Non-discriminating access for Digital Inclusion (DigI)
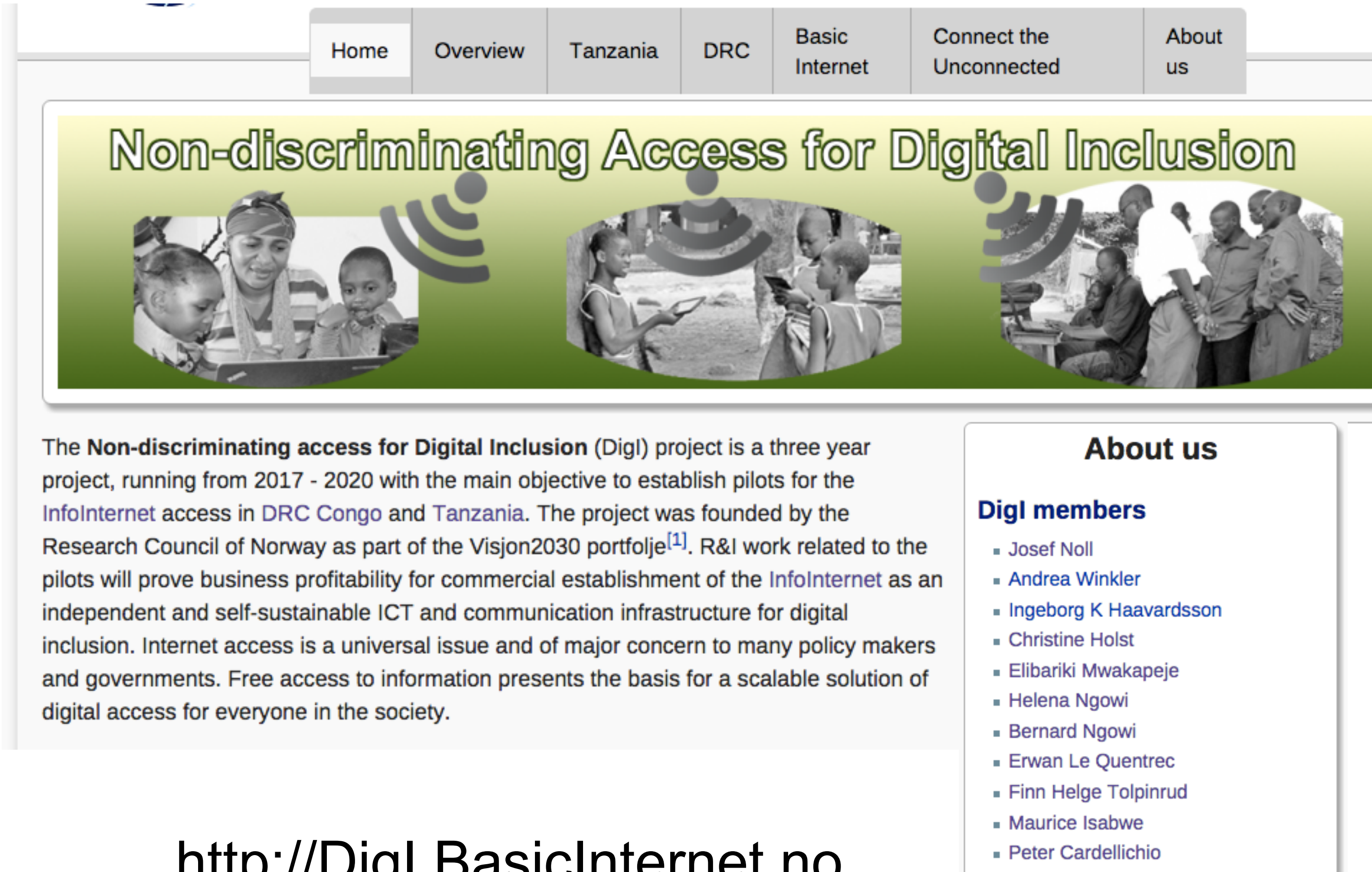
Josef Noll, Vidar Sannerhaugen

Basic Internet Foundation

[josef,vidar]@basicinternet.no

http://DigI.BasicInternet.no

Main objectives - InfoInternet provision

- Free access to information
  - → for everyone
  - → for all times (sustainable business model)
  - → KPI evaluation
- Pilot in Tanzania
  - → Health information
  - → 2 health spots (Phase A)
  - → 10 health spots (Phase B)
- Pilot in DRC
  - → Extend GSM with InfoInternet
  - → 2 + 6 off-grid villages (A + B)
- Sustainability and Impact

| Home | Overview | Tanzania | DRC | Basic Internet | Connect the Unconnected | About us |

