



TechNet-21



DEPLOYING AN ELECTRONIC LMIS: MAKING THE RIGHT CHOICE

logistimo

Digital Services

Anup Akkihal, Neeraj Thakare, Austine Omiunu & Joseph Mtenje
15:00 CET, October 7th, 2021

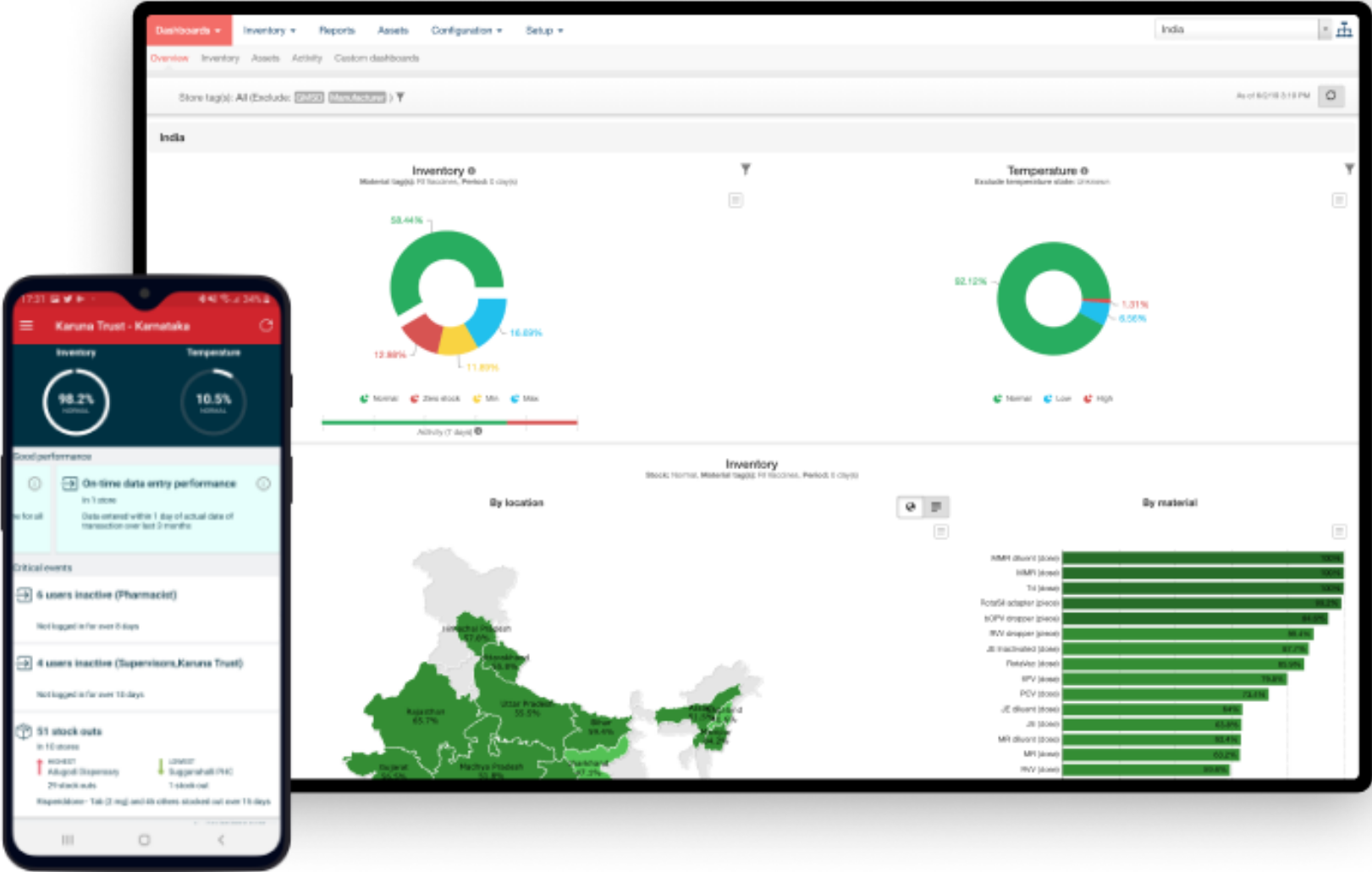
INTRODUCTION

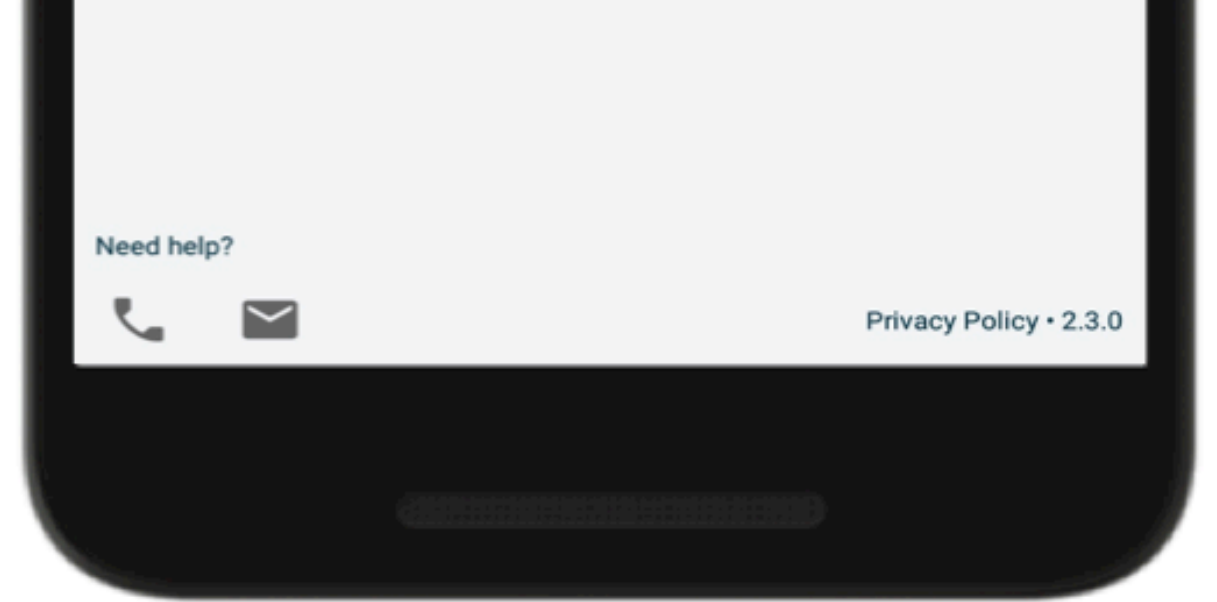
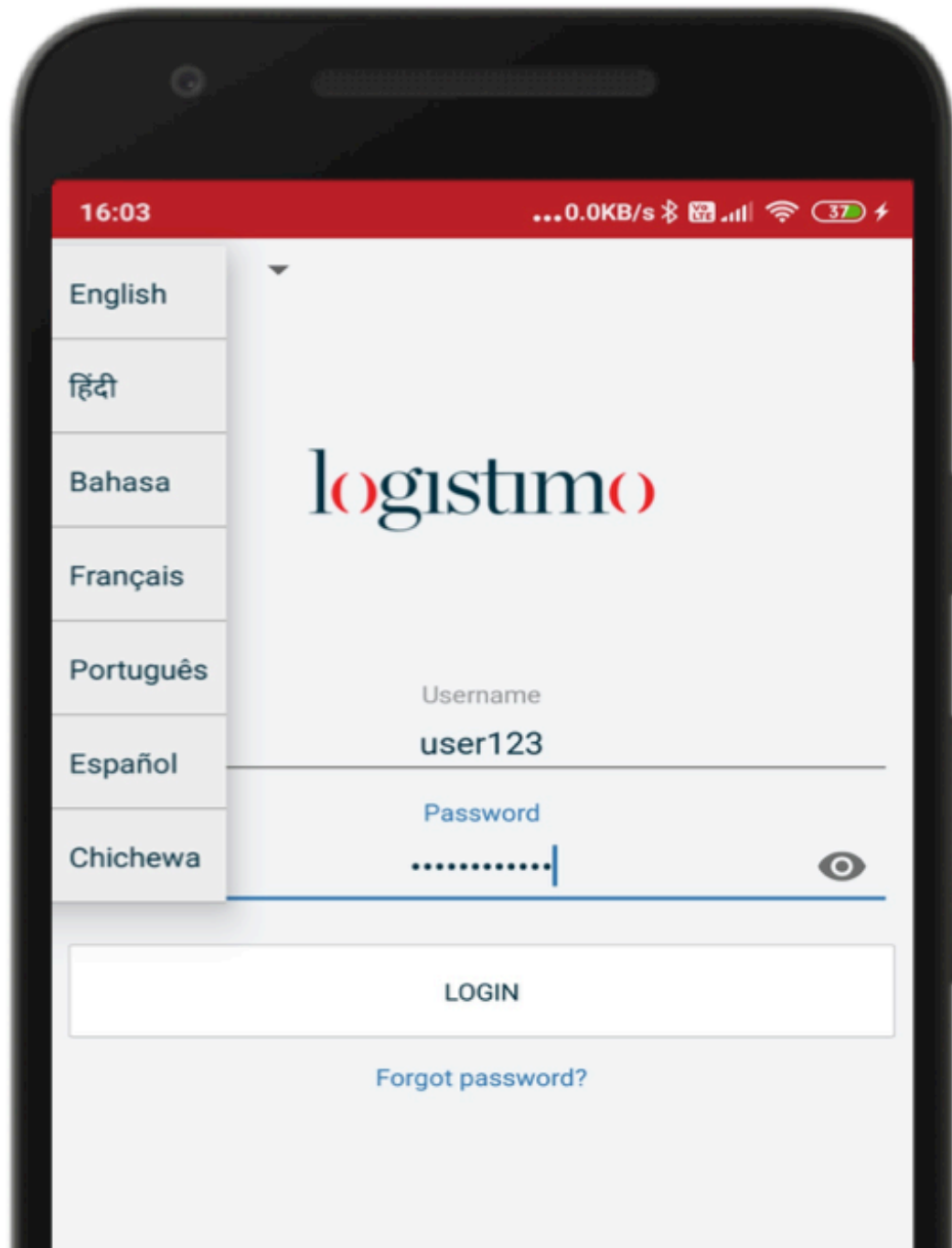


TechNet-21



LOGISTICS MANAGEMENT INFO SYSTEM





7 LANGUAGES

+2 WEEKS / EACH ADDITIONAL

SEAMLESS ONLINE-OFFLINE EXPERIENCE



Network connectivity or bandwidth should not prevent data collection or decision support for long. Logistimo works seamlessly across WiFi, GPRS mobile internet (3G/4G), as well as SMS and offline modes.



We can take it wherever we go.



SENEGAL EPI

ANGOLA EPI

○ **ZAMBIA EPI**

○ **MALAWI EPI**

Forecasting & optimization

Select the appropriate option for inventory forecasting and/or optimization, and specify relevant parameters.

Computation options

Demand forecast

Computes 'Demand forecast'. Specify defaults for all materials.

Minimum transaction period

0.065

months

This value is taken from the corresponding field under 'Consumption rate computation'.

Maximum transaction period

3.0

months

This value is taken from the corresponding field under 'Consumption rate computation'.

Order periodicity (average)

10.0

days

Number of order periods to look
back

3.0

period(s)

Display Show demand forecast



6

Measles (dose)

665
1 month ago

0.44

265

665

24/8/16 10:43 AM



Consumption rate

1521.88 / month

(21/7/16 6:21 PM)



Available stock	Months of stock	Quantity	
Wakiso district s ...			
1792 Stock on hand: 1792 (0,0)	220.51	<input type="text" value="470"/>	
