

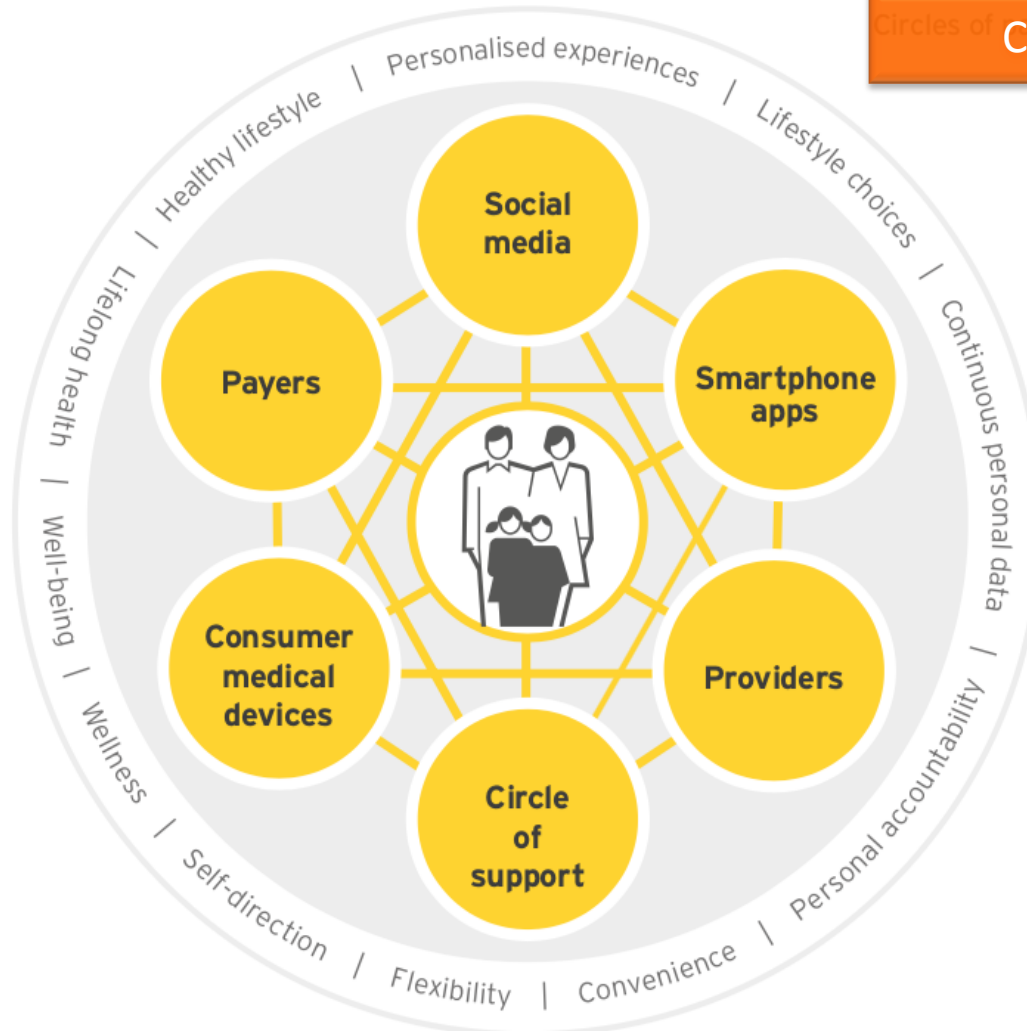


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Transformation of Health in the Digital Market – Investing in Technological Empowerment and Governance

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13th April 2018 OECD Workshop Digital Health

Circles of participatory health



Source: Ernst & Young, 2016

Opportunities:

- Big Data for Health
- 5-G rapid low latency network
- Integration with IoT

New capabilities:

- FAIR Data
- EOSC
- Field Lab implementation research
- PPP collaboration

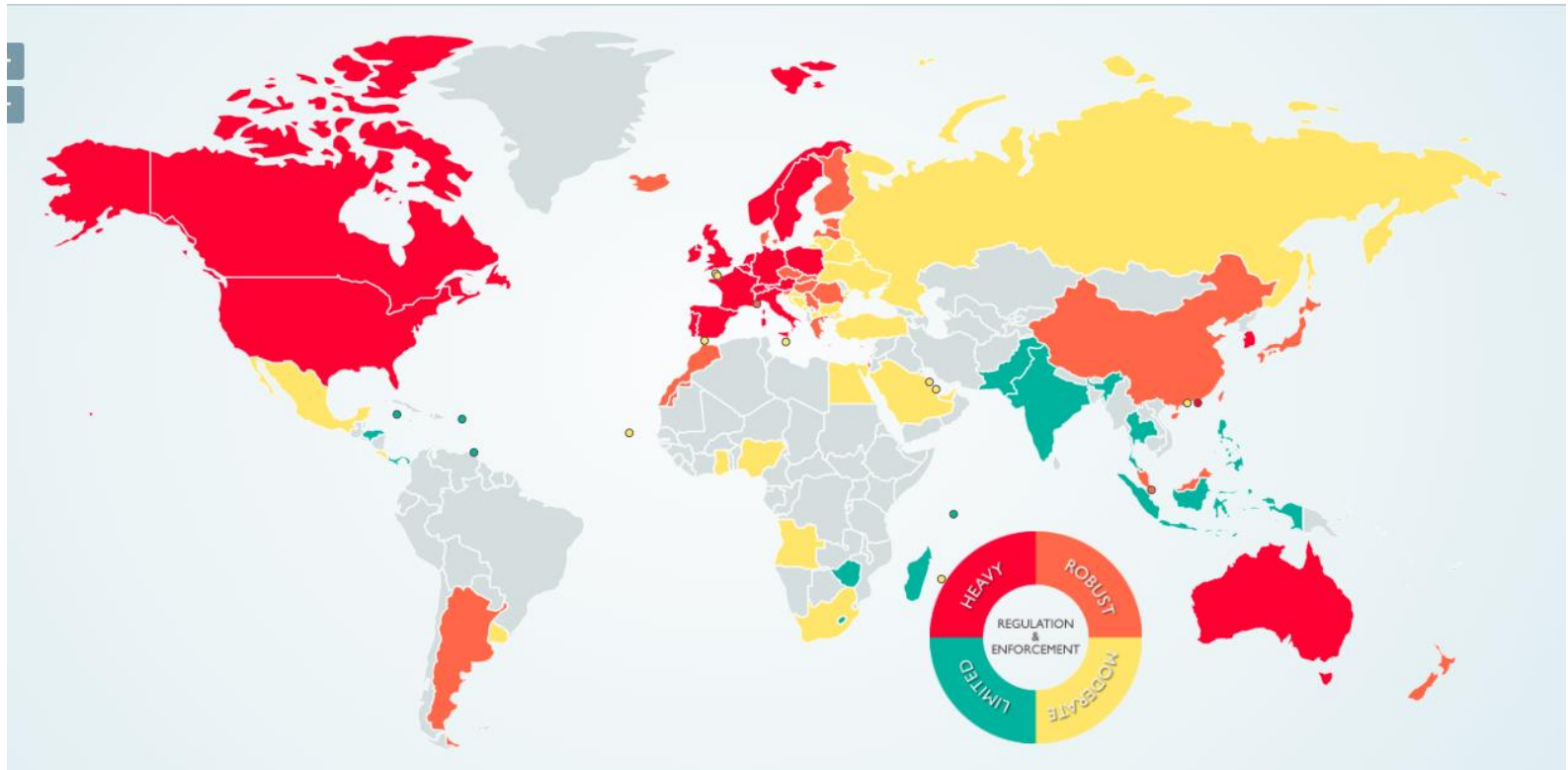
- Technological empowerment is key to persons and their circle of support becoming more health literate and actively engaging in and managing health