Non-discriminating Access for Digital Inclusion

The **Non-discriminating access for Digital Inclusion** (DigI) project is a three year project, running from 2017 - 2020 with the main objective to establish pilots for the InfoInternet access in DRC Congo and Tanzania. The project was founded by the Research Council of Norway as part of the Visjon2030 portfolje[1]. R&I work related to the pilots will prove business profitability for commercial establishment of the InfoInternet as an independent and self-sustainable ICT and communication infrastructure for digital inclusion. Internet access is a universal issue and of major concern to many policy makers and governments. Free access to information presents the basis for a scalable solution of digital access for everyone in the society.

About us

DigI members
- Josef Noll
- Andrea Winkler
- Ingeborg K Haavardsson
- Christine Holst
- Elibariki Mwakapeje
- Helena Ngowi
- Bernard Ngowi
- Erwan Le Quentrec
- Finn Helge Tolpinrud
- Maurice Isabwe
- Peter Cardellichio
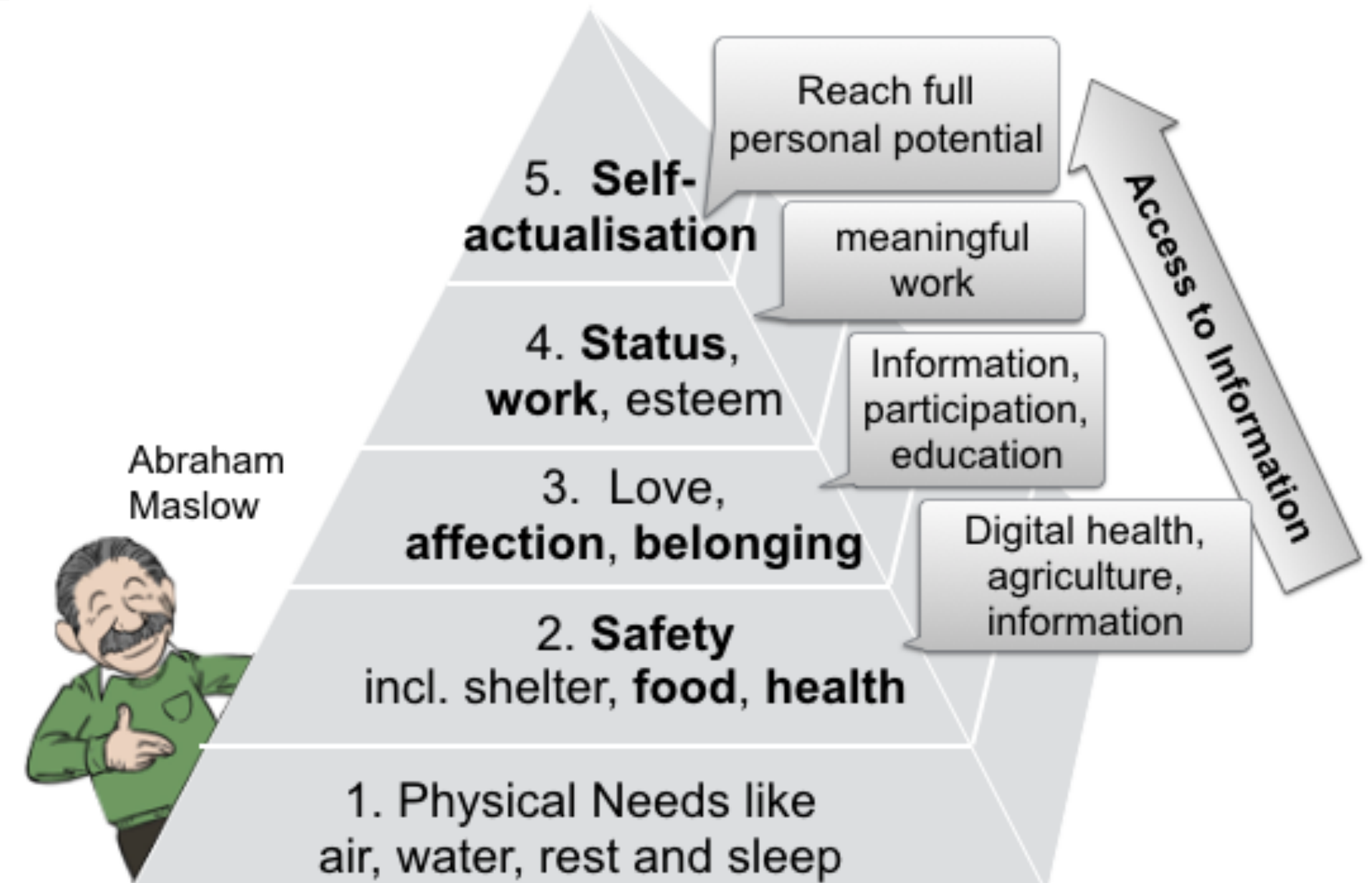
http://DigI.BasicInternet.no

Focus in Tanzania

- "nobody pays for a health video"
  - ➡ 10 min of video or 10 months of information?