2490 Stock on hand: 2490 (0,0)	245.67	<input type="text" value="450"/> <i>Recommended: 470</i>	
		<input type="text" value="Reason"/>	
		<ul style="list-style-type: none">✓ Select reasonOutbreakMigrant MovementSupply shortageOthers	
		<input type="button" value="Submit"/>	<input type="button" value="Reset"/>



1-24 of 24

Sl.No.	Material	Stock on hand	Allocated	Available	In-transit	Months of stock	Min.	Max.	Last updated
1	0.05ml A.D Syringes for BCG	1000	0	1000	0	NA	0	0	11/1/16 7:43 PM
2	0.5ml A.D Syringes	500	0	500	0	NA	0	0	11/1/16 7:43 PM
3	2ml Reconstitution Syringes for BCG	0	0	0	0	NA	0	0	3/1/16 8:30 PM
4	5ml Reconstitution Syringes for Measles	0	0	0	0	NA	0	0	3/1/16 8:30 PM
5	Albendazole 400mg	0	0	0	0	NA	0	0	3/1/16 8:30 PM
6	BCG (dose)	120	0	120	0	NA	0	0	29/6/17 3:08 PM
7	BCG diluent (dose)	41	0	41	0	NA	0	0	11/1/16 7:31 PM

Batches of BCG diluent (dose)

Sl.No.	Batch ID	Manufactured date (dd/mm/yyyy)	Manufacturer	Expiry date (dd/mm/yyyy)	Stock on hand	Allocated	Available
1	350-1	01/01/2015	Ncipd ltd	31/10/2019	18	0	18
2	357-2		Ncipd Ltd	29/02/2020	3	0	3

Expired batches of BCG diluent (dose)

Sl.No.	Batch ID	Manufactured date (dd/mm/yyyy)	Manufacturer	Expiry date (dd/mm/yyyy)	Stock on hand	Allocated	Action
1	95-1	01/03/2015	Ncipd Ltd	31/03/2018	20	0	

12:52

🔔 4G 📶 🔋 88%



Add new batch

Cares Health Facility

Measles (dose)

Batch ID*

B92830

Manufactured date

Manufacturer name*

Biopharma

Batch expiry date*

31/12/2021

Receipts - Pugo Municipal Warehouse

500

Total available quantity after the operation will be 4160

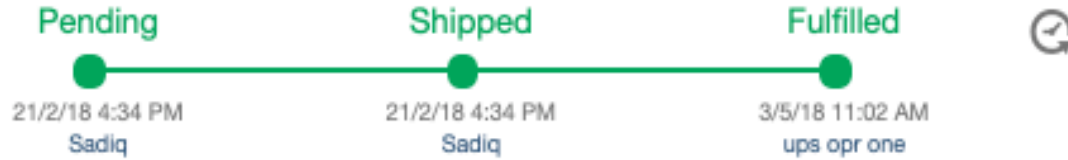
Status

Shipment: 1547020-2 FULFILLED

Issue reference # : ship#2

Created on 21/2/18 4:34 PM by Sadiq , Last updated on 3/5/18 11:02 AM by ups opr one

