Optimization of the Receiving Request Process for Jurisdiction and Classification

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Abstract *— The purpose of the project is the centralization of jurisdiction and classification (JC) of commodities and technology in a single unit for the entire Pratt & Whitney organization, as well as to unify and standardize the receiving requests method for jurisdiction and classification of technical data, The main objectives are a 50% reduction in turnaround time of requests and a 30% workload increase to the International Trade Compliance department. The method to achieve these goals is to create a master web based tool in which all requests for JC are received and distributed to different teams, based on their expertise. The project is divided in four phases. The first phase is the reorganization of the department into working units, which is done in collaboration with the business unit Associate Director and the Human Resources division. The second phase consists in the design of a web-based tool developed in association with the Information Technology support group. Such development will set up the unification and standardization of the method of receiving requests and the segregation of such, according to the department of origin, due to the particular requirements each area has. The third phase entails in providing the essential training to all users of the tool, to facilitate its use. Fourth and final phase comprises measuring the results of the process optimization and identifying areas of opportunities to be addressed on a later stage. After the implementation of the action plan defined, results showed a decrease in turnaround time of 30% and a workload increase of 54% in the International Trade Compliance department.*

Key Terms *— Export Control, Jet Engines, Jurisdiction and Classification, Pratt & Whitney, Turnaround Time*

INTRODUCTION

Exports, imports and transfer of commodities, technology and/or any other information considered to be important to the United States regarding the national security and the economic or foreign policy, is regulated by the U.S. Department of Commerce, Bureau of Industry and Security (BIS) and the US Department of State, Directorate of Defense Trade Controls (DDTC), through the Export Administration Regulations (EAR) and through the International Traffic in Arms Regulations (ITAR). Failure to comply with the export control regulations may result in severe penalties, criminal and monetary, against the entities in violation.

Pratt & Whitney Puerto Rico (PWPR) is an aerospace company dedicated to the design and manufacturing of aircrafts engines, gas turbines for industrial and power generation and marine turbines worldwide. The organization supports customers such as Airbus, Mitsubishi, Irkut and the United States Government - Military branch. The International Trade Compliance (ITC) department is dedicated to provide jurisdiction and classification (JC) of commodities, technology and any other data to be exported outside the United States or transferred within.

The current process is based on a requestor submitting a jurisdiction and classification (JC) request to PWPR or any other business unit across Pratt & Whitney in order to be worked. The requests are received through different methods, such as share and personal email accounts and different platforms across the organization. This process is currently executed in all business areas of the organization.

The proposed optimization on the process is to convert the PWPR International Trade Compliance

department in a centralized unit to perform the JC's of the entire Pratt & Whitney organization. This way all the jurisdiction and classification tasks would be centralized and the method of receiving requests would be unify and standardized. This will allow the PWPR International Trade Compliance department to increase the workload, efficiently track and monitor requests, improve turnaround time, provide a better customer service and at the same time, improve the accuracy of the jurisdiction of classifications performed for all the technical data and commodities across Pratt & Whitney.

The main objectives of the project are reducing the turnaround time of JC requests by 50% as well as to increase the International Trade Compliance Department workload by 30%. This effort has been divided into four main phases: department re-organization, the design of a web based tool, performing training for the web based tool and measure the results obtained thanks to the improvement project implemented.

LITERATURE REVIEW

Every major organization is in constant search of optimizing its key procedures, in order to develop and improve their competitive advantage. One of the most popular and recognized organization for this is Toyota [1]-[3]. Clearly, successful organizations work hard to reduce turnaround time on the majority of their processes. Short turnaround time is economically advantageous, making the most efficient use of time and materials [4]. Using the Pareto Chart method in conjunction with the Plan, Do, Check, Act (PDCA) method [5]-[6] is an efficient way to identify major issues on a process and a guide on how to manage them accordingly

In 2004, the Relation of Value, Cost and Waste graph was introduced [7]. Such relation shows the concept of the cost value equilibrium. The further above this cost value equilibrium is positioned, the higher the customer is attracted to the product or service. Value is created once internal waste is reduced, the costs are reduced and shorter delivery cycle is achieved, which increase the overall offer to the customer.

ANALYSIS APPROACH

The PWPR International Trade Compliance department conducted a turn back analysis for 2018. After grouping the data and using the Pareto Chart method, it showed that the department's major hitter was non-compliance with the turnaround time previously agreed with the internal customers. The necessity of increasing the department workload, which was determined via a finance analysis, and reducing the turnaround time of the requests being processed was evident. The project was proposed and approved by the International Trade Compliance Organization Associate Director. The four main stages of the project are: (a) the department re-organization, (b) the design and development of a web based tool, (c) training and maintenance and last (d) measuring the results.

Department Re-Organization

In this phase, a re-organization of the International Trade Compliance department was executed. A matrix model with two senior managers was employed, dividing the department into two functional areas: (a) the Jurisdiction and Classification Center of Excellence and (b) the Operations & Legal Support. Each area is directed by a senior manager and was segregated by teams, based on their expertise, each team led by a senior supervisor.

