OpenLMIS Webinar Series: Vaccine Module Update

November 30 2017

Presenters

Tenly Snow - *facilitator*, *presenter*

OpenLMIS Community Manager

Mary Jo Kochendorfer - *presenter*

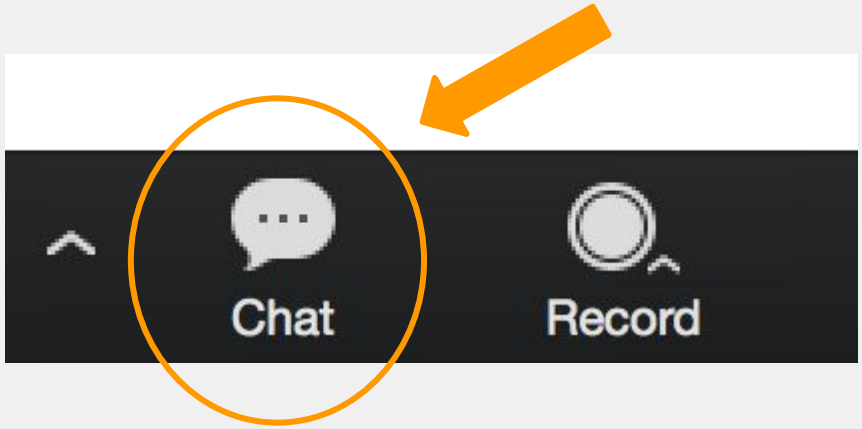
OpenLMIS Product Manager

Rachel Powers - *presenter*

Associate, Information Systems Group

Webinar Logistics

- Please remain on mute throughout the webinar
- Ask questions using the “Chat” function at the bottom of the screen



- Questions will be read aloud by the facilitator during the Q&A pauses and will be answered by the presenters
- Any additional questions that are not answered during the presentation may be sent to info@openlmis.org

Agenda

1. **Introduction to OpenLMIS**
2. **Recap of project scope**
3. **New developments**
   a. Integration with mobile health platform (OpenSRP)
   b. Reporting
4. **Showcase completed features**
   a. Cold Chain Equipment features
   b. Ideal Stock Amount for estimation
5. **Status on MVP features**
   a. Overall Update
   b. Resupply (creating an order, fulfilling an order, planning a distribution, managing the POD)
   c. Stock Management
6. **Closing Remarks**

This presentation and recording will be available on the OpenLMIS wiki and YouTube Channel

OpenLMIS

Introduction

What is OpenLMIS?

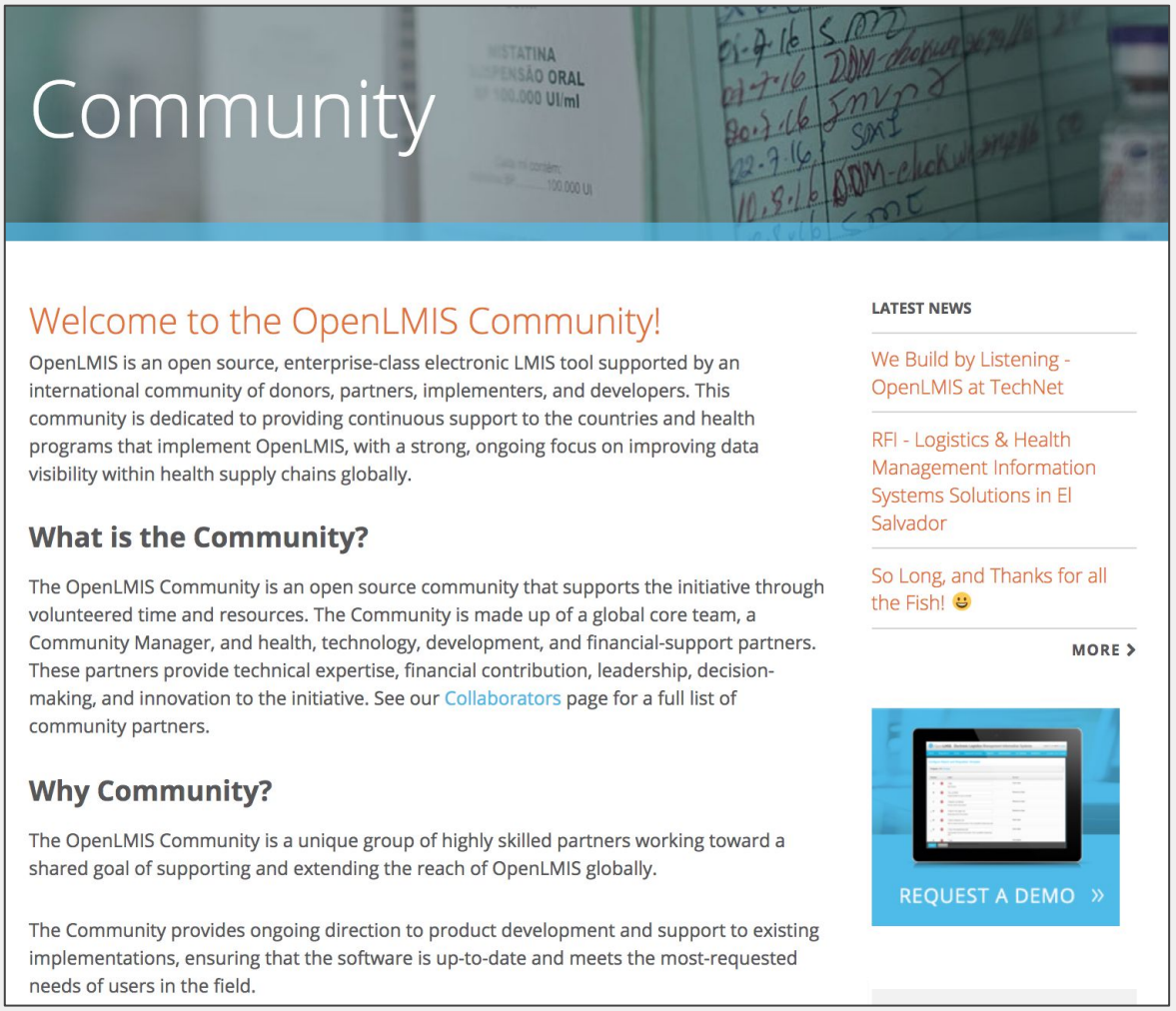
What is OpenLMIS?

OpenLMIS is an open source, cloud-based, enterprise class electronic logistics management information system (LMIS) purpose-built to manage health commodity supply chains

The OpenLMIS Community

The OpenLMIS initiative incorporates a community-focused approach to develop open source and customizable LMIS systems

- ➔ The Community sets standards, actively supports implementations, and continually reviews the product roadmap in order to provide global leadership
- ➔ OpenLMIS Product Committee meets 2x per month to discuss and review software development



Features and Functionality

Requisitions and Ordering

- ➔ Create, authorize, approve report and requisitions, both regular, based on configured processing periods, and emergency.
- ➔ Supports offline data capture on key screens.
- ➔ Executes complex and configurable approval hierarchies.
- ➔ Calculates order amounts based on average consumption and max policies.
- ➔ Complex data validations to support quality data capture.
- ➔ Generate orders for external fulfillment based on approved requisitions.

Setup and Customization

- ➔ Manage system users, role assignments, programs, facilities, orderables and associations with bulk uploads and administrative screens.
- ➔ Configure the system to match your processing and reorder periods, policies and facility hierarchy.

Stock Management

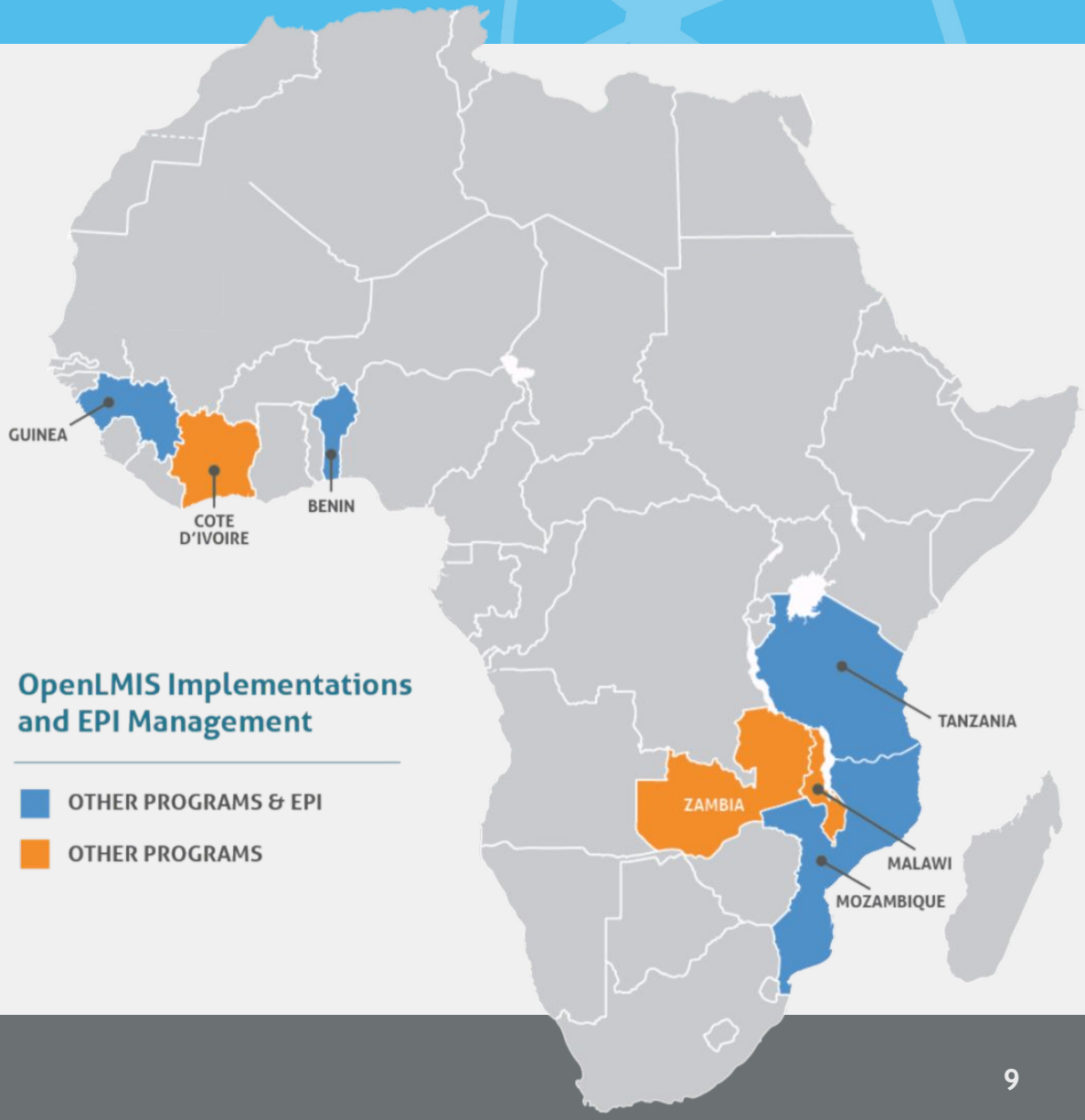
- ➔ Record transactions and view electronic stock cards (supports lot info)
- ➔ Perform physical inventory & adjustments
- ➔ Track ins/outs of stock – send and receive stock

Where does OpenLMIS Manage Vaccines?

OpenLMIS manages logistics data for over 10,000 health facilities across 7 geographies

OpenLMIS manages EPI data in 4 geographies across Africa

In Mozambique, OpenLMIS manages EPI data for 830 service delivery points, reaching over 13.8 million people



Why is OpenLMIS Building the Vaccine Module?

No digitized data, no management

Without a reliable electronic system to **capture**, **aggregate**, and **disseminate** data, EPI programs struggle to manage evolving, expanding systems

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Recap of Project Scope

What we set out to do.

Community Process

Establish support

Gain buy-in from global stakeholders and funders

- Global stakeholders

Build upon existing efforts

Combine reqs from multiple existing systems, taking into account gaps and lessons learned

- Country systems
- Subject matter experts

Prioritize scope

Prioritize features and determine software development schedule

- Global stakeholders

Validate user needs

Work with end users to optimize user experience and ensure system supports workflows

- Country users
- Design workshop

Realize the tech vision

Build the software

Iterate on system

- Subject matter experts
- Country systems
- Country users

Prioritization in Copenhagen

27 attendees with representatives from

UNICEF, Gates, GAVI, PATH, CHAI, JSI, NexLeaf, VillageReach

Background and details on workshop and scope can be found on the public wiki.

Prototyping in Senegal

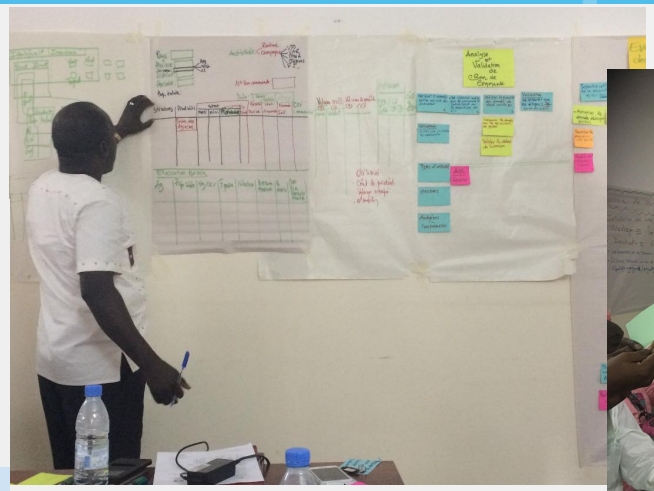
Focused on defining the workflows & data elements associated with resupplying vaccines

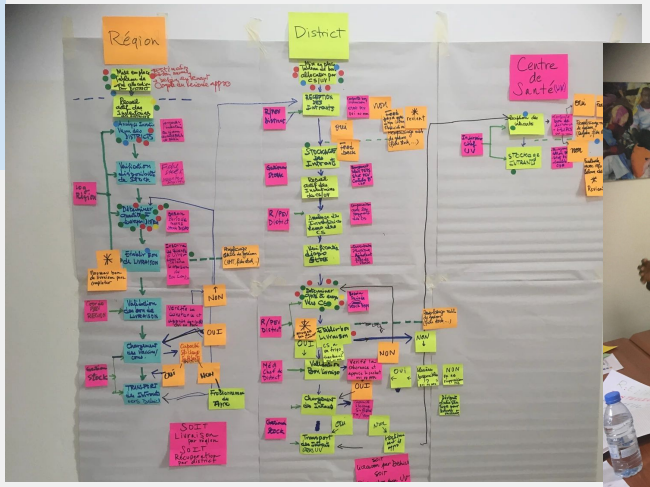
12 attendees from EPI programs in 5 countries

Bénin, Côte d'Ivoire, DRC, Guinea, Senegal

Workshop outcomes directly influence the design and development of the OpenLMIS vaccine module

Report on the workshop, here.





