HISP – DHIS2

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hisp.uio.no dhis2.org

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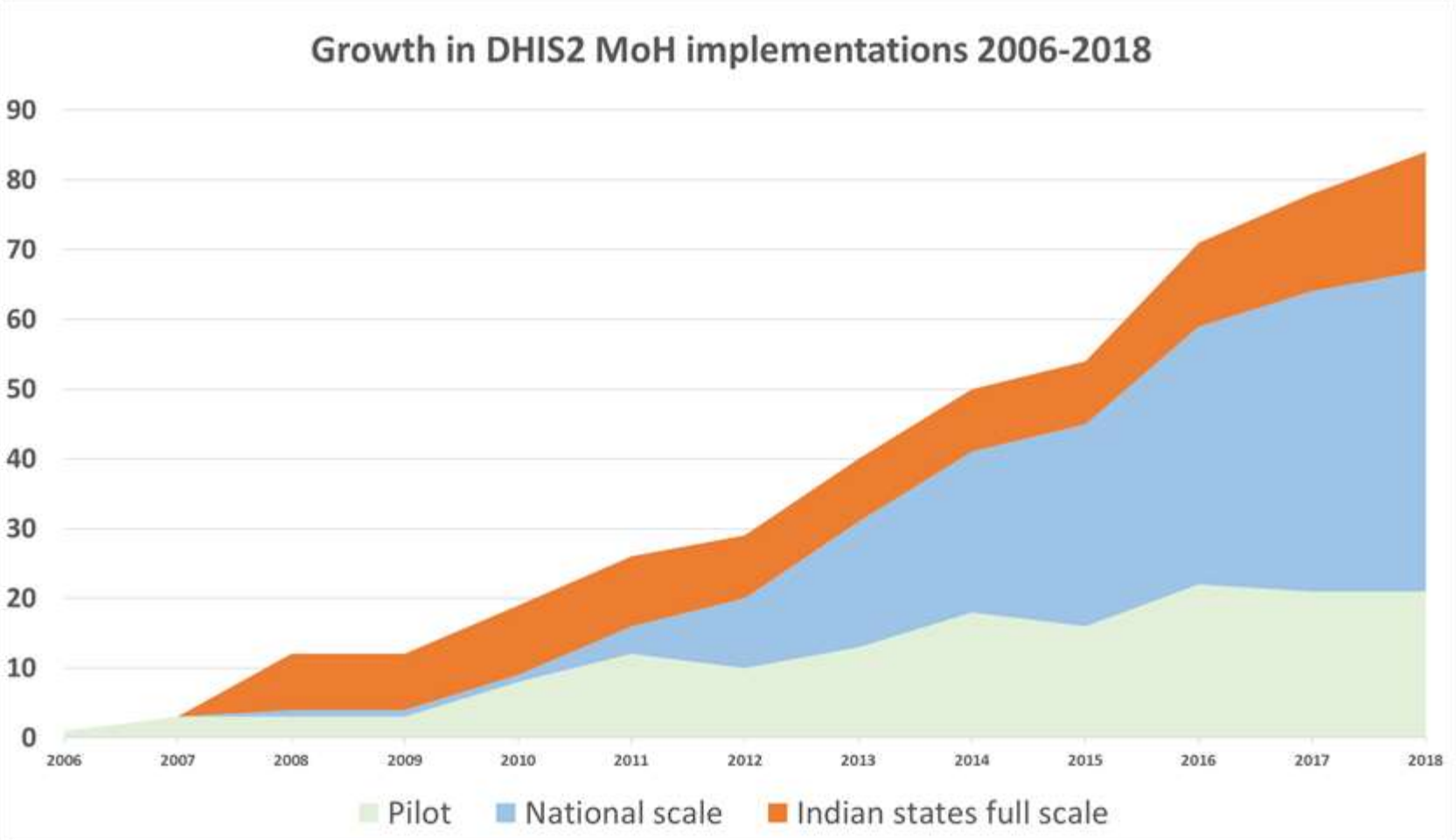
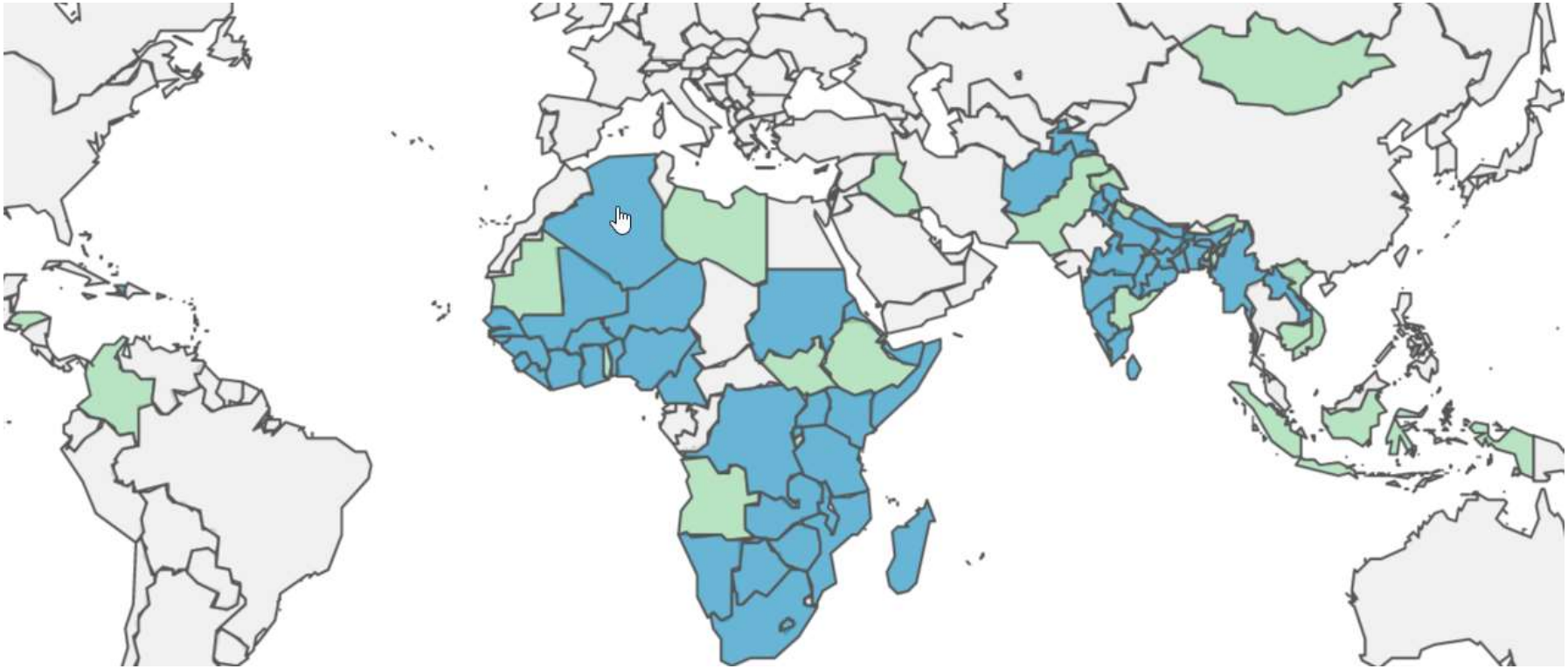
Health Information Systems Program - DHIS 2

