

# **Invoice Submission System**

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**Abstract** - *When it comes to revenue, contracts and businesses it is imperative for agreements to be met. The Procurement Organization of Honeywell Aerospace is currently facing a lot of road blocks while trying to achieve production and meet their goals while satisfying their customer at an above the competition way. There is a big gap between supplier, customers and even between focal workings for the Procurement Organization. Current process is not lean and it's hurting the company's reputation among the competition and some suppliers are even considering cutting agreements with the company and taking its products to other company who could meet their expectations earlier and in a more satisfactory way. Honeywell Aerospace is a multi-national company that manufactures and sells aircraft and aerospace tools and parts around the globe. The Procurement organization is the one responsible for ensuring that all invoices and costs get processed and hit their respective projects per schedule but it's difficult when you have different type of customers and suppliers from around the globe and sometimes the same supplier is supporting different types of projects assigned by the same company. Honeywell divides their engineering projects into two types: commercial and government funded. There are current four focals from the procurement organization in charge of all projects, the team is composed from people from two different countries: Mexicali peers cannot work on government funded projects. This means that even when you have four employees to do all the job, two of them due to citizen restrictions can't even look at around 32% of the projects and these four people are in charge and responsible for processing all invoices for the whole Engineering organization and when its sole database becomes obsolete and the process is not very user friendly, numbers are not met and*

*something should be done about it. Upper management in Honeywell chimes in looking for ways to retain their customers and make sure they are satisfied.*

## **Key Terms:**

- *Invoice Submission System: internal process of Honeywell to receive and process invoices for engineering projects.*
- *Focal: employee designated to work with Engineering project.*
- *Procurement Organization: Department responsible for receivable and processing of all invoices within Honeywell Aerospace.*
- *SharePoint: website provided and maintained by Honeywell for internal and 3rd party suppliers to upload invoices from their projects for processing*

## **INTRODUCTION**

Aerospace companies are in a tight competitive environment and they are always looking for ways of ensuring those contracts with new suppliers are being met and to retain those suppliers that have been already established making sure products are delivered right and fast while giving the best customer service possible at the same time. This is not an easy task but Honeywell is aware that this is what they need to do in order to stay on track.

This design project will look for failure modes and areas of opportunities within the Invoice Submission System from the Procurement team and ways to turn them into enhancements for the process in order to improve overall process and customer satisfaction throughout the team and customer-company relationship. It is very important for the company of Honeywell to get their internal teams to build up as teams and come together to get the process where it should be. The development of this project will aid the company in the meeting of

deliverables of ongoing projects and the targeting of future projects for the company. The way this project will be done will make sure that after process improvements have been implemented that they stay that way following some

### **PROBLEM STATEMENT**

Having different external suppliers and internal customers assigned to log in into our SharePoint site and choose between 4 different folders to upload their multiple invoices pending to be processed is causing a lot of confusion for our customers. This confusion can result on invoice misplacement, delays of invoice payments and customer dissatisfaction when they are not quite sure on what to do and who to contact in case of questions or issues with their respective projects.

### **RESEARCH DESCRIPTION**

This project intends to study and analyze our current SharePoint and look for ways to simplify ways of uploading invoices from a customer perspective. Six Sigma DMAIC methodology will be used for this effort. (i.e. [1] VOC and OVOC are part of the new initiative by Honeywell. HUE (Honeywell User Experience) and will be conducted on multiple customers so that more insight is recorded on whether what is working, what is not and look for new things that could be better and weren't notice until now. HUE looks to analyze the insights of internal processes and ensure the customer experience is the best one possible, if not look for areas where to improve. VOC and OVOC will be great tools in this situation to aid us in achieving a better understanding on what our customers are going through every time an invoice needs to get processed.) A focal group will be used too in order to gain some insight on what customer is really looking for when dealing with projects and how to handle project and pending invoices. Topic regarding invoices and the SharePoint will be addressed too. Addressing the SharePoint will let the team know what are the stakeholder expectations towards the database and

what features should the tool show and offer in order to meet their expectations.

### **RESEARCH OBJECTIVES**

For this research project the following objectives will be use:

- 2 type of projects
  - Commercial
  - Government
- 221 active suppliers in Honeywell database
  - 141 suppliers work with commercial type of projects.
  - 80 suppliers work with government funded projects.
- 13,851 invoices were received during 2016 year.
- 12,716 invoices were for commercial projects.
- 1,135 invoices were for government projects.

### **RESEARCH CONTRIBUTIONS**

With this research project, the company is looking to improve the standard process of the invoice submission system. As a result of this project, the company will have an improved process and a point of contact assigned to each supplier so they know who to contact when some issue or question arise regarding their projects. This will consolidate information and stop the double efforts within the Procurement department. Enhancement to the process will cut time in internal throughput time of receiving and processing and will improve relationship with customers that have open contracts with the company.

