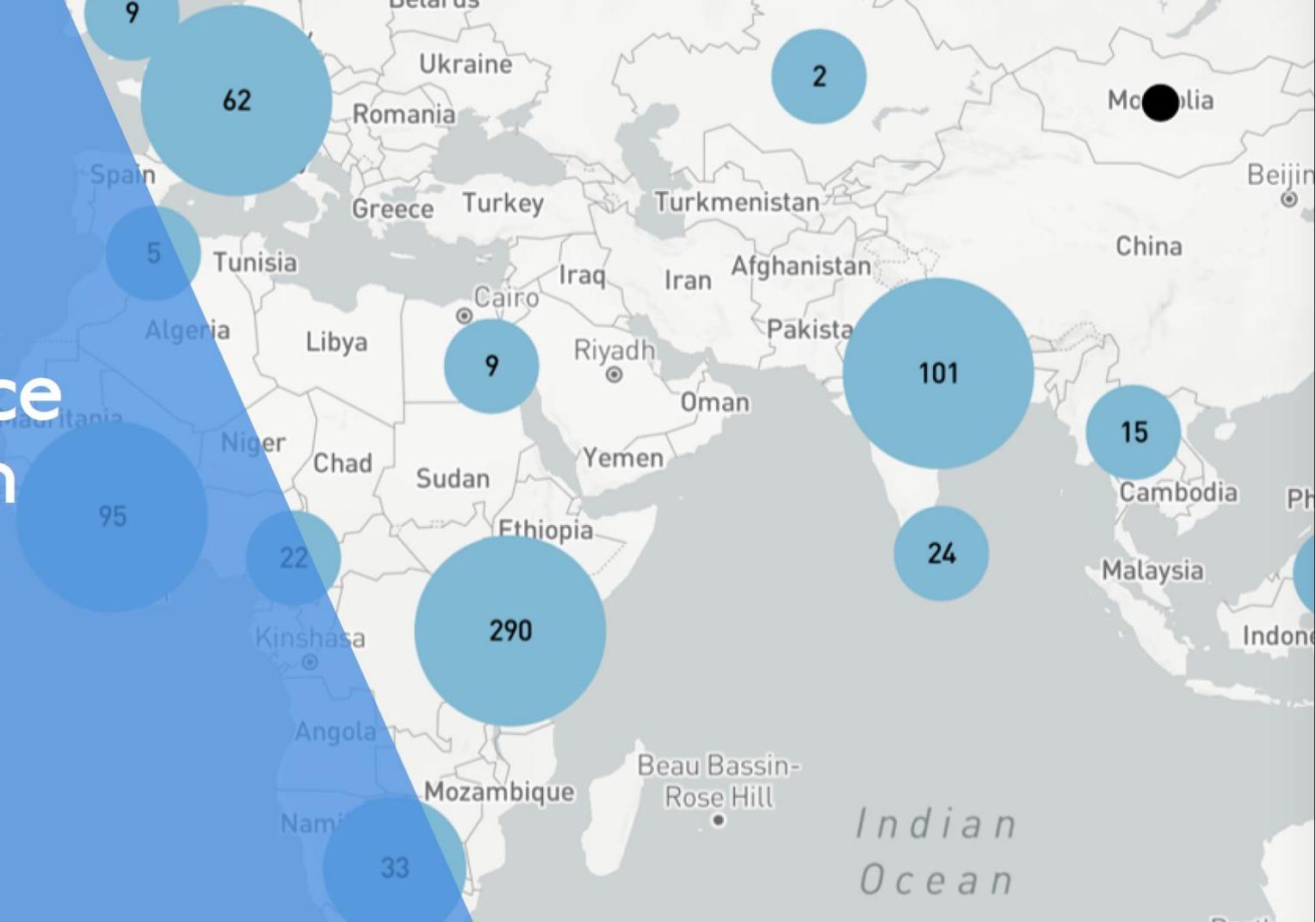


IMPLEMENTOME

Une plateforme de gestion de connaissance pour l'implémentation de solutions de santé numérique

Mirana Randriambelonoro



gdhub



Geneva Digital Health Hub



UNIVERSITÉ
DE GENÈVE



World Health
Organization



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development
and Cooperation SDC

- 1 Context and background
- 2 Promises and challenges of digital health
- 3 gdhub (Geneva Digital Health Hub)
- 4 Implementome

Smartphone



88%
of the time
next to us





Digital health



digital health



Search

[Advanced](#) [Create alert](#) [Create RSS](#)

[User Guide](#)

Save

Email

Send to

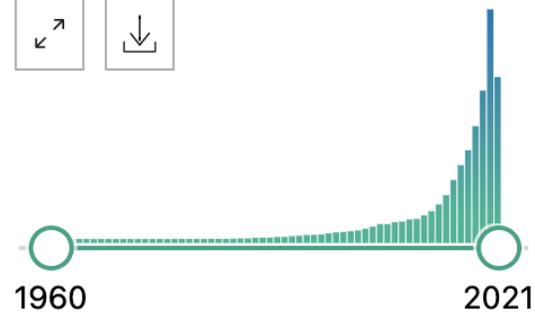
Sorted by: Best match

Display options

MY NCBI FILTERS

36,636 results

RESULTS BY YEAR



TEXT AVAILABILITY



1

Cite

Share

[The impact of **digital health** interventions on **health**-related outcomes in the workplace: A systematic review.](#)

Howarth A, Quesada J, Silva J, Judycki S, Mills PR.

Digit Health. 2018 May 10;4:2055207618770861. doi: 10.1177/2055207618770861. eCollection 2018 Jan-Dec.

PMID: 29942631 [Free PMC article](#). [Review](#).

However, little is known about the impact of **digital**-only interventions on **health**-related outcomes in employee groups. The aim of this systematic review was to assess the impact of pure **digital health** interventions in the workplace on **health**-rel ...

Innovation in health is an imperative

new processes



new professions in the digital age

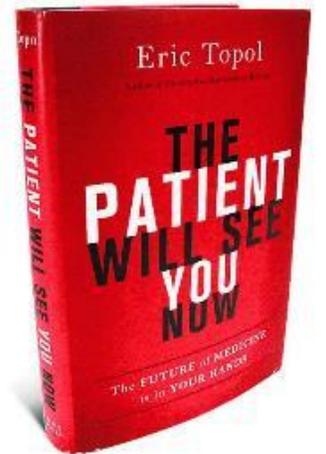


HEALTHCARE
Wearable Technology
Therapist



HEALTHCARE
Healthcare Navigator

new expectations from patients and their families

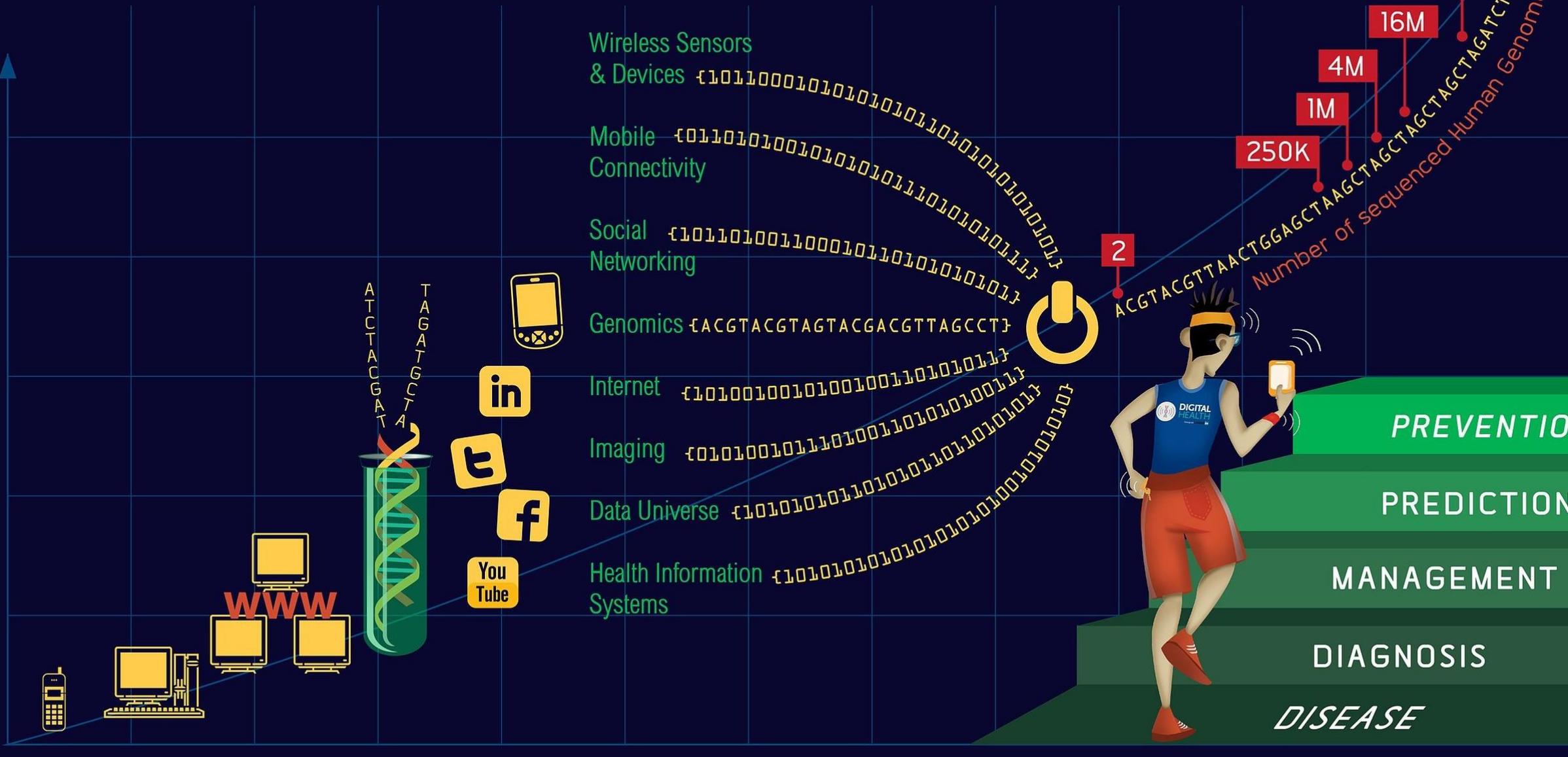


Accelerating Digital Technology

Super-Convergence

Reboot

Acceleration of Digital Technology



64M

16M

4M

1M

250K

2

Number of sequenced Human Genomes

PREVENTION

PREDICTION

MANAGEMENT

DIAGNOSIS

DISEASE

Based on the work of Dr. Eric Topol, author of "The Creative Destruction of Medicine: How the Digital Revolution Will Create Better Health Care"

1970

1980

1990

2000

2010

2020

NEW MEDICAL TECHNOLOGIES

Medical devices

- 3D printing
- Cardiac devices
- Implants and bionics



Precision and personalized medicine

- Computer-assisted surgery
- Surgical robots
- Personalized medicine

Medical imaging and diagnostics

- Optical high-definition imaging and virtual anatomic models
- Biosensors and markers
- 4D human charting and virtual reality
- Screening for diseases

Regenerative medicine

- Tissue engineering
- Effective bioartificial pancreas

ORGANIZATIONAL AND PROCESS INNOVATIONS

Novel approaches in healthcare research

- Software-based modeling to speed up research
- Artificial intelligence techniques to speed up research and clinical trials



New ways of delivering healthcare

- Telemedicine applications
- Drone delivery of medications
- Remote monitoring and portable diagnostics
- Improved data sharing

Promising fields for
medical innovation
and technologies

The Promise of Digital Health: transform healthcare



Empowerment

Patients
Health providers
Governments



Access

Greater access to care



Cost

Reduced cost



Quality

Better quality care



Outcomes

Improved outcomes
through better diagnosis
and treatment

What is the status of global digital health ?



