



BID Initiative Tanzania

Better data, plus better decisions, will lead to better health outcomes.

30 November 2017



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Better data. Better decisions. Better health.



OUTLINE



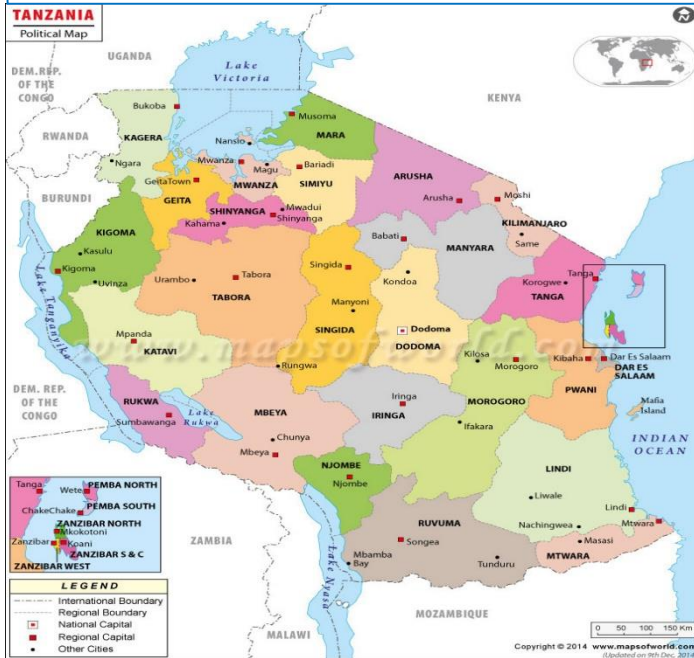
- Background Information
- Immunization services
- BID implementation
- Electronic immunization registry
- Overview of Vaccine Information Management System
- Lesson Learnt and Way forward