- Addressing health as the basis for further development

- from Global Health to digital Global Health

Work in Tanzania [edit]

- WP-T1 Specifications for Tanzania
  Priority of content, selection of villages
- WP-T2 Pilot Phase A Tanzania
  Extending the network, providing (limited) content
- WP-T3 Phase A evaluations and Phase B Specification
  Lessons learned from phase A
- WP-T4 Pilot Phase B Tanzania
  Extending the reach and the services
- WP-T5 Tanzania Phase B evaluation and suggestions
  Transformation into sustainable access

Reach full personal potential

5. **Self-actualisation**   meaningful work

Access to Information

4. **Status, work**, esteem   Information, participation, education

Abraham Maslow

3. Love, **affection, belonging**   Digital health, agriculture, information

2. **Safety** incl. shelter, **food, health**

1. Physical Needs like air, water, rest and sleep

[adopted from: https://shift-magazine.net/2015/11/17/the-economics-of-human-need/]

Focus in DRC

- Internet as enabler for Digital Society

- Potential services:
  - voucher-sales for digital services,
  - electrical lights,
  - programs and mentoring for education and health
- Sustainability
  - operated by commercial actor
  - service continuity (free InfoInternet)
    - only 2-2,5% of bandwidth needed

- 11 partners from 5 countries

Basic Internet Foundation [edit]

The Basic Internet Foundation will demonstrate the technical feasibility and the business profitability of InfoInternet

Digl members of Basic Internet Foundation: Danica Radovanovic, Josef Noll, Sudhir Dixit

University of Oslo [edit]

UiO will strengthen the social responsibility in health and education. The Center for Global Health will benefit from leveraging the One-Health services into the digital space. The Department of Technology Systems will benefit from research project development, disseminating the reports and papers in high-quality journals and publications, with exchange students.

Digl members of UiO: Andrea Winkler, Christine Holst, Elibariki Mwakapeje, Iñaki Garitano, Josef Noll

Orange [edit]

Orange will demonstrate the novel opportunity of freemium access, enable low-end customers to become familiar with digital information, and generate business from other customers through paid voucher system.

Digl members of Orange: Erwan Le Quentrec

Ministry of Health in Tanzania [edit]

The Ministry of Health in Tanzania supports the roll-out of Digital Health

Digl members of Ministry of Health: Elibariki Mwakapeje

National Centre for Medical Research [edit]

The National Centre for Medical Research (NIMR) will contribute with health content and support the roll-out, and will benefit from faster access to health information

Digl members of NIMR: Bernard Ngowi

Sokoine University of Agriculture [edit]

The Sokoine University of Agriculture (SUA) will contribute with agriculture related health information, and receive faster access to health information and triggers for relevant public health intervention through apps and digital access

Mondragon University [edit]

Mondragon will provide the the technical infrastructure in collaboration with the Basic Internet Foundation

Digl members of MGEP: Iñaki Garitano

Global Health Media Project [edit]

The Global Health Media Project (GMHP) will enable local (off-line) access for their health videos, and pilots the online interactivity

Digl members of GMHP: Peter Cardellichio

IPX Extenso [edit]

IPXextenso will extend their GSM off-grid network with Internet and enable a new service market

Digl members of IPX Extenso: Finn Helge Tolpinrud

Future Competence [edit]

Future Competence (FCI) will foster digital competence and education through using their experience from the African market

Digl members of Future Competence: Ghislain Maurice Norbert Isabwe

Movation [edit]

Movation will handle innovation aspects, e.g. best praxis applicability of open innovation

Digl members of Movation: Bjarne Tarjei Haugen, Josef Noll

Benefits of partnership [edit]

Our aim is to contribute to contribute to Empowerment of the unconnected people *through* Digital Inclusion *and the* Connect the Unconnected Initiative . If you want to become part of the Initiative, please contact us. We envision your knowledge, your responsibility, and your aim to contribute to the SDG 2030 targets.