Status



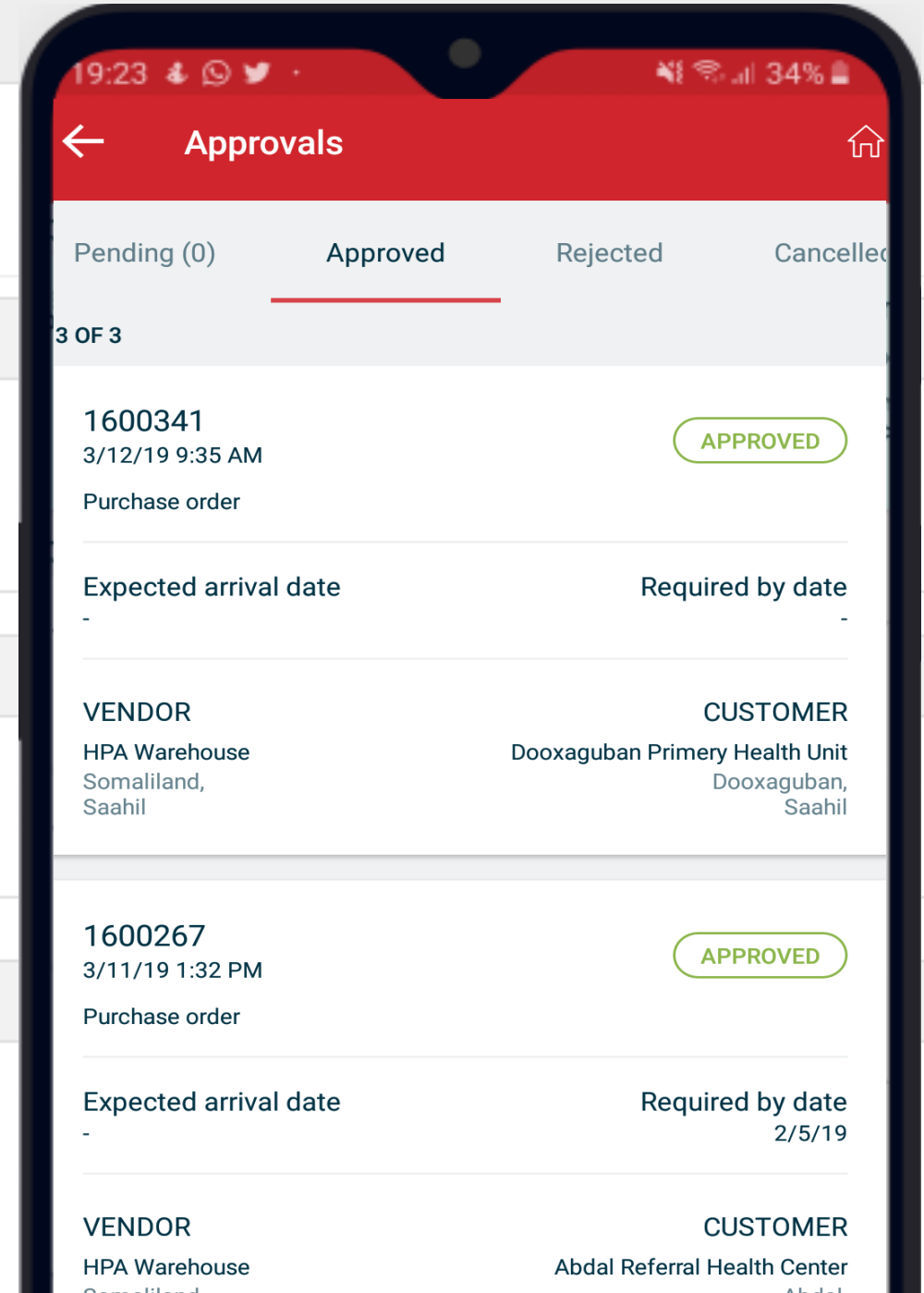
Receiving store

UttarPradeshTest, SVS

Agra, Baheri, Bareilly, Uttar Pradesh

Details

Transporter	DTDC
Tracking #	FHK029810102
Estimated date of arrival	None





4:35 pm



Operations

Mysore DVS



Inventory



View stock



Enter issues



Enter receipts



Enter stock counts



Enter discards



Enter transfers



View transactions



7:31 PM

5.75K/s Airtel Voda 46%



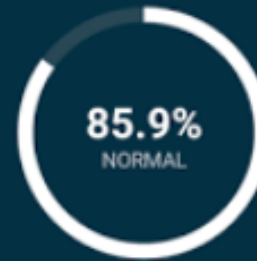
Rajasthan State

TODAY, 07:26 PM



Inventory

Temperature



0.25% STORES ACTIVE



1 order needs your approval

As of 08/09/17 06:30 p.m.



4 assets freezing

In 4 stores across 3 districts



HIGHEST

Bikaner District RJ - eVIN

2 assets



LOWEST

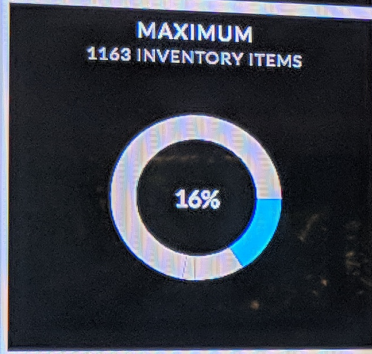
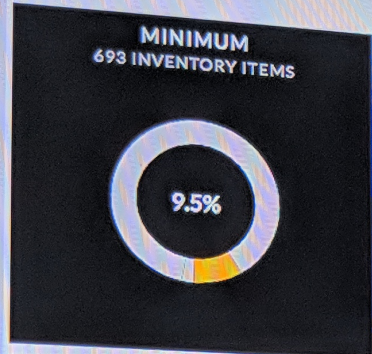
Sikar District RJ - eVIN

