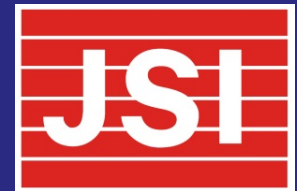




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Leveraging Mobile Reporting to Improve Vaccine Stock Management

Abebe Kassahun
John Snow, Inc.
November 2017





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Strong Supply Chains Save Lives



JSI improves health logistics in Africa, Asia, the Caribbean, Eastern Europe, Eurasia, and Latin America.



We strengthen supply chains end-to-end by building systems that connect manufacturers, funders, IT experts, health ministries, pharmacies and communities.



JSI creates sustainable systems that draw on >30 years of strong relationships with country governments, commercial sector, civil society, academia, and the donor & multilateral communities.



JSI manages more than **30 SCM projects**. We have managed \$3B+ of health procurement experience on 125 SCM projects implemented in >100 countries.



We are passionate about using our public health and supply chain expertise to help our partners eradicate malaria, increase access to contraceptives, improve routine immunization.





Plan of Presentation

- Overview of vaccine supply chain in Ethiopia
- Key features and variables of mBrana
- Findings from mBrana analytics
- Summary
- Next steps



Ethiopia: Country Profile

1. Projected Total Population 2015 (Census 2007):

- 92.05 million
 - Under-1: **2.9% (approx 3 million)**
 - Under-5: **14.6%**
 - Under 15: **44.9%**

2. Administrative Organization:

- 9 Regions, 2 City Administrations
- 840 Districts

3. Health Infrastructure:

- >300 Hospitals
- 3,500 Health Centers
- 16,500 Health Posts
- **>38,000** Salaried Health Extension Workers **3,000,000** community volunteers