Vaccine Module MVP Scope

OpenLMIS version 3 and vaccine module

A long-term, solution supported by a community of financing and implementation partners

- ➔ Track stock amounts at multiple levels of the supply chain
- ➔ Manage the resupply of stock by fulfilling orders to supervised facilities
- ➔ Calculate reorder amounts calculated using ideal stock amounts
- ➔ Manage a centralized CCE catalog; Add and monitor CCE at specific facilities
- ➔ Reporting on DISC indicators

Estimated Release Date: March 30

Follow the living product roadmap for updates.

Requisitions & Allocations. Supports push, pull, and mixed supply chains and the processes required for each.

Forecasting. Update and input annual forecasted needs, at sub-national levels, to inform reorder and resupply quantities.

Stock Management. Captures inventory data and stock movements to provide an overview of full stock availability. Record vial wastage and VVM status.

Cold Chain Equipment. OpenLMIS captures cold chain equipment inventory, functional status, and temperature status.

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New Developments

Additional scope and partnerships.

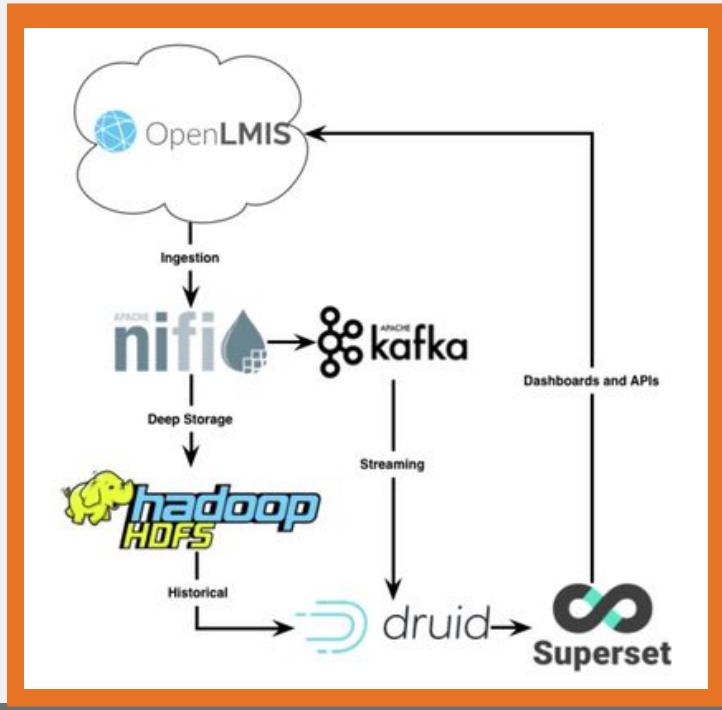
Data Warehousing and Reporting

Investing in open-source reporting infrastructure to support big data collection, ad-hoc analysis, and easy to use reporting tools.

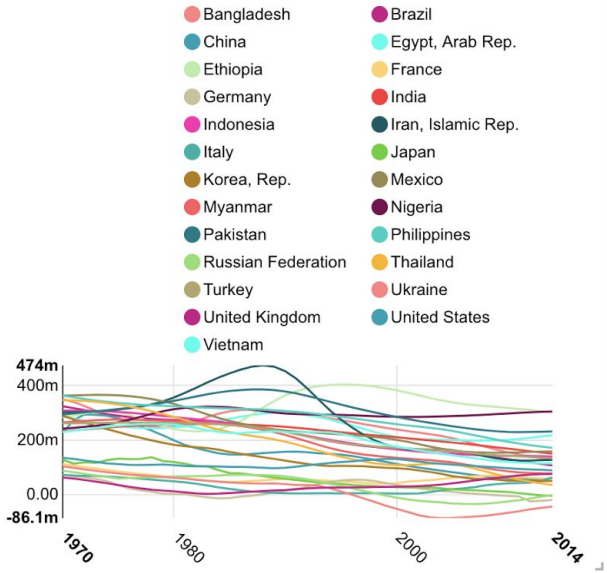
1. Data ingestion and coordination
2. Data processing and warehousing
3. High performance queries
4. Easy to use visualization

Ideally, other open source platforms can leverage this in the future and share the infrastructure to build out composite indicators across systems.

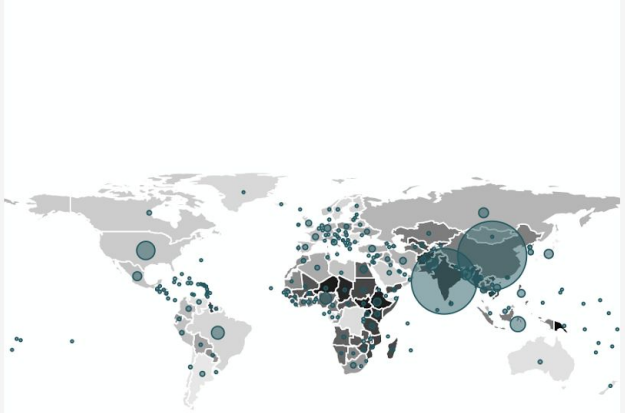
More Details: Reporting Wiki



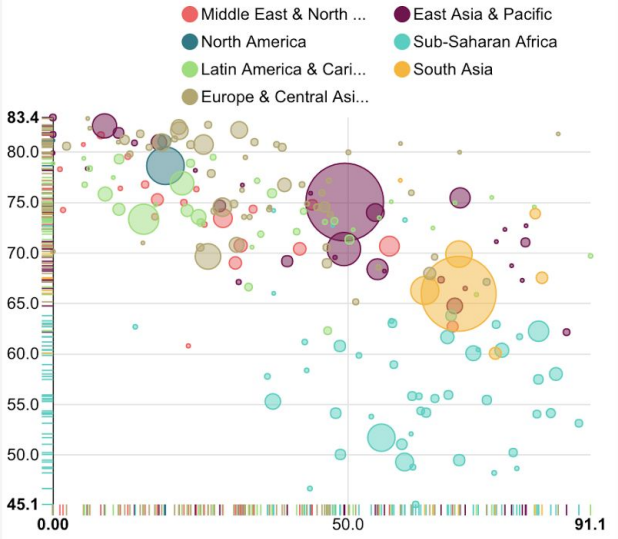
Growth Rate



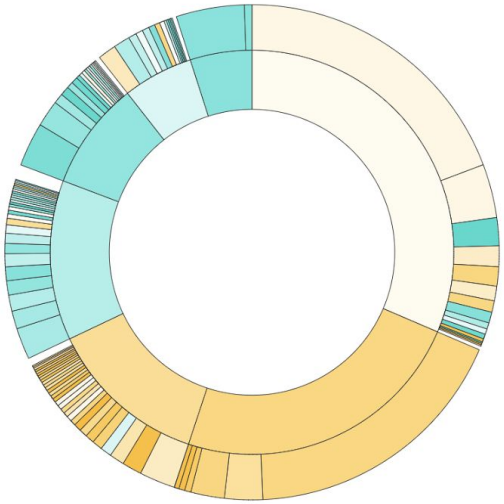
% Rural



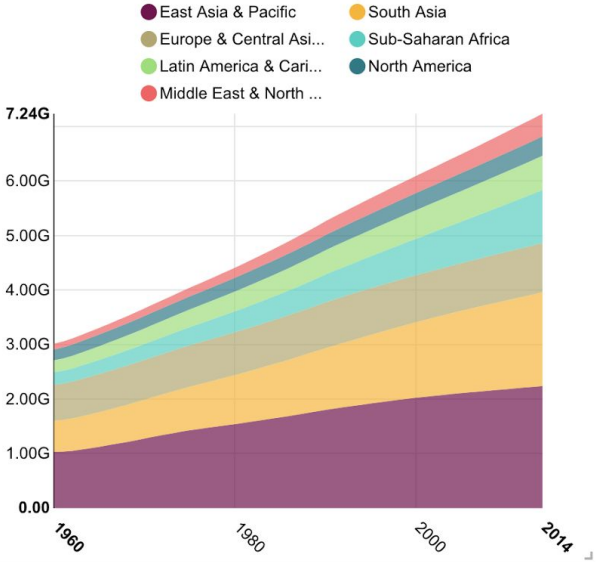
Life Expectancy VS Rural %



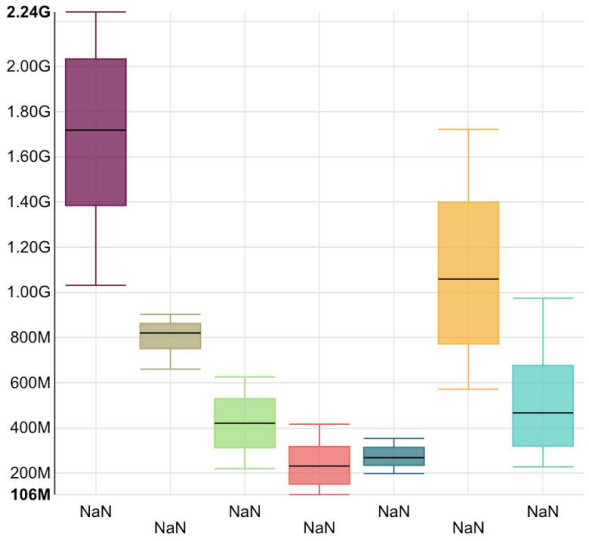
Rural Breakdown



World's Pop Growth



Box plot



Mobile Reference Implementation

Supply Chain Management

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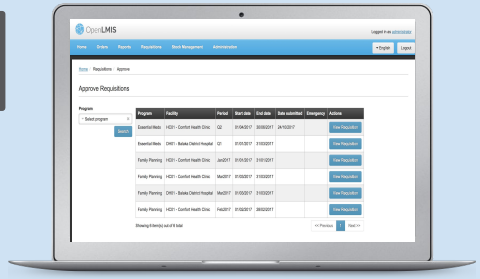
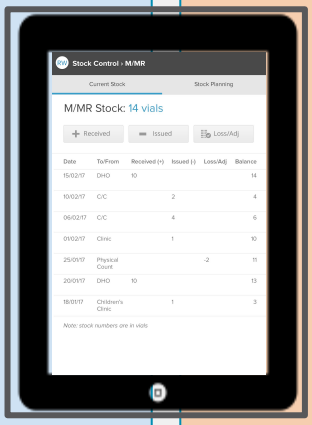
Regional, District,& high volume facilities



