Linkage of Commodity Supply Chain Data Systems to Support Timely and Accurate Decision Making Processes

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Medical Commodities Program(MCP).

Learning points

1. Approach to electronic data collection linkage and analysis for decision making
2. Continuous improvement approaches
3. Achievement of data collection systems
4. Lessons Learnt
5. Conclusion and Recommendations

USAID KEMSA Medical Commodities Program (MCP)

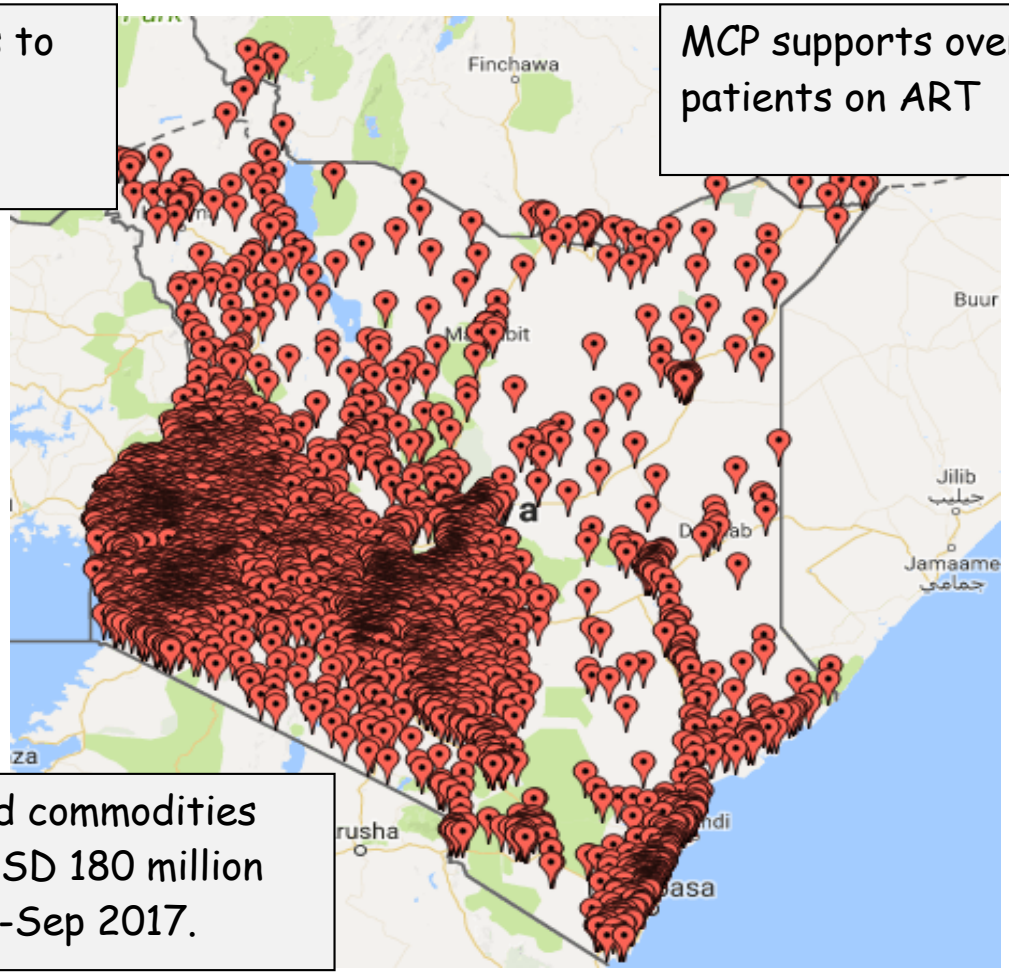
Goal

- Five year USD 650 million program mandated to establish and operate a safe, secure, reliable and sustainable supply chain management system for HIV/AIDS commodities needed to provide care and treatment for people with HIV/AIDS in Kenya.
- **Objectives**
- Forecasting and quantification, acquisition, quality assurance, warehousing and distribution.

