

Reducing the Lead-Time of the End of Month Financial Closing Process

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Abstract — *The end of month financial closing process is a time consuming and challenging task for most organizations. Being able to minimize the amount of time invested during the end of month closing process, and instead have the accounting department dedicated to more value add activities, is a priority across all types of industries. The methodology of DMAIC (Define, Measure, Analyze, Improve and Control) was used to reduce the lead-time of the end of month process in a Pharmacy Benefit Management company. It was found that by standardizing the data gathering process and establishing a more robust procurement process, the lead-time was reduced by 25%.*

Key Terms — *Cycle time, Instant close, Lean, Six Sigma*

INTRODUCTION

An opportunity was identified in the Finance Department of a Pharmacy Benefit Management company, located in San Juan, Puerto Rico. Even though, the company has existed over 10 years, there are still a lot of processes that lack standardization. As it occurs with most of organizations, the end of month, financial closing process was one of the processes that was highly inefficient. The process was taking an average of 20 days to complete, since the data gathering process step until the presentation of the financial statements. The amount of time required to complete the end of month financial closing was considered unacceptable for the company's President and CEO.

Given the excessive amount of time being consumed by the process, an initiative was launched as an intent to reduce the process lead-time and allow the financial analysts to be dedicated to more value added activities. The initiative established as a main objective to reduce

the process lead-time by 15%. Another objective established was to reduce the amount of non-value add activities such as waiting time and rework. In addition, given the lack of standardization that exist within the organization, an effort to standardize the reports and inputs received at the first process step will take place to facilitate the analysis and reconciliation of financial accounts. Based on the established objectives, the organization agreed to leverage from Lean Six Sigma concepts, specifically DMAIC methodology.

LITERATURE REVIEW

Even though, there's been a lot of process improvement and technological advances, the end of month financial closing process still represents a major concern for most organizations. The problem is that most of the accountant's day-to-day activities are based on collecting data rather than analyzing it. There's not enough time to dedicate to analyzing data, find root causes of variations and establish mechanisms that add value to the company. Most of their time is consumed on gathering the data, pursuing other departments for critical input information, reworking reports, among other non- value added tasks. One of the most time consuming activities accountants face constantly is the financial month-end closing. Despite recent technological advances, financial closing process still consume a significant amount of time and is a stress enabler activity [1].

Due to the awareness of the time-consuming problem month-end closing represents, organizations are interested in reducing the lead-time of this important process. A proposed way to significantly reduce the process lead-time is to seek to achieve an instant close. In order to achieve an instant close, it is imperative to maximize the use of all capabilities of the enterprise resource planning

systems [2]. This approach suggests that there is a lack of data integration that consumes a significant part of the process lead-time that can be solved by exploiting all functionalities that enterprise resource planning systems provide.

A way to reduce non-value add activities or waste is by using Lean Six Sigma methodology. Lean Six Sigma methodology has been successfully used in organizations around the world to improve the efficiency of their manufacturing processes. The focus of this methodology is to reduce waste and defects, which results in higher quality and lower costs. Even though, this methodology was originally design to improve manufacturing processes, it can be beneficial for service environments as well. An example of these benefits was observed in Med Solution Inc., were they used these principles to improve the efficiency of their financial process and reduce quarterly reports cycle time [3].

METHODOLOGY

In order to achieve the established objectives, the DMAIC methodology was applied. DMAIC is a well-structured methodology that guides an improvement effort from definition until its conclusion. The methodology consists of five phases: Define, Measure, Analyze, Improve and Control. During the Define phase, the problem is outline, along with detailed customer requirements. The Measure phase, focuses on quantifying the current state performance. During the Analyze phase, root causes of variations and poor performance are identified. Next, the Improve phase focuses on eliminating or reducing the root causes identified during the Analyze phase. Finally, the Control phase establishes mechanisms to ensure the improved state is maintained through time.

As part of DMAIC methodology, a series of tools can be used throughout the different phases. To address the end of month financial closing process lead-time reduction effort, a SIPOC (Supplier, Input, Process, Output, Customer) was used to clearly define the process and all

stakeholders involved. Another important tool utilized, was the Cause and Effect Diagram. This diagram helps to provide visibility on the causes of low performance and its effect within the process.

ANALYSIS

As previously stated, once the problem is clearly defined, the next step is to measure the current state performance.

Current State

Historical data was captured and its average was used to determine the time is taking the financial department complete each of the process steps of the end of month financial closing. The process consists of the following steps: Data Entry, Analysis and Reconciliation of Accounts, Generate Reports and Present Reports. During data entry, all input reports and data is captured and entered within the financial system. With these reports, the financial analyst performs account reconciliation of all entries. Then financial statements and reports are generated. Finally, the financial statements and reports are presented to top management, including the president and CEO of the company.

In Figure 1, the process steps are shown with the average days it was taking to complete each of the steps prior to the process improvement effort. It can be observed, that a total of 20 days were required to complete the process, in which 18 days were consumed in the first two process steps: Data Entry and Analysis & Reconciliation of Accounts. Given that 90% of the process lead-time was consumed within the first two process steps, it was an indicator of where the majority of opportunities could be found. Based on this premise, more detailed analysis was performed to Data Entry and Reconciliation Processes to better understand the sources of inefficiency.

