

Abstract

ATK's Radial Airframe Forming Process Assessment

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The purpose of this project was to provide ATK with a solution to increase efficiency in the R-02 radial forming center so that it could meet the increase in demand projected for the next 5 years. In addition, give ATK projected dates of when new machines would need to be implemented to be able to keep up with the demand. The system was analyzed through time studies to identify areas of possible improvement and eliminate any non-value added activities. Cycle times of each activity were used to simulate the current state of the system using ProModel software. Changes in operations were considered to optimize machine and operator's levels of efficiency. These changes and possible improvements resulted in an increase in machine's efficiency to 91% and operator's efficiency to 98%, which consequently produce 19% more throughput. With a higher throughput, the R-02 center will only need 5 out of the 6 forming machines that ATK had originally planned for 2017, resulting in a present worth value savings of \$2,730,000.