Program foot prints

MCP distributes commodities to 11,092 facilities across 47 counties.

MCP supports over 1,089,823 patients on ART



MCP procured commodities worth over USD 180 million by Oct 2016-Sep 2017.

The big question

- If every other area of our operation remained at its current level of performance what is the one area where change would have the greatest impact?

The Problem

- In 2013, KEMSA put in place electronic data systems that operated independently leading to operational inefficiencies.
- The systems generated raw data which was analyzed externally to generate reports
- Lack of end to end data visibility caused delays in decision making, leading to delays across the supply chain. Order turn around time exceeded 30 days resulting to stock-outs

Methodology applied-DMAIC

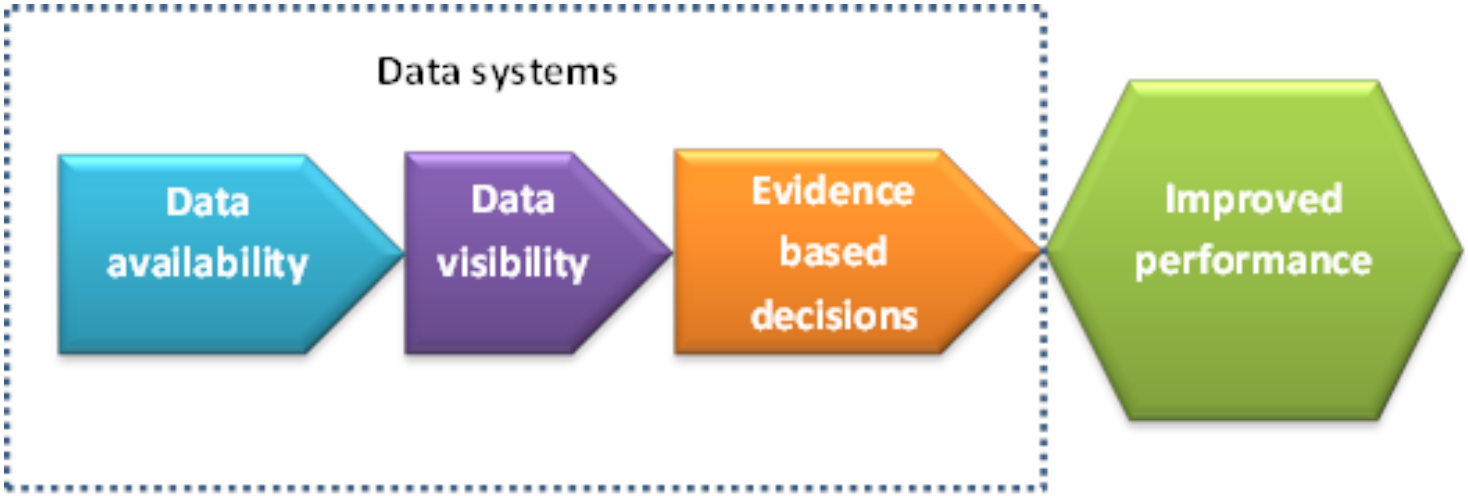
- **Define** the problem, improvement activity, opportunity for improvement ,project goals, customer requirements
- **Measure** process performance(lag and lead measurements
- **Analyse** the problem to determine root causes of poor performance
- **Improve** performance by addressing &eliminating the root causes
- **Control** the improvement processes

To address these problems, KEMSA MCP sought to:

- 1) Link the systems to enhance visibility
  - Enhance evidence based decision making
  - Enhance accountability

