Panel: Making most out of all that data

Global Health Development Forum

Gina Assaf

www.souktel.com

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Overview

Key Details

- Founded in 2006 by Harvard & MIT graduate fellows
- Offices: Washington, DC; Amman, Jordan; Ramallah, Palestine
- Sectors: global health, economic growth, democracy/governance, education, emergency response, agriculture
- Regions: Africa, South and Southeast Asia, Middle East

Core Focus Areas

- Design & delivery of custom, end-to-end digital solutions for USAID, DFID and UN implementers
- Creation of cross-platform services: accessible via mobile audio, text, web
- Direct connectivity to mobile network gateways; direct network partnerships across Africa & Asia
- Strategy and go-to-market planning for digital service roll-out in frontier markets/crisis zones

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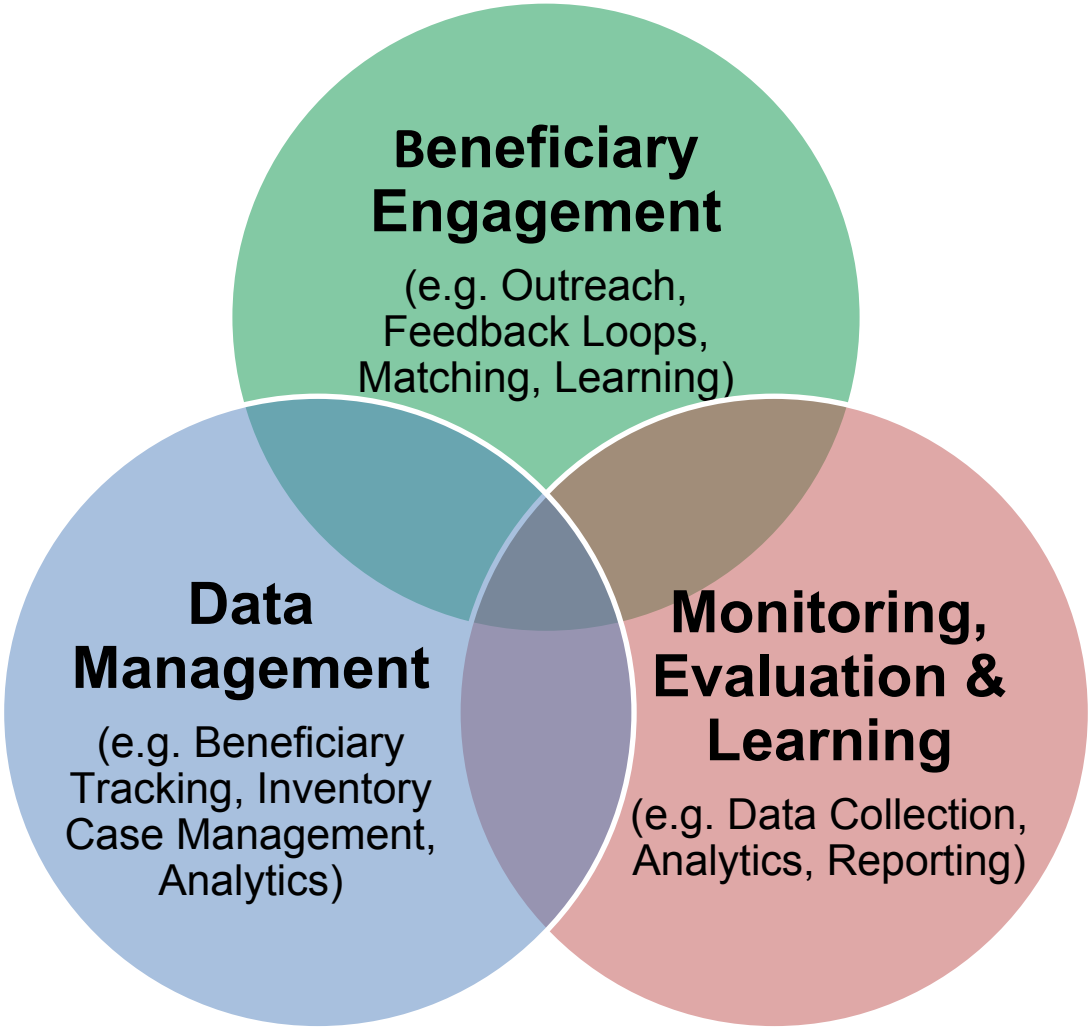
Areas of Intervention



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Core Solutions

Digital Strategy Advising: Solution design, campaign management, go-to-market outreach, sustainability planning

Content Delivery: Scalable mobile audio, video and text content delivery platforms, with built-in trend analysis & monitoring

M&E and Analytics: Data collection and indicator tracking via mobile messenger (WhatsApp)/web/SMS/audio, with real time map displays and analytics dashboards

Interactive Communities: Small-group mentoring and knowledge sharing networks, with management and tracking interfaces

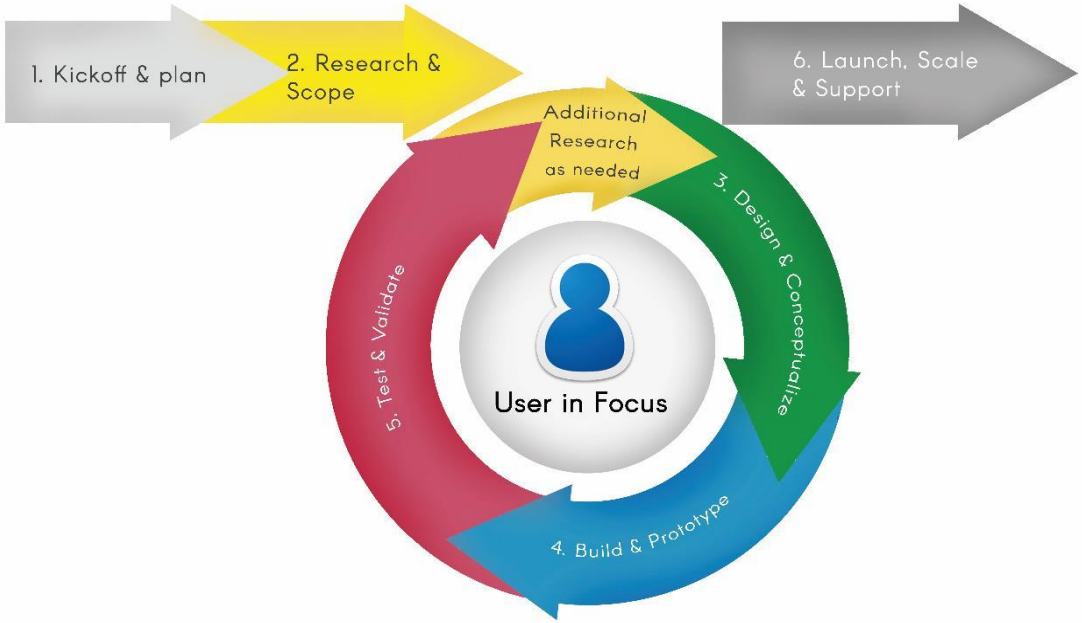
MatchMe: Supply/demand matching platform, linking buyers/sellers, communities/service providers

User-Centered Design Approach

- Software design process that revolves around user needs and use cases and requires input from users at all stages of design process

- Designers, data scientists, domain experts and potential end-users must come together to define use cases, needs, constraints and data sources

- Requires Iteration



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Identifying Data User Needs

- Who are the different users/**personas**?
- What information do they **need** from the data?
- How will they be **using and consuming** the data?
- What **data combinations** are interesting for particular use cases?
- What data sources are **available**?
- What data is **missing** and needs to be collected?
- What is **possible** vs. **what is easy to integrate** with?

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Global Health - Making most out of all that data

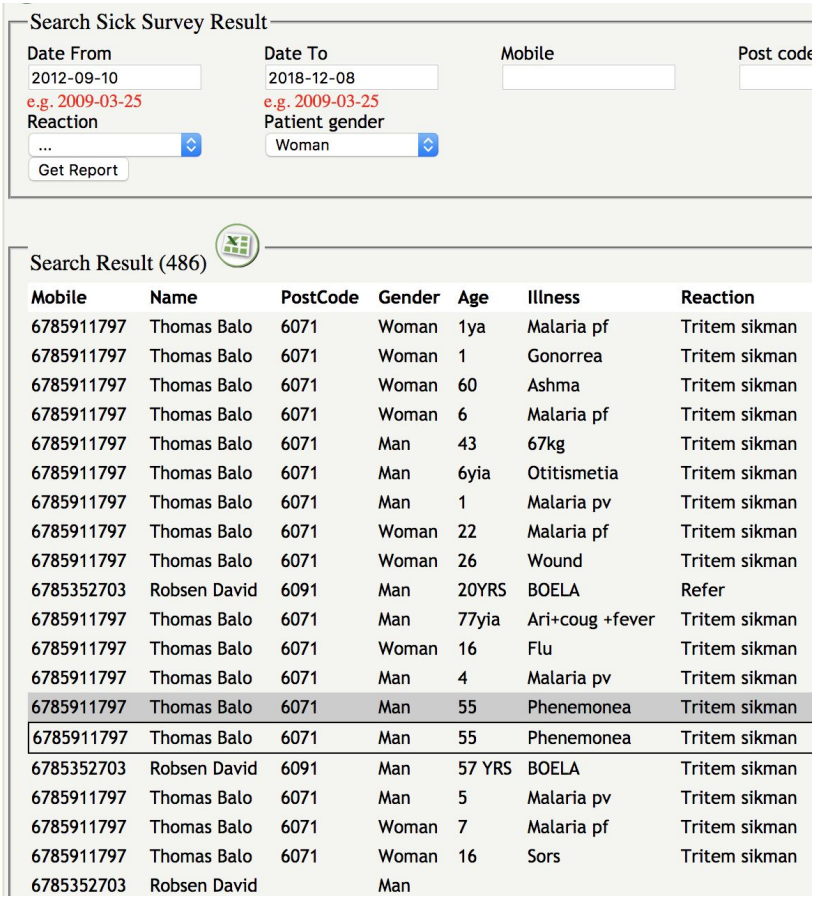
Select Use Cases

Use Case 1: Rural Clinic Patient Reporting Platform (Partner: Save the Children; Funder: AusAid)

Partnered with Vanuatu Ministry of health and mobile network operator to make health data accessible to aid workers