- HISP a global **action research network** initiated in collaboration with University of Western Cape in1994 funded by Norad.
- DHIS 2 is an open source software for reporting, analysis and dissemination of data for **all** health programs
- Shared and integrated data warehouse for essential health data: **information for action**
- **Aggregate, events,** and **patient** data
- **Generic and generative platform** - supports a wide range of uses also beyond the health sector
- Financed and endorsed by all Global Health agencies, WHO, Norad, Global Fund, PEPFAR Unicef, Gates Foundation, GAVI, CDC
- WHO collaborative senter
- DHIS2 used in 88 countries in the Global South


Growth in DHIS2 MoH implementations 2006-2018
90
80
70
60
50
40
30
20
10
0
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
Pilot
National scale
Indian states full scale

DHIS2 adoption around the world (MoH implementations) – Jan 2019



Global «footprint» 2.28 billion people

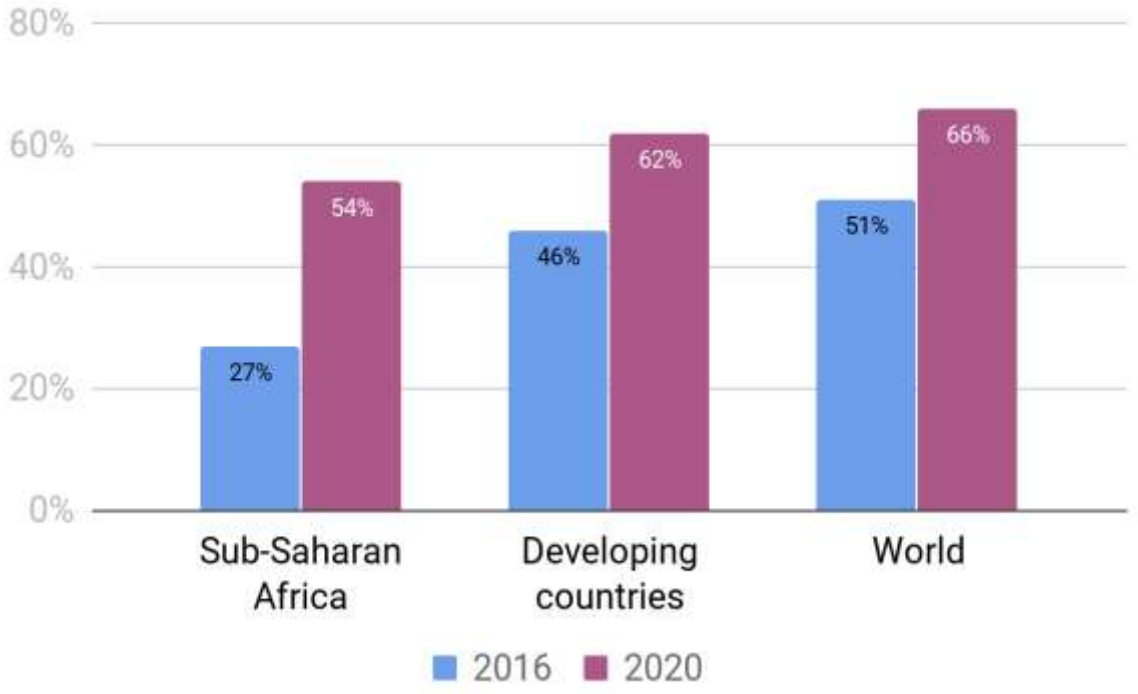
+ 60 NGO's, 58 PEPFAR countries, 60+ PSI countries, 10 global organizations