OBSERVATOIRE DE LA E-SANTÉ

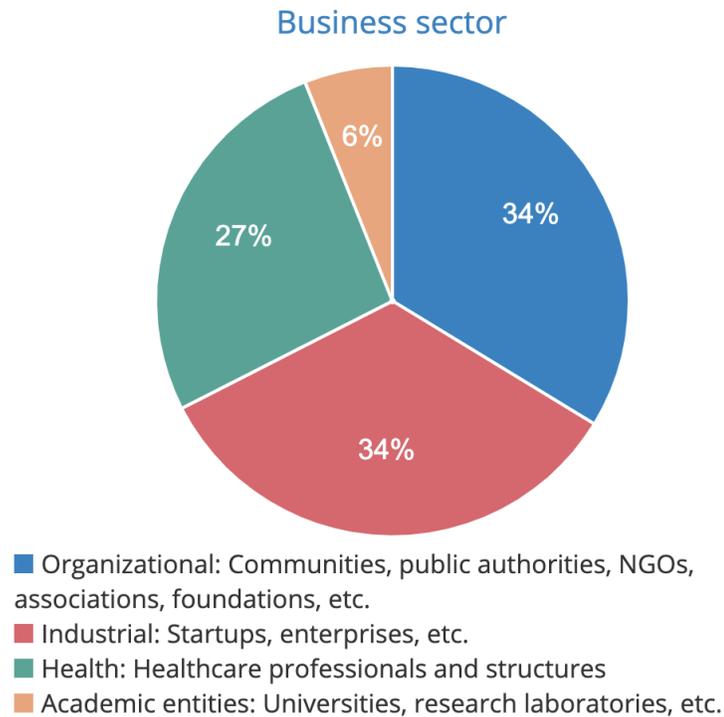


DANS LES PAYS DU SUD

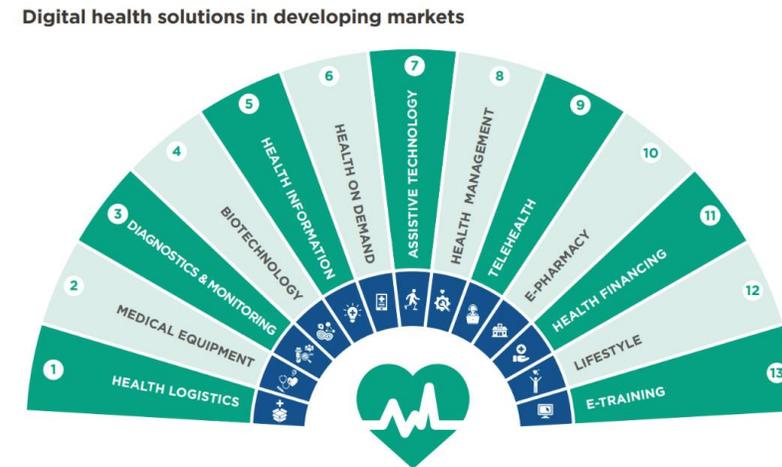
Ecosystem & Stakeholders



The private sector is playing a major role in the digital health space in LMIC countries

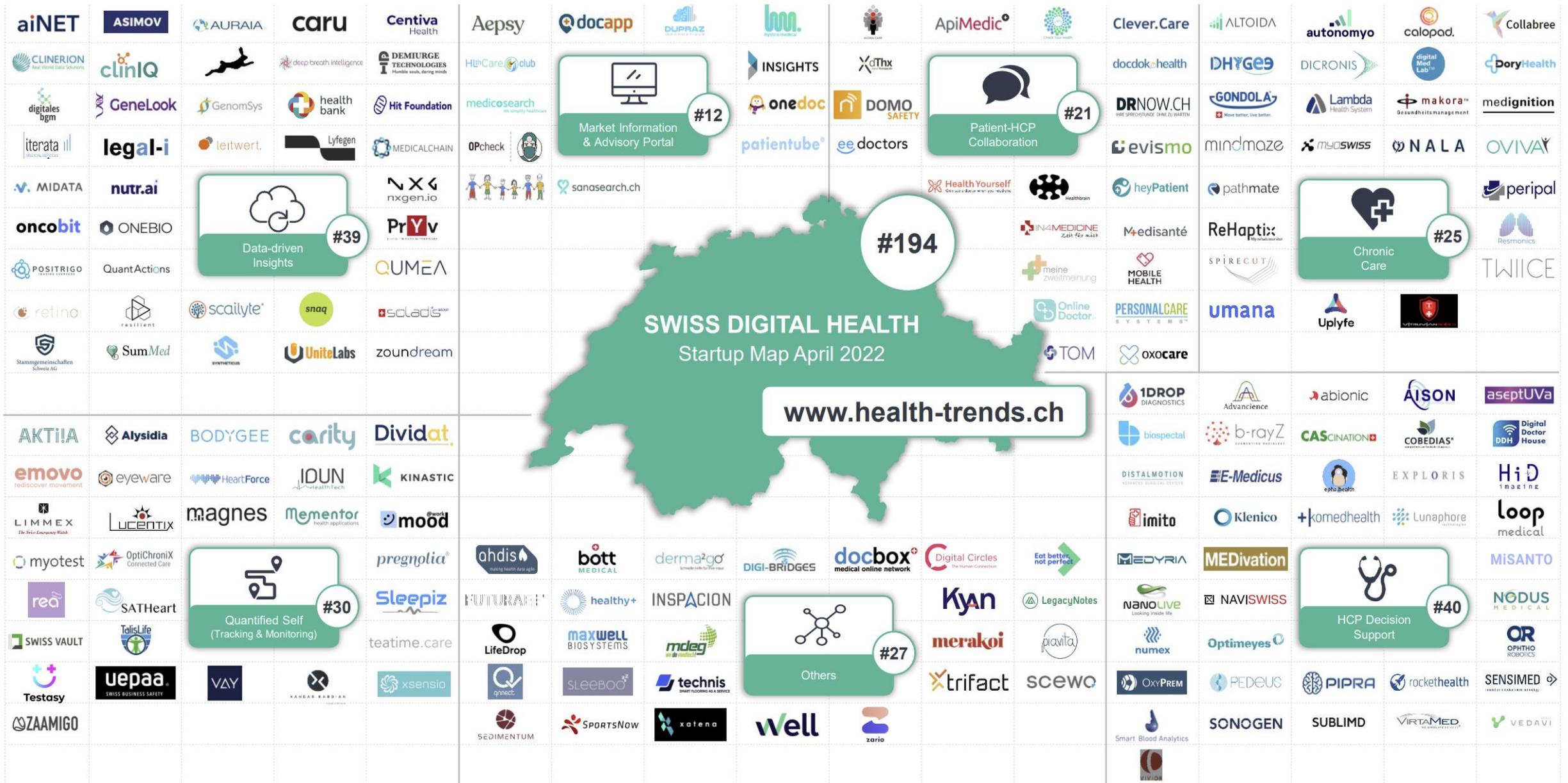


Source: Data analysis – eHealth Observatory Pierre Fabre Foundation



Start-ups are using mobile and frontier technologies to profoundly transform health systems

Source: Digital Health - A health system strengthening tool for developing countries, GSMA



Digital transformation in Healthcare is complex and **very challenging** !