United Republic of Tanzania: Background



Map: Administrative regions, regional capitals and major population centres

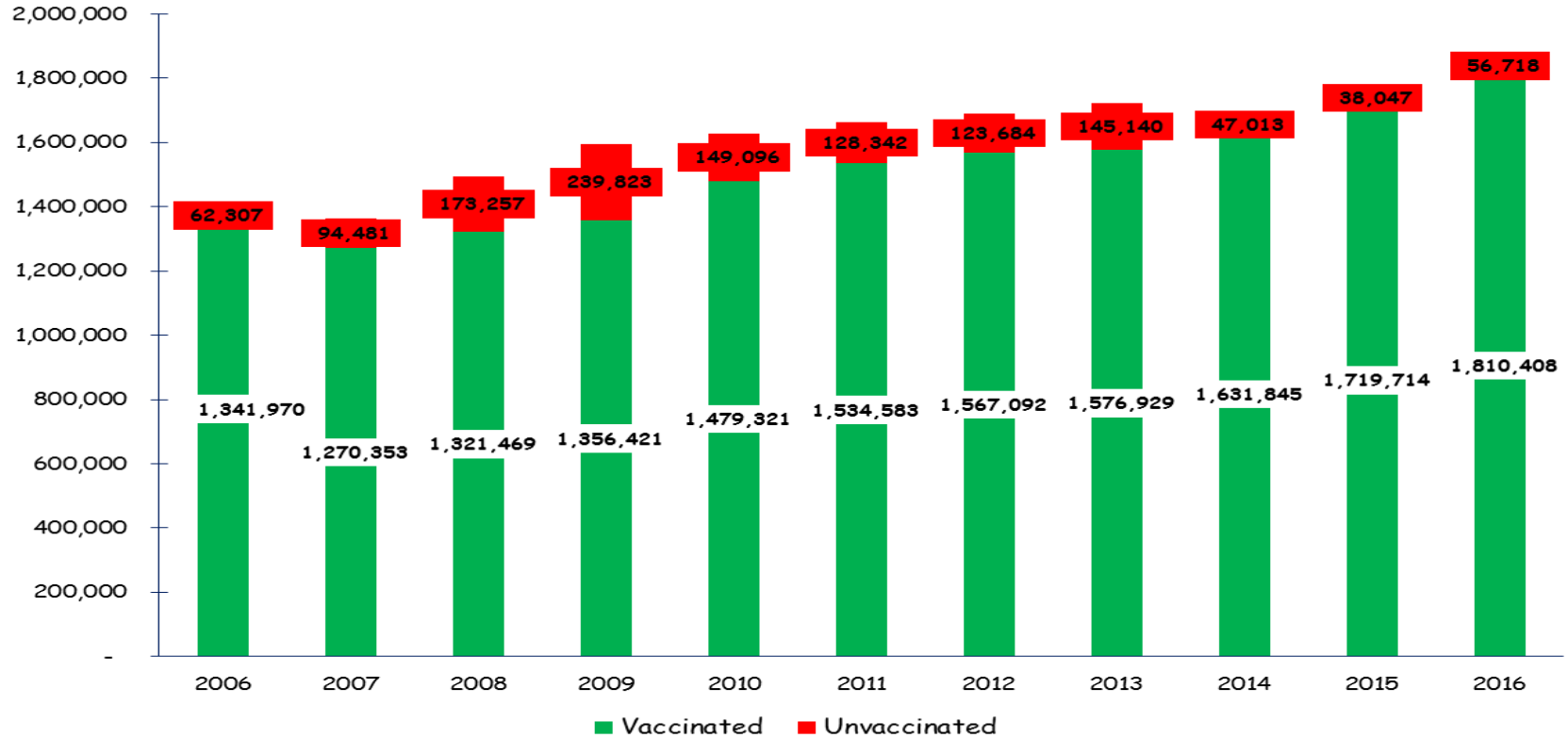


- Area: 945,050 Km²
- Total population : 48,751,804 Million
- Administrative regions: 30
- Councils 187
- Total population Urban 30%
- Total population Rural 70%
- Health Facilities 7,474
- Health facility providing Immunization services 6,024





Trend of immunized Children





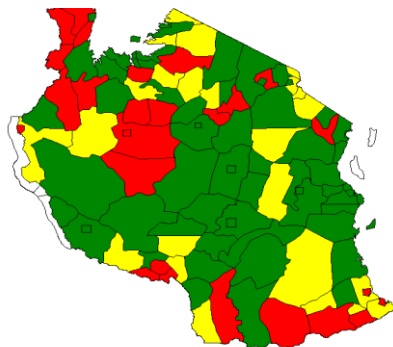
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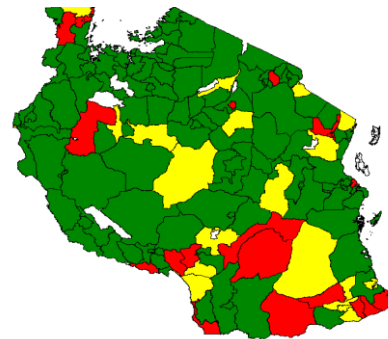


PENTA 3 coverage in Tanzania- 2013-2016

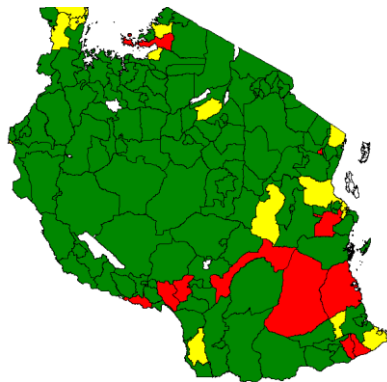
2013



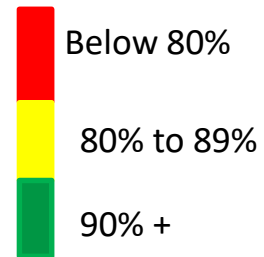
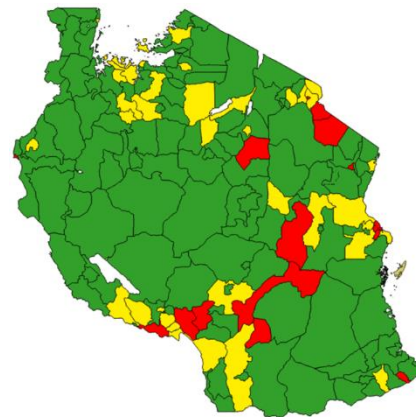
2014