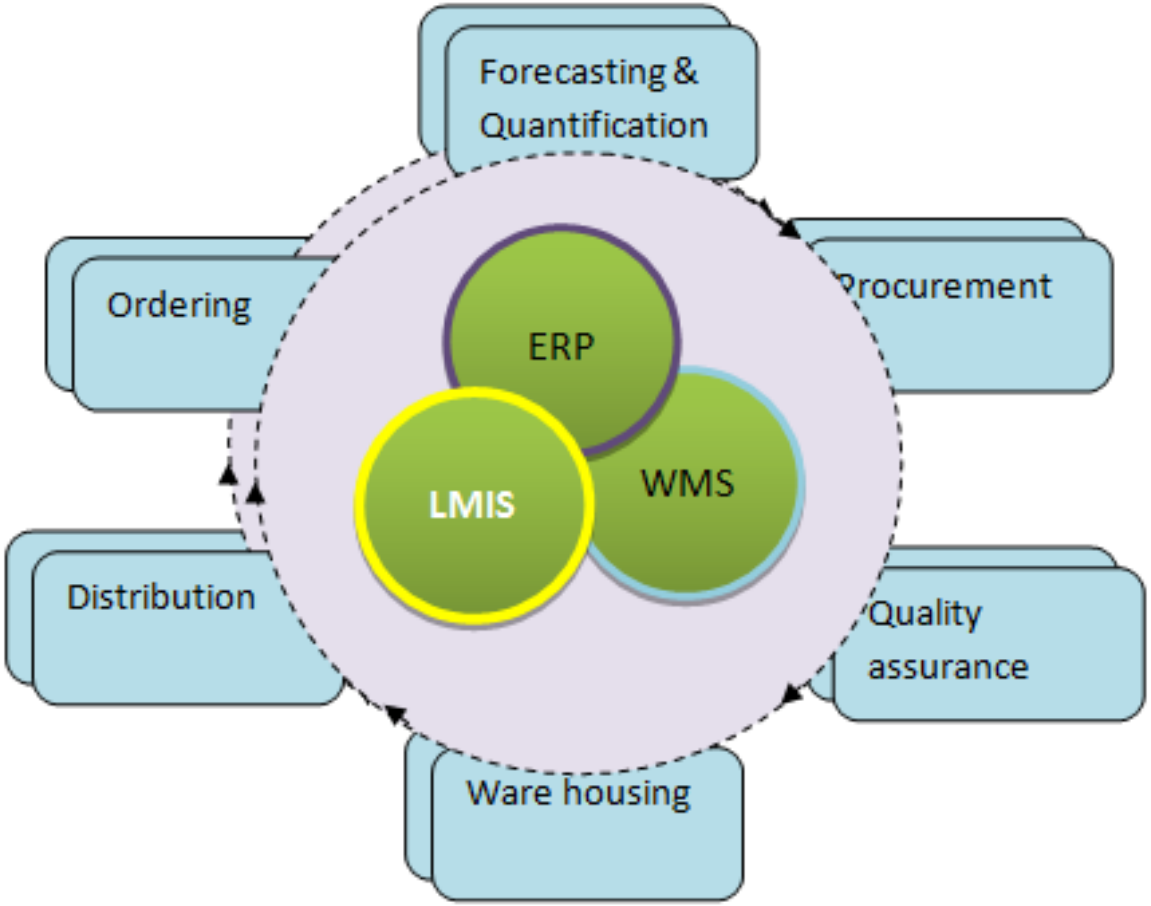
- 2) Develop system generated reports and dash boards
  - Real time
  - Timely
  - Accurate