Fragmentation

and a Landscape defined by pilotitis

Lack of best practices

and access to up-to-date data on past and recent implementations

High failure rate

in digital health projects

Scarcity

of qualified resources that understand both healthcare and IT Domains

Cybersecurity, Data privacy, Trust

concerns and issues

Ethics and Equity

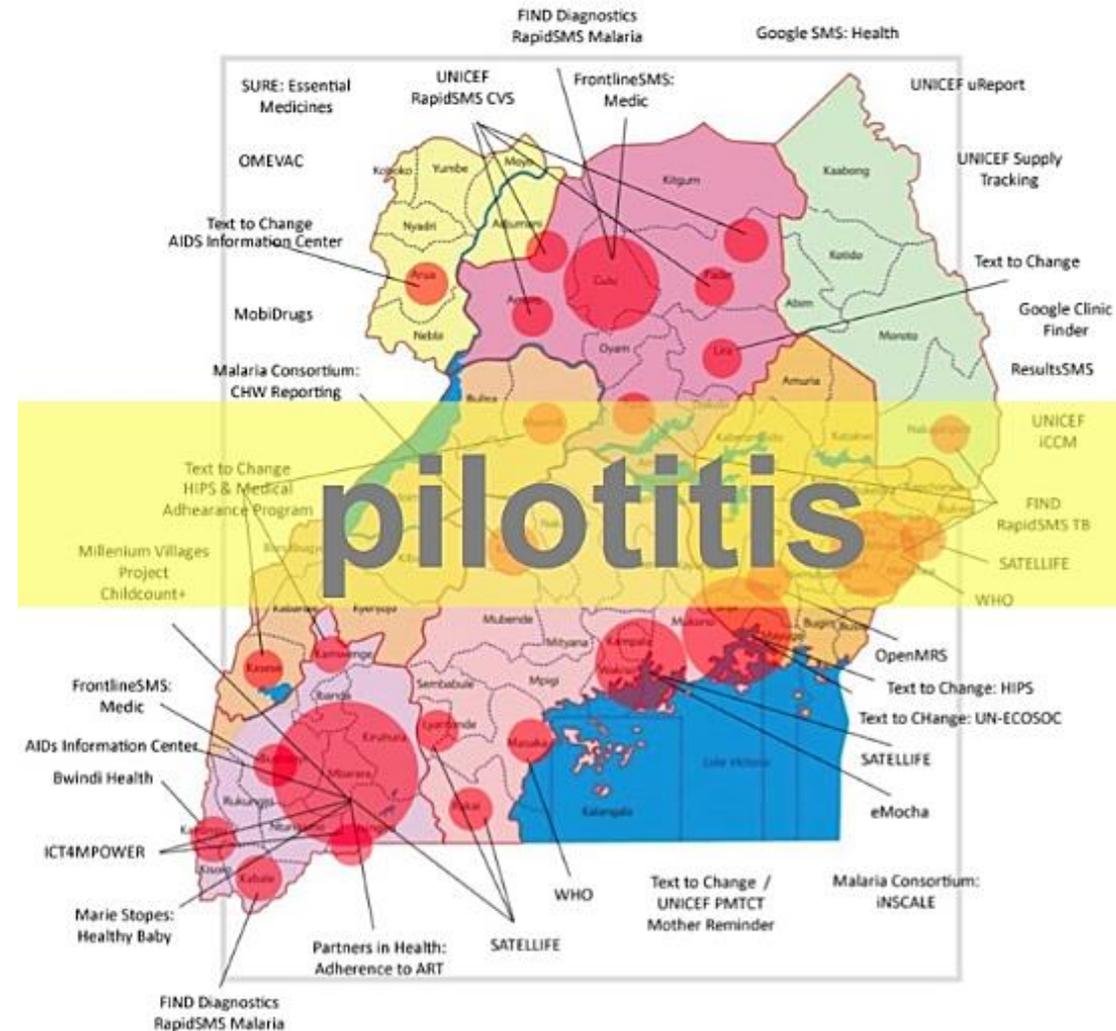
concerns and issues

Pilots always work and never scale

Uganda pilots in 2012

<https://www.ictworks.org/ugandan-mhealth-moratorium-good-thing>

Huang, F., Blaschke, S. & Lucas, H. Beyond pilotitis: taking digital health interventions to the national level in China and Uganda. *Global Health* **13**, 49 (2017). <https://doi.org/10.1186/s12992-017-0275-z>



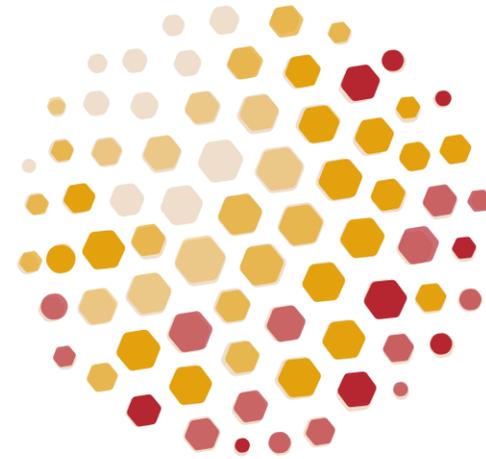
Challenges do not only represent a barrier, but also have risks associated!

and access to data on past and recent implementations

Cybersecurity, Data privacy, Trust
concerns and issues



gdhub



Geneva Digital Health Hub

Partners



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Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development
and Cooperation SDC



World Health
Organization



HUG

Hôpitaux
Universitaires
Genève

Connecting the dots

Digital Health has the potential to significantly improve population health globally but faces challenges in achieving scale. Leveraging on the international Geneva, and assisted by advanced data analytics and knowledge management tools, the **gdhub** aims at translating guidelines and policies into actionable insights, and to document and federate knowledge and stakeholders active in global digital health to connect the dots for effective coordination, governance, collaboration and ultimately impact.



Lessons learnt from COVID



The Lancet Regional Health - Europe

Volume 9, October 2021, 100221



Series Health Policy

Multi-country collaboration in responding to global infectious disease threats: lessons for Europe from the COVID-19 pandemic

Mark Jit ^{a, b}, Aparna Ananthakrishnan ^{c*}, Martin McKee ^{d*}, Olivier J. Wouters ^{e, *}, Philippe Beutels ^{f, g*}, Yot Teerawattananon ^{c, h*}

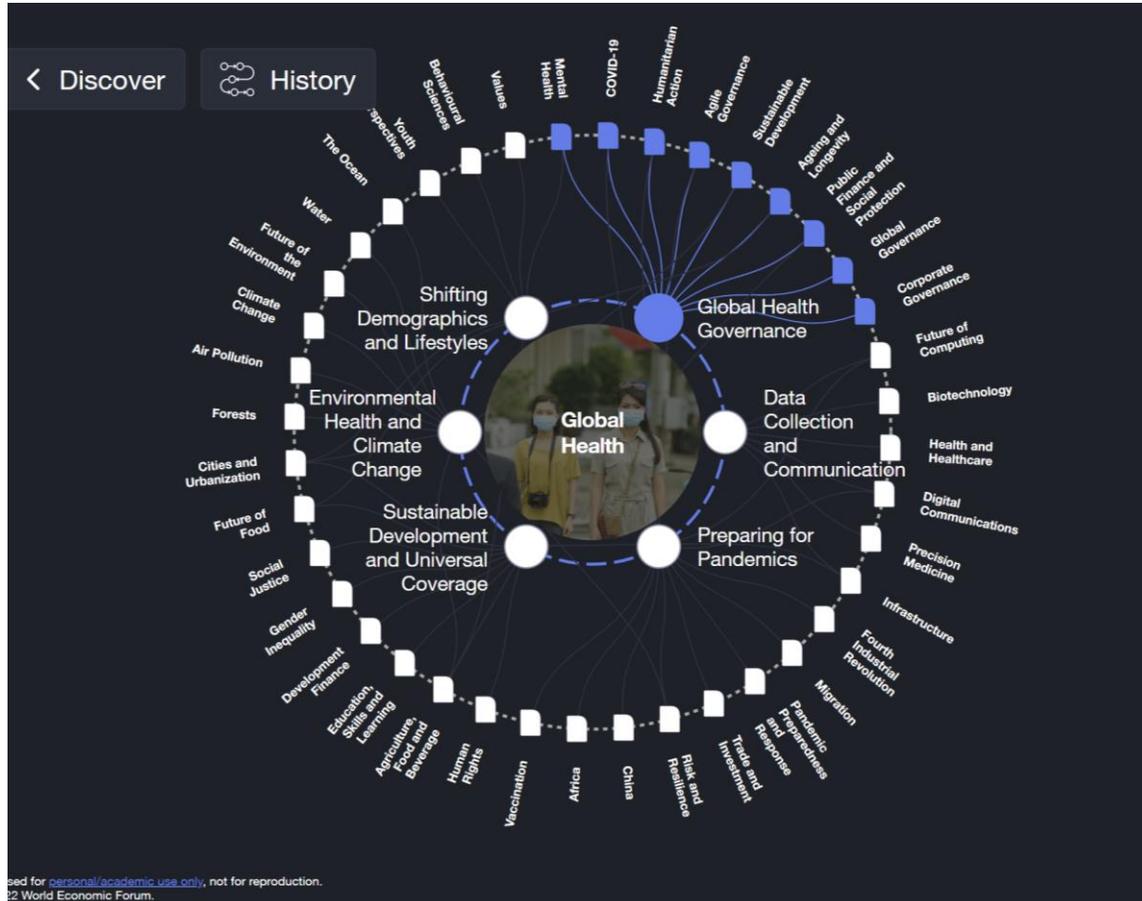
Show more

+ Add to Mendeley Share Cite

Table 1. Scorecard showing global successes and shortcomings in the multilateral response to the COVID-19 pandemic.

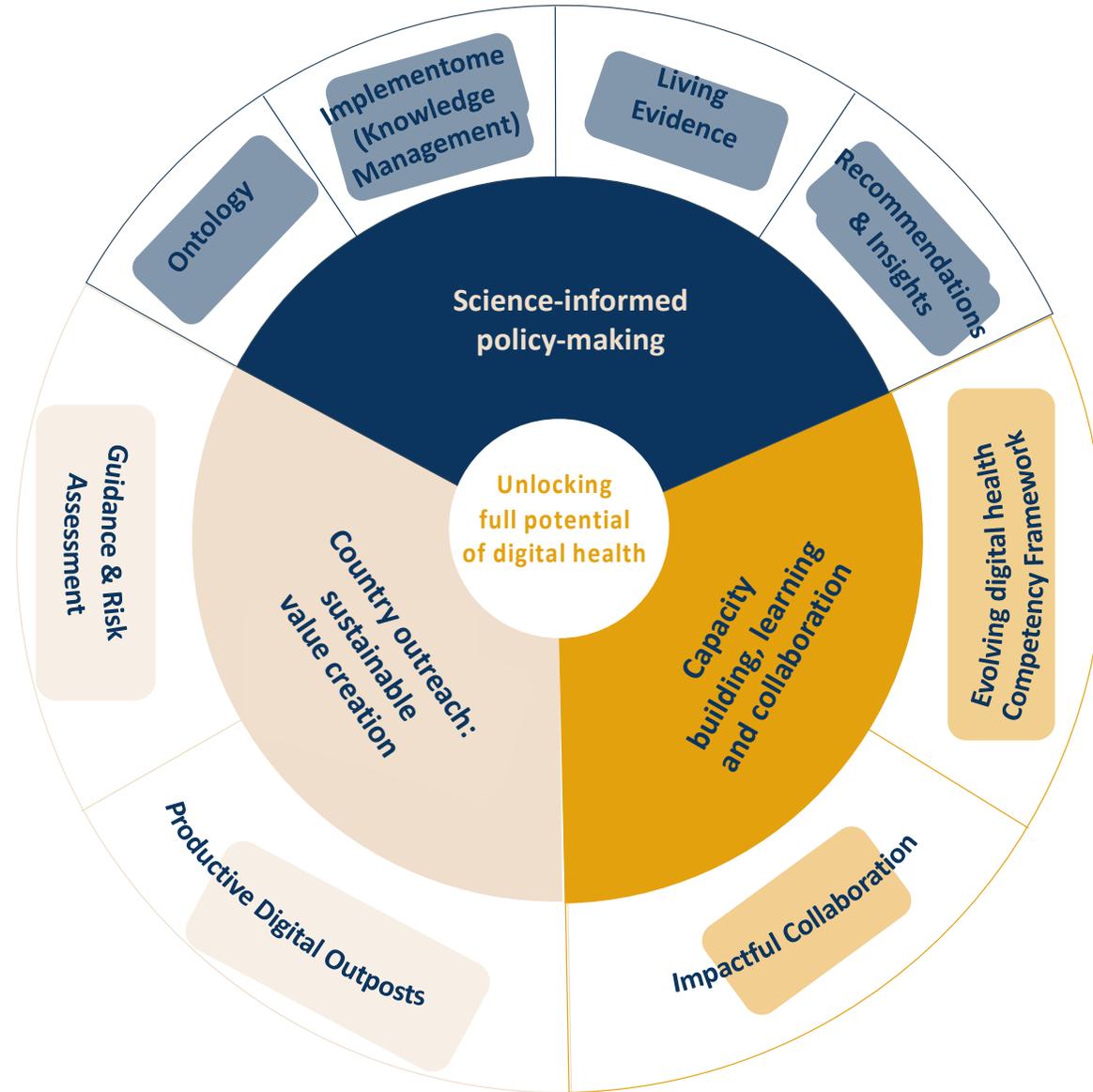
Domain	Successes	Shortcomings
Research collaboration and information sharing	<ul style="list-style-type: none">• Sharing of information by researchers• International research collaborations• Public data repositories	<ul style="list-style-type: none">• Many regions and countries slow to learn policy lessons from elsewhere• Lack of systemic global research governance• Duplication of research studies