1 asset

Freezing for over 10 hours in 10 days

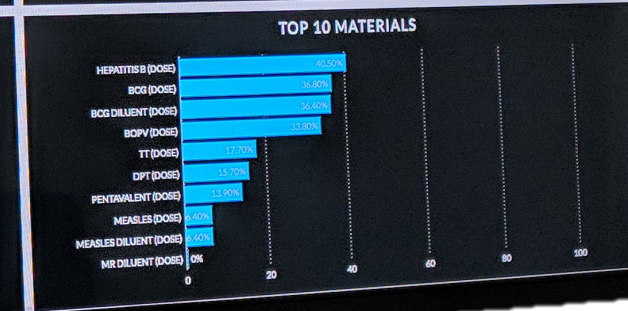
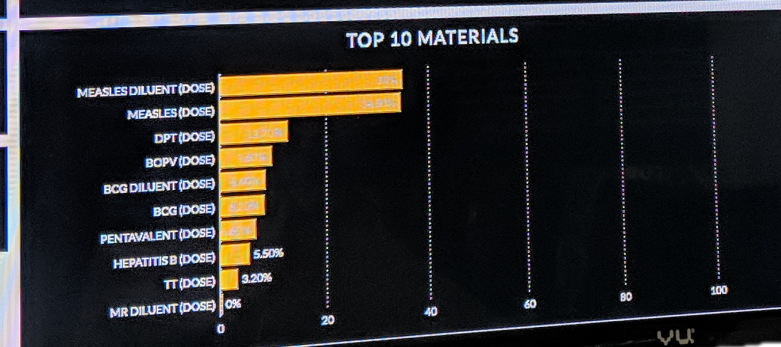
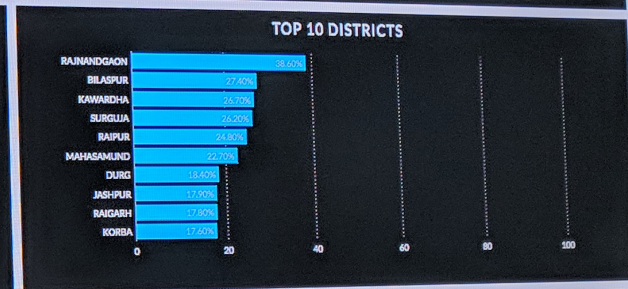
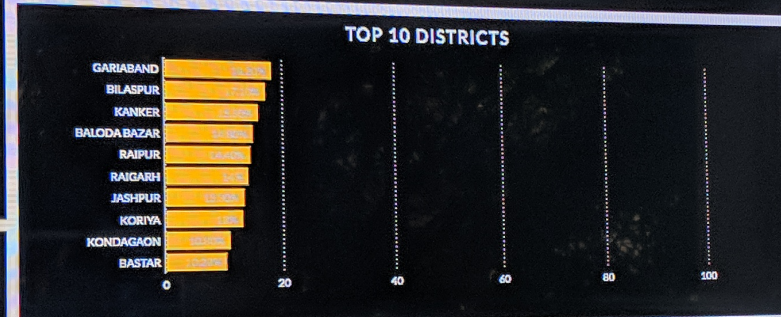
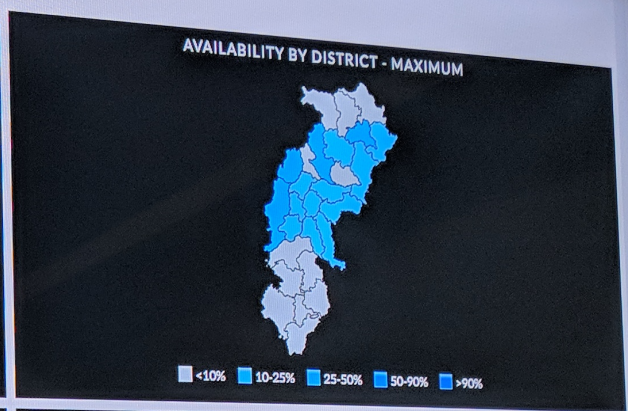
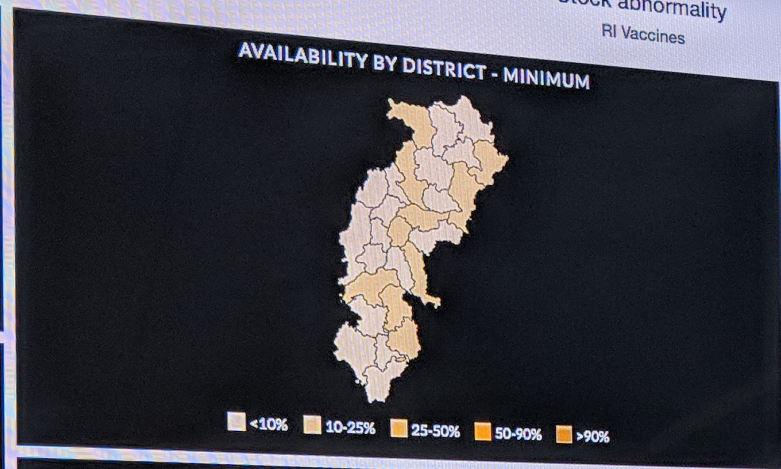


Stock abnormality RI Vaccines



INVENTORY ITEMS 7,280

STORES 560







Available stock
Machinga DHO Inte ...

Quantity

Reason *

1204

Enter by batch

✓ Select reason

Broken

Damaged

Frozen

Expired

WMM

MDVP



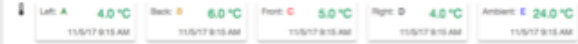
Submit

Reset

Assets

WIC07GE0N00B2A5K0091 - VT3000 (Vestfrost)

Indore District Facility, Indore, Madhya Pradesh, IN



Walk-in cooler

Working

Sagar (+91 9991613629)

Sagar (+91 9991613629)

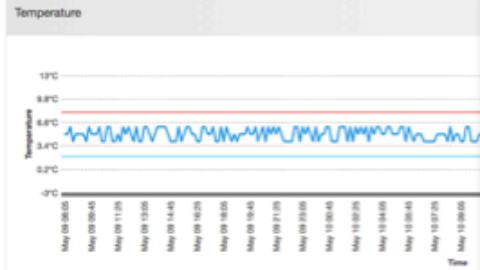


Created on 6/5/16 10:52 AM by Karjyee D. Last updated on 6/5/16 10:52 AM by Karjyee D