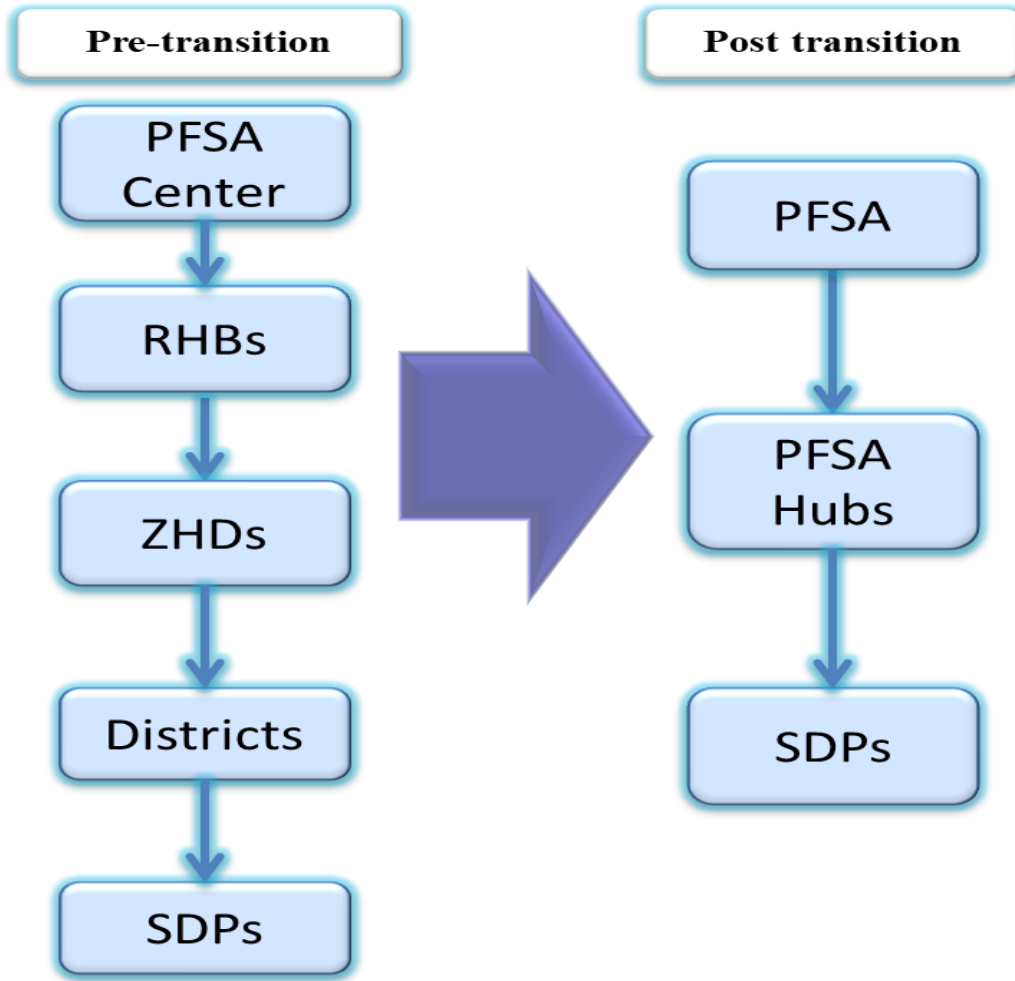


Routine Immunization Programme

- The Ethiopian EPI (Expanded Programme on Immunization) programme was launched in 1980 with the **six traditional antigens.**
- Pentavalent, PCV, Rota and IPV vaccines were introduced in 2007, 2011, 2013 & 2015 respectively
- Immunization services given through static, outreach & mobile services



Immunization Supply Chain Transition : from FMOH to PFSA (Pharmaceuticals Fund and Supply Agency)



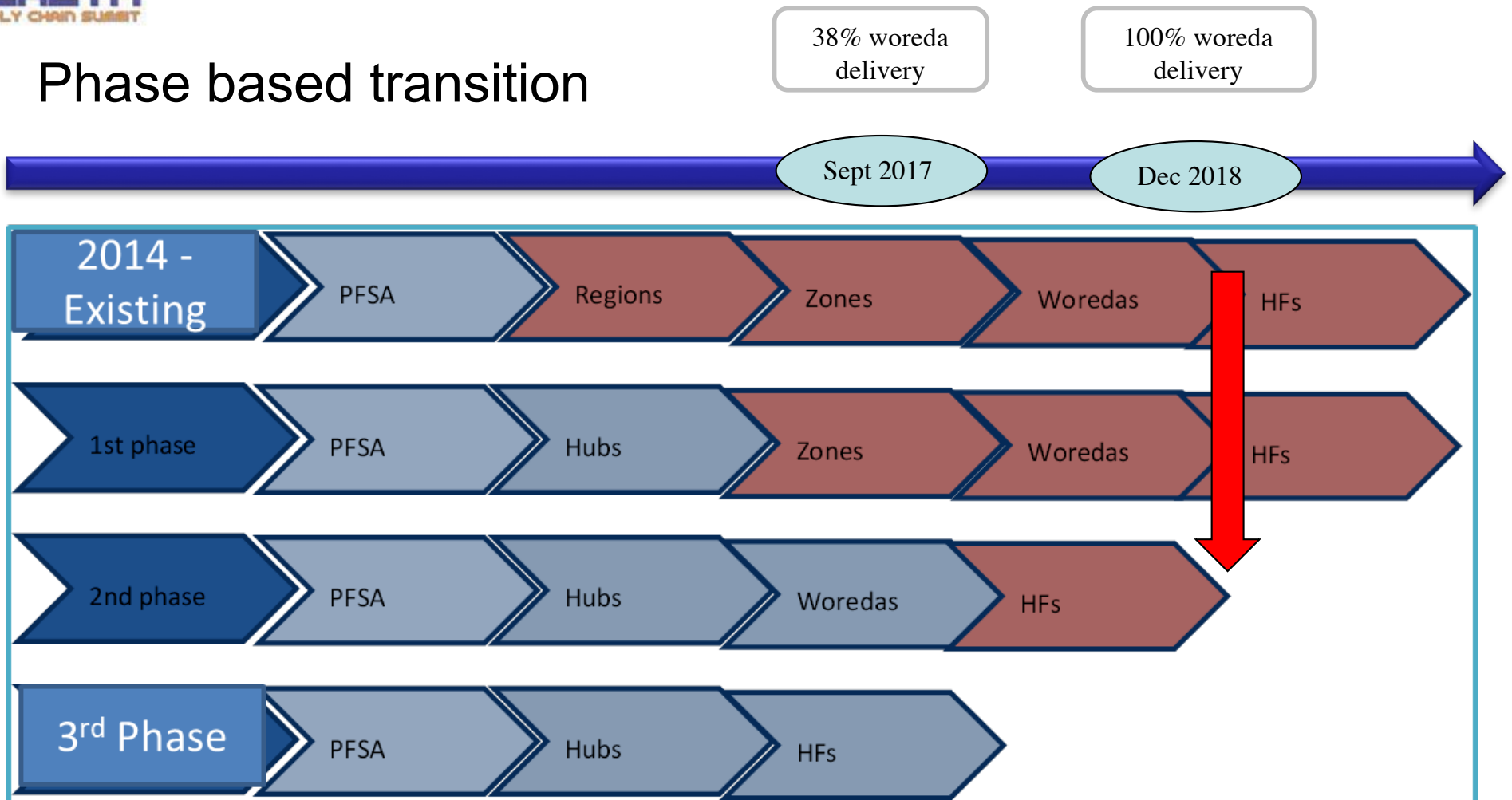
What is happening in transition?

