THE EVOLUTION OF VACCINE INFORMATION MANAGEMENT SYSTEM (VIMS) IN TANZANIA
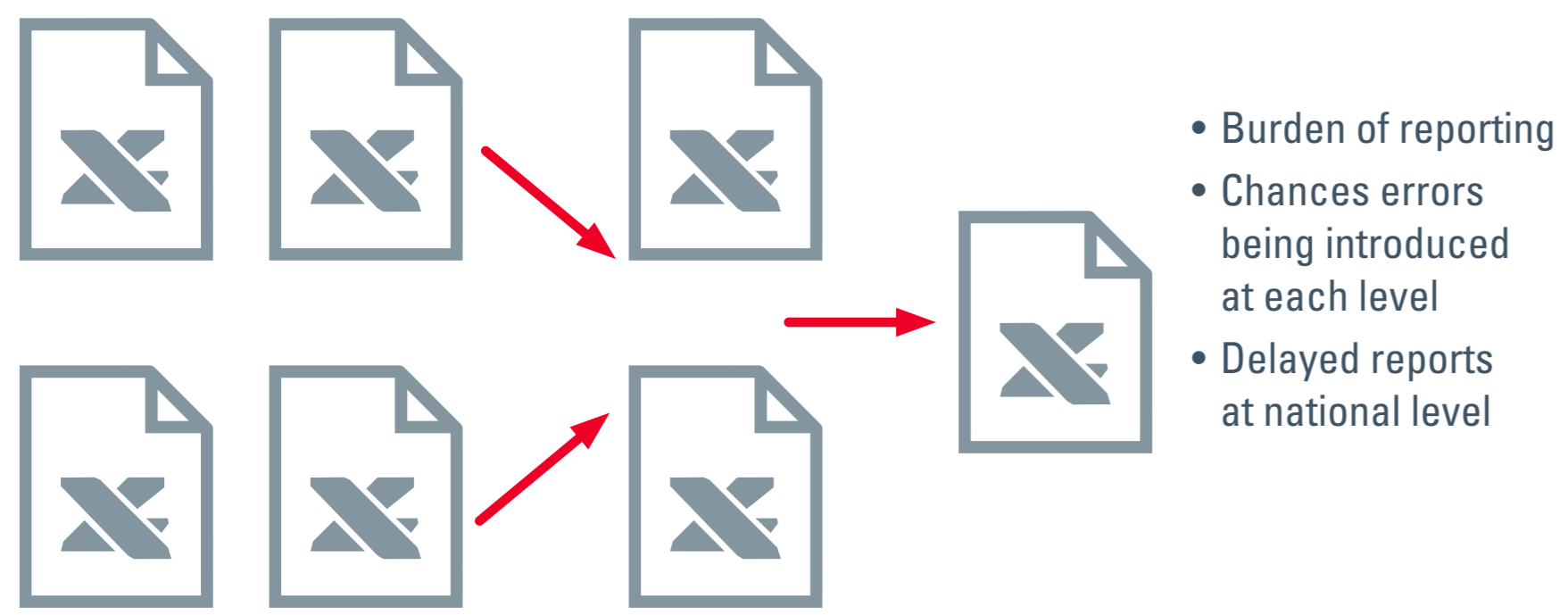
