

## THE BOEING COMPANY – CAS

### OPTIMIZING THE SOFTWARE DEVELOPMENT PROCESS FOR MAINTENANCE PERFORMANCE TOOLBOX

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BOEING, a multi-billion dollar company, is the leading manufacturer of commercial airplanes and second-largest defense contractor in the world. The Digital Aviation (DA) division creates software solutions with the goal of being the leading provider of unified and innovative technology that enhances operations for the Aviation industry. Created in 2002, Maintenance Performance Toolbox is an integrated suite of applications providing digital tools to improve the efficiency of airline maintenance employees and engineering personnel.

To leverage the latest technologies, Boeing is currently developing a new software system that will be launched in three phases over the next three years. During these transition years, the existing legacy software platform will deliver business value to current customers while resources are reallocated towards the new investment. The Tauber team was commissioned to map out the entire product development value stream and develop recommendations to increase throughput by improving development efficiency during the reduction of operating budgets for legacy systems.

During the 14-week project, the Tauber team conducted over 50 interviews with business and development staff members to create a value stream map of the current software development process and identify areas of improvement. The team then performed quantitative analysis using data gathered from multiple internal company databases, financial reports, and staff surveys to identify improvement opportunities. Based on this work, the Tauber team developed a set of recommendations to improve product quality and speed to market, including investing in testing and deployment automation, eliminating redundant processes, and streamlining development by implementing Agile practices, a Lean software framework.

In order to facilitate implementation post-internship, presentations were given to senior management, and a plan was constructed to provide a clear timeline for execution. Once the recommendations are implemented, Toolbox is expected to see a 61% increase in development efficiency and an additional 3,000 hours of operations savings, leading to 24% more new features completed and 29% more defects fixed. This translates to an estimated \$1.3M cost savings over the next three years.