Partners

- Basic Internet Foundation
- University of Oslo
- Orange
- Ministry of Health in Tanzania
- National Centre for Medical Research
- Sokoine University of Agriculture
- Mondragon University
- Global Health Media Project
- IPX Extenso
- Future Competence
- Movation

Associate Partners

- Amotel
- LHL Internasjonal
- *Collaboration opportunities*

Partnership for Digital Africa

Basic Internet

Comment: As a guest country at the G20 summit, we must help to change the world | Erna Solberg

ERNA SOLBERG (H), PRIME MINISTER

UPDATED: 30.JAN.2017 9:39 P.M. | PUBLISHED: 30.JAN.2017 7:58 P.M.

In July last year was Erna Solberg invited by Angela Merkel for this year's G20 meeting. Here from a meeting between the German Chancellor and the Norwegian Prime Minister in Berlin in November, where Norway's participation as guest country at the economic summit were among issues discussed.

1. UN sustainability goals and Agenda 2030:

Germany has chosen this agenda as a backdrop for their entire program for the presidency, and I lead a group at the United Nations that will drive towards implementation.

We will work to ensure that the G20 goes ahead with its own specific commitments to help achieve sustainability goals.

2. Migration and partnership with Africa:

The world is experiencing the greatest influx of refugees since World War II. Europe, and especially Germany, have seen the consequences of that.

It is necessary to improve the situation where people break up close. Germany will use its chairmanship to do something about the problems which people belong. There is no minimum job creation and private investment. There are agreements with African countries wishing to achieve it.

G20 can therefore help the countries and international organizations use their resources more on measures which create growth and job creation.

3. Health and education.

Norway has long had a heavy international involvement. Education and health are associated with economic growth.

How can we help?

Our contribution:

- **Information for all (InfoInternet)**
  - ➡ **free access** to text and pictures
    - the "**walk** on the Internet"
  - ➡ paid access to amusement
    - "Toll Roads"
- The **catalyst** for the SDGs

Provide Everyone with Free Access to Information

Free local info
- health
- education

All   Small Baby   Newborn   Childbirth   Breastfeeding   Choler

The Story of Ebola, English   The Story of Ebola, Swahili

https://globalhealthmedia.org/videos/ebola-portfolio/

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE AND JUSTICE STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	THE GLOBAL GOALS For Sustainable Development

Summary

- What is the project about?

  - → Providing free access to information for everyone
  - → Inclusion in the digital society
  - → Catalyst for the SDGs

- 2.   What is the innovation in your project?

  - → Free access to information - sustainable business
  - → Local Health and Education - free access
  - → Ecosystem for Digital inclusion
  - → Digital Global Health Platform, (Village market platform)

- 3.   What is the potential for it to be brought to scale after the project?

  - → Business operation through local operators (TZ: Amotel, Halotel, Airtel…)
  - → Buz partners involved: Orange, IPXextenso
  - → invitation: IT-industry,…

- 4.   What are the biggest risks in the project, and how will you mitigate them?

  - → Business culture —- involvement of local: Ministry of Health, NIMR, …
  - → no-take up: text & pictures not sufficient for digital literacy

Sustainability and Impact

Closing the Digital Divide Gap

- Government in Tanzania provides: Backbone (fibre to regions)

- **Wireless distribution & termination**
- **Health Centres**
- **Primary, secondary school**
- **Community centres**

- Operators
  - ➡ provide extension to home
  - ➡ provide service environment, e.g. mWallet
  - ➡ support mobile broadband uptake

