



UiO : Department of Technology Systems
University of Oslo

**Global Health Inspiration days,
13-14Nov2017, Oslo**

Digital Health as Catalyst for Digital Societies

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Center for Global Health, Signatory scheme: **Digital Health**

Partnership for Digital Africa

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.

United Nations Sustainable Development Goals



Digital Global Health

digital is coming

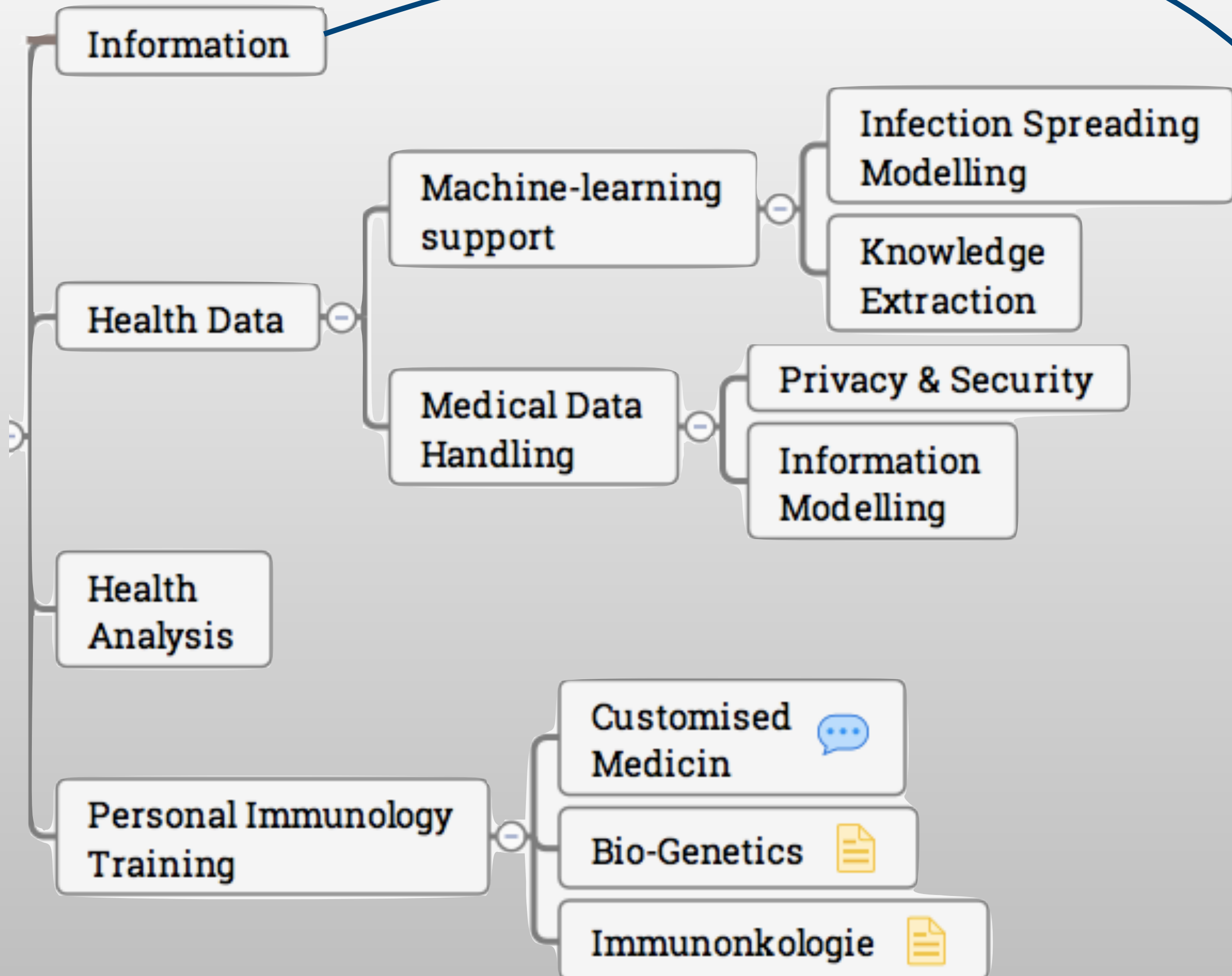


- Digital Health - the new area for IT companies
 - 20% of USA's state budget for Health