Made data available to aid workers via SMS

Searchable web interface for reporting needs



Mobile	Name	PostCode	Gender	Age	Illness	Reaction
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6785911797	Thomas Balo	6071	Woman	1	Gonorrea	Tritem sikman
6785911797	Thomas Balo	6071	Woman	60	Ashma	Tritem sikman
6785911797	Thomas Balo	6071	Woman	6	Malaria pf	Tritem sikman
6785911797	Thomas Balo	6071	Man	43	67kg	Tritem sikman
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6785911797	Thomas Balo	6071	Man	1	Malaria pv	Tritem sikman
6785911797	Thomas Balo	6071	Woman	22	Malaria pf	Tritem sikman
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6785911797	Thomas Balo	6071	Woman	16	Flu	Tritem sikman
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6785352703	Robsen David	6091	Man	57 YRS	BOELA	Tritem sikman
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6785352703	Robsen David		Man			

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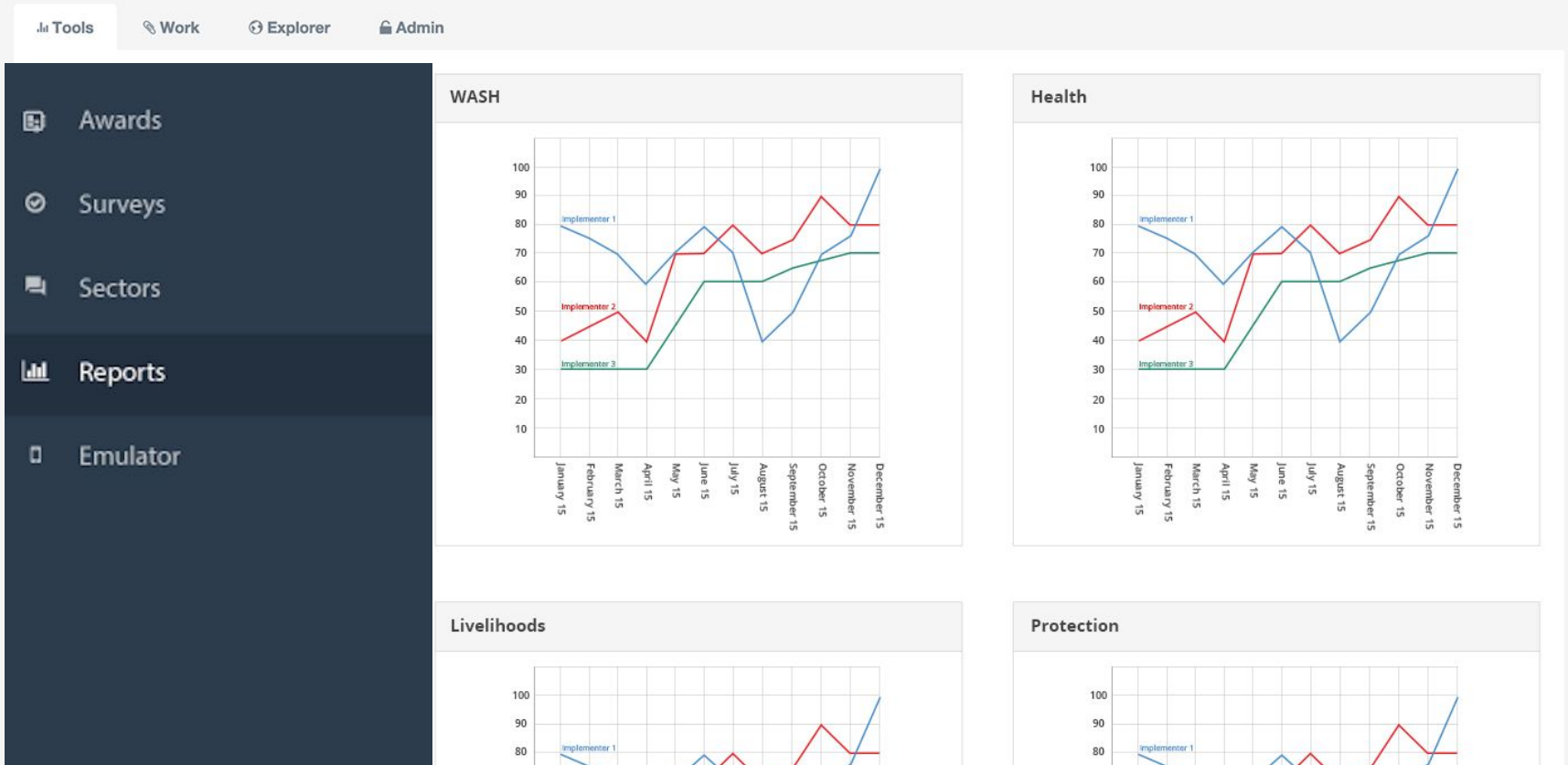
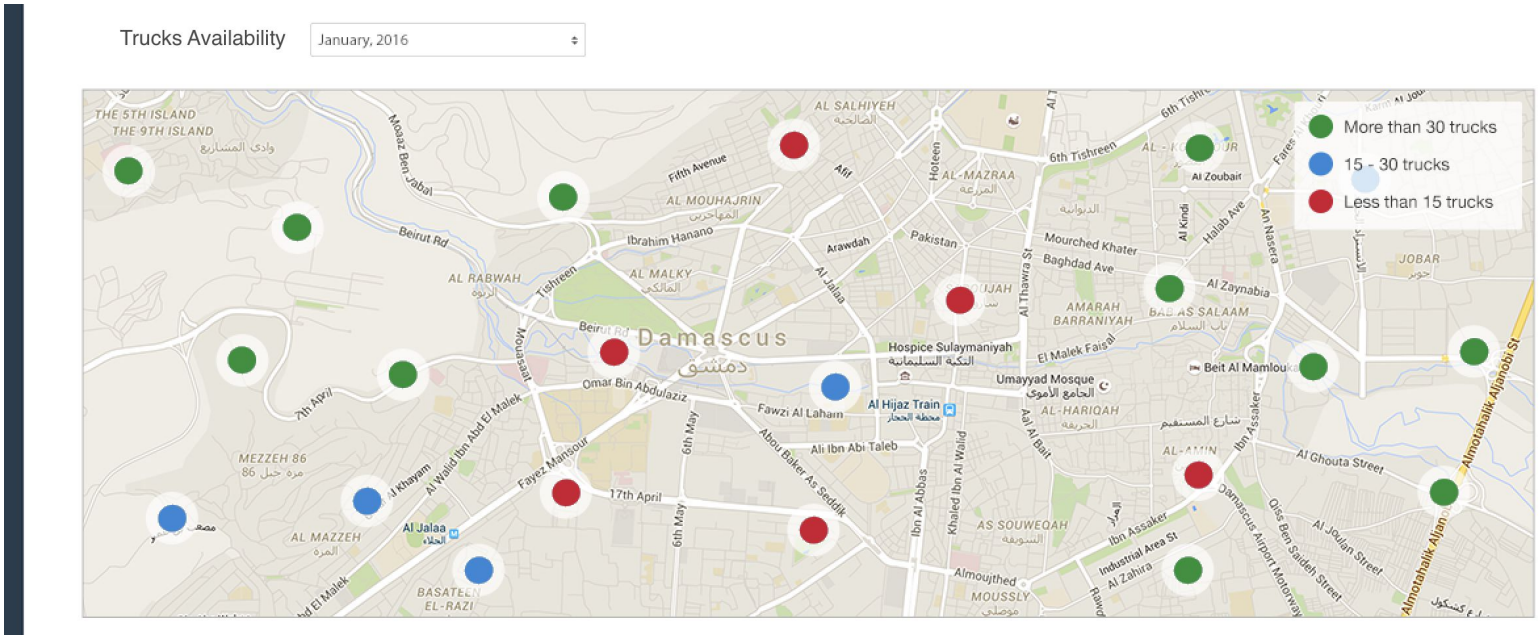
Use Case 2: M&E of Service & Aid Delivery (Partner: Various)

M&E on multiple areas of aid service and delivery with 30+ partners
-Monitoring of data obtained from on-the-ground collected data and integration of existing data sources.



Use Case 3: Medical Supply Chain Management (Partner: IRC)

Streamlining contractors' distribution of emergency medical supplies to clinics serving Syrian refugees using an inventory management tool.



Use Case 4 - Syrian Refugee Nutrition Data (Partners: Various; Funder: UNICEF)

Data collected by various implementing partners and use of existing UNICEF data to provide solution for monitoring malnutrition of refugees

Lessons learned - On Use of Data

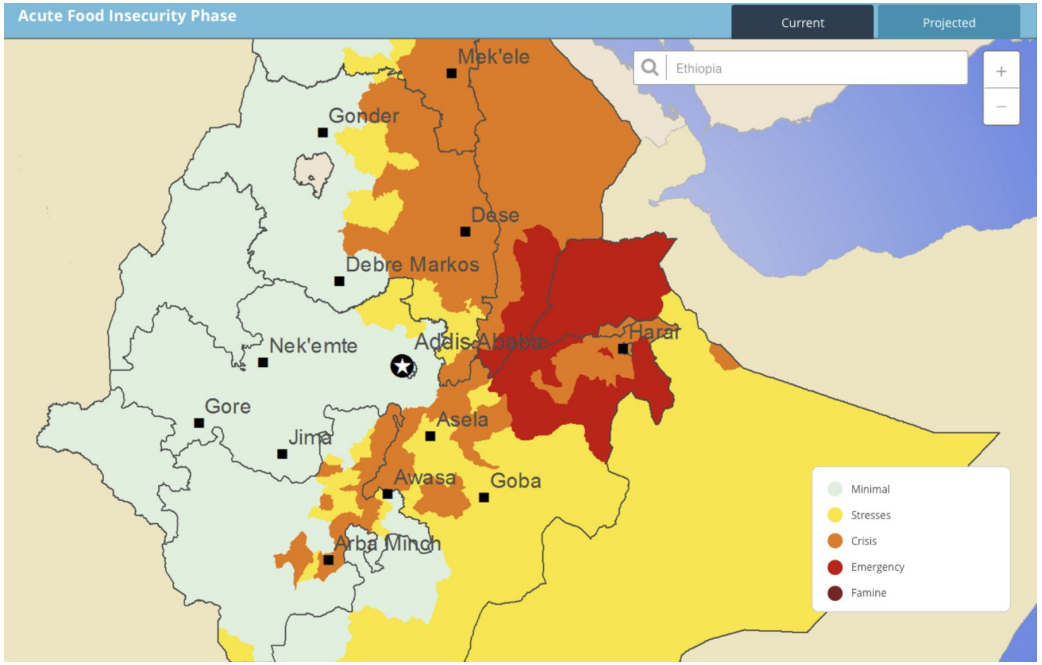
- Start with the **use cases and users** that need the data
- Use cases can be **simple yet** still impactful - Identify new channels to disseminate and use the existing data
- **Identify** and work with the **partners** early on - Help **facilitate** conversations with the partners
- **Prioritize** by level of effort to integrate data with impact
- **Plan** for the time and effort for the **bureaucracy** of access to the data and the effort for **cleaning** and **integrating** the data

