



# GHEID

## Global/Geneva Hub for Evaluation and Implementation of Digital Health

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# GHEID

- Hosted by HI5LAB : HEALTH INFORMATICS FOR INNOVATION, INTEGRATION, IMPLEMENTATION AND IMPACT
- Vision: to federate diverse competencies in the field of digital health implementation and evaluation into a network of experts that has the critical mass and credibility to provide the services necessary to support diverse implementations and evaluations of digital health in various settings.
- Tool: inter-connected mapping of digital health activities, stakeholders, and outputs



# SMART-GHEID

Preliminary insights

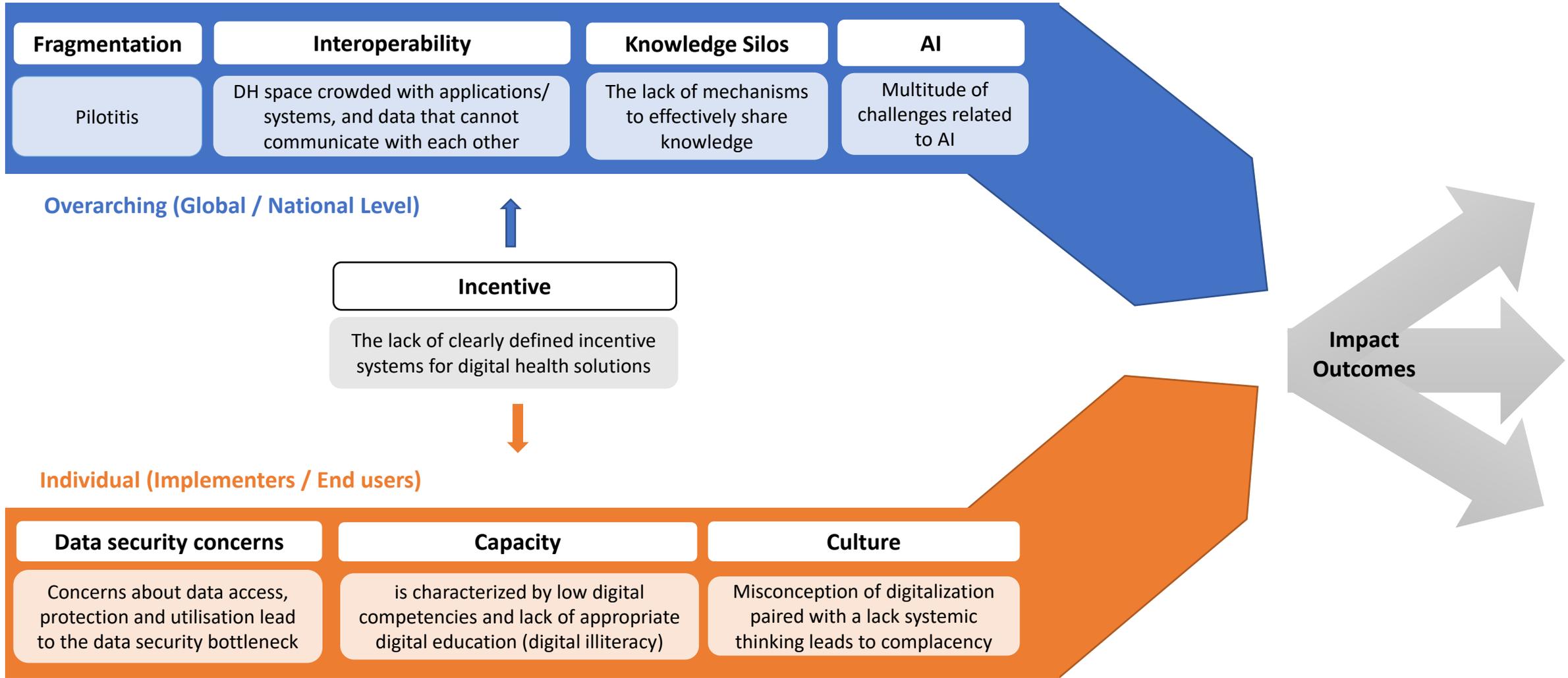
# SMART-GHEID preliminary insights

## SMART: Study to Map and Assess Relevant Technologies for health

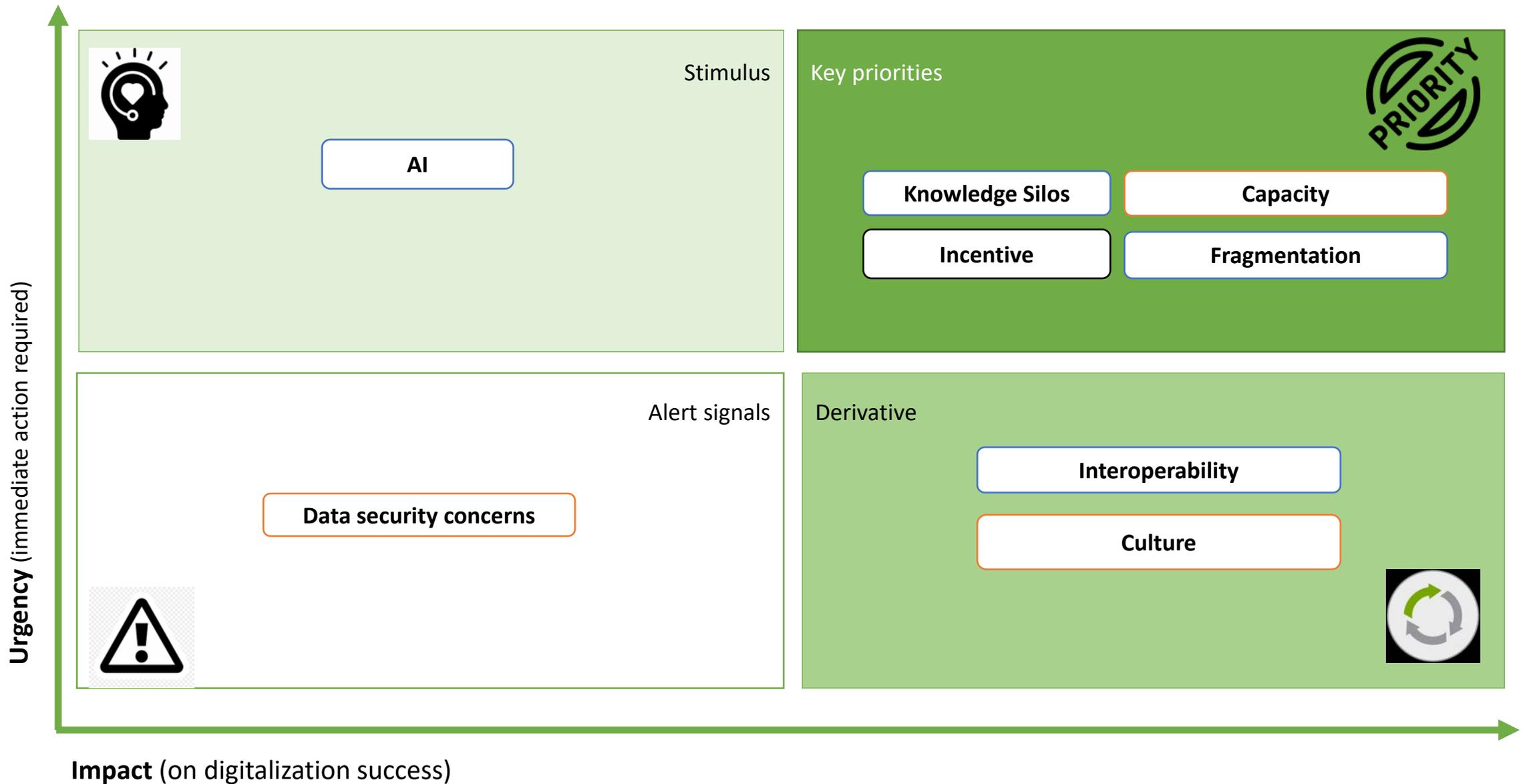
- 28 people interviewed from 23 Organizations / initiatives
- 13 Surveys from initiatives already funded by SDC



