



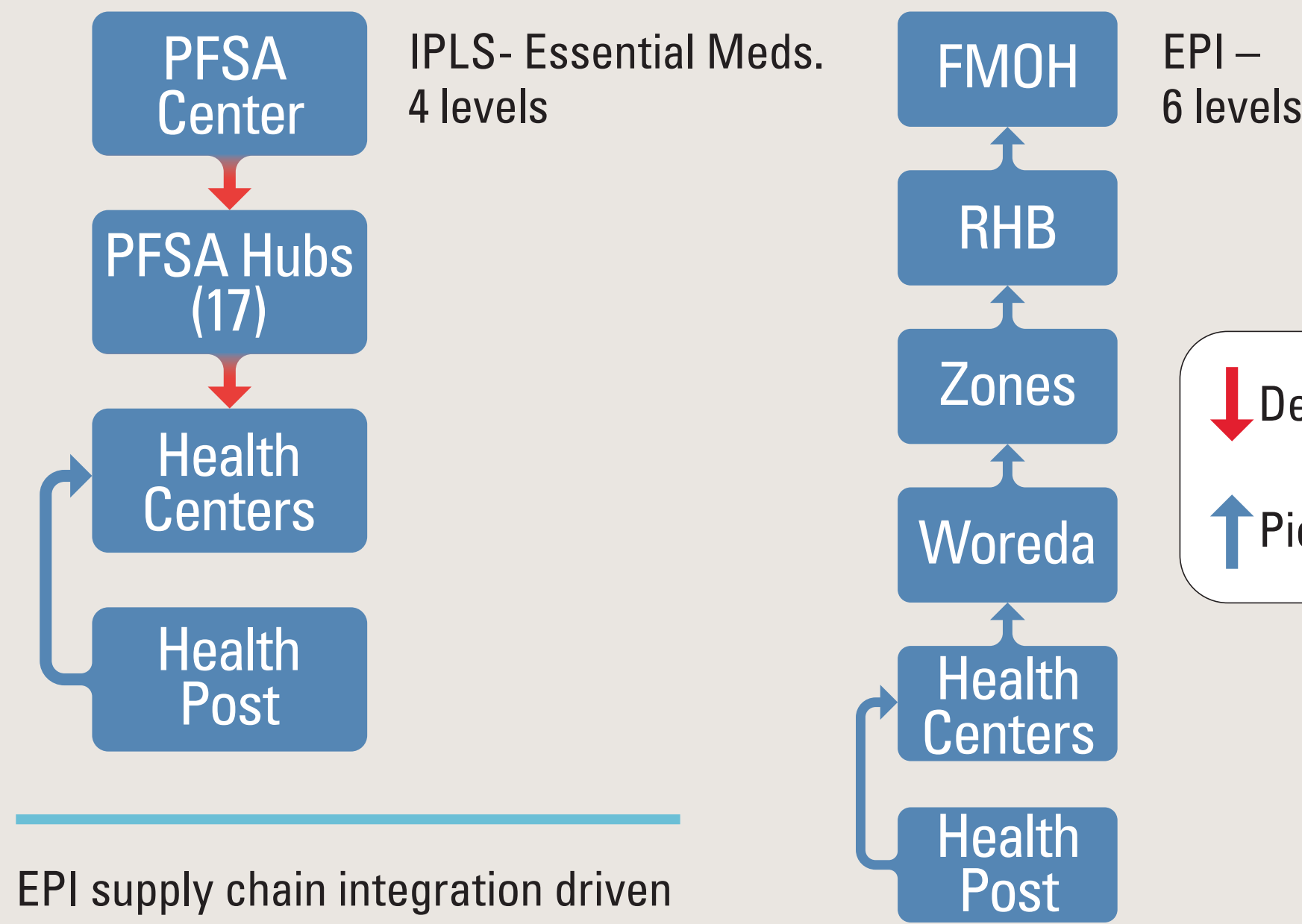
Logistics Management Information Systems – Pillar of Supply Chain Integration