 - Facebook: \$ 600 million Cell Globe
 - Microsoft: medical publications 27 million
- Examples
 - Google: Skin Cancer type - image recognition
 - Software for depression
 - nanoparticles for heart-attack recognition
 - IBM: Autism of newborns
- Cancer treatment
 - 200 substances, 1200 medicaments
 - 2 x combination: > 100.000 possibilities
 - 3 x combinations: ~300 million
- Leukemia
 - 11026 combination of substances
 - 102 tested within 2 years
 - computers suggest most promising

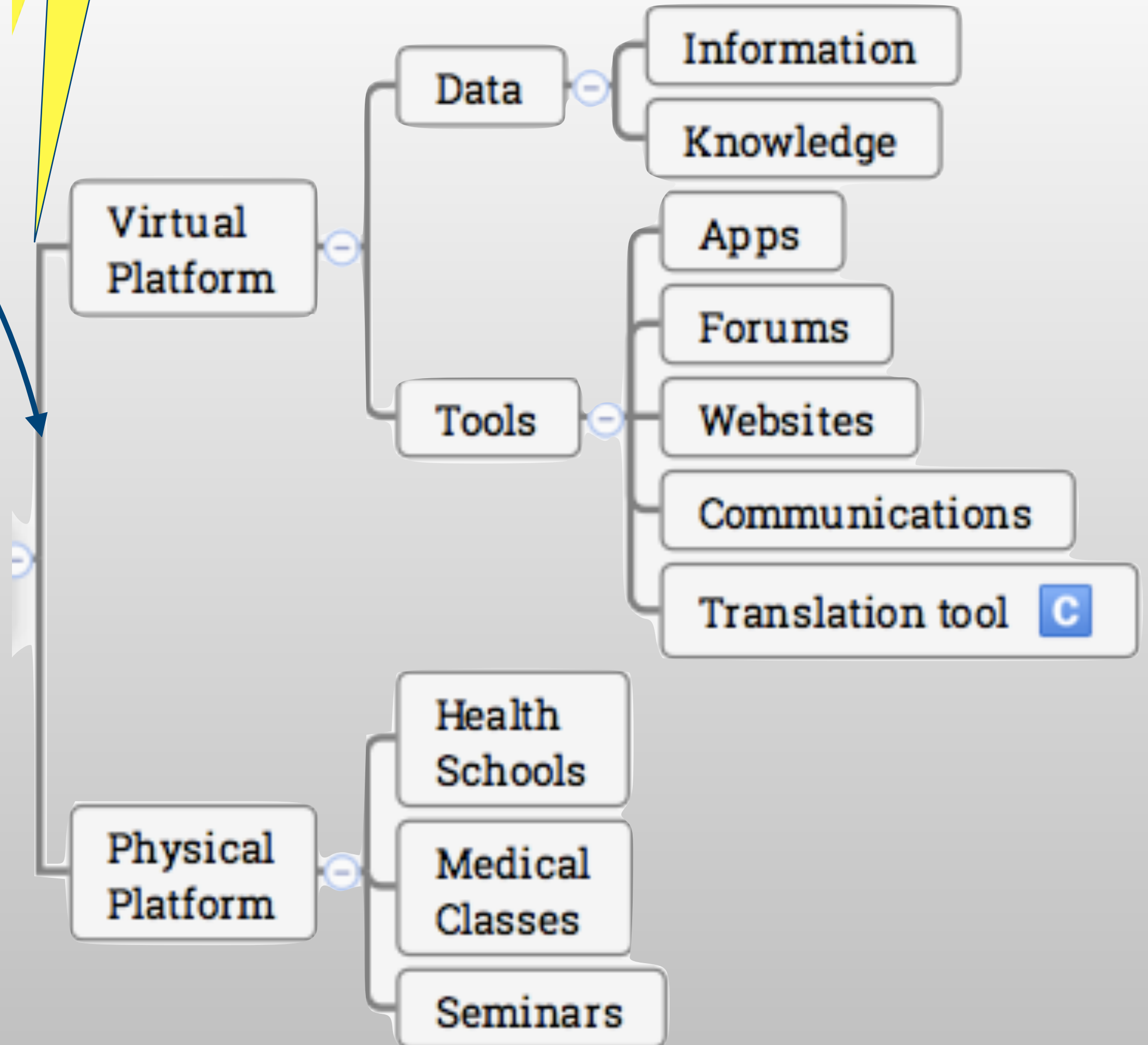
Digital Health & Digital Health Platform