Read more on dhis2.org/inaction and facebook.com/dhis2

The gap is closing

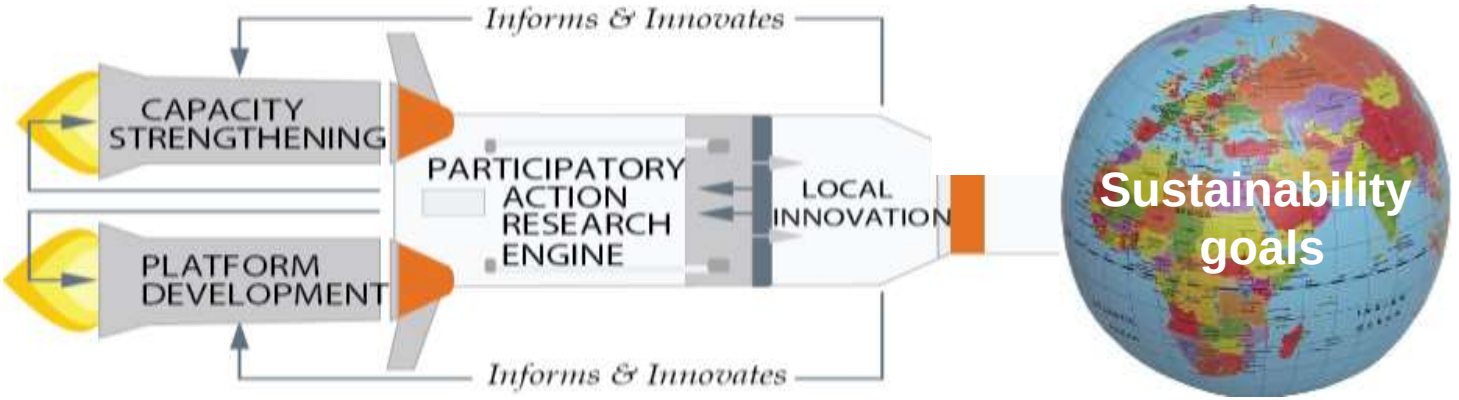
Percentage of subscriptions using smartphones
Source: *GSMA - The Mobile Economy / Sub-Saharan Africa 2017*

Smartphone adoption growing



Action research: Capacity building through innovation

- Strengthening national health information systems
  - Collaborating with Ministries of Health
  - Participatory design (Scandinavian tradition)
- Action Research: Building knowledge on implementing HIS while building systems on the ground through partnerships.
- HISP PhD school at University of Oslo: 50 PhDs graduated, 30 active
- International Masters programs in South Africa, Mozambique, Malawi, Tanzania, Ethiopia, Sri Lanka (400 graduated)
- Regional DHIS 2 Academies, 87 Academies since 2011, 4800 graduated
- Online Academy: Fundamentals, PEPFAR, In country Data Use (Indonesia)



Platform for Global Digital Public Good

A growing DHIS 2 community

- Open source development in a global community
  - HISP Vietnam, HISP Tanzania (UDSM), HISP Uganda, HISP India, HISP US, HISP UiO, HISP South Africa, PSI
- Implementing partners in multiple countries
  - HISP Nigeria, HISP Rwanda, HISP Bangladesh, HISP West and Central Africa, Akros, RTI, CHAI, PATH, PSI and many more
- Collaboration with global agencies and NGOs
  - Norad, WHO, CDC, Gates, Global Fund, Pepfar, GAVI, UNICEF, PSI, CHAI, MSF, NRC
- WHO develops standard health apps on DHIS2 with recommended content/configurations
  - Indicators and best practice visualisations for data use at country level
  - Patient-level registries for surveillance

DHIS 2 in a nutshell

- A generic open source software platform supporting a wide range of use cases
- Highly configurable and allows for tailored local systems addressing local needs
- Each MoH implementation of DHIS 2 in a country is fully owned and governed by the country
  - the server, the database, the data is a separate instance of DHIS 2 from other countries' instances
- Each country has a different «system» built on the platform
  - variations in indicators, disaggregations, reports, analytical outputs

UiO : Department of Informatics
University of Oslo

World Health Organization

University of Oslo is working with WHO to offer standardized material in DHIS2

HISP/ UiO is WHO Collaborating Centre for Innovation and Implementation Research for health information systems strengthening

Global Fund and GAVI are supporting financially the implementation of this material in countries

A set of program-specific meta-data packages (“configuration packages”) have been developed, together with curriculum for how to do program-specific analysis based on this.

HISP/UiO role is to work with WHO, GAVI and Global Fund to support countries who want to use this package.

