



**Roundtable Digital Rural
Norwegian Embassy, Dar es Salaam, 12Feb2018**

Digital Inclusion in Rural Tanzania

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Diql.BasicInternet.no

Digi and Basic Internet Partners



FR



ES



Ministry of Health, TZ



UiO



TZ



USA



Future Competence International

Create the FUTURE TODAY!™

RW



BasicInternet.org



Basic Internet



@Basic4all

"internet light for all"

Apr 2018, Josef Noll

Goals of the meeting

- Contribute with your expertise on Digital Rural Inclusion
- Goal of the Meeting: “Digital Inclusion in Rural Tanzania”
 - Mobile Broadband uptake in rural areas
 - Digital Health, Literacy and decent work
- Scaling up from pilot activity “free access to non-profit content”
 - From pilot phase with 3 to 10 villages
 - Common initiative “Connecting Rural Tanzania”

Value and business proposition



- “non-profit content” is
 - ➔ education, health, agriculture and governmental information
 - ➔ left out in traditional business models
- ISP and Mobile network provider
 - ➔ increase # subscribers
 - ➔ digital literacy through free access to content
 - ➔ reduce fees for “non-profit content”
- Government
 - ➔ “Digital Tanzania” uptake in rural areas
 - ➔ Non-profit content provision



Results from Meetings in Feb2018

Round-table discussion, Dar es Salaam, 12Feb2018



http://its-wiki.no/wiki/Digl:Roundtable_Digital_Health_for_Tanzania

- **Norwegian Embassy**
 - Johanne Bjørnflaten Walthinsen, Private Business Development
 - Noel Magoti, Private Business Development
- **Ministry of Health (MoH)**
 - Dr. Mpoki M. Ulisubisya, Permanent Secretary
 - Marcos Mzeru
 - Elibariki Mwakapeje
- **USCAF** - Peter Ulanga, CEO
- **Tanzania Telecommunication Company (TTCL)** - Eng. Enocent Msasi
- **Tigo**
 - Jérôme Albou, Chief Technical and Information Officer (CTIO)
 - Anna Tesha
- **Vodacom** - Noel B. Mazoya, Marketing Manager M-Commerce, for Rosalynn Mwori
- **Sokoine University of Agriculture**
 - Helena Ngowi, Professor
 - Flora Francis Kajuna, PhD Researcher
- **National Institute for Medical Research**, - Dr. Bernard Ngowi, Director
- **Muhimbili University of Health and Allied Sciences** -Dr. Felix Sukums, Director of ICT
- **University of Oslo** - Christine Holst, Digi Project Coordinator, Centre for Global Health
- **Basic Internet Foundation** - Prof. Josef Noll, Secretary General