Conceptual framework



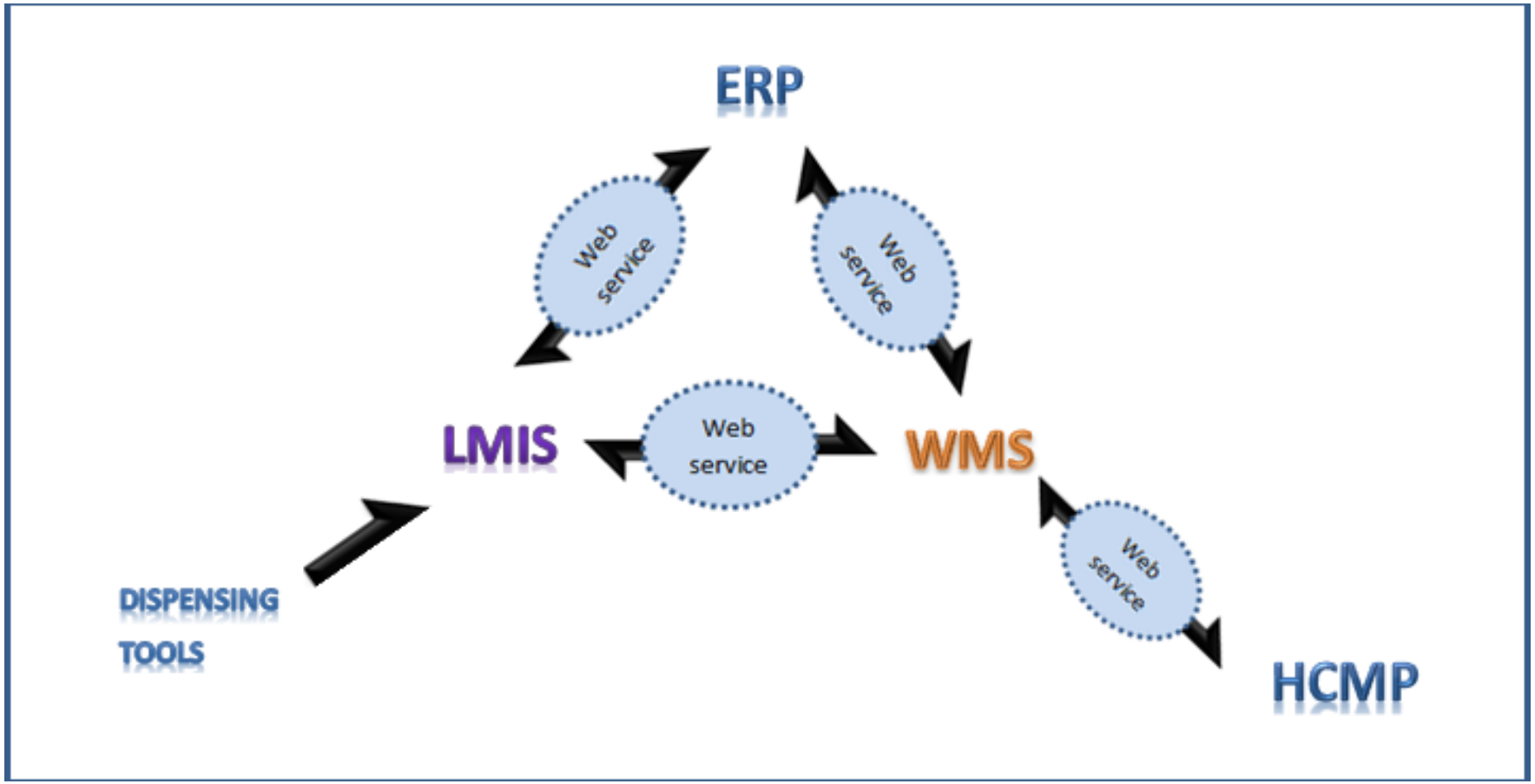
Functional areas and the Integrated Data systems

- **ERP-**
- Enterprise resource planning
- **WMS-**
- Warehouse management system
- **LMIS-**
- Logistics management system