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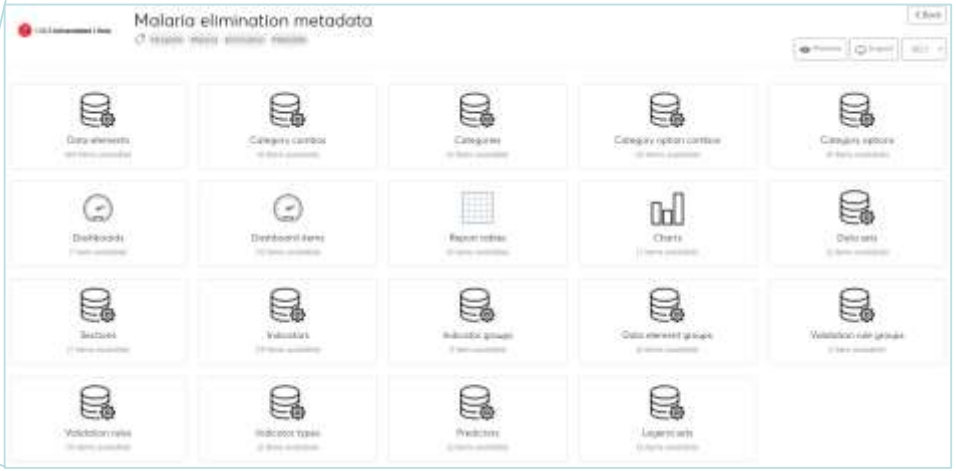
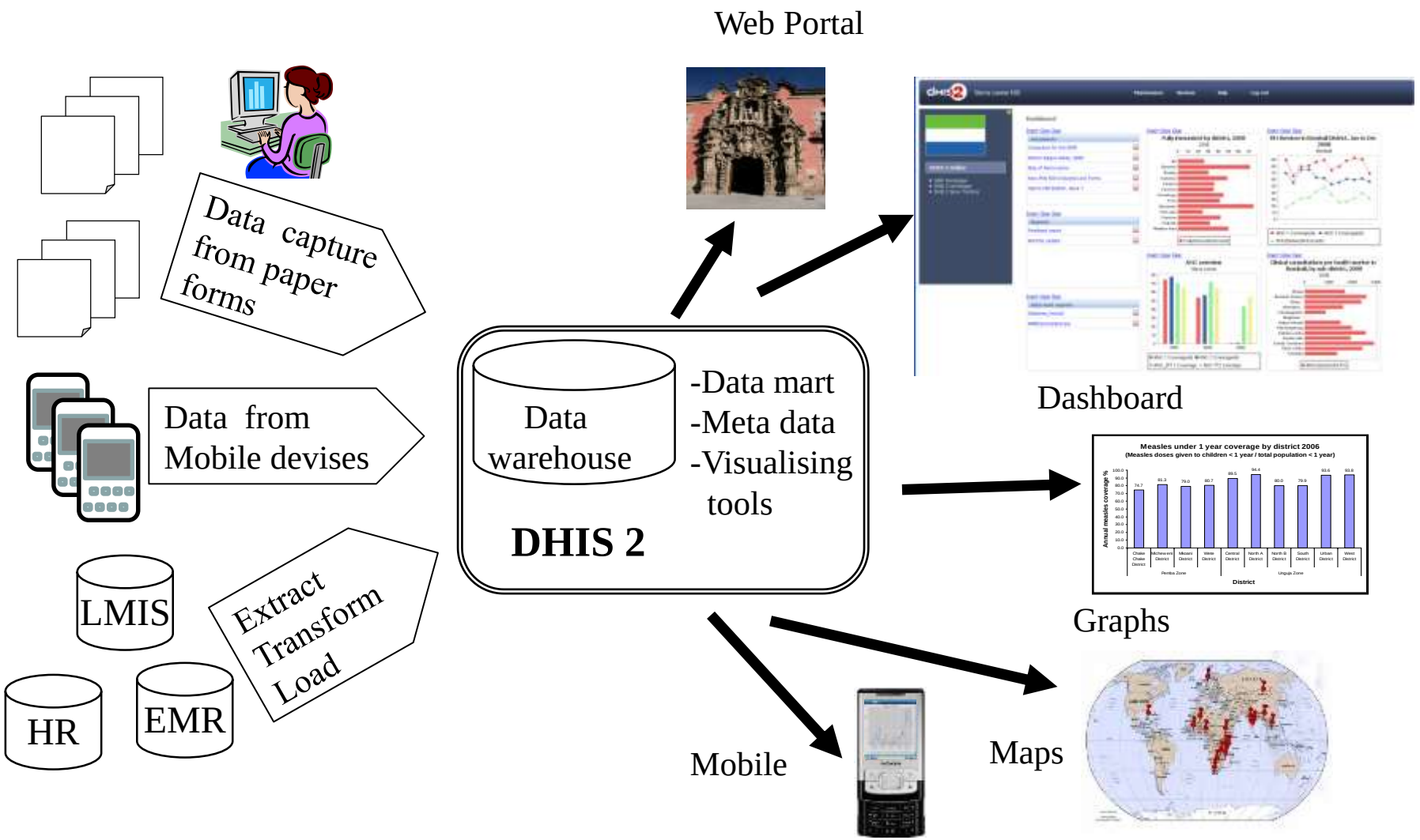
Global guidance and tools