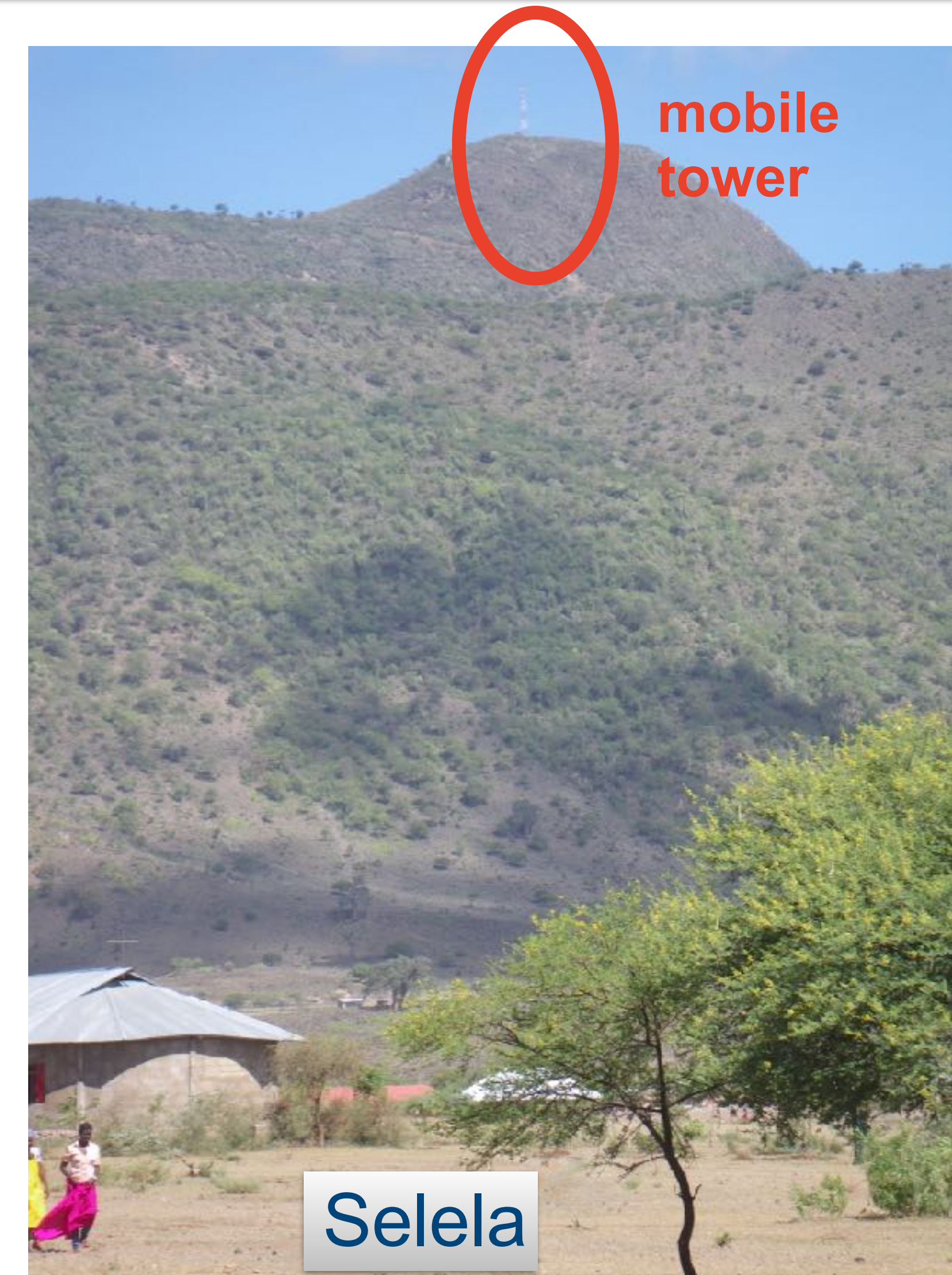


Status Connectivity Tanzania, 12Feb2018



http://its-wiki.no/wiki/Digl:Roundtable_Digital_Health_for_Tanzania

- Universal Communications Service Access Fund (UCSAF)
 - bring mobile coverage to Tanzania (TZ).
 - mobile coverage 90% of the population (2G).
 - 500 wards, over 2000 villages have 2G
 - ▶ covering 4 million people in rural Tanzania, over 300 schools
 - ▶ total of 150.000 km², which is about 16% of the country. Over 300 schools are connected.
- **Goal:** Reach 98% of the population
 - increase of 8% is difficult to reach due to the spread population.
 - High operational costs for the 2G network
 - ▶ maintenance of the remote sites, security and power supply.
 - Internet and mobile broadband (3G and 4G networks),
 - ▶ the majority of wards have 3G in the centre
 - ▶ 4G is sparsely deployed, concentrating on cities.





Government building, Selela



local guest house, Selela



Government building, Izazi



tower (3G), Migoli

Take-away, Roundtable Digital Literacy, 12Feb2018



http://its-wiki.no/wiki/Digl:Roundtable_Digital_Health_for_Tanzania

- **Content** in Swahili,
 - local content, health, education
 - agriculture, fishing,
 - covering local content, social network content
 - Commercial: Mobile Money,
- **Schools** - *“every child should have the ability to access digital content”*
- **Devices:** The majority of phones are 2G phones,
 - Smartphone (when electricity), low-cost platforms
 - limited roll-out of 3G and 4G networks.
- **Incentives** for users .
- The Permanent Secretary Dr. Mpoki M. Ulisubisya asked **Peter Ulanga from USCAF to coordinate** the further collaboration.