Digital Health

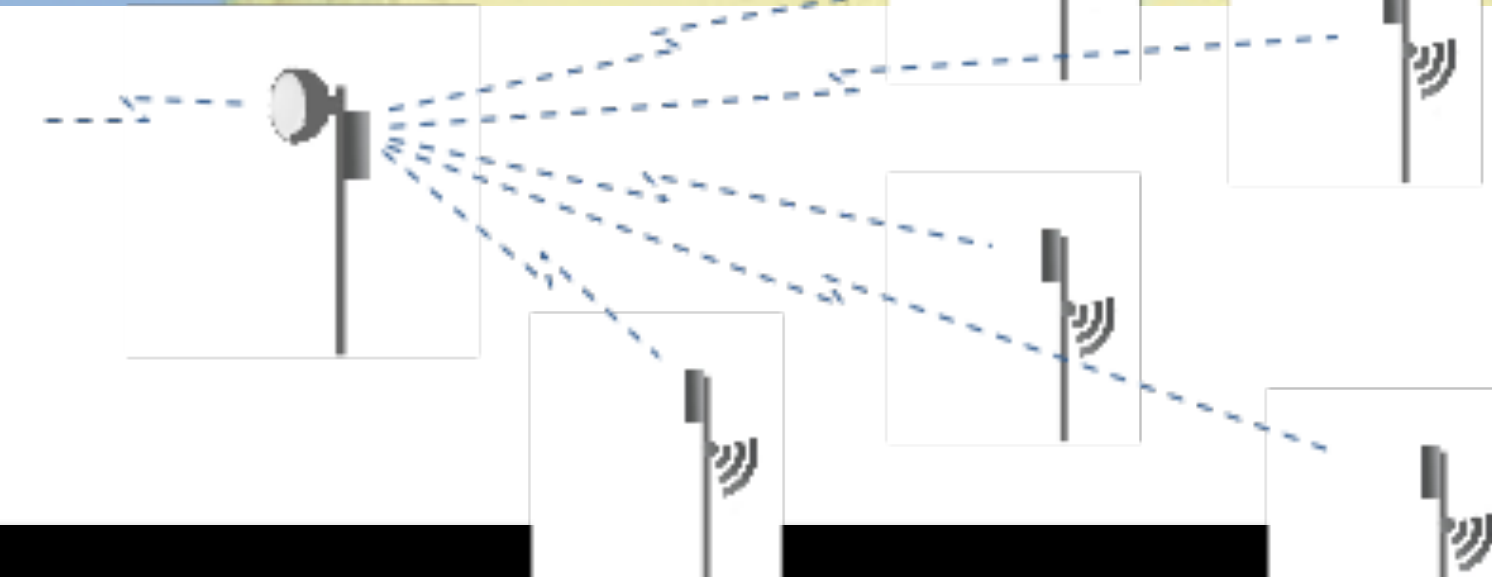
