

Digital Health in Global Health

An overview of ongoing trends and dynamics

HELLO!

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You can find me at @nicolasdeborman

Initiatives



- ✓ Health Data Collaborative
- ✓ Communities of Practice
- ✓ Global Health Data Platforms

- ✓ OpenHIE
- ✓ DHIS2
- ✓ IHRIS
- ✓ Health Financing
- ✓ LMIS

- ✓ Hospital Level
- ✓ Health Center Level
- ✓ Community Health Workers

- ✓ mHealth
- ✓ Apps

GLOBAL INITIATIVES

Health Data Collaborative, Communities of Practice,
Global Health Data Platforms...



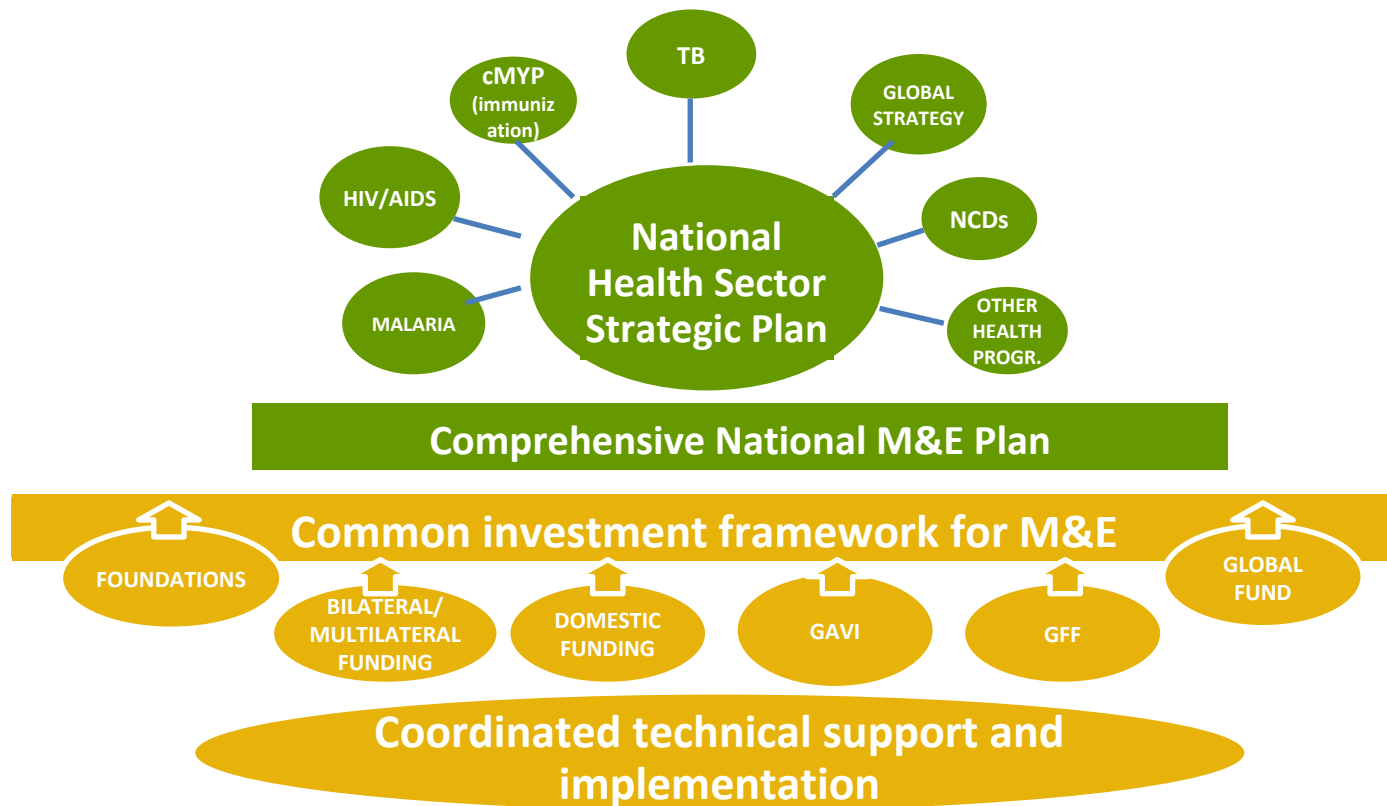
HEALTH DATA
COLLABORATIVE

DATA FOR HEALTH AND
SUSTAINABLE DEVELOPMENT

www.healthdatacollaborative.org



GETTING BEHIND COUNTRY PRIORITIES



YOU CAN ALSO BROWSE INDIVIDUAL INDICATORS:

[Health status](#)[Risk factors](#)[Service coverage](#)[Health systems](#)


SERVICE COVERAGE



Reproductive, maternal, newborn, child and adolescent




-  Demand for family planning satisfied with modern methods (38 kB)
-  Contraceptive prevalence rate (39 kB)
-  Antenatal care coverage (42 kB)
-  Births attended by skilled health personnel (45 kB)
-  Postpartum care coverage (37 kB)
-  Care-seeking for symptoms of pneumonia (42 kB)
-  Children with diarrhoea receiving oral rehydration solution (ORS) (41 kB)
-  Vitamin A supplementation coverage (37 kB)

Immunization

-  Immunization coverage rate by vaccine for each vaccine in the national schedule (36 kB)

HIV


Tuberculosis

-  TB patients with results for drug susceptibility testing (35 kB)
-  TB case detection rate (41 kB)
-  Second-line treatment coverage among multidrug-resistant tuberculosis (MDR-TB) cases (36 kB)