Take-away, Roundtable Digital Literacy, 12Feb2018



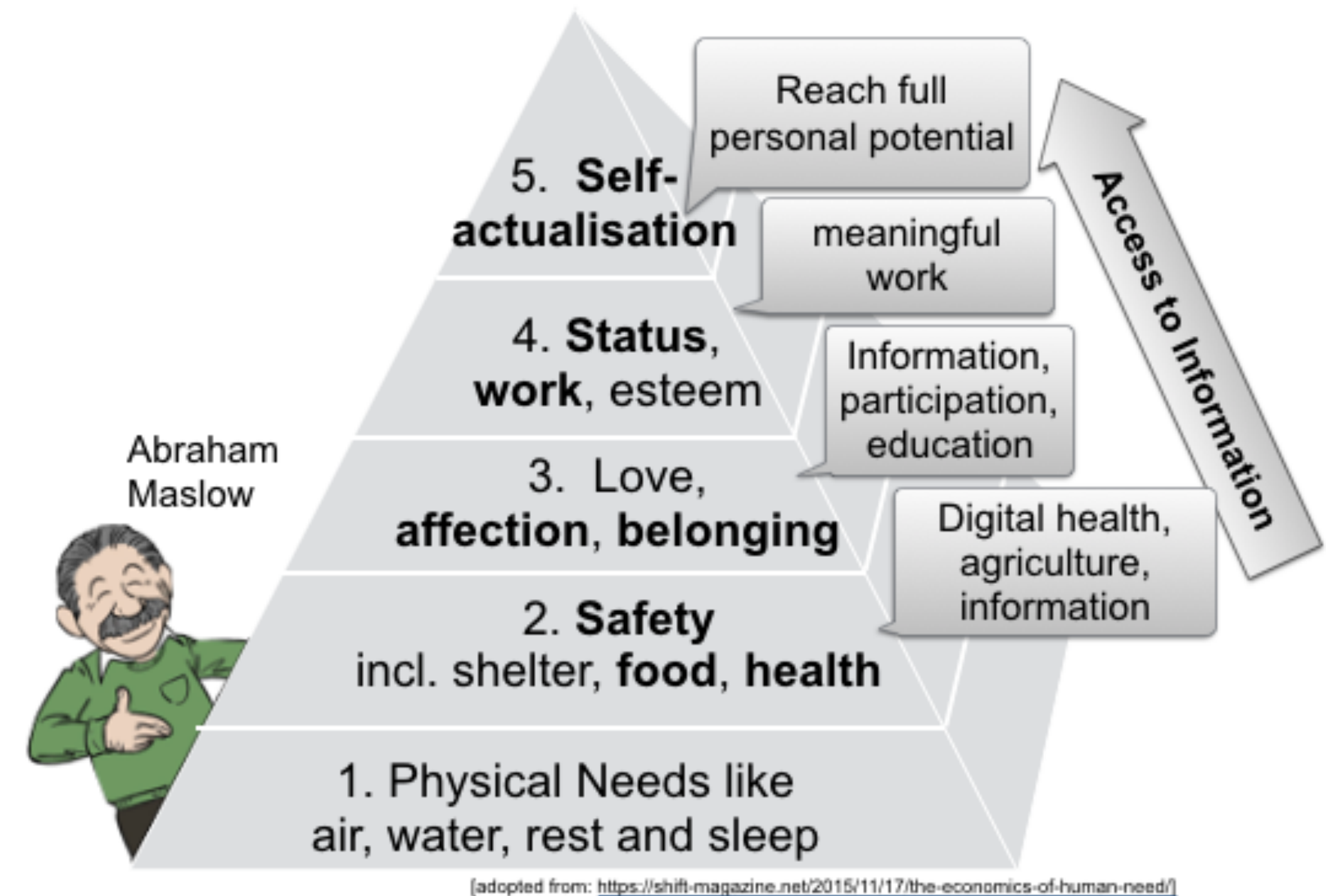
http://its-wiki.no/wiki/Digl:Roundtable_Digital_Health_for_Tanzania

- **Content** in Swahili,
 - covering local content, social network content
 - health and education information.
 - best praxis in agriculture, and local information spreading, e.g. fishing conditions and prices is seen as driver for adaptation.
 - Other services include inscription to e.g. secondary schools and similar activities
 - Commercial point of view Mobile Money like M-Pesa has highest priority, in addition to social network content such as Facebook and WhatsApp.
- **Schools** - *“every child should have the ability to access digital content”*
 - programs for providing digital curricula.
 - Partners like Khan Academy
- **Devices:** The majority of phones are 2G phones,
 - communities with electric power see the raise of smartphones. Lack of charging of smartphones is seen as a major hinder,
 - followed by the limited roll-out of 3G and 4G networks.
 - Priority should be given to the adoption of tablets and the availability of low-cost smartphones, evtl through a collaboration with India.
- **Incentives** for users:
 - The benefit of access to information is not obvious to users,
 - reluctance to subscribe to mobile broadband.
 - foster uptake, e.g. to provide free air time, download of music or calling minutes to users participating in digital health education.
- The Permanent Secretary Dr. Mpoki M. Ulisubisya asked **Peter Ulanga from USCAF to coordinate** the further collaboration.