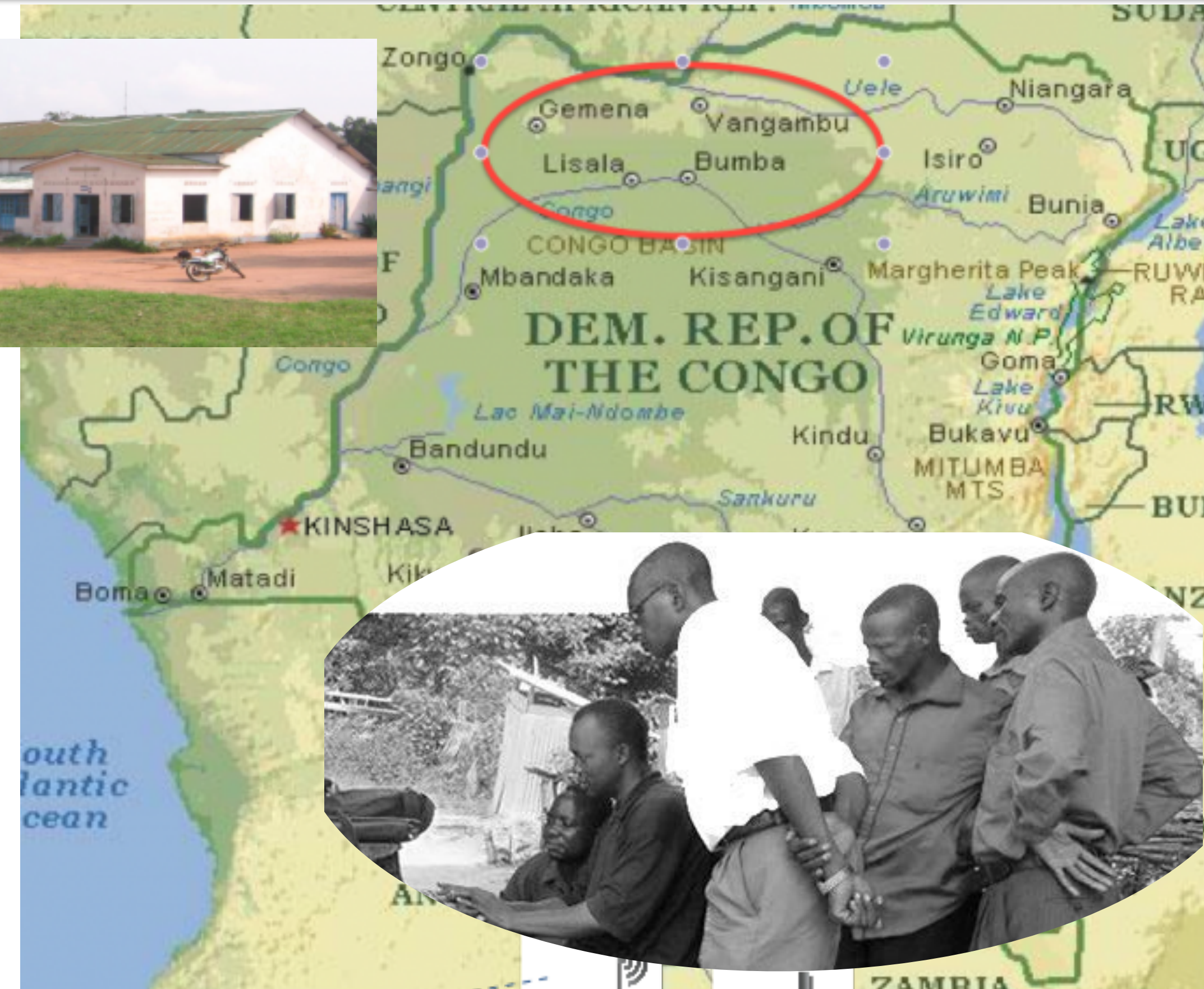


