

# DHIS 2 Implementation in Action

Sharing implementation experiences from Senegal

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PATH

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# PATH is a leader in global health innovation

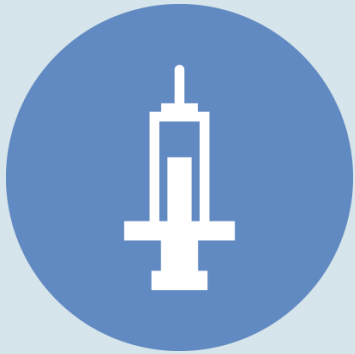
We harness our  
entrepreneurial insight,  
scientific and public health  
expertise, and passion for  
health equity...

...to save the lives of  
women and children.



# Core expertise across five platforms

Innovation happens here



**Vaccines**



**Drugs**



**Diagnostics**



**Devices**



**System and  
Service  
Innovations**

# PATH and the Global Health Security Agenda (GHSA)

- PATH implements Global Health Security Agenda in five different countries: **Senegal, Tanzania, Vietnam, the Democratic Republic of the Congo and Indi.**
- PATH works alongside each country's **Ministry of Health** as well as other ministries, in partnership with **CDC and local organizations.**
- In Senegal, PATH works to improve **surveillance and information systems, laboratory capacity, immunization, and AMR/IPC practices.** PATH began supporting GHSA activities in Senegal in 2015.

## *Prevent*

Improved surveillance to rapidly detect and report threats, monitor trends, and produce actionable data.

## *Detect*

Strong laboratories with rapid, high-quality diagnostics and integrated reporting.

## *Respond*

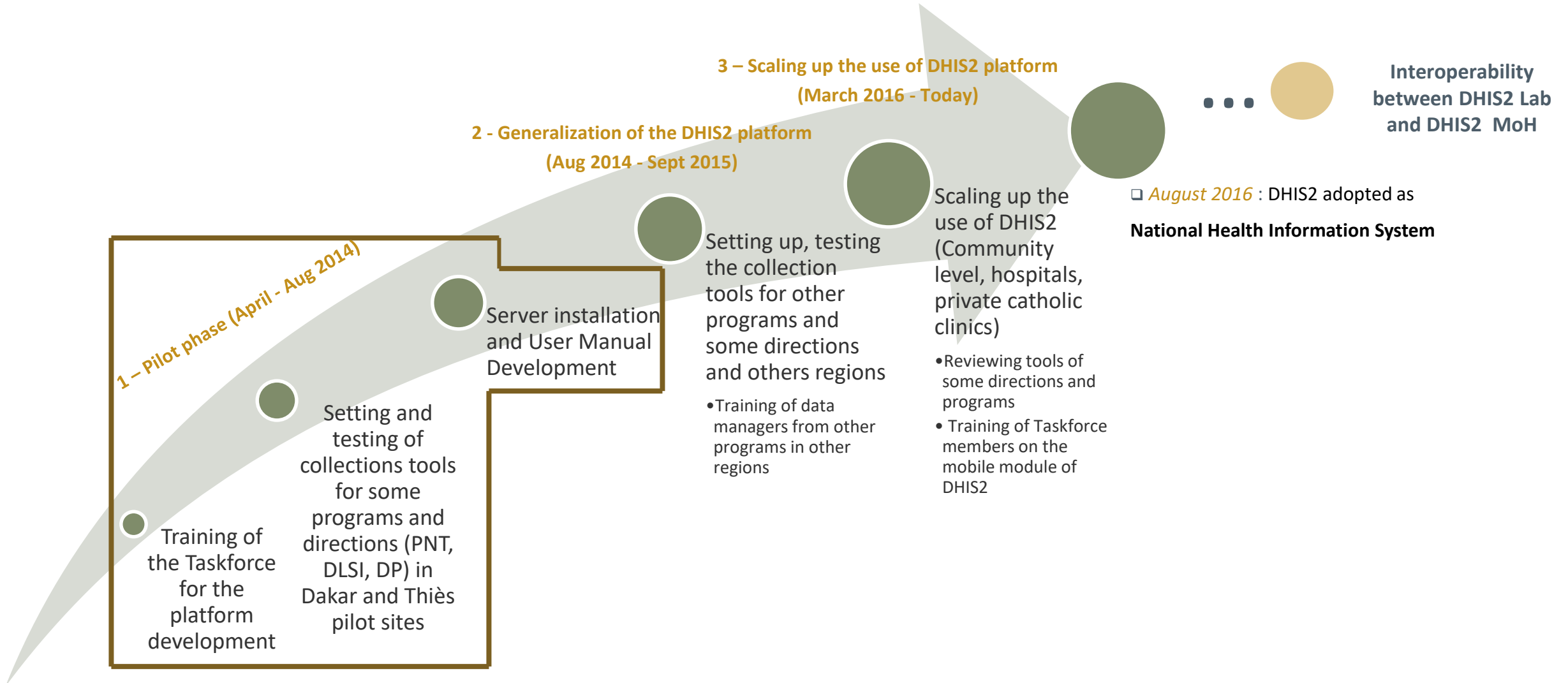
Integrated data information systems & visualization for prompt alerts, system-wide information flow, and informed decision-making.