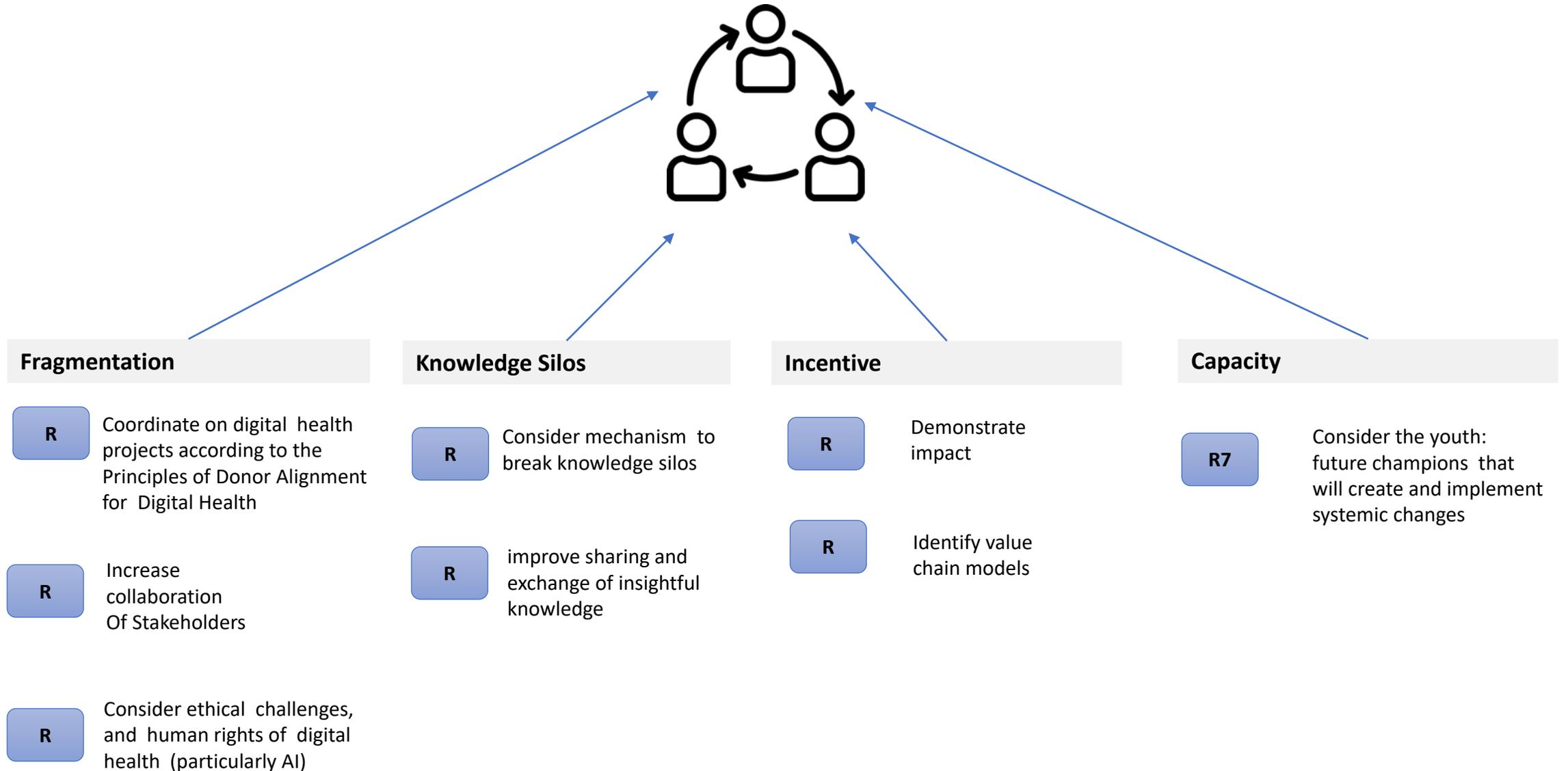
# SMART-GHEID bottlenecks



# Key priorities

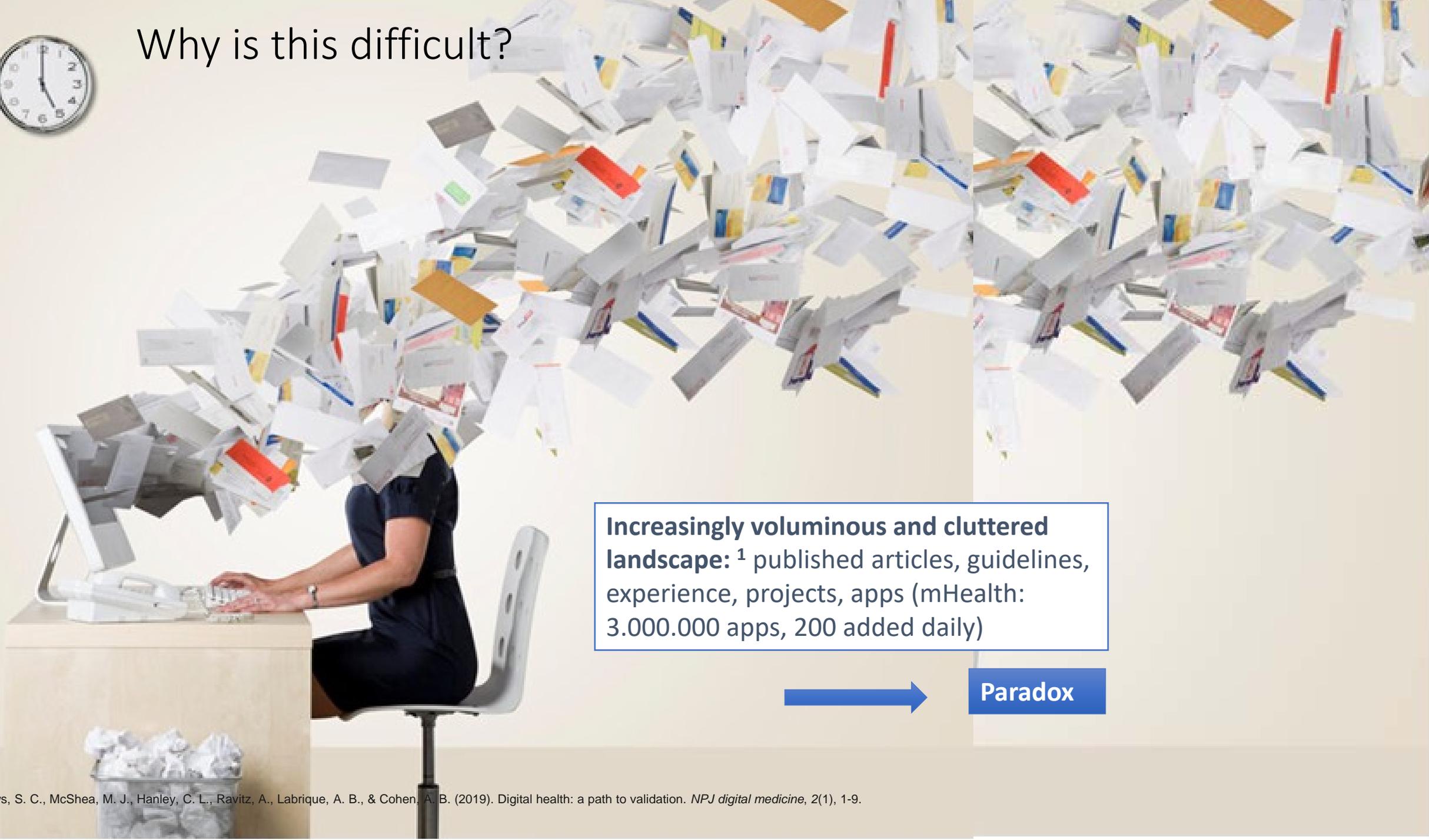


# Increased collaboration / meaningful connection will address key priorities





# Why is this difficult?



**Increasingly voluminous and cluttered landscape:** <sup>1</sup> published articles, guidelines, experience, projects, apps (mHealth: 3.000.000 apps, 200 added daily)



**Paradox**

<sup>1</sup> Mathews, S. C., McShea, M. J., Hanley, C. L., Ravitz, A., Labrique, A. B., & Cohen, A. B. (2019). Digital health: a path to validation. *NPJ digital medicine*, 2(1), 1-9.

# How can we achieve this

**Platform** to connect

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

- As for other “omics” domains, a key challenge is to master the variety and volume of information
- Knowledge models can improve this