- ✓ PFSA will deliver to districts & eventually SDPs using refrigerated trucks -
 - ✓ Place and form value addition
- ✓ Pull system
 - ✓ Time value addition
- ✓ Monthly distribution
- ✓ New cold rooms at PFSA center & hubs
- ✓ Integrated LMIS



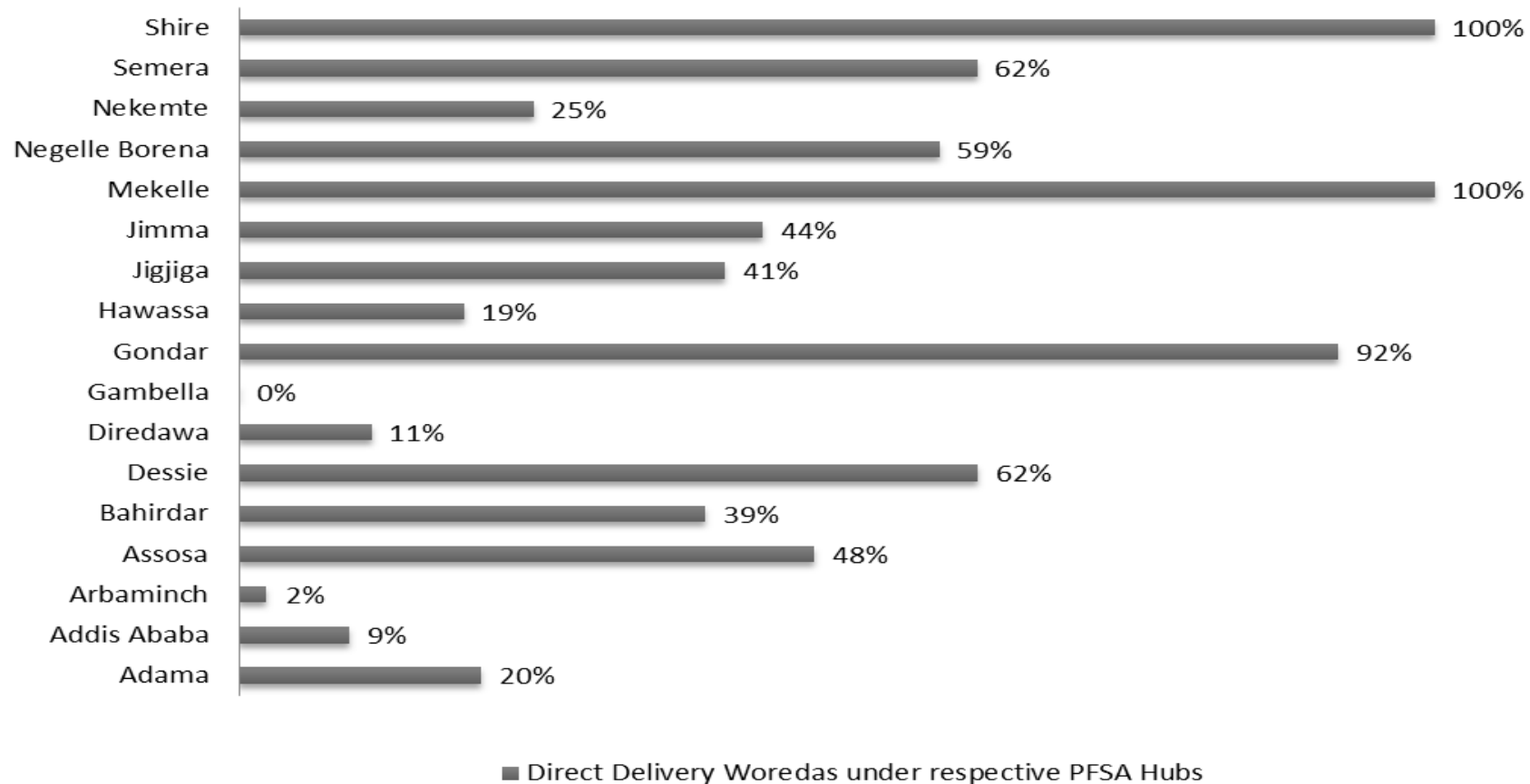
The Transition Plan Designed as *Phase Based* Approach