# Background on digital tools for surveillance

- ❑ The MOH has undertaken measures and reforms aimed at the development of health information, including the adoption of **DHIS 2 platform as the National Health Information System**
- ❑ To improve its capacity to detect and prevent priority health events, government wanted an automated system for real-time collection and **transmission of surveillance data, enabling early warning and decision-making** for a rapid and appropriate response. Began using DHIS 2 for IDSR in 2014.
- ❑ In order to reinforce the quality of epidemiological surveillance in Senegal, PATH in partnership with the Direction of Laboratories has set up a project to implement DHIS 2 platform for **the reporting of laboratory data on the 11 diseases of mandatory declaration**.

# DHIS 2 Implementation phases - NHIS



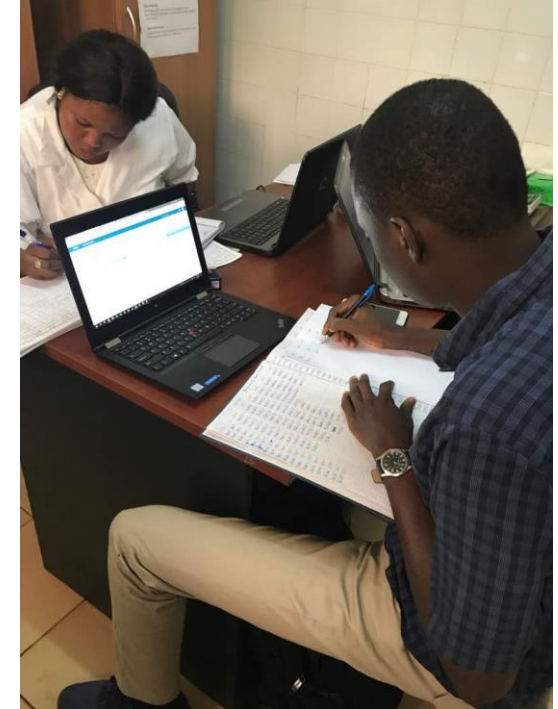
# DHIS 2 Implementation – Health and Social Information System Division (HSISD)

## ❑ Expand the use of DHIS 2 to all hospitals in the country for reporting

- ❑ Train the DSISS taskforce on ICD10
- ❑ Harmonize collection tools for DHIS 2 hospital instances
- ❑ Improve capacities of surveillance focal points and DP officers to use DHIS 2 analysis modules
- ❑ Review existing hospital reporting systems and guidelines
- ❑ Train regional hospital staff on use of DHIS 2 at 35 hospitals (Almost 700 agents will be trained)

## ❑ Improve platform usage and data quality

- ❑ Platform optimization (users, organization units, data elements, indicators, etc.)
- ❑ Develop policy, guidelines, protocols and technical documents to ensure data quality management in the DHIS 2 platform
- ❑ Technical support for experimenting the mobile version of DHIS 2 in areas with limited access to Internet