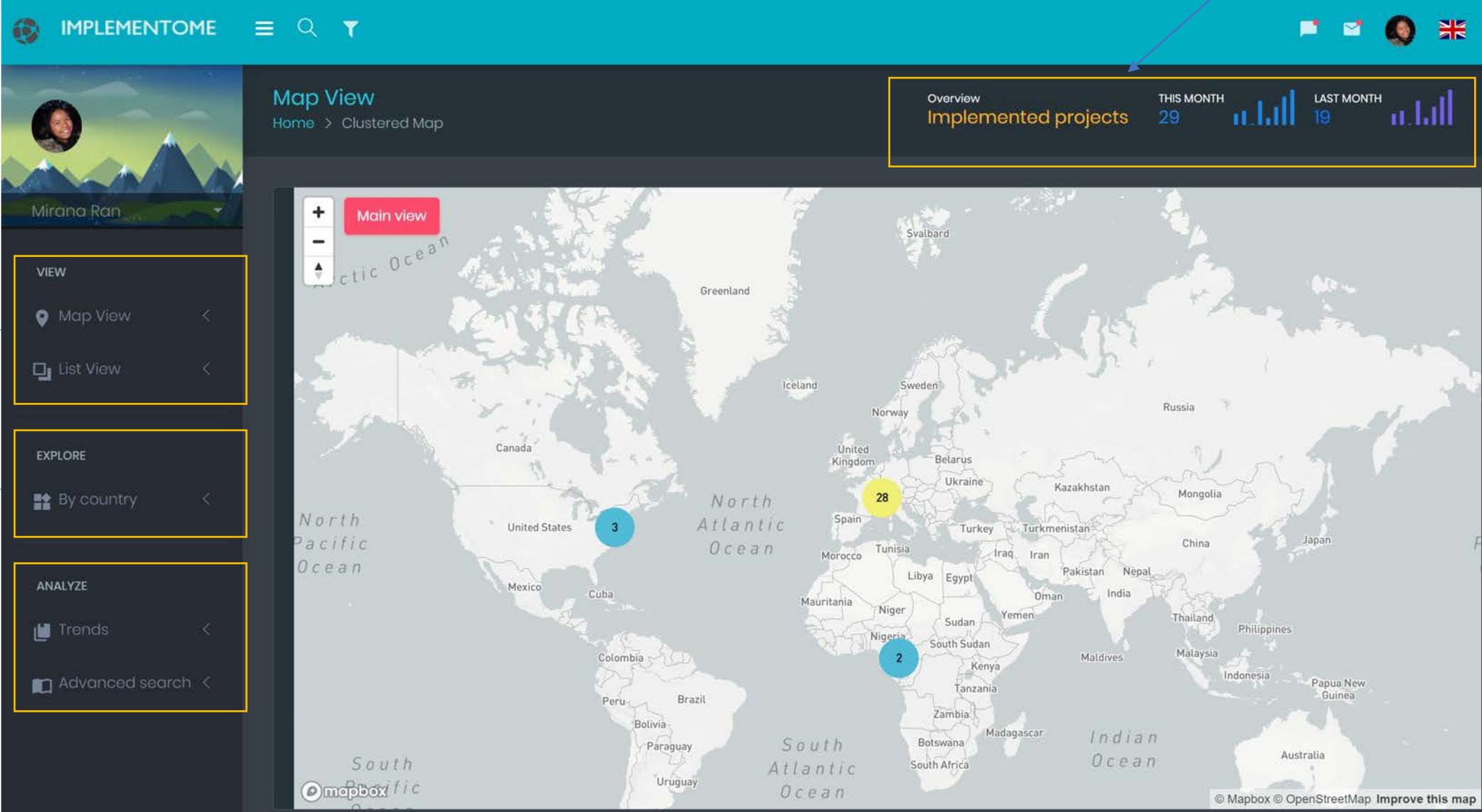


# Implementome

inter-connected mapping of digital health activities, stakeholders, and outputs

# Main interface

Quick view: implemented projects trends



View

Explore

Analyze

# Map view: clustered items (projects) view on the map

The screenshot displays the IMPLEMENTOME web application interface. At the top, the logo 'IMPLEMENTOME' is visible alongside navigation icons. The user profile 'Mirana Ran' is shown in the top left. The main header area includes the title 'Map View' and a breadcrumb 'Home > Clustered Map'. On the right, there are summary statistics: 'Overview Implemented projects' with 'THIS MONTH 29' and 'LAST MONTH 19', each accompanied by a bar chart. A left sidebar contains navigation options under 'VIEW' (Map View, List View), 'EXPLORE' (By country), and 'ANALYZE' (Trends, Advanced search). The central map shows a world map with three clustered data points: a yellow circle with '28' over the United Kingdom, a blue circle with '3' over the United States, and another blue circle with '2' over Nigeria. The map includes a 'Main view' button and zoom controls. The bottom right corner features the Mapbox logo and copyright information: '© Mapbox © OpenStreetMap Improve this map'.

# Map view: example - programs

The screenshot displays the IMPLEMENTOME web application interface. At the top, the header includes the IMPLEMENTOME logo, navigation icons, and user profile information. The main content area is titled "Map View" and shows a "Clustering Map" of Geneva, Switzerland. The map features several blue circular markers with numbers 2, 3, and 7, indicating project locations. A yellow box highlights a specific project location near the World Trade Organization. A detailed information panel for this project is visible on the right, listing the program as "LANCET FINANCIAL TIMES COMMISSION GOVERNING HEALTH FUTURES", the language as "English", and the access as "LANCET FINANCIAL TIMES COMMISSION". The panel also lists the persons involved: "Ilona Kickbusch, Anurag Aarawal". The interface includes a sidebar with navigation options like "VIEW" (Map View, List View), "EXPLORE" (By country), and "ANALYZE" (Trends, Advanced search). A top navigation bar shows "Implemented projects" with 29 projects this month and 19 last month, accompanied by bar charts. The bottom of the map includes a Mapbox logo and copyright information.

# Map view: example - publications

The screenshot displays the IMPLEMENTOME web application interface. At the top, the header includes the IMPLEMENTOME logo, navigation icons, and user profile information. The main content area is titled "Map View" and shows a map of Yaounde, Cameroon. A red pin is located in the center of the map, and a yellow box highlights a specific location. A popup window on the right side of the map displays the following information:

**SMS reminders to improve adherence and cure of tuberculosis patients in Cameroon (TB-SMS Cameroon): A randomized controlled trial**

Languages  
English

Access  
[Paper](#)

Authors  
Georges Bediang, Beat Stoll, Nadia Elia, Jean-Louis Abena, Antoine Geissbühler, Mirana

The interface also includes a sidebar on the left with navigation options: VIEW (Map View, List View), EXPLORE (By country), and ANALYZE (Trends, Advanced search). At the bottom right, there is a copyright notice: © Mapbox © OpenStreetMap Improve this map.