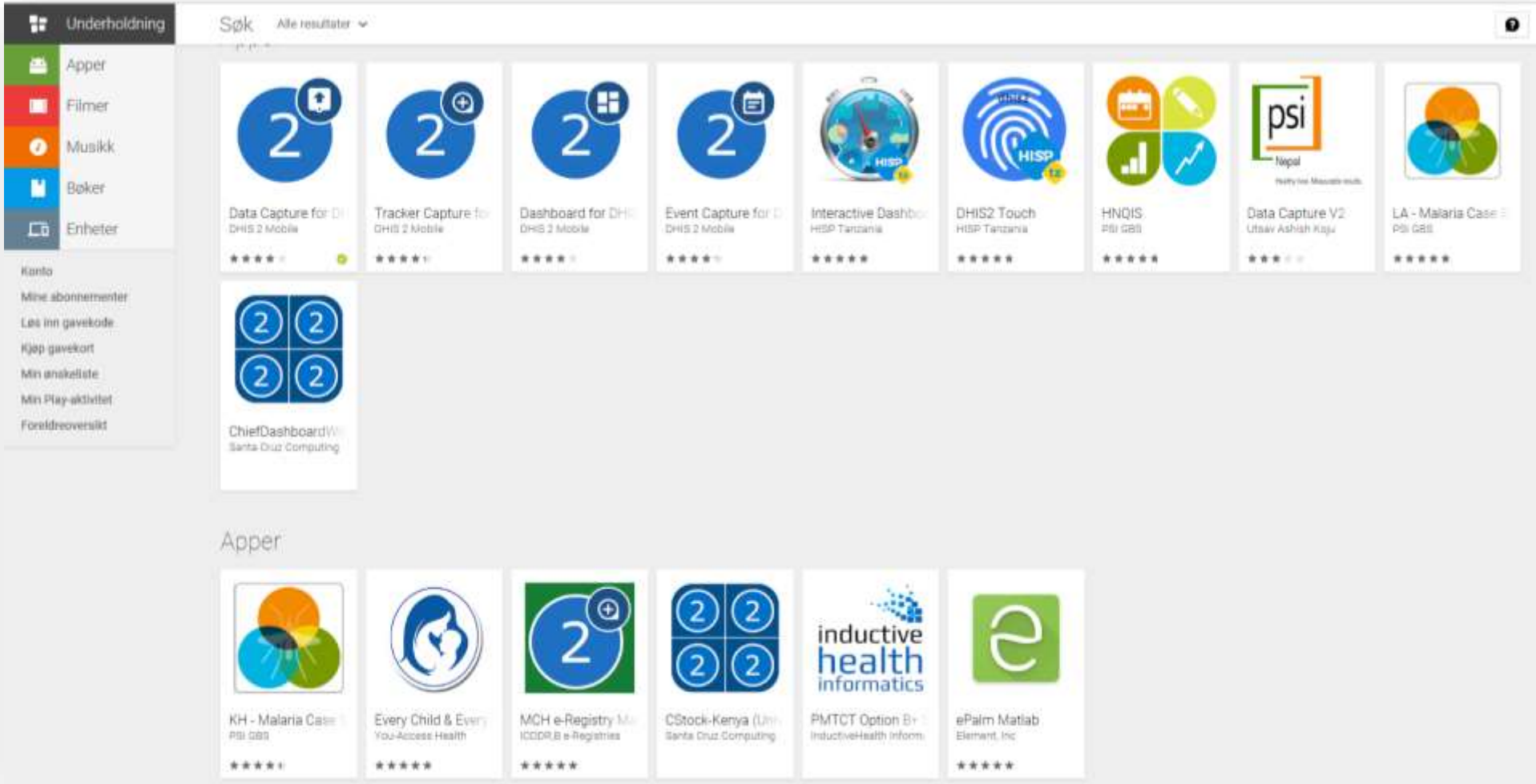


- **Programme specific indicators and data elements**
- **Best practice dashboards, analyses**
- **Aggregate and case-based reporting**
- **Standard data entry forms/registers**
- **Data quality metrics**
- **Sources, evidence base and regular updates**

DHIS2 Country platform: Integrating health programs & data sources

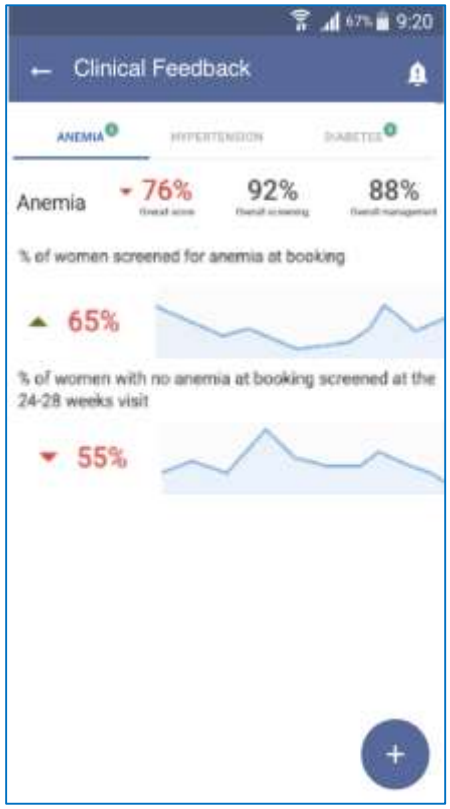


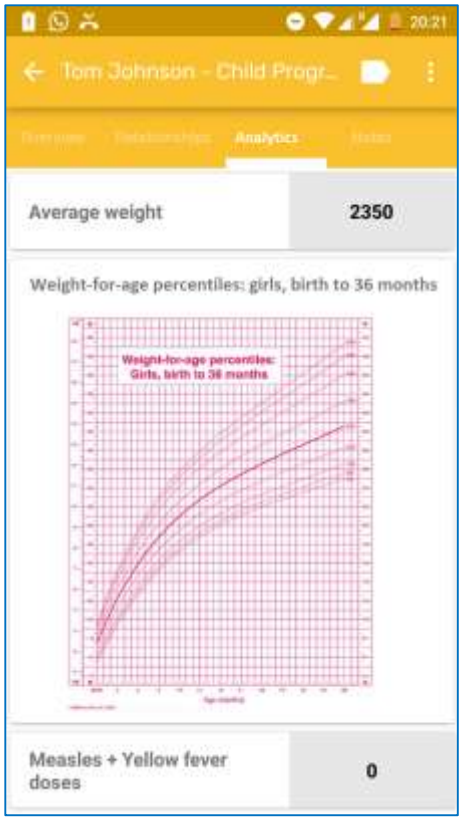
DHIS2 Mobile solutions at Google Play Store