Malaria

-  Intermittent preventive therapy for malaria during pregnancy (IPTp) (36 kB)
-  Use of insecticide treated nets (ITNs) (36 kB)
-  Treatment of confirmed malaria cases (36 kB)
-  Indoor residual spraying (IRS) coverage (36 kB)

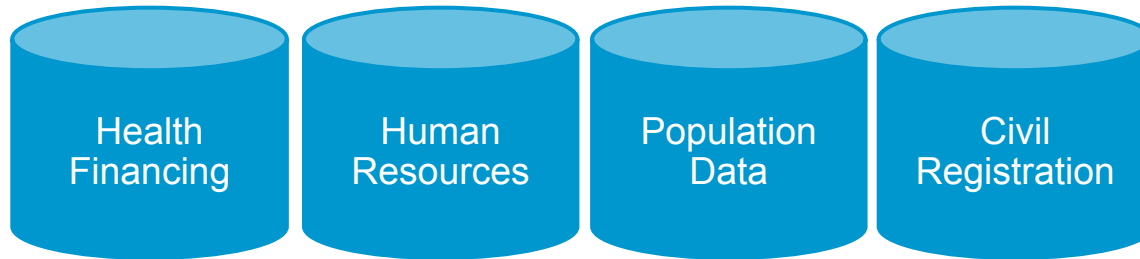
Neglected tropical diseases

-  Coverage of preventive chemotherapy for selected neglected tropical diseases (38 kB)

First alignment priorities



Second priorities



COMMUNITIES OF PRACTICE: FROM MHEALTH TO DIGITAL HEALTH



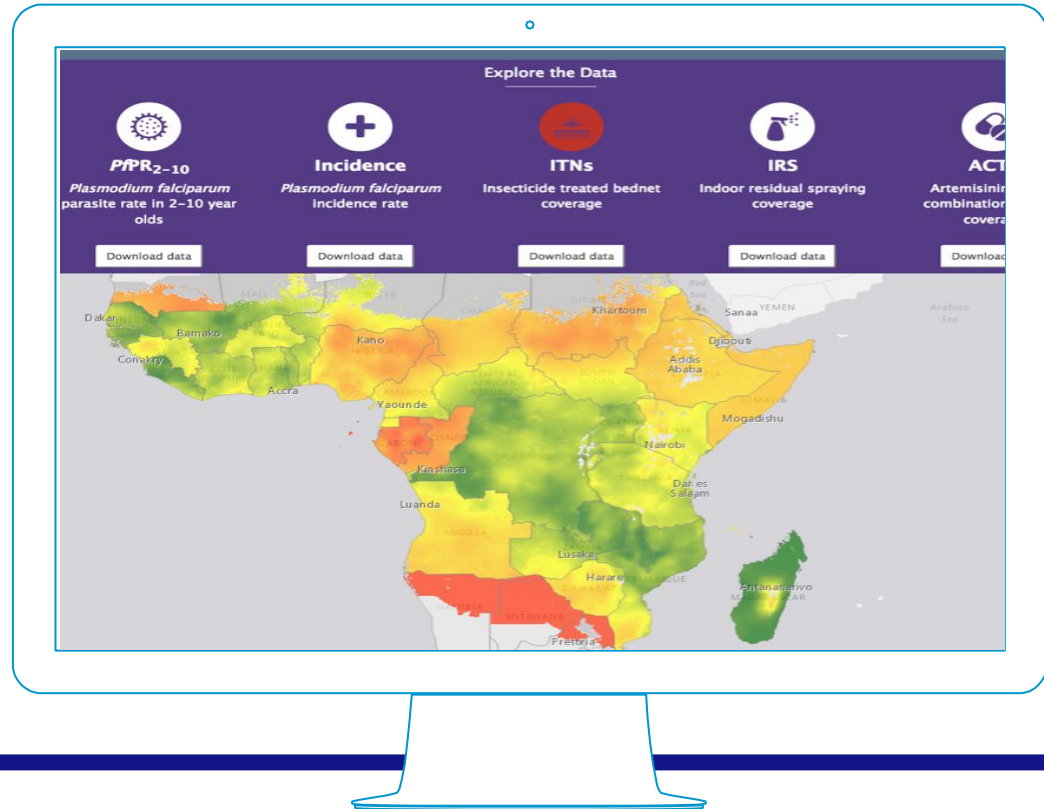
What?
Crunching “any”
available data to
measure global health

Disease burden:
Healthdata.org



GLOBAL HEALTH DATA PLATFORMS

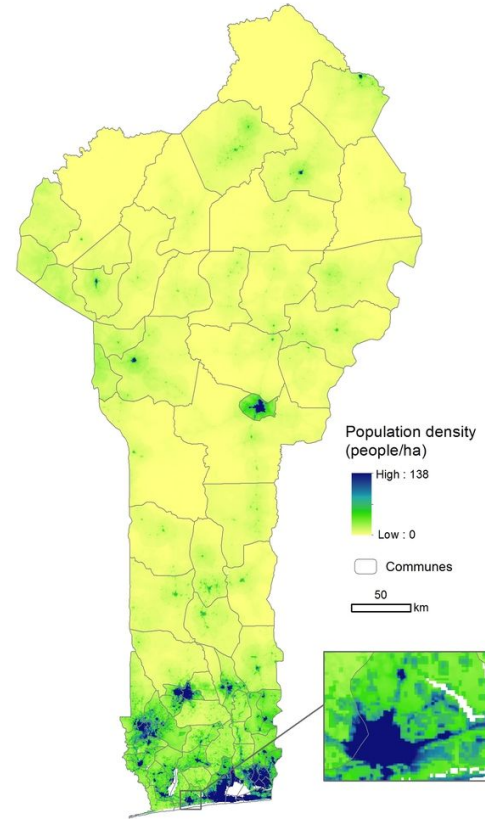
Example: Malaria Atlas



Example:

WorldPop
High Resolution Population Density Maps

(30% Belgian Project @ ULB)



GLOBAL HEALTH DATA INITIATIVES (BELGIUM)

The Global Health Barometer

VUB – the Global Health
Barometer

Barometer based on
medical record data
mining



GLOBAL HEALTH DATA INITIATIVES (BELGIUM)

BlueSquare –
the integrated data
platform initiative
(IDPI)

Measuring Primary
Health Care
Performance at scale
using any existing data

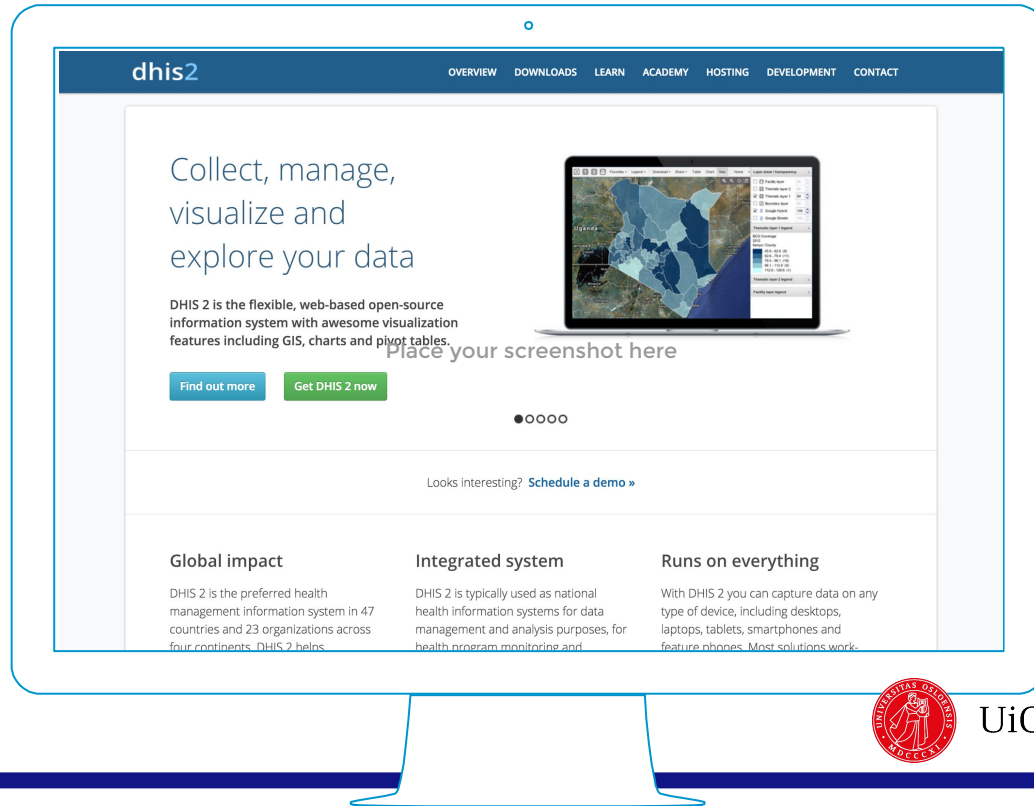
Consortium with 2 other
companies and the Bill &
Melinda Gates Foundation



COUNTRY-LEVEL DYNAMICS

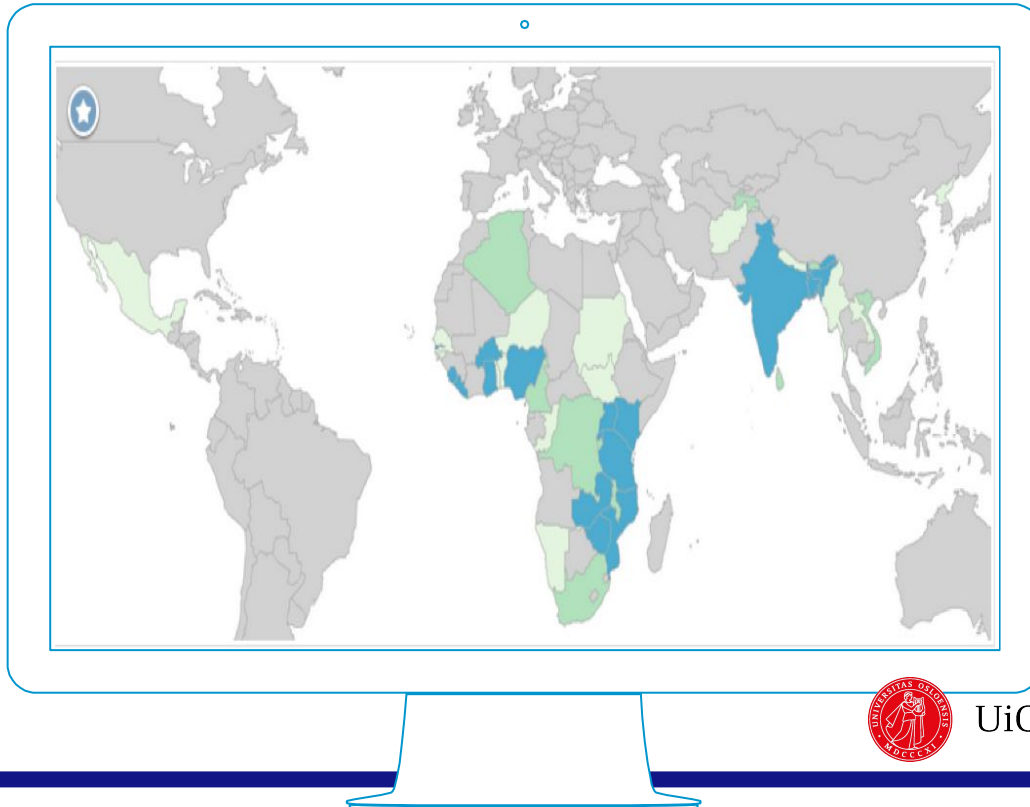
DHIS2, OpenHIE, IHRIS, LMIS, Health Financing, Open Data...