Discussion Areas

- A. Internet to the villages
- B. Health information
- C. Village involvement
- D. International co-operation



Holistic approach
for rural development

Energy

Communication

Information

Migration path: A) Internet to the villages

- From 2G to 4G (5G)
 - tower upgrade
 - customer base & devices
 - future technology: 4G/LTE
 - coverage: 4G >150 km vs 3G ~ 10-15 km
- 2G and IP links
 - Amotel & Telecomshop Belgium for coverage and Internet

- 4G hot-spot termination
 - Jio (India): INR 999 (USD ~13) hot-spot
 - INR 150 (USD ~2.2) for 1 GB/day

GSM + Wifi
→ 200W
→ MicroBTS



[source: Amotel]

Facilitator for economic growth and partnership

- We need more long-term investments
 - build infrastructure
 - enable digital services
- Long-term revenue

The example from India

- 1 GB per day for € ~2.1 per month
- free voice, Zero-rated cloud content
- Schools, railway stations, ...
- *“Revenue is not an issue. Services will come”*



[source: Jio Press Release, Jan 2018, India]

<p>JioFi 4G Data + Voice Device</p> <p>Festive Offer.</p>  <p>₹ 999</p>	<p>JioFi</p> <p>Attractive Offer*</p>  <p>₹ 1,999</p>
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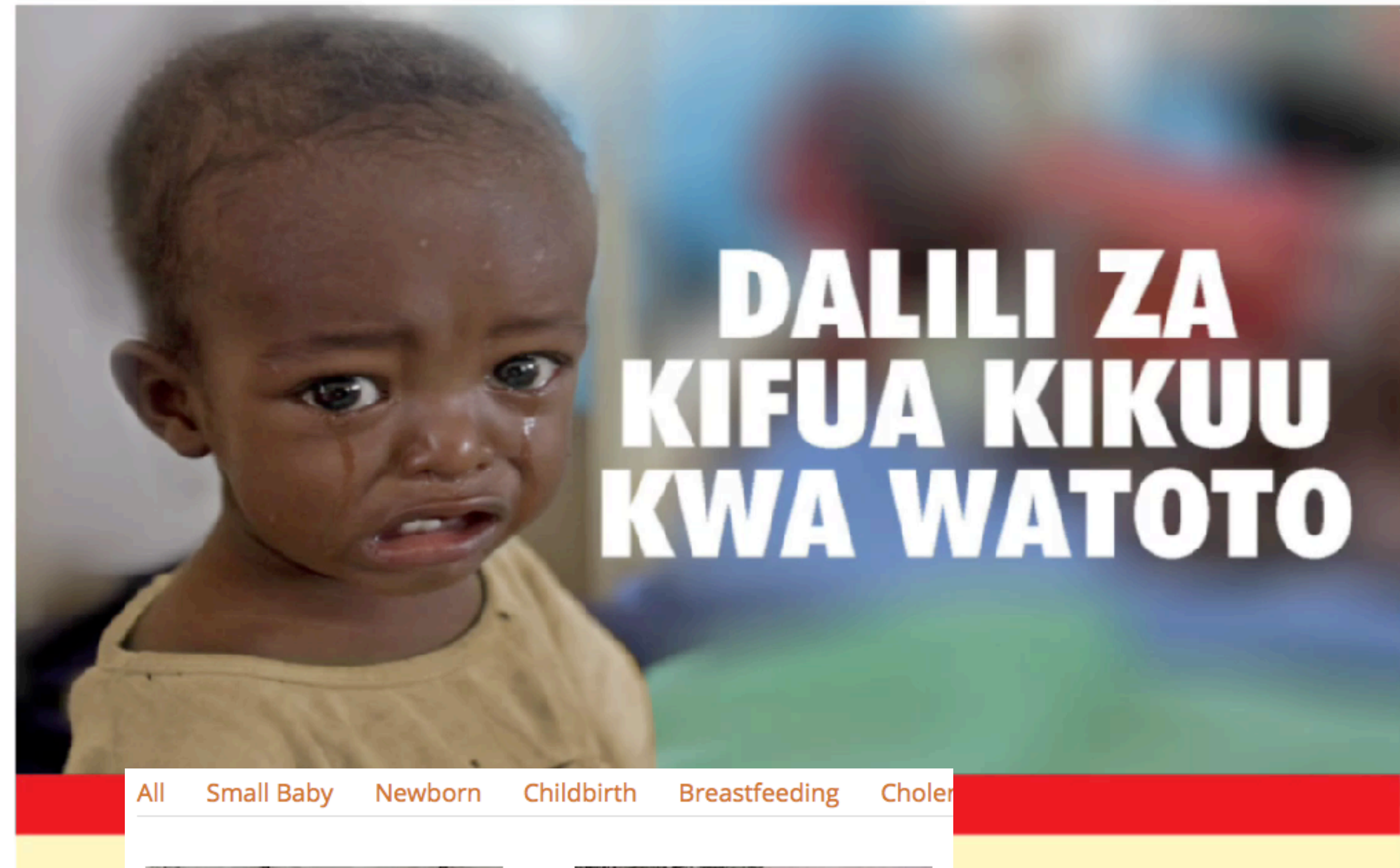
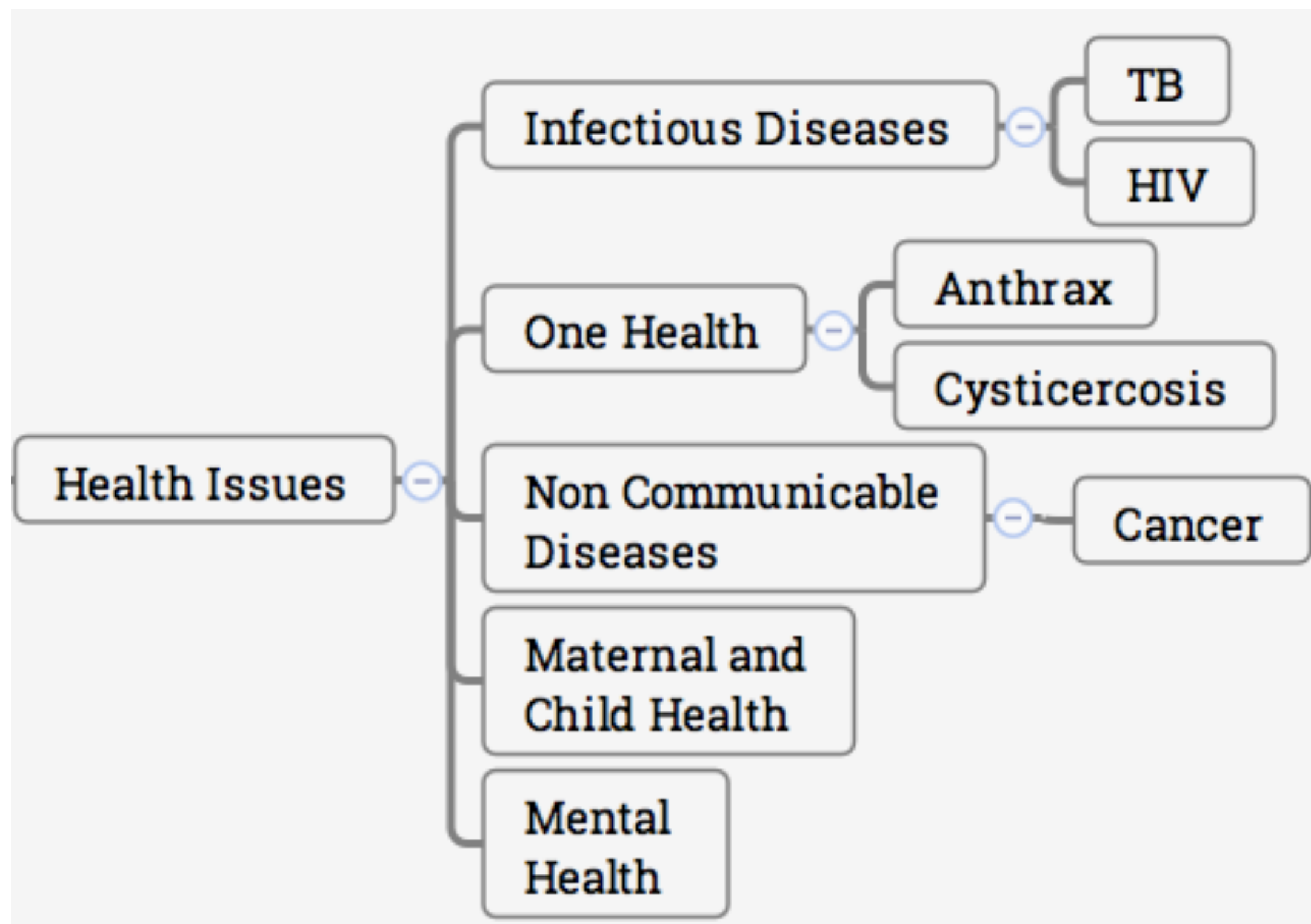
999 INR ~ 15 US\$