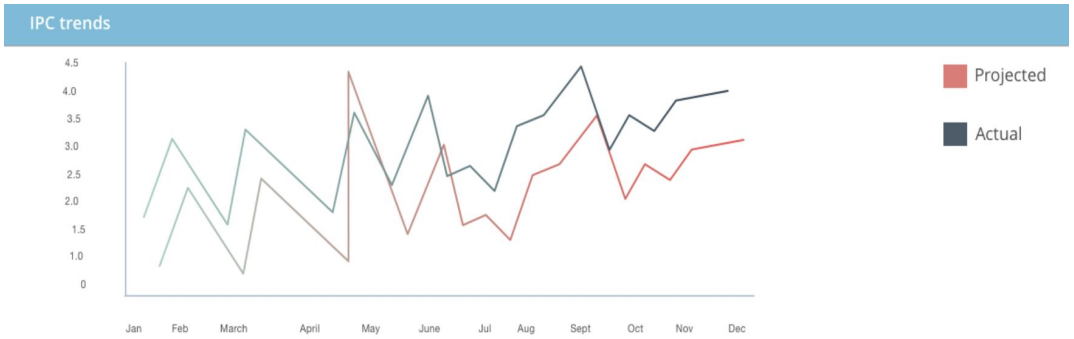
Global Health - Making most out of all that data

Exploring Big Data Analytics - ML/AI Applications

AI & Machine Learning Applications - Opportunities for Global Health

- Predicting malnutrition cases
- Predicting famine related to food insecurity
- Medical supply inventory management





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Challenges with Big Data Analysis- ML/AI

- **Large representative sample**
- **Biases in data** - What data is being used?
- **Formats and types of data - Unstructured** to **Structured:** Standardization and integration issues
- **Data Quality** - Requires data reviewing and cleaning
- **Continuous funding** needed for R&D work
- Requires a change in **staffing skills requirements**

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Small is Beautiful:

3 Key Concepts for Data Use

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BOLD
THINKERS
DRIVING
REAL-WORLD
IMPACT

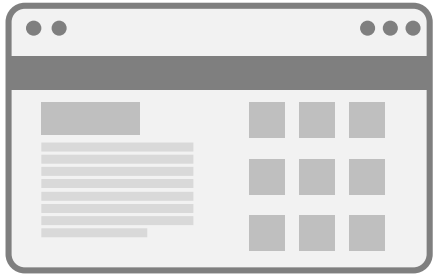
Maslow's Hammer

If all you have is a hammer, everything looks like a nail.

DATA PIPELINE PROCESS

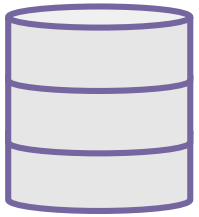
DOCUMENTS

WEBSITES

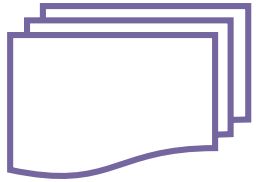


SOCIAL MEDIA

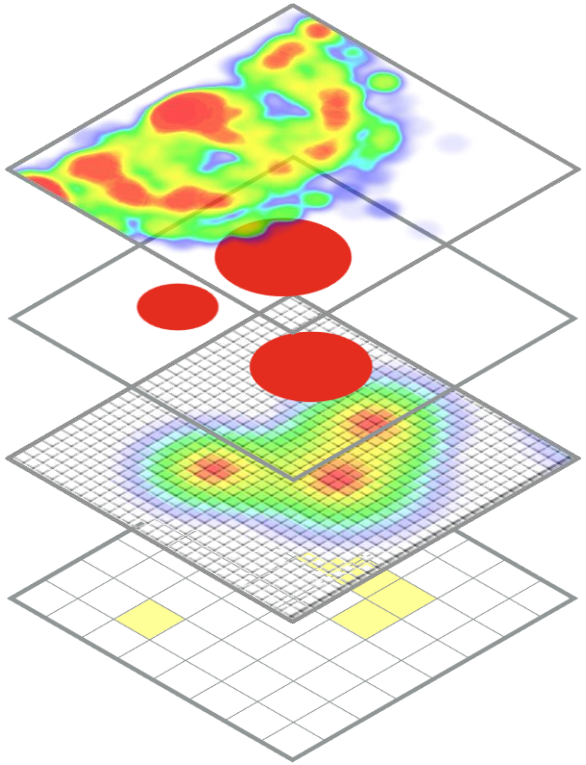
DATA STORES

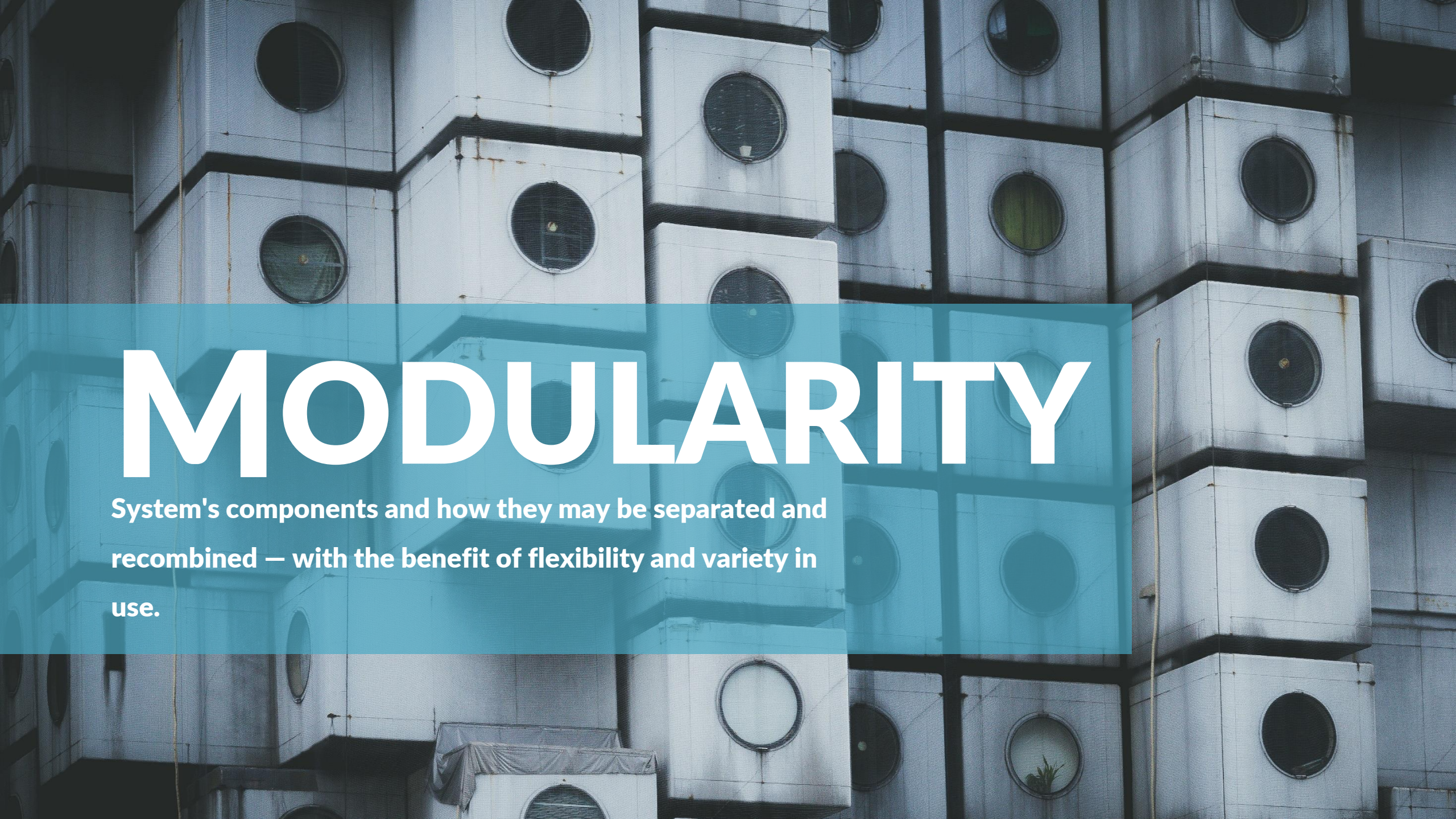


DATA ANALYSIS



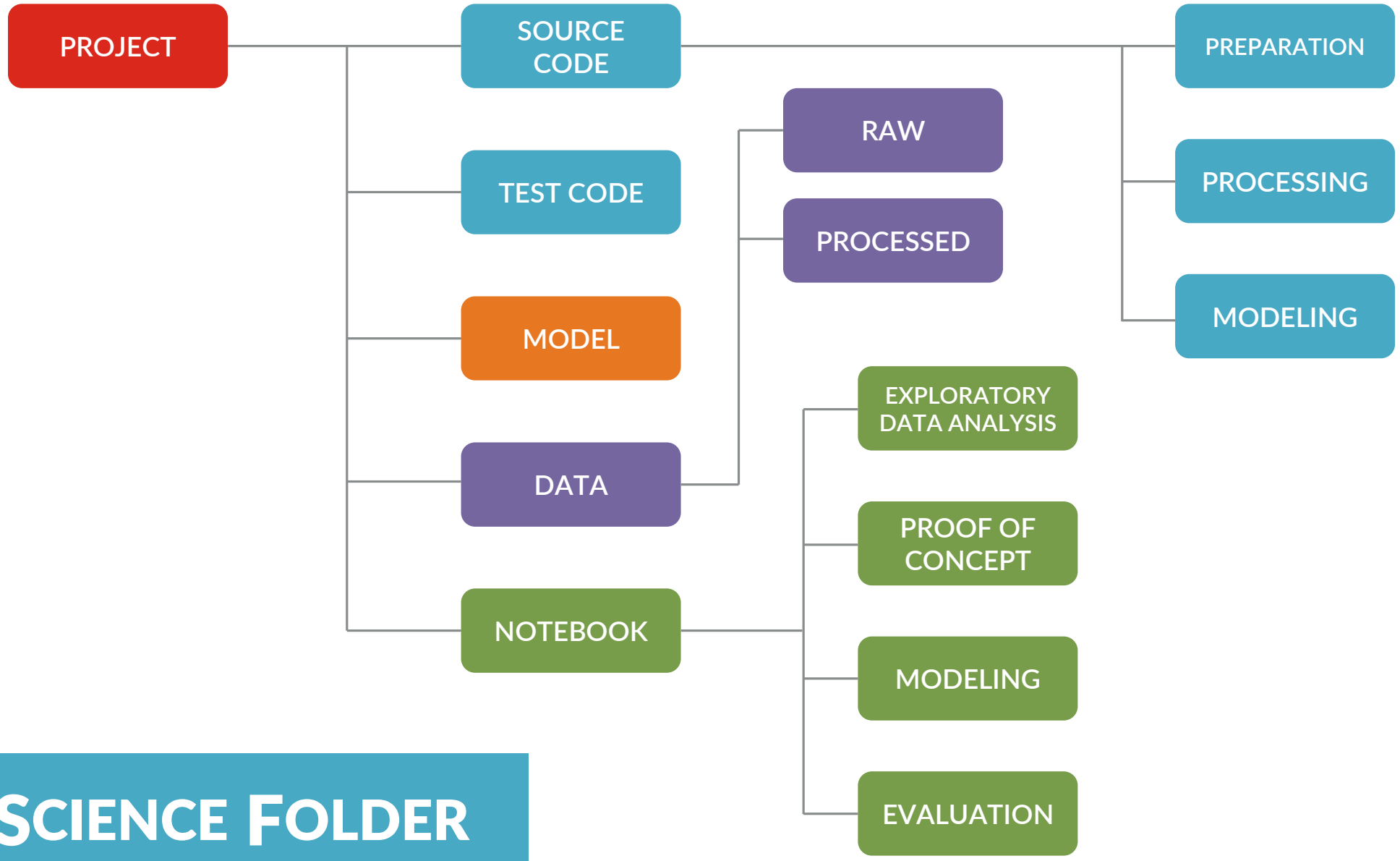
ANALYTICS, CLASSIFICATION, MODELING





MODULARITY

System's components and how they may be separated and recombined — with the benefit of flexibility and variety in use.