# Map view: example - organizations

**IMPLEMENTOME** Home > Clustered Map

**Map View**

Overview  
Implemented projects

THIS MONTH 29  
LAST MONTH 19

**Main view**

**Gesellschaft für Internationale Zusammenarbeit (GIZ)**

Languages  
English, German

Access  
GIZ

Persons  
Saurav Bhattarai, Tanja Gönner

VIEW  
Map View <  
List View <

EXPLORE  
By country <

ANALYZE  
Trends <  
Advanced search <

mapbox

© Mapbox © OpenStreetMap Improve this map

# Map view: example - persons

The screenshot displays the IMPLEMENTOME web application interface. At the top, a teal navigation bar contains the logo, a menu icon, search, and filter icons, along with user profile and language settings. The main content area is titled "Map View" and includes a breadcrumb "Home > Clustered Map". On the right, there are summary statistics: "Overview Implemented projects" with "THIS MONTH 29" and "LAST MONTH 19", each accompanied by a bar chart. A left sidebar shows navigation options under "VIEW" (Map View, List View), "EXPLORE" (By country), and "ANALYZE" (Trends, Advanced search). The central map shows the city of Geneva with a red person icon highlighted in a yellow box near the Grand Théâtre de Genève. A profile overlay for Antoine Geissbuhler is shown on the right, including his photo, name, organization (University of Geneva), profile link (Google scholar), and a project titled "SMS reminders to improve adherence and cure of" with a "See all" button. The map footer includes Mapbox and OpenStreetMap logos.

Filter: by type/status/system level - example here: by type person

The screenshot displays the IMPLEMENTOME interface with a teal header. A yellow box highlights the filter icon (a downward-pointing triangle) in the top navigation bar. Below the header, three filter sections are visible:

- By type:** A list of categories with checkboxes. The 'Person' option is checked and highlighted with a yellow box. Other options include Network, Organization, Publication, Research center, Program, and Tools.
- By status:** A list of status options, all of which are checked with red checkmarks: Completed and continued, Completed and ended, and Ongoing.
- By system level:** A list of system level options, all of which are checked with blue checkmarks: Local, National, and International.

Below the filters is a world map with red pins indicating data points in France, Mauritania, Nigeria, and Madagascar. The map includes labels for major oceans (North Pacific, North Atlantic, South Atlantic, Indian) and various countries. The bottom left corner features the Mapbox logo, and the bottom right corner has the text '© Mapbox © OpenStreetMap Improve this map'.

# Explore: by country - example here: United States

The screenshot displays the IMPLEMENTOME web application interface. At the top, the header includes the logo, navigation icons, and user profile information. The main content area is titled "Map View" and shows a map of the United States with various cities and states labeled. A sidebar on the left contains a menu with "EXPLORE" and "ANALYZE" sections. The "EXPLORE" section is highlighted with a yellow box, and the "By country" option is selected. Below it, a list of countries is shown, with "United States" highlighted in a yellow box. The "ANALYZE" section includes "Trends" and "Advanced search" options. In the top right corner, there are statistics for "Implemented projects": "THIS MONTH 29" and "LAST MONTH 19", accompanied by bar charts. The map itself shows a "Main view" button and a "United States" label. The bottom of the map includes a "mapbox" logo and copyright information: "© Mapbox © OpenStreetMap Improve this map".