Importance of collaboration



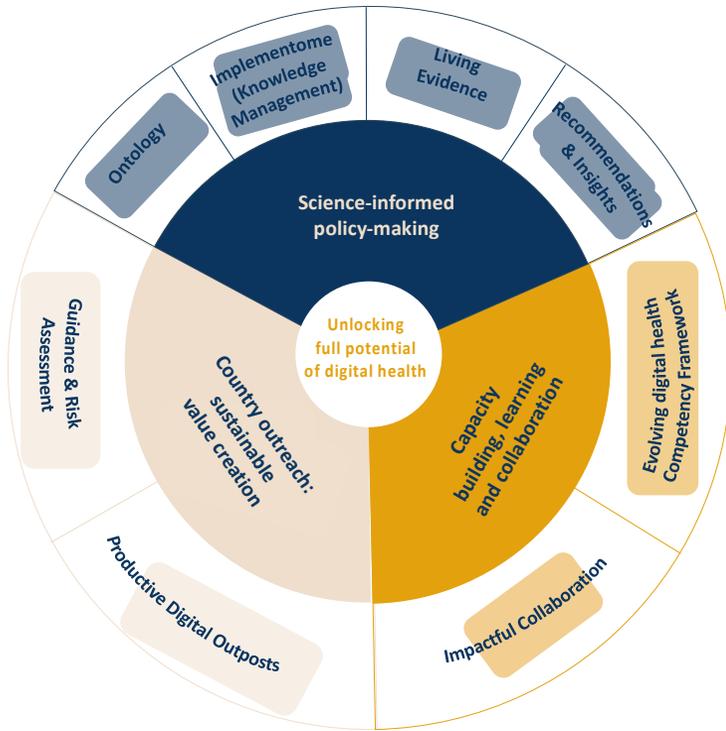
New ways of improving global health are emerging thanks to partnerships and sharing of data and knowledge

e.g: HUG



Partners





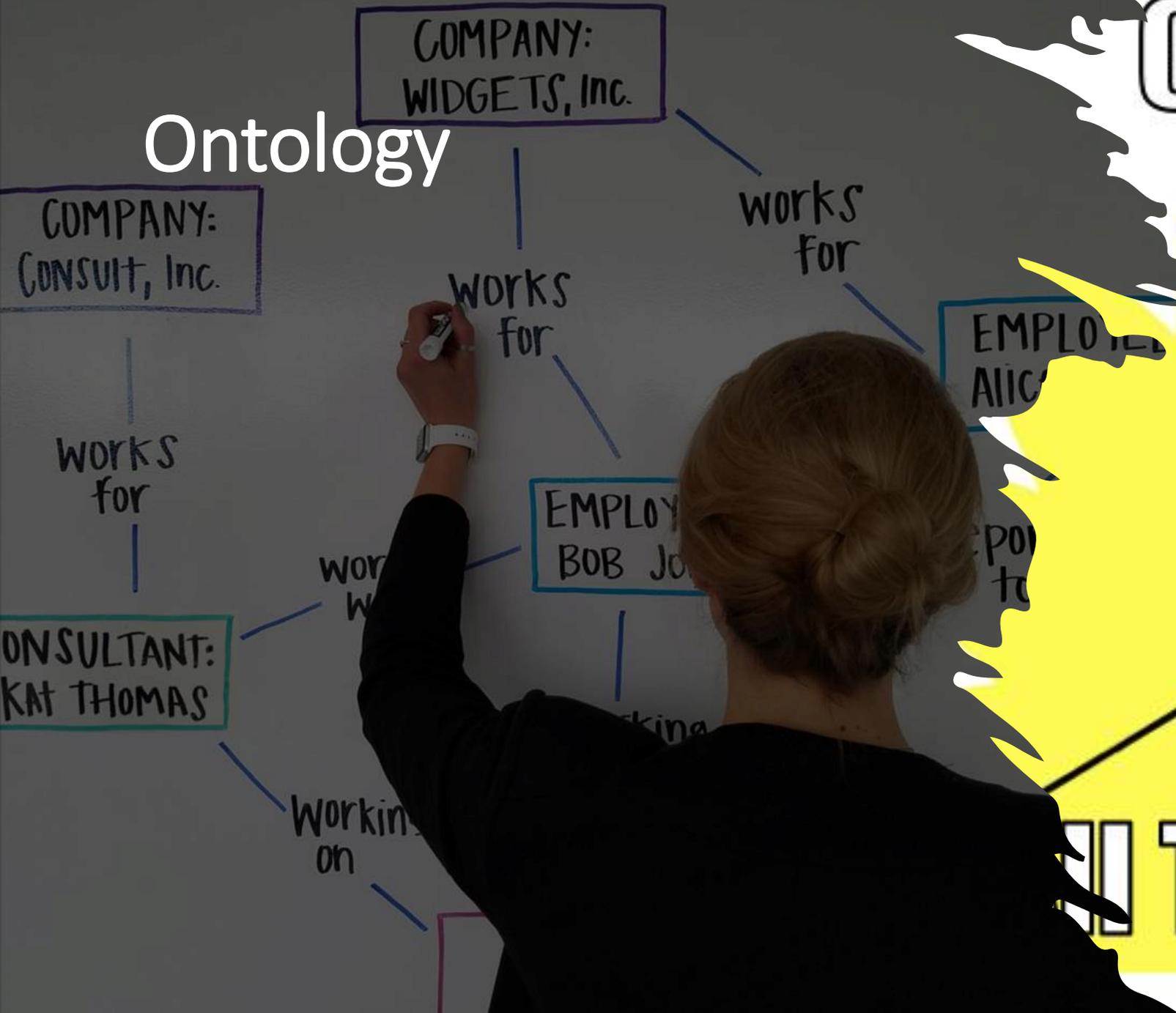
Science-informed policy-making

Enabling science-based policy and decision making that facilitates the development of global policies and norms for responsible digital health implementations based on advanced knowledge management approaches.