Phase based transition



Transition Performance – Sept 2107

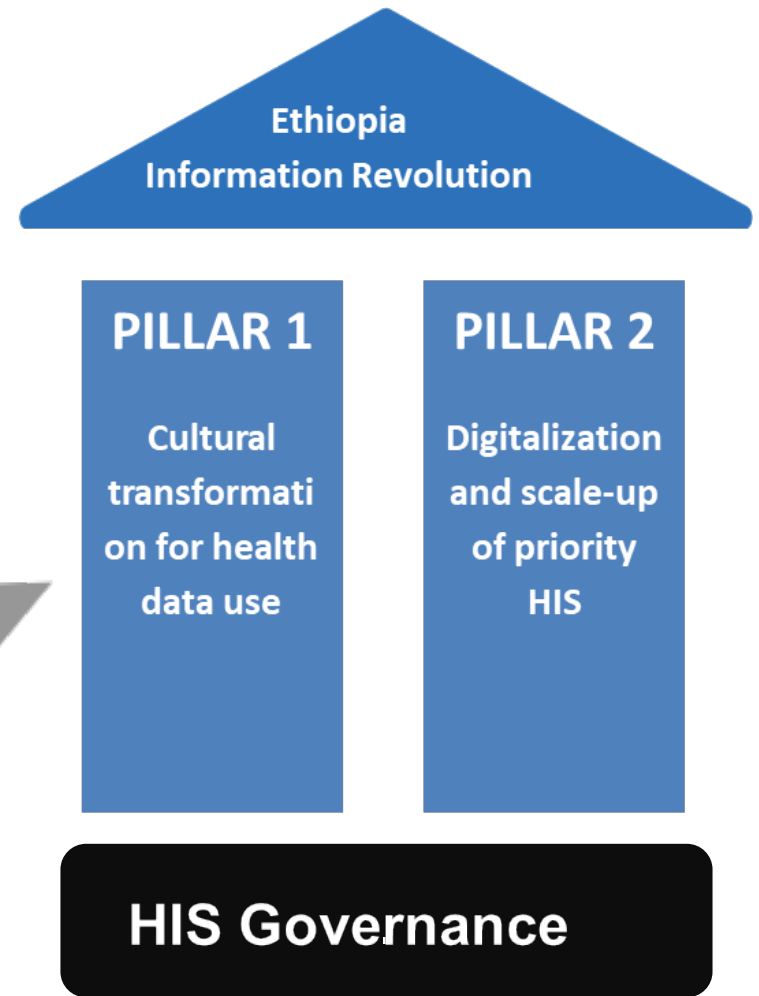
Direct Delivery Woredas under respective PFSA Hubs





Information Revolution Goal

To improve the use of high-quality routine information in the health sector, contributing to improved quality, efficiency and availability of primary health and nutrition services at all levels.





What is mBrana?

- Electronics logistics management system available both in mobile and web
- ‘Brana’ refers to an ancient Ethiopian system of record keeping
- Deployed in districts that manage vaccines and are supplied from PFSA.
- Fully interoperable with other upstream logistics tools



