EPSA's journey

Becoming a data- and performance-driven organization in the pursuit of ISO 9001:2015 certification

Contents

- EPSA: The Challenges, Objectives, and Solutions
- The Partners
- The Timeline
- The Warehouses
- The Journey
- The CoE Approach
- The CoE Achievements
- The CoE Conclusion
- The Closing Thought

EPSA in a nushell

The Ethiopian Pharmaceutical Supply Agency (EPSA) ensures the uninterrupted supply of pharmaceuticals to the public at an affordable price.

With over seventy years of service, EPSA is a veteran institution in providing pharmaceuticals, laboratory reagents, medical equipment and supplies to the Ethiopian people.

EPSA has launched an all rounded reform in its work procedures.

Challenges

- Master data collection and management.
- Limited visibility into inventory levels across various warehouses.
- Adherence to good storage and distribution practices.
- Low stock availability, and expired stock.
- Long delivery schedules.

Objectives

- Become Africa's leading public health supply chain organization.
- Become data- and performance-driven.
- Improve operational maturity.
- Prepare for ISO 9001:2015 certification.

Solutions

- Expand on a Centre of Excellence (CoE project piloted in 2018.)
- Implement GRIDD methodology.
- Deploy custom-built maturity modeling toolkit.
- Use Lean Sigma Six principles.
- Develop Key Performance indicators.

The CoE Approach   *Perfected in Practice*

The CoE approach combines several well-known and proven business optimization techniques and disciplines:

GRIDD Methodology

GRIDD is a robust, scalable methodology that improves supply chains in a sustainable, independent way.
It is effective in measuring and improving supply chain networks' levels of maturity.

Maturity Modelling Toolkit

Deploying a custom-built maturity modeling toolkit in a "phased gate" manner that requires each project stage to be reviewed before moving on to the next.
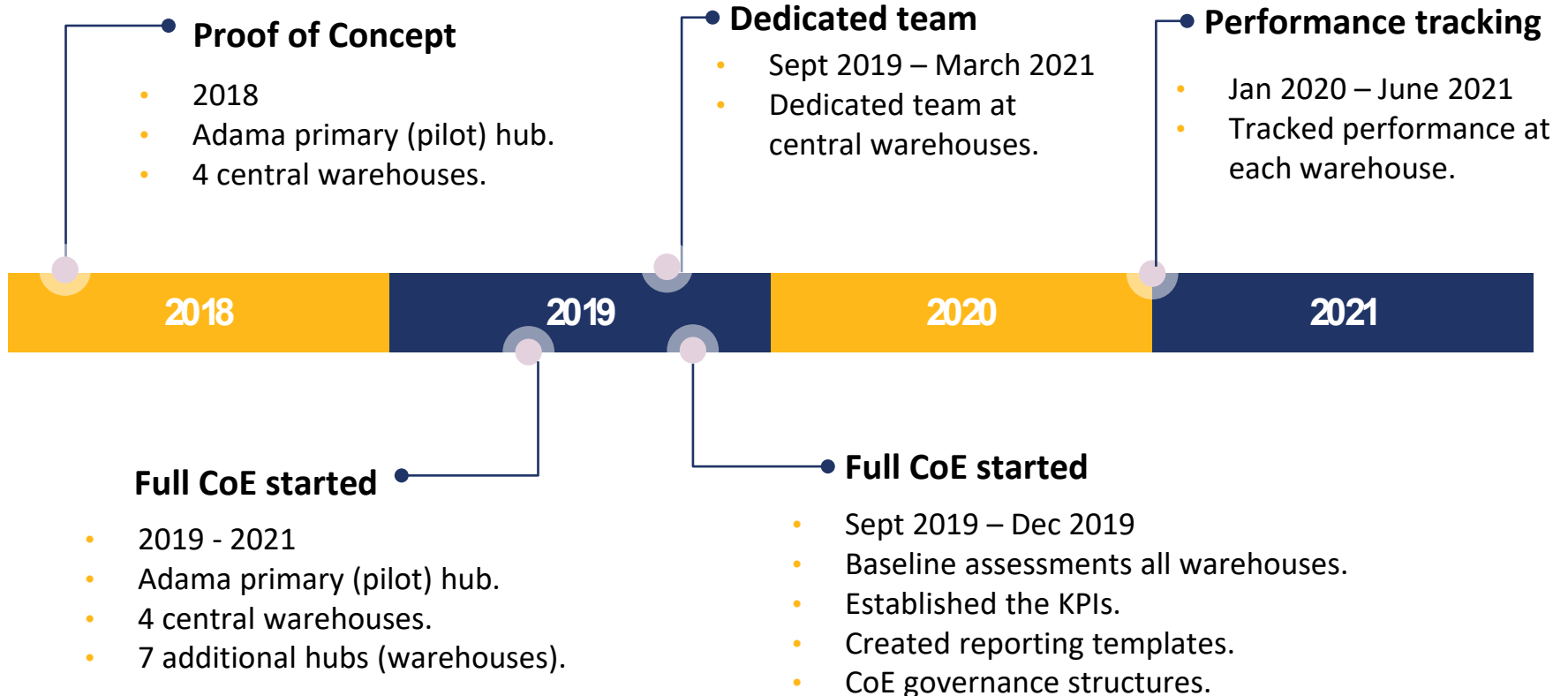
Lean Sigma Six

Using Lean Sigma Six principles to improve performance by systematically removing waste and reducing variation through collaborative team effort.

Key Performance Indicators (KPIs)

Developing KPIs which are critical measurements needed to inform and track change and improvements.