Harrison Mariki, inSupply, JSI Research & Training Institute, Inc.
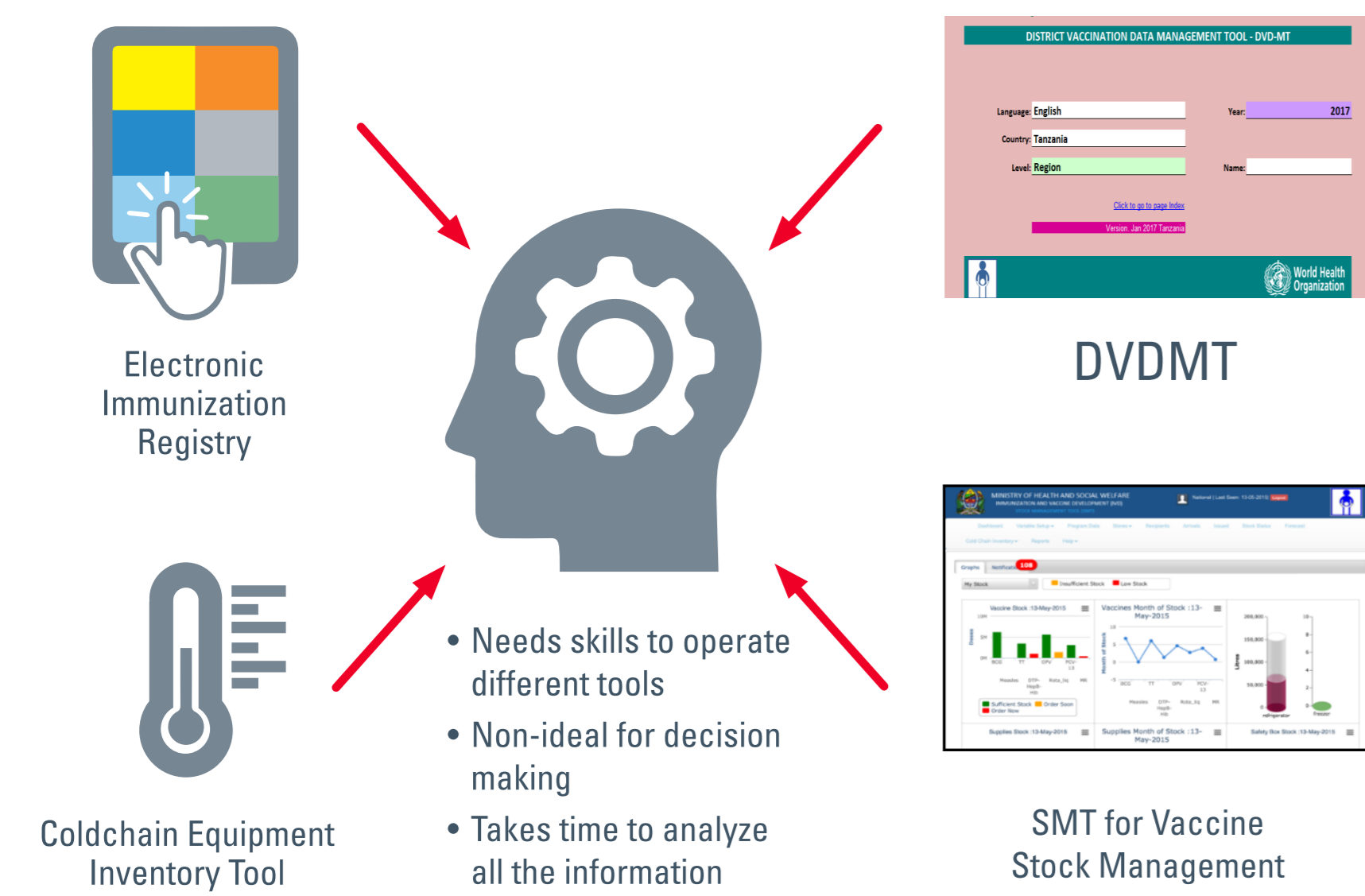
TANZANIA SYSTEMS PRIOR TO VIMS