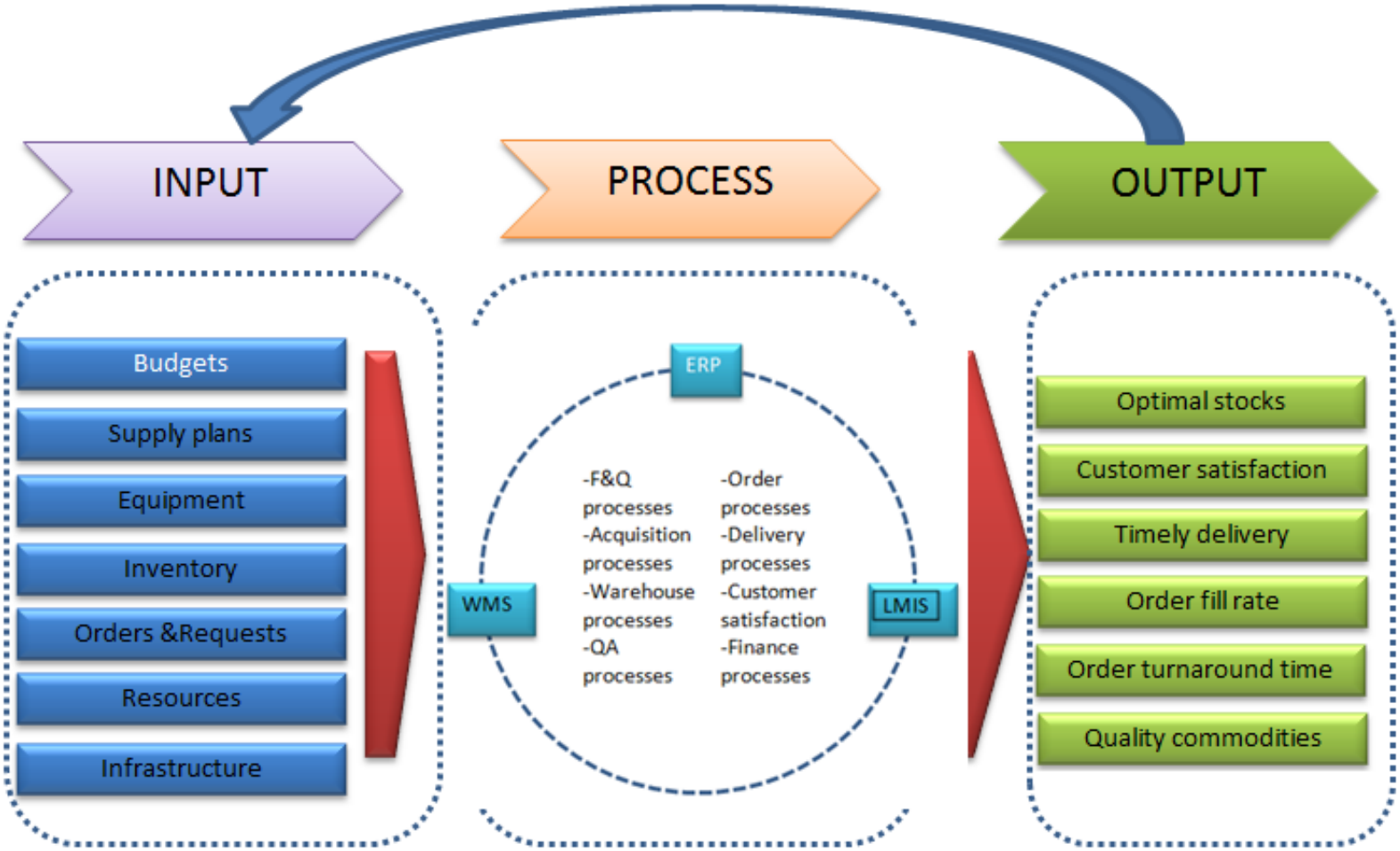


Other external systems
Dispensing tools
HCMP
Health Commodities Management platform

How are the data systems linked?