### **LITERATURE REVIEW**

When working on engineering projects, where payments are due and there are milestones to complete, it is crucial to have a simplified process where it is easy for everyone involved in the process to understand it and follow it without further issues. When it comes to the invoice submission system, it is not clear enough to its

stakeholders on how to proceed and this is when it becomes complicated. Suppliers when in doubt on where to upload their invoices, they upload everywhere (sometimes in the 4 folders, the same invoice, at the same time) this creates a lot of confusion for the focals and sometimes double booking when more than 1 focal process the same invoice causing double hitting in a project which can result in problems for some projects with big negative variances. Sometimes these invoices that are placed on every folder are part of a government funded and it gets processed by a Mexicali focal which can result in company policy violation due to US restrictions. For example, supplier Belcan is one of the biggest supplier for the company, it currently has 164 open projects with Honeywell and they are all distributed between 4 current focals. 11.5% of these open projects are gov. funded so they need to be assigned only between the 2 Puerto Rico focals. This research will attack all these issues and look for ways to stop them from happening anymore and at the same time, satisfy our client and make it easy for the focals. Through this project every waste in the processed will be eliminated leaving a leaner simplified process. Making the process lean means that it will be a faster, efficient and better. A lean process always tends to reduce cycle time and throughput time and this is also something the company is really looking forward to.

Using the DMAIC Six Sigma methodology, the company will be able to analyze all wastes too. DMAIC which stands for define, measure, analyze, Improve and control will help the company achieve its goal. During the define stage the problem will be discussed and decided. After the problem is defined, project objectives are discussed and the scope and stakeholders will be define too. A project charter has been completed during this phase in order to present the objective of this research project. During the define phase, a Data Analysis was performed to be aware of the necessary data available to analyze and measure metrics and data throughout the project.

Thanks to the DMAIC methodology, the team has been able to learn new topic and tools to be

used when conducting a process improvement project. VOC and OVOC was gathered during the measure stage of the project. Supplier were divided into categories which show Big impact, Medium impact and Low impact depending on the amount of open projects with the company. After dividing those, 10 suppliers out of each group were randomly selected and requested for VOC and OVOC during the current invoicing submission system. A set of questions was developed and a timer was used during the process to compare how long taking supplier to go through the invoicing submission SharePoint was. A root cause analysis, a 5 Why and a fishbone diagram should be good tools to identify potential causes of issues for the current problem the Procurement team is facing. A thought process map could be of great help when it shows the process step by step and it analyzes each one along the way.

During the Analyze phase all data that was recorded will all be put on the table together and analyzed so that the Improve phase can begin. Once the decision has been found, it is very important to prove that with the possible solution the issue won't rise again in future occasions. In order to work on this phase, some tools like FMEA, Control plan will be a good option. Using these tools will get you to the final phase: controlling. The control plan tool will help you deciding on what do in case of same issues arising and how to control it. During this final phase, it is revised that product is working well and will continue to. Creating a standard work will be a good tool to work on during this phase.

## **METHODOLOGY**

Along the project, all DMAIC phases will be used in order to achieve its main goal.

During the Define phase a project charter and data analysis was used.

All open projects were analyzed per focal of the group and type of projects per focal. Each project/invoice was taken into consideration.