ROUTINE IMMUNIZATION THROUGH DVDMT

Multiple spreadsheets consolidated at each level and emailed again for national reporting.

- Burden of reporting
- Chances errors being introduced at each level
- Delayed reports at national level

INNOVATIVE SYSTEMS THAT OPERATE IN SILOS

Electronic Immunization Registry

DVDMT

Coldchain Equipment Inventory Tool

- Needs skills to operate different tools
- Non-ideal for decision making
- Takes time to analyze all the information

SMT for Vaccine Stock Management

PROJECT SUMMARY

VIMS Structure

Under the leadership of the Tanzania Ministry of Health, Community Development, Gender, Elderly, and Children (MOHCDGEC) – Immunization and Vaccine Development program, VIMS is supported by funding from the US Agency for International Development, the Bill & Melinda Gates Foundation, and Gavi with the Clinton Health Access Initiative, JSI – through inSupply and the Maternal and Child Survival Program, PATH, and VillageReach providing technical assistance.

Problem Statement

- While Tanzania immunization rates remain high, the immunization program still face some critical challenges limiting efficiency and effectiveness of managing the program. To address the challenges and ultimately improve program performance, Immunization program in partnership with implementing partners developed and implemented VIMS.

Project Goals

VIMS interventions aim to:
- Integrate tools and triangulate data currently captured in different tools for better decision making.
- Improve immunization data quality and availability.
- Increase data use and decision skills at all levels of health system.
- Improve vaccine supply and distribution system accurately forecast vaccine requirements, and
- Prevent equipment break-downs without compromising immunization performance.

TANZANIA VIMS

- Faster, easier, and more accurate data
- CCE, routine immunization and stock information available in one platform
- Better decision making at all levels
- Reduced Stockouts
- Better health outcomes

MAJOR ACTIVITIES

VIMS Pre-test

Initial development product was based on project scope and routine immunization, CCE and in country supply chain processes, roles, and permissions.

The new system was designed to bring together the stand alone data sources and information systems which included VIMS design also looked at improved business processes like removal of data entry role for Regional Immunization and Vaccine Officers (RIVOs), allowing them to focus on program performance.

VIMS was pretested in 7 regions with a health facility level electronic immunization registry (EIR) component being piloted in one region.

AVERAGE REPORTING RATES BY REGION

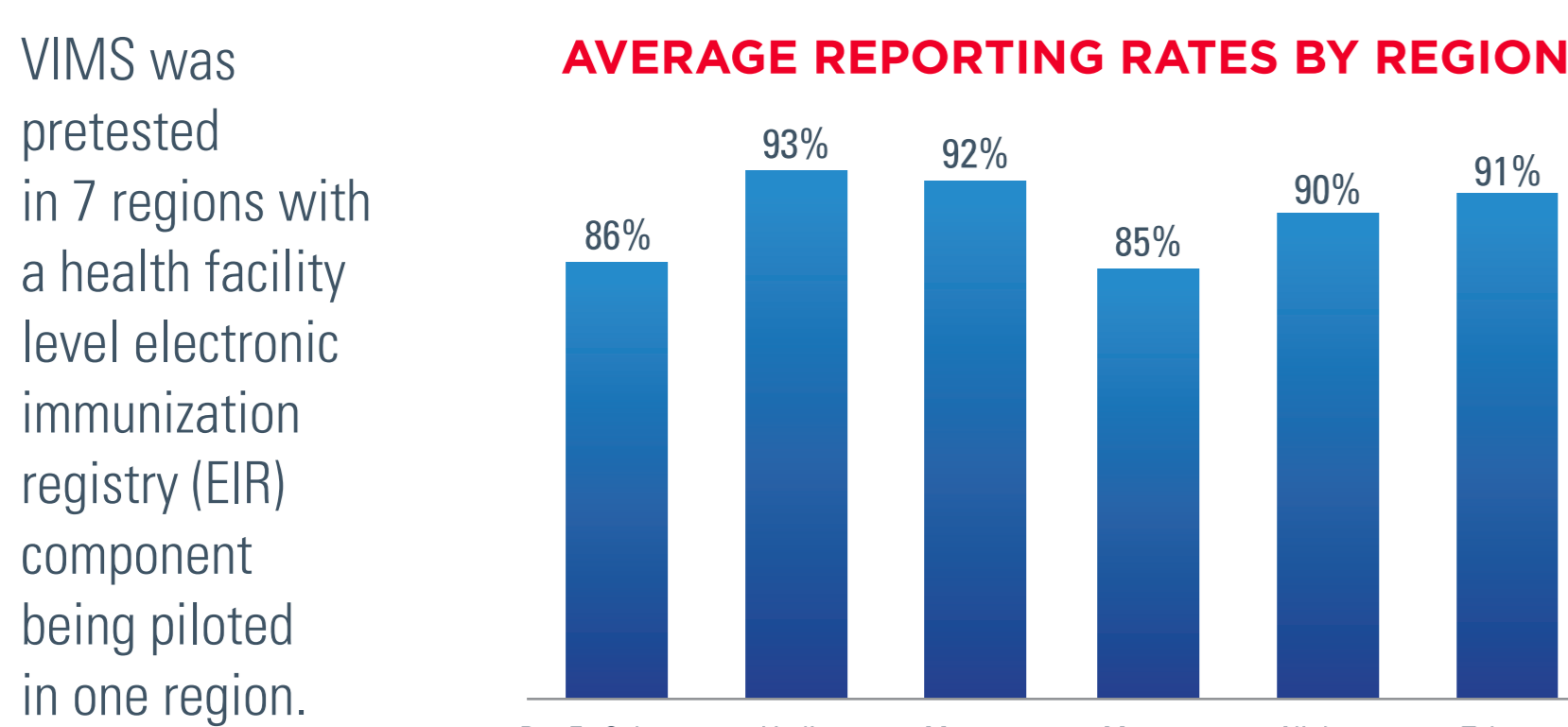| Region	Rate
Dar Es Salaam	86%
Lindi	93%
Mtwara	92%
Mwanza	85%
Njobe	90%
Tabora	91%

