PARM-IT Process Robustness

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ABSTRACT

Long turnaround times to complete requests, mistakes performed by the employees, and ineffective forms used by the clients to submit their requests are some of the problems faced by the employees handling the PARM-IT process. The main causes for these issues are a lack of an operational "request form" that provides all the minimum information needed by the employees handling the assignment, a process flow that contains inefficiencies and the inexistence of an inspection method that captures errors before they get delivered to the client. After studying this process, waste was identified and eliminated giving way to an improved process flow that includes inspections, capturing errors before they are delivered and decreased turnaround times.

BACKGROUND

PARM-IT is a tool used in the aerospace industry's engine test environment to name the instrumentation installed in the engine prior a test. It is a monotonous task but one that requires a quick turnaround so testing is not hold off. This Project proposes an improvement in the handling of PARM-IT tasks requests through Process Robustness and the possible generation of tools to ease and standardize the receiving of requests, processing and delivering of products.

PROBLEM STATEMENT

Clients have complained on how requests have been handled. How turnaround time is longer than expected and errors have introduced turnbacks in the process.

OBJECTIVES

The goals for this project are to decrease turnaround time to achieve on-time delivery, reduce non-conformances and turnbacks in the process, and improve overall customer satisfaction.

ANALYSIS AND METHODOLOGY

To improve this service a Value Stream Process Management technique (VSPM) will be used. The goal is to accomplish the proposed objectives achieving process effectiveness, efficiency and agility through waste elimination and the standardization of work. This will help increase customer satisfaction with the value of delivered goods and services.

Process opportunities were identified after developing the Current State Process Map (Figure 1) and the Supplier-Input-Process-Output-Customer (SIPOC), a seen in Figure 2. This, along with a Customer Satisfaction survey, helped determine what is important for the clients and their complaints.
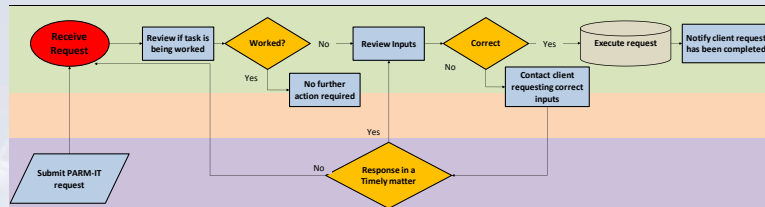
Figure 1- PARM-IT Current State Process Map

An Impact Maturity analysis was performed to prioritize and select those opportunities that needed immediate attention. After the Lean Principles were applied and Waste was identified a streamlined, Future State Map was developed. Kaizen bursts were identified which outlined our action plan.

Suppliers (a)	Inputs (b)	Process (c)	Outputs (d)	Customers (e)
Client (Various Groups)	Information from Client related to job needs	Client submits request	Completed request sheet	Client (Various Groups)
Client (Various Groups)	Completed request sheet	Execute request	Completed job execution satisfying clients needs	Contractor
Contractor	Completed job execution satifying clients needs	Notify client request has been completed	Email notification	Client (Various Groups)

Figure 2- PARM-IT SIPOC

Then an Action Plan to attain Future State was implemented followed by a design and implementation of a control plan to monitor the effectiveness of the improvements. With this plan the process was streamed from customer requests through all the steps necessary to deliver the product to the customer. It allowed the identification of waste in the entire process and to eliminate and enhance it.

RESULTS

After implementing the Lean Principles a robust, Future State Map was developed. Inspections points were added along the process in order to capture repetitive mistakes that had been occurring. Team members were trained and qualified as inspectors and Inspection Forms were developed to help capture non-conformances before they reach the clients and requestors. Thanks to these inspections the turnbacks occurrences were reduced by 20% (Figure 3).
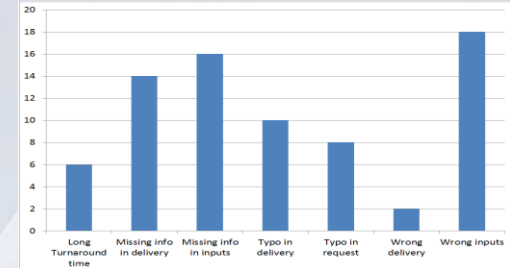
RESULTS (cont.)

Figure 3 - PARM-IT Turnbacks – reduced by 20%

The inspections were combined with a re-training of the team to help refresh the process and clarify some doubts. Reference material like Work Instructions was developed as a go-to document for the employees to consult when in doubt.

Another improvement added to this process was the development of a standard "Request Form" which contains all the fields and information required from the customer in order to initiate the process with no lack of information and in the required format for the team to process it.

CONCLUSIONS

Once all the improvements were applied, it was confirmed that the objectives had been met. The amount of mistakes were reduced decreasing the turnbacks by 20% along with the non-conformities complains. After re-training the personnel and streamlining the process the turnaround time was reduced in average by 15%. Finally a survey to the customers demonstrated that once all these improvements were implemented the satisfaction improved in the Quality and Delivery areas as the product delivered is now virtually defect free and is been provided to the clients in less time.