Exchange stocking information for ordering and shipment information

Health Service Delivery Management



Point of care, Facility level

OPENSRP

Q & A #1

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Showcase

Cold Chain Equipment Management
Forecasting & Estimation

Cold Chain Equipment

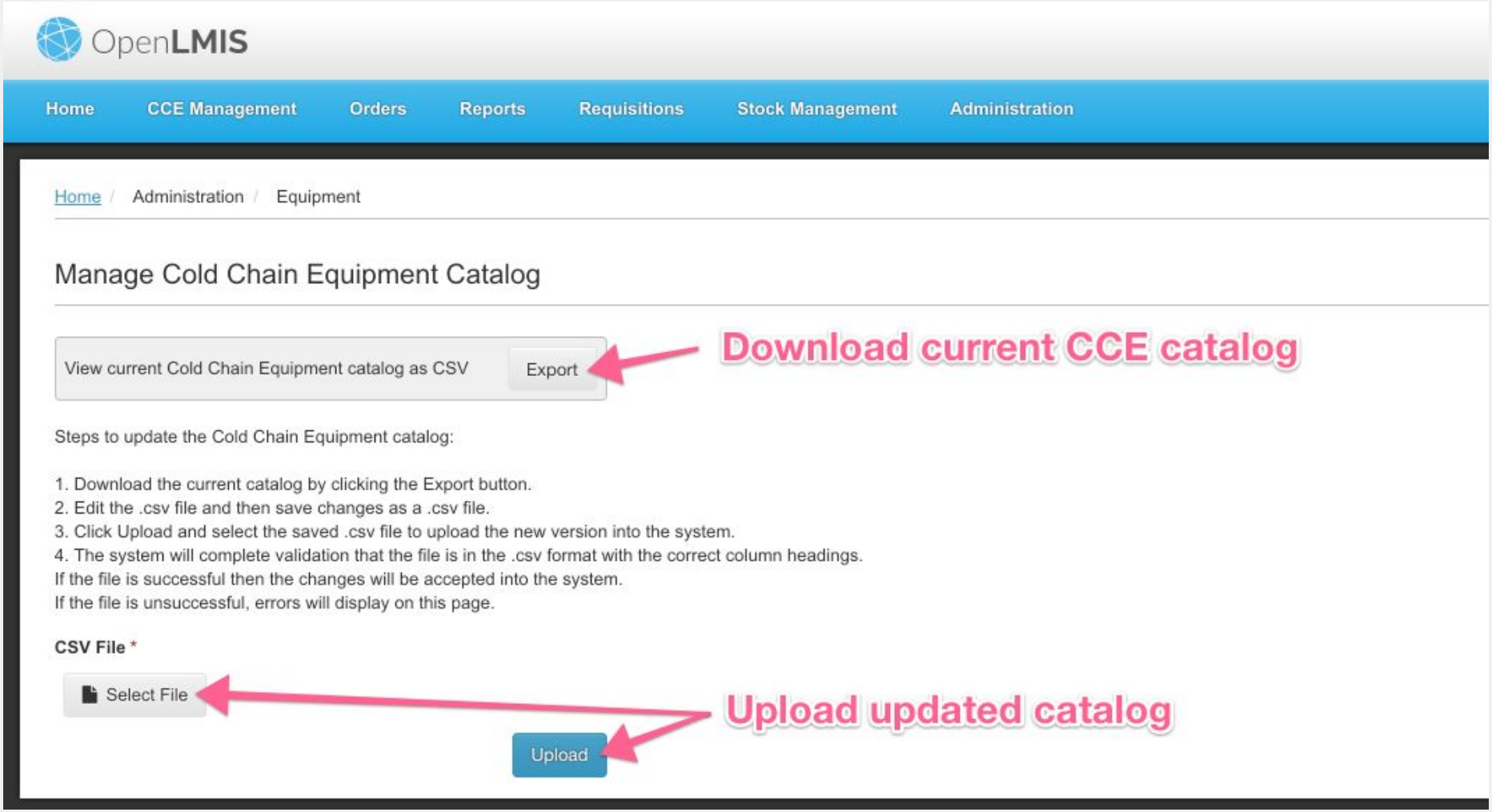
OpenLMIS

Cold Chain Equipment Management

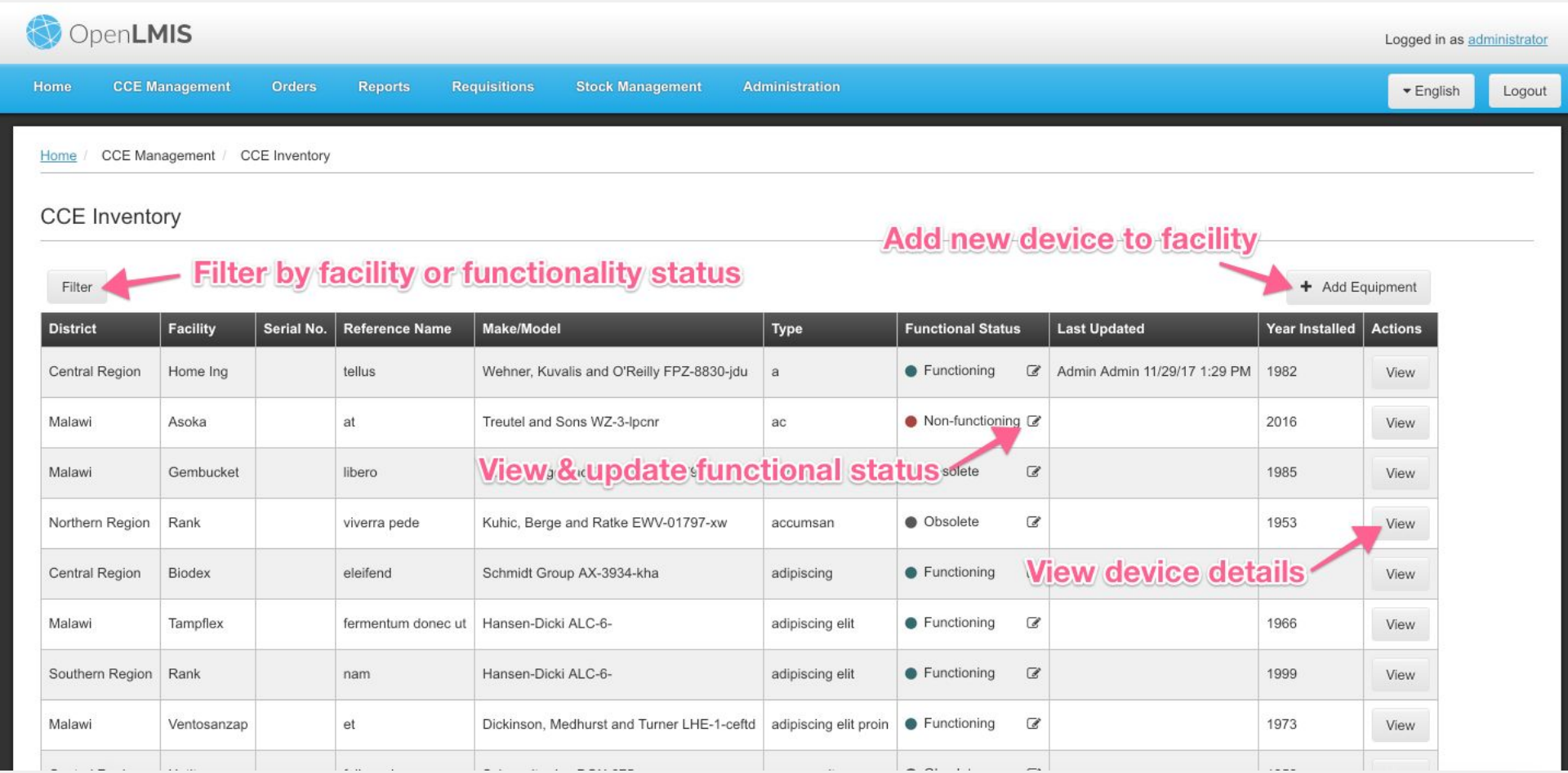
Key functionalities:

1. **Catalog:** Create & update CCE Catalog
2. **Inventory:** Create & update facility CCE inventory (including adding new devices)
3. **Functionality:** Update CCE functionality status
4. ***RTM**: Integrate with Remote Temperature Monitoring system(s)*