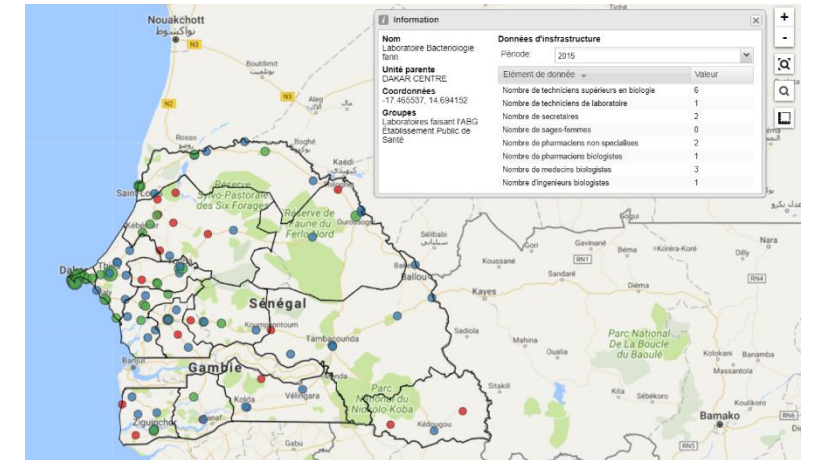
# DHIS 2 Implementation - Laboratories

## ❑ Reporting for 11 diseases of mandatory declaration

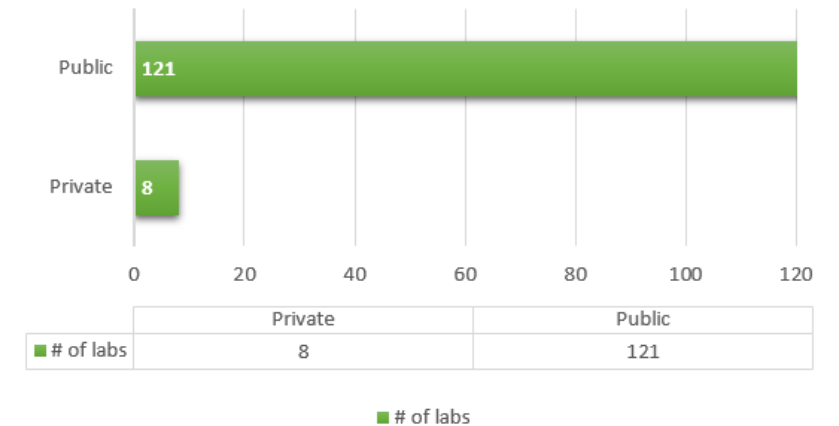
- ❑ Shorten the time between detection and response, to reduce biothreats and stop pandemics.
- ❑ Allowing a timely evaluation of potential epidemiological threats and enables a prompt and efficient reaction.
- ❑ Partnering with Fondation Mérieux to develop a system to capture data via mobile phone or computer and shared on a central platform for real-time epidemiological analyses, mapping, and the automatic production of reports

## ❑ Laboratories mapping

- ❑ Plan optimally investments and actions to be implemented for laboratory strengthening.
- ❑ Identify laboratory capacities in terms of personnel, sampling capacities, types of analysis, equipment and infrastructure.
- ❑ Detailed cartography of laboratories including their geolocation, contacts, general data and technical platform.



Status of labs





# Supporting Labs to combat Antimicrobial Resistance (AMR)

## ❑ AMR Surveillance

- ❑ Using DHIS 2, PATH has established AMR surveillance in select laboratories to prevent the emergence and spread of organisms resistant to antimicrobial drugs in Senegal
- ❑ Trained 24 of the 44 laboratories on AMR reporting

## ❑ Supporting additional enhancements of AMR capabilities of lab staff



# DHIS 2 Implementation Challenges

## ❑ DHIS 2 MoH

- ❑ Data Quality
- ❑ Health data integration with different time periods listed
- ❑ Poor timeliness of data in the public health sector
- ❑ Insufficient intersectoral collaboration for data availability from other ministries

## ❑ DHIS 2 Laboratories

- ❑ Infrastructure challenges such as internet and power
- ❑ Staff Turnover and lack of consolidated contact list of laboratory managers
- ❑ Retrieving geographic coordinates



# Ecosystem Challenges

- ❑ Poor mobile connectivity limiting DHIS 2 mobile data collection
- ❑ Integration of laboratory data into the national DHIS 2 platform
- ❑ Full integration of private sector data
- ❑ Ensure health personnel at all levels of the health pyramid are trained to collect and analyze health data
- ❑ Poor data quality
- ❑ Interoperability of different platforms and patient-monitoring systems





# PATH GHSA Successes to note

- ❑ Excellent collaboration / partnership with MoH especially with Direction of Planning, Research and Statistics/Health and Social Information System Division
- ❑ Mapping of laboratories to understand understand laboratory capacity across the country to support the DL to plan investments
- ❑ Establishment of an AMR surveillance system to prevent and treat infectious diseases with safe and effective medicines of guaranteed quality, used responsibly and accessible to all as needed.
- ❑ Capacity building of DP surveillance focal points on DHIS 2 analysis modules (pivot table, data visualization, GIS)
- ❑ MoH technical support in collaboration with the NMCP in integrating MACEPA database data into the national health information system for better monitoring of malaria indicators
- ❑ Several workshops and capacity building efforts to strengthen DSISS taskforce of ICD10 so they can code diseases properly for hospital record forms

# Reflections

- ❑ **National policy and strategy:** Government has developed a National Strategy for Digital Health (2017 – 2023)
- ❑ **System integration for quick response:** Facilitating interoperability between DHIS 2 and Laboratory systems
- ❑ **Data Quality essential for surveillance:**– PATH finalizing a data quality audit manual in collaboration with the MoH.
- ❑ **Scaling at the right page:** Performing post-training supervision in health facilities on the use of DHIS 2
- ❑ **Linking data to response:** Strengthening surveillance of epidemic-prone diseases in real time and accelerate epidemic response capacity
- ❑ **Pathogen identification:** Improving the quality of pathogen identification in some microbiology laboratories and the National Public Health Laboratory





# Thank you

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