Data Science Folder

G.I. Joe Fallacy

The fallacy that “knowing is half the battle.”

Problem-Solving Cycle

THANK YOU!

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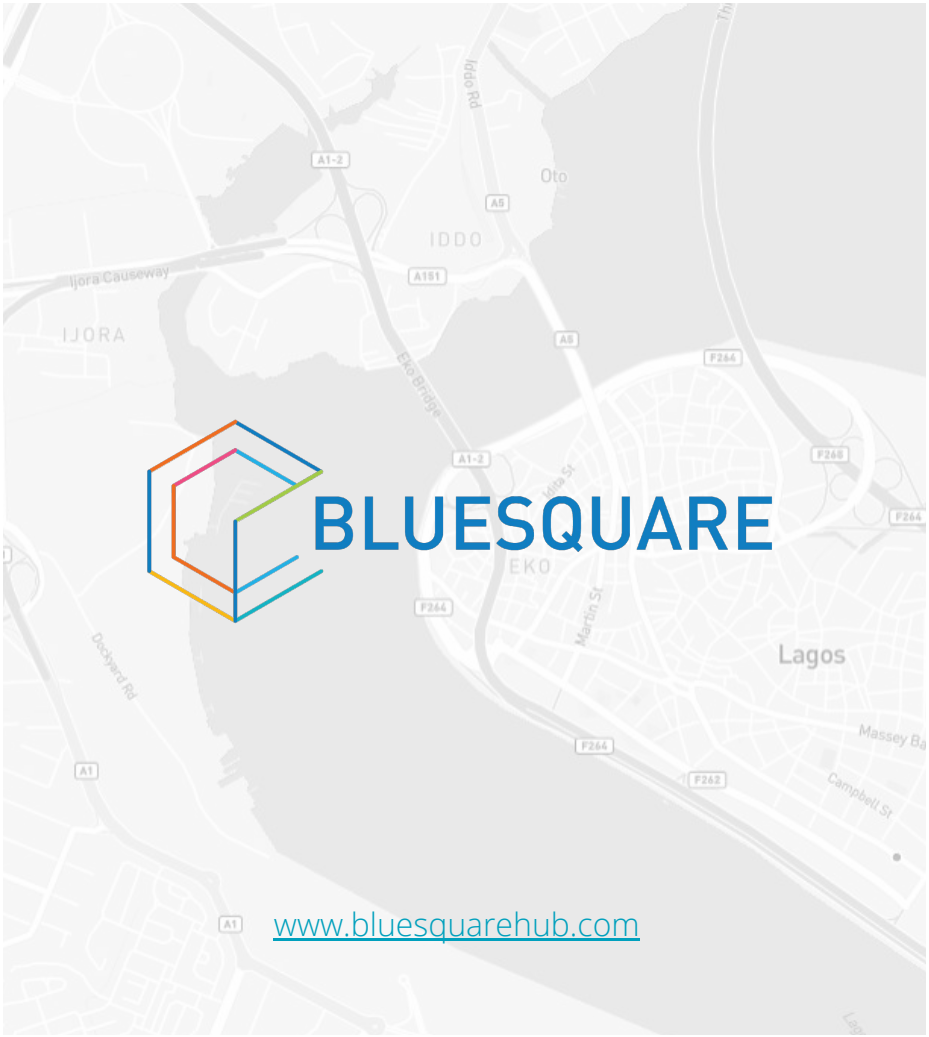
BOLD
THINKERS
DRIVING
REAL-WORLD
IMPACT



Making the most out of all that data.

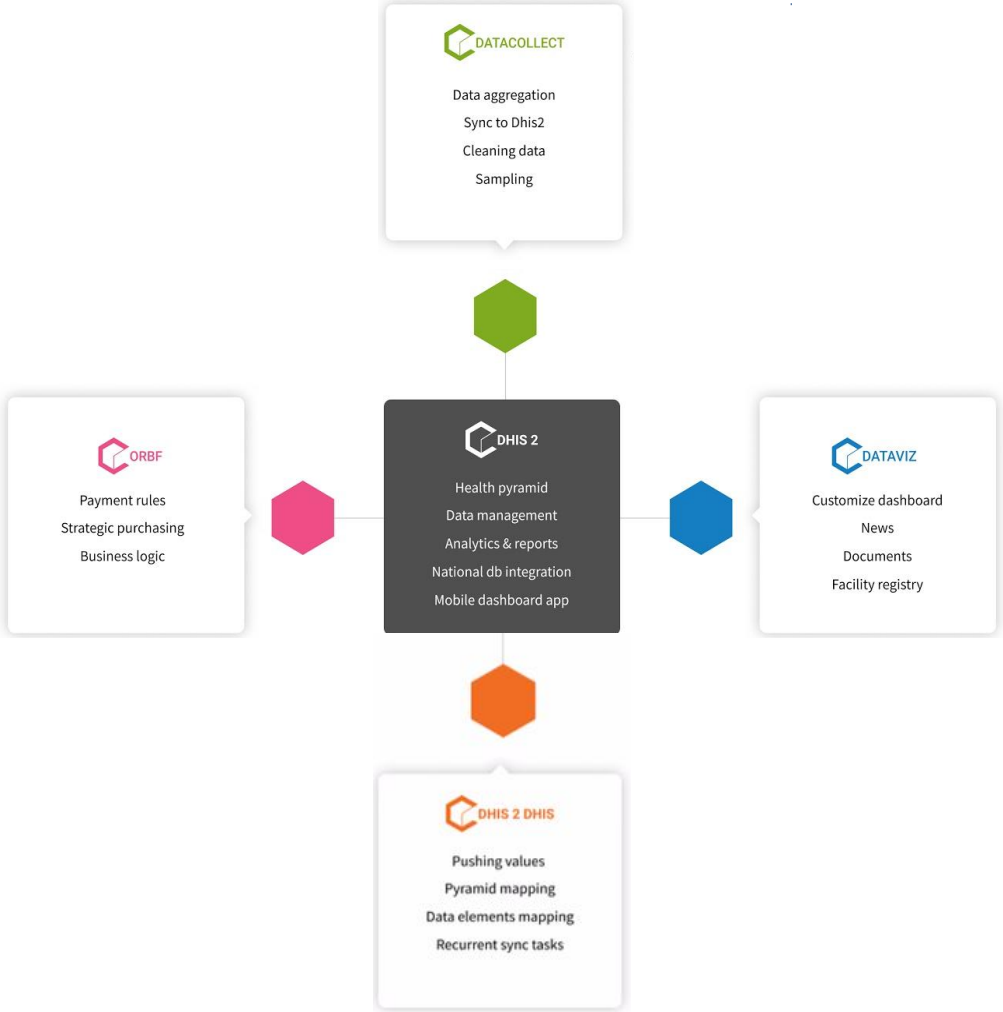
www.bluesquarehub.com

December 2018

who we are • BLUESQUARE

GLOBAL HEALTH TECHNOLOGY

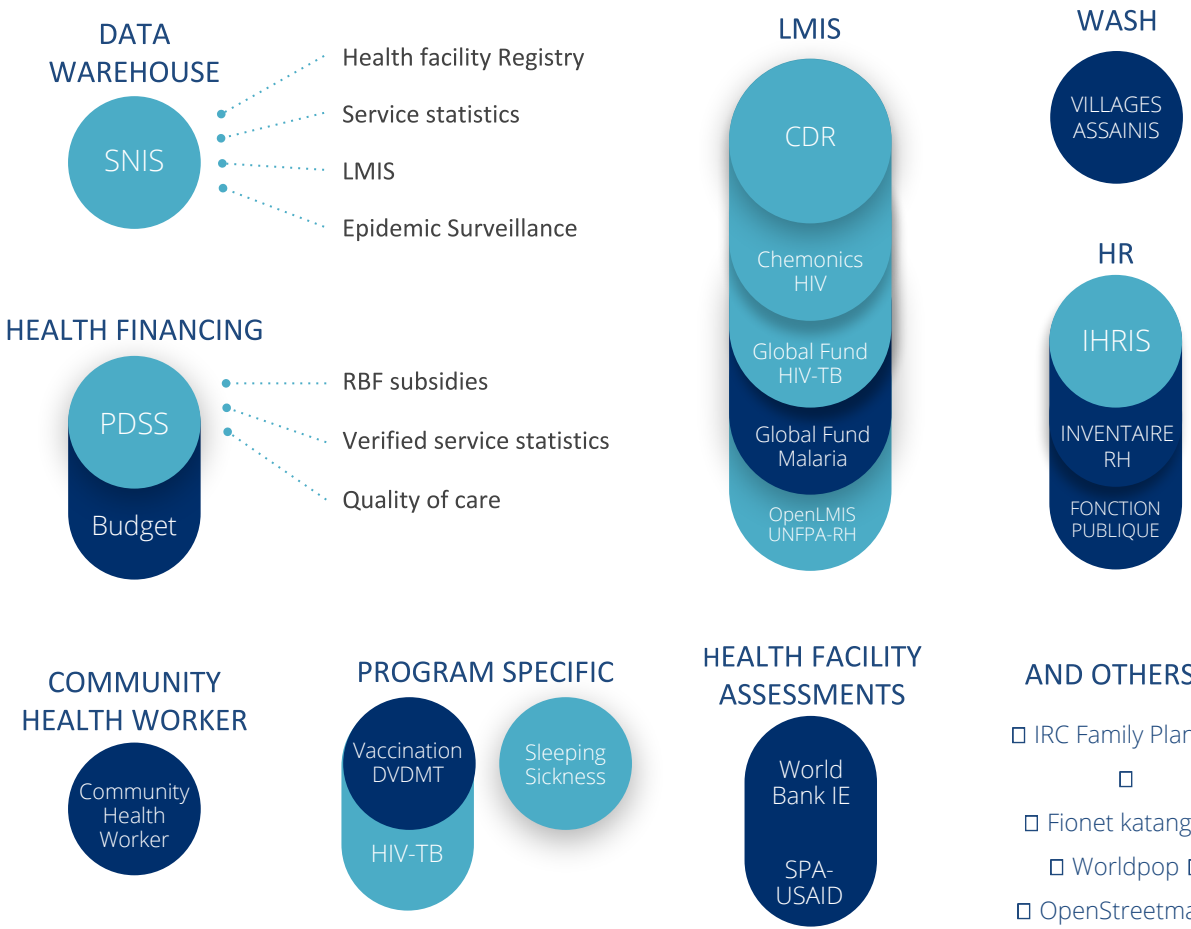
- Belgian **global health data company** created in 2012
- Expertise: health data systems, data collection, data access, data science, visualisation.
- 30 staff, 75% in Brussels
- Current clients:
  - Ministries of health
  - Global Fund - Aids, TB & Malaria
  - WHO
  - World Bank
  - NGOs : Memisa, Plan, IPPF, Cordaid,...
  - Pharmaceutical companies