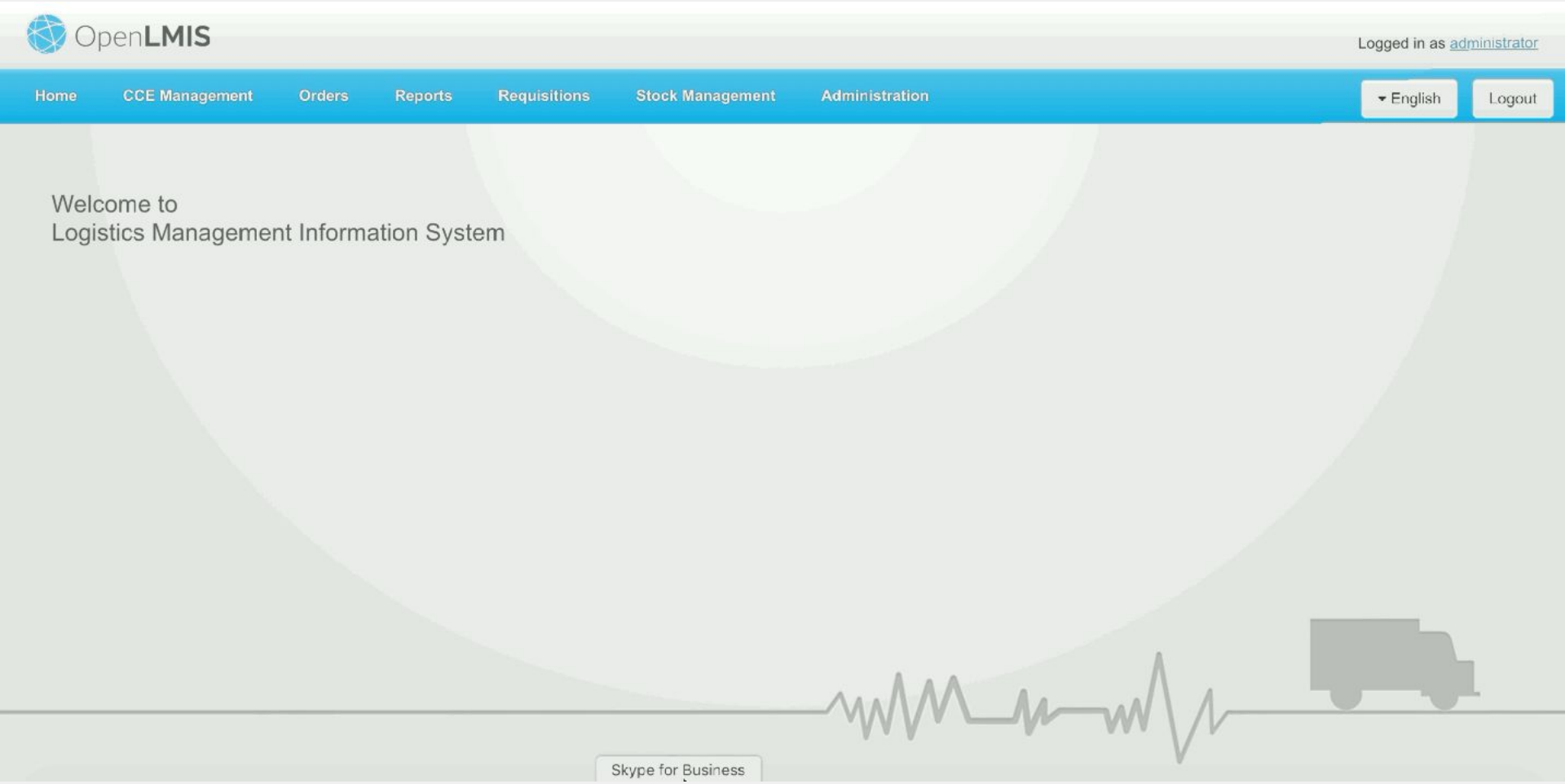
Create & Update CCE Catalog



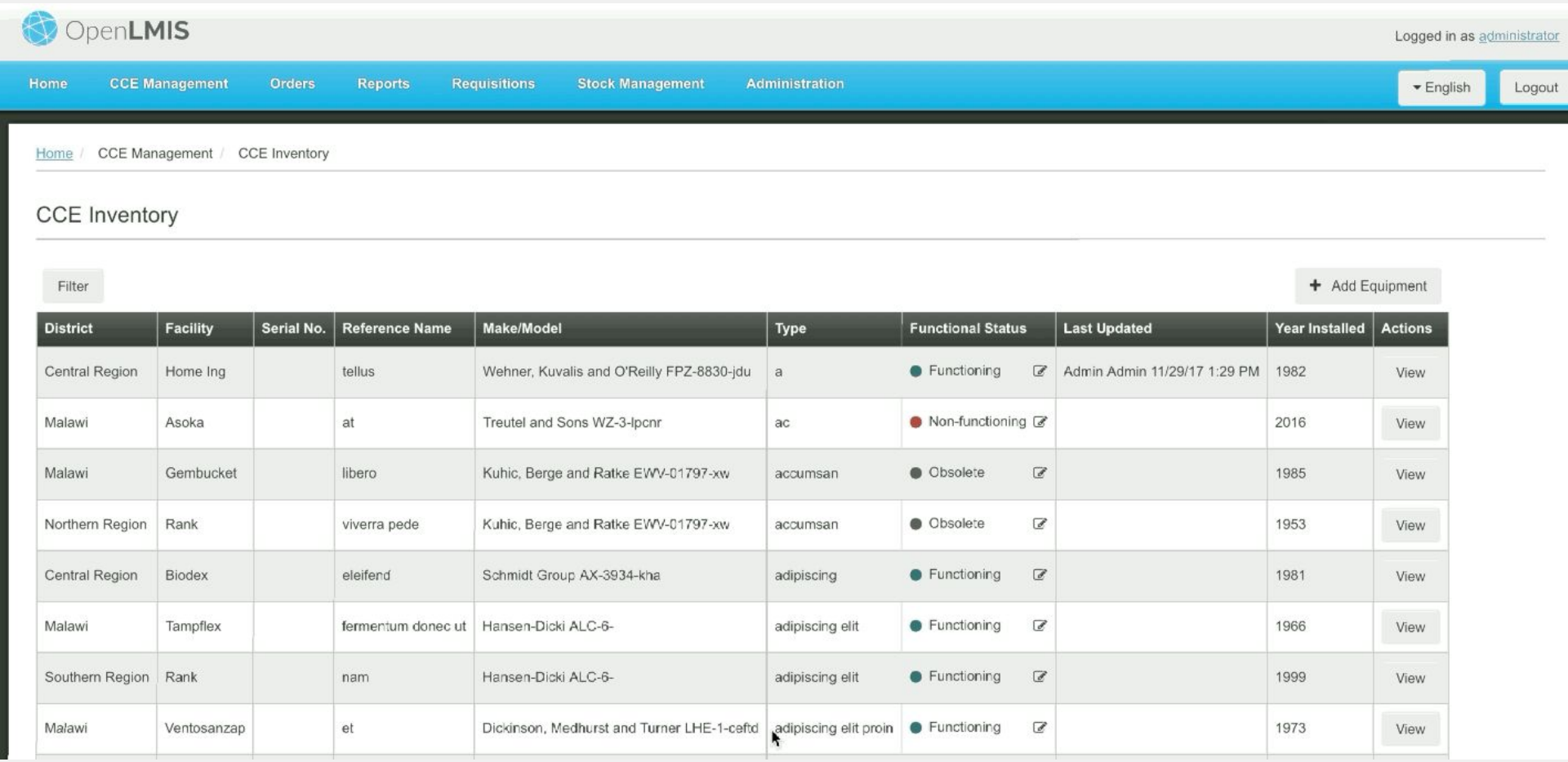
Manage CCE Inventory



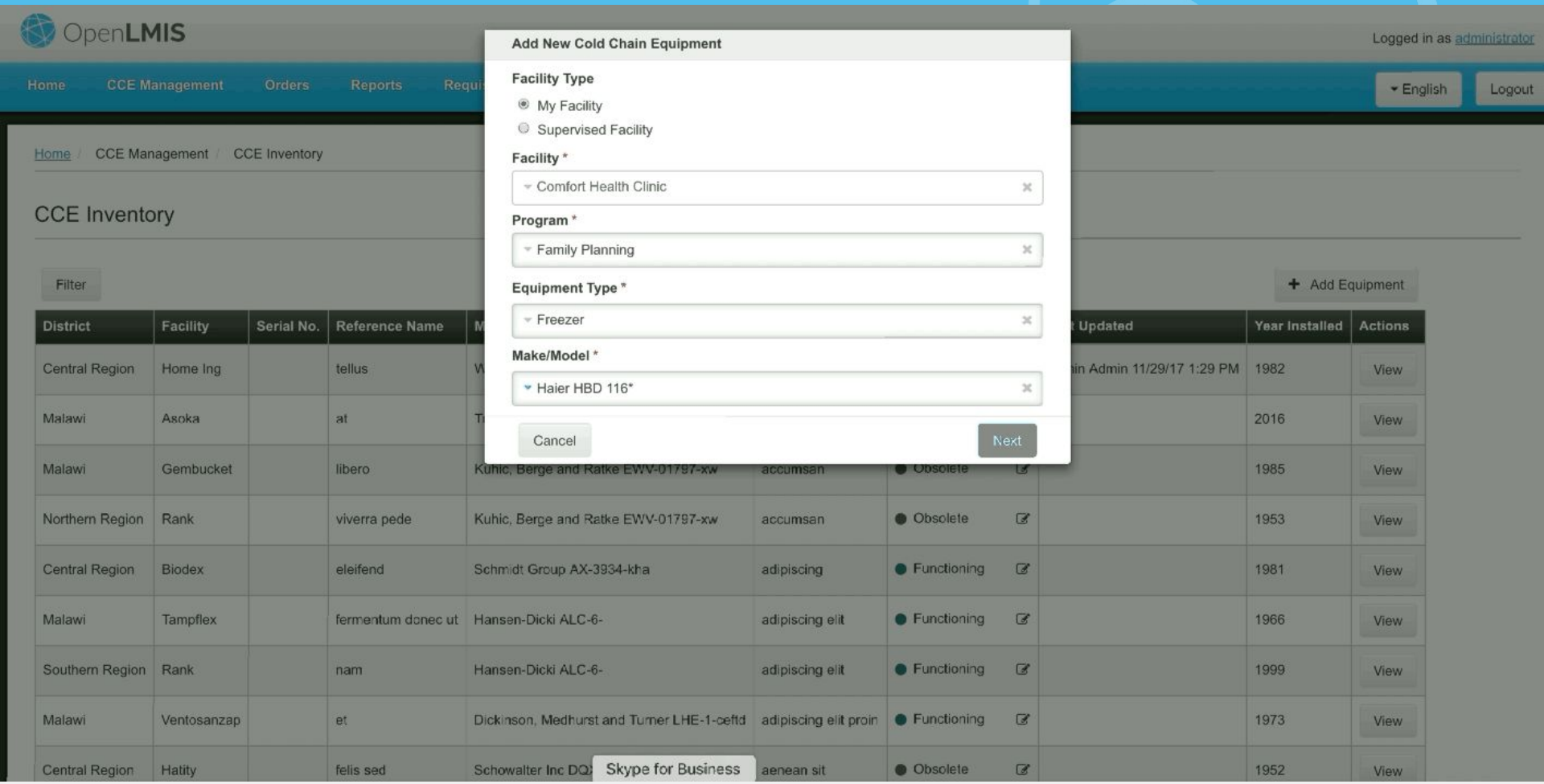
Manage CCE Inventory

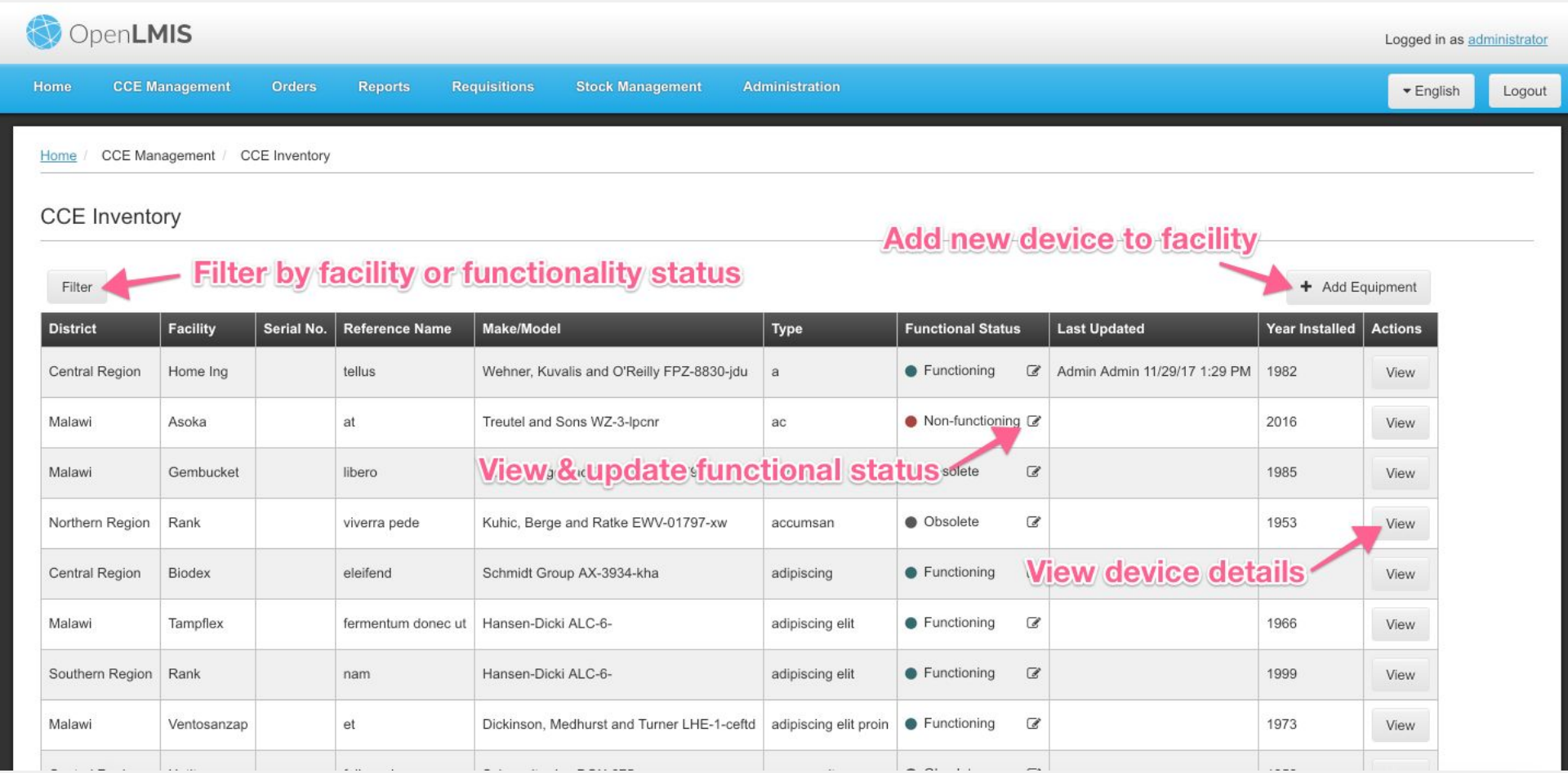


Add new device



Add new device




OpenLMIS
Logged in as administrator
Home
CCE Management
Orders
Reports
Requisitions
Stock Management
Administration
English
Logout
Home / CCE Management / CCE Inventory
CCE Inventory
Add new device to facility
Filter
Filter by facility or functionality status
+ Add Equipment
View & update functional status
View device details
District
Facility
Serial No.
Reference Name
Make/Model
Type
Functional Status
Last Updated
Year Installed
Actions
Central Region
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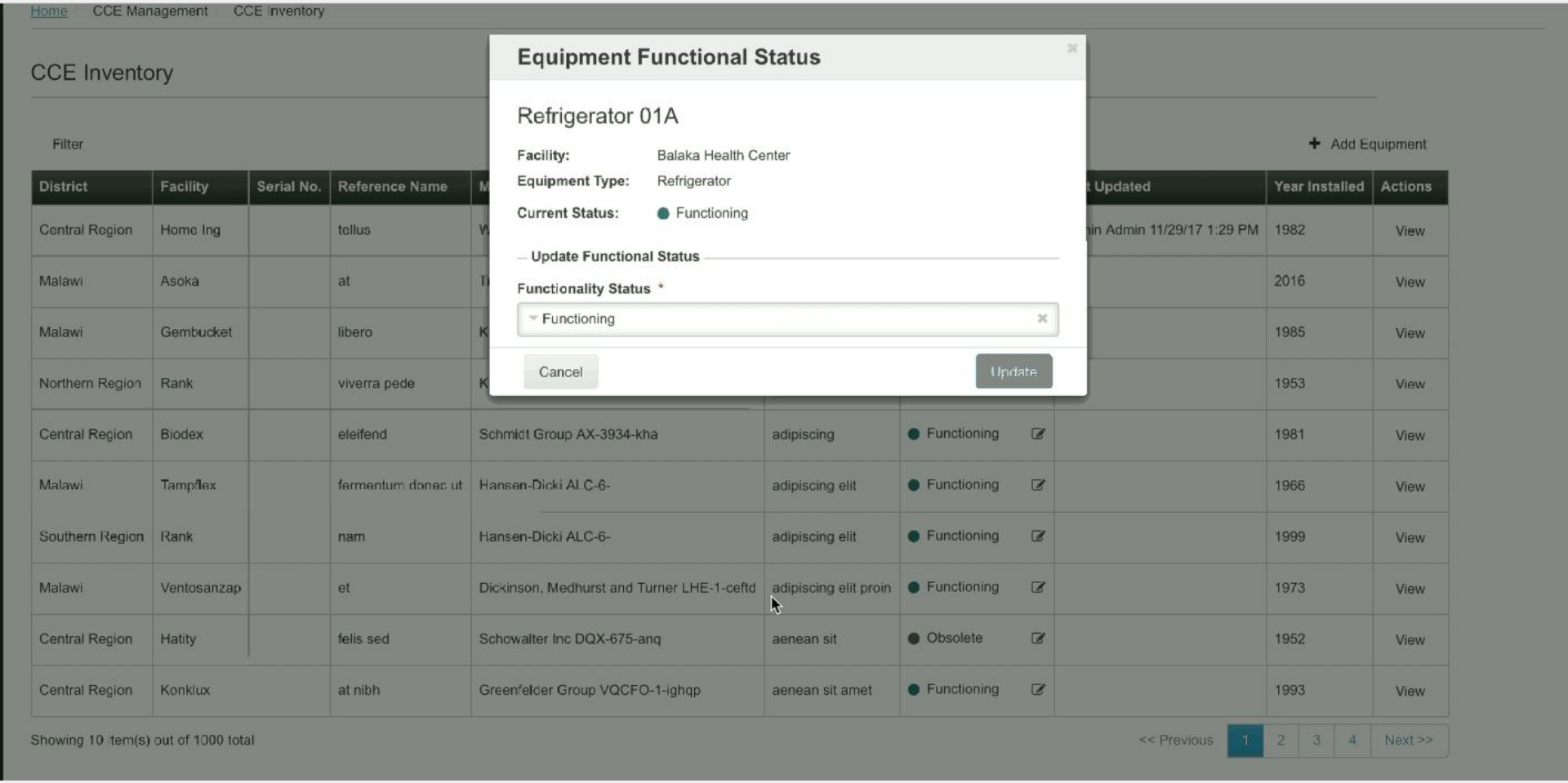
View