The Challenges in Europe and Africa

- to improve point of care services in remote areas

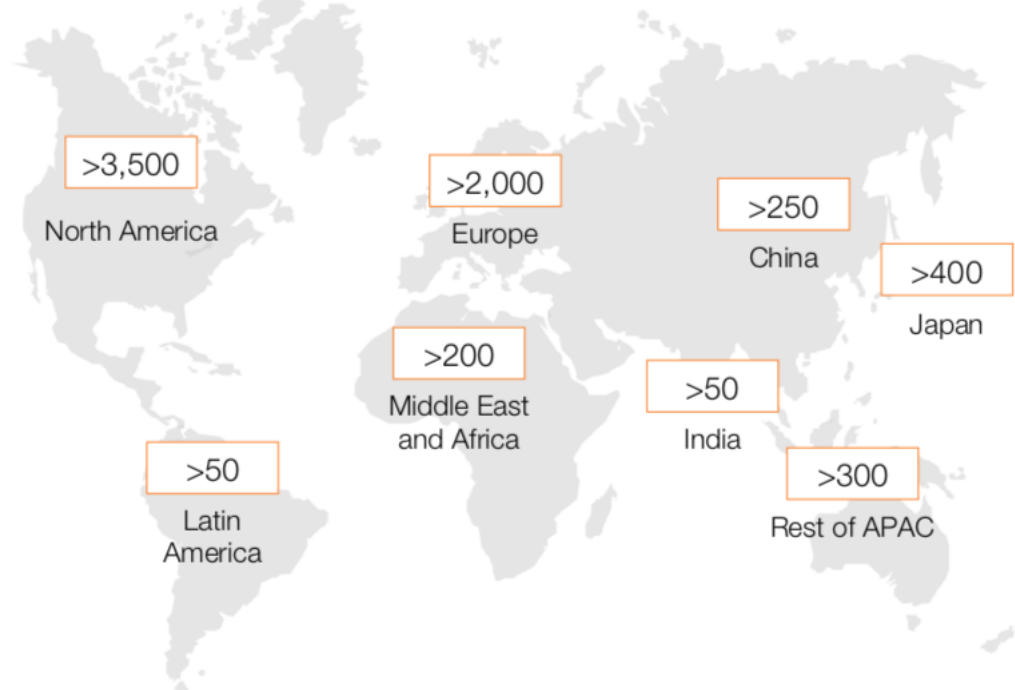
- 1 Governance for data protection
- 2 Participation for Data Science driven Digital Health
 - problem of inequality
- 3 Context-relevance of solutions
- 4 Sustainability and long-term prospects