2015



2016





Background of BID in Tanzania



- BID Initiative is **country-led initiative and interventions being developed in collaboration with multiple stakeholders across all levels for the health system**
- The BID Initiative identify, test, and develop immunization data solutions with users at all levels of the health system.
- Prioritized data quality and use interventions including the development of an electronic immunization registry which is used at primary health care level in Arusha and Tanga region





Objective of BID in Tanzania



1. Improve immunization data quality and availability.
2. Increase data use and decision making skills at all levels of health system.
3. Build motivation to use data at all levels to improve performance.
4. Increase capacity to monitor performance through use of available data





Key challenges identified at National level



- Accurate denominator (addressing: forecasting and coverage data, outside coverage area).
- Left out and defaulter tracing.
- Unique identification of infants (and other target populations, depending on antigen and intervention).
- Complex data collection forms and tools.
- Data visibility (supply chain and logistics).
- Data management and use capacity at all levels of the health system.
- Harmonization of indicators.





Challenges identified at service delivery level

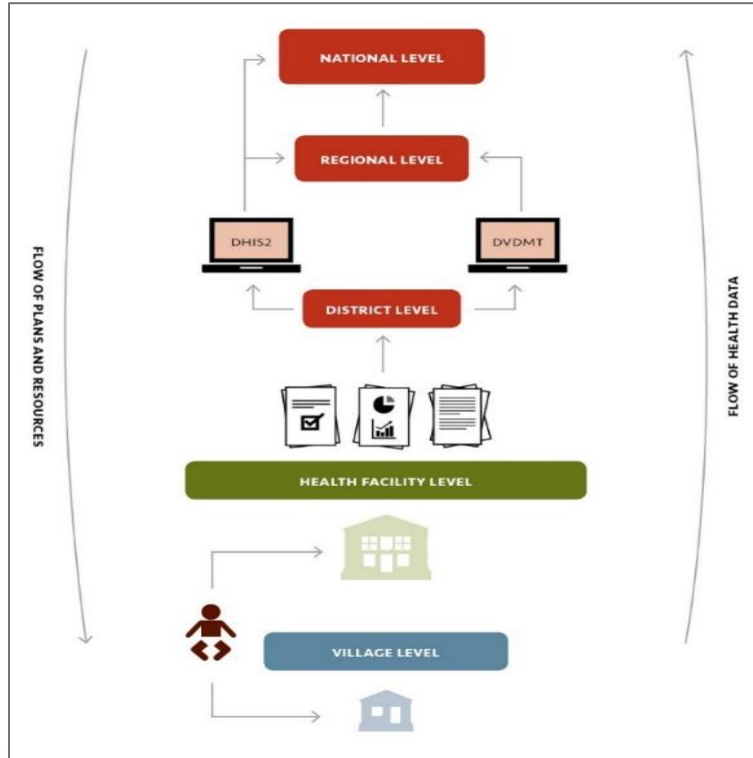


- Identifying and tracing defaulters across the various facilities
- Movement between health facilities creates challenges in following children through the continuum of care for immunization services.
- Denominators in some health facilities/districts are not realistic
- Multiple reporting tools at the facility and district level (DVDMT, SMT, CCIT, monthly report and HIMS report and DHIS 2).
 - Limited data quality checks found inconsistencies in data submitted to Districts
- Delayed reporting due to limited availability of transportation and geographical location of some health facilities.
- Inadequate data utilization for decision making
- Inadequate feedback mechanisms from higher to the point of data collection.