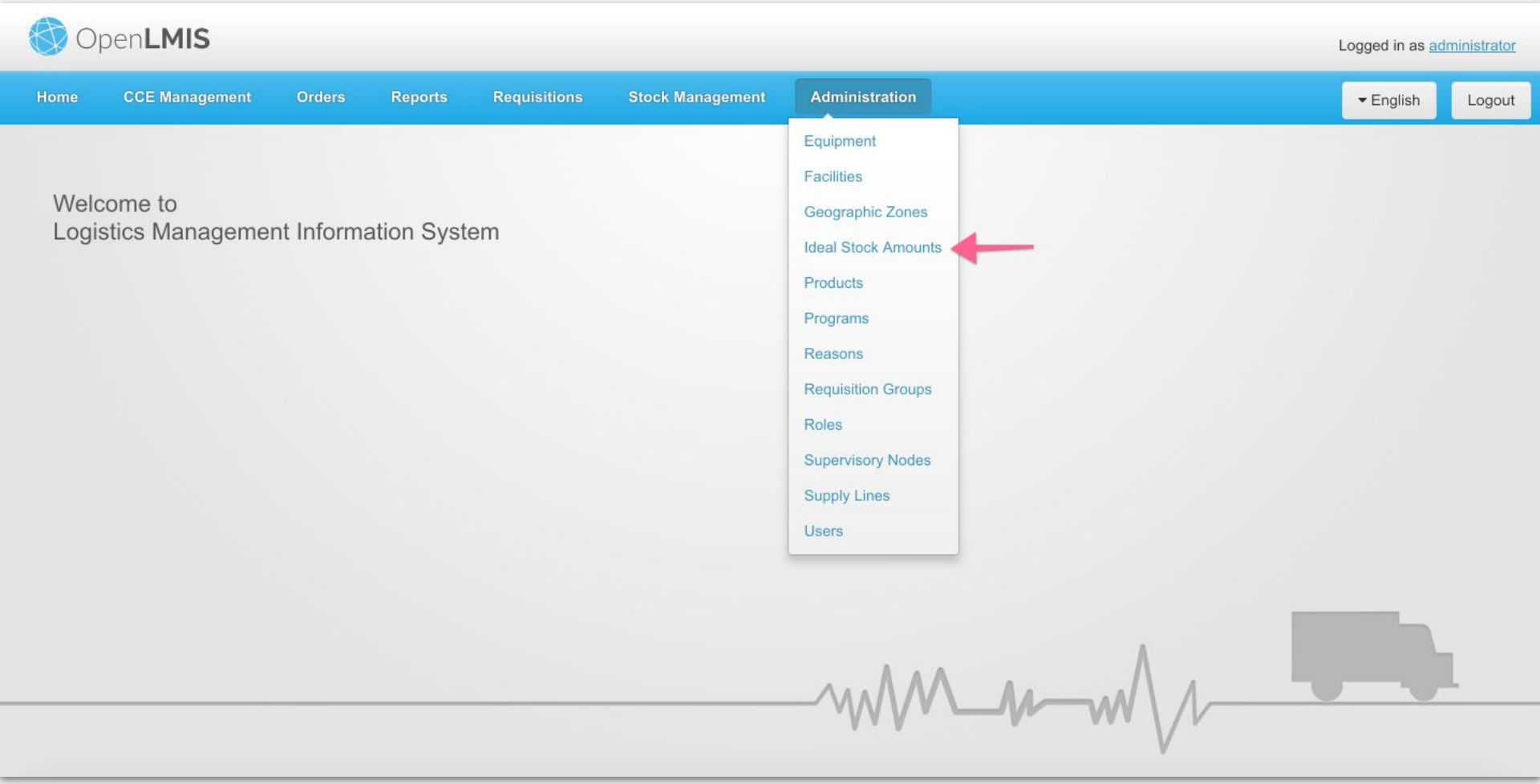
Update CCE Functionality



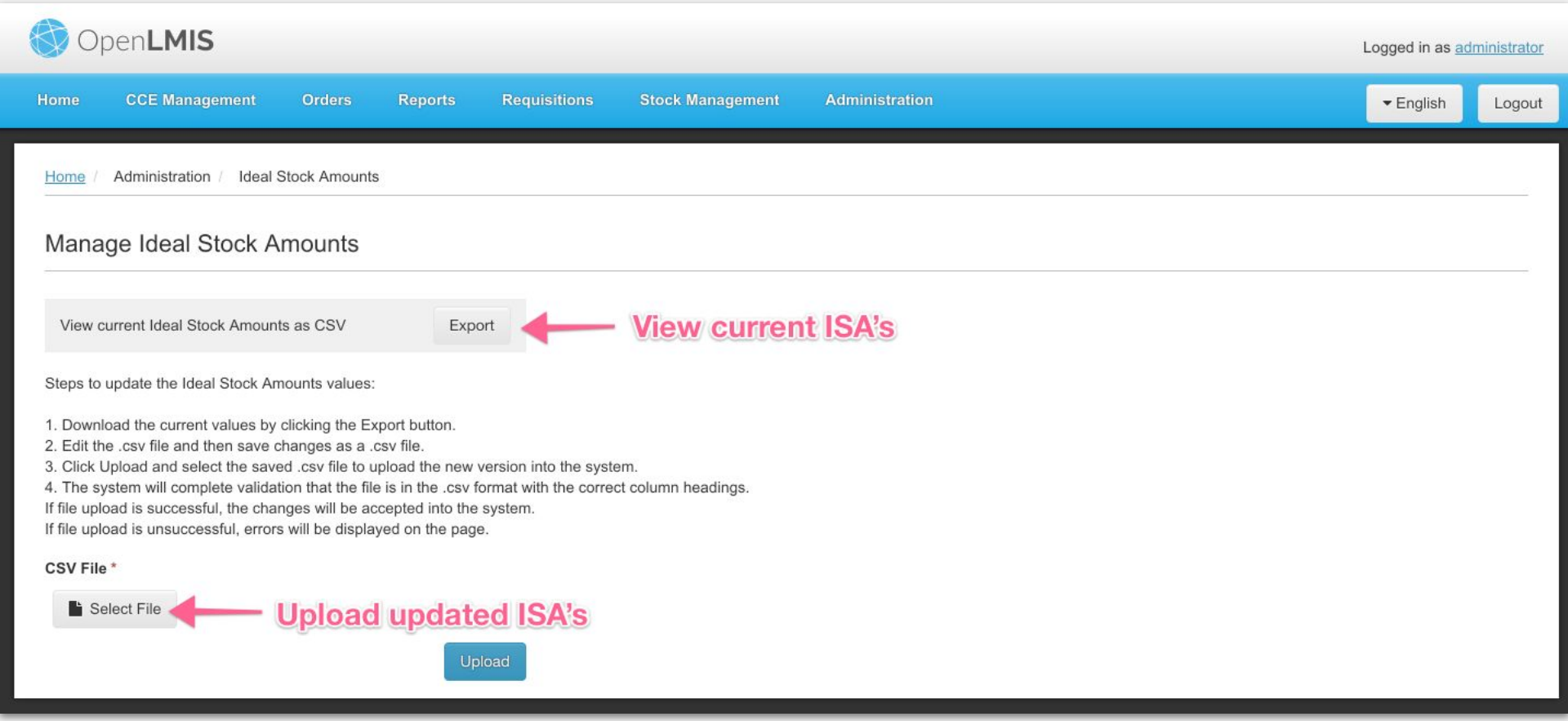
Ideal Stock Amounts

OpenLMIS

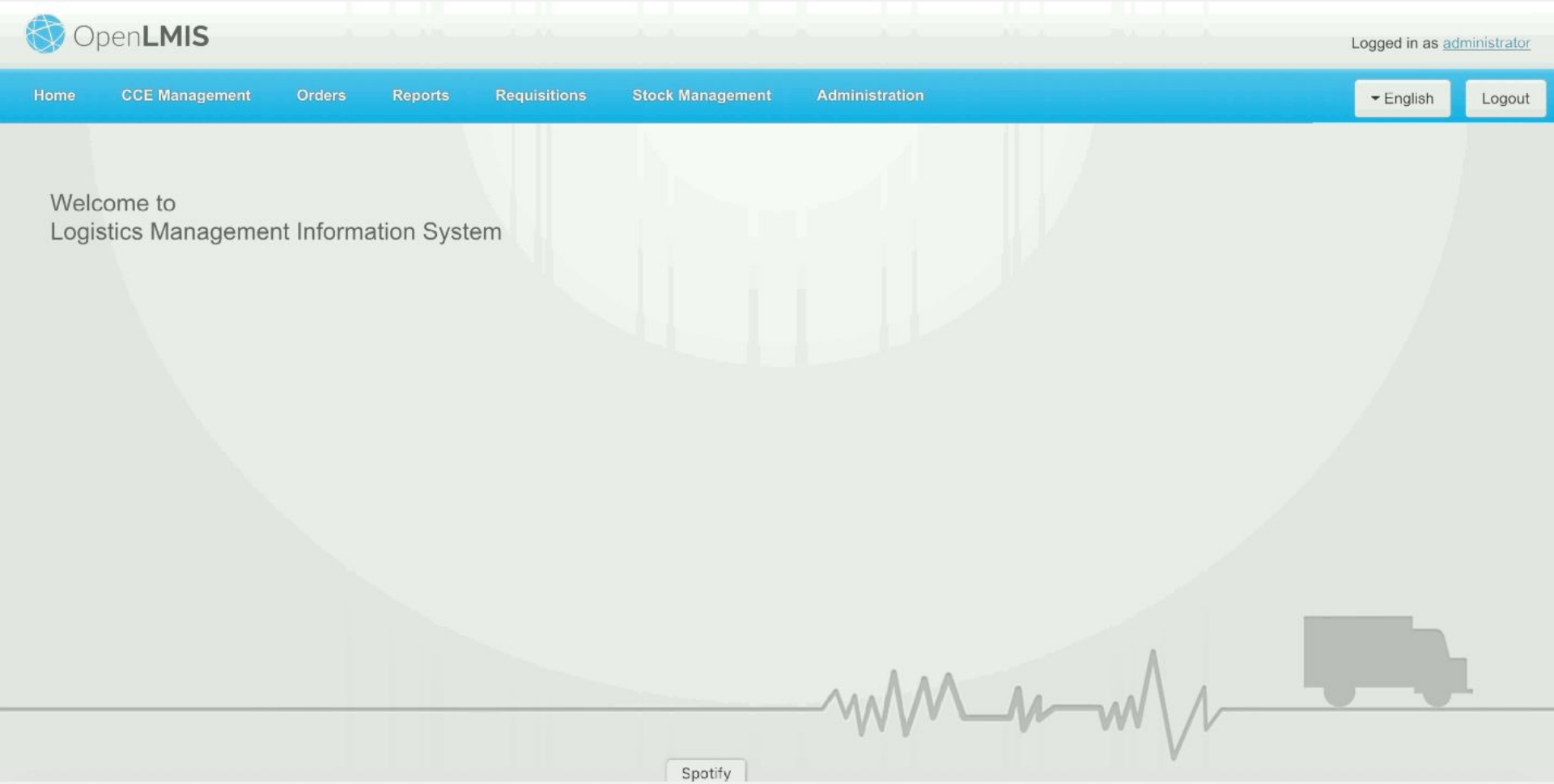
Ideal Stock Amounts

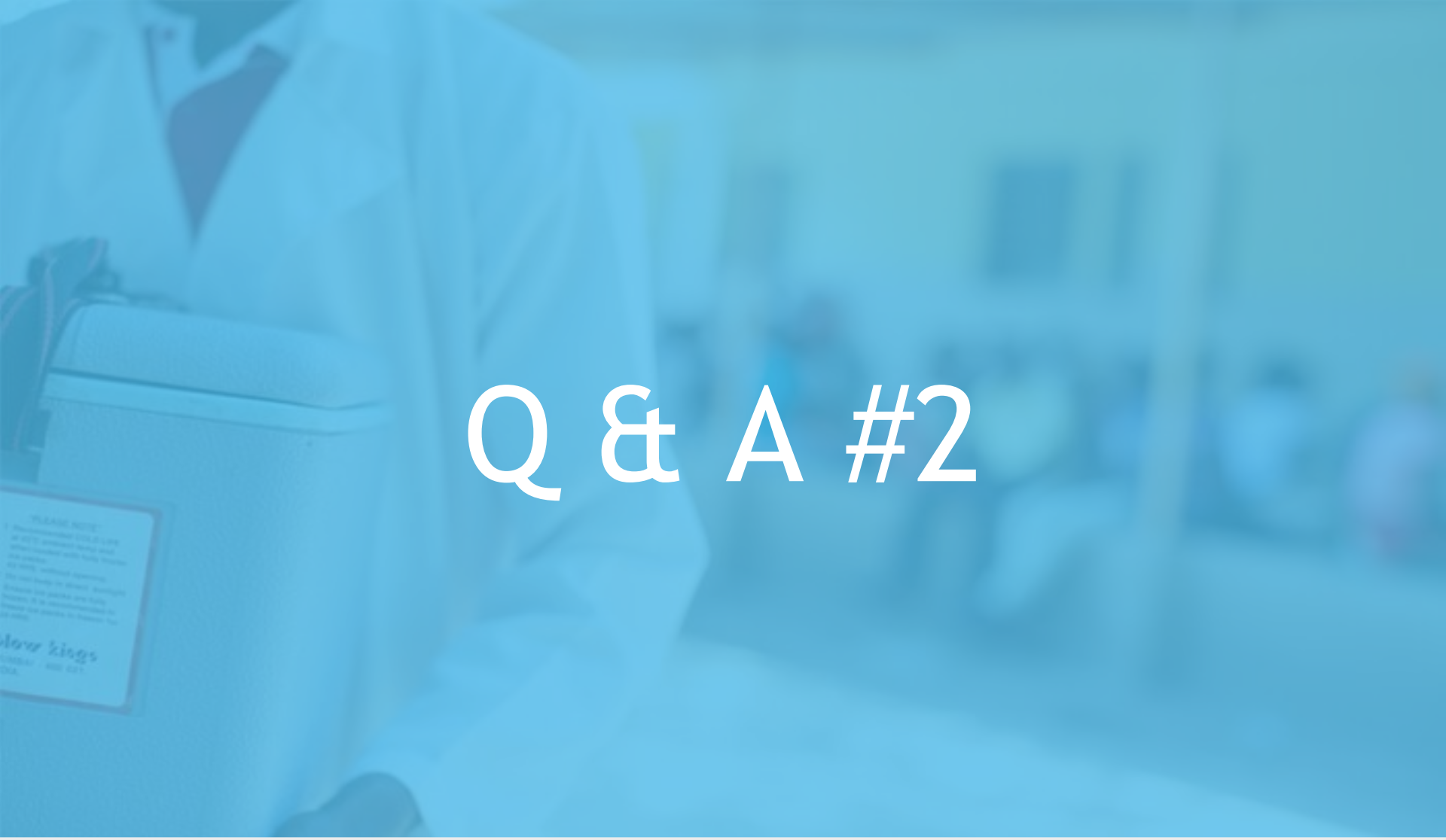


Ideal Stock Amounts



Ideal Stock Amount





Q & A #2

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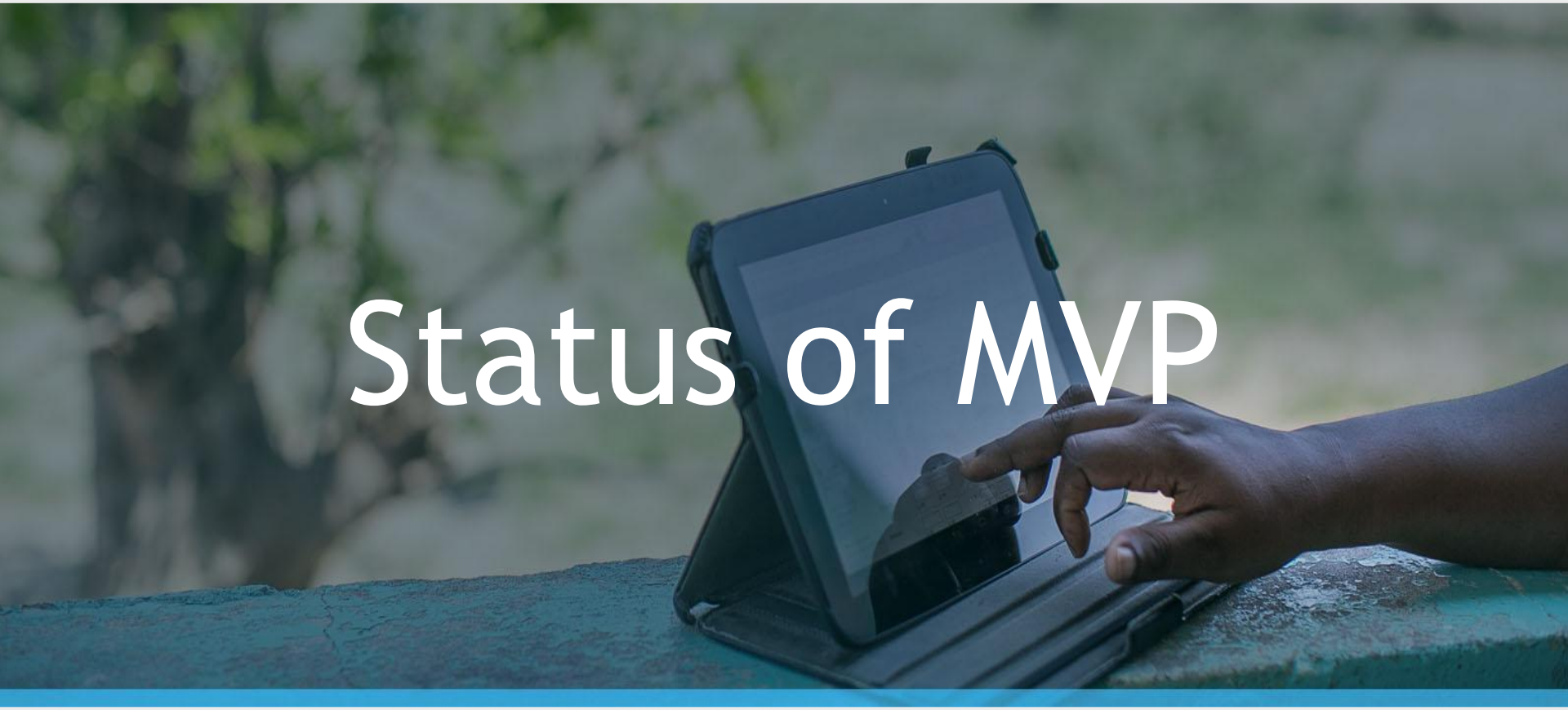
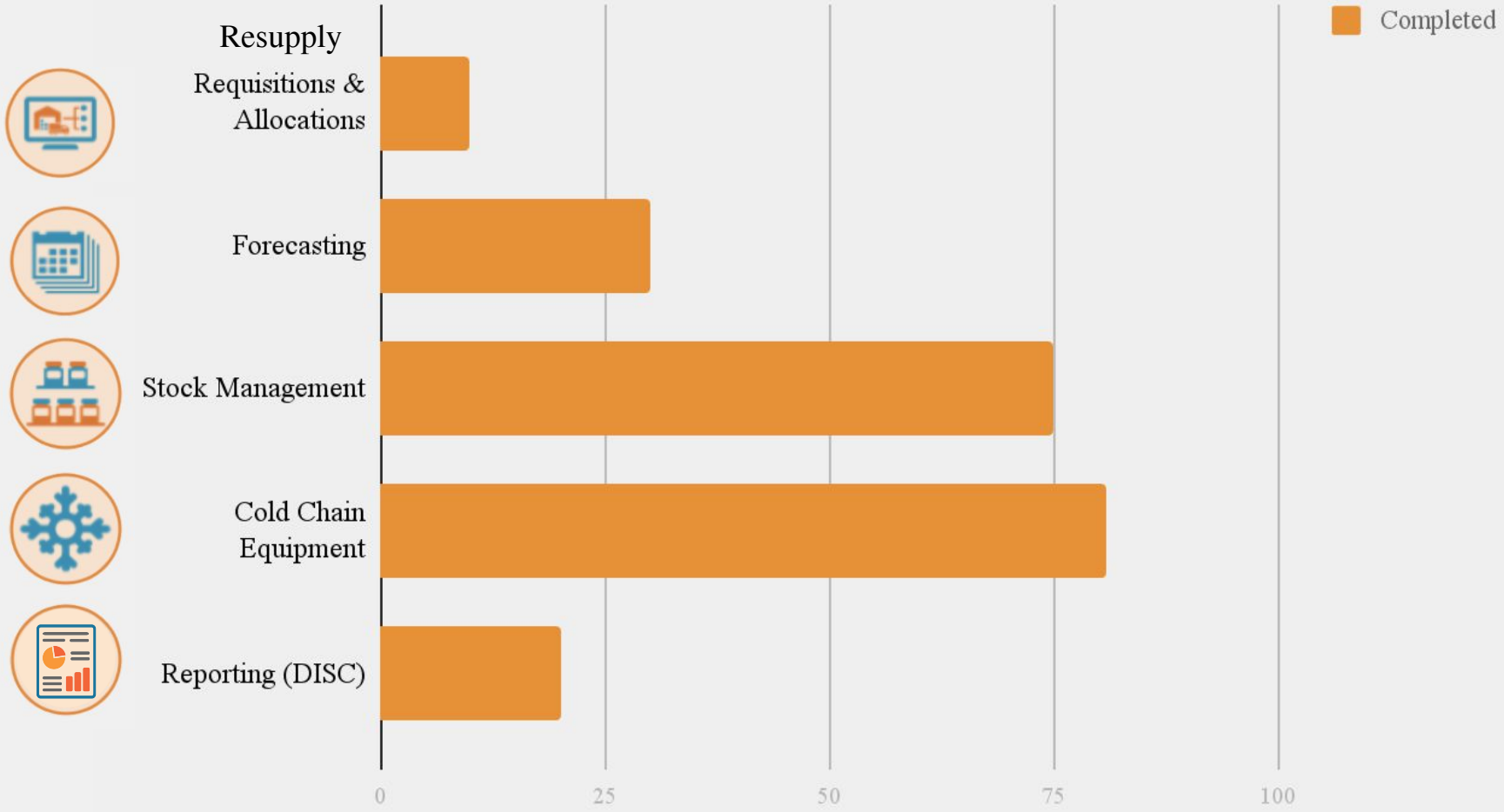


Status of MVP

Where are we?

