

Trane Puerto Rico Contracting Transition Process Improvement

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Abstract — *Trane Puerto Rico has established processes for conducting contracting work. The processes in place are adequate in most cases but may need adjustments in others. A case in point is the transition process. Before this project was implemented, there was no standardized process for transitioning projects. This caused misinformation, delays, lack of productivity, errors, and unnecessary costs. The project established a transition process to reduce time spent during transition, minimize errors and better overall performance.*

Key Terms — *Transition, Compliance, Project Execution, Performance*

INTRODUCTION

Trane Puerto Rico LLC, a subsidiary of Trane Technologies, is dedicated to the distribution of HVAC equipment, controls, and services. Services include installation, technical support, rentals, contracting and maintenance.

In Trane Puerto Rico’s Contracting Department there is a need to establish a process that effectively delivers an agile transition from the sale to the execution of projects. To this date, there was no standardized process for transitioning a project to the fulfillment team. The establishment of such process and guideline for transitioning is very important for the outcomes of the project and the whole company. The subject of this paper is the improvement to the project transition process under the Contracting Department. The paper covers literature review, methodology, discussion of results & conclusions of the project. The current process conditions, organizational structure and proposed changes are discussed and explained.

LITERATURE REVIEW

To understand the background and purpose of defining this process, there is a need to understand Sarbanes Oxley (SOX) financial regulations and accounting best practices. “SOX regulations were implemented as a guidance to ensure transparency of financial reports and revenue recognition” [1]. To be SOX compliant, companies must establish internal controls and processes. Incorporating SOX regulation into the transition process documentation is an important part of this project.

The main advantages of implementing this new transition process, is the increased projects profitability and team productivity. “When everything has a system built around it, you create a business that can scale and grow because people are no longer expending mental energy on small things. Everyone can move faster and more confidently in their jobs because decision-making is focused only on important decisions. Customers get a consistent, positive experience no matter who they are interacting with” [2].

In the implementation, control would lead into quality improvement of the process itself. “The use of simple Project Management techniques, such as defining, leading and managing, would be very useful in a new process design” [3]. There is a need to implement new strategies and processes to achieve the objectives.

METHODOLOGY

For the development of this project, first, the current conditions were assessed. Roles and responsibilities were defined, a Voice of Customer approach was used, where all team members were asked for recommendations and input regarding the Transition Process. Also, a time study and a fish-

bone analysis about the causes that lead to project failure during transition were conducted. Once the current conditions were exposed and analyzed, and the opportunities for improvement were identified, the new process design was developed. After discussion and approval by Contracting Manager, the new process was implemented, and the team members were trained to follow the process.

CURRENT CONDITIONS

Due to COVID-19 pandemic and the economic impact it caused on the construction industry, the company had made changes to the organizational structure and downsized the Contracting team. A total of 5 positions were impacted: one Project Manager, one Project Engineer and three Technicians. The department downsizing, the encouraged social distancing and “work from home” modality, made very important the establishment of roles and responsibilities among team members. “The transition to a new process or situation is a gradual psychological process that individuals and groups go through to reorient themselves so they can function in the new situation” [4].

To understand current roles & responsibilities, a stakeholder analysis was performed. This consists of an assessment, messaging, roles & responsibilities, and expectations. Training plans identify the steps required to create and deliver training. Metrics are important to provide feedback on how well the process is performing and meeting goals. These process measurements will reveal how much the changes are impacting results and how well people are following the new procedures.

Primary Stakeholders include roles in the contracting and acquisition teams as well as territory leadership and support functions. Table 1 is a RACI (responsible, accountable, consult, and inform) diagram of the stakeholders and their communication requirements in this project.

Identifying the role, commitment required, and current level of buy in helps provide details of the messaging required for each group. By planning messaging out for these groups, a change leader can

validate messages during a conversation with a stakeholder group.

Table 1
RACI Diagram

			Stakeholder Type			
Stakeholder	Category	Commitment Required	R	A	C	I
Sales Manager	Contributor	Belief or Buy-in		x		x
Estimator	Output Delivery	Action Required	x	x		x
Project Managers	Output Delivery	Action Required	x	x	x	x
Project Administrators	Product Support	Action Required	x			x
Account Managers	Contributor	Action Required	x		x	

Recently there was a restructuring of the department, reducing the team. The current structure is shown on Figure 1.

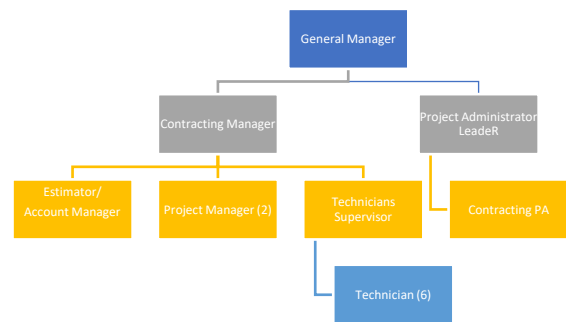


Figure 1
Organizational Structure: Contracting Department

Regarding the transition process, the responsibilities among the team members are as follows:

- **Contracting Manager:** Is responsible for leading the team, assigning projects to project managers, report financial results such as Forecast & Pipeline to upper management.
- **Estimator / Account Manager:** Is responsible for estimating and making proposals. Once sold, the project information and documentation must

be submitted for credit approval and project creation. During transition account manager shall meet with project manager to discuss all project details.

- **Project Administrator:** Is responsible for the project creation and making sure all the documents required have been submitted, such as purchase order, proposal, terms & conditions, tax documents, among other.
- **Project Manager:** Is responsible for the validation of costs, reviewing scope of work with account manager, manage cost and budgeting, lead technical execution. Other responsibilities include submittal creation, procurement, and graphics.