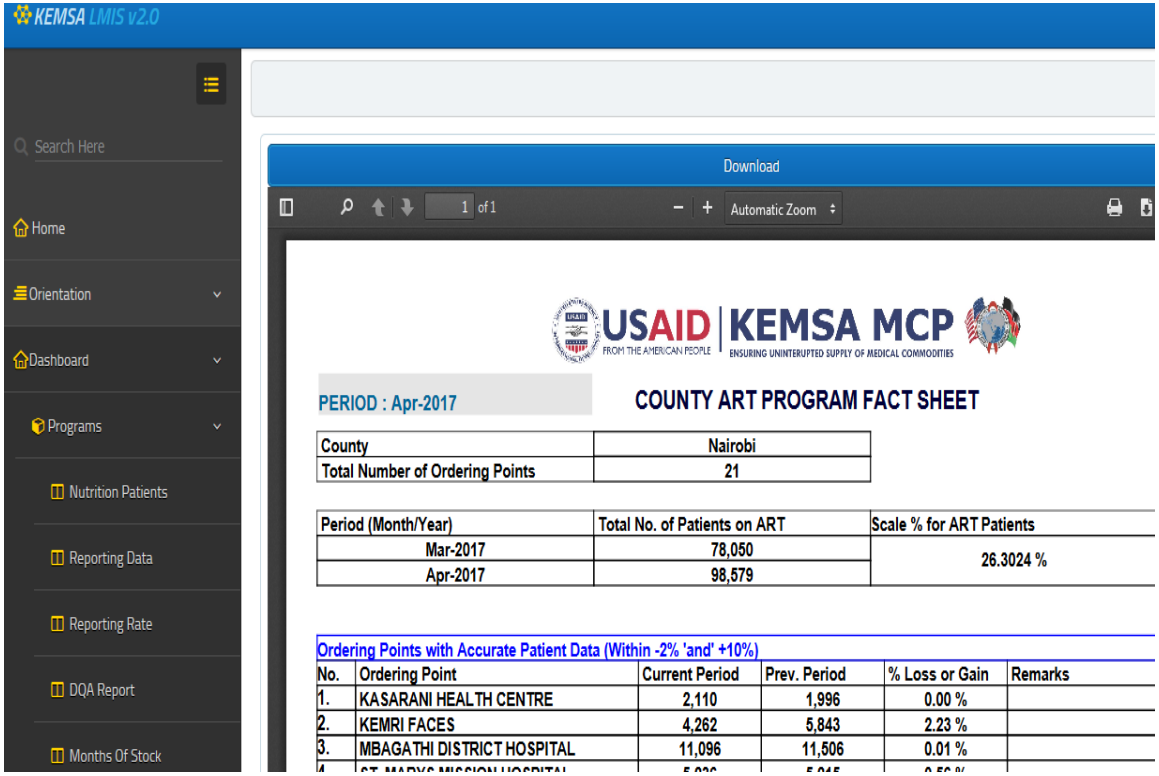
Program input, processes and their out puts



Outcomes of end to end data availability & visibility

Outcomes cont'd

- Enhancing data accuracy and timeliness through
- -Automated feedback reports to facilities on performance on data accuracy and timeliness.