Software Development Status



Resupply: Requisitions & Allocations

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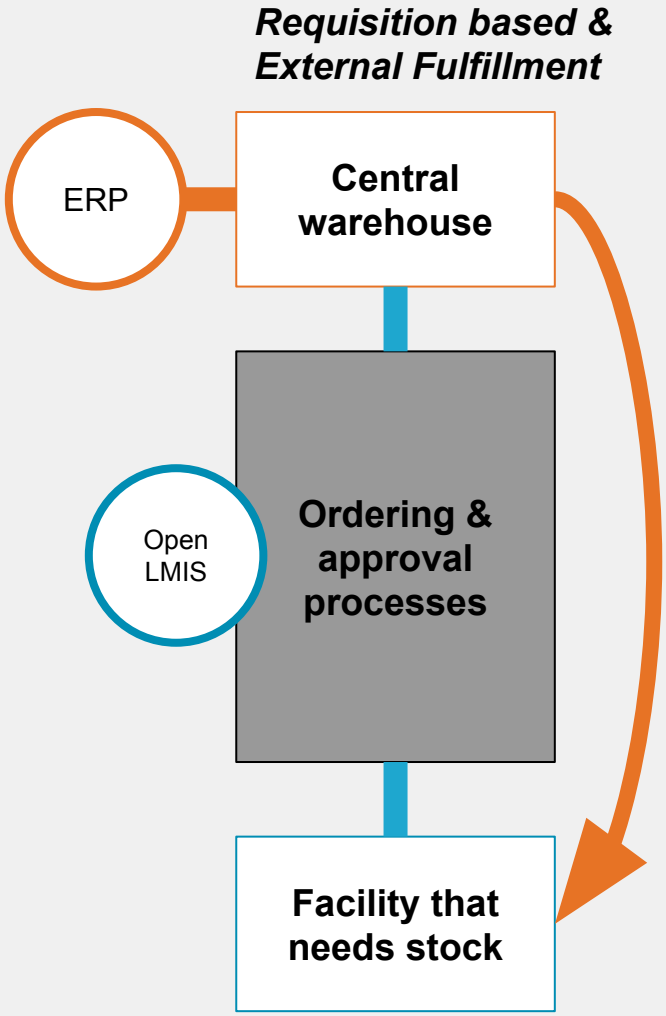
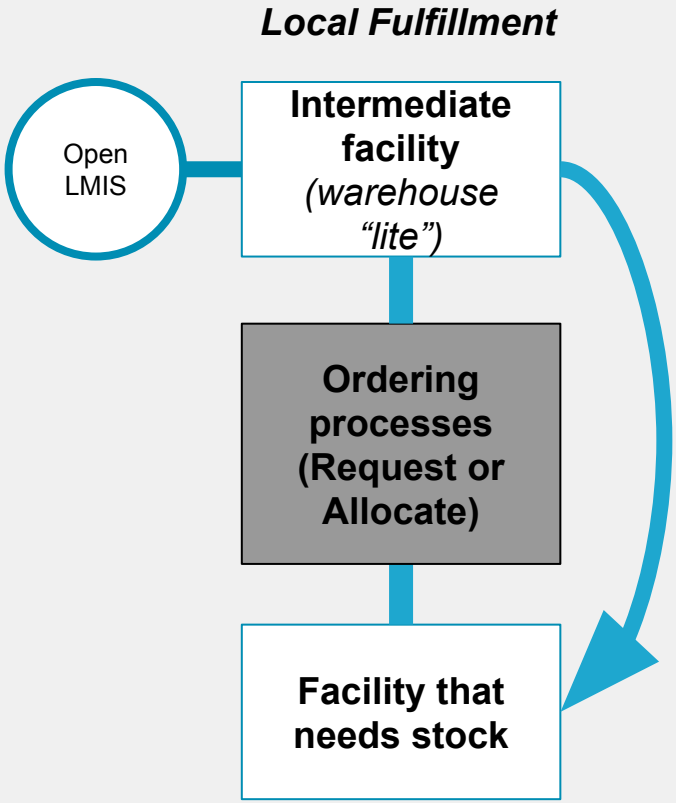
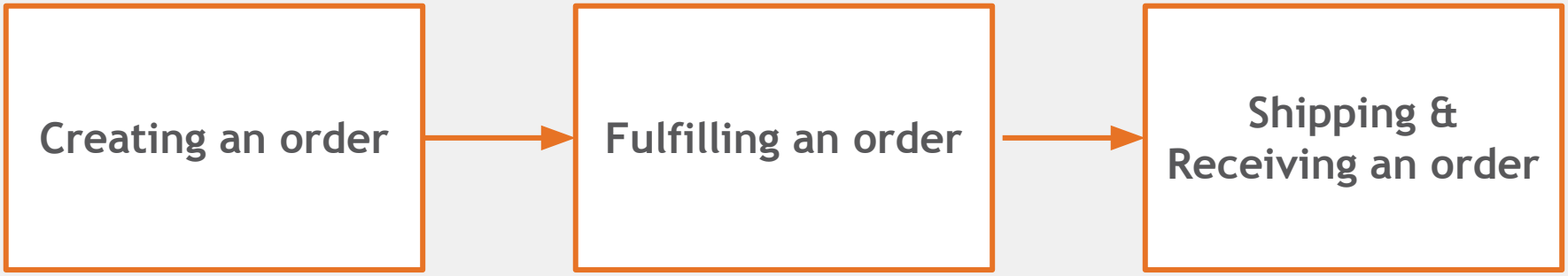
What is resupply?





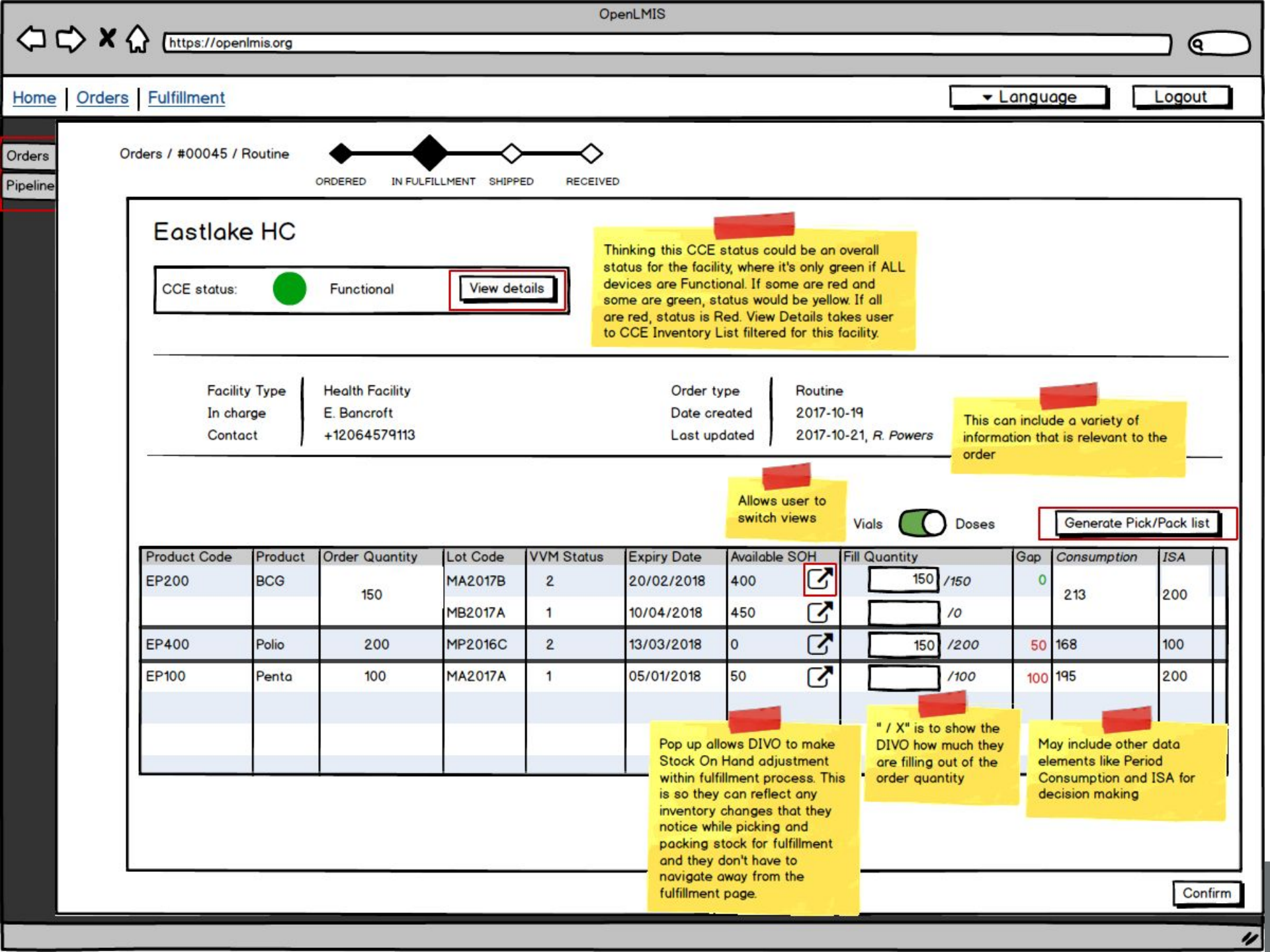
Resupply: Requisitions & Allocations



- Requisition based orders
- Allocation based orders
- Emergency orders
- Calculated order amounts based on ISA or consumption

- View ordered quantities
- View data elements for decision making
- Set & confirm fill quantities

- Confirm stock received (POD)
- Reject & return stock
- Update SOH to reflect resupplied stock


OpenLMIS
https://openlmis.org
Home | Orders | Fulfillment
Language
Logout
Orders
Pipeline
Orders / #00045 / Routine
ORDERED
IN FULFILLMENT
SHIPPED
RECEIVED
Eastlake HC
CCE status:
Functional
View details
Thinking this CCE status could be an overall status for the facility, where it's only green if ALL devices are Functional. If some are red and some are green, status would be yellow. If all are red, status is Red. View Details takes user to CCE Inventory List filtered for this facility.
Facility Type
Health Facility
In charge
E. Bancroft
Contact
+12064579113
Order type
Routine
Date created
2017-10-19
Last updated
2017-10-21, R. Powers
This can include a variety of information that is relevant to the order
Allows user to switch views
Vials
Doses
Generate Pick/Pack list
Product Code
Product
Order Quantity
Lot Code
VVM Status
Expiry Date
Available SOH
Fill Quantity
Gap
Consumption
ISA
EP200
BCG
150
MA2017B
2
20/02/2018
400
150 /150
0
213
200
MB2017A
1
10/04/2018
450
/0
EP400
Polio
200
MP2016C
2
13/03/2018
0
150 /200
50
168
100
EP100
Penta
100
MA2017A
1
05/01/2018
50
/100
100
195
200
Pop up allows DIVO to make Stock On Hand adjustment within fulfillment process. This is so they can reflect any inventory changes that they notice while picking and packing stock for fulfillment and they don't have to navigate away from the fulfillment page.
" / X" is to show the DIVO how much they are filling out of the order quantity
May include other data elements like Period Consumption and ISA for decision making
Confirm

Stock Management

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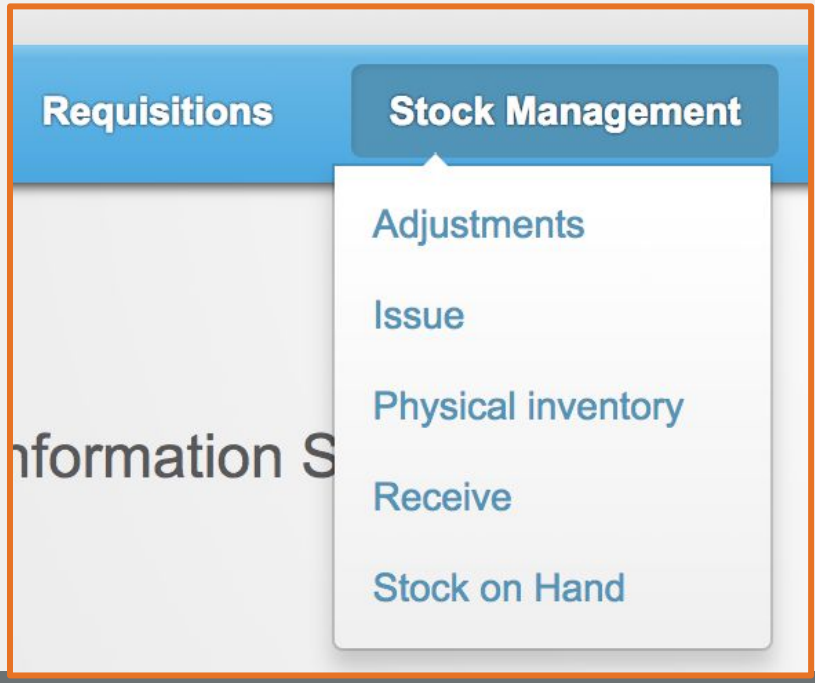
Stock Management