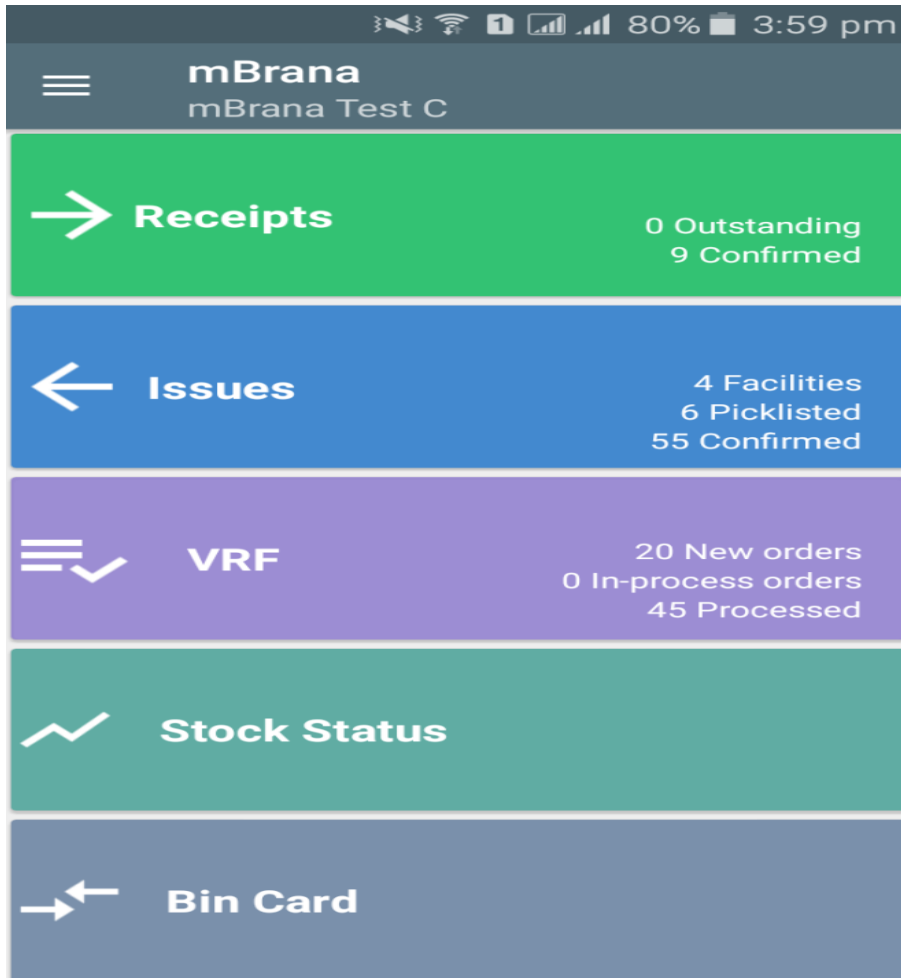
Why mBrana?

- Lack of **access to reliable and timely data** for decision making
- Poor vaccine supply chain management performance and efficiency
 - 2103 EVMA assessment shows poor performance in stock management, distribution and MIS
 - This includes limited use of standard order forms (VRF)
- Tried desktop application but poor infrastructure (electricity) and internet connection limited user acceptance