Summary | Information | Relationships

Export

Left: A | Back: B | Front: C | Right: D | Ambient: E

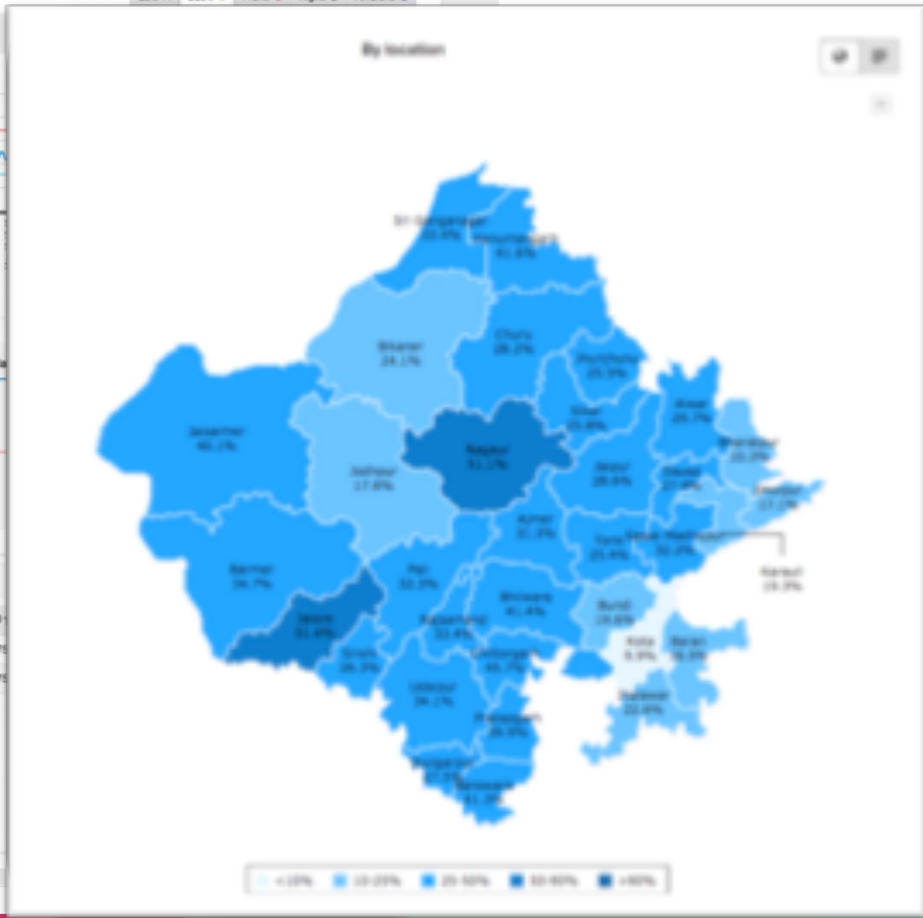


Select a portion of the chart to zoom in



Recent activity

Monitoring point	Alarm	
Ambient: E	Temperature incursion of 25.0 °C	27
Ambient: E	High temperature excursion of 24.0 °C	27





17:31 34%

Inventory Temperature

98.2% NORMAL

10.5% NORMAL

Good performance

On-time data entry performance
In 1 store
Data entered within 1 day of actual date of transaction over last 3 months

Critical events

6 users inactive (Pharmacist)

Not logged in for over 8 days

13:00 73%

Karuna Trust - Karnataka

Nandikeshwara PHC

Good asset management
Temperature was in range over 96% of the time for all assets over last 3 months

Shashidar

Like

Thithimathi PHC

Good asset management
Temperature was in range over 96% of the time for all assets over last 3 months

Ramesh Naidu

19:23 34%

Karuna Trust - Karnataka

Good performance

Good asset management
In 2 stores
Temperature was in range over 96% of the time for all assets over last 3 months

Critical events

6 users inactive (Pharmacist)

Not logged in for over 8 days

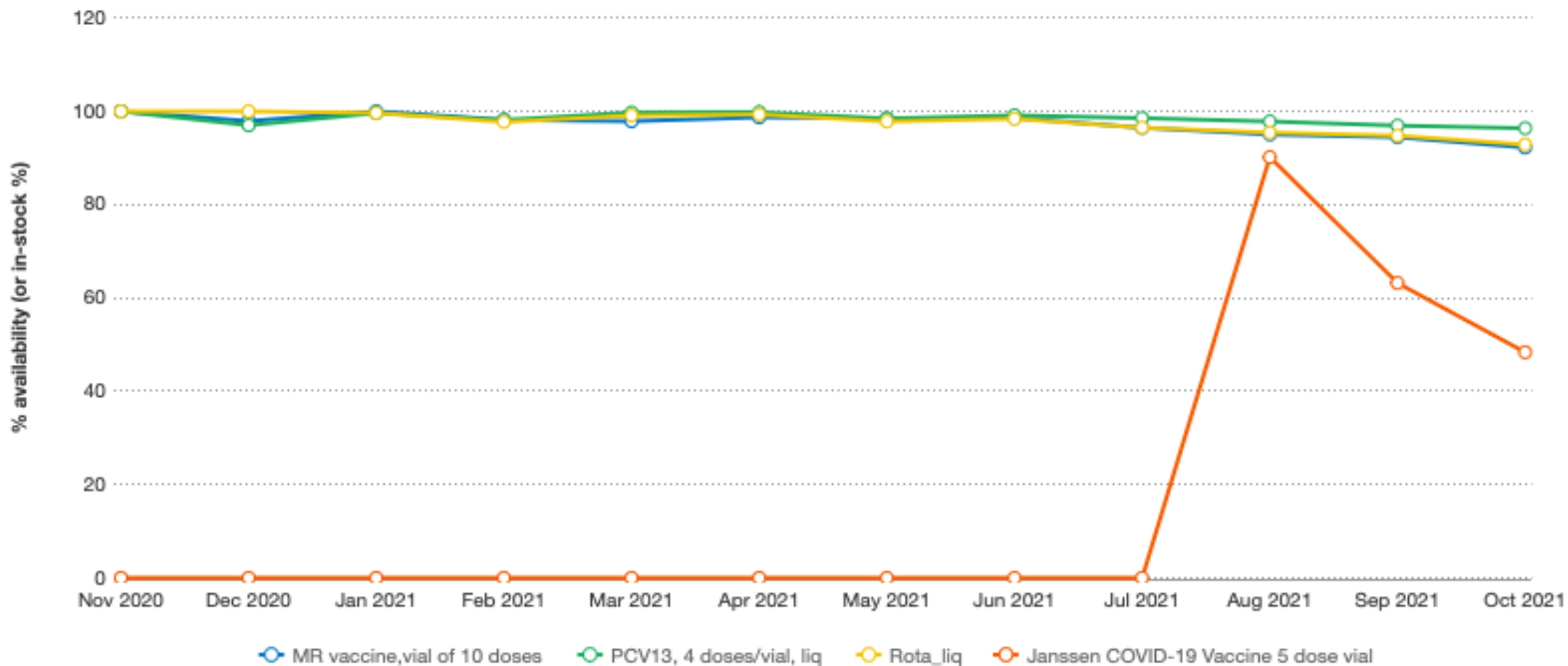
4 users inactive (Supervisors, Karuna Trust)

Not logged in for over 10 days



% availability (or in-stock %)

From: Nov 2020 To: Oct 2021 Material: Janssen COVID-19 Vaccine 5 dose vial



Orders

Shipments

Inventory

Setup

Accounts

Assets

Select an event, its associated parameters (if any), and add a notification configuration. Click on an event to view or edit it

-- Select event --

Add Notifications

Edit notification

Stock issued

Specify the tags to exclude while notifying the event.