Building on Existing Systems

Data Integration and Governance


Routine Facility Assessments
Self-reported data
Program Data
Human resources
Health Financing
Financial
QoC
Data
CMIS
Demographic
Stockouts
Patient Feedback



Fragmented Data Environment

CONSOLIDATING MULTIPLE SOURCES...

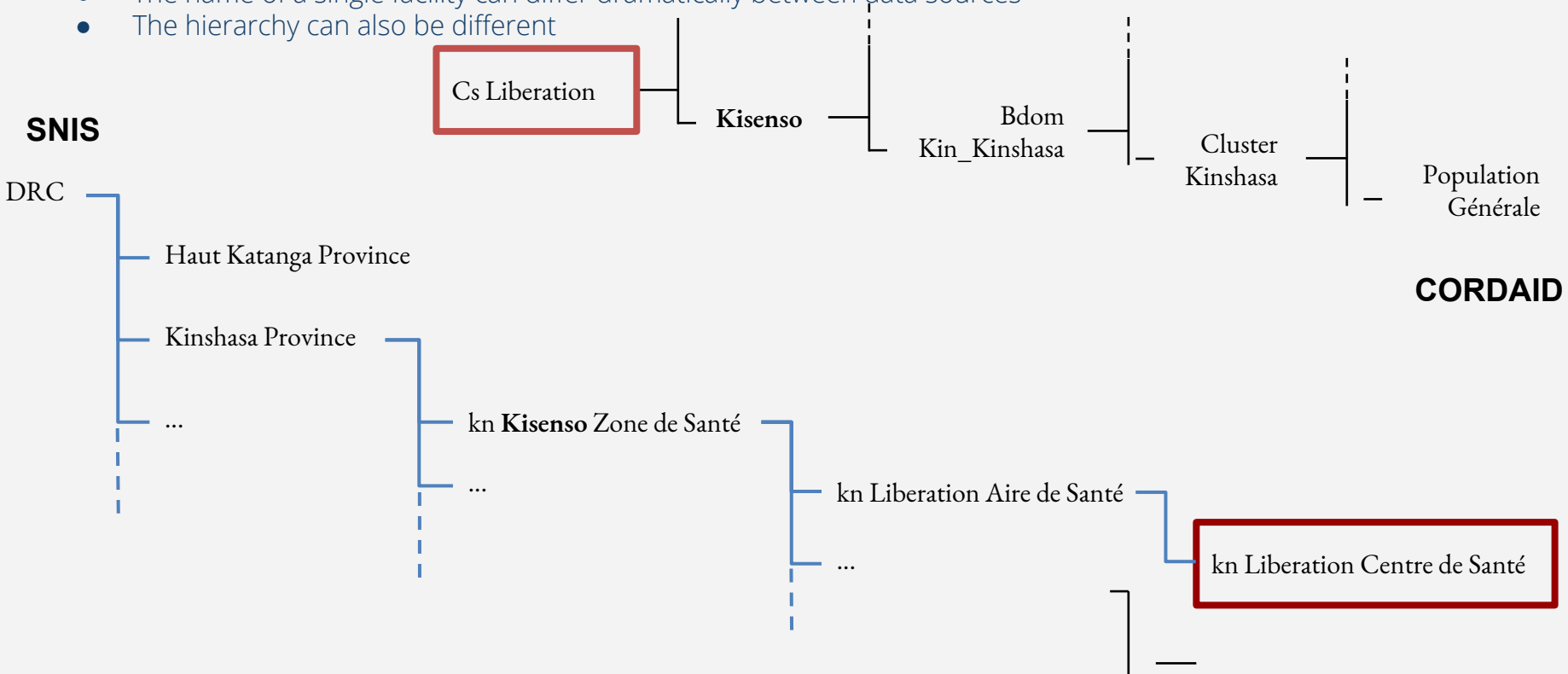
... AT THE FACILITY LEVEL:

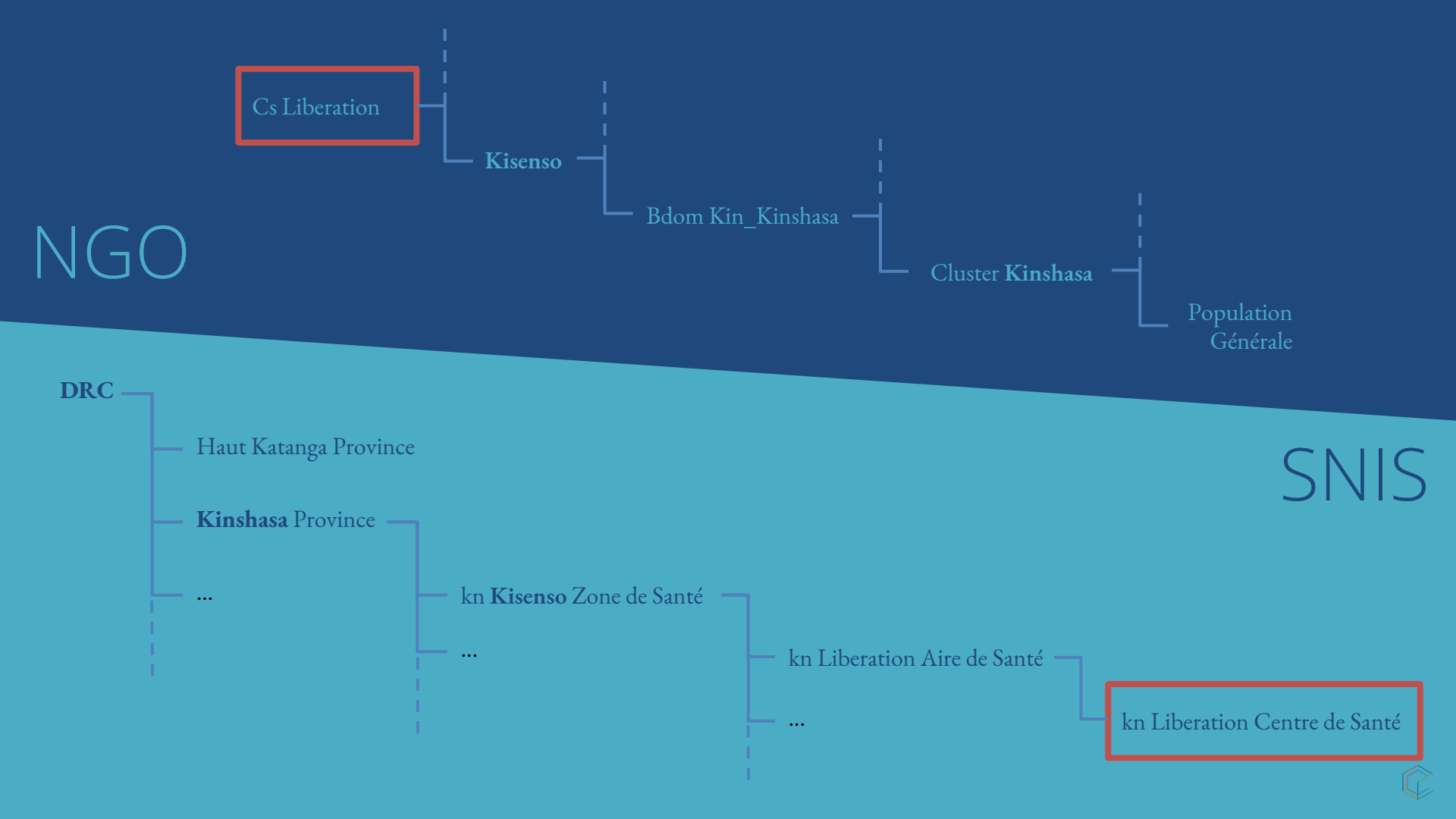
- Critical for enriching the information available on facilities providing services
- The name of a single facility can differ dramatically between data sources
- The hierarchy can also be different