Data collection system BEFORE BID



- Data on vaccines are collected at all levels from HF to national level
- Tools for collection of data from HF level
 - HF monthly reporting form
 - Tally sheet
 - Child registers
- At district to national level data is collected through DVDMT, CCIT, SMT



Key Interventions



- Development of Electronic Immunization Registry System
 - Potential partners: MoHSW, PO-RALG, WHO, PATH, UNICEF, GAVI, CHAI, JSI/MCSP, AMREF
 - There will likely be tight mutually beneficial linkages with RITA and the under-5 birth registration initiative
- Simplify data collection tools and optimization of reporting processes (tablets, barcode scanner, serial barcode number)
- Support improvements in the management of the vaccine supply chain and data visualization.
- Support capacity building efforts around data management and use
 - Strengthening supportive supervision
 - Promoting peer learning through routine data review meetings
 - Virtual peer learning forums (WhatsApp groups)
 - Data Use & Mentorship Guidelines
 - Targeted supportive supervision to councils and facilities

Cold Chain Inventory Management



Electronic Immunization Registry



Vaccine Stock Management



The interface shows a form with the following fields: Language (English), Year (2017), County (Tumkur), Level (Region), and Name. There are also buttons for 'Click to print this form' and 'View all DVID forms'. The World Health Organization logo is visible at the bottom.

Routine immunization Data



Vaccine Arrival Registry (Barcoding)



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Intervention Coverage



- The health facility version, (Electronic Immunization Registry) is in 600 health facilities in Tanga and Arusha regions.
 - EIR will be in 588 more health facilities by October 2017 for Kilimanjaro and Dodoma.
 - Plan is to use stage based approach in scaling EIS countrywide as we are continue to learn.
- Immunization registry is integrated into Vaccine Information Management System (VIMS) at the district level
 - Currently implemented in 15 regions of Tanzania mainland, in over 100 councils





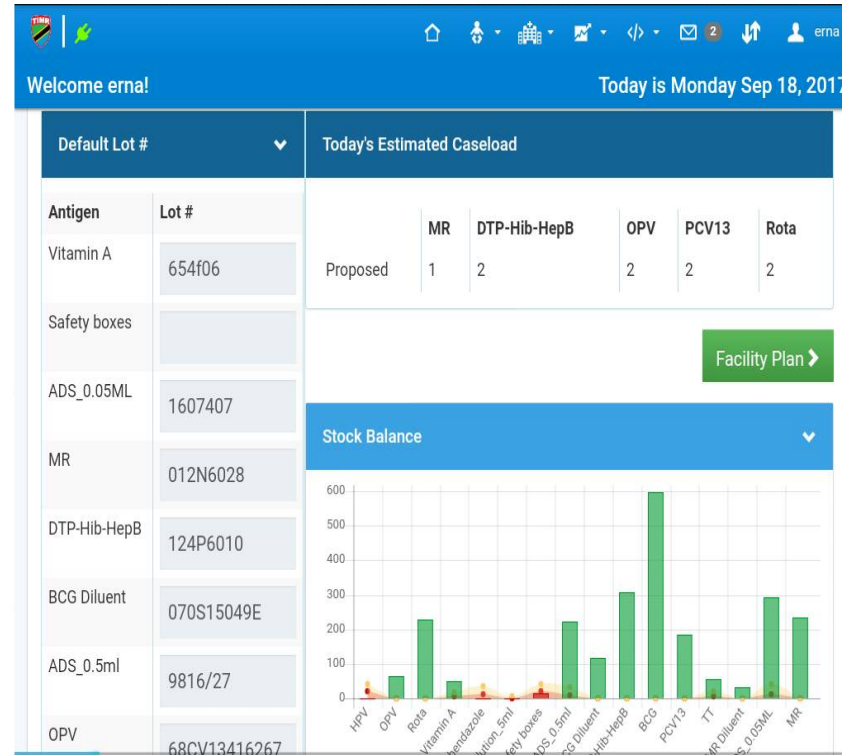
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ELECTRONIC IMMUNIZATION REGISTRY: FACILITY LEVEL INFORMATION SYSTEM

