

CASE STUDY

InspirOn Engineering helps to improve Effectiveness of Product Development Activities for a European Food Processing Machinery OEM by assisting them for Sustenance Engineering Tasks

Abstract

For an Engineering Product development team the sustenance engineering tasks feels to be routine and mundane. Offloading such tasks provides an opportunity of better utilization of the team and also leads to increased effectiveness of the team towards product development activities. In addition to this, the flexibility of the service provider helps to improve overall functioning of the Engineering department.

This Case Study presents the approach adapted to support the sustenance engineering tasks of converting Left Hand machine assembly to Right Hand and vice versa.



Introduction

For a conventional Engineering Product Development department, most of the sustenance engineering activities are planned to be carried out manually using in house CAD/CAE/PLM systems. The drawback of this model is that a lot of time of Subject Matter Expertise (SMEs) is utilized into carrying out the mundane tasks of sustenance engineering. Even though the SMEs have very good experience of having worked on these tasks in past, an enormous amount of their time is spent in supporting these activities.

With offloading the sustenance engineering tasks to a reliable engineering solutions provider, the effectiveness of Subject Matter Experts can be increased by utilizing their time on important activities that actually requires their knowledge.

This case study presents the benefits due to outsourcing the routine sustenance engineering task of LH to RH conversion. An OEM in Europe had approached Inspiron Engineering Pvt Ltd for outsourcing their Design conversion of LH to RH Layout.

The Machinery Assembly consisted of many components and sub-assemblies.

In the conventional scenario, the conversion task used to take 40% of time of a Subject Matter Expertise (SME) of the OEM. By employing offloading these tasks to Inspiron, it resulted into improvement of SME's time for new product development activities.

The project consisted of analysing the design aspects of the machinery and identifying the standard components amongst the configurations needed.

The next section describes the scope of the project. Subsequent section provides information of the approach followed to execute the project. It also provides an overview of the process followed. Finally the case study highlights the benefits to the customer and lessons learnt.

Overview of the Project

The Scope of this project was to convert Left Hand (LH) Machinery into Right Hand (RH) layout. Following were key activities involved:

- Understand the current Product Development Process for the LH Machinery
- Analyse the components and sub-assemblies that can be used as standard between LH and RH assemblies
- Detail out the scope to convert the Left Hand to Right Hand Machinery
- Identifying components that require customization or modification due to layout change
- Generation of the Right Hand Machinery Layout

Approach

Understanding the Product Design Process of the reference model required following activities:

- Analysing and identifying the components to be a standard component or custom component between the two assemblies