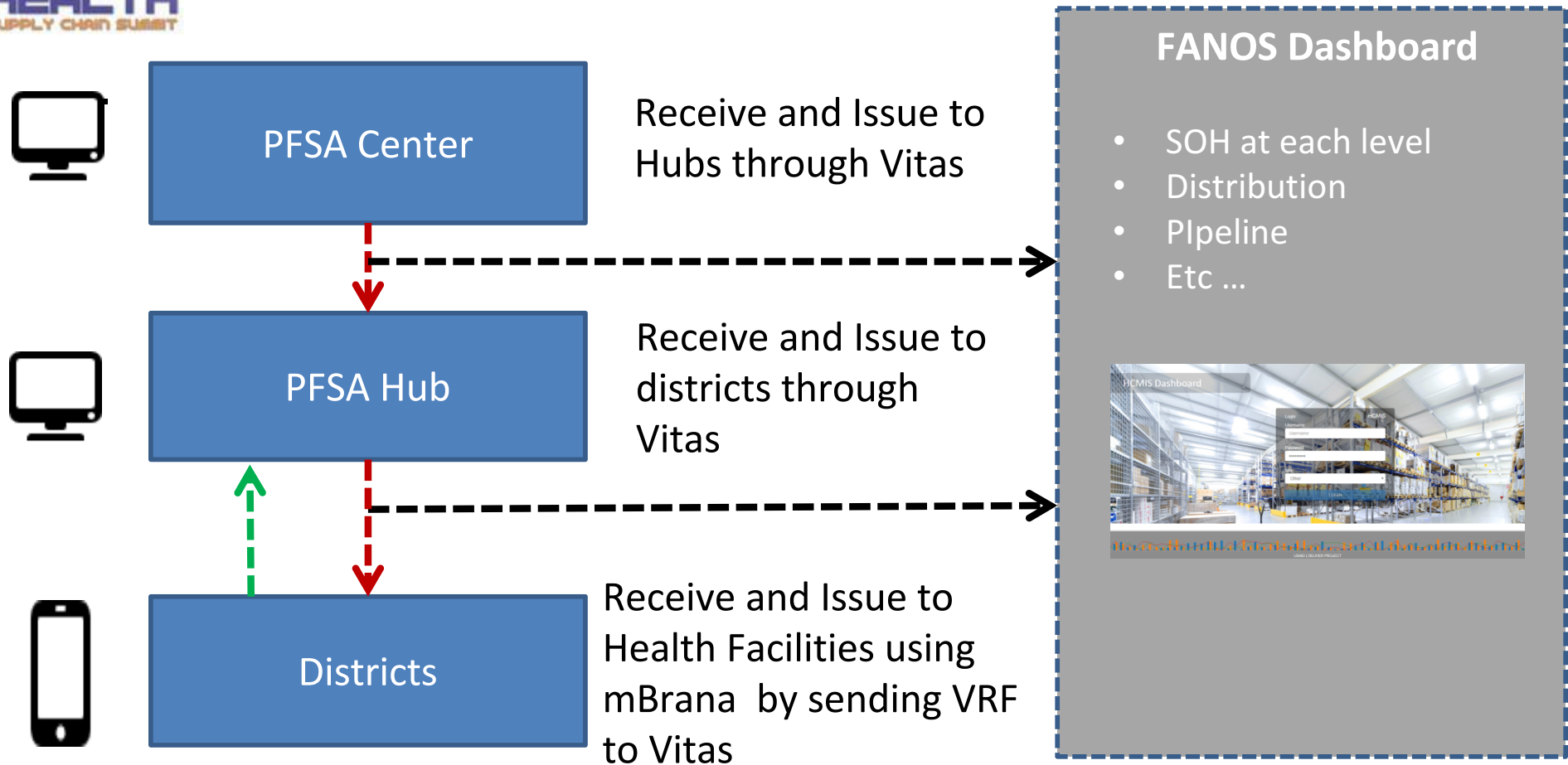
mBrana – Key Features and Variables



- vaccine commodity inventory management system for districts



mBrana and Vitas Interoperability





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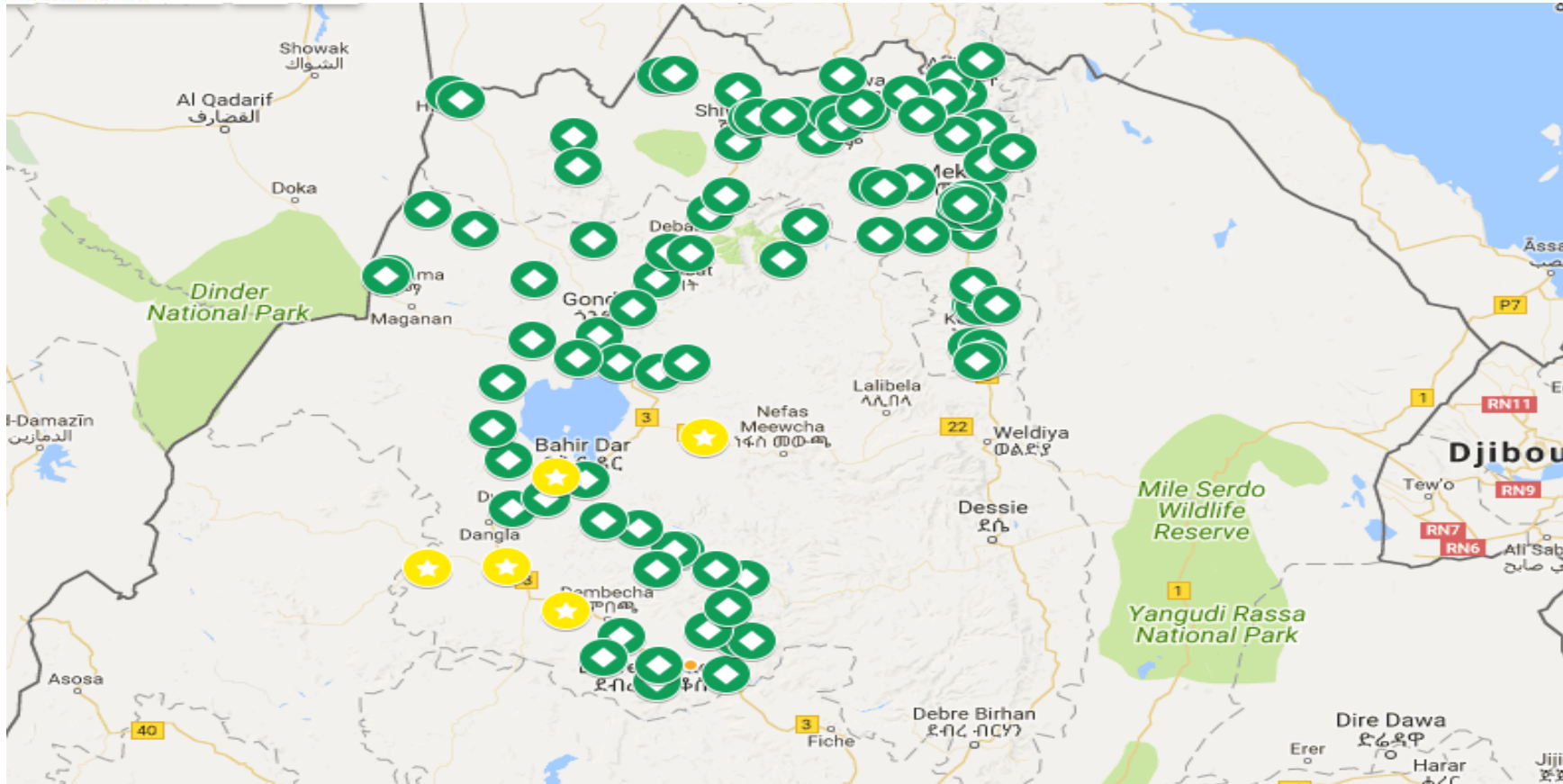
FANOS Overview

Site	BCG	BOPV	HPV	IPV	Measle	PCV	Penta	Rota	TT
Abiy Adi C	2	4	6	10	7	26	0	15	30
Adigrat Town C	0	0	0	0	1,000	0	0	0	298
Adishindum C	31	0	42	6	20	0	45	0	324
Adwa Town C	5	75	0	2	844	0	0	100	182
Ahferom C	10	3	153	37	1,066	401	965	1,167	54
Alaje C	110	116	0	74	67	544	224	330	112
Alamata Town C	14	0	20	26	1,041	0	100	150	194
Asgedetsimbla C	48	74	20	10	6,494	422	357	205	447
Atsibi Wonberta C	47	0	33	62	125	103	575	534	484
Axum Town C	6	83	389	40	102	235	438	114	140
Ayder C	20	0	0	0	2,275	0	0	0	0
Degua Temben C	33	100	50	47	395	880	580	900	69
Endamohoni C	10	23	0	12	515	154	314	233	163
Enderta C	16	74	7	27	0	263	483	358	0
Erob C	21	29	46	50	33	234	94	100	345



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mBrana has been deployed in 180 districts