Overview of EIR

- The Electronic Immunization Registry (EIR) is a multi-application, scalable immunization registry platform. The system has been developed from OpenIZ an
- Consists of many components:
 - IMS – Immunization Management System
 - Cloud based, user's don't see this
 - Mobile Application – TImR Mobile
 - Android based disconnected client for TImR data
 - Web Portal
 - Web based portal for completing orders, running complex reports, etc.
 - Administration Portal
 - Web based portal for administering the TImR system
 - Form Scanner
 - Windows based software for scanning paper forms and submitting data to TImR
 - Interoperability Layer
 - Used to integrate TImR with other systems such as VIMS and DHIS2
 - Data Warehouse
 - Used to provide in-application reporting from TImR source data



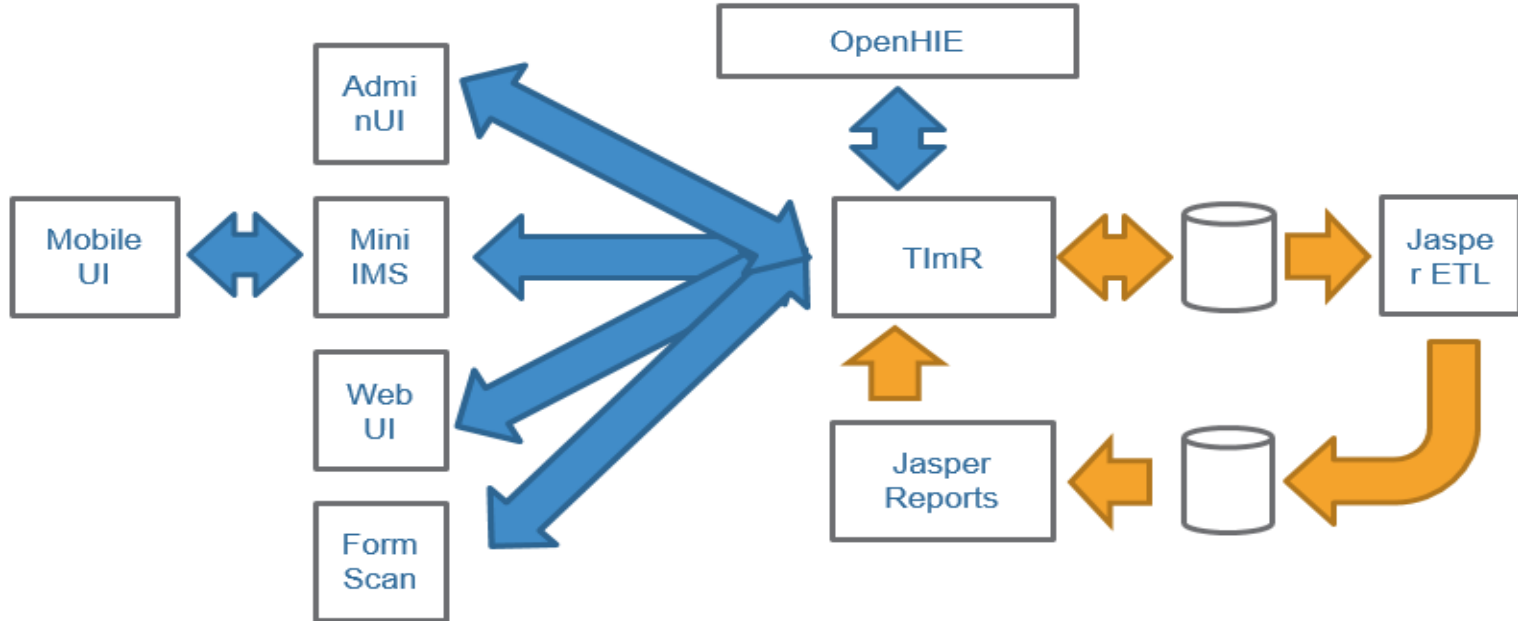


Tool Used at Facility Level



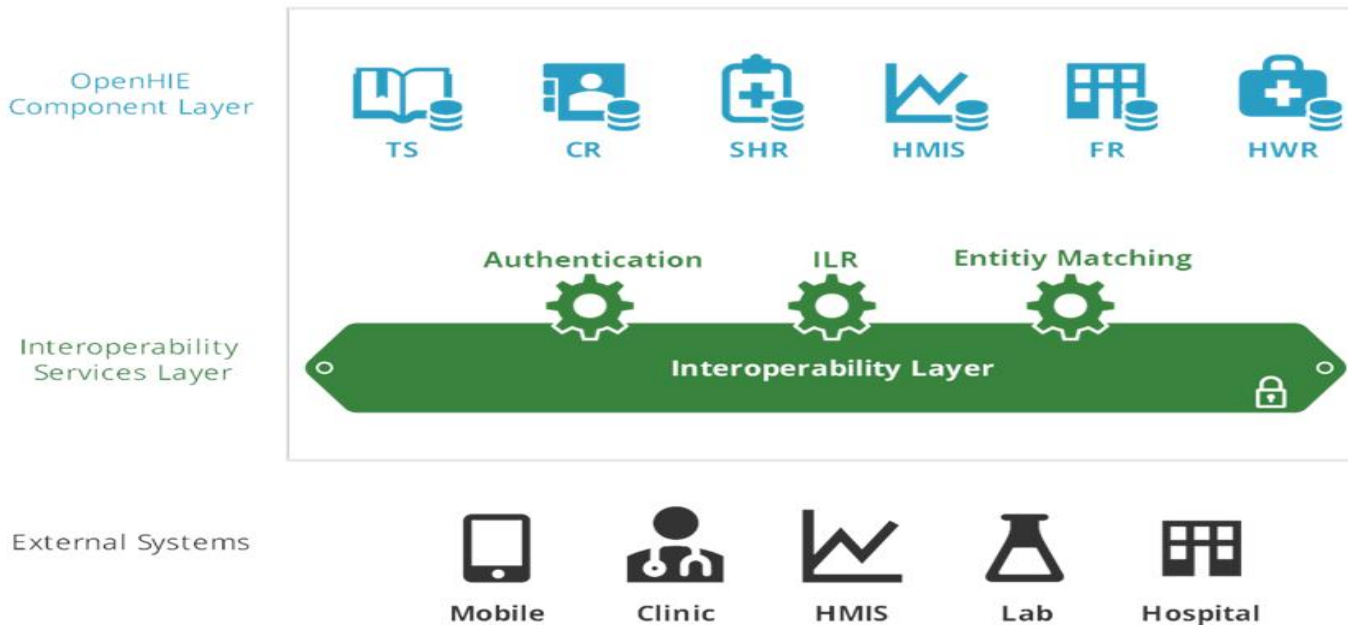


EIS- Solution Architecture

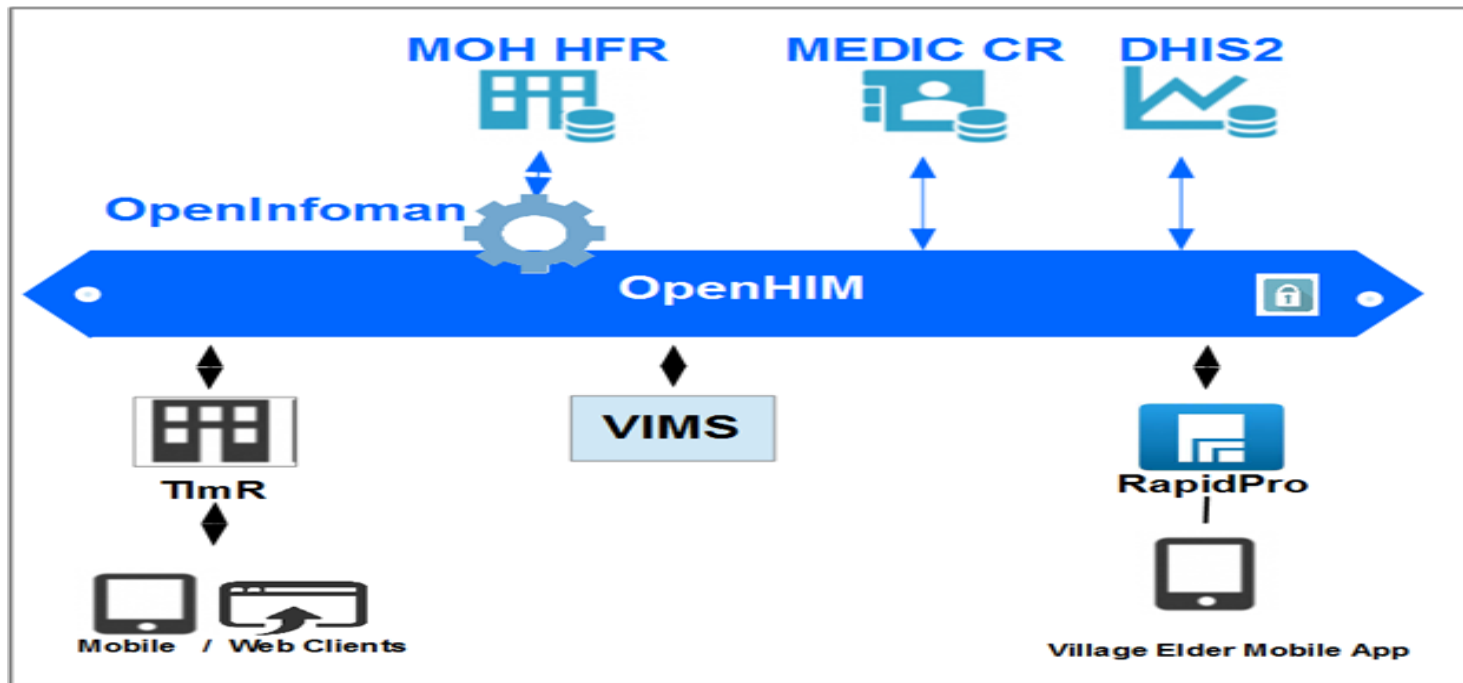




Solution Architecture...cont



OPENHIM Tanzania context





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ELECTRONIC IMMUNIZATION REGISTRY: FUNCTIONALITIES



What can be done using EIR – Demonstrate

1. Clients search and registration, caregivers, & children – use barcode as unique identifier for child & caregiver ID link with CRVS
2. Child Immunization schedule management, appointment management, decision supports & facility plan