Monitoring Performance and System Use

The VIMS support team selected and used a set of indicators to track system use and plan target support though remote assistance and supportive supervision visits.

This helped to identify and remove barriers. E.g. training of assistant district immunization officers to assist with data entry in poorly performing districts.

TRACKING MANAGEMENT OF STOCK IN VIMS

Facility	User Name	Start Date	Stock Events Recorded
Ilala DVS	Michael Victor Ngowi	Tuesday, February 28, 2017 6:09 PM	4,144
Arusha City DVS	Allan Rushokana	Tuesday, September 6, 2016 2:53 PM	3,199
Wanging'ombe DVS	Abdul Mwasumbi	Thursday, September 15, 2016 7:12 PM	2,883
Ilemela DVS	Esther Kimori	Friday, September 23, 2016 10:45 AM	2,621
Misungwi DVS	Anatory B Bulahya	Thursday, October 27, 2016 2:42 PM	2,559
Sengerema DVS	Willbard Muyumbu	Friday, October 7, 2016 11:18 AM	2,483
Njombe TC DVS	Simon M Ngassa	Monday, October 17, 2016 7:57 AM	2,373
Buchosa DVS	Eva Marko Malima	Friday, October 7, 2016 10:50 AM	2,234
Arusha DC DVS	Muruta Kiboko	Tuesday, February 7, 2017 7:16 PM	1,936

System Enhancement-based Users' Feedback

Users responded positively to VIMS attributes related to data management.