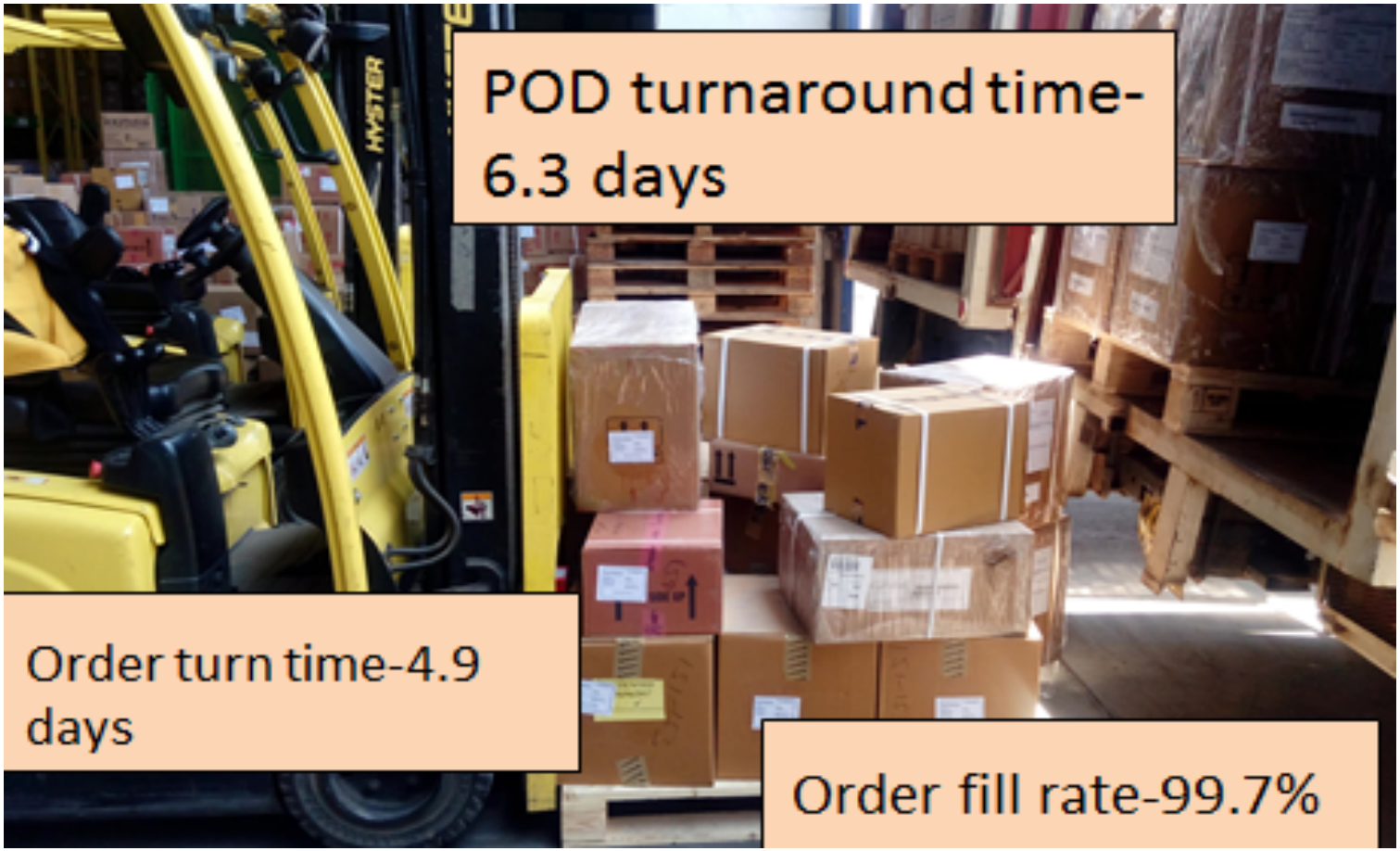
Outcomes cont'd

- **Forecasting and quantification**
- Consumption data drawn from LMIS was used to draw annual forecasts which improved from 69% to 85.3 % Oct 2016-Sep 2017)