I. Data Protection Laws of the World



II. Inequality of Data stored by Geography

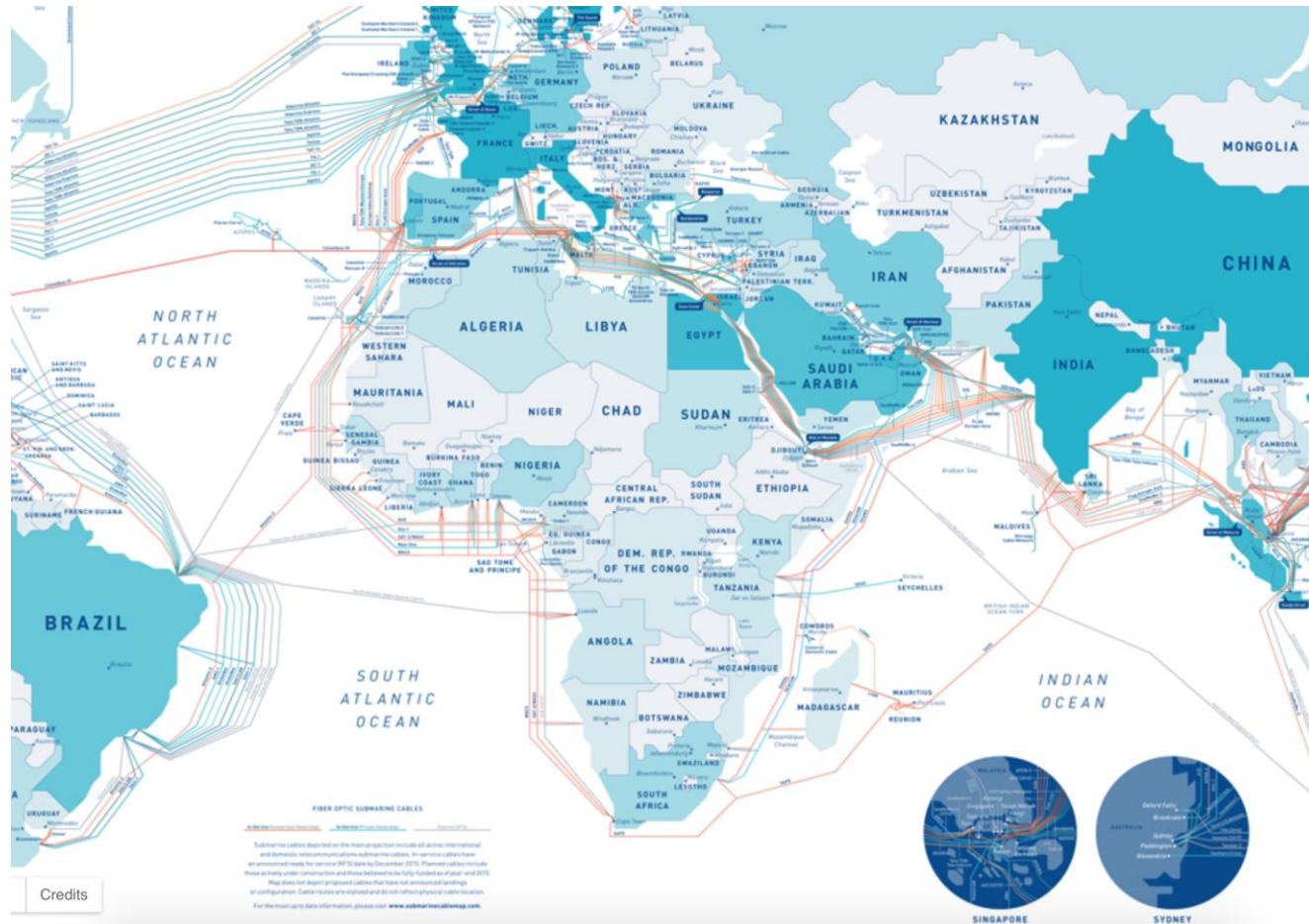
New data stored by geography, 2010
Petabytes (i.e., 1 million gigabytes)



Source: IDC storage reports: McKinsey Global Institute analysis, 2010

New data stored by geography 2010

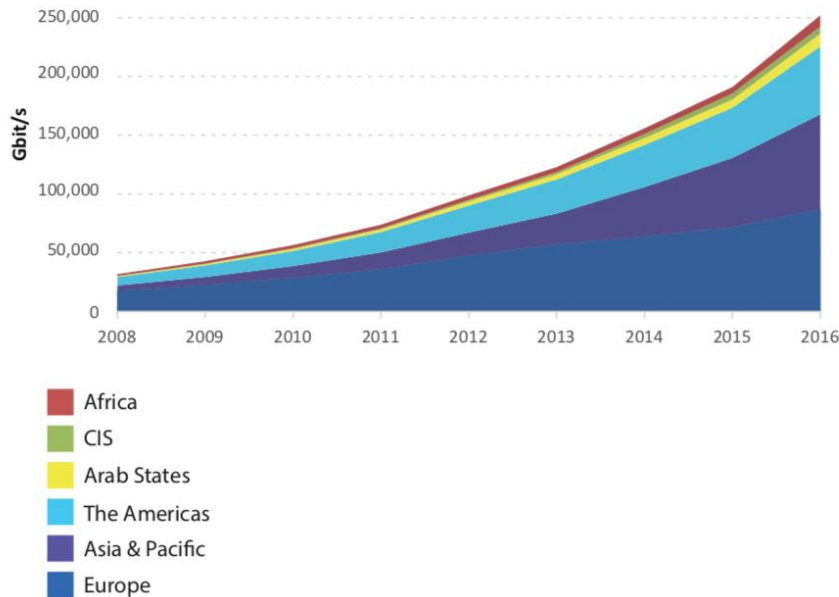
Inequality in today's information society: Data cables in Comparative Perspective