Sustainable, inclusive and distributed Platform for Global Health



Background

- Internet provision to various parts of DRC
 - operations since 2011
- Connection to a.o. University of Lisala
- Experiences from Internet provision
 - Expensive access: 2000 US\$/month for 1 Mbit/s
Note: 80 Mbit/s for 66 US\$ (NO), factor: **2.420**
or **0.04%**
 - Requirement for self-sustainable infrastructure
- Developed network infrastructure
 - low-cost establishment of local hot-spots
 - remote core infrastructure (in Norway)
 - based on experiences from Internet history at UiO/UNIK



Connectivity & Affordability



- Mobile driven development,
 - ➔ Revenue-driven
- **Affordability** (costs of data)
- industrial perspective
 - ➔ Industry4.0, Internet of Things
- **Novel Approach** required



The Unconnected Market Landscape

Unique Mobile Internet Users

Population 15+ (bn)	Total
Developed World	0.9
Developing World	4.3
Total	5.2

Penetration 15+ (%)	Total
Developed World	100%
Developing World	100%
Total	100%

BMI	NMI	Unconnected	Total
0.6	0.1	0.3	
1.0	0.8	2.5	3.3
1.6	0.9	2.8	

BMI	NMI	Unconnected	Total
64%	8%	27%	
23%	18%	59%	77%
30%	17%	53%	

Source: GSMA Intelligence; figures reflect position at end of 2014
 BMI = Broadband Mobile Internet (3G/4G); NMI = Narrowband Mobile Internet (<3G)

77% don't have decent access

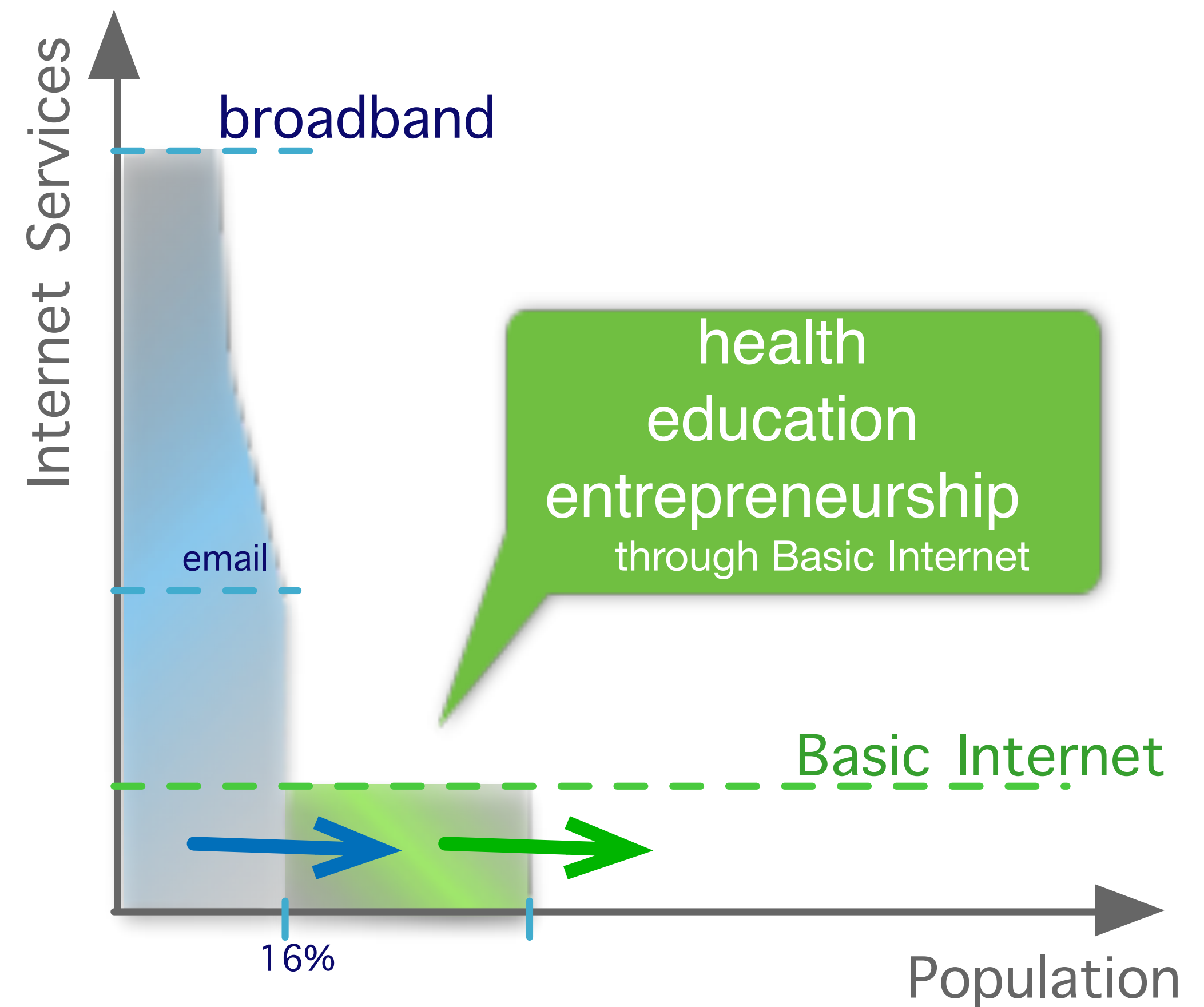
[Source: GSMA, Nov2015]