All team members were asked about the current process and the opportunities for improvement they could see. Some team members were trained on procurement processes and Microsoft tools usage.

Measure & Analysis

After meeting with all team members, the deficiencies of the current process were identified and so the areas of opportunity to improve, Figure 2 presents a fish-bone analysis of the main causes related to transition that lead onto project failures.

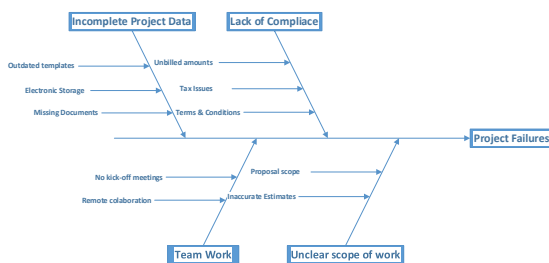


Figure 2
Fish-bone Analysis

The members were asked to assess the current process and identify the causes for project failures in transitioning projects. Most of them agreed that incomplete data, compliance issues, lack of teamwork and scope of work lack of definition were among the principal problems for an effective project transition.

A time study was performed to see the actual time spent between transition stages. Table 2 shows the amount of time in days, spent on the process for 5 projects.

Table 2
Time Study

	Time (Days)		
	Acquisition	Transition	Total
Project A	5	8	13
Project B	6	8	14
Project C	3	10	13
Project D	5	6	11
Project E	6	3	9
Average (Days)	5	7	12

DEVELOPMENT & IMPLEMENTATION

A high-level process flow is provided in Figure 3. The process begins with a qualified opportunity and ends with effective communication between sales and fulfillment about project success. The process is dependent on teamwork and accountability during the project development phase.

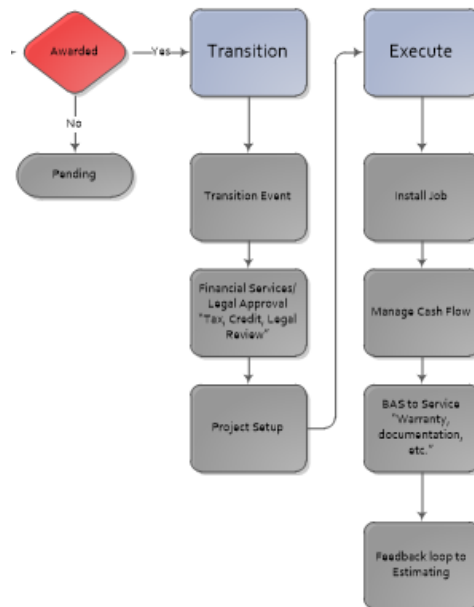


Figure 3
Process Flow
Award Stage

Once a project is awarded, the account manager shall gather and save information files about the job. Network drives, SharePoint libraries, or other

electronic media are recommended for storing and retrieving information. Documents to include are Trane estimate, proposal, copy of approved LOA (for compliance purposes), sketches, electrical subcontractor quotes (if applicable), other vendor quotes, plans, specs and equipment submittals.

All applicable items must be in place prior to a transition meeting. Time must be allowed for proper digestion of material and supporting dates. A good guideline for time allowance to prepare for the transition meeting is 2-3-3:

- 2 days – notification
- 2 days – Must haves for bookings
- 3 days – Operations team time to review prior to transition meeting

Transition Meeting

Transition from sales to fulfillment facilitates the transfer of project ownership and information. The transition process includes usage of the TIP package. This package includes all available information about the job as indicated above. Transitions can occur earlier in the project lifecycle when the above items are procured in a timely fashion prior to the transition stage or milestone. The transition event is the same as currently practiced though the incorporation of fulfillment resources is included. This new process will enable smoother transfers of information and better understanding of project drivers such as scope, schedule, and budget.

Execution Stage

At this point ownership of the project has been accepted by the Project Manager. The Project Manager organizes his team, establishes a plan, and executes accordingly. The Project Manager oversees and directs all activities of the project. Project Managers work with the Contracting Chain to determine the best course of execution. The PM directs the Procurement of Materials, as well as scheduling Subcontractor and Internal Resource to ensure timely fulfillment of Project Tasks. Task ownership is critical and should be carried out from start to finish, by the assigned individual. The individual logs their notes, time and percent

complete against each project task worked on. The Project Manager then compares the progress of the Project Tasks against the original time allowance given at the onset of the project. Capturing this information helps identify areas of concern during the time in which the project is being executed. This also allows the individual executing the Task to see how well they are performing against the allowed time which was allocated for the task.

The project manager establishes a schedule of values for invoicing purposes. Additionally, he/she establishes the budget and initial forecast for the project, (PeopleSoft Project). On a monthly basis billings and invoices are processed while the cost to complete is forecasted.

Once the project has been completed, a transition event to the service departments occurs.

RESULTS & DISCUSSION

Using the measurement strategies and analysis of the current state, the deficiencies and needs for the transition process were identified. On average the time it takes a project to be transitioned to fulfillment team is 12 working days. The objective is to reduce the total time to 8 working days.

The team collaboration has improved since team is engaged and motivated to improve transition performance and department productivity. The team members were pleased to be part of the process development. Although remote working has been a challenge to schedule meetings, the availability of technology tools has facilitated the whole process implementation.

CONCLUSIONS

The new transition process guideline has been successfully implemented, new time study was conducted leading to and overall transition time of 10 days, which is an improvement to previous results. The process will be monitored closely to determine if further control may be required.

The team productivity and department performance has certainly improved. The impact of this new process to years financial performance will

be analyzed and documented. Also, compliance issues shall minimize and this will be documented by the end of year.

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