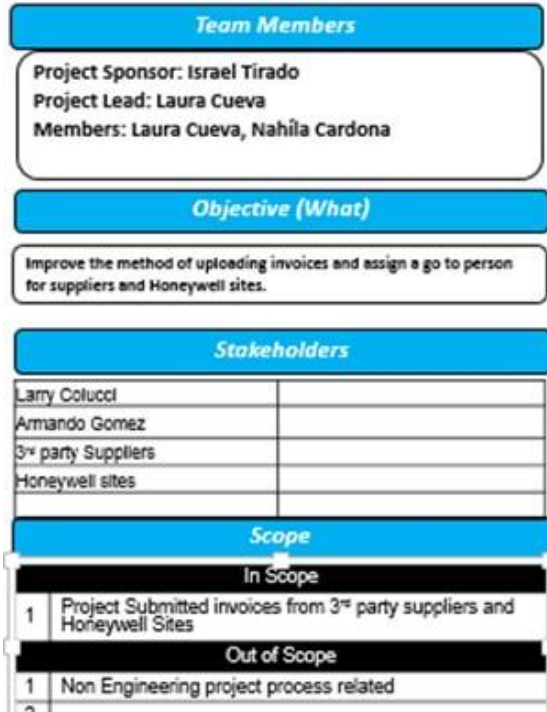


Figure 1  
Project Charter

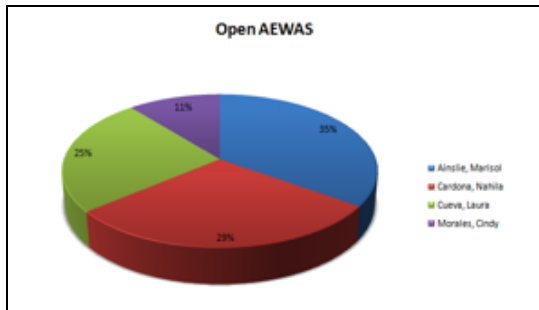


Figure 2  
Data Analysis

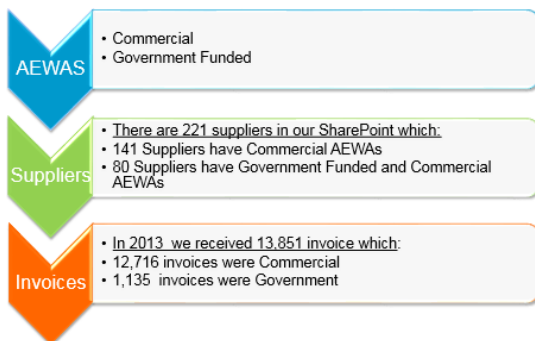


Figure 3  
Project Analysis

During the Measure phase, team created a thought process map, a process map and, a SIPOC

to measure and gather all data possible in order to get to a solution. All these tools will be of help when gathering information on which step of the process to tackle and has more importance within the whole process and to the supplier.

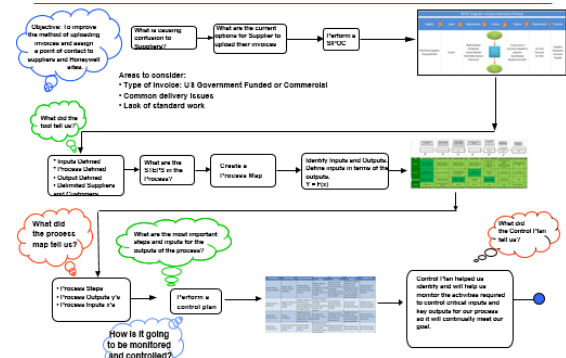


Figure 4  
Thought Process Map

During this tool, every step of the process was analyzed and gather all questions and issues that could arise during each step, who is affected by every step and what is the outcome of each step. With this tool every thought coming from every step is analyzed to see if there is room to improvement or something to measure.

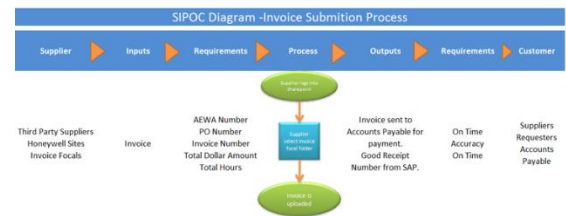


Figure 5  
SIPOC

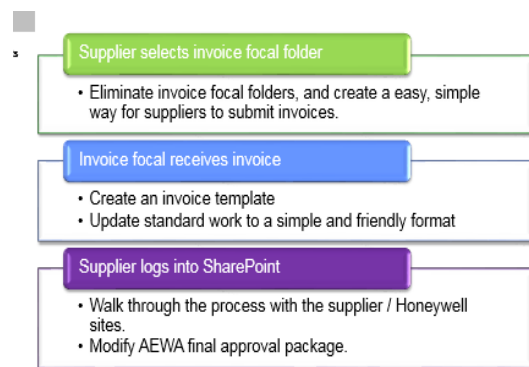
This tool was used to determine what is already known about the process. SIPOC stands for supplier, input, requirements, process, output, and customers. This tool helps to identify the customers/stakeholders of your project. It also helps you identify their inputs and requirements at the same time it helps you to find out what can be the outputs out of the process. This last step in the tool in which you discuss the outcomes, it is very important for the team to take into consideration.

While developing all these tools, it was clear the area that needed the most attention. SharePoint

and its interaction with the supplier or how supplier looks at the SharePoint needed to be changed. Customer is currently doing a lot of rework and not friendly process due to simply not understanding the tool itself and just to make sure the invoice gets to the company (because they do want to get paid on time) they end uploading the invoices multiple times in multiple places. This is causing rework on their end but also on the Procurement side as well. When focal start to process an invoice only to find out it has already been processed by another focal. According to the results of all this Measure and Analyze phase of the project, the improvement needs to be inside the SharePoint and it needs to improve how different customers upload their invoices to this SharePoint. During the VOC sessions, it was clear that a liaison between the company and external customers are needed because it was obvious that customers were not 100% satisfied or on the same page as the process should be.