100% of users surveyed agreed that VIMS can easily forecast vaccine stockouts, helps to avoid overstock or understock, and prevents them as users from submitting incomplete reports.
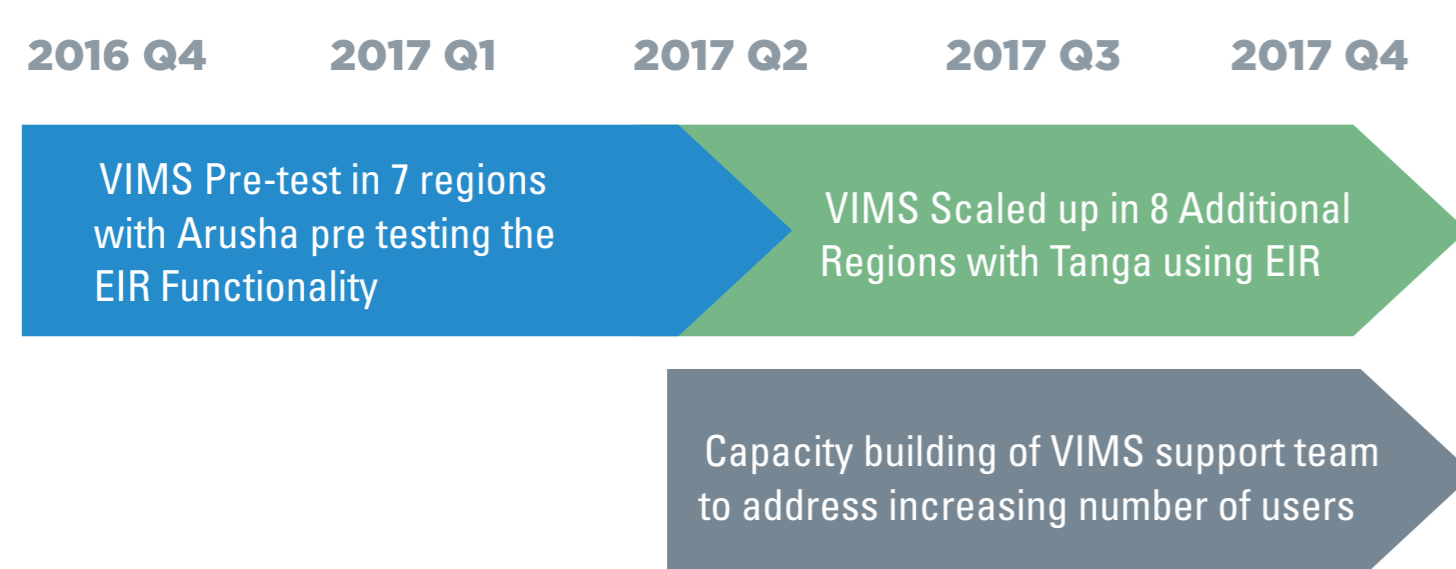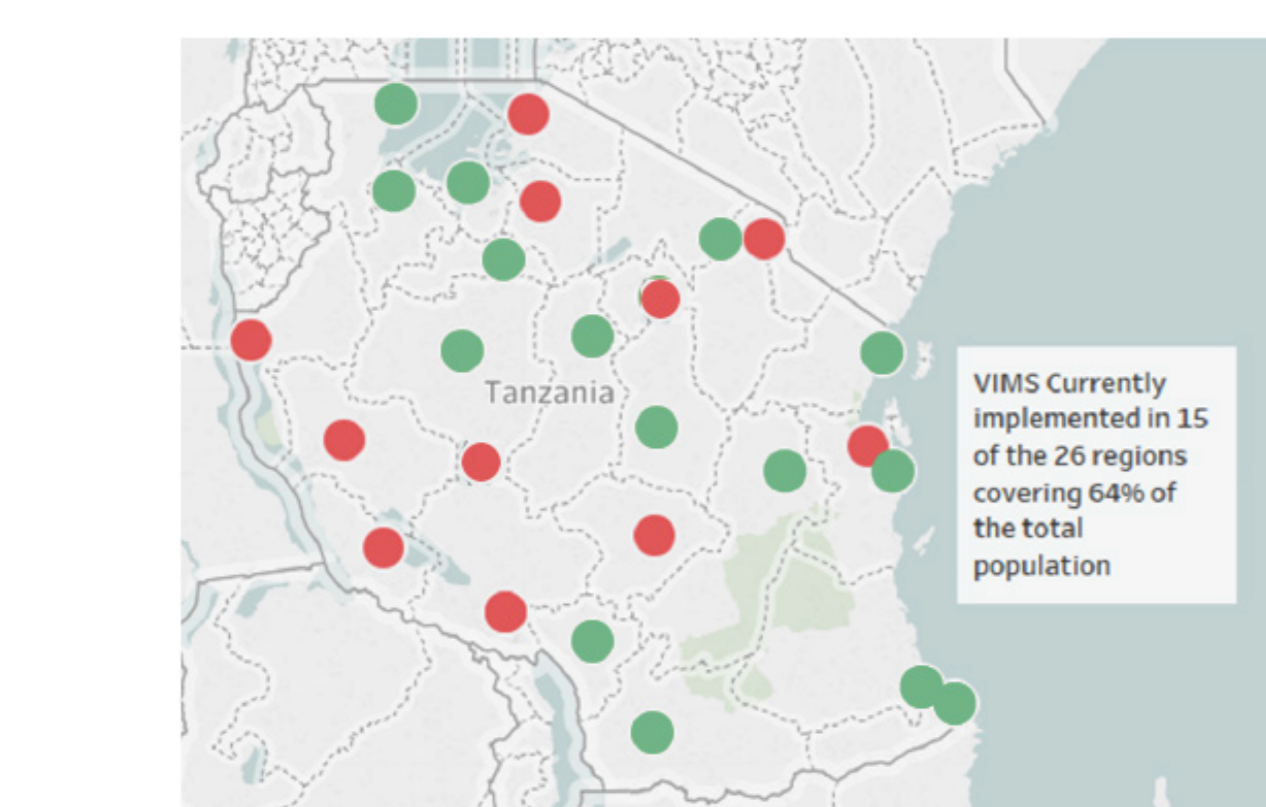
VIMS IMPLEMENTATION

VIMS IMPLEMENTATION PROGRESS

2016 Q4   2017 Q1   2017 Q2   2017 Q3   2017 Q4

- VIMS Pre-test in 7 regions with Arusha pre testing the EIR Functionality
- VIMS Scaled up in 8 Additional Regions with Tanga using EIR
- Capacity building of VIMS support team to address increasing number of users