OUR CHALLENGES

COMBINING & CONSOLIDATING MULTIPLE SOURCES AT HF LEVEL

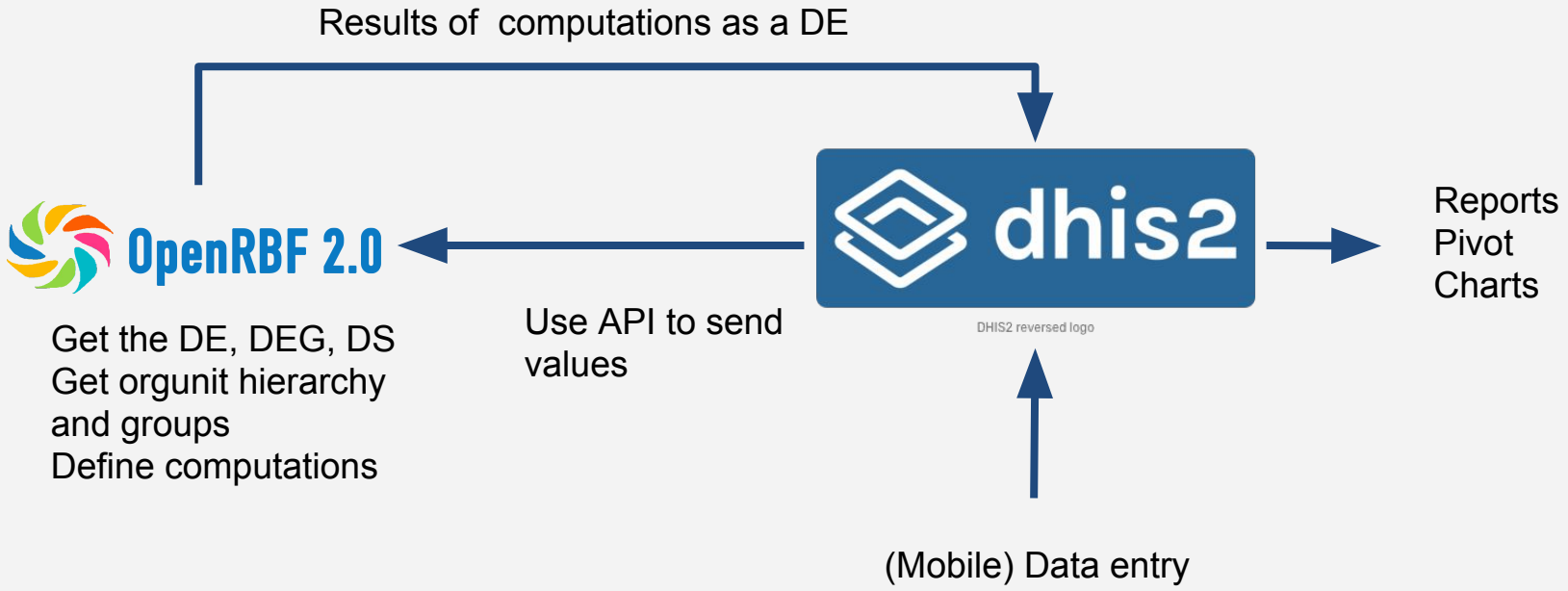
- Critical for enriching the information available on facilities providing HIV care services
- The name of a single facility can differ dramatically between data sources
- The hierarchy can also be different




NGO
Cs Liberation
Kisenso
Bdom Kin_Kinshasa
Cluster Kinshasa
Population Générale
SNIS
DRC
Haut Katanga Province
Kinshasa Province
...
kn Kisenso Zone de Santé
...
kn Liberation Aire de Santé
...
kn Liberation Centre de Santé

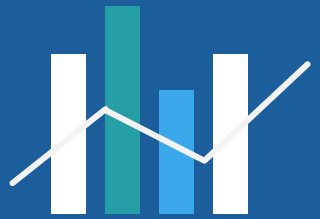
Improve the Use of Routine Data

Optimizing Data I ORBF2

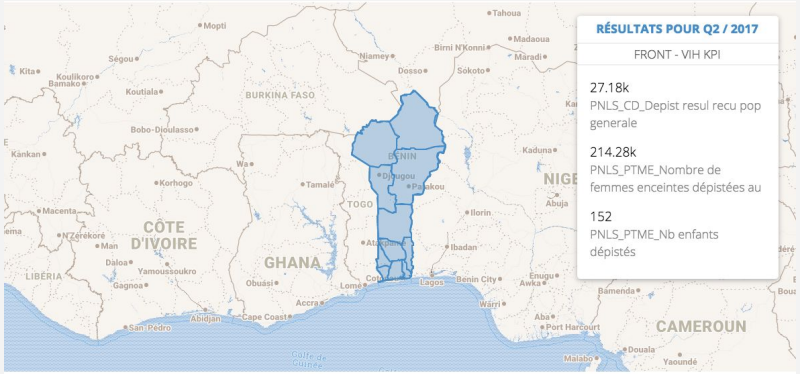


All the best available data in one place

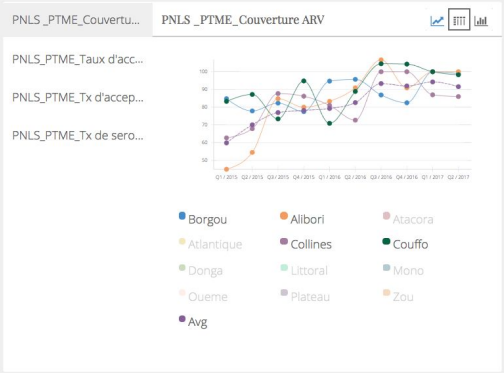
Combine public and private sector health system data, survey data, big data sources and geospatial intelligence in a country-level web dashboard



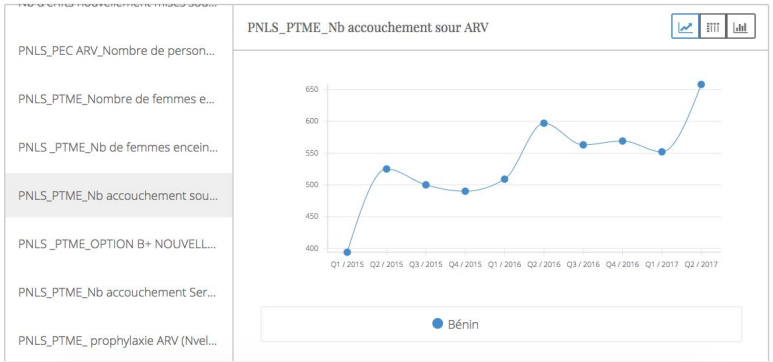
Optimizing Data Use I Getting the full HIV/AIDS picture