Material tags

× OPEN Vials

Store tags

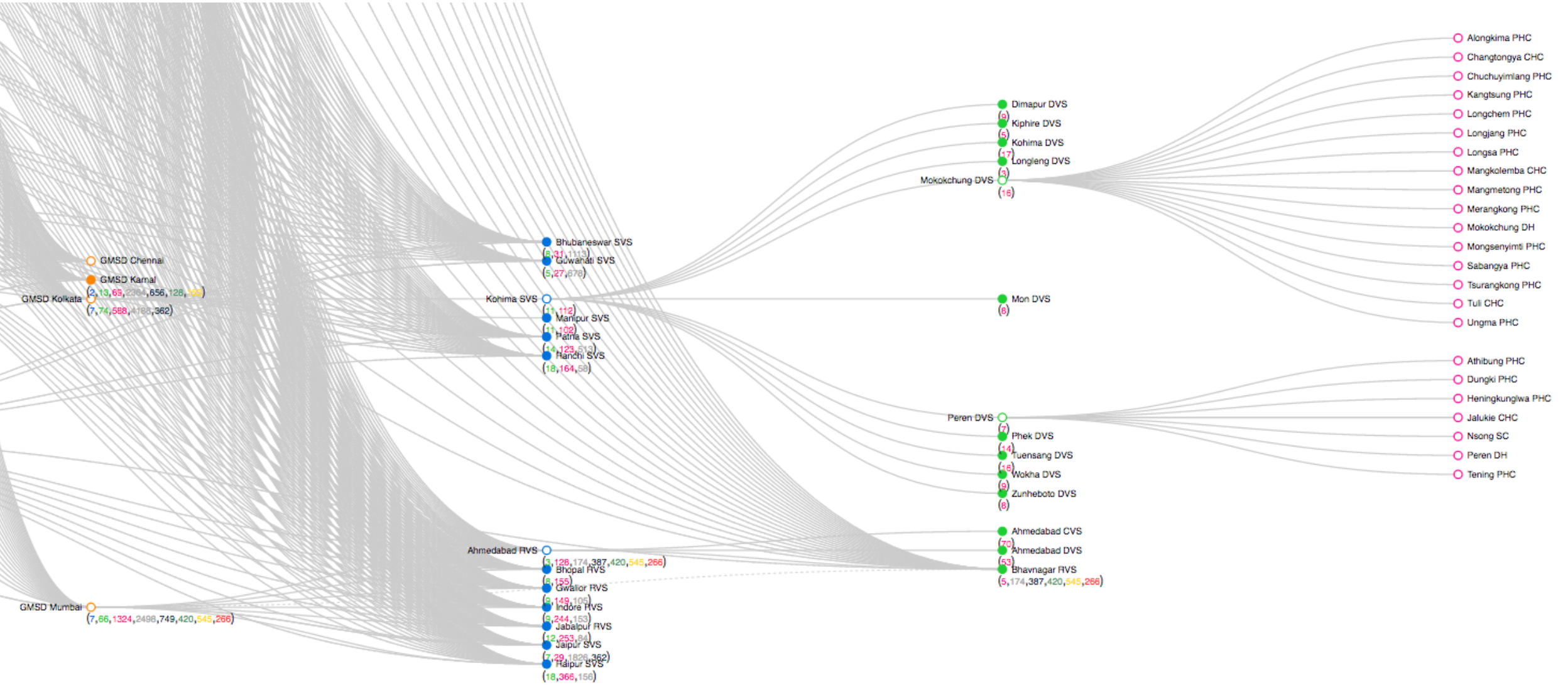
× Route2

Specify who should be notified of this event, at what frequency and method (email/SMS). In case of SMS message, also specify the message template with variables embedded in the message, as needed.

Whom to notify, at what Frequency?

	Whom to notify	Frequency
<input type="checkbox"/>	Receiving stores / Owners	<input type="radio"/> Immediately (SMS) <input type="radio"/> Daily (Email) <input type="radio"/> Weekly (Email) <input type="radio"/> Monthly (Email)
<input type="checkbox"/>	Issuing stores	<input type="radio"/> Immediately (SMS) <input type="radio"/> Daily (Email) <input type="radio"/> Weekly (Email) <input type="radio"/> Monthly (Email)
<input type="checkbox"/>	Administrators	<input type="radio"/> Immediately (SMS) <input type="radio"/> Daily (Email) <input type="radio"/> Weekly (Email) <input type="radio"/> Monthly (Email)
<input type="checkbox"/>	Asset owners / maintainers	<input type="radio"/> Immediately (SMS) <input type="radio"/> Daily (Email) <input type="radio"/> Weekly (Email) <input type="radio"/> Monthly (Email)
<input checked="" type="checkbox"/>	Users Enter groups of users by tags × DVSM Enter individual users Enter user names	<input checked="" type="radio"/> Immediately (SMS) <input type="radio"/> Daily (Email) <input type="radio"/> Weekly (Email) <input type="radio"/> Monthly (Email)

Post on Bulletin board



SI.No.	Entity	Material	Opening stock	Operation	Quantity	Closing stock	Updated on	Updated by
<input type="checkbox"/>	1428 Kasangati HC IV Kasangati, Wakiso	0.05ml AD Syringes	835	issue To Static Facility	655	180	18/3/19 5:26 PM	Monica Kemigabo
<input type="checkbox"/>	1429 Kasangati HC IV Kasangati, Wakiso	5.0ml Reconstitution Syringes	69	issue To Static Facility	40	29	18/3/19 5:26 PM	Monica Kemigabo
<input type="checkbox"/>	1430 Kasangati HC IV Kasangati, Wakiso	0.5ml AD Syringes	1,527	issue To Static Facility	1,000	527	18/3/19 5:26 PM	Monica Kemigabo

