

THE BOEING COMPANY – GLOBAL SERVICES

Scaling Vertical Integration Across the Boeing Enterprise

STUDENT TEAM:

Jason Comstock – EGL (BSE & MSE Industrial and Operations Engineering)
Kayla Malehorn – EGL (BSE Mechanical Engineering/MEng Systems Engineering and Design)
Ryan Manes – Master of Business Administration

PROJECT SPONSORS:

David Hahs – Insourcing Business Processes &
Tools Manager
Joel Raup – Insourcing Business Leader

FACULTY ADVISORS:

Amy Cohn – College of Engineering
Vijay Pandiarajan – Ross School of Business

The Boeing Company is the world's largest aerospace company and leading manufacturer of commercial jetliners; defense, space and security systems; and service provider of aftermarket support. Boeing Global Services (BGS) was established