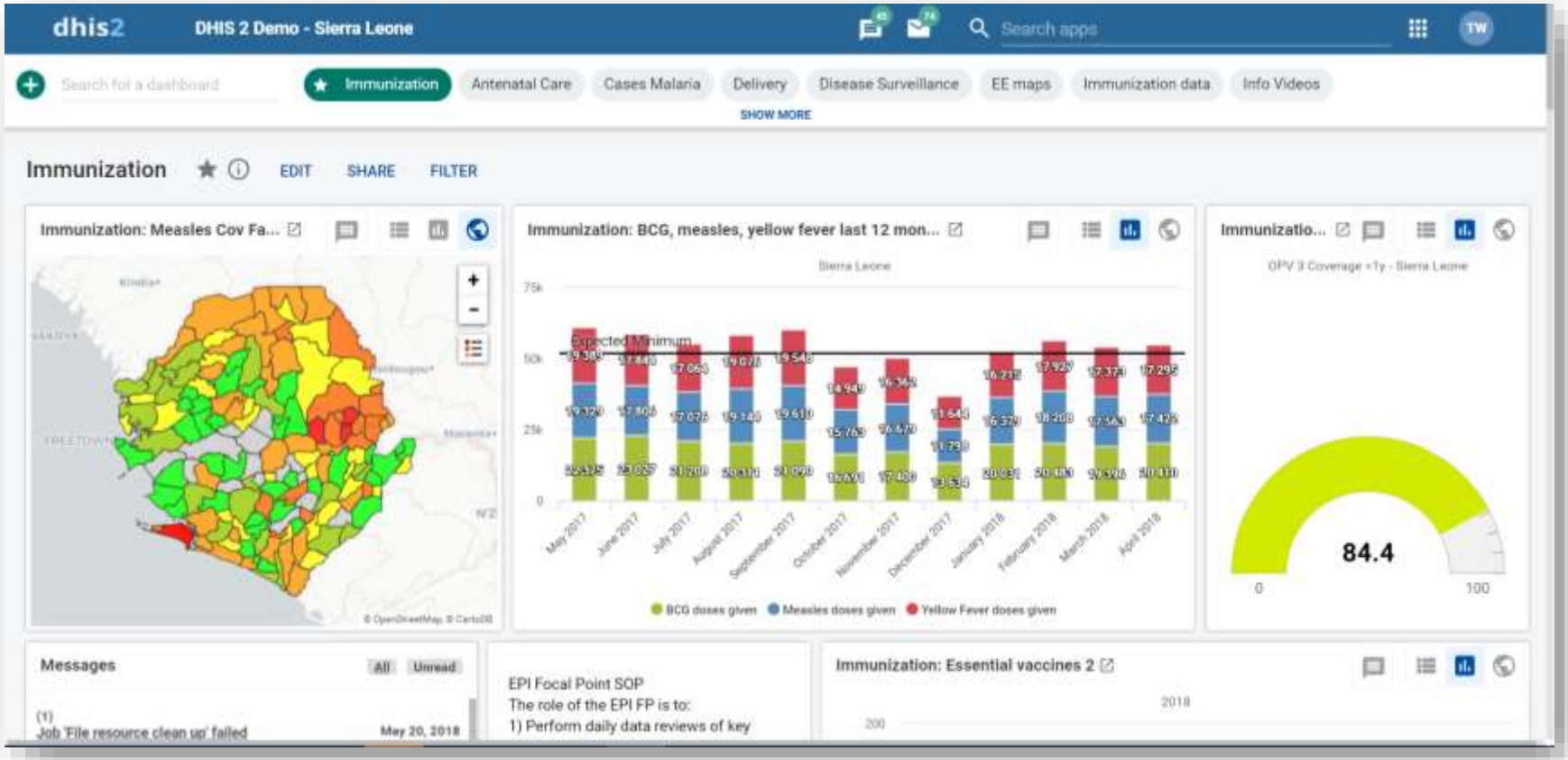
Closing technology gaps: Android

- Vital for offline environments
- Can run on inexpensive mobile devices
- Easy to carry with community health workers
- Social media features





Customizable dashboards for all with real-time data



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Training Mobile Dashboard for Head of Facilities in Indonesia

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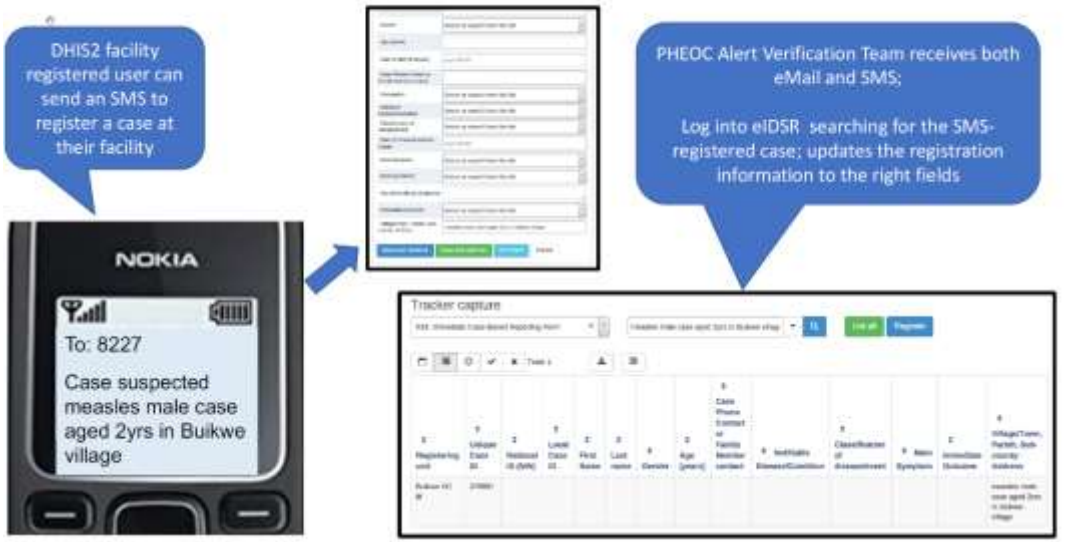
DHIS2 for disease surveillance
- preventing the next big Ebola outbreak