IMPLEMENTOME

Map View

Home > Unclustered Map

Overview  
Implemented projects

THIS MONTH 29

LAST MONTH 19

EXPLORE

By country

United States

ANALYZE

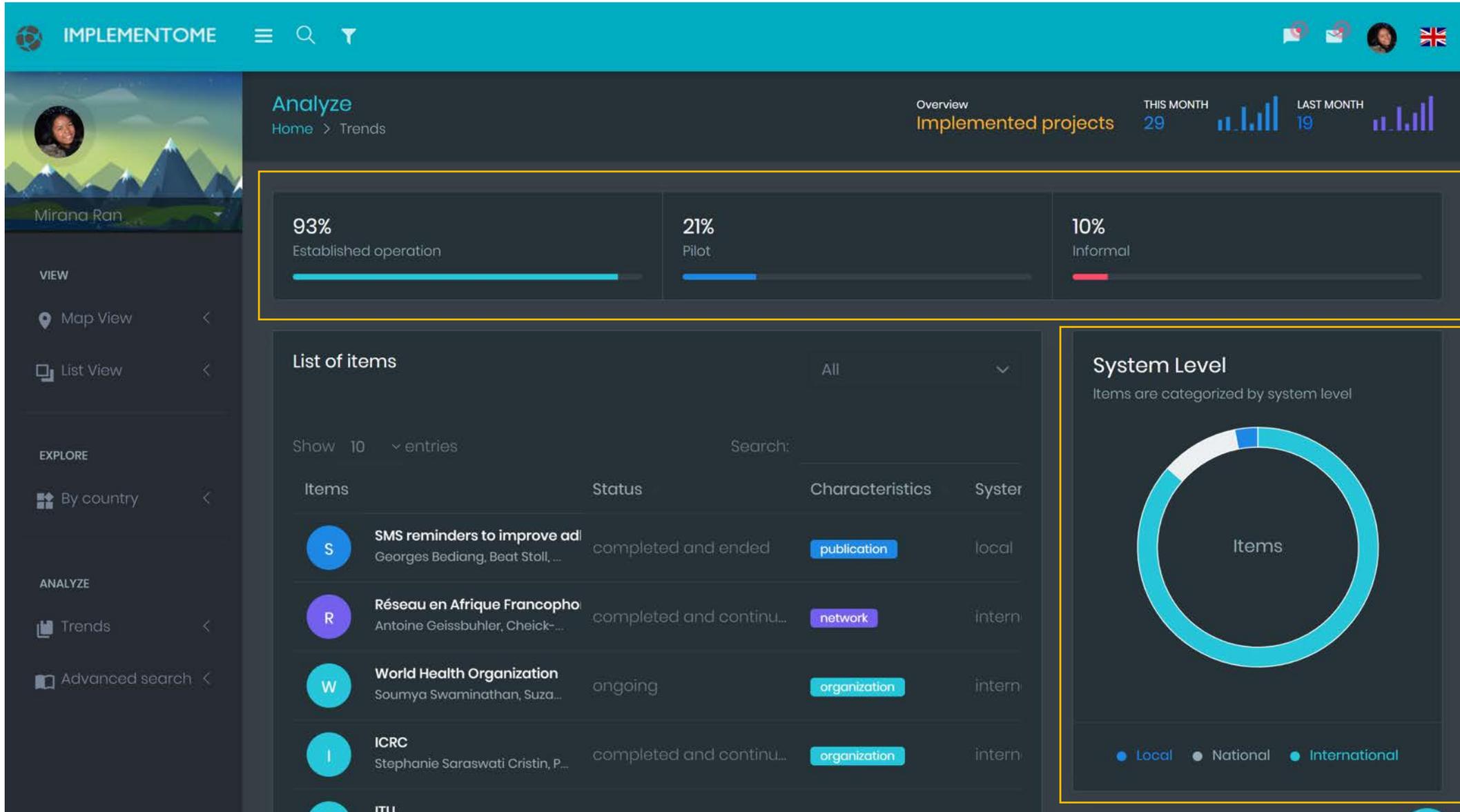
Trends

Advanced search

mapbox

© Mapbox © OpenStreetMap Improve this map

# Trends



← Maturity level

← System level

# Trends : list of items

The screenshot displays the IMPLEMENTOME dashboard. At the top, the header includes the logo, navigation icons, and user profile information. The main content area is divided into several sections:

- Analyze**: Shows progress for 'Established operation' (93%), 'Pilot' (21%), and 'Informal' (10%) with corresponding progress bars.
- Overview**: Displays 'Implemented projects' for 'THIS MONTH' (29) and 'LAST MONTH' (19) with bar charts.
- List of items**: A table listing items with columns for Items, Status, Characteristics, and System Level. The table is highlighted with a yellow border.
- System Level**: A donut chart showing the distribution of items by system level (Local, National, International).

**List of items**

Items	Status	Characteristics	System Level
<b>S</b> SMS reminders to improve ad Georges Bediang, Beat Stoll, ...	completed and ended	publication	local
<b>R</b> Réseau en Afrique Francopho Antoine Geissbuhler, Cheick-...	completed and continu...	network	intern
<b>W</b> World Health Organization Soumya Swaminathan, Suza...	ongoing	organization	intern
<b>I</b> ICRC Stephanie Saraswati Cristin, P...	completed and continu...	organization	intern