The Timeline

Proof of Concept
- 2018
- Adama primary (pilot) hub.
- 4 central warehouses.

Dedicated team
- Sept 2019 – March 2021
- Dedicated team at central warehouses.

Performance tracking
- Jan 2020 – June 2021
- Tracked performance at each warehouse.

2018 **2019** **2020** **2021**

Full CoE started
- 2019 - 2021
- Adama primary (pilot) hub.
- 4 central warehouses.
- 7 additional hubs (warehouses).

Full CoE started
- Sept 2019 – Dec 2019
- Baseline assessments all warehouses.
- Established the KPIs.
- Created reporting templates.
- CoE governance structures.

The Warehouses > 25 in total

4 Central Medical Stores = Tier 1
8 Auxiliary Warehouses
8 other warehouses off-site
In/around Addis Ababa

7 Primary Hubs = Tier 2
Bahir Dar, Dessie, Dire Dawa, Hawassa, Jimma, Mekelle, and Nekemte.

Secondary Hubs = Tier 3
Shared CoE solutions and tools with peer in interest of improving health outcomes.

The CoE Achievements

VISIBILITY

| Data Management | Inventory management | Warehouse Management | Maturity Growth |

Visibility

By systematically solving the shortcomings in data management, EPSA was able to improve visibility across its many operations and warehouses.

Improved visibility led to several positive outcomes.

Improved stock availability and shortened delivery schedules:

- Shortening "dock-to-stock" lead times.

- Improving inventory data.

- Reducing the number of annual stock counting days.

- Clearing expired stock that took up space in Central Medical Stores and resulted in the use of auxiliary warehouses which further complicated visibility and distribution.

Data Management

Master data

Collected product profile info and volumetric info for EPSA's 1,600 active SKUs.

Master data management is critical in enabling data-driven decision making.

Monitoring

Developed information collection tools for warehouse activities such as stock receiving into EPSA's network and distribution into the regions.

Monitoring is needed to progress from a reactive to a proactive data-driven operation.

COVID-19 reporting

Developed customized warehouse operations reports to provide EPSA's with real-time network storage capacity information, such as open pallet locations.

Reports enable informed decision making and improves distribution planning. At the peak of pandemic, EPSA was able schedule inbound COVID-19 products while they were still in transit to Ethiopia.

Inventory Management

The CoE implemented several private sector best practices to develop capacity, improve the accuracy and efficiency of inventory management, and ensure accurate put-away, and the efficient use of warehouse space.

50%
Reduction for delivery schedule between pilot hub and health facilities in 2018.

68.5%
Improvement in dock-to-stock lead time over 10-week period:
12 days to 3.8 days.

49%
Improvement in inventory accuracy at CMS over 9 months*.

23%
Improvement in inventory accuracy at Primary Hubs over 8 months*.

88%
improvement in annual stock taking days.
42 days to 4 days.

Maintained inventory accuracy above 95% for the last five months of the program.

Warehouse Management

Warehouse optimization was critical, and the results of the interventions had a notable impact across the supply chain.

Interventions	Outcomes
• Fast-Normal-Slow analysis of the program and revolving drug fund stocks.	• Identified products that are in high demand. • Configured warehouses to position inventory accordingly.
• ABC analysis and operationalizing new central warehouses.	• Improved warehouse layouts and increased storage space. • Improved inventory management processes. • Improved order processes and information-based fleet selection. • Consolidation of stock in the central warehouses.
• Reviewed and updated expired stock and disposal processes.	• Removal of 1,200 pallets of expired stock, freeing up valuable space for fresh inbound supply.

8 − 6 = 2

Reduced the auxiliary warehouses that captured the overflow from the 4 CMS around Addis Ababa from 8 to 2.
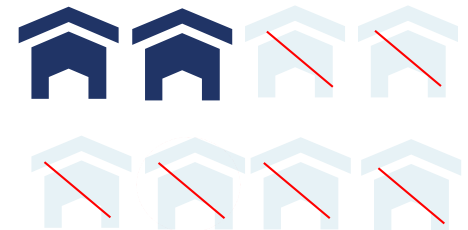
Maturity Level Growth

Overall, average improvement	Improvement at 4 Central Medical Stores	Improvement at 7 Primary Hubs
12.5%	13%	11.2%

By Feb 2021:

7 warehouses reached
Maturity Level 2

3 warehouses reached
Maturity Level 3

With continued funding and support EPSA can achieve Maturity Level 5 for ISO 9001:2015 certification.

Conclusion

The CoE approach has successfully demonstrated that EPSA's **existing infrastructure** and **human resources** can be driven to achieve higher output levels to improve product availability, while minimizing service costs and product wastage.

Private sector skills

- Delivers measurable results.
- Funding, donor buy-in, and political will is needed.

GRIDD Methodology

- Deliver sustainable supply chain networks that can operate at first world, best practice levels.
- Capable of receiving any certification, including ISO or others.

Maturity Process

- Maturity progress highly encouraging.
- Assuming the current maturity growth momentum can be maintained, four of the primary hubs can be expected to be able to pursue ISO 9001:2015 accreditation.

- Why do projects like these matter?
- Why should donors and governments care?
- How do we create accountability?

Closing thought

Projects like the CoE, that drive sustainability, has financial benefits to the Ministry of Health and donors. It puts money back into health program budgets with minimal or no infrastructure or system investments.

An example is that, by increasing the annual stock turn rate from 0.89 to 1.5 per annum, the EPSA storage capacity is extended by approximately 10 years.

Thank you

Questions?