"Half a dollar is enough"



- "nobody pays for a health video"
 - requires new business model
- *Internet light*: text & pictures
 - Free access to information
 - Local content: health video, education
 - Voucher access to entertainment
- 10 min video = 10 months of information [Source:Opera Software]
 - Information: 2-2.5% bandwidth
 - 1 paid user + 300-400 "Internet light"



“Internet light for all”

free access to information for all



Road Infrastructure

- Basic infrastructure
 - free usage for pedestrians & cyclists
 - authentication for cars
- Highways & toll roads
 - speed & comfort
 - often privately managed
- Successful complementarity



InfoInternet Infrastructure

- Basic Access
 - free access of information
 - walk to Internet
- Broadband and Mobile services
 - Voice, video & games
 - speed & comfort
 - privately managed
- Complementarity



The need for Partnerskap – InfoInternet



Partnership for digital inclusion	
Telecom	Internet light
revenue-driven	non-profit
targeting leveraged creation	targeting no- and limited use
voice & mobile broadband	compressed text & pictures
subscription based (SIM)	free access & voucher
mobile network: coverage & capacity	Wifi-spots: health-/ community centres, schools
operator cost model	target: 0.5 US\$/month



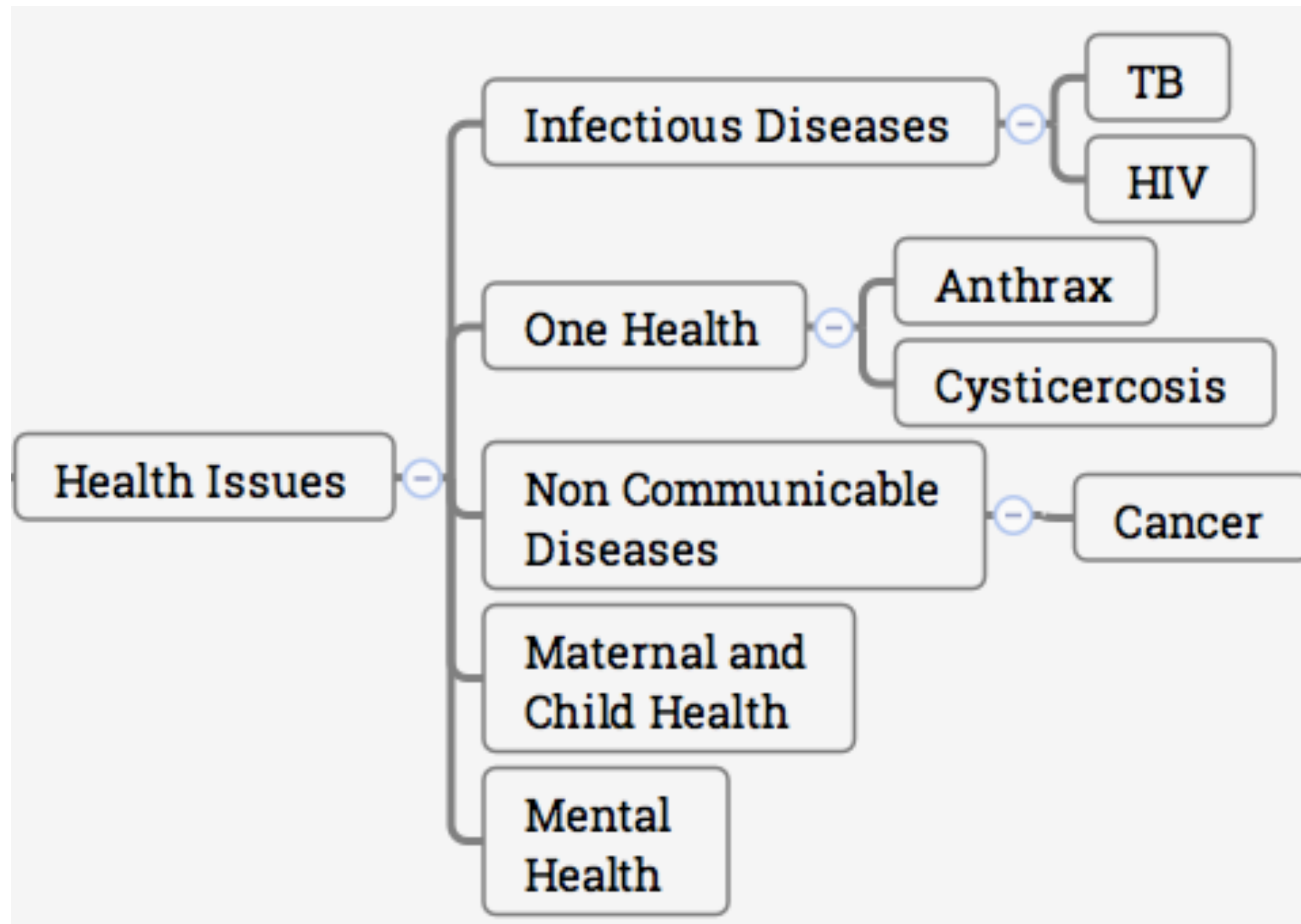
[Source: GSMA, Nov2015]

Tanzania – Digital Health

2017



- Digital Health Information
 - ➔ 4 villages with health spots in Tanzania
 - ➔ Focus on TB, HIV, Anthrax and Cysticercosis
 - ➔ Health videos



Digital Global Health Involvement, participation and sharing

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



All Small Baby Newborn Childbirth Breastfeeding Cholera



The Story of Ebola, English



The Story of Ebola, Swahili

<https://globalhealthmedia.org/videos>

Summary

- **Digital Inclusion** is the key for **sustainable development**
- **Net neutrality**
 - access to information, compressed text and pictures through the **InfoInternet** standard
- Establishing the pilots for **Digital Inclusion** through **Internet light for all**
 - Focus in **Tanzania** on **health**
 - Focus in **DRC** on **education/work**
- Well-balanced team
 - Strong local presence
 - Academia, Politics, Industry and SMEs
- **Catalyst** for Sustainable Development Goals (SDGs)



Partners



FR



ES



Ministry of Health, TZ



UiO



TZ



USA



UK



TZ

Time has come for a transformation of Health into the data-driven world.

Chris Bishop, Microsoft Cambridge (2017)