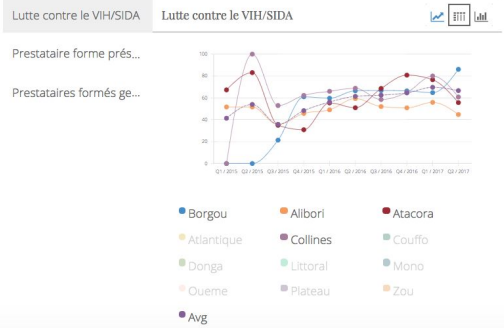
Couverture



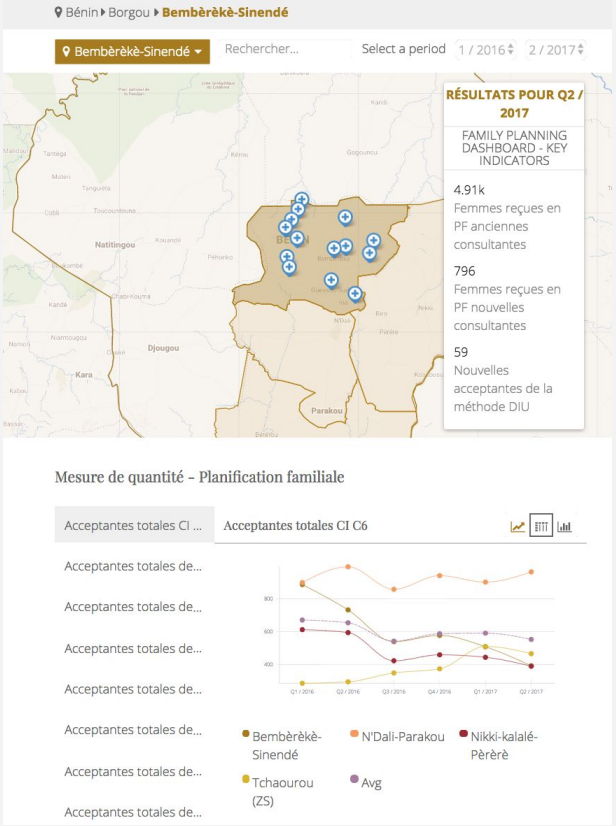
Quantité



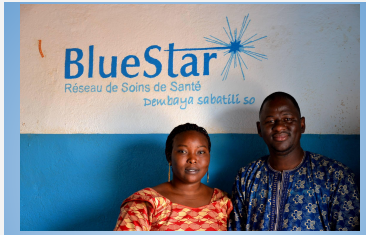
Qualité des services



Optimizing Data Use I Getting the full FP picture



How I Enrich with multiple health facility data sources



Private sector service provision data

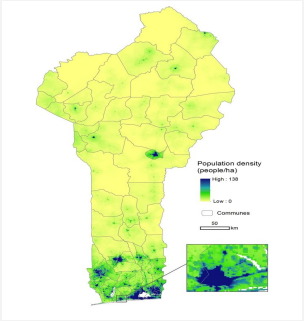
FP dashboard

Quality of care

Health Facility Assessments

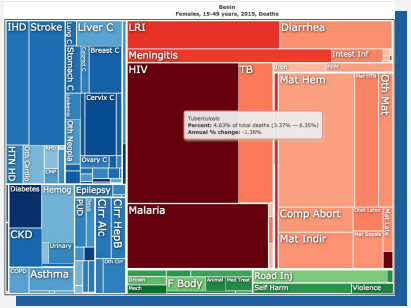
Patient Feedback

How I Enrich with demographic data and big data sources



World Pop

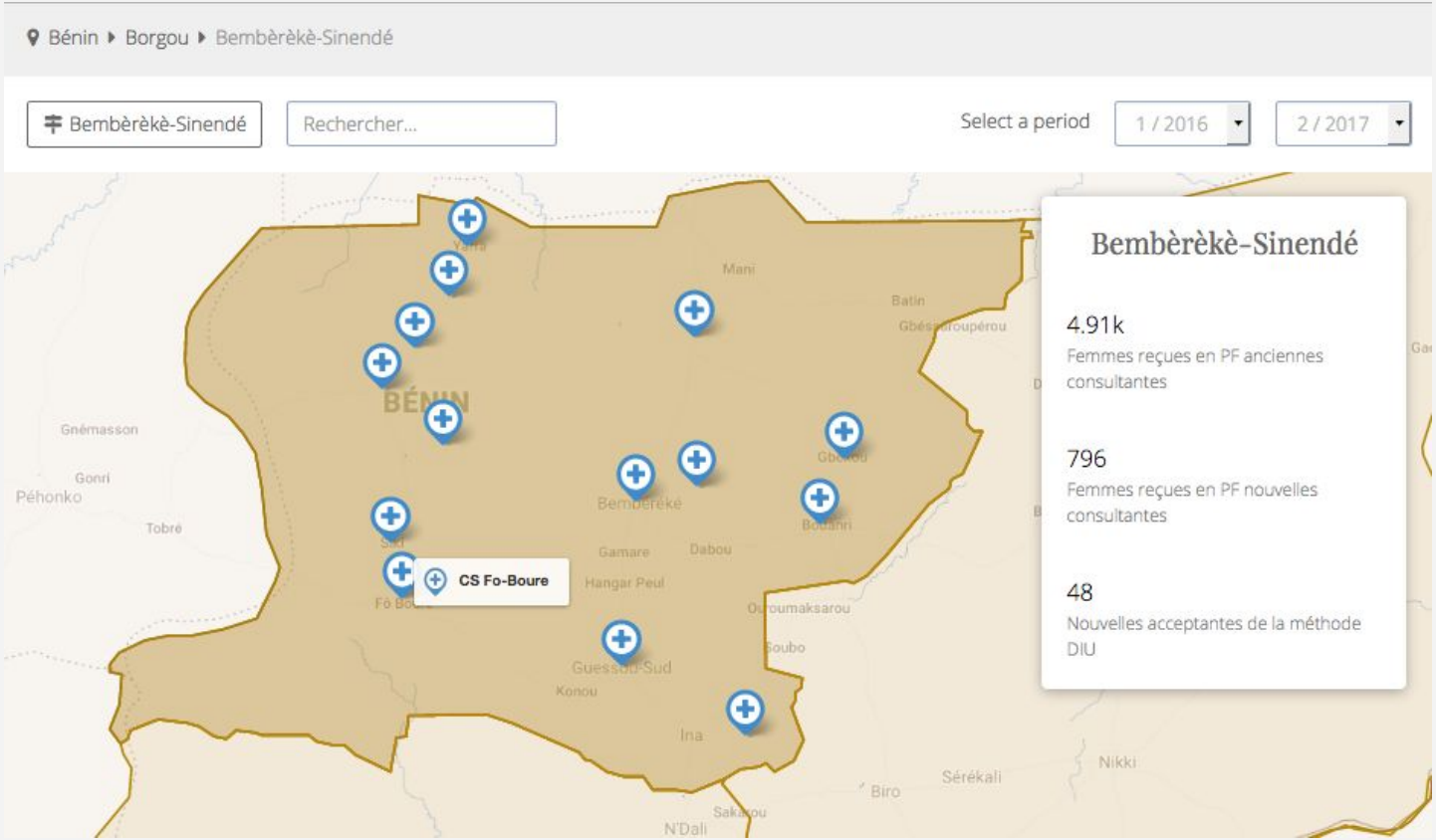
Demographic and Health Survey



Burden of Disease

Open Street Map

From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Bembèrèkè-Sinendé
Rechercher...
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1 / 2016
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Hangar Peul
CS Fo-Boure
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Konou
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Femmes reçues en PF nouvelles consultantes
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Nouvelles acceptantes de la méthode DIU

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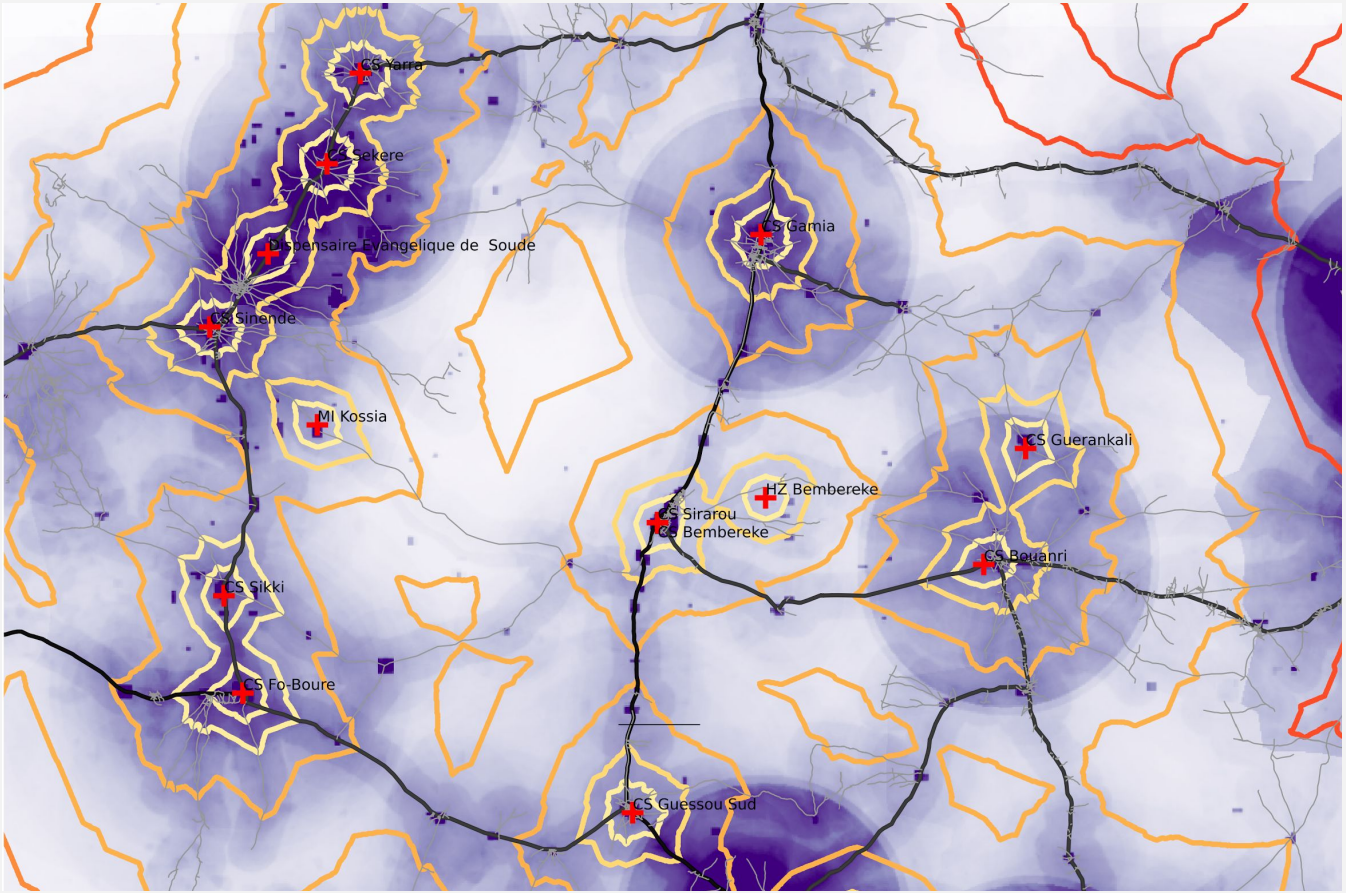


Distance (in time) to health centers for women of child-bearing age (WCBA)

BLUESQUARE

Our technologies promote smarter allocation of global health resources in emerging economies

so they get to where it matters most.

Vidya Mahadevan vmahadevan@bluesquarehub.com

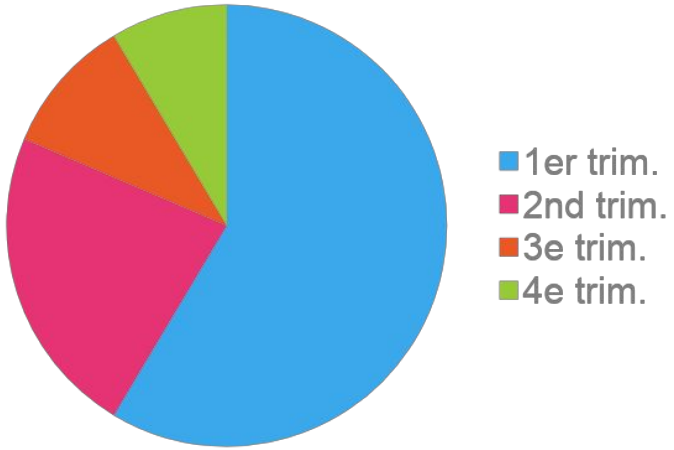
Make use of Advanced Analytics

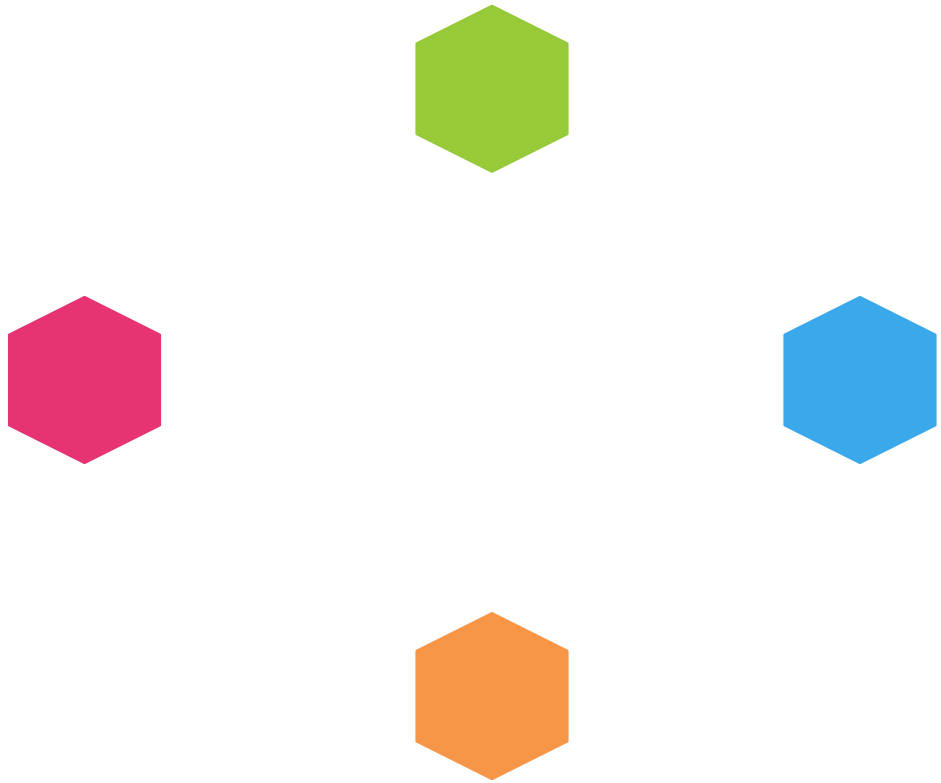
TITLE 2 I Text & Graph.

Nihil morati post haec militares avidi saepe turbarum adorti sunt

Montium primum, qui divertebat in proximo, levi corpore senem atque.

Nihil morati post haec militares avidi saepe turbarum adorti sunt





TITLE 1 I Subtitle & Pic.

Nihil morati post haec militares avidi saepe turbarum adorti sunt

Montium primum, qui divertebat in proximo, levi corpore senem atque.