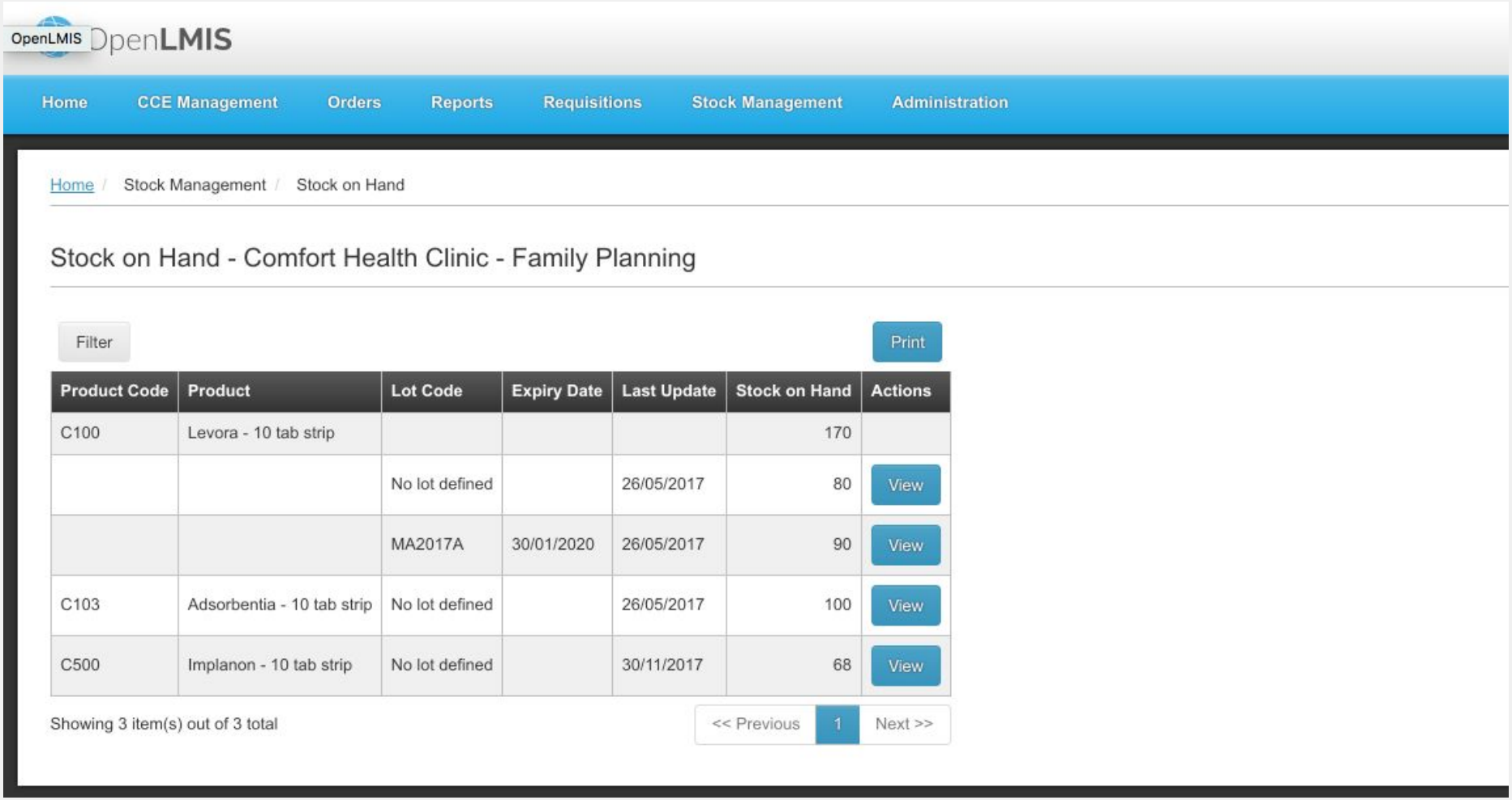
Current Features

Making stock movements as they happen versus reporting in aggregate

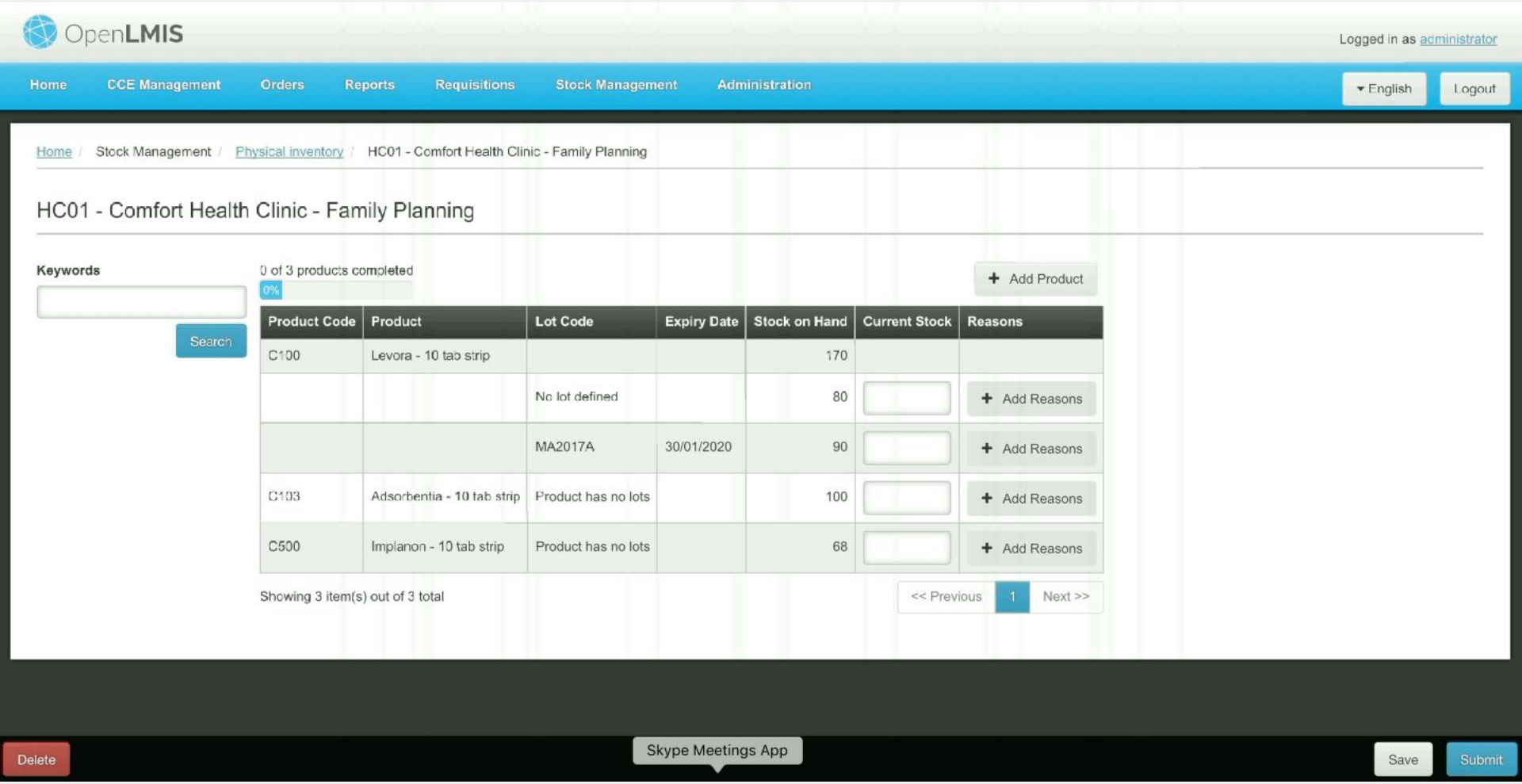
- Physical inventory / stock take
- Issue
- Receive
- Adjust



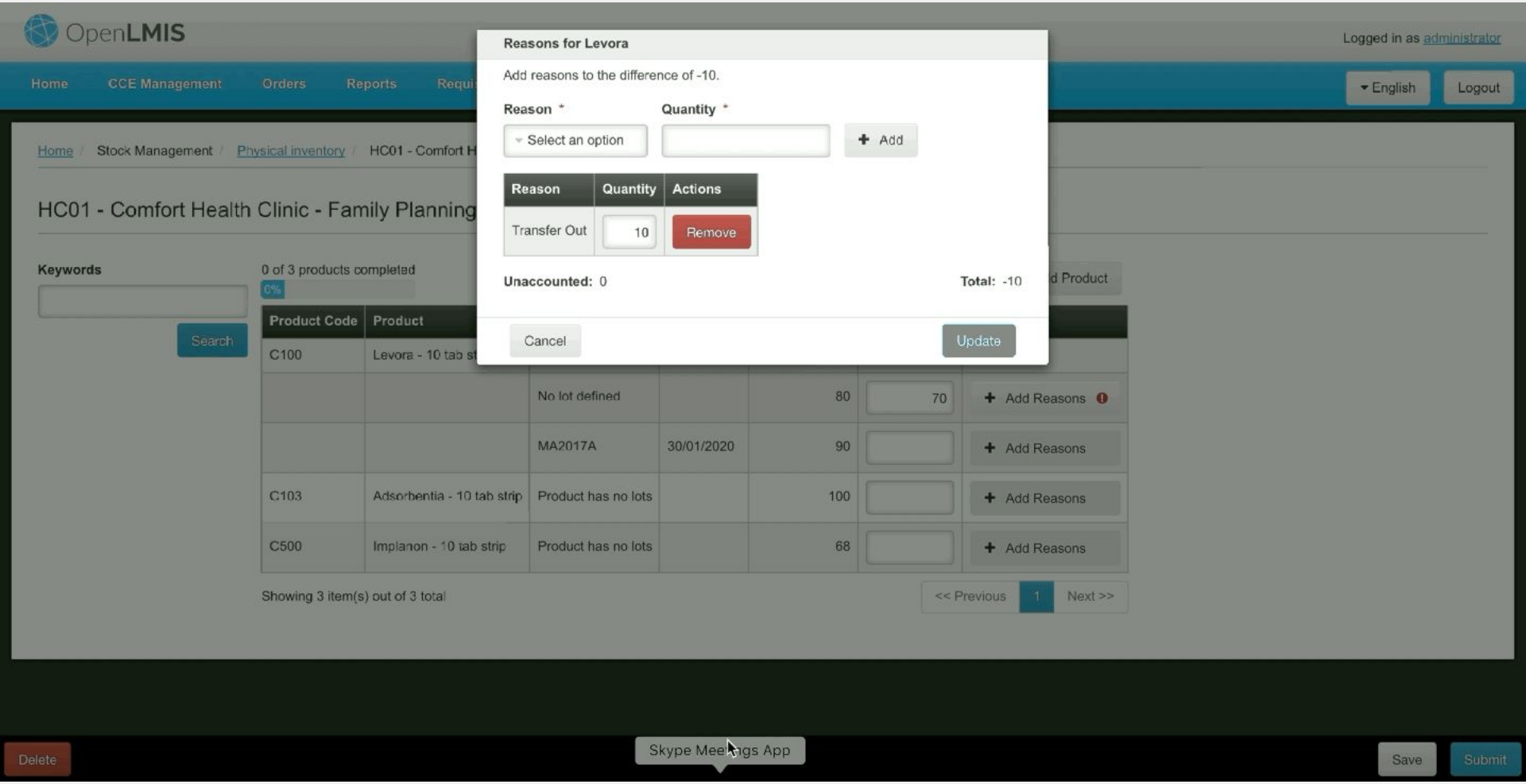
View Stock on Hand



Conduct Physical Inventory



Conduct Physical Inventory



Q & A #3
Final Questions

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Thank you for joining the webinar, please take a moment to complete the poll!

Please direct further questions to info@openlmis.org

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OpenLMIS Webinar Series:
Vaccine Module Update

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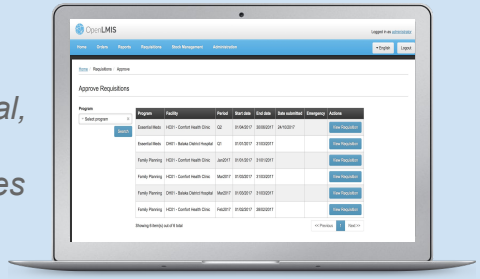
Additional slides if we want to leverage

Integration Opportunities

Supply Chain Management

Health Service Delivery Management

National & EPI Program Level Visualisation and reporting

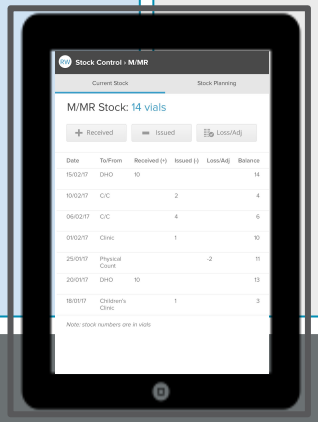


At the Regional, District,& high volume facilities

Send coverage and point of care information

OpenLMIS

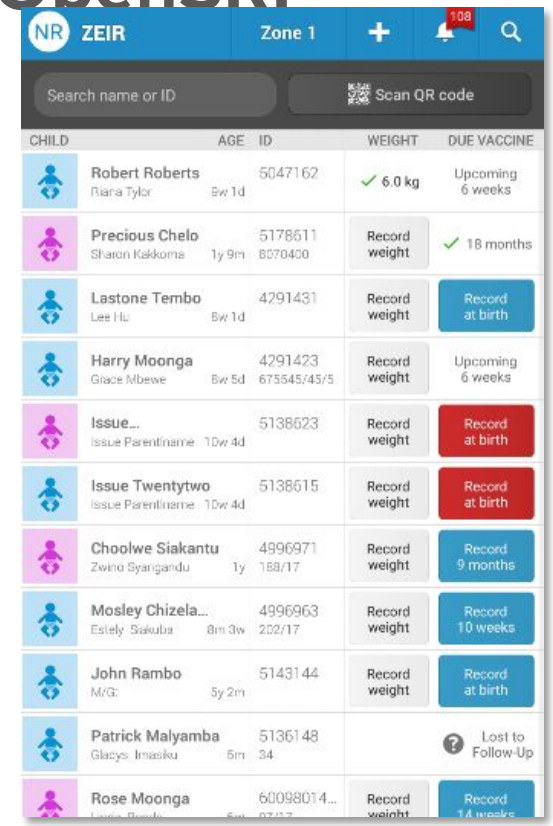
Exchange stocking information and shipment information

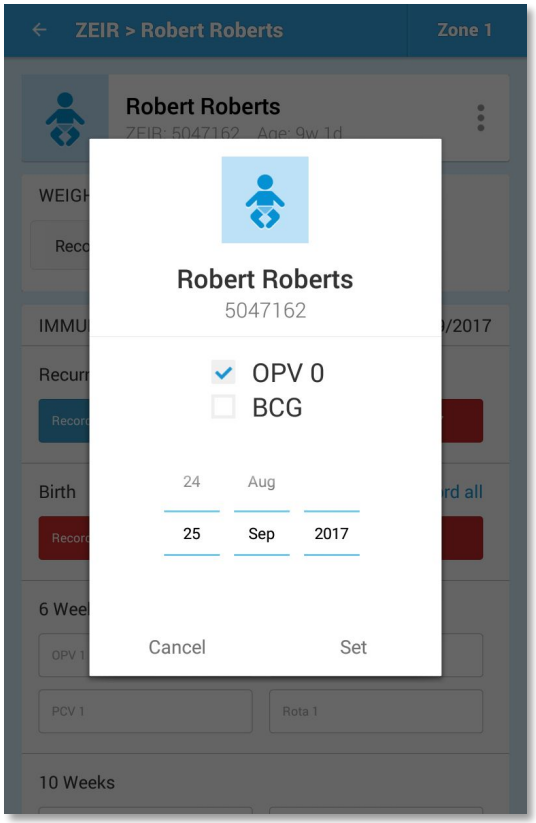


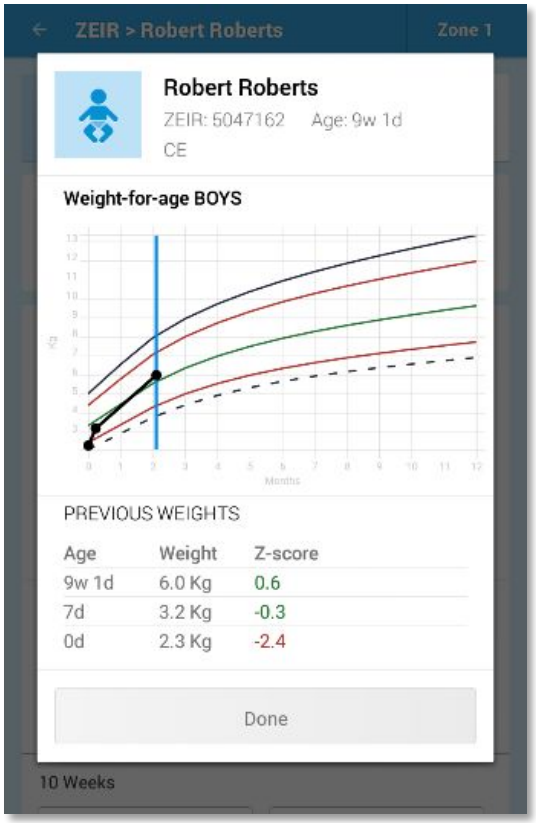
OPENSRP

Point of care, Facility level Electronic Medical Record (EMR)

OpenSRP


NR
ZEIR
Zone 1
108
Search name or ID
Scan QR code
CHILD
AGE
ID
WEIGHT
DUE VACCINE
Robert Roberts
Bana Tylor
8w 1d
5047162
6.0 kg
Upcoming
6 weeks
Precious Chelo
Sharon Kakkoma
1y 9m
5178611
8070400
Record
weight
18 months
Lastone Tembo
Lee Hu
8w 1d
4291431
Record
weight
Record
at birth
Harry Moonga
Grace Mbewe
8w 5d
4291423
675545/45/5
Record
weight
Upcoming
6 weeks
Issue...
Issue Parentname
10w 4d
5138623
Record
weight
Record
at birth
Issue Twentytwo
Issue Parentname
10w 4d
5138615
Record
weight
Record
at birth
Choolwe Siakantu
Zwino Syangandu
1y
4996971
168/17
Record
weight
Record
9 months
Mosley Chizela...
Estely Siakuba
8m 3w
4996963
202/17
Record
weight
Record
10 weeks
John Rambo
M/G:
5y 2m
5143144
Record
weight
Record
at birth
Patrick Malyamba
Gladys Imasiku
5m
5136148
34
Lost to
Follow-Up
Rose Moonga
60098014...
Record
weight
Record


ZEIR > Robert Roberts
Zone 1
Robert Roberts
ZEIR: 5047162 Age: 9w 1d
WEIGH
Recc
IMMU
/2017
Recurr
Birth
rd all
6 Wee
OPV 1
PCV 1
Rota 1
10 Weeks
Robert Roberts
5047162
OPV 0
BCG
24
Aug
25
Sep
2017
Cancel
Set


ZEIR > Robert Roberts
Zone 1
Robert Roberts
ZEIR: 5047162 Age: 9w 1d
CE
Weight-for-age BOYS
Months
PREVIOUS WEIGHTS
Age
Weight
Z-score
9w 1d
6.0 Kg
0.6
7d
3.2 Kg
-0.3
0d
2.3 Kg
-2.4
Done
10 Weeks

OpenSRP Six C's

CADRES

CONVERGENCE

CONTENT

COLLECT

CONTINUITY

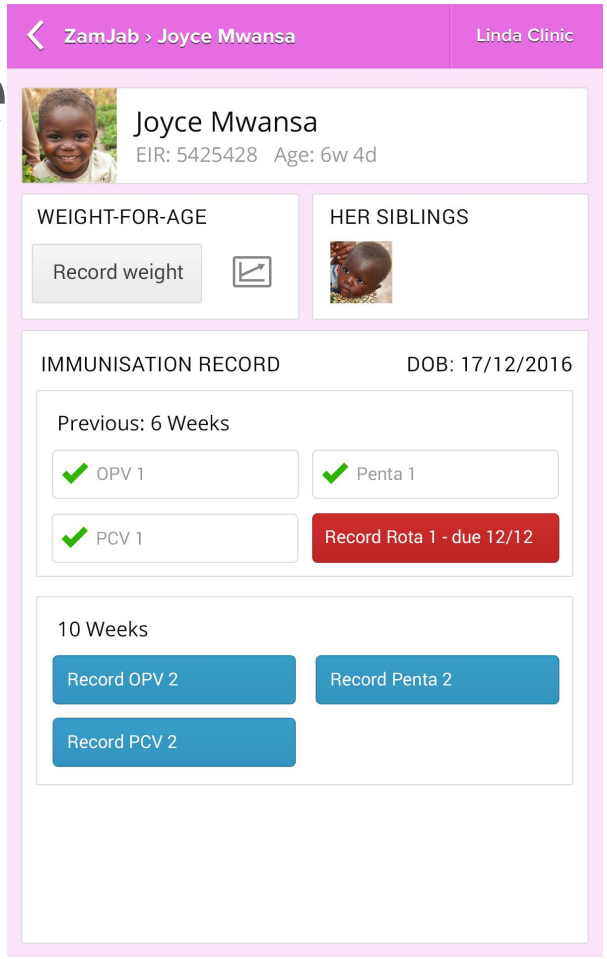
CHARTING

- **Support all frontline health worker cadres** - who they are, how they interact, roles, competencies and reporting mechanisms - to allow data sharing and reduce redundant data collection
- **Support the client-worker interactions -** how frequently, at which location (home, clinic, camp) they converge, and promote *timely* delivery of services
- **Provide guidance and decision support** to the health worker
- **Capture error-free data** required for national health indicators and for local performance monitoring.
- **Schedule follow-up visits and enable record lookups** to promote continuity of care across services and life stages (e.g. Birth Registration ➜ Immunization ➜ Growth Monitoring)
- **Reporting & analysis of coverage,** workforce performance to enable data-driven supervision, performance feedback, incentives, and quality control.

OPENSRP

OpenSRP Fe

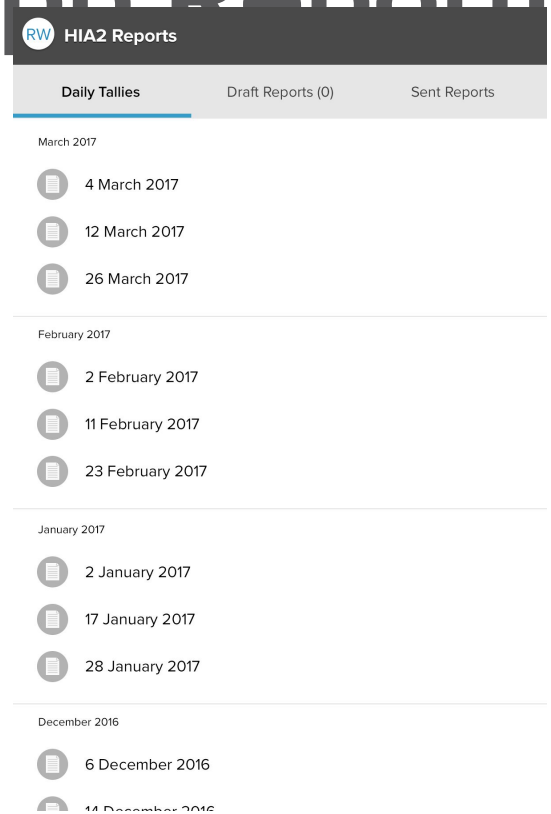
- Two-way integration with OpenMRS
- Common data model (maps to CIEL concept dictionary)
- Offline functionality, including schedules, patient registrations, lookups
- Unique identifier module / QR code support / biometric support
- Global patient lookup
- Team-based data sharing
- DHIS2 integration and reporting
- In-app reporting

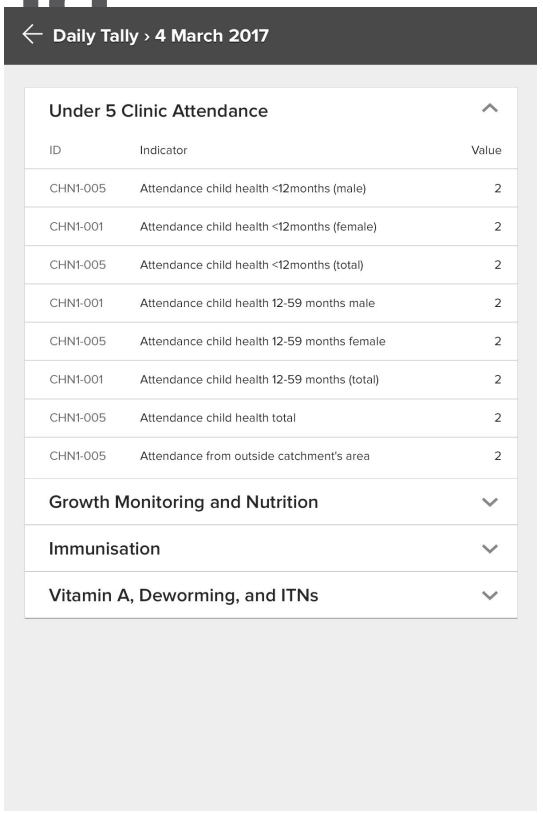


OPENSRP

In-app Reporting

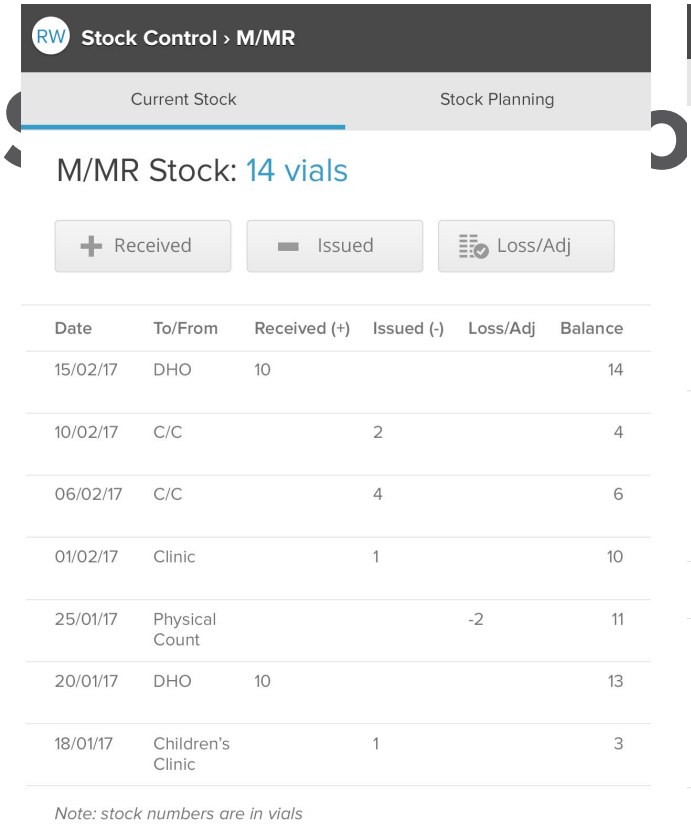
- Daily tallies of service data
- Monthly reporting indicator aggregations
- Submission to DHIS2





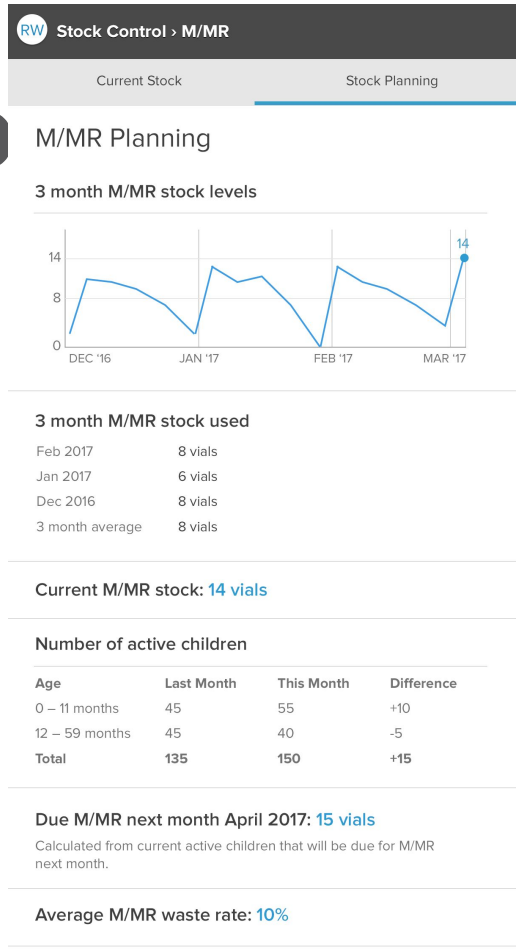
OPENSRP

- Record all stock activity: Stock received, Stock issued, and Stock loss or adjustment
- Stock forecasting and planning



Date	To/From	Received (+)	Issued (-)	Loss/Adj	Balance
15/02/17	DHO	10			14
10/02/17	C/C		2		4
06/02/17	C/C		4		6
01/02/17	Clinic		1		10
25/01/17	Physical Count			-2	11
20/01/17	DHO	10			13
18/01/17	Children's Clinic		1		3

Note: stock numbers are in vials



OPENSRP

ZEIR Summary Dashboard ☆

Total Children Registered

31,677
Children registered

Total Immunizations Given

293,459
Immunizations given

Total Weights Recorded

53,482
Weights recorded

District Filter

Since ∞ Until ∞

district_name

Select [district_name]

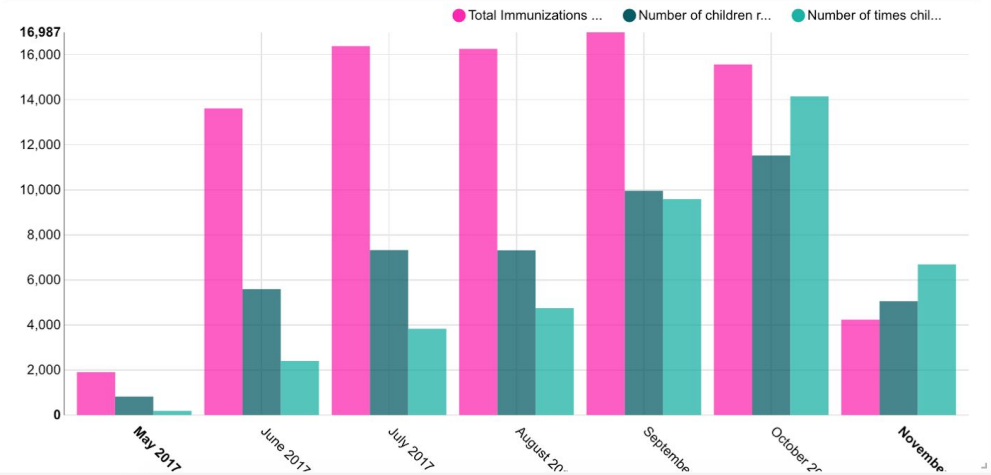
Facility Filter

Since ∞ Until ∞

facility_name

Select [facility_name]

All Activity - 6-month



Totals by District - All-time

district_name	Number of times children weighed	Number of children registered	Total Immunizations Given
Kalomo District	22.5k	7.61k	95.6k
Mazabuka District	11.2k	5.79k	69.9k
Kazungula District	7.78k	5.65k	68.0k
Livingstone District	6.64k	4.14k	42.5k
Pemba District	4.72k	1.10k	10.6k
Choma District	3.15k	544	5.57k
Gwembe District	1.86k	93.0	1.03k
Zimba District	65.0	68.0	249
NULL	6.00	6.00	29.0
Fort Jameson	1.00	1.00	6.00