

# USING PERFORMANCE-BASED FINANCING TO MOTIVATE SUPPLY CHAIN IMPROVEMENT AT A CENTRAL MEDICAL STORE IN MOZAMBIQUE



For more information, contact:  
Brian Serumaga  
bserumaga@jsi.com

## Authors

Brian Serumaga, Cary Spisak, Lindsay Morgan, James Rosen, Rena Eichler

### 1. Background and Introduction

This poster reports progress with a performance-based financing (PBF) program aimed at strengthening the supply chain, specifically the performance of the central medical store. In Mozambique, the central medical store (Central de Medicamentos e Artigos Médicos—CMAM) plays the key roles of procurement, warehousing and distribution of medicines and health supplies for the public sector supply chain. CMAM receives significant US government support for both health commodities and technical assistance. This has led to significant process improvements, but evidence for improvements in performance indicators is not clear.

In January 2013, USAID entered into a year-long government to government grant arrangement that conditions disbursement of tranches of USAID support on specific results at CMAM. The disbursements would take the form of a fixed amount reimbursement award (FARA) of up to \$125,000 per quarter (\$500,000 per year) if CMAM could demonstrate meeting quarterly targets on six performance indicators. These results were related to planning, distribution, and warehouse management. The aim of the PBF program is to spur innovation and hard work, reduce pilferage, and improve warehousing practices and management.

### PBF scheme Design

The design of the PBF scheme was an iterative process that required a series of meetings between CMAM, USAID Mozambique and technical experts on PBF and supply chain management. The USAID | DELIVER PROJECT and Health Systems 2020 Project (the predecessor to the Health Finance and Governance Project) collaborated on providing technical assistance in the early design stages.

It was decided to let CMAM make their own decisions on how best to utilize the FARA grant in order to achieve the required targets. At the end of each quarter, CMAM was required to produce reports on these indicators, which were then verified by a team of auditors from USAID.

Indicators were selected in areas where change had previously been difficult to achieve and where baseline data could be collected or was available. Indicators were also chosen in areas of performance which were entirely under CMAM's control, and for which measurable targets could be set and achieved within the 1 year of the program.