Nihil morati post haec militares avidi saepe turbarum adorti sunt

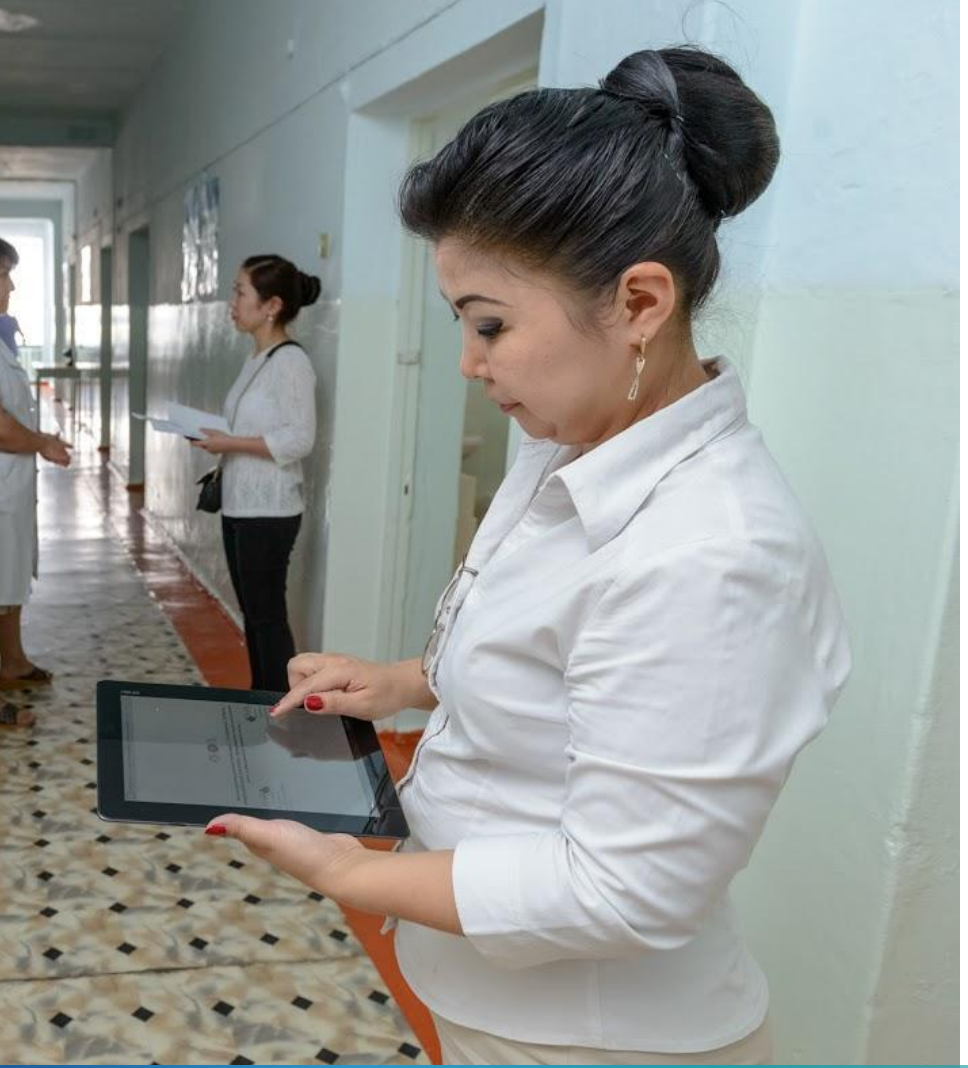


TABLE OF CONTENTS

‘QUOTATION LOREM IPSUM’

Author of quotation

TITLE I Subtitle

1. Slide with sections, sub sections & sub sub sections.
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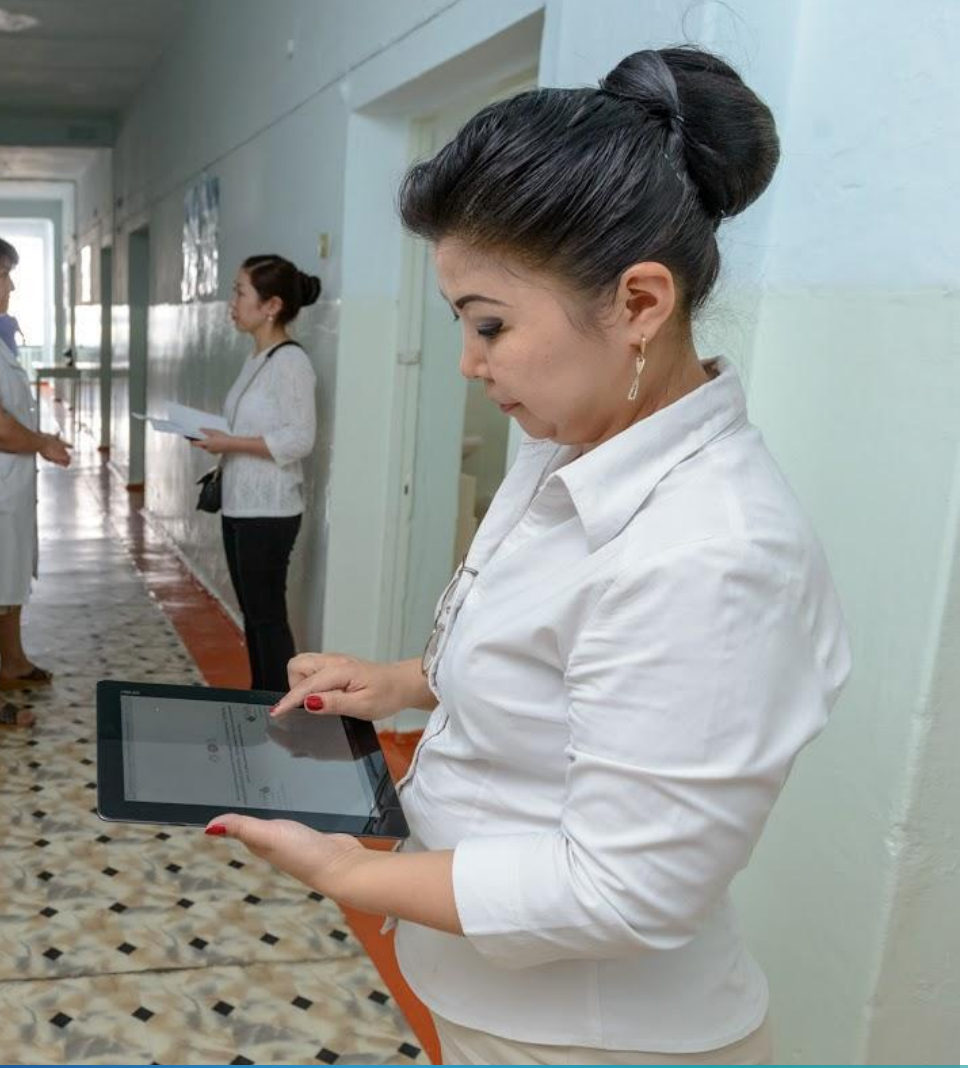
    b. Xyz
        - Xyz
        - Xyz
2. Lorem Ipsum
3. Lorem Ipsum
4. Lorem Ipsum



TITLE I Subtitle

1. Slide with sections + picture
    a. Xyz
        - Xyz

TITLE 1 I Subtitle & Pic.

COLUMN 1

Montium primum, qui divertebat in proximo, levi corpore senem atque.

Nihil morati post haec militares avidi saepe turbarum adorti sunt

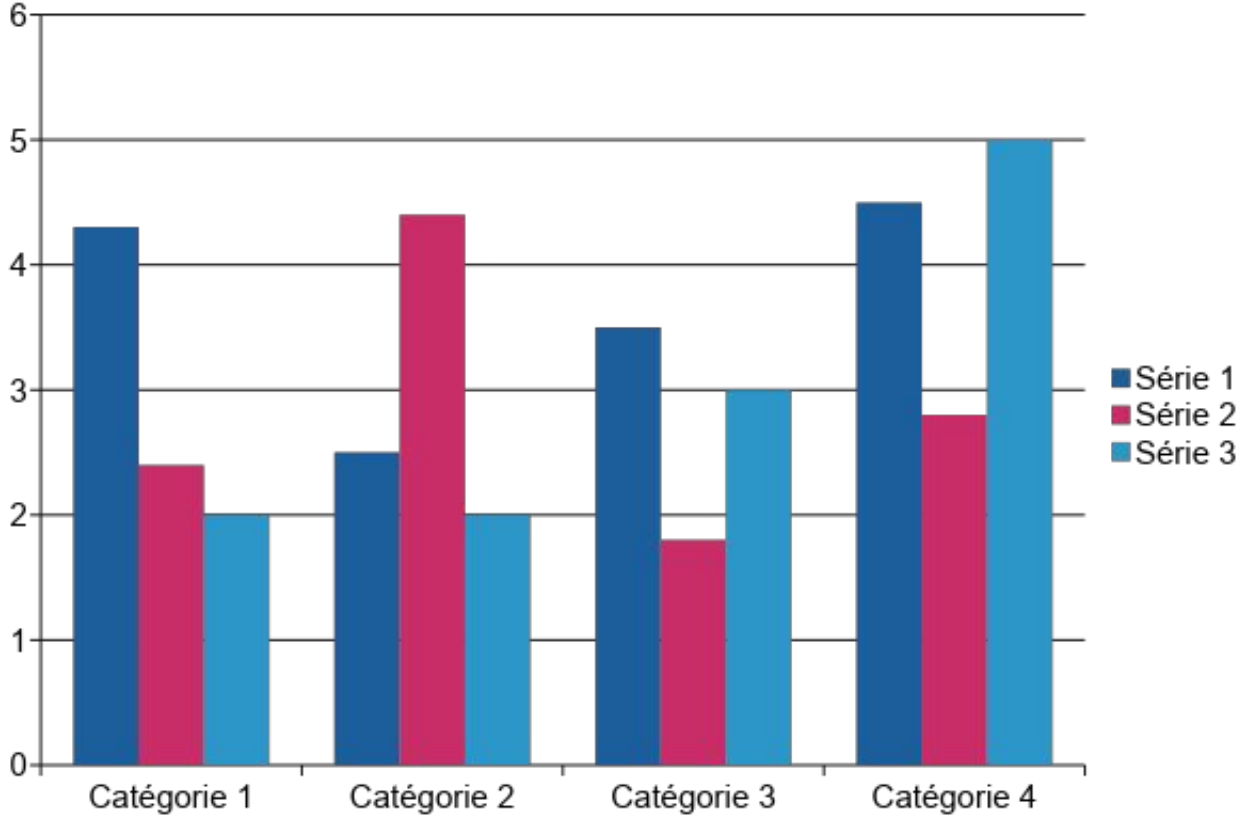
COLUMN 2

Montium primum, qui divertebat in proximo, levi corpore senem atque.

Nihil morati post haec militares avidi saepe turbarum adorti sunt

FILM

BIG IDEA OR CONCEPT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Catégorie 3
Catégorie 4
Série 1
Série 2
Série 3

	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
CAT. 1				
CAT. 2				
CAT. 3				
CAT. 4				

MAP - HIGHLIGHT AREAS OF INTEREST BY COVERING WITH DOTS OF COLOR

89,526,124

BIG NUMBER/DATA

ANY QUESTIONS?

THANK YOU.

Company Info Company Info
Contact Info Contact info

HELLO,

SPEAKER NAME

Work title

HELLO,

SPEAKER NAME

Work title