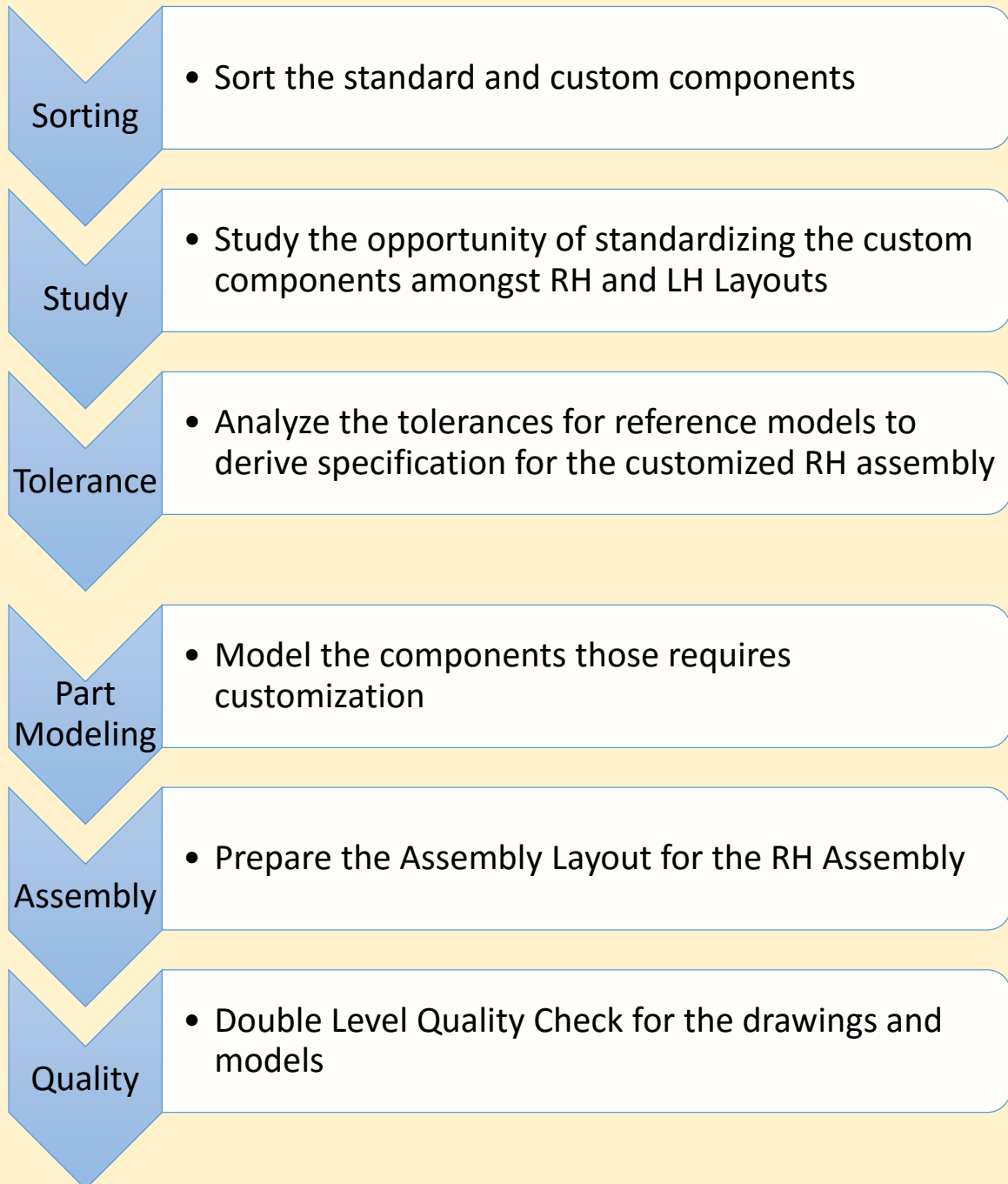
- For identified custom components the opportunity of standardizing it was analysed
- Analysing the tolerances and fits for the reference design to define the specification for the customized design for Right Hand Machinery
- Studying the current equipment layout for the LH assembly and analysing it for space constraint for RH assembly
- 3D models preparation for the customized components
- 3D models preparation for the assembly layout
- 2D drawings creation for the finalized layout of RH assembly

It was required to have all the work done in PTC Creo software.

The initial design for LH assembly was received in native PTC Creo format and was referred during the process of developing the RH assembly as mentioned in the previous section.

Multiple iterations were required to ensure that the final layout of the RH Assembly remains per layout specification requested by the customer

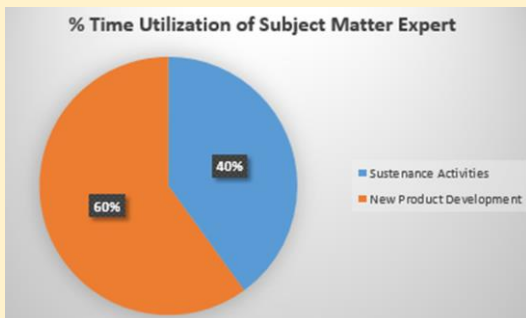
Process followed at Inspiron



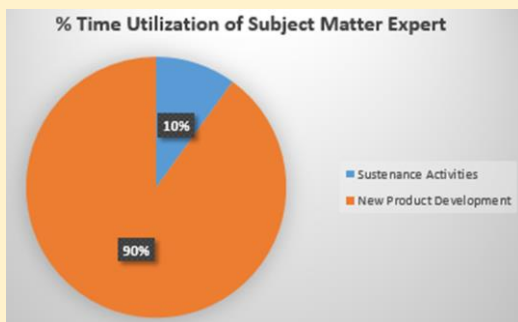
Key Benefits

Benefits acknowledged by the OEM by offloading the sustenance engineering work are as follows:

- Better Utilization of time for Subject Matter Experts



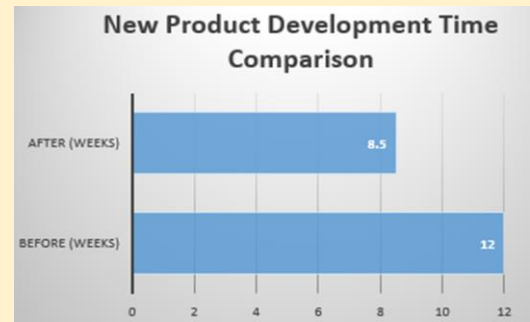
Before Outsourcing



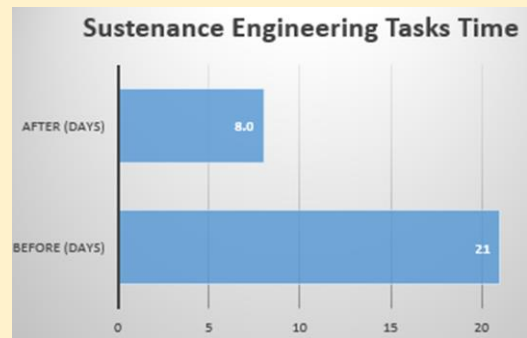
After Outsourcing

The effectiveness of a Subject Matter Expert was increased by 30% since he is able to focus on important tasks when the sustenance engineering tasks were outsourced to Inspiron Engineering.

- Improved Product Development Time (Shortened Time to Market for New Products)

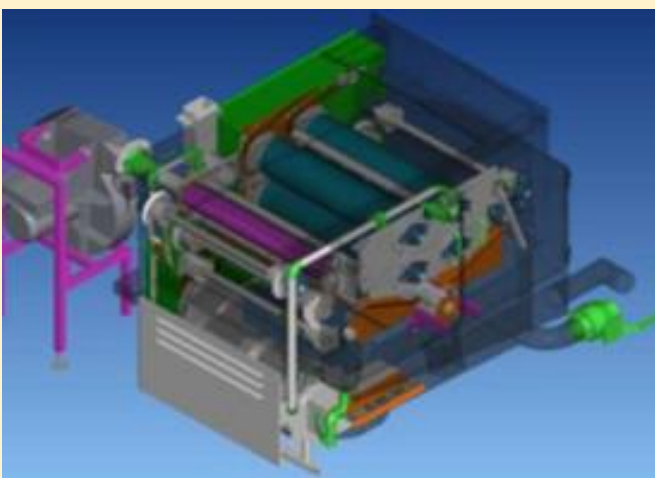


- Improved Completion time for Sustenance Engineering Task of LH to RH Conversion



Key Lessons Learnt

- Outsourcing routine tasks and sustenance engineering activities can help to increase the utilization and focus of subject matter experts on important functions such as Product Design and Development, Product Performance Validations and Product function improvements from various aspects such as thermal, ergonomic, fatigue etc.
- Outsourcing sustenance engineering tasks to external agency like Inspiron helps in completion of the tasks faster with good quality.



LH to RH Conversion

About InspiOn

InspiriOn Engineering Pvt. Ltd. is world's largest manufacturer of high performance Flyers. In addition to this, IEPL provides engineering services to various industries by their KPO division.

For more information regarding InspiriOn Engineering, please visit www.inspiron.co.in

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