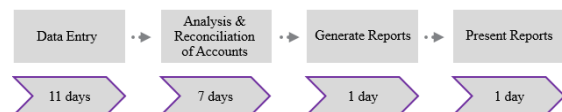


Figure 1
Process Steps

Areas of Opportunities

To aid in the areas of opportunities identification process, a Cause & Effect Diagram was developed, as shown in Figure 2. The diagram illustrates the root causes that are causing the poor performance in the end of month financial closing process. When analyzing the root causes identified in more detail, it was determined that the main drivers affecting the process were: incomplete input reports, late submission of reports and the lack of a standard procurement process.

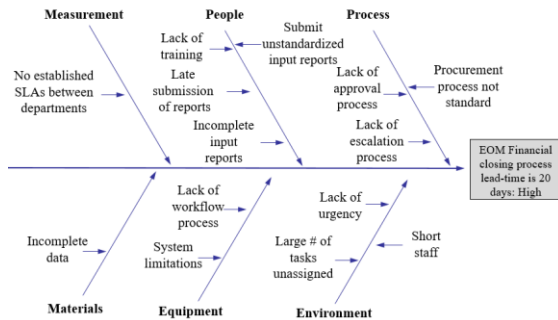


Figure 2
Cause & Effect Diagram

After completing the Cause & Effect Diagram and identifying the main causes of poor performance, a characterization of the process was performed in order to identify the value and non-value added activities within the process. Through a detailed process mapping, and leveraging the waste concepts of Lean Manufacturing, process steps sources of waste were identified. The main sources of waste identified in the process were waiting time and rework.

Future State

Based on the data collected during the measure phase and root causes identified during the analysis phase, a target lead-time of 16 days was determined for the end of month financial closing process. Given that for the last two process steps, the actual time were 1 day and not many inefficiencies were identified, reductions were targeted for the first two process steps, as shown in Figure 3.

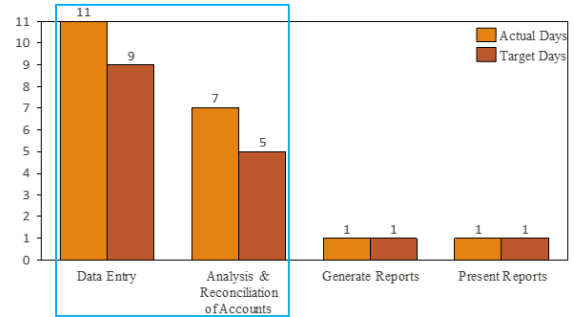


Figure 3
Actual vs. Target Lead-Time

RESULTS

Once the analysis phase was completed, main root causes of inefficiencies were addressed through several improvement initiatives. First, most input reports were lacking a standard format, which required the accounting team to have to constantly request additional information. Standard reports were developed for company cards expenses and intercompany invoices. This standardization helps to avoid the rework required, and waiting time, to obtain the information needed to complete the Data Entry process. Next, service level agreements (SLAs) were established and agreed between the different departments that required to provide input data for the end of month closing process. A performance metric was developed to measure and communicate the delivery response of the different departments against the SLAs.

Another improvement implemented was adding standardization and an approval step to the procurement activities. Previously, several departments within the company performed their purchases without an approval process and no notification was sent to finance team. When invoices were received from vendors, the financial analysts waste a lot of time trying to reconcile to which department the expense belonged to. As an improvement, a requisition form was developed which contains all the required fields of information needed by the finance team to reconcile accounts in an efficient way. The form needs to be completed prior to completing the purchase and is sent for

approval via email to the head of the department making the purchase and the financial analyst.

Due to all of the implemented improvement initiatives, a 25% of lead-time reduction was obtained, which translates in a 5 days reduction; from 20 days to 15 days.

DISCUSSION

Process improvement concept is completely new at the organization. The end of month financial closing process lead-time reduction initiative was the first project using lean concepts. Due to its success and effectiveness, it is important to continue to deploy process improvement notion and Lean culture within the organization. As the company continues to grow, improving process efficiencies will be critical to sustain success. This project should be used as a case study to ensure top management accepts and allocate resources for future process improvement initiatives.

CONCLUSION

The aim of the project was to improve the end of month financial closing process by reducing process lead-time by at least 15%. Also, reduce non-value added activities, such as rework and waiting time, by applying Lean principles and standardizing input reports to improve reconciliation of account process. These objectives were successfully achieved. After the process improvement initiatives implementation, it was observed a 25% of lead-time reduction.

Given the limitations and short time available to complete the project, several recommendations were identified for future work. First, to create an automated tool for purchasing and approval activities. Also, it is highly recommended to continue monitoring the end of month financial closing process to ensure improvements are sustained over time. Finally, continue applying process improvement concepts and Lean principles to obtain further reduction to process lead-time.

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