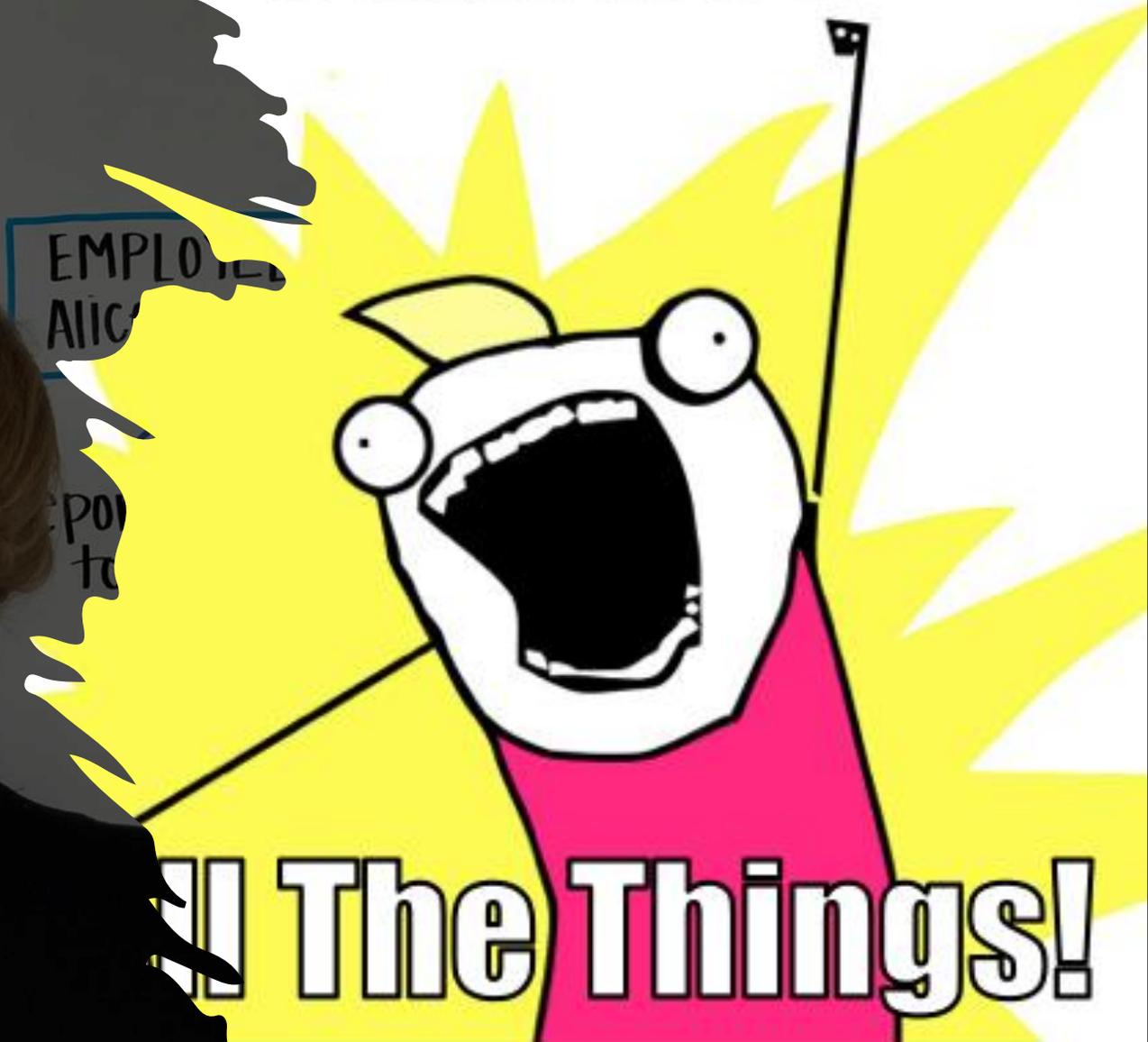
Partners



Ontology



Connect



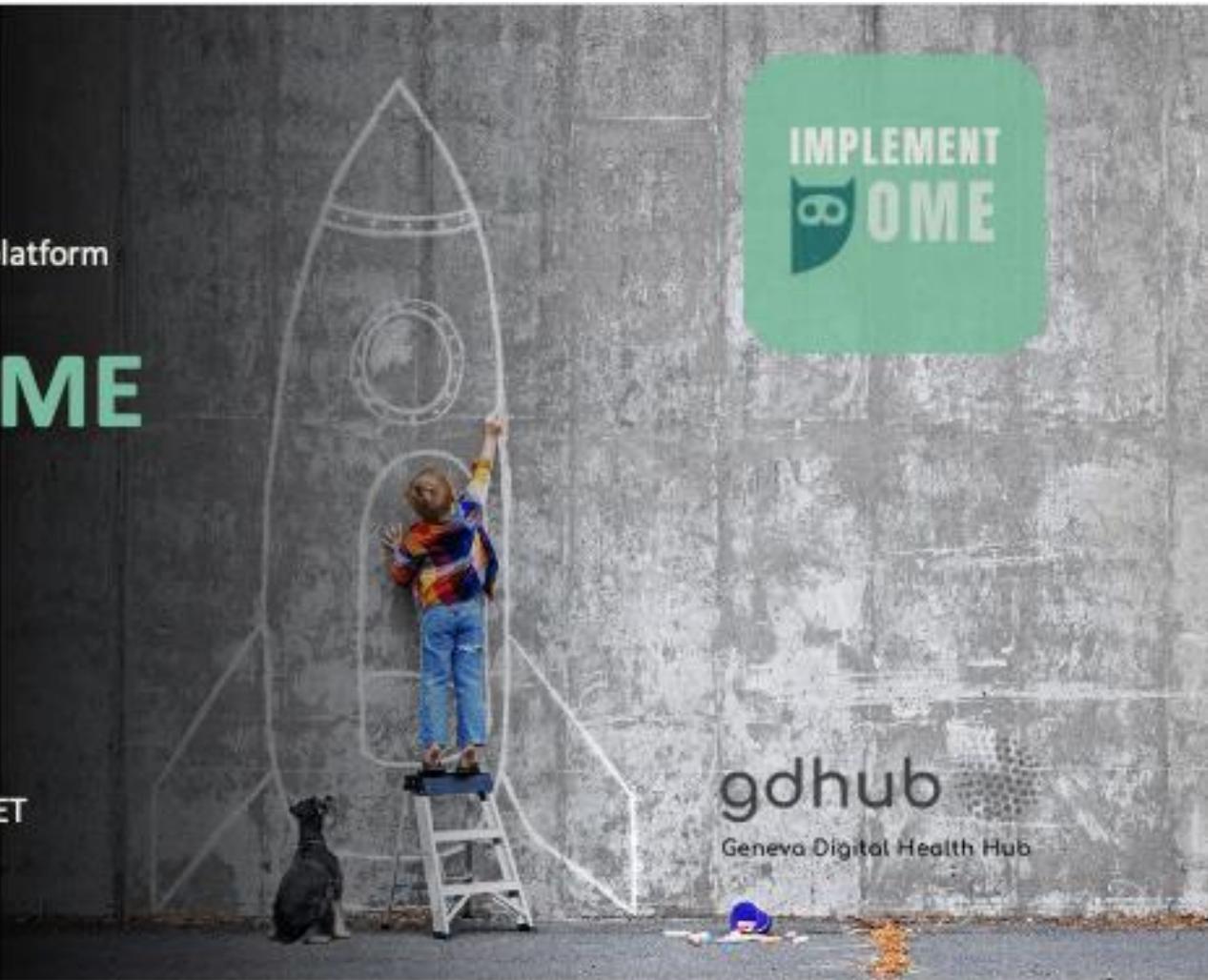
! The Things!

Launch of the

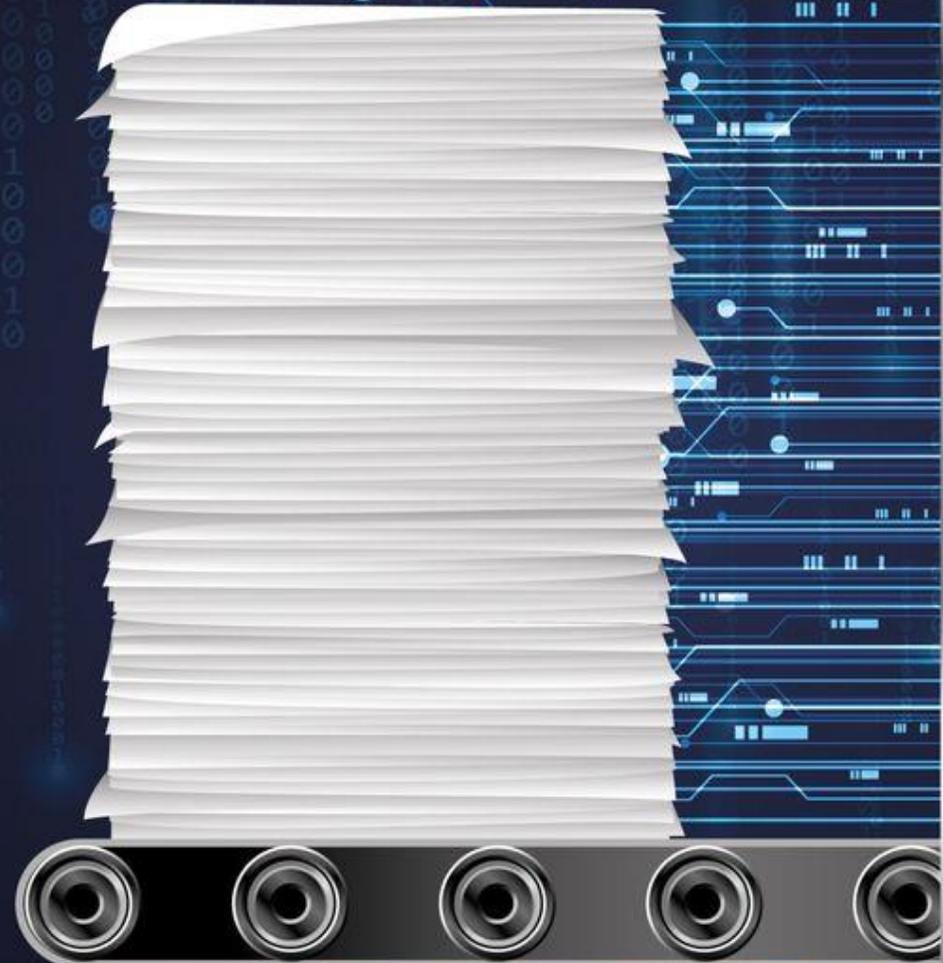
#digitalhealth #knowledgemanagement #platform