This re-organization carries numerous benefits such as the integration of business areas, integration, uniformity and consistency of processes and documentation globally, developing and strengthen expert level skills, increase department workload and the creation of subject matter experts per areas. Figure 1 shows the new organizational structure for the International Trade Compliance department.

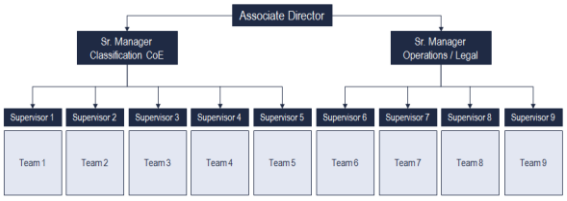

Figure 1
New department organizational model

Design of Web Based Tool

The purpose of the development of the base web tool is to unify the method of receiving requests for jurisdiction and classification of technical data as well as to standardize the inputs required to perform the work. This tool will also help to precisely track the turnaround time of each of the requests.

The platform chosen for the development of the tool is the My Workflow tool. This platform belongs to the organization supporting the project and has been designed to comply with its particular necessities. Part of the benefits that this platform brings are its ease and speed to design in it and the adaptation of creating programs tailored to the requirements of the organization.

The process of operation of the tool consists in the tool inquiring the requestor for certain information such as his work area, the part number to be executed, engine to which the part belongs and the type of document to be worked. After all information is entered into the system and the request is submitted, an email notification is send automatically to the assigned employee to work the request, according to the area of expertise. In this stage the employee executes the request. Parallel, at the time the request is submitted, the turnaround time begins to be registered within the application. This time concludes once it is finished and is marked as completed in the system. Once marked as completed, the requestor receives a notification via email, recording the conclusion of the transaction.

This tool provides benefits for both the requestor and the International Trade Compliance department management team. The automation of the procedure of receiving requests via the master tool helps reducing the waste, indirectly aiding in the turnaround time reduction. The requestor can track the status of the request from the time it was submitted until it was completed. On the other hand, the department management can have visibility of the turnaround time of the request, as well as its execution time.

Training

To optimize the operation of the tool, it is necessary that users can utilize it properly and effectively. Several training sessions were conducted for this purpose. In these trainings all the functions of the tool were explained in detail, as well as feedback on how to make the tool more efficient was recollected. In addition to the training sessions, a tool user guide was created and its location was distributed electronically for easy access.

RESULTS AND DISCUSSIONS

The department workload and turnaround time data of the requests processed from January to October 2019 was collected analyzed. For the months of January to July, the average turnaround time was 5.57 days per request. However, for the months of August to the first week of October, there was a reduction in turnaround time, being the average 3.73 days per request. This means a reduction of 1.84 days or 33.07%. Figure 2 shows the conduct of turnaround time from the months of January to the first week of October 2019.

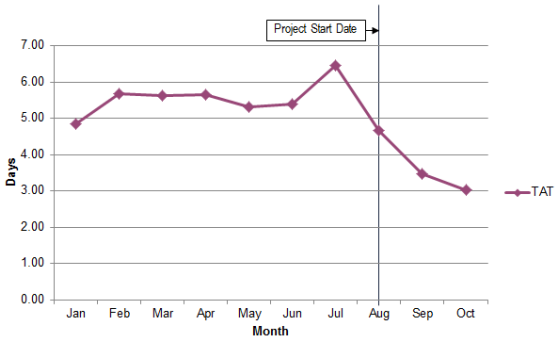

Figure 2
Turnaround time behavior across time

Department workload data shows an average of 3,050 requests per month, during the months of

January to July. For the months of August until the first week of October, the average increased to 4,696 requests per month. Average of the month of October was obtained by extrapolating the first week of the month data. This represents an increase of 1,646 more requests per month, which is a 53.95% increase. On Figure 3 is depicted the department workload across the months January to the first week of October 2019. Workload behavior has a noticeable increment in the last three months, which is in accordance with the period of time the action plan defined was implemented.

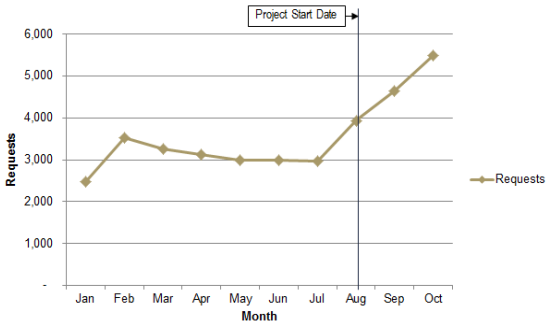

Figure 3
Workload behavior across time

CONCLUSIONS

The purpose of the project was to accomplish a 50% turnaround time reduction and a 30% increase in the workload of the International Trade Compliance department. After implementing the identified actions, the findings in the data collection show that the unification, simplification and organization of the method of receiving requests and the optimal organization of the team executing the work, produced a turnaround time decrease of 30% and an increase in the department's workload of 54%. Even though not all main objectives were accomplished, there was a noticeable reduction pattern in turnaround time. These types of re-organization and procedures improvement are fundamental in the development and evolution of the complex aerospace industry. Once the project has been completed and fully implemented, the next stage will be the continuous improvement and maintenance of the web-based tool developed.

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