Internet uptake

Pilots
- prototypes
- projects

the Digital Divide Gap

commercial uptake
Wifi & Mobile

InfoInternet

Time
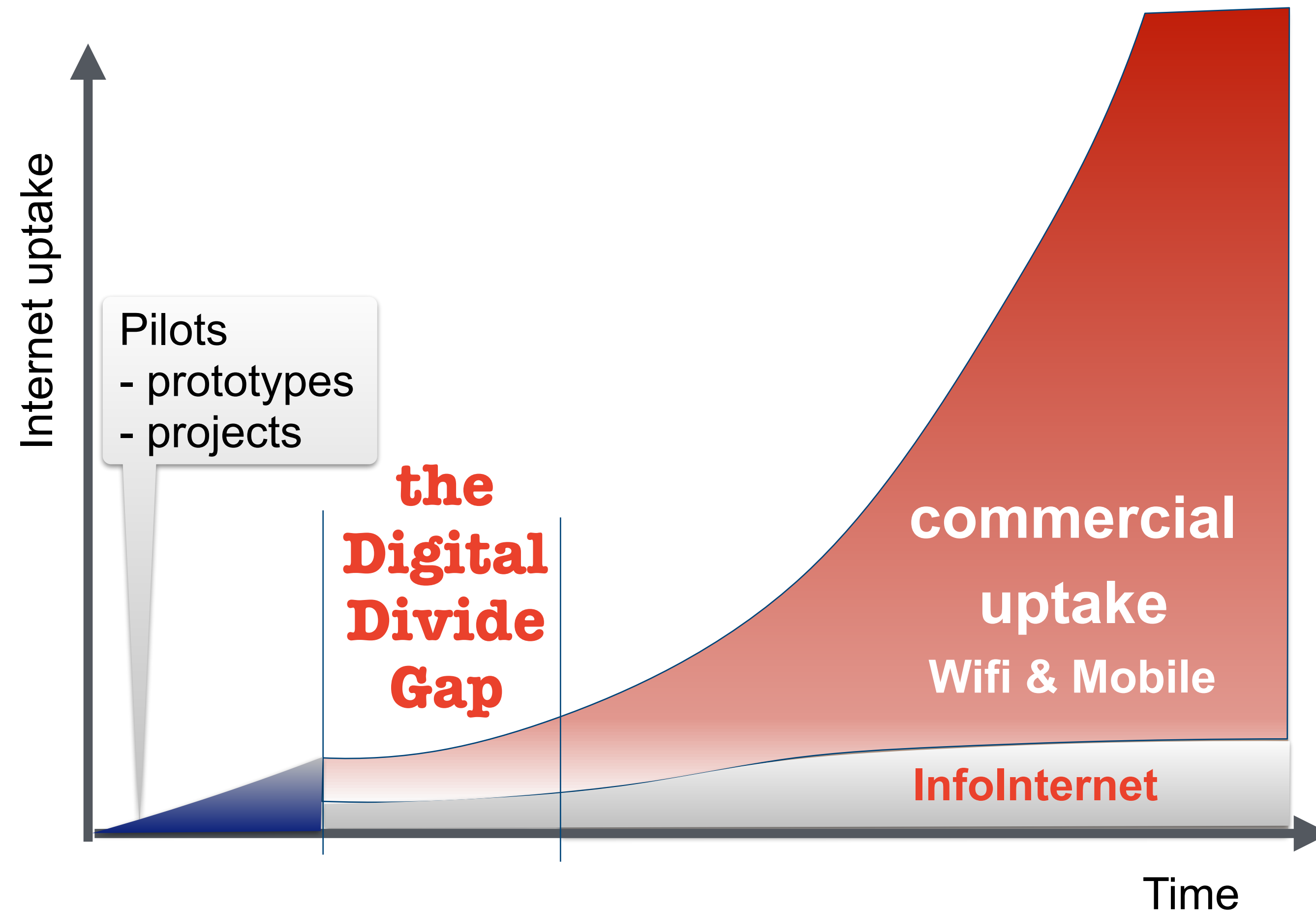
Answering NetNeutrality

- Net Neutrality:
  The principle that Internet service providers should enable access to all content and applications regardless of the source, and without favouring or blocking particular products or websites.

  [Source: Oxford Dictionary]

- InfoInternet principles
  - ➡ Free access to all content being text and pictures, payed access to high-bandwidth services
  - ➡ All the Internet, without favouring or blocking particular products or websites

https://en.oxforddictionaries.com/definition/net_neutrality

Impact & Scalability

- Connecting the unconnected 4.000 villages in Tanzania
  - ➡ Fibre to regions
  - ➡ "connecting"
- Addressing Digital Development Partnership (DDP) from Worldbank
- Collaboration from Norway & Tanzania
  - ➡ Invite IT (Google, Microsoft)
  - ➡ Invite GSMA
  - ➡ Create showcase for Worldbank DDP

BasicInternet.org

KJELLER INNOVASJON · UiO : University of Oslo · Basic Internet Foundation

Connecting the Unconnected: Providing Free Access to Global Health Information in Tanzania

The Basic Internet Foundation calls for action and your support in connecting the unconnected 4.000 villages in Tanzania (CTU alliance). Digital inclusion is a key for health, education and meaningful work. Connecting Tanzania with free access to information through the alliance of IT, Telecom, Academia, and public sector partners will create the showcase for Digital Africa with a use case dedicated to healthcare. The unique CTU alliance, addressing a common mission and best praxis for partnership in digital access, will build the basis for sustainable development, a catalyst for achieving the SDGs and business acceleration in Africa.

Opportunity

Higher penetration of Internet access, especially in rural areas, is the key for sustainable development and supports:

(i) Local governments, as digital inclusion is vital for six key sectors: health, agriculture, education, retail, government and financial services.