DHIS2: THE LEADING DATA MANAGEMENT SOFTWARE PLATFORM



UiO : University of Oslo

DHIS2: THE LEADING DATA MANAGEMENT SOFTWARE PLATFORM



UiO : University of Oslo

EXAMPLE IN NIGERIA

34,246
Health Facilities

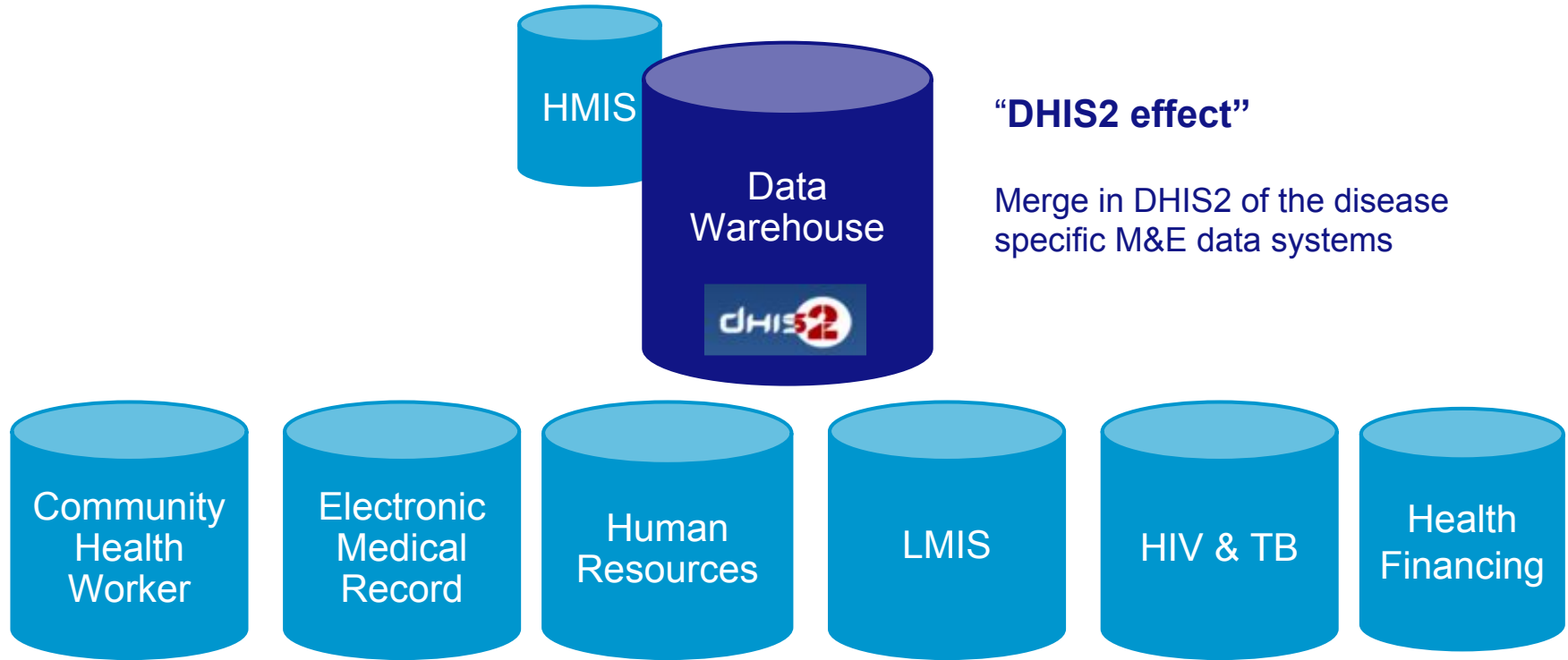
8,242
Private



The screenshot displays the dhis2 Health Management Information System interface. On the left is a sidebar menu with options: Report, Standard Report, Data Set Report, Reporting Rate Summary, Resource, Organisation Unit Report, Data Approval, and Report Table. The main area shows a table of health facilities, with the 'Report' option selected. The table lists various Nigerian states and the Federal Government, with columns for facility counts. The total counts at the bottom are 8242 for Private facilities and 34246 for all Health Facilities.

dhis2 Health Management Information System			
Report	kt Katsina State	42	1521
Standard Report	kw Kwara State	13	473
Data Set Report	la Lagos State	1993	336
Reporting Rate Summary	na Nasarawa State	187	788
Resource	ni Niger State	164	1427
Organisation Unit Report	og Ogun State	1030	601
Data Approval	on Ondo State	348	595
Report Table	os Osun State	315	769
	oy Oyo State	671	795
	pl Plateau State	85	971
	ri Rivers State	16	452
	so Sokoto State	45	680
	ta Taraba State	102	724
	yo Yobe State	0	517
	za Zamfara State	17	719
	ng Federal Government	8242	26004