VIMS Currently implemented in 15 of the 26 regions covering 64% of the total population

Tanzania

- VIMS rollout began in seven test regions with eight regions in the second rollout phase.
- Two regions are currently implementing the Electronic immunization registry at health facility level.
- The Tanzania Ministry of Health, Community Development, Gender, Elderly, and Children plans to support national scale up in conjunction with other partner funding.
- At least 200 staff have been trained in more than 100 Councils.
- More than 4000 CCE registered in VIMS with known, location and functionality status.
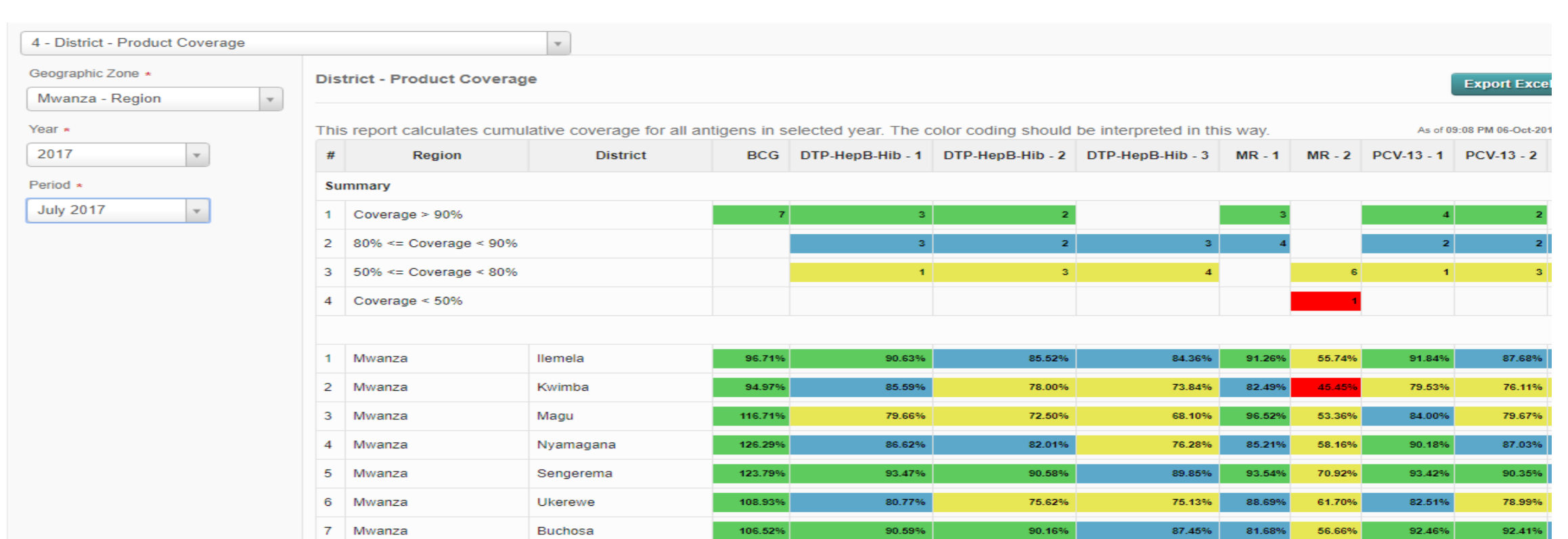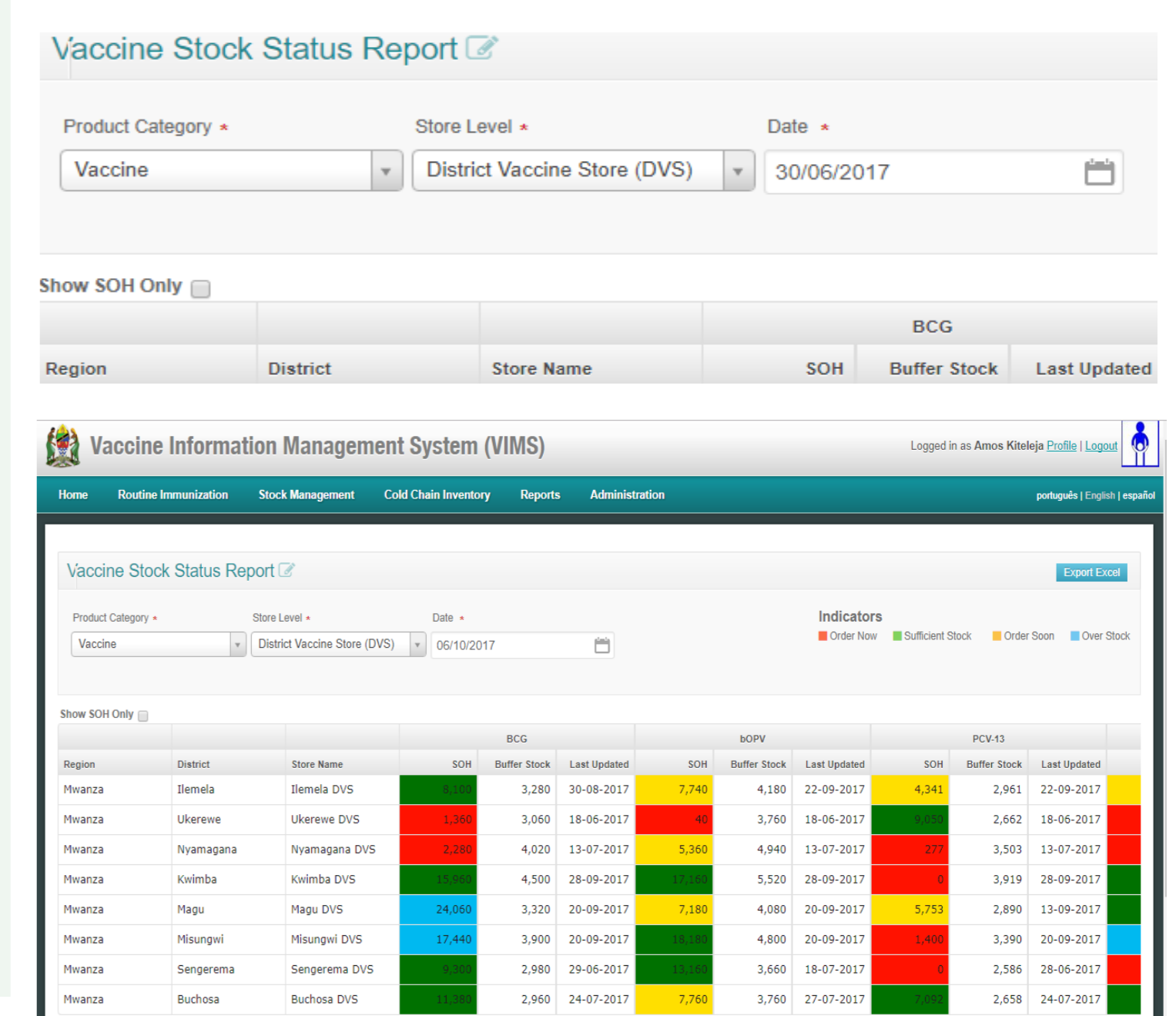
RESULTS