**System Level**

Items are categorized by system level

● Local ● National ● International

# Trends : list of items

The screenshot shows the IMPLEMENTOME dashboard. The top navigation bar includes the logo, a menu icon, a search icon, and a user profile icon. The main header area displays 'Analyze' with a breadcrumb 'Home > Trends'. On the right, there are statistics for 'Implemented projects' for 'THIS MONTH' (29) and 'LAST MONTH' (19), accompanied by bar charts. Below this, three progress bars show 'Established operation' at 93%, 'Pilot' at 21%, and 'Informal' at 10%. The central 'List of items' section features a dropdown menu set to 'All' and a search bar containing 'world'. Below the search bar is a table with columns for 'Items', 'Status', 'Characteristics', and 'System level'. Two items are listed: 'World Health Organization' (ongoing, organization, intern) and 'World Bank' (completed and continu..., organization, intern). A pagination bar at the bottom of the list indicates 'Showing 1 to 2 of 2 entries (filtered from 29 total entries)'. To the right of the list is a donut chart titled 'System Level' with the text 'Items are categorized by system level'. The chart shows three segments: 'Local' (blue), 'National' (grey), and 'International' (red). A legend below the chart identifies these categories. The left sidebar contains navigation options for 'VIEW' (Map View, List View) and 'EXPLORE' (By country). The bottom of the dashboard includes a 'Challenges' section and a settings gear icon.

filter

search

# Trends: challenges

The screenshot displays the IMPLEMENTOME web application interface. The top navigation bar is teal and contains the logo, a menu icon, a search icon, and a filter icon. On the right side of the header, there are icons for notifications, an email icon, a user profile picture, and a flag icon representing the United Kingdom.

The main content area is a dark grey panel with a list of organizations. Each entry includes a circular icon with a letter, the organization name, a list of names, a status, a category tag, and a location type. The organizations listed are:

- I** ITU: Hani Eskandar, Reinhard Scho... (ongoing, organization, intern)
- E** EssentialTech: Klaus Schönenberger, Solomz... (ongoing, research center, intern)
- S** Swiss TPH: Martin Raab, Jürg Utzinger (completed and continu..., research center, intern)
- M** Medicus Mundi: Martin Leschhorn Strebel, Ren... (completed and continu..., network, intern)
- A** AGA KHAN DEVELOPMENT NETW: Saleem Sayani (completed and continu..., organization, intern)
- T** Terre des Hommes: Riccardo Lampariello, Barbar... (completed and continu..., organization, intern)

Below the list, it says "Showing 1 to 10 of 29 entries" and includes navigation links for "Previous", "2", "3", and "Next". A progress bar is visible at the bottom of the list area.

On the left side, there is a sidebar with navigation options under "VIEW" (Map View, List View), "EXPLORE" (By country), and "ANALYZE" (Trends, Advanced search).

On the right side, a "Challenges" sidebar is highlighted with a yellow border. It lists six challenge categories with their respective counts and progress bars:

- Capacity building: 20
- Technical and Design challenges: 26
- Normative challenges: 16
- Financial challenges: 6
- Ethical challenges: 4
- Infrastructure: 7

# Advanced search: single search

IMPLEMENTOME

Analyze

Home > Advanced search

Overview  
Implemented projects

THIS MONTH 29

LAST MONTH 19

United States

Process - All

Context Elements - All

Show 10 entries

Search:

Items	Status	Characteristics	System level
<b>D-Tree International</b> Erica Layer, Alison Clark	completed and continued	organization	international
<b>World Bank</b> Joaquin Andres Blaya	completed and continued	organization	international
<b>Bill and Melinda Gates Foundation</b> Saurav Bhattarai	completed and continued	organization	international

By country

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# Advanced search: combined search

The screenshot shows the Implementome web application interface. The top navigation bar includes the logo, a search icon, and a user profile. The main content area is titled 'Analyze' and shows a list of items filtered by 'Switzerland' and 'Ethics'. The list includes three entries: 'World Health Organization', 'LANCET FINANCIAL TIMES COMMISSION GOVERNING HEA', and 'Special Programme for Research and Training in Trop'. The interface also features a sidebar with navigation options like 'Map View', 'List View', 'By country', and 'Trends'. A search bar is visible in the top right of the main content area.

IMPLEMENTOME

Analyze

Home > Advanced search

Overview  
Implemented projects

THIS MONTH  
29

LAST MONTH  
19

List of items

Switzerland

Process - All

Ethics

Show 10 entries

Search:

Items	Status	Characteristics	System level
<b>W</b> World Health Organization Soumya Swaminathan, Suzanne Hill, Bernado Mariano	ongoing	organization	international
<b>L</b> LANCET FINANCIAL TIMES COMMISSION GOVERNING HEA Ilona Kickbusch, Anurag Agrawal	ongoing	program	international
<b>S</b> Special Programme for Research and Training in Trop Robert Terry, John Reeder	ongoing	organization	international

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All the entities tackling **ethics** in **Switzerland**

# Thank you

For your attention