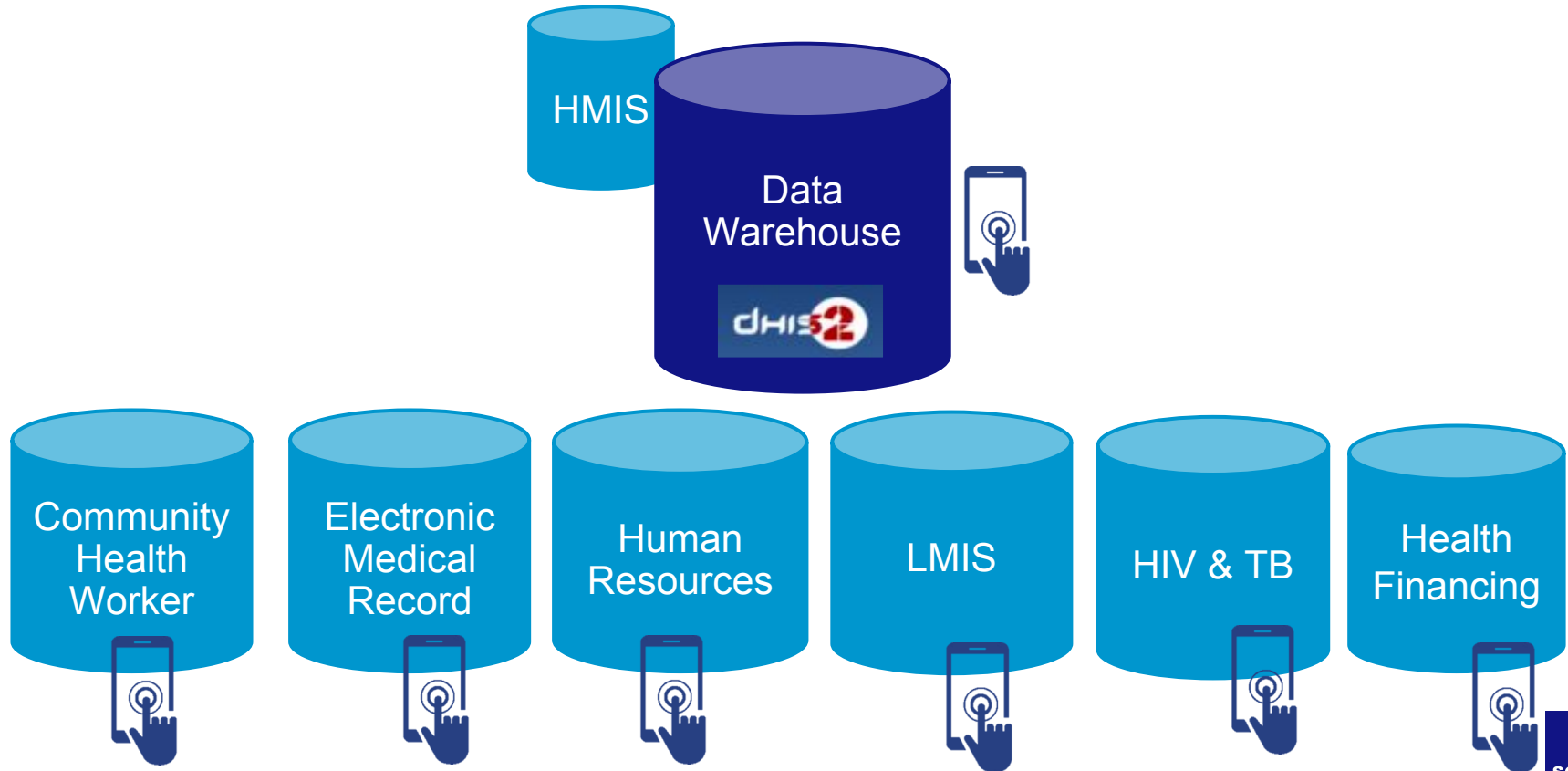
DHIS2 IN A TYPICAL DATA ECOSYSTEM



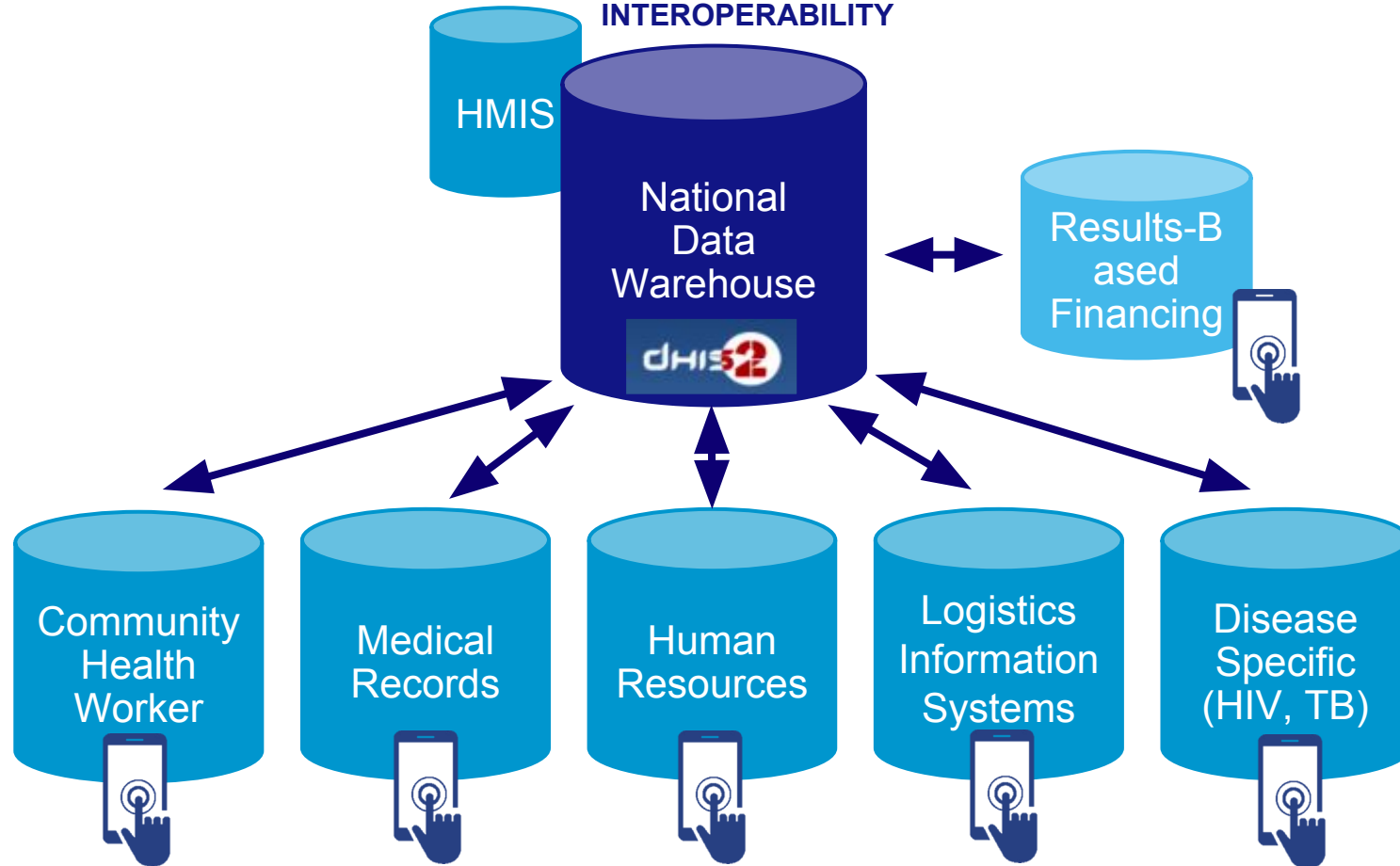
“DHIS2 effect”

Merge in DHIS2 of the disease specific M&E data systems

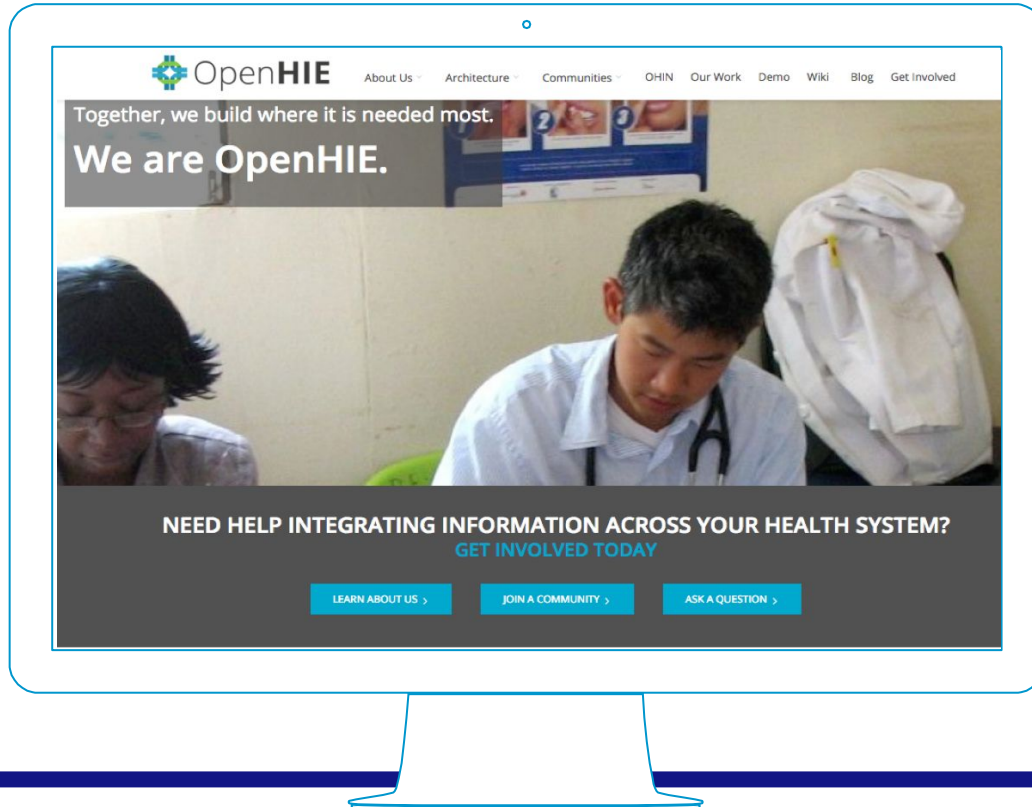
RISE OF MOBILE DEVICES IN ROUTINE SYSTEMS



DATA SYSTEM INTEGRATION AND INTEROPERABILITY



DATA SYSTEM INTEROPERABILITY



OpenHIE
Component Layer



TS



CR



SHR



HMIS



FR



HWR

Authentication



ILR



Entity Matching



Interoperability
Services Layer



External Systems



Mobile



Clinic



HMIS



Lab



Hospital

HUMAN RESOURCES

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Open Source Human Resources Information Solutions

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mHero and the Principles for Digital Development: Development Done Right

By Amanda Puckett BenDor IntraHealth International and UNICEF launched the mHero platform in late 2014 in the midst of the Ebola ...