The Ethiopia Experience

Supply Chain Timeline

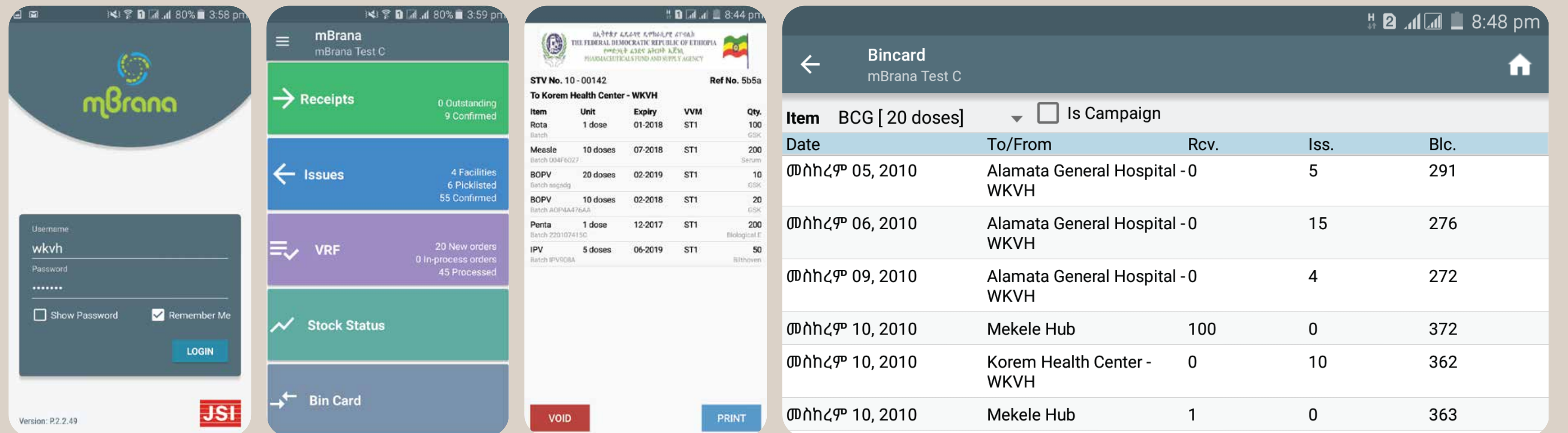
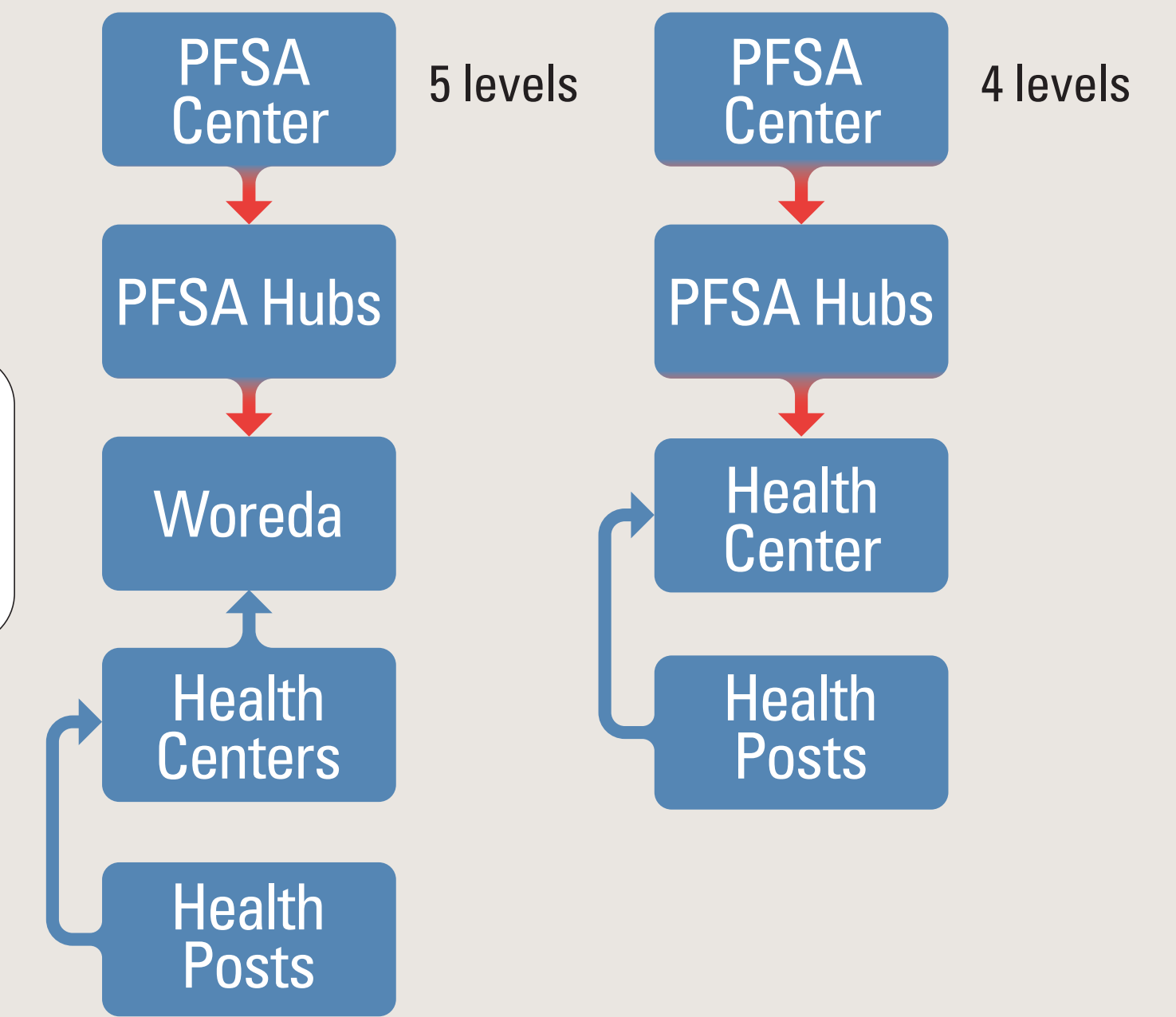
- 2007** Integrated Supply Chain Agency- PFSA - created
- 2009** Health Commodity Management Information System (HCMIS): first automation of LMIS begins
- 2013** LMIS Integration – HCMIS incorporates vaccines
- 2016** Mobile LMIS systems for district level EPI begins
- 2017** All PFSA hubs managing vaccines; delivering to woredas (districts)
- 201?** Direct delivery of vaccines to health facilities