IMPLEMENTOME

Tuesday 22nd of November 2022, 11.00 CET



gdhub
Geneva Digital Health Hub



Big data

Expert appraisal

ML



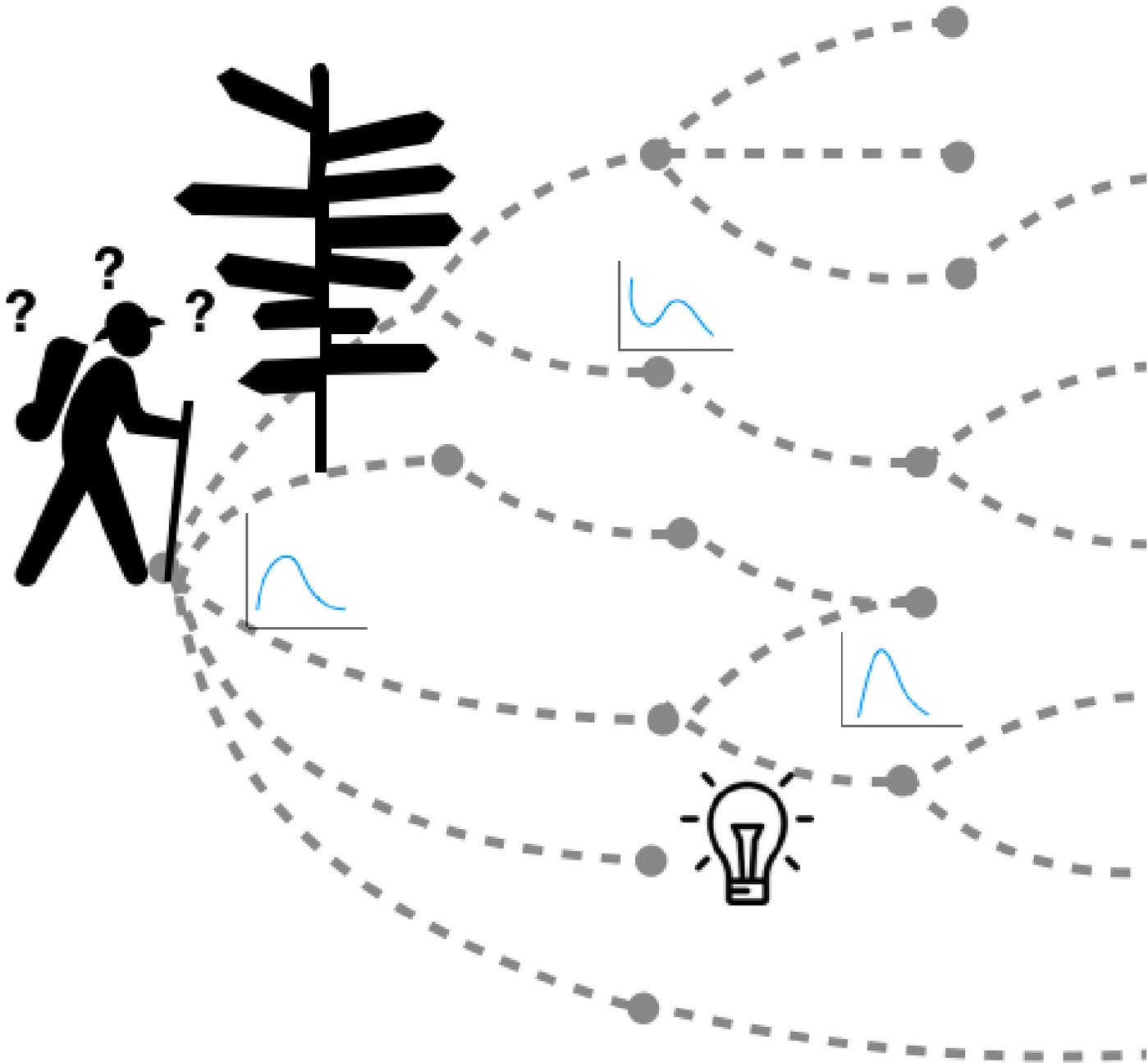
Natural language processing



Living evidence

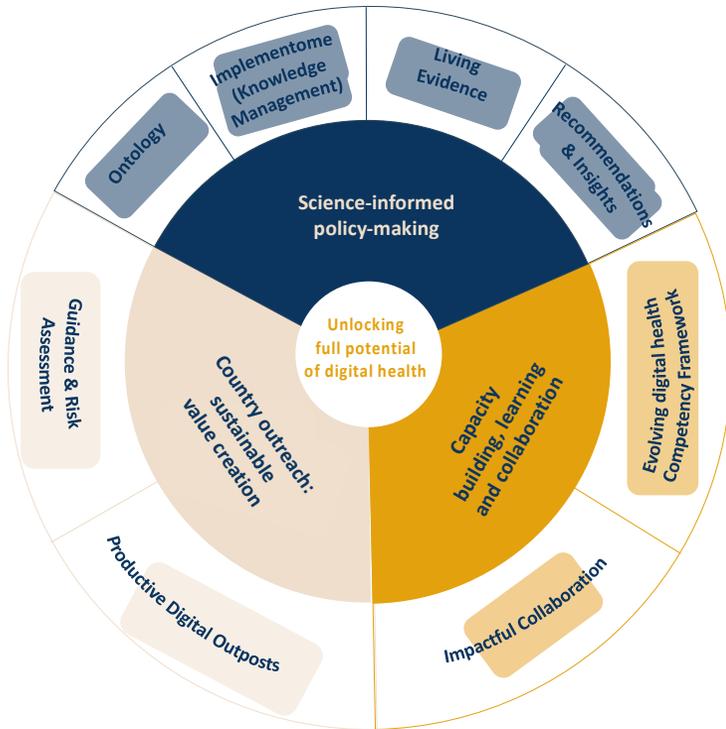
- Summarized article
Summarized article

A solid blue rectangular block is located on the right side of the "Living evidence" panel.



Recommendations & Insights

- Implementation Reporting
- Assessing the Role of Telemedicine in providing equitable access to care
- Responsible Digital Health (sustainable and environmental)



Capacity building, learning and collaboration

Fostering active learning and collaboration to improve institutional capacities and cooperation to support responsible digital health development and implementation and reduce fragmentation of efforts.

Partners





Hackathons

Unleashing the power of collective action for global digital health

Outcomes of the first GDHack!

gdhub
Global Digital Health



Knowledge Exchange Promoter

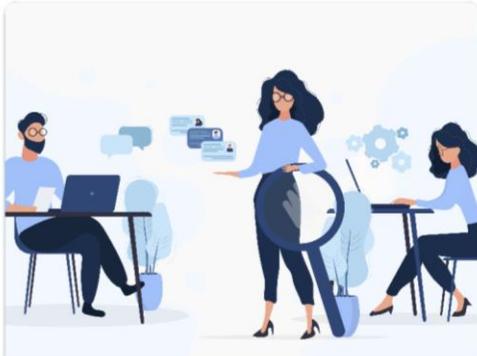


Communities of practice

Communities of Practice connect people in meaningful ways,
to learn and share
in a particular domain area,
to build everyone's knowledge and capabilities, so that

**Individually, we are better at what we do,
Collectively we achieve much greater impact**

Communities of practice



Implementome
1450 members

This community aims to bring together stakeholders working on digital health

Implementome



CDSS CoP
83 members

This community aims to bring together stakeholders working on digital health

E-decision support



World Health Organization

Telemedicine
77 members

This community aims to bring together stakeholders working on digital health

Telemedicine

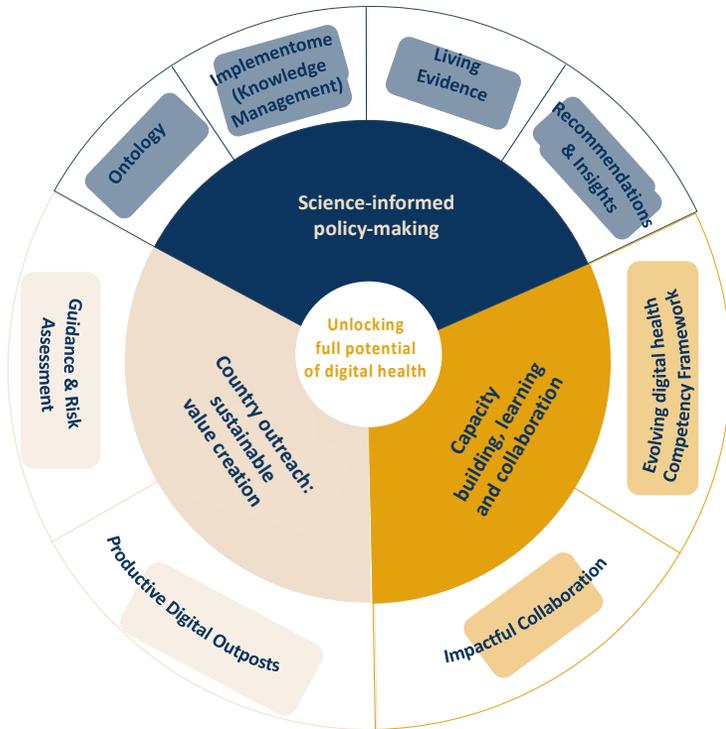


Space and global health
77 members

This community aims to bring together stakeholders working on digital health

Space and global health

...



Country outreach: sustainable value creation

Advancing sustainable value creation through strengthened national and sub-national digital health ecosystems that embed global norms and best practices.