Transaction at Kumwenda, Wampeewo, Uganda

Distance between transaction point and the Entity: 0.3 km

Accuracy: 1100 meters

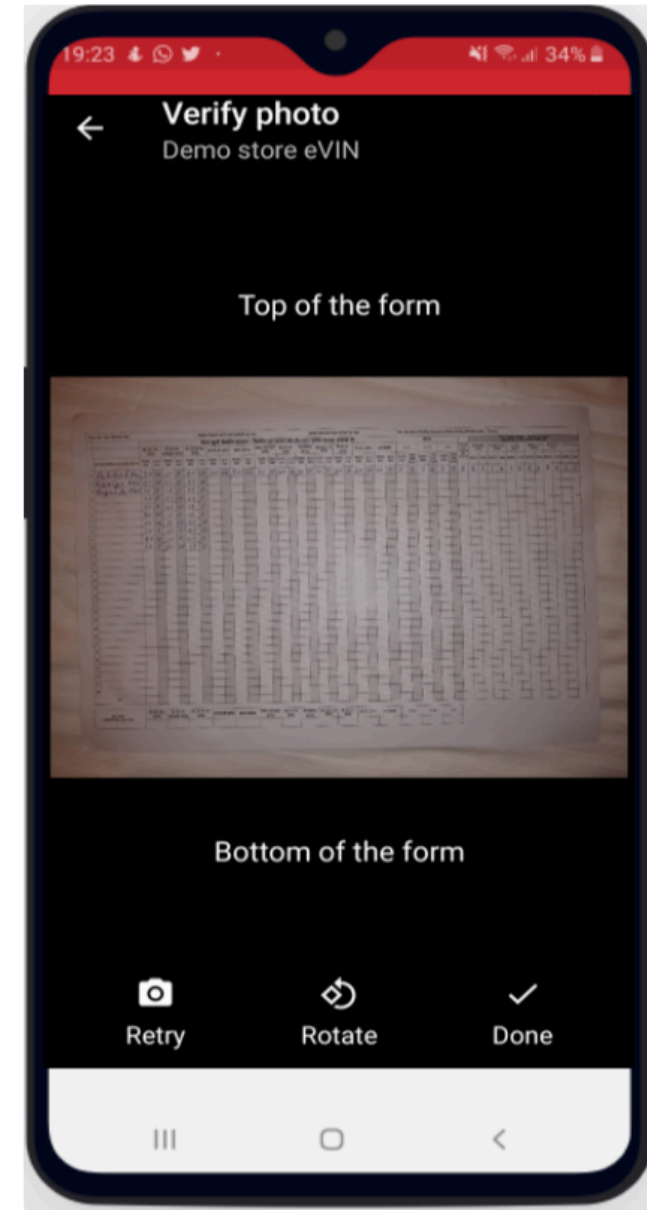
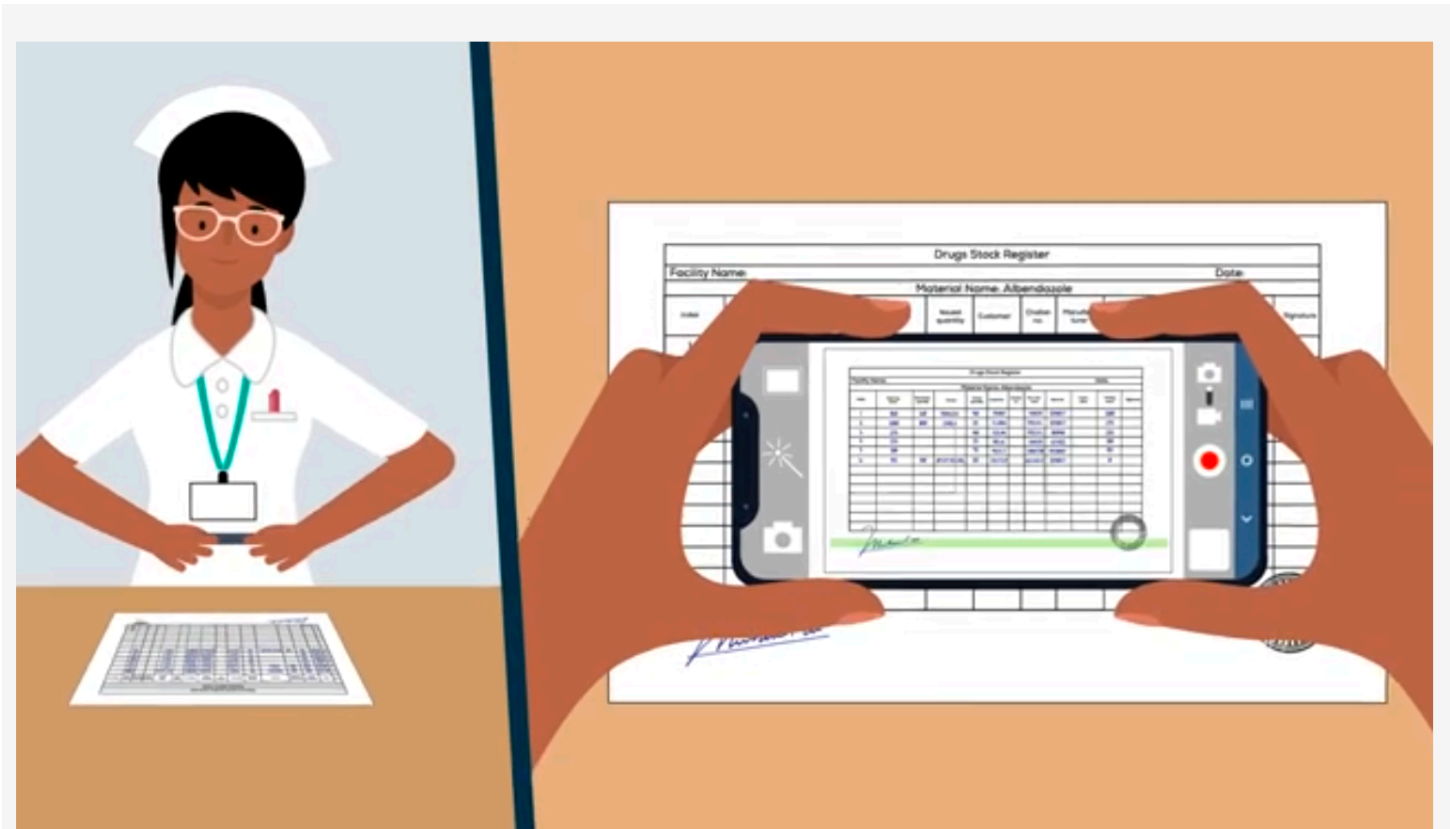
Map Satellite

Entity at: Kasangati, Uganda
0.434972,32.600775

Transaction at: Kumwenda, Wampeewo, Uganda
0.432868,32.60107

Wayira Memorial Medical Center

Map data ©2019 Google Terms of Use Report a map error



12:50

🕒 4G 📶 🔋 89%



Enter receipts

Cares Health Facility



Search materials...



103 Items

Diluent (4)

Dropper (1)

Emergency Drugs (5)

Adrenaline - inj - 2 ml

21/11/20 12:32 PM

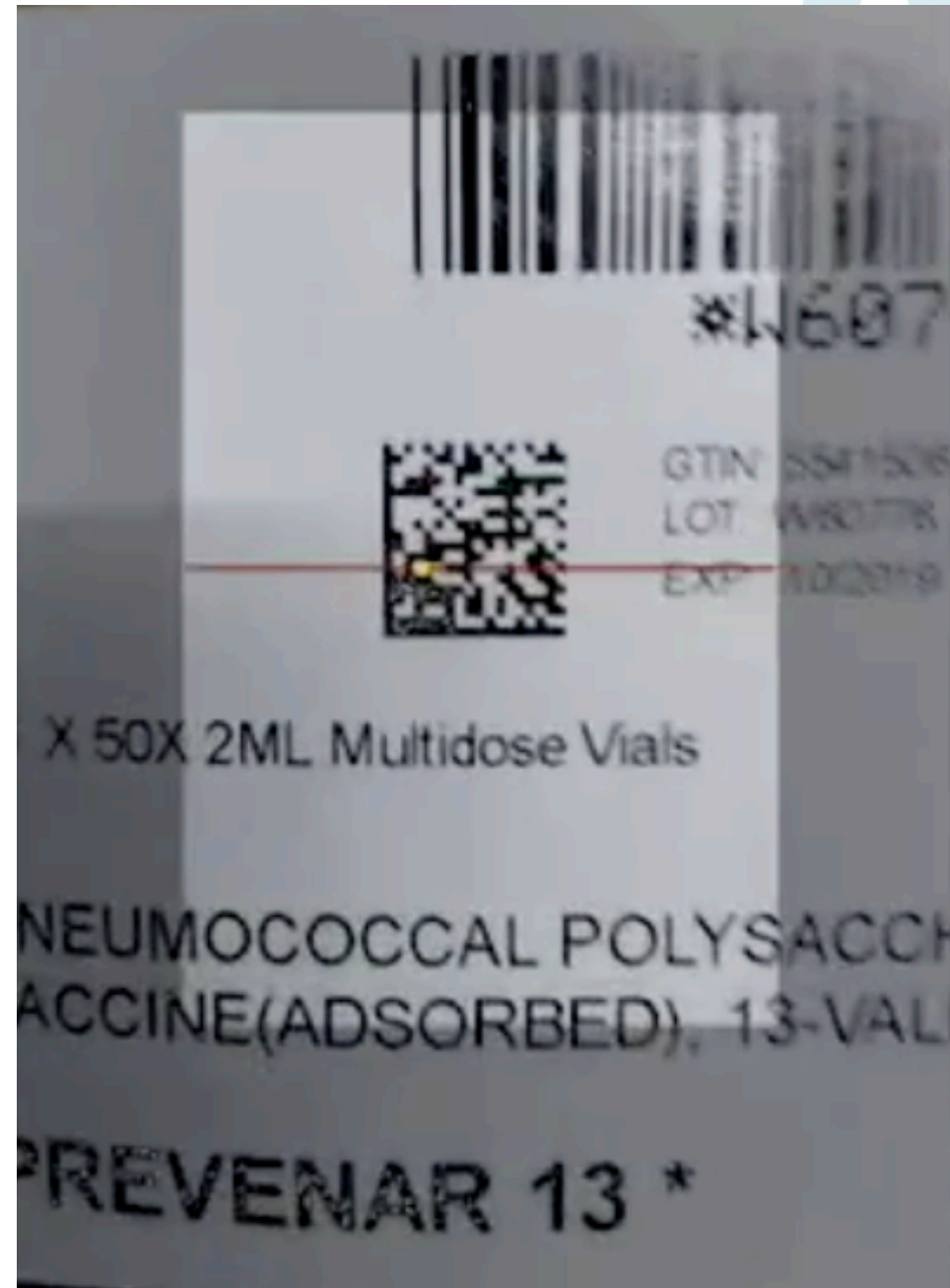
200



Insulin (dose)

