

Executive Summary

Team 2: Fabrication Shop Operations Improvements

In order to improve on logistics and save annual budget, Bombardier's Fabrication Shop is planning to come up with effective solutions to unify the current scheduling systems and optimizing shop-floor layout. For both projects, scopes and findings are identified, based on which feasible solutions are proposed and one recommendation is made and justified for each project.

The first project focuses on analyzing the fabrication shop scheduling and tracking issues, effects and causes of operational inefficiencies and synthesize the scheduling and tracking production activities within the Fabrication Shop. Root cause analysis was performed and the main area of focus is confined to communication issues that lie within the current scheduling system. A series of automation using VBA tools was designed and tested based on data provided by Bombardier Fabrication Shop. The proposed solution will combine the current PSR and EShort systems as a Master PSR and significantly reduce the report generation and meanwhile save a large number of man-hours per year. Upon implementation of the proposed solution, the Fabrication Shop will benefit greatly from the improved data flow in terms of on-time order completion.

The second project involves conducting optimization of the current shop-floor layout. Through analyzing and studying the current layout and machine usage information, three solutions are proposed to reduce the Fabrication Shop's footprint. The three solutions are illustrated in the final report and advantages and disadvantages of each solution are discussed in depth. A recommendation is made that benefits the Fabrication Shop both from long-term and short-term considerations.

The next steps toward implementing the proposed solutions for both projects are also elaborated in the final report. Possible schemes regarding improving the scheduling system and shop-floor layout that are beyond the scope of the project are also considered and discussed in the end in order to draw a bigger picture of the two current Fabrication Shop issues.