Partners

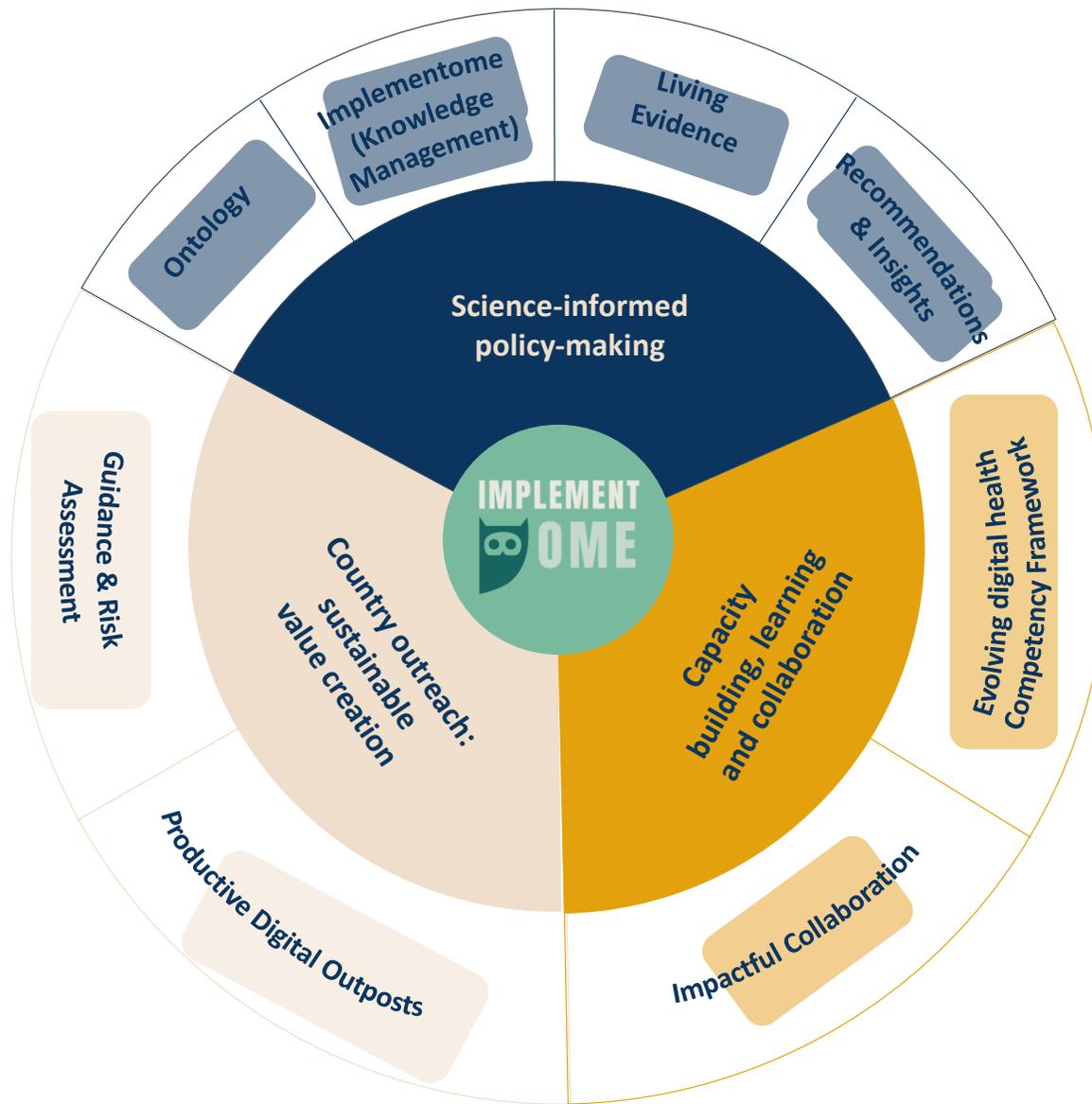




Digital Outposts



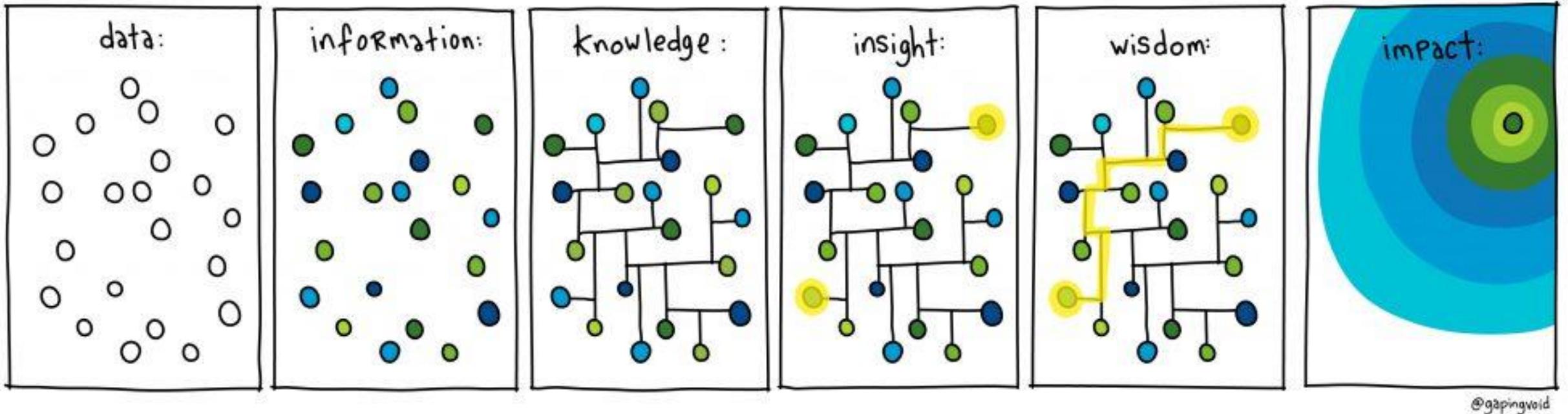




Partners



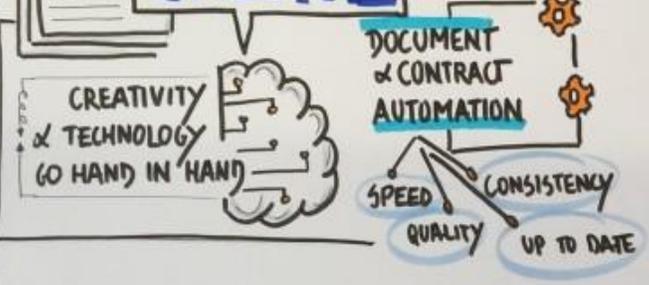
Implementomics



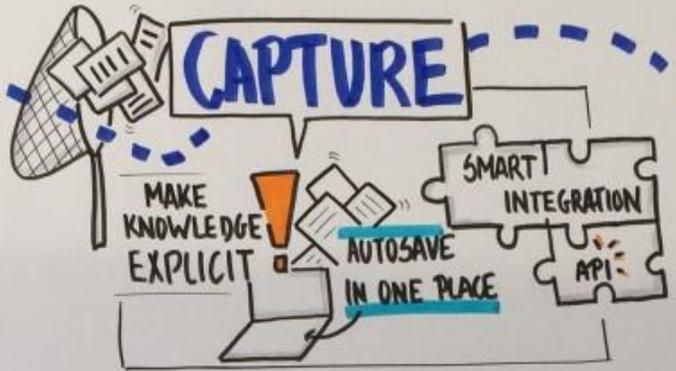
“Implementomics,” the ability to capture, organize and exploit the multidimensional knowledge related to implementation issues.

361° KNOWLEDGE MANAGEMENT PROCESSES

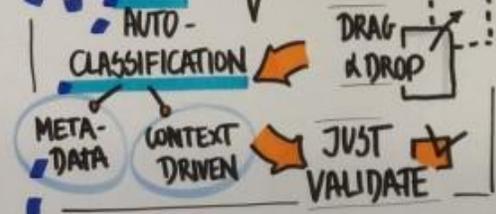
CREATE



CAPTURE



ORGANISE



SHARE



(RE-)USE



MANAGE



SELL



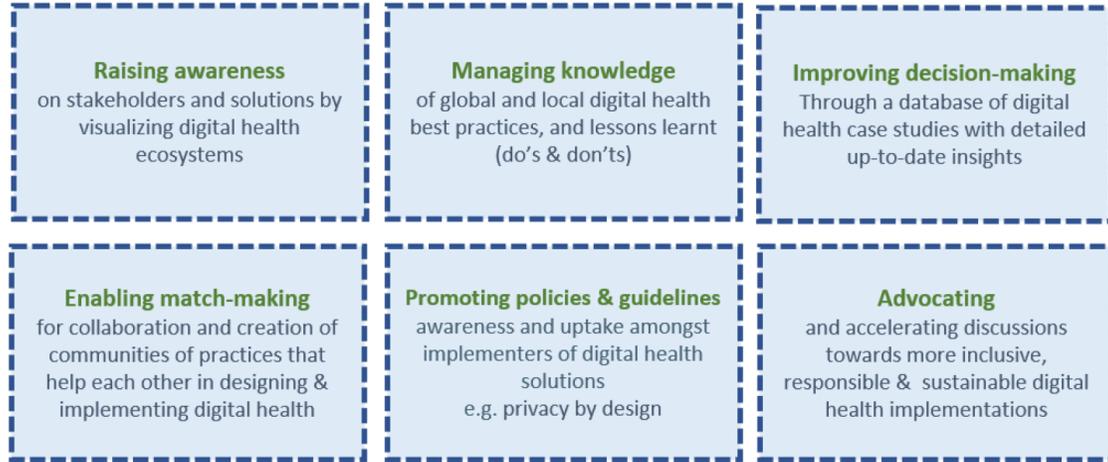
PROMOTE



ENHANCE



The **Implementome** accompanies digital health transformation for impact and sustainability.



Digital transformation in healthcare is challenging, but knowledge management might be the key to sustainable solutions. The Implementome aims at closing the implementation science gap and enabling science-based decision-making.

For more information:
www.gdhub.org

Background

Digital health is not just a buzzword. It is a movement that has been transforming the way people have access to healthcare and how they manage their health.

Despite its potential, the use of digital health in LMICs to overcome barriers to health service delivery has faced challenges in achieving scale and is characterized by fragmentation.

Implementome

Implementome is a knowledge management platform which aims at documenting knowledge and facilitating the identification of determinants for the success or failure of digital health implementations.

The Implementome provides a multidimensional and evolutive digital health knowledge base of people, projects, publications, evaluations, lessons learned, and evidence. Based on a formal ontology and structured terminologies, the tool can be explored and enriched both by humans and AI-enabled automated processes.

Implementome

Share

Learn

Connect

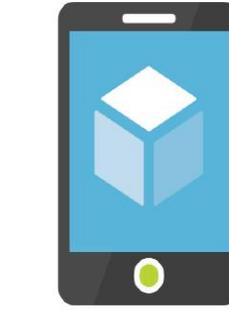
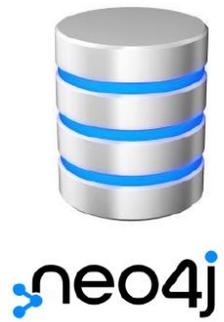
Exchange

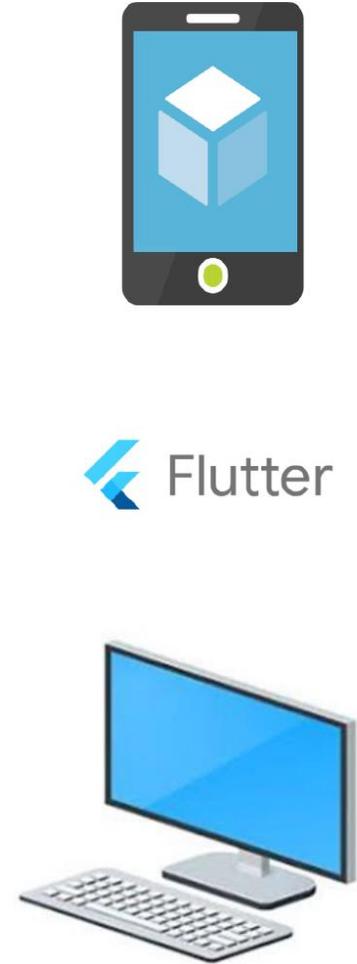
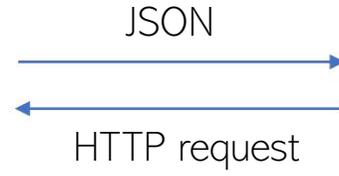
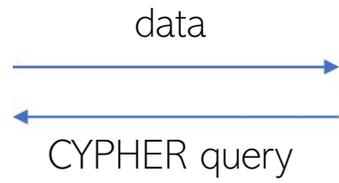
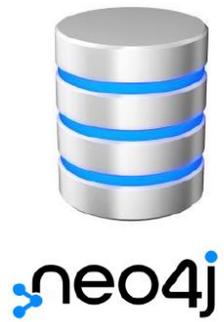


