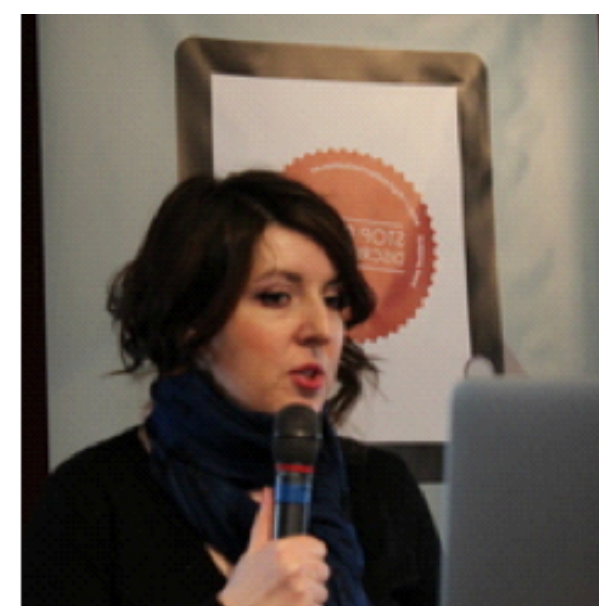
Dr. Peter Cardellichio
Global Health Media - USA



Mrs. Flora Kajuna
SUA - Tanzania



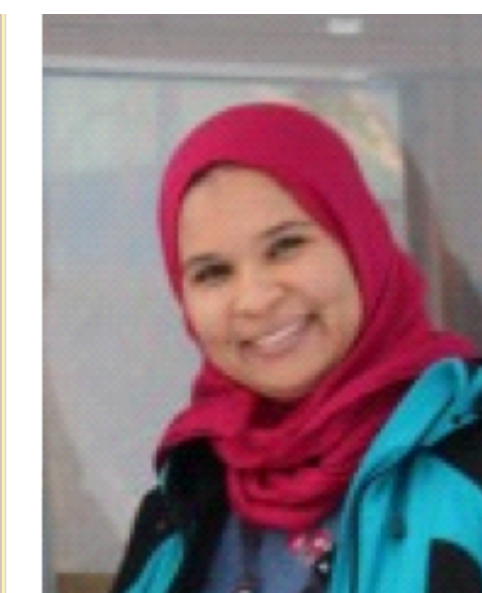
Dr. Felix Sukums,
Muhas - Tanzania



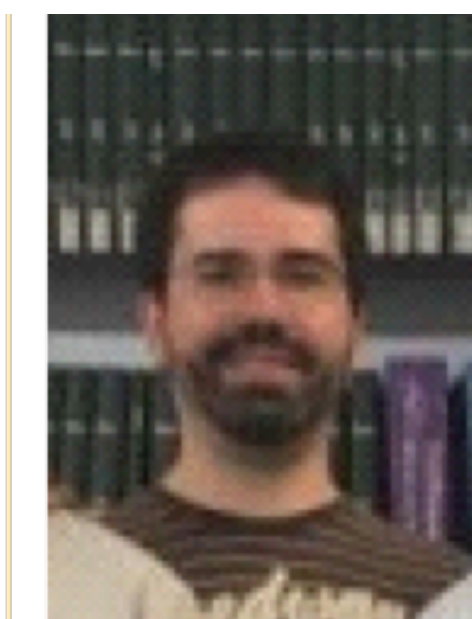
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