Source: TeleGeography

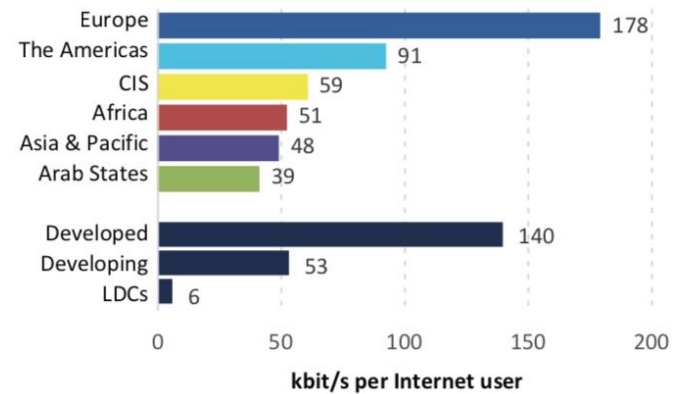
Global Differences in International Bandwidth Availability and Use

International Internet bandwidth in Gbit/s, per region, 2008-2016



Source: ITU.
Note: CIS refers to the Commonwealth of Independent States.

International Internet bandwidth per Internet user in kbit/s, 2016



International Internet bandwidth grew worldwide by 32% between 2015 and 2016. Africa experienced an increase of 72% during this period, the highest of all regions.

International bandwidth up

The 100 billion nodes of Facebook



3 Need for Technological Context-Relevance of Solutions

“possibly due to the technocentric orientation of most mHealth literature, their actual impact as determinants of success/failure seems under-estimated. It is insufficient merely to acknowledge the fact that context matters. (..) Project assessments within all three intervention categories show the effectiveness of mHealth projects depends on either (a) the success of rare efforts to address circumstantial complications, or (b) the possibility to avoid (many of) these complications through simple design and limited objective.”
(Krah & Kruijf, 2016)

3 Need for Participation for Data Science driven Digital Health

Open
data
is about
MORE
THAN
DISCLOSURE
it must be
“Fair”

- Findable
- Accessible
- Interoperable
- Reusable

From IEEE ComSoc Technology News 5G And The Next Billion Mobile Users: A View From Africa

“Continuing our occasional series on the role of 5G in the connection of the next billion wireless users,(..) We need *affordable wireless access* in its requirements. Maybe along with the three legs that 5G stands on (massive Machine Type Communication (MTC), enhanced Mobile Broadband (eMBB), and Ultra Reliable Communication (URC), we need to add a fourth leg of ultra low-cost broadband (ULCBB). This can be done without impacting the first three, perhaps at the expense of the timeframe of the standard. But *are we too late to change the direction* of the 5G super tanker?”