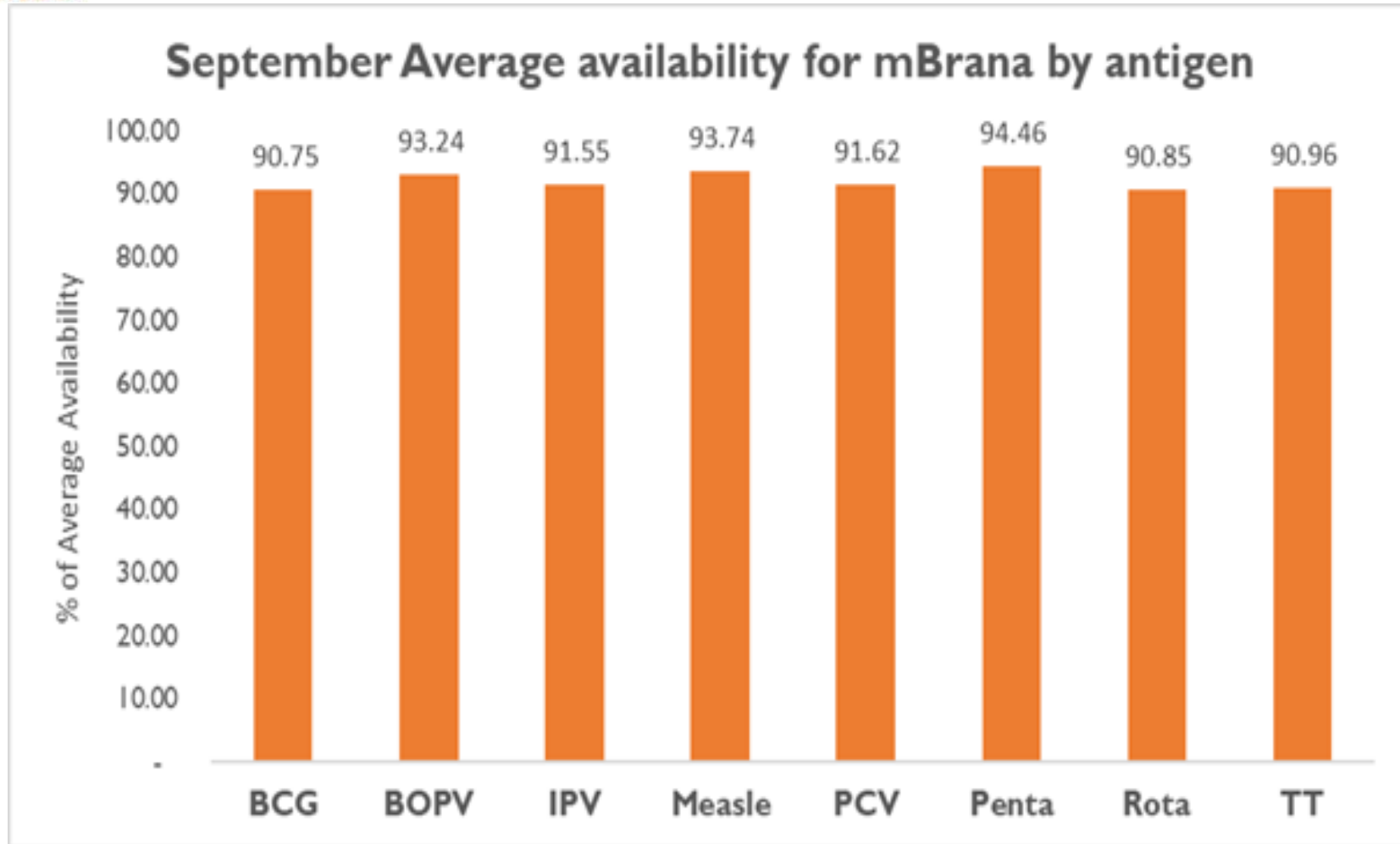




mBrana Analytics

Indicator	Definition	Base line	Sept 2017
Vaccine Stock Availability	% of district-level storage points with 100 % stock availability	NA	89.6 %
District-level Vx inventory visibility	% of district-level storage points reporting Vx inventory data to Hub	0%	21.4%
On Time and In Full (OTIF)	% of deliveries to district level storage facilities delivered on-time and in-full	NA	96.6%

Average availability per antigen (districts)





Summary

- Interoperability with PFSA MIS allows:
 - “Automatic” ordering
 - Syncing of data to the national FANOS Supply Chain Dashboard enhances data visibility (district stock + what is issued to facilities)
- Agile development with a local team allows system to be quickly and easily modified
- Increasing efficiency by
 - Reduced reporting time from up to five days to minutes
 - Reduction of related costs such as fuel, per diem salary etc
- Mobile platform cheaper and easier to use, improved user acceptability (than desktop/internet based system)
- Real time data visibility
- Open source system, developed locally enhances sustainability



Next Steps

- Scale up nationally to 637 districts by Dec. 2018
- On going system & user support
- Support for improved inventory management, e.g. use of VVM feature
- Monitor data quality
- Data use for real time decision making
- Pilot system extension to facility level
- Evaluation/Impact studies



Thank You