(ii) The people themselves to gain access to information related to education and healthcare, and finally more employment, income generation and productivity growth for everyone.

(iii) Companies that realise the market potential behind this vast number of people currently without access to Internet and, therefore, without market exposure. This may not be in terms of the purchasing power of each inhabitant, but as a result of the mere number of people.

The UN Sustainable Development Goals (SDGs) have identified "access to information and communication technology and strive to provide universal and affordable access to the Internet" (SDG target 9.c). Though mobile operators play an eminent role, partnership is needed to address the digital access to remote villages and provide information access to people otherwise left left behind.

World Development Report

The World Bank's 2016 World Development Report on Digital Dividends (WDR 2016) reports on opportunities of digital technologies and digital access. Digital access is the key for digital development being the positive driver for sustainable and inclusive development.

Figure 1 - Digital Inclusion starts with health and food

The CTU alliance will help the unconnected to reach the next steps of the Maslow pyramid (see figure 1), by providing access and information for food and health, and enable the further reach to levels 3-5 for everyone. The WDR 2016 report also highlights the risks that exist if digital societies are only limited to those already being better off.

Connecting Tanzania

The CTU alliance takes the challenges to connect rural areas, and aims at creating the showcase for digital information access in Africa. The government of Tanzania is building the fibre infrastructure connecting the various regions, which is an excellent starting point of bringing Internet to the 4.000 unconnected villages. We envision information hot-spots with free access to information with sustainable business models, and the commercial roll-out of mobile networks for coverage.

By connecting the unconnected villages we envision growth in access to mobile Internet, given the following developments:

(i) Current trends show that **smart phones** are getting dominant, thus allowing users access to digital information if data access can be made affordable.

(ii) Availability and **affordability** of data traffic. GSMA has pointed out that by the end of 2014 around 77% of the developing had no access to 3G/4G mobile networks. Though operators plan for cheaper networks with wider coverage, access to villages has to be ensured before mobile networks can be established.

(iii) **Addressing inequality**, and especially the education of women and girls, who typically don't have mobile broadband connectivity.

(iv) Free **access to information**, starting with **digital health**, being the basis for further education. The free access gives those who have never used a value proposition prior to the commercial uptake of mobile Internet.

(v) **Establishing** the base for **commercial** operations of Internet provision, mobile operations and digital job creation.

People know the value of television, voice calling on phones, motor bikes, refrigerators, etc., but not of the Internet and the opportunities enabled by the digital society.

Showcase for developing economies

Though appreciating the cultural and economic differences between regions, we believe that connecting the unconnected 4.000 villages in Tanzania will become the show-case for digital Africa. The collaboration between public authorities in connecting the regions, the joint effort of connecting the villages, and the duality in providing free access to information and

commercial mobile/Internet access will become the catalyst for achieving the SDGs.

With half of the World's population growth taking place in Africa, digital Tanzania can provide the best praxis of digital inclusion of Africa.

From Health to Empowerment

Our primary focus is on digital health addressing SDG target 3. Digital information for health addresses the whole value chain of Global Health, including

(i) information to people on basic health, health practices, hygiene, and food security,

(ii) health workers to be connected to information and diagnostics services,

(iii) remote analytics, management of diseases and outbreaks.

Safety, food and health will enable people to aim for the higher levels including education, societal engagement, and participation in the society. Furthermore, digital inclusion will open for quality education, empower women and girls, and lead to economic growth, employment and decent work for all.

Priorities & Governance Principles

Given the governmental support of connecting the regions, priority is given to (i) extending Internet access to the villages, (ii) creating WiFi hot-spots at health centres, and (iii) the commercial roll-out of Mobile/Internet access.

The CTU initiative for Tanzania will create non-discriminating access to information, ensure net-neutrality, and provide a platform for commercial operations both from network providers, ISPs and IT services.

