AER 1601 - Final Project Report

Work Center Optimization

Bombardier Team 2 Bay 4 - Final Assembly Line

Executive Summary

Innovation within the technical Engineering field of an aircraft manufacturer is only a piece of the larger puzzle. Smooth and efficient Operation is key to success of an Aerospace Enterprise.

Without this crucial part, the products developed within the technical area of the business, no matter how innovative, would not successfully make it out to market. This project has focused on the Optimization of Operations within Bombardier Aerospace, with a focus on the Final Assembly Line of the Global 5500/6500 line of aircraft.

The project, a collaboration between UTIAS and Bombardier, was based within the Final Assembly Line (FAL) of the Downsview plant of Bombardier Aerospace in Toronto. The Operational aspects of the workings of the company, with focus on the FAL (situated within Bay 4 of the Downsview plant), were meticulously studied and analysed for inefficiencies. The findings were reviewed to identify areas of improvement and possible solutions.

The final recommended solutions, presented within this report, are focused on the following topics: Tooling Organization and Traceability, Handling of DNR Parts, and Layout Optimization and Standardization. This report discusses the findings and proposed solutions within these areas in details, as well as includes a new proposed Layout for Bay 4 / Final Assembly, which along with the other recommendations aims to accomplish improved efficiency and standardization across the Final Assembly Line, ultimately improving the flow of day-to-day Operations within Bombardier Aerospace