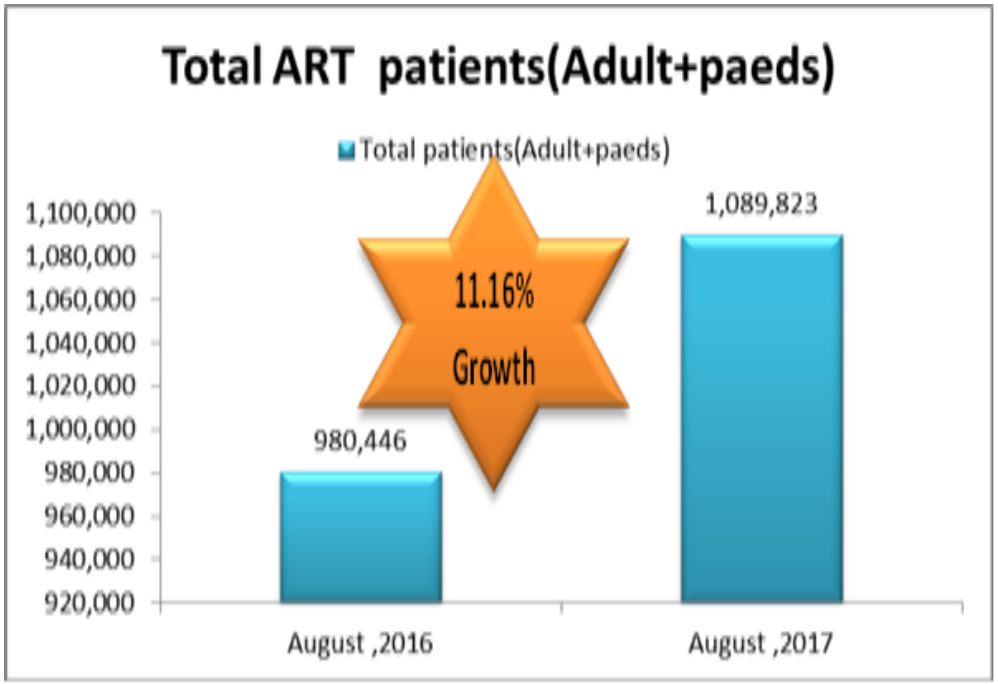
Outcomes cont'd

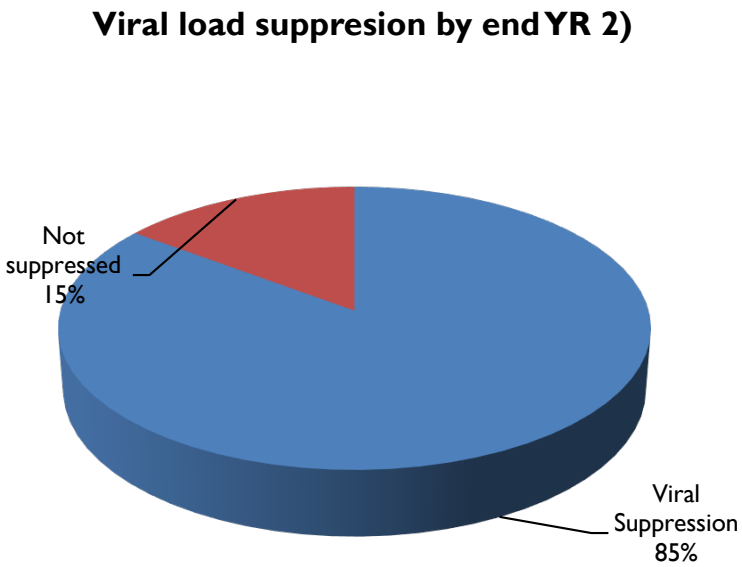
- Accurate inventory management through WMS- Optimal stocks availed both at the central warehouse and facility level
- 90% of commodities with above three months of stock
- 3.9 average Facility months of stock maintained over the year (Oct 2016- Sep 2017

Outcomes cont'd



Contributions to UNITAID 90-90-90 targets achievement





Linking commodities to health outcomes

Lessons learnt

- **<u>Data systems linkage</u>**
- Better integration of functional areas leads in improvement in communication, work flow and success of supply chains
- Sharing of data effectively and efficiently between and within functional areas leads to more efficient business processes
- Accountability enhanced
- Real time process monitoring for interventions
- Improved reporting and reduced man hours

Constraints

- Stake holders vested interests
- Long government bureaucratic processes
- Industrial strikes
- Volatile political climates

Conclusions/& Recommendations

- -Information system integration offers the greatest avenue for strengthening pharmaceutical systems through automation of processes, improved operational efficiency and ultimately improved health outcomes.
- -It is recommended that health supply chains should leverage integrated data systems. Linking the data systems with facility commodity dispensing systems to automate facility reporting is a key recommendation in ensuring timely and accurate reporting.

THANK YOU