This tool which helped the team to identify and understand failures within the process and brainstorm as a team on how to tackle them and stop them from happening again. Working on a FMEA helped us understand which failures were

happening more often and which weren't that important taking into consideration our main goal in the project.



**Figure 6**  
**FMEA**

Control plan analyzed results from the process and aid the team in order to understand which were the best steps and actions to control results and don't let the process fall into failure again. Some process improvements like Standard work documentation and monthly meetings with suppliers were implemented as a control plan in order to maintain results within the process. A control plan is a go to guide in order to know what to do and what measurements are being taken to ensure that the process is and stays under control.

Process Step	Failure Mode	Process Specification	New Measurement system	Current Control Method	New Control Method	Reaction Plan
Supplier selects invoice focal folder	Supplier selects incorrect invoice focal folder.	Supplier selects invoice focal folder within two minutes of access.	Supplier uploads invoices to Sharepoint according to AEWA type. (Commercial or Gov. funded)	Suppliers upload invoices through Invoice focal folder in Sharepoint, according to invoice focal assigned on the Final Approval	Supplier will log into SharePoint and upload invoices according to type of AEWA. (Commercial or Gov. funded. Invoice focal folder will be eliminated.	Invoice Focals will monthly review workload to keep it balanced.
Supplier logs into SharePoint	Supplier is refuses to changes in the process.	Supplier will log into SharePoint with Username/password given by AEWA team to upload invoices	Prepare a welcome package that will be sent with username/password for every new supplier.	Invoices that are being submitted through email are rejected.	Invoices will be accepted only through SharePoint.	Establish point of contact for Supplier in case of questions.
Invoice Focal receives Invoice	Invoice is incomplete.	Supplier will send invoice with correct information such as: AEWA/PO #, inv total amount, hours.	Honeywell will provide an invoice template.	Invoices sent with incomplete or invalid information are being rejected.	Suppliers will send invoices using template provided by Honeywell final approval package.	Invoice Focal will reject every incorrect invoice sent.
Invoice Focal receives Invoice	Invoice Focal didn't receive proper training.	Invoice focal will receive a proper training.	Standard work will be revised and target training will be prepared for every new employee.	Invoices uses actual standard work and training from peers.	New employee will be properly trained.	Standard work will be revised annually.

**Figure 7**  
**Control Plan**

## **Observations**

As result from all the tools used within this research, it was evaluated and decided that Invoicing process needed an enhancement and that there was a lot of room for improvement. If customer satisfaction is a must in our process, there were several steps within the process that needed our attention. Some of the results from the projects were:

- New hires didn't receive proper training or introduction to process or tools.
- Invoices are frequently submitted without proper information required from Procurement in order to be processed and to be in compliance for audit purposes.
- There is no liaison or POC between team and stakeholders and customers.
- Current communication process suffers from a lot of trash and gap holes.
- Tool used by team needs to be updated.
- No current tracking system for misplaced invoices.

## **RESULTS**

According to the findings evaluated in this project, some of the results that will be taken into consideration in order to enhance the process are:

- Invoice template will be created for supplier to have a standard document to submit that complies with all company requirements.
- A Standard work document will be created and monitored by team in order to have a guide to refer to at all times and facilitate training to new hires
- A POC per supplier will be identified in order for supplier and stakeholder have a designated go to person to address and work every issues with.
- An automatic stamp will be assigned to each invoice uploaded to SP in order to track misplaced and invoices that are not processed

- SP structure will be redesign with a simplified view for supplier and focals in order to be leaner and more user friendly for everyone.
- Invoice focal folders will be eliminated leaving a single folder for the supplier to upload and the focals to pick up from.
- Changed to project final approval package must be done in order to explain better the structure of the process and further instructions to suppliers.
- Quarterly meetings with suppliers will be held in order to follow up on process and how it's working for them in order to ensure customer satisfaction after latest improvement.

## **CONCLUSION**

Per project updates and improvements. During latest meeting with customers, 98% of suppliers were satisfied with enhancements to the SharePoint and process. Throughput cycle time has been reduced and overall all team members are working more motivated and happy. Kuddos from upper management were received for focusing in getting a leaner process and customer satisfaction guaranteed. A new VOC will be held during Q3 with the same suppliers in order to make sure that improvements are still working and looking for ways to make our process always better.

## **REFERENCES**

- [1] Honeywell. (2018). *Six Sigma Tools* [Online]. Available: <https://csrt.honeywell.com/Reports/SixSigmaProjectDashboard.aspx>. [Accessed on: January 17, 2018].