Given a close relation to the DDP of the World Bank, we will provide open information on all operations to ensure applicability in other markets, and best praxis for Internet for all, regional ICT markets, e-Government and digital innovation.
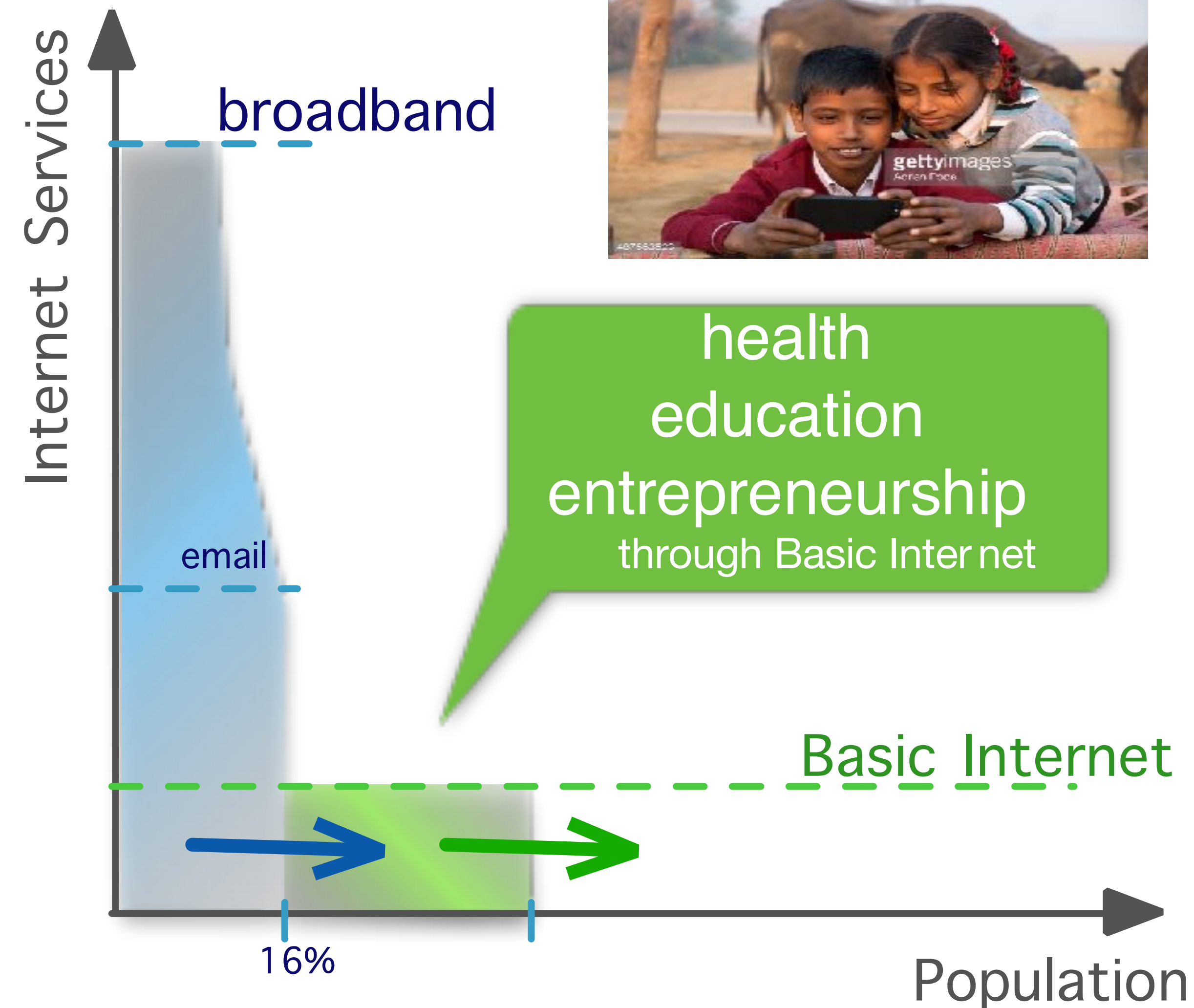
These principles are the basis for business roll-out, as well as open competence, extendability, and scalability of digital access.

The CTU initiative is inviting for partnership in networking, technology, and content to establish Digital Tanzania as showcase for Digital Africa.

Contact: Josef Noll, Basic Internet Foundation, josef@basicinternet.org, Andrea Winkler, Universitet i Oslo, a.s.winkler@medisin.uio.no

December 2016

- Digital Inclusion is the key for sustainable development
  - ➡ Complementary to traditional industry
  - ➡ Relevant for the developing world (and the World)
- Net neutrality
  - ➡ access to information, compressed text and pictures through the InfoInternet
- Establishing the pilots for Digital Inclusion through Information access
  - ➡ Focus in Tanzania on Health
  - ➡ Focus in DRC on education/work
- Well-balanced team
  - ➡ Strong local presence
  - ➡ Academia, Politics, Industry and SMEs
- Addressing the challenges of "Empower the people at the bottom of the pyramid"
  - Preparing the showcase Digital Tanzania
  - Catalyst for Sustainable Development Goals 2030

Internet Services

broadband

health
education
entrepreneurship
through Basic Internet

email

Basic Internet

16%

Population

for a world:
"Where everyone can open his browser and get free access to Internet"

No one should have to choose between access to the Internet and food or medicine.