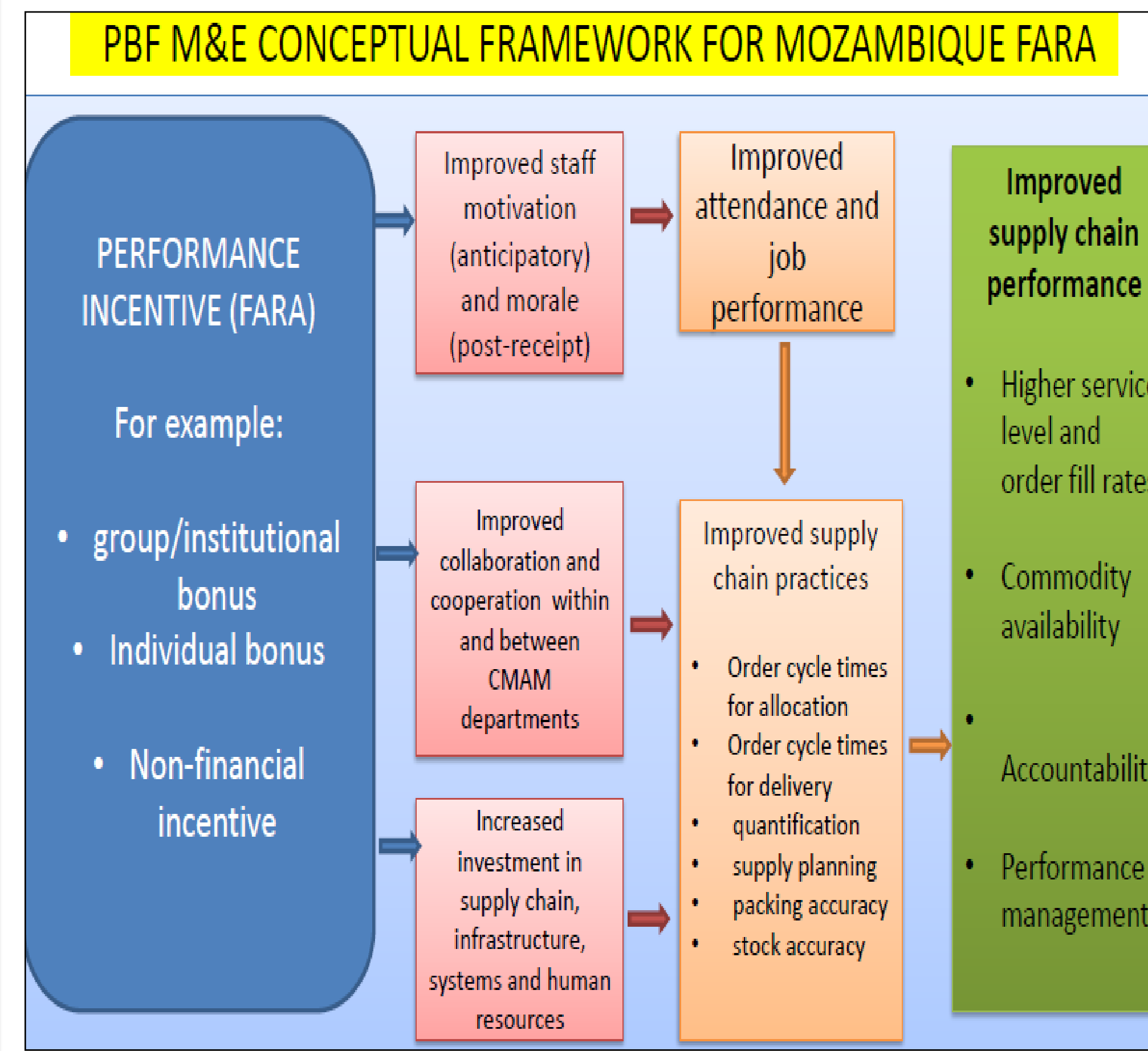
### Performance Indicators

- Updated quarterly supply plan that meets 3 predetermined quality criteria, for each product group (8 plans per quarter)
- Order processing time for distribution is 15 calendar days or less for essential medicines orders to all 18 Central and Provincial clients of CMAM
- Improved order packing accuracy. (That all items packed and ready for dispatch match packing lists)
- Number of days from receipt of orders to delivery for essential medicines orders to the 18 Central + Provincial clients is 35 days or less
- Improved stock accuracy. (That the stock status of randomly selected health products on the warehouse shelf matches the quantity posted in the computerized warehouse management system)

### 2. Theory of Change

We hypothesized that the FARA incentive would lead to improved supply chain performance through three pathways:

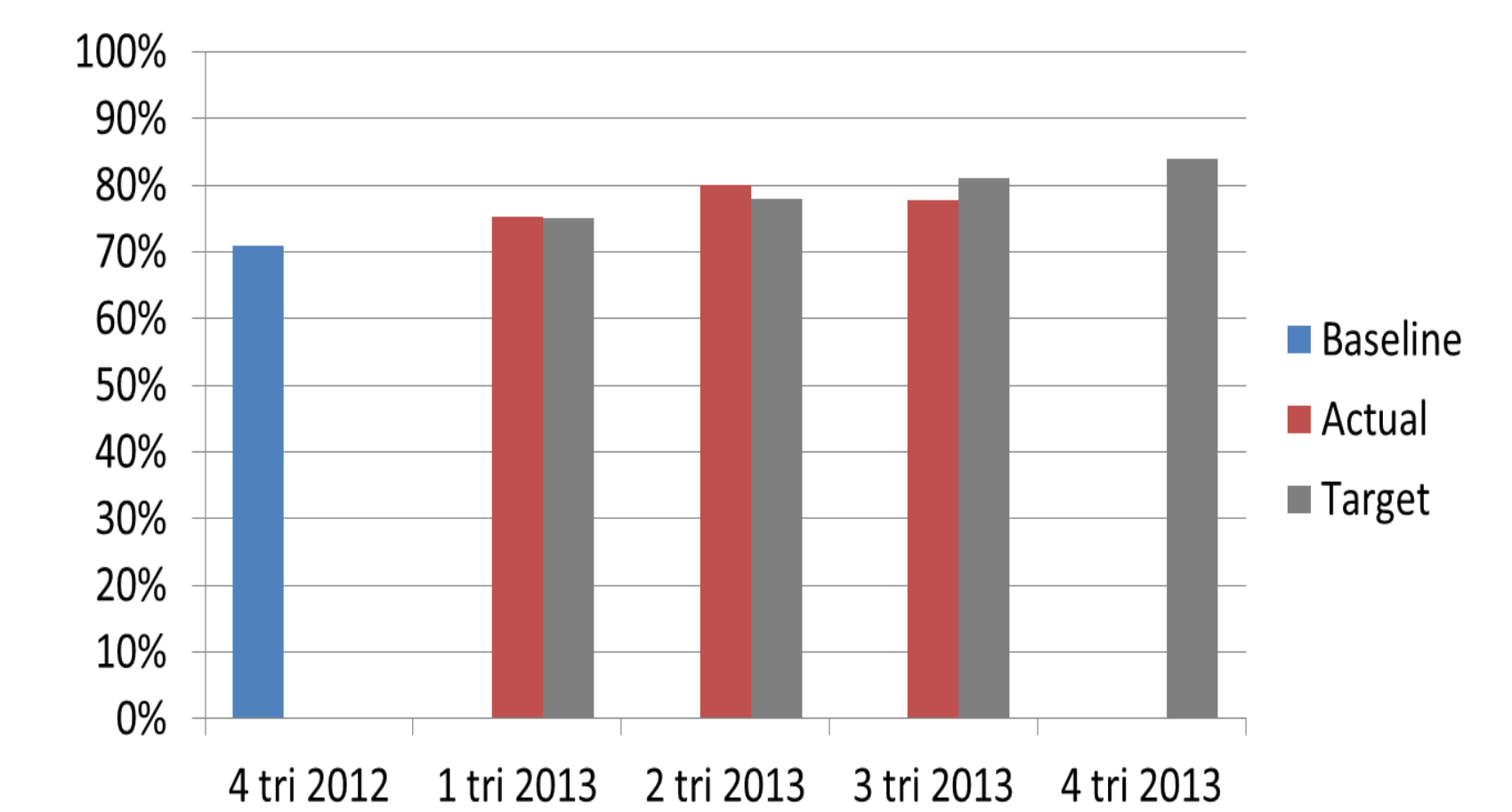
- Improved staff motivation and morale due to individual or group bonus payments
- Improved collaboration between and within CMAM departments due to the need for cooperation among departments in order to achieve the performance targets, and
- Increased targeted investments in infrastructure, systems and human resources, due to the additional funds available to CMAM through the grant. (See Graphic below)