3. Facility stock management, stock balance, adjustment & lot # management & decision supports
4. Facility Performance measurement
 1. Coverage report (scheduled & target population)
 2. Stock balance
 3. Daily traffic management
 4. Defaulter & dropout report
5. Data quality management
 1. Data validation checks
 2. Vaccination and stock consumption checks
 3. Vaccine consistence check
 4. Child schedule management







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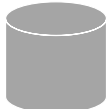
VACCINE MANAGEMENT INFORMATION SYSTEM FUNCTIONALITIES

VIMS Overview

Combine Today's Separate Tools

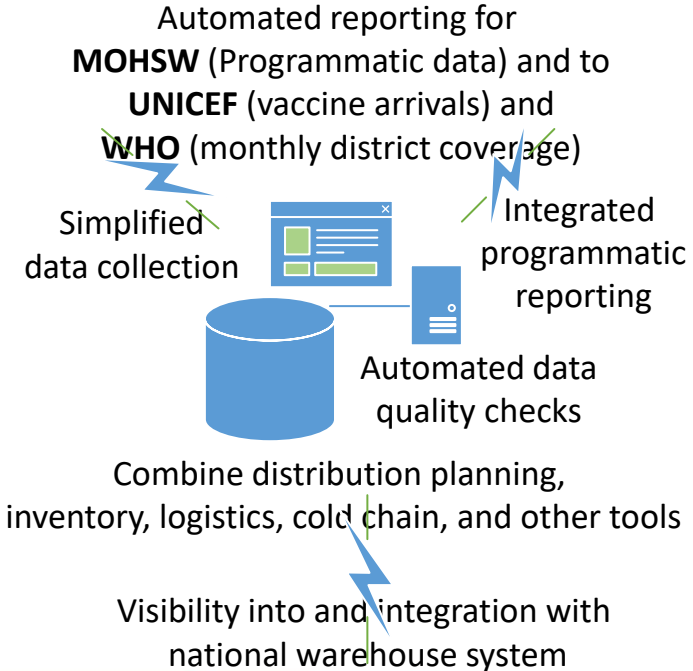
   
Multiple DVDMT, SMT, CCIT spreadsheets, emailed, and cut and pasted together for national reporting