Evidence-based
decision making



Initiate & support
collaboration







Digital Health Atlas



Mapping: Nepal - Mali - Kenya



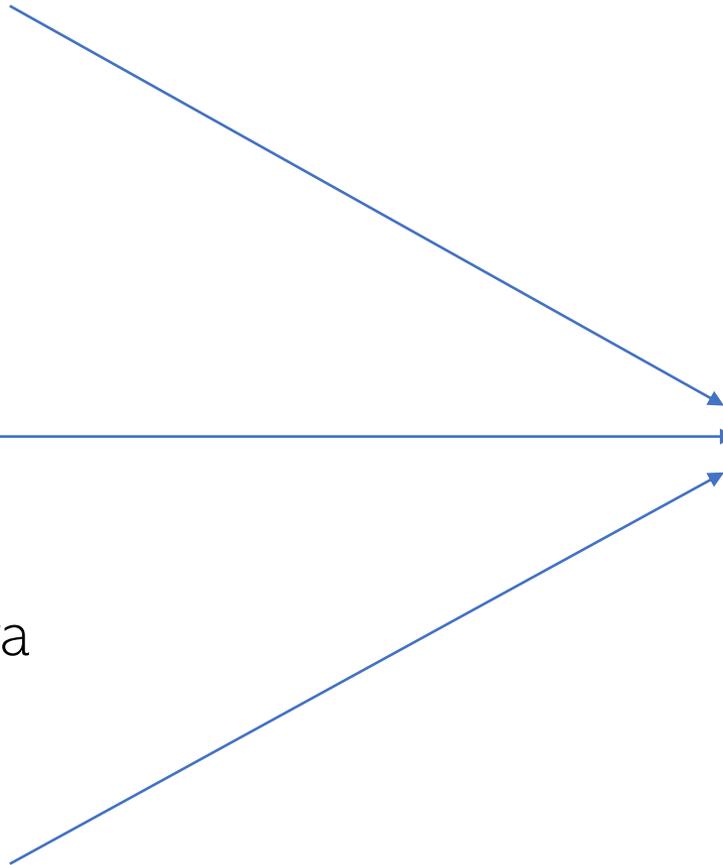
Communities of practice



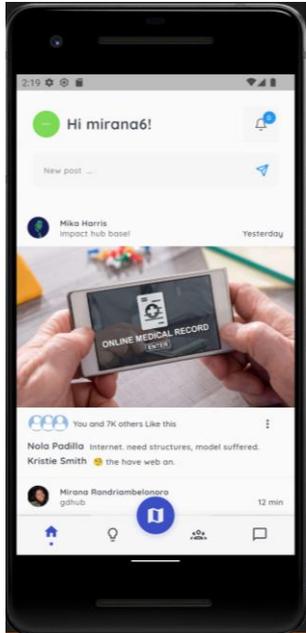
Validation process



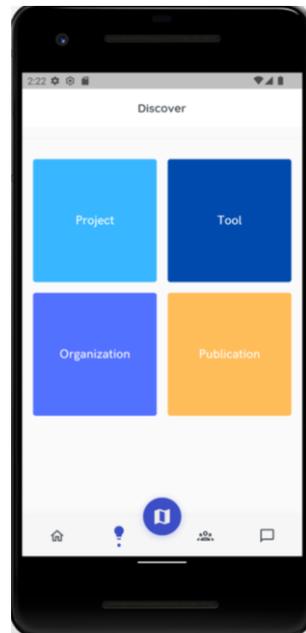
Users



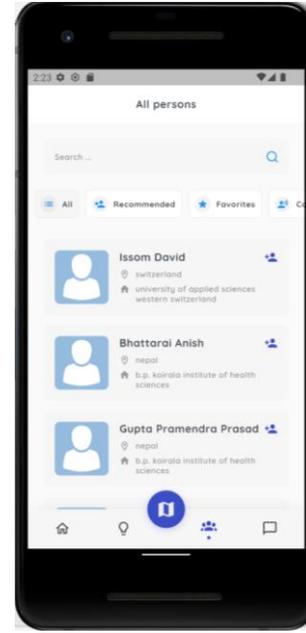
Implementome



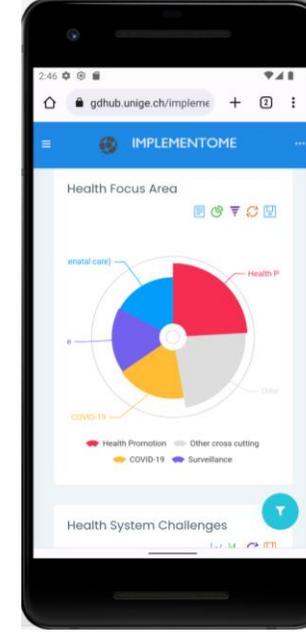
Home



Discover



People &
Communities



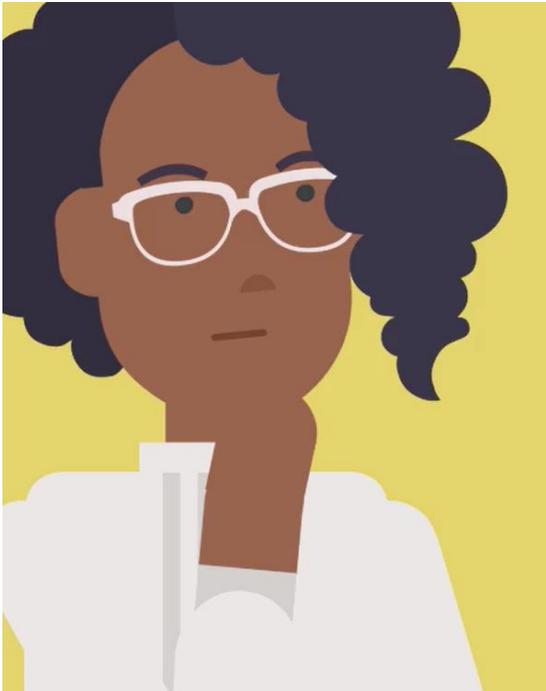
Trends



Maps



Use case



Implementor

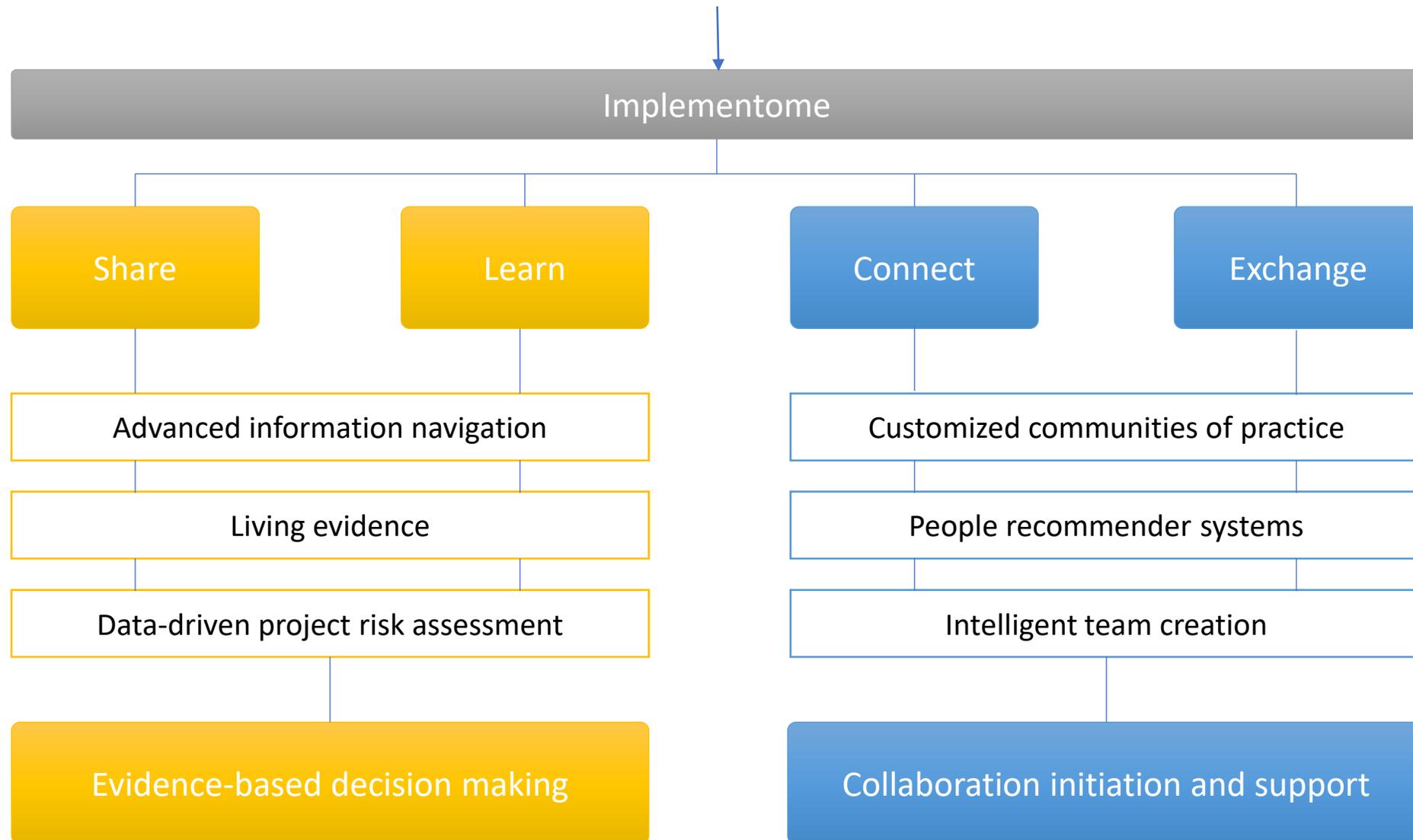
I'm the director of a district hospital in rural Nigeria. I plan to implement a tele-expertise service in cardiology:

- What **tools** could I use?
- Whom could I **learn from** and **collaborate with**? Whom should I **contact**?
- What are the **challenges and best practices** regarding sustainable **business models** for this activity?
- How do I demonstrate **impact**?
- Is there an appropriate **community of practice** I could join?
- *I want to hear about the **experience** of colleagues who have done the same work before. How other projects face similar **challenges** to mine?*

Demo

Implementome: long-term vision

Automatic mechanisms for collecting and annotating data



Enriching user profile



A group of four diverse business professionals (two men and two women) are standing in an office setting, looking towards the right. The background shows a city skyline with several tall buildings. The text "BE IMPACTFUL" is overlaid in white, bold, sans-serif font at the bottom center of the image.

BE IMPACTFUL

Thank you



More information: <https://gdhub.org/>

Contact us :

caroline.perrin@unige.ch

mirana.randriambelonoro@unige.ch

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