### 3. Results

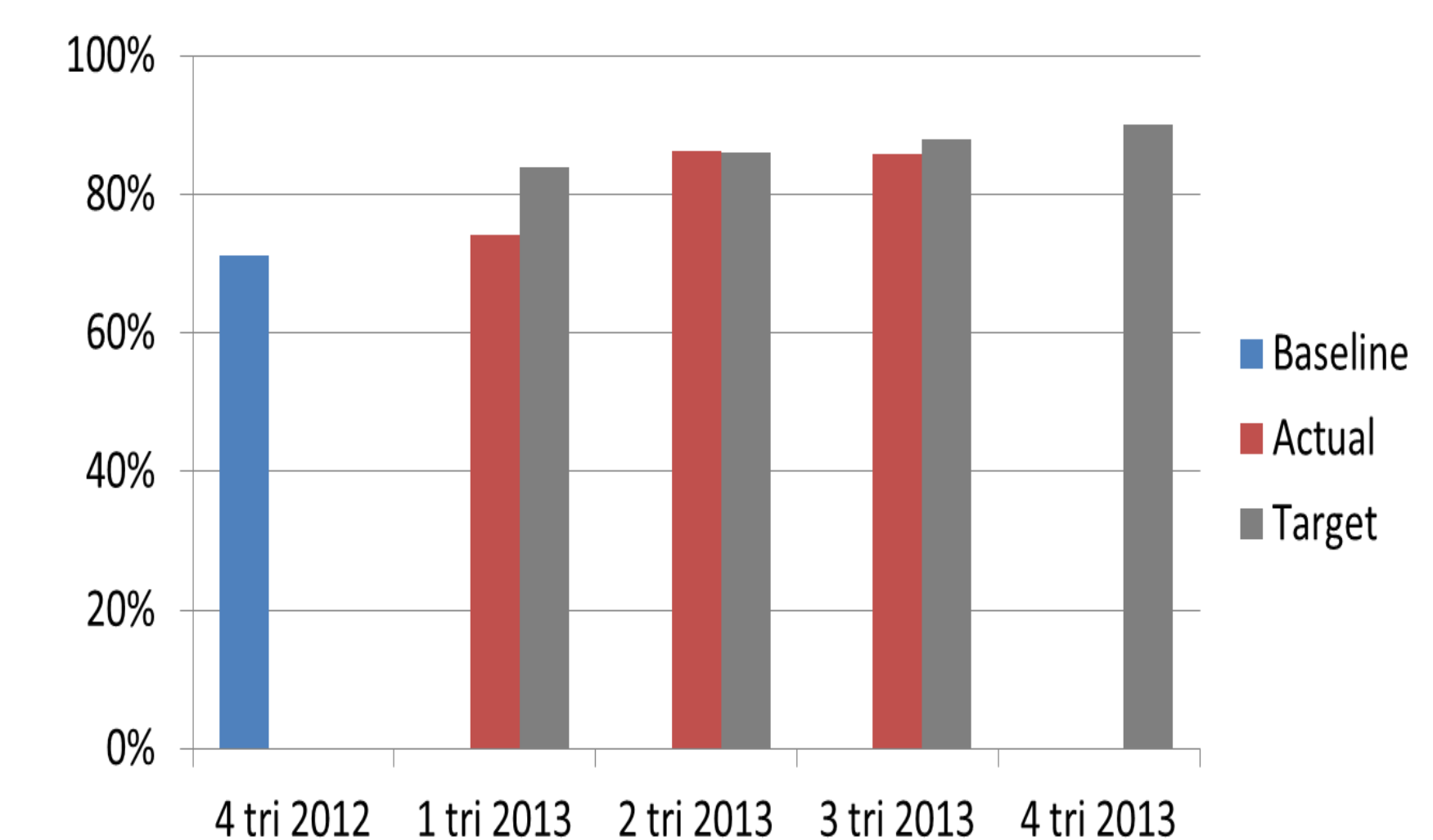
Results of the first year of the PBF program are promising. CMAM consistently achieved performance targets related to planning and distribution, and also made progress on indicators related to warehouse operations.