  Paper and email ordering and distribution

 Disconnected stock management reporting

  Separate reporting process for HMIS

Into One System (January 2014)





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LESSONS LEARNT

BID Initiative Approach



Learn Fast

- Work on a variety of interventions and solutions in our demo countries
- Continue seeking out new innovations and solutions



Fail Fast

- Determine what's not working and stop or change course
- Document our findings, including the lessons learned from our failures



Share Fast

- Through the BID Learning Network and country collaborative, share potential solutions
- Involve users in design and testing
- Package solutions for dissemination



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LESSONS LEARNT: SYSTEM DESIGNS AND TESTING PROCESSES



Key Lessons learnt....

- A right mix between health professionals and end user is really key in achieving a usable health system
- While HCWs agree on common challenge they often disagree in common solution. A system design has to address a compromising solution.
- User Centered Design approach takes relatively longer time in system designing
- Design for scale, test for scale (robust and comprehensive test plan in place) and deploy slowly.
- Don't scale beyond testing facilities if the system still has bugs; it is vital to roll out the system into few facilities (6-20 facilities depending on the size of the supporting team) first before scaling into the whole district
- Development flexibility is required
 - Additional features requirements
 - System usage visibility
 - Un common functions (reproduce part or all of the legacy system)



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LESSONS LEARNT: SUPPORT AND RUNNING PARALLEL SYSTEMS

Key Lessons learnt...

- Plan for supporting parallel system for undefined time frame.
 - Identifying facilities that needed extra support based on agreed criterial especially during the initial stage of implementation (number of clients, staff level and capacity)
- Take immeasurable time to completely switch to full electronic information system
- Political will, cost, technical capacity beyond initial investment support is usually the key driver to government decision to switch
- Establish criterion and timeline on what it takes to make the legacy system redundant in the very initial stage of implementation. (set clear expectation to all HCW involved in the process.



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LESSONS LEARNT: ROLLOUT APPROACH



Key Lessons learnt

- Onetime and continuous support to health care workers: Having DIMs in the districts have ensured HCWs are receiving onetime and continuous support
- Cost effectiveness of the new approach: Under the old strategy, high cost was incurred in transport and per diems for BID implementation team.
 - we learnt that when district council provided vehicle (while PATH paid for fuel and drivers per diem), there was a cost saving of up 90% of the total rollout cost in that particular district.
- Sense of ownership and increased system usage among health care workers: when BID staff were conducting rollout and supporting facilities, health care workers had a perceptions that this is a project run by PATH and even their commitment in using the system and data was slightly low



Key Lessons Learnt..

- Changing pattern of health care worker demand with time and after being exposed to information;
 - one of the learning is that we have experienced a changing demand from how to use the device, how to enter information in the registry to how do I get my report performance reports from the system.
- Community sensitivity to new interventions that directly touch them or their children: Introducing of barcode ID to child health card lead into misconceptions and (it was linked with masonic misconceptions) and before the issues was widely spread there was a need to actively address the situation.
 - The lesson is we need to proactively educate and/or equip health care workers to educate community for any new intervention that will directly touch them/their children before any misconception rises

Key Lessons Learnt..

- Ownership and sustaining the knowledge and pace of using new interventions:
 - Under this strategy, the implementation team was to provide ongoing support to all facilities and provide training to new end users.
 - They were also responsible for developing data use capacity of HCWs through frequent visits to facilities. This made it difficult to ensure smooth transitioning of the BID Initiative implementation roles from PATH to district authorities to own, maintain and sustain the initiative.
- Increase rollout speed: In this strategy, increasing the rollout pace meant to increase the size of the implementation team so that they are able to cover multiple districts at the same time or reduce the number of weeks they spend in a district.



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Thank you.