The adoption rate of 4G phones saw a four-fold increase last year because of the disruption in the telecom market as well as the dip in the cost of internet. Its reach has penetrated every corner of India, including the remote corners of the country. While Reliance Jio, Micromax etc. work on developing 4G feature phones, smartphones still remain the future.

<https://www.techradar.com/news/cheapest-4g-phones-in-india>

B) Digital Global Health Involvement, participation and sharing

- **Catalyst** for Agenda 2030 and SDGs
- **Entry point** for the **Digital Society**



<https://globalhealthmedia.org/videos>

C) Village involvement

- Goal: digital involvement
- Village platform
 - ➔ information for ward, Gov,...
 - ➔ health information for the people
 - ➔ Digital involvement of the people



Village information



Izazi is located in Iringa Rural District, Iringa and time zone Africa/Dar_es_Salaam.

[More](#)

Health information



Stay safe from Cysticercosis, Anthrax, Tuberculosis, Cholera, HIV/AIDS and other preventable diseases.

[More](#)

Social information



In Izazi, we are very happy people.Check our blog & Tweets.

[More](#)

D) International co-operation

- Digital Health
 - ➔ inventory: DHIS2
 - ➔ information: Global Health Media
 - ➔ health education
- Application areas
 - ➔ Agriculture, e.g. Veggie project
- Education
 - ➔ Khan Academy
- Infrastructure
 - ➔ India: 4G hot-spots by Jio
 - ➔ handsets
- Financing Digital Rural Tanzania
 - ➔ African Development Bank (AFDB)
 - ➔ World Bank
 - ➔ The Nordics,
 - ▶ Norad, Sida,...
 - ▶ Norfund, Swefund,...
 - ➔ Compact with Africa (CwA)
- showcase for GSMA, ITU

Digital Rural Tanzania

Discussion of a holistic approach for rural development

Communication

Internet to the villages

Energy

International co-operation

Common initiatives

Digital Inclusion

Health Information

Education

Village information

contribute to Partnership with Africa



- Example: Digital Tanzania
 - ➔ Unconnected: 13 Million people in 4.000 villages
- Combined effort of
 - ➔ IT industry,
 - ➔ World Bank,
 - ➔ Telecom and
 - ➔ Norwegian Industry

- Funding requirements
 - ➔ \$ 65.000 per village
 - ➔ \$ 280 Million for Digital Tanzania
 - ➔ € 89 Billion EU Frontex border control



1 USD/month for Telecom

Cost: 70 kUS\$/village

About the Basic Internet Foundation



- Founded by **University of Oslo (UNIK)** and **Kjeller Innovation**
 - ➔ facilitates: **“Internet light for all”**
 - ➔ free access to **information**: text, pictures and local content
 - ➔ Develops the market, complementary to market actors
 - ➔ **Sustainable business**, free information & paid amusement
 - ➔ Secretary General: Prof. Josef Noll (UiO)
- **Information** is the **basis** for **education**, **health** and entrepreneurship
- **Digitalisation** is the engine of **economic growth** and wellbeing of people
- Sustainable development requires **digital inclusion**, which necessitates Internet for all
- **Impact** lives of the **unconnected** 3.5 billions of **people** in the world