#### Comparison of stock status records to random physical count



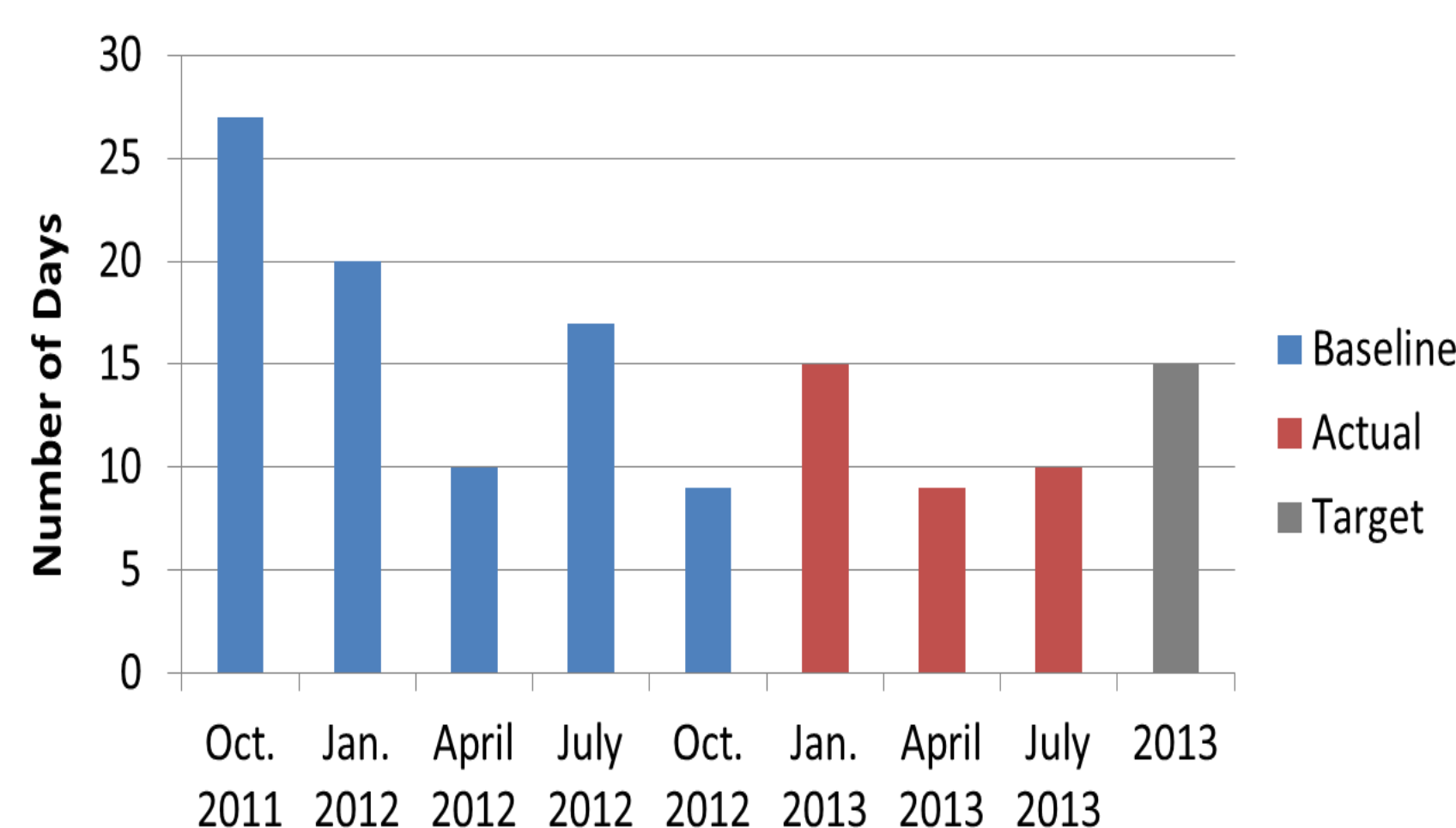
This indicator is useful for monitoring for pilferage of commodities from the warehouses and also ensuring that stock keeping records are regularly updated. At baseline (Fourth quarter of 2012), stock status of commodities recorded in the warehousing system matched the physical count for 70% of inventory commodities. Increasing targets were set for each quarter and were met in the first two quarters of 2013. There was a slight decline in performance in the third quarter of 2013, although this was still above baseline performance.