Pre Integration Supply Chain – IPLS & EPI



EPI supply chain integration driven by need for increased efficiency, and sustainability including a reduction in supply chain levels and supply chain optimization

Current & End State EPI SC

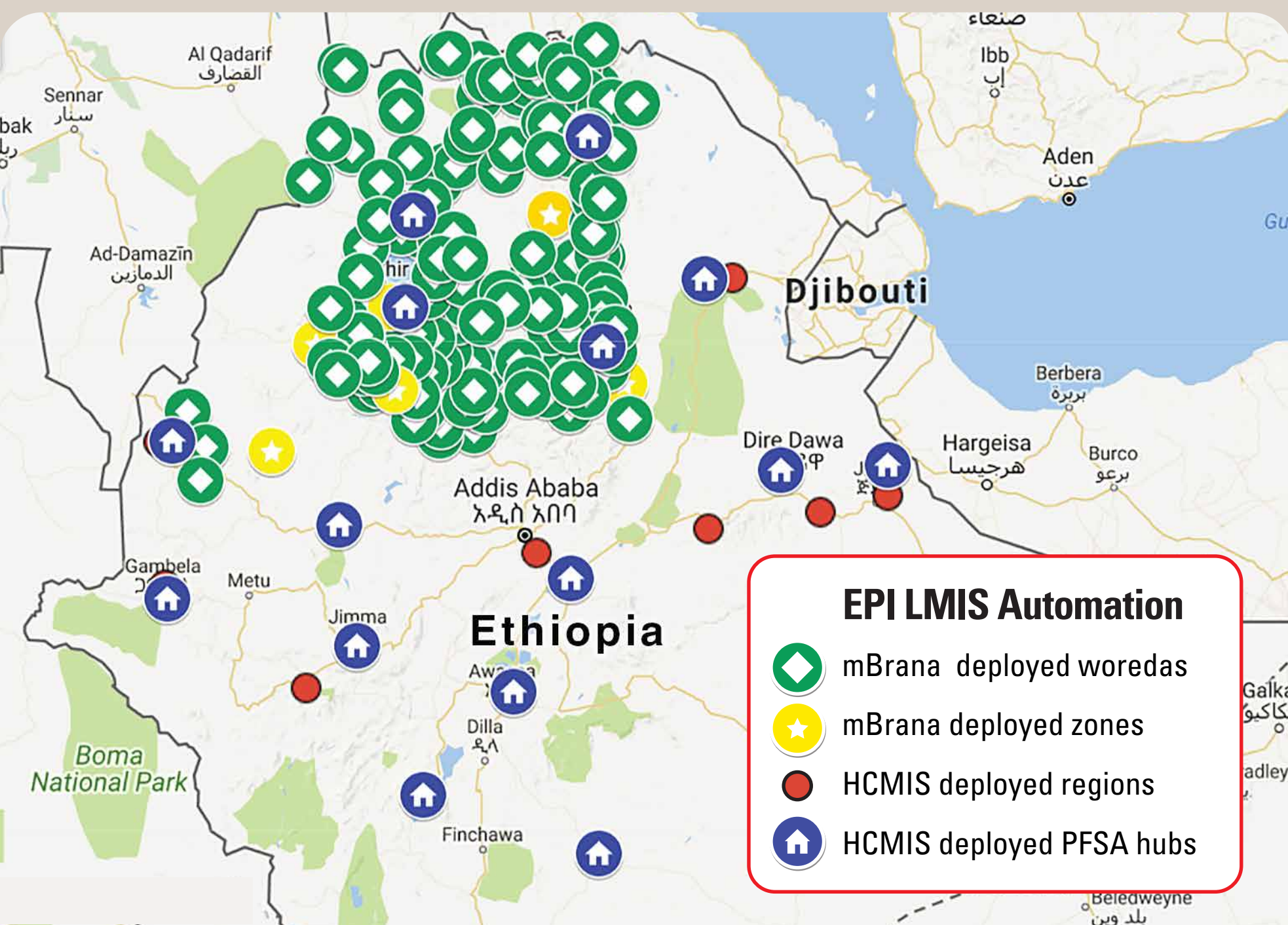


Pre Integration LMIS

- IPLS**
Center: Automated
Hubs: Automated
Health Center: Paper/automation
Health Post: Paper
- EPI**
Paper at all levels

Current EPI LMIS

- Center:** Automated – Live Data Visibility
- Hubs:** Automated – Live Data Visibility
- Woreda:** c. 25% automated with live data visibility, target 100% by end of 2018
- Health Center:** Paper
- Health Post:** Paper



Ethiopia SC Integration By Component

	Legacy	Current	Goal
Quantification	Vertical	Vertical	Vertical
Procurement	Vertical	Vertical	Integrated?
LMIS	Vertical Paper	Integrated Automated & paper*	Integrated Automated
Storage	Vertical	Integrated*	Integrated
Ordering	Vertical	Vertical	Vertical
Distribution	Vertical Pick up Cold boxes	Vertical Delivery & pick up Refrigerated & cold boxes	Vertical Delivery Refrigerated
Management	Vertical	Integrated	Integrated

While many components should and will remain vertical, LMIS has been the focus of integration
* Integrated at PFSA, but at health facilities mainly vertical

Benefits of Integrated LMIS

- Cost effective
- Increased data visibility & access (all data in one place without interfaces)
- Faster implementation
- Enhanced sustainability

Lessons Learned

- LMIS is an obvious area for integration, and LMIS integration can be done independently of other SC integration
- Mobile technology particularly suited for vertical SC components (e.g. ordering, receipt & issue) due to smaller number of items being managed
- Having all supply chain data in one dashboard increases data use

HCMIS

- Warehouse Management
- Procurement
- Costing
- Interoperable with Financial Management
- Vaccine specific features (e.g., VRF)
- Deployed at PFSA Center & Hubs (regions)

mBrana

- Inventory management
- Requisition/Issuing
- Basic reports
- Vaccine specific features (e.g., VRF)
- Deployed at woredas (currently 150+ with plans to reach 600+ by 2018)

Systems Fully Interoperable for Ordering & Data Sharing

FANOS Supply Chain Dashboard: Data Visualization & Decision-Making

Master Data Application

All software systems are open source, and developed in Ethiopia