[Read More »](#)



iHRIS Software Improves Health Outcomes

Getting the right health worker in the right place at the right time is key to improving health outcomes. iHRIS is free and open source software for managing health workforce information. This information helps countries address health workforce shortages and solve other challenges across the health sector.

With iHRIS, your health workforce is in full view.

iHRIS Blog

JUL 25

mHero and the Principles for Digital Development: Development Done Right

FEB 18

iHRIS Community begins using Slack

DEC 02

More countries sign on to iHRIS: Global Community Still Growing and Adapting

LOGISTICS AND INFORMATION SYSTEMS



IMIS

**Open Source Health
Insurance Data System**

Swiss TPH



Swiss Tropical and Public Health Institute
Schweizerisches Tropen- und Public Health-Institut

MAS Pilot

BIT - Step

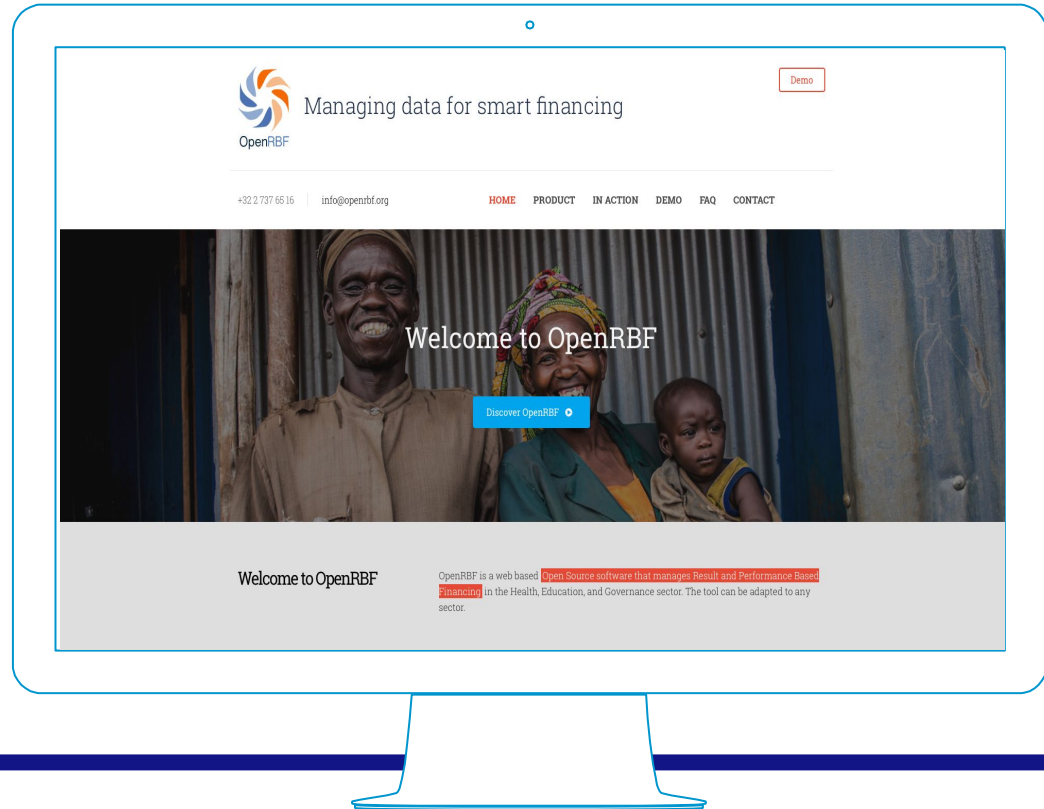
Micro-health Insurance Data System



OpenRBF (BlueSquare)

Results-based
financing data system

*Towards health
financing on top of
DHIS2*



OPEN DATA



Together Let's Build Solutions With Open Data

The Kenya Open Data Portal makes Public Government datasets accessible for free to the public in easy reusable formats, supporting the Government's drive to proactively inform citizens and be accountable.

Welcome To The Open Data Portal

[View the Catalogue](#)



Explore the data

Search for data: (Population Distribution, Schools, Budget data)





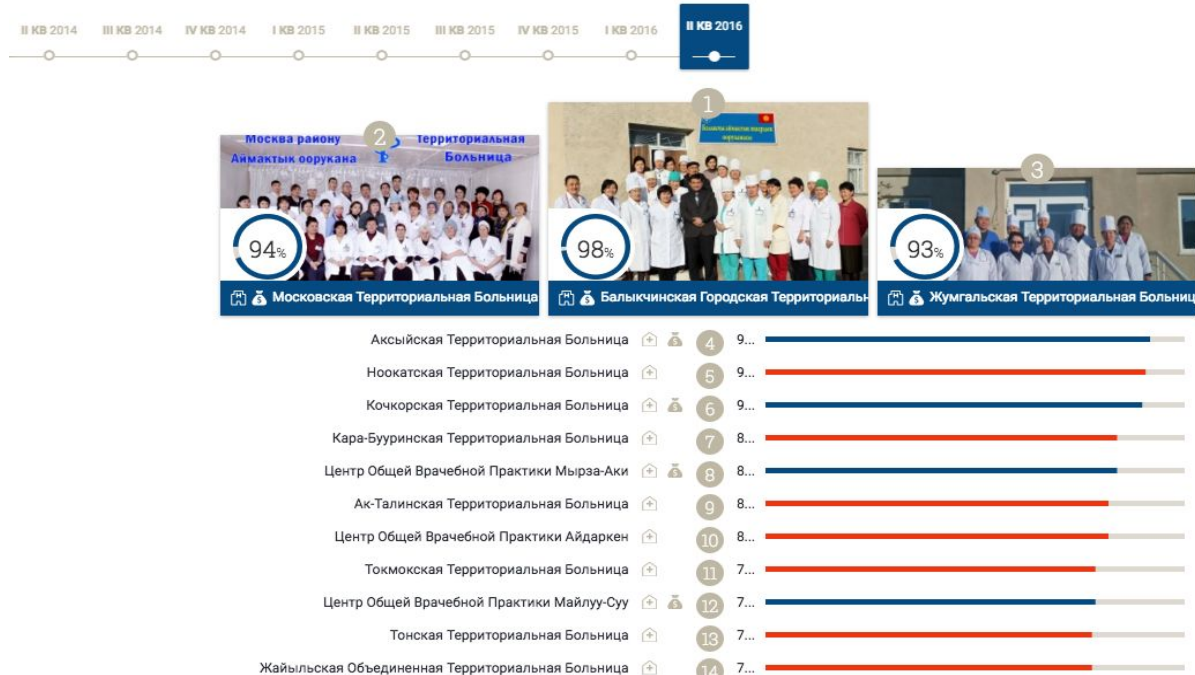
Ordoff Clinic, Kadoma (Zimbabwe)