What is needed:

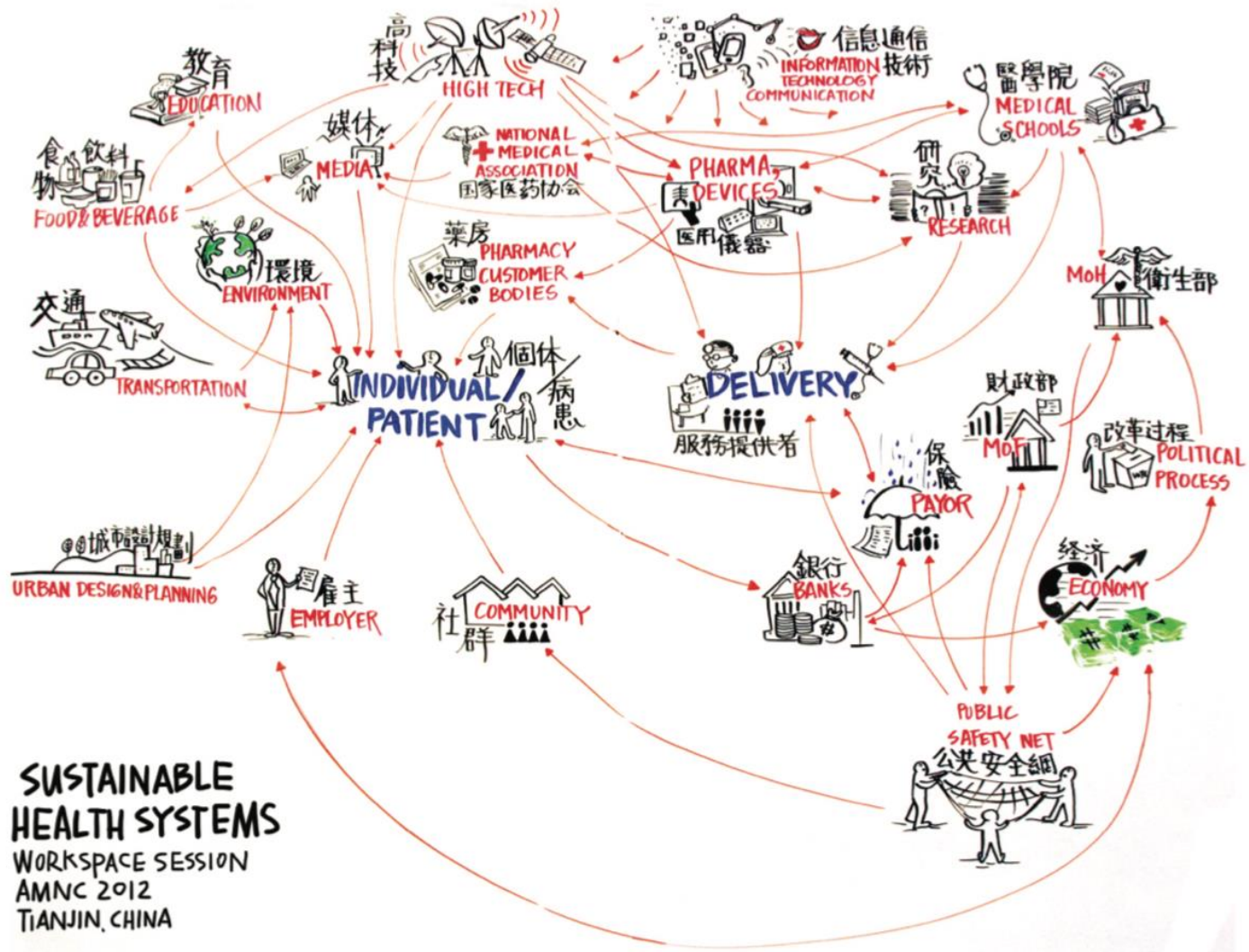
- Training
- Collaboration
- Participation

Between technology institutes and universities on development of:

- 5-G
- FAIR
- EOOSC



4 Sustainability and long-term prospects



Source: Scribe of the Sustainable Health System Workshop at the World Economic Forum Annual Meeting of the New Champions, 2012

Conclusions

1. University training, research and and participation in digital development in Africa
2. Inclusion of Africa in the Open Science Cloud for Health with dedicated Go-FAIR programme
3. Expansion of living lab contextualization
4. Regional collaboration between African regions and the EU

Thank you

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