Web

CONNECT

IPR

Suggestion: IPR management

- Suggestion for IPR management of Results obtained in "Non-discriminating access for Digital Inclusion (DigI)".

- The coordinator suggests to adopt the Project Consortium Agreement from the JU ECSEL, PCA v5 dated 26Feb2015. The reason for adopting the PCA from JU ECSEL is the wide acceptance amongst European Industry, and the de-facto standard of the PCA for industrial innovation projects.

- Details on the options for 8.2.3 and 8.2.5 need to be agreed by all project participants, expected to take place within the first 3 months of the project.

- Though some smaller sections address a.o. the background, dissemination and other IPR-related aspects, the main section is section 8

Technical Annex
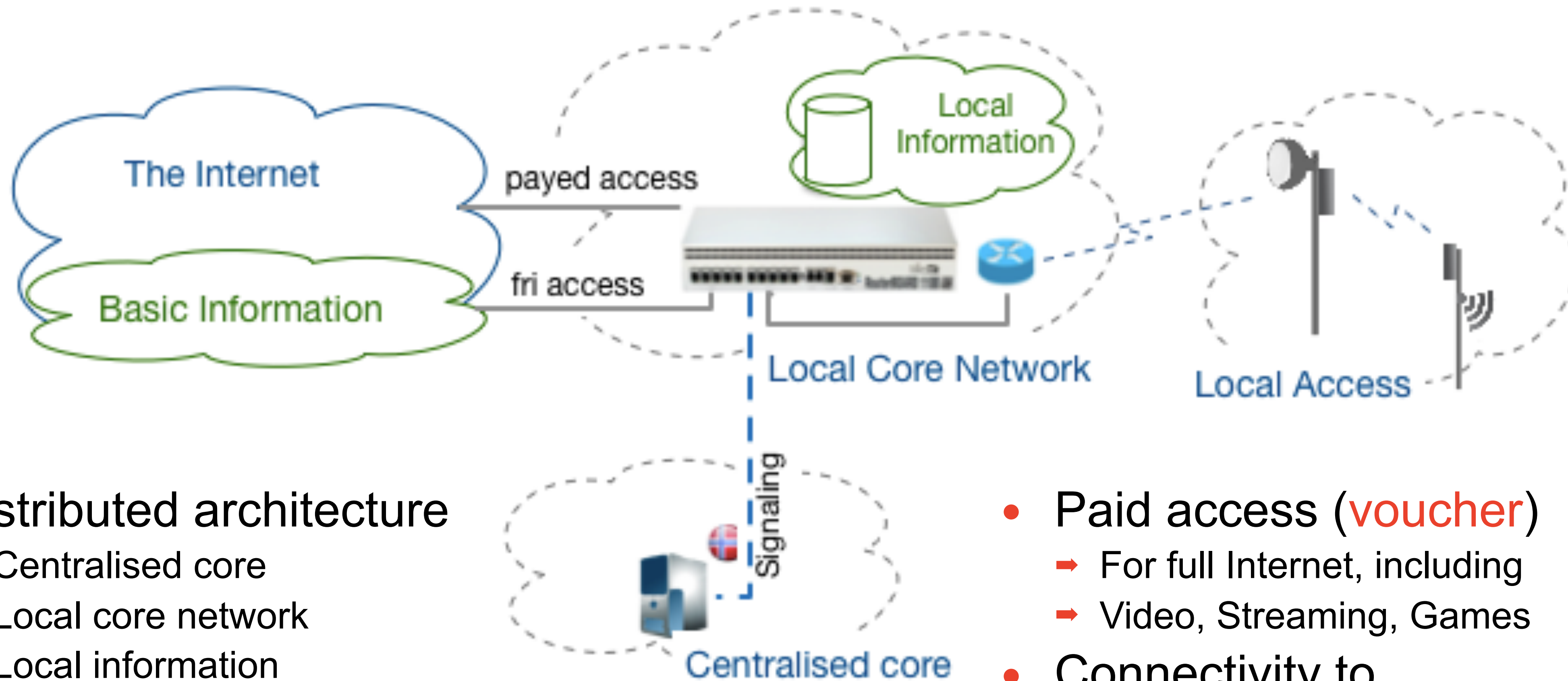
- **Distributed architecture**
  - Centralised core
  - Local core network
  - Local information
  - Local access
- **Fri access to**
  - Basic Information (InfoInternet)
  - Local Information

- **Paid access (voucher)**
  - For full Internet, including
  - Video, Streaming, Games
- **Connectivity to**
  - Mobile Operator Network
  - Radio Link Network
  - Satellite back-bone