IMPROVED DATA VISIBILITY FOR DECISION MAKING

Data entered by a nurse using EIR or DIVO using VIMS at District level is instantly available to all levels for decision making

Immunization and Vaccine Officers have real time stock visibility and CCE functionality of supervised vaccine stores.

VIMS has improved program performance as seen in a 10% vaccine stock availability at service delivery points can be seen from January to June 2017.

Color coding of reports and dashboards gives users greater ease of data visualization and interpretation when analyzing system performance.

PLANNED SYSTEM ENHANCEMENTS

Based on feedback from the MOHCDGEC and IVD the following enhancements are planned

- Integration with the broad TZ-eLMIS (December 2017)
- Integration with DHIS2 (March 2018)
- Integration of the new remote temperature monitoring project (2018)
- VIMS scale up in remaining 11 Regions (Timing based on availability of Funds)
- EIR will be in 588 more health facilities by December 2017 for Kilimanjaro and Dodoma.

FUTURE PRIORITIES

VIMS evaluations and system analyses have revealed the importance of human capacity in the data entry and collection processes. Users must have high data literacy in order to achieve the greatest gains from VIMS in terms of time use, data visibility and access, and data triangulation.

Our ongoing support will continue to improve capacity and introduce new system features to ease and improve overall data use and knowledge.

FOR MORE INFORMATION, CONTACT:

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