#### Comparison of Pick accuracy to packing list



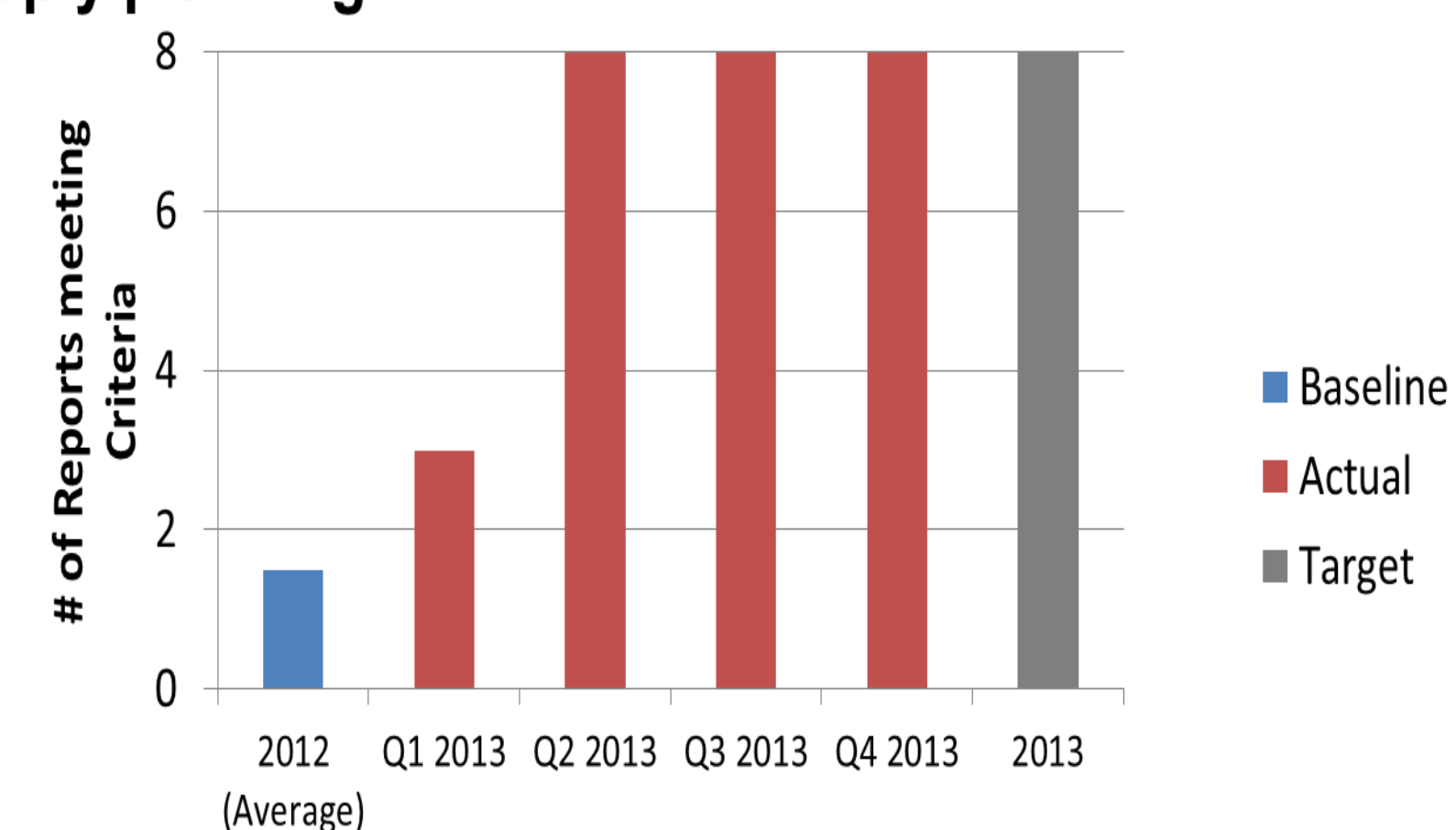
At baseline (4<sup>th</sup> quarter of 2012), pick accuracy was only 71% for all products dispatched from CMAM. Significant process revisions were undertaken by CMAM in the 1<sup>st</sup> quarter of 2013. These included the development and monitoring of adherence to new standard operating procedures for staff involved in picking and packing all commodities. As a result of these concerted efforts, CMAM was able to meet the performance target in the 2<sup>nd</sup> quarter of 2013. Performance did not change in the 3<sup>rd</sup> quarter however, due to poor results in two out of the three CMAM warehouses