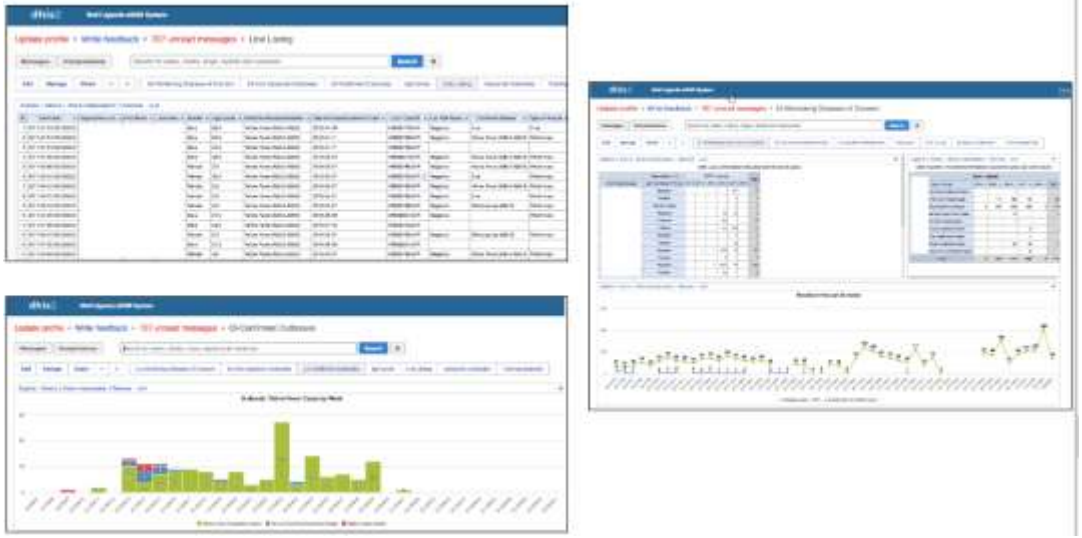
- Ebola outbreak in West Africa in 2014 triggered a need for better routine surveillance systems
- CDC and UiO collaboration (GHSA) on case-based surveillance systems, focused on early detection, **communication** between health clinics and the national laboratories
- Uganda, leading the way, implementing DHIS2 for surveillance at implement national scale

1. Web, Android, SMS for early notification
2. Links clinic and labs -> confirmed cases
3. Triggers alerts on suspected outbreaks
4. Supports response teams with data analysis

SMS case Registration



Disease Surveillance Analysis, Reporting and Presentation



DHIS2 as a generic platform: beyond health

- Water and Sanitation
- Nutrition
- Education
- Agriculture

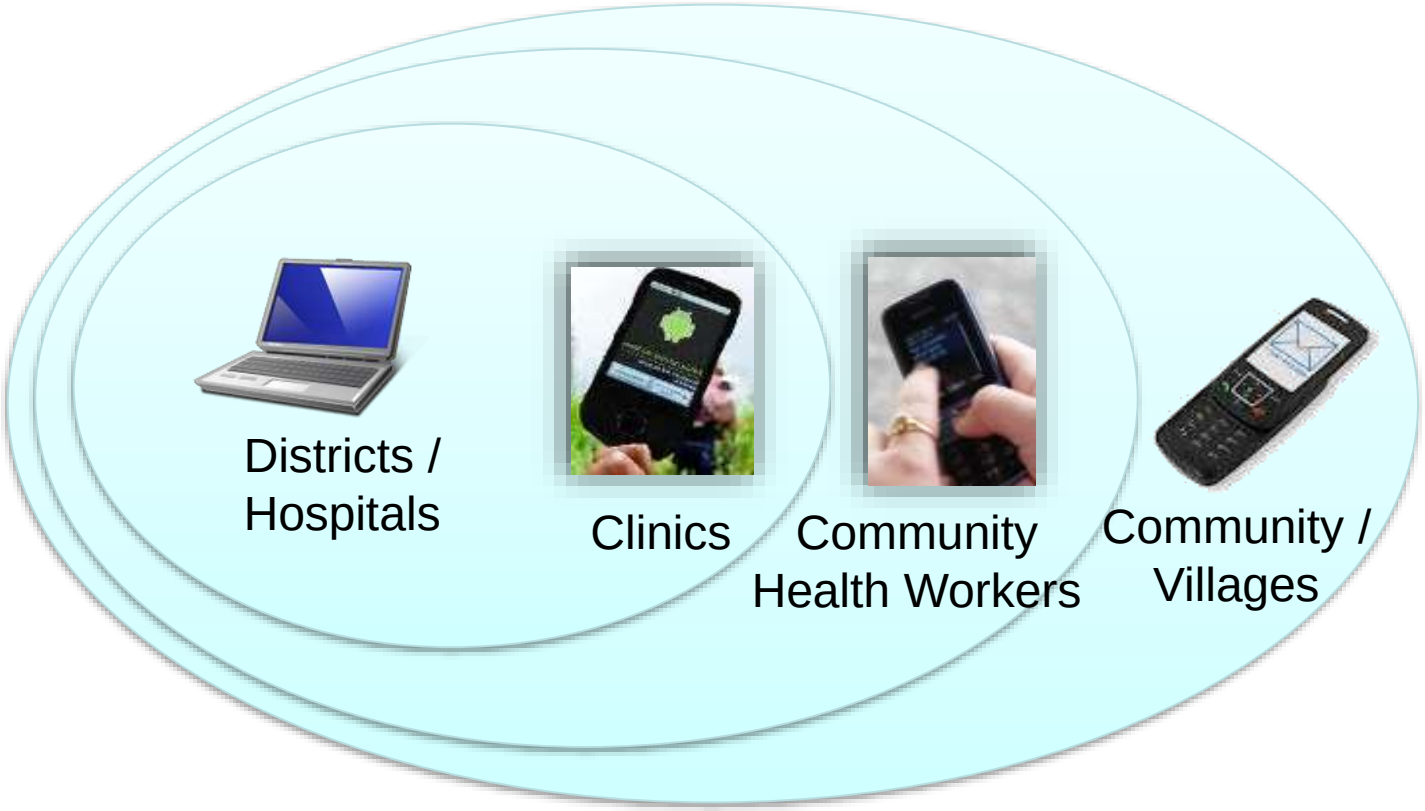
- Reuse of software features
- Reuse of IT capacity in country/region
- Leverage global community