BELGIAN INITIATIVE OPEN DHIS2 PLATFORM

Рейтинг Организаций Здравоохранения

Средняя оценка : ОЗ с выплатами **73%** - ОЗ без выплат **63%**



POINT OF CARE

OpenClinic, CERHIS, leDa, OpenSRP...



OpenClinic
an opensource clinic system



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What is OpenClinic?

[News](#)

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[W3C](#) [HTML5](#)

[W3C](#) [CSS3](#)

[RSS](#) [2.0](#)

What is OpenClinic project?

OpenClinic is an easy to use, open source, medical records system written in [PHP](#). It has been mainly thought for private clinics, surgeries and private doctors. It is platform independent and it has multilanguage architecture.

Currently, OpenClinic has the following options:

- Medical Records

Use this option to manage your patient's medical records.

Patient's Administration:

- Search, new, delete, edit
- Social Data
- Clinic History
- Problem Reports

LE SYSTÈME D'INFORMATION HOSPITALIER MOBILE

Pour les pays en développement

[Découvrir CERHIS](#)



Terre des hommes
Helping children worldwide. tdh.ch

What we do

What's new

Who we are

What you can do



leDA - Innovative online technology for children's health care

leDA supports health care workers in West Africa with digital tablets and mobile applications to improve children's medical treatment.



[ABOUT ▾](#)[TECHNOLOGY ▾](#)[ADAPTATION PROCESS ▾](#)[IMPLEMENTATIONS ▾](#)

OPENSRP

Open Smart Register Platform is an open source mobile health platform that allows frontline health workers to electronically register and track the health of their entire client population.



HOSPITAL SYSTEM FOR LOW RESOURCE SETTINGS

IMPROVE

patient care.
Access intuitive clinical summaries, charts and X-rays from anywhere.

INFORM

decision-making with comprehensive reports. Increase efficiency with seamless integration between medical records, lab and billing.

CONFIGURE

a reliable system easily to your hospital's workflow. Engage with a growing and responsive implementer community.

Bahmni is an easy-to-use EMR & hospital system. It combines and enhances existing open source products into a single solution.



OpenMRS for



DICOM and PACS



COMMUNITY HEALTH WORKER

CommcareHQ, RapidPro...

[CommCare](#)[Solutions](#)[Impact](#)[Pricing](#)[Demo](#)[English](#)[Sign In](#)

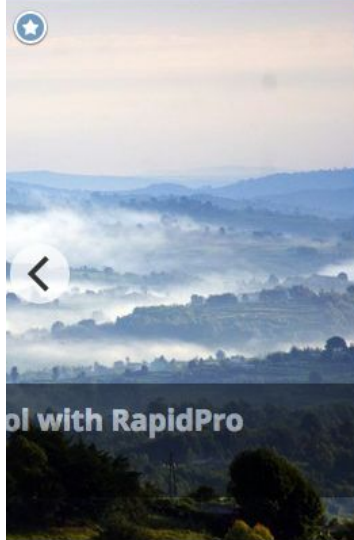
CommCare: Reaching the last mile in over 50 countries.

[Sectors](#)[Partners](#)[Case Studies](#)[Publications](#)

All UNICEF RapidPro accounts can now be accessed at <https://app.rapidpro.io>



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About RapidPro

Read about the evolution of RapidPro from RapidSMS



The Marketplace

Use this portal to explore vendors, their areas of expertise, and the services they provide.



AND THE PATIENT?

mHealth, Android Apps...

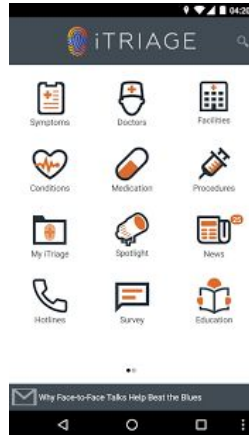


Mobile Alliance for Maternal Action

**7.5 million women,
families and
caregivers reached
with vital health
information that is
transforming their
lives.**



ANDROID APPS



Safe Delivery



TAKEAWAYS...

Data is at the heart of global health

As in other sectors, data & technology will be at the heart of any intervention.

Belgium is small

There is a lot happening out there.

Working in our Belgian silo will lead to marginalised work.

Recipe for success

Our community builds great products. But that is not sufficient.

Communication, collaboration, network, visibility, reach are all fundamental ingredient of success

THANKS!

Any questions?

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