#### Distribution Planning Time



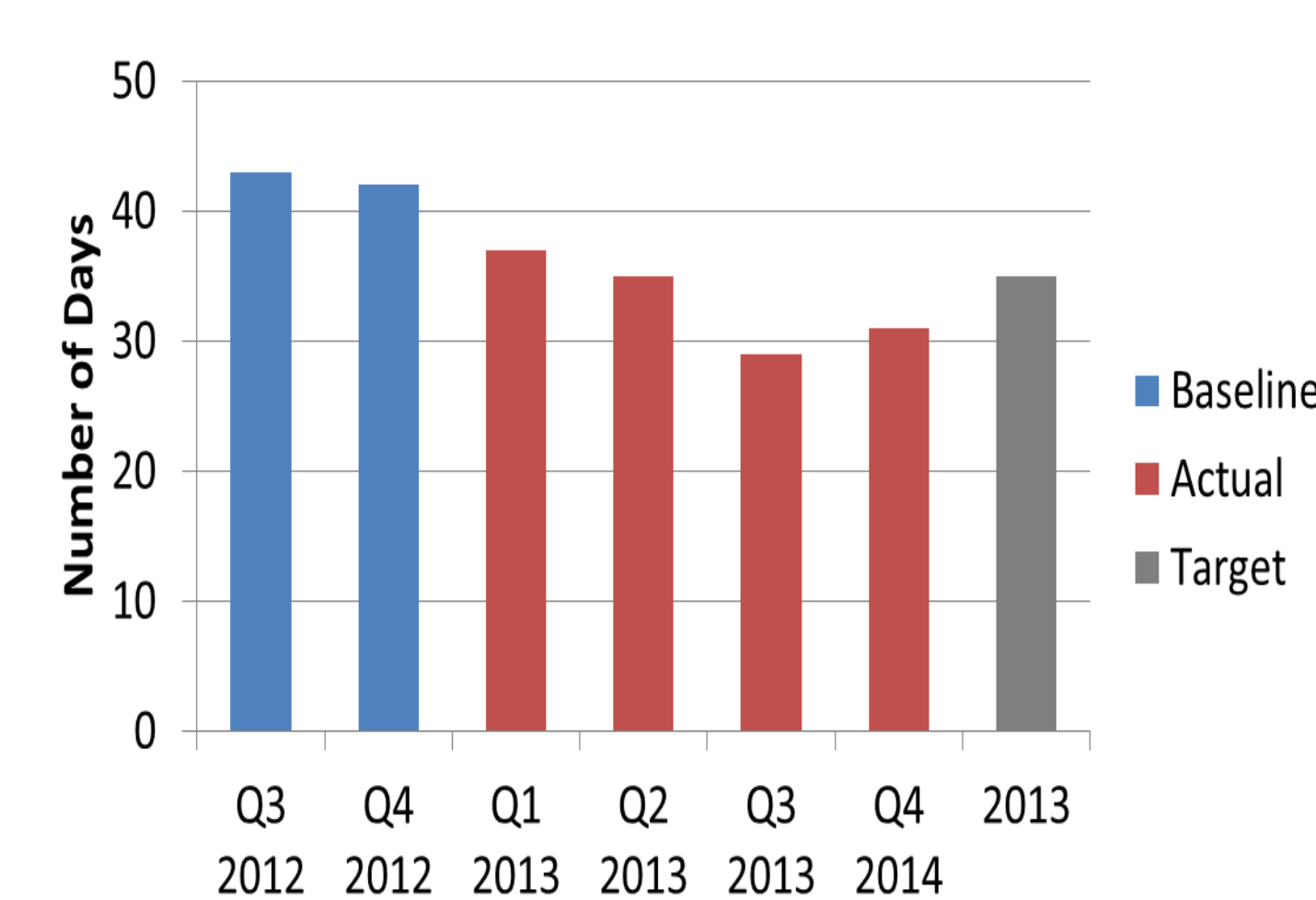
This indicator was used to monitor the duration from receipt of orders to the availability of a distribution plan for all commodities ordered. The performance target was set at 15 days, and this was met in the 1<sup>st</sup> quarter of 2013 and exceeded in the subsequent quarters.

#### Annual quantification and quarterly update reports for supply planning



Previously, few forecasting and supply plan reports were regularly updated by CMAM. This indicator led to CMAM providing leadership and ownership of these processes and better collaboration with other stakeholders.

#### Order Preparation – Dispatch Time



This indicator shows that at baseline, it took approximately 40 days for orders to be dispatched from CMAM. Following process changes, there was steady progress on this indicator in 2013, and the performance target was finally achieved in the 3<sup>rd</sup> quarter.