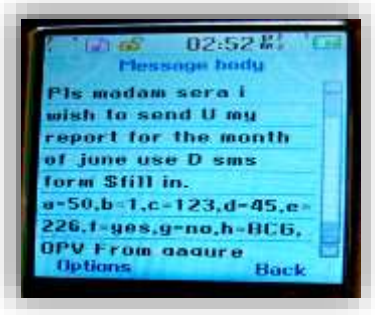
Hisp.uio.no, dhis2.org

Innovation through partnerships
Biometrics

- Partnering with private companies to create global goods
- Enables health care records even for people without national ID
- Enables anonymous unique ID for vulnerable populations
- Closes the gap between the wealthy and poor when it comes to achieving Universal Health Coverage

Extending the DHIS reach through mobiles





SMS

Java

Browser

Android

PC/laptop/tablet

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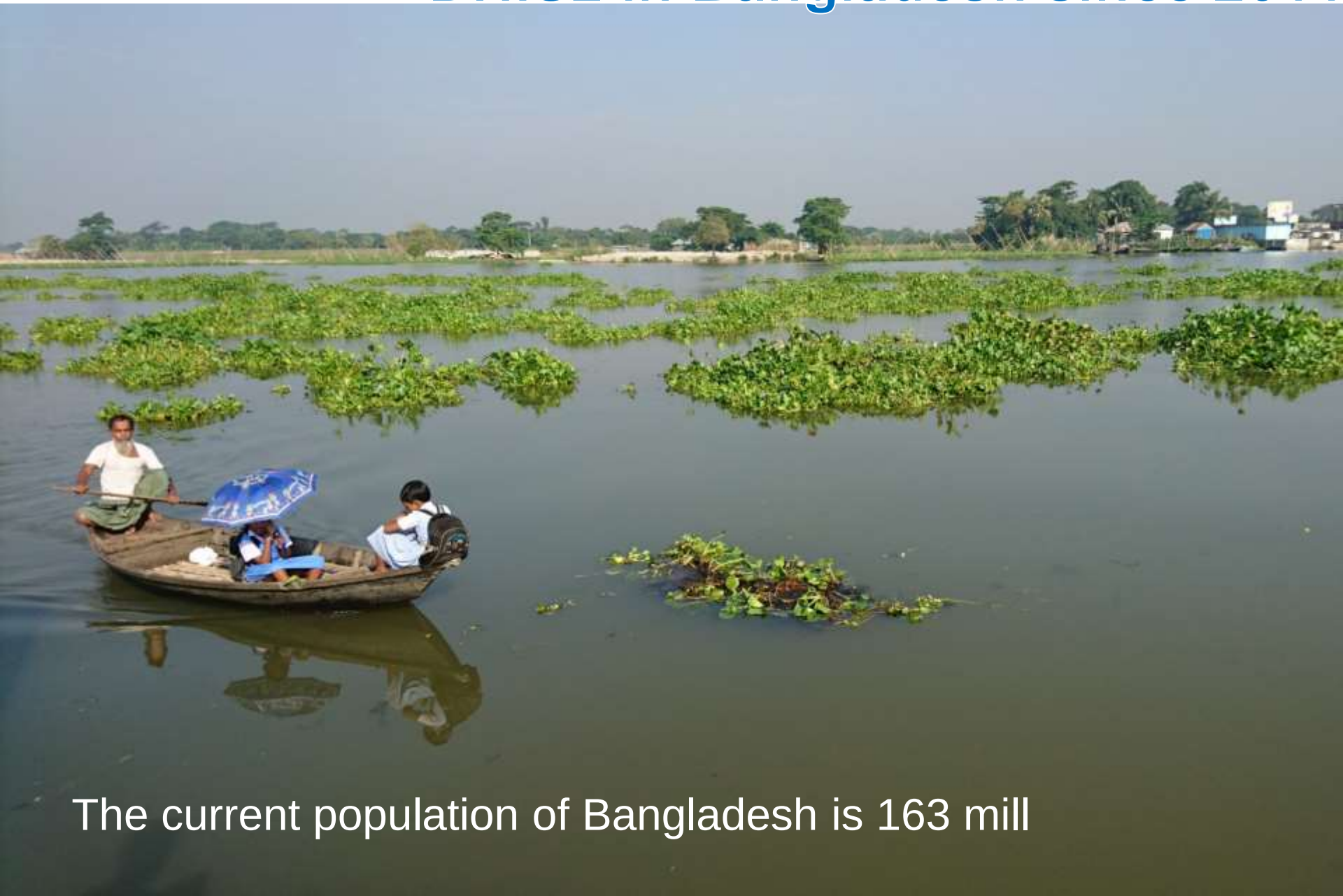
DHIS2 in Bangladesh since 2011



The current population of Bangladesh is 163 mill