10/7/20 6:17 PM

190





- **DHIS2, ERP & OTHER INTEGRATIONS**
- **LOCAL IMPLEMENTATION PARTNERS**
- **TYPICAL 2-WEEK KNOWLEDGE TRANSFER; TRAINING DURATIONS VARY SIGNIFICANTLY BY USE CASE; HANDHOLDING POSSIBLE**
- **[HTTPS://WWW.LOGISTIMO.COM/PRICING](https://www.logistimo.com/pricing)**
- **40% DISCOUNT ON ANNUAL RESERVATIONS**



Enabling sustainable behaviors of data recording and use in low-resource supply chains

Arun Ramanujapuram
Logistimo
Bangalore, Karnataka, India
arun@logistimo.com

Charan Kumar Malemarpuram
Logistimo
Bangalore, Karnataka, India
charan@logistimo.com

ABSTRACT

Public services, such as public health supply chains, in low- and middle-income countries can be characterized as *low-resource environments*, where both infrastructure and human capacity are limited. There is no strong culture of data recording or use, with ad hoc reporting practices, poor planning and lack of coordination. All these lead to poor supply chain performance, thereby restricting access to medicines, and eventually resulting in poorer health and mortality.

We describe the ground-up design of Logistimo SCM, a supply chain management software, offered as a service, that has enabled a transformative change in public health supply chains, leading to improved performance. Our approach is rooted in bottom-up empowerment of the human value chain, based on the

ACM Reference format:

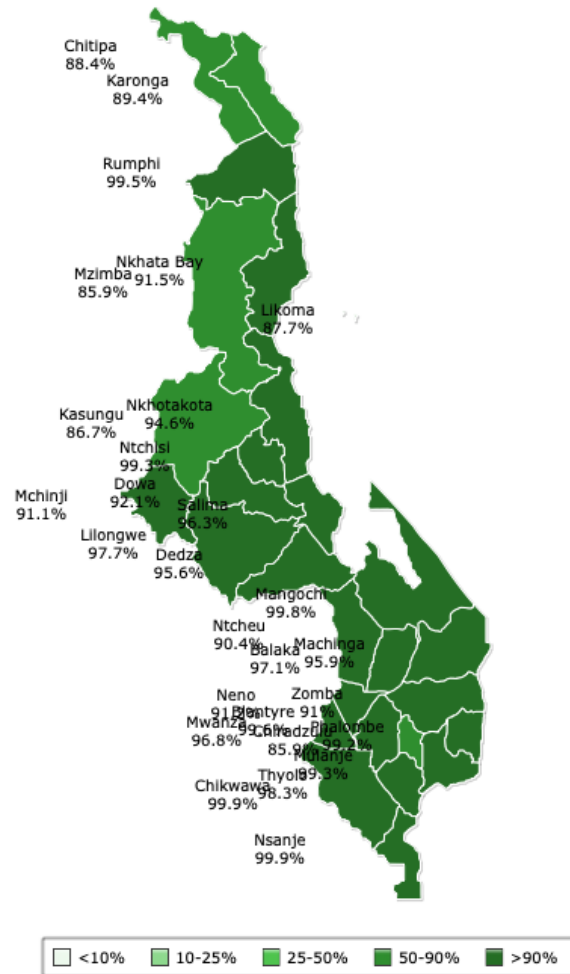
Arun Ramanujapuram, and Charan Kumar Malemarpuram. 2020. Enabling sustainable behaviors of data recording and use in low-resource supply chains. In *Proceedings of ACM SIGCAS Conference on Computing and Sustainable Societies. June 15-17 2020, Guayaquil, Ecuador*, 11 pages. <https://doi.org/10.1145/3378393.3402248>

1 Introduction

One third of world's population lacks regular access to essential medicines, and in the poorest parts of Asia and Africa, this figure increases to 50% [27]. To achieve good health outcomes, access to essential medicines and related consumables is crucial. The weakness of public health supply chains has remained a constant barrier across a range of low- and middle-income countries. Despite major investments over many decades, efforts to



MALAWI



- 1466 entities live, to the last mile
- ~3.7M transactions passed per annum
- 2520 commodities across EPI, malaria, TB, HIV, essential medicines, reproductive health & nutrition
- >93% stock availability
- COVID vaccine distribution managed for 2 vaccines
- 14.5M doses tracked
- Bulletin Boards used at National Level/Ministry
- Nationwide rollout to all EPI stores completed within a year; nationwide rollout to non-EPI stores underway.



AUSTINE OMIUNU

EHIN PROJECT COORDINATOR, UNDP MALAWI








JOSEPH MTENJE

EHIN ICT OFFICER, UNDP MALAWI



Electronic Health Information Network (eHIN)

TechNet Presentation 7 Oct 2021

Inventory  View stock  Enter issues  Enter stock counts  Enter discards  View transactions Orders Profile 

System Overview

- eHIN is an innovative, easy to use mobile phone and web-based application aimed at managing and tracking all health commodities at all tiers of health supply chain.
- The application is aimed at improving transparency and accountability while managing health commodities.
- The System in Malawi is being used to manage different programmes that categorise different medicines and medical supplies.
- Currently deployed at over 1,400 entities covering Vaccines and pharmaceuticals

Benefits

- Real time visibility of medicines and vaccines at all levels from last mile to central level
- Track medicines and vaccines by batch and expiry
- Extensive dashboard and reports to help decision making by different stakeholders
- Ability to manage orders from last mile to national warehouses
- Ability to remote monitor temperatures in fridges using temperature loggers that can be monitored using mobile phones.



Challenges

- Some Health workers refusing to use the system because they did not attend the training. The training covered at least 2 people per entity.
- Some health Workers personalizing the use of the mobile phones preventing fellow staff to use the phones.
- Some facilities having completely no network coverage making the health workers to travel to places of network in order to submit data and orders
- Change management



Benefits on COVID19 Vaccine



- Increased visibility of the COVID19 Vaccine
- Better management of the COVID19 Vaccine separated by vaccine type.
- Managed the distribution of vaccines using the ordering process where Vaccine stores see the vaccines shipped to them before the products arrive which improves planning at the facility.
- COVID19 Vaccine were short expiries so system helped redistribute to high usage areas to avoid expiries.



System web address:
web.logistimo.com

- *For more details:*
Joseph.Mtenje@undp.org
Austine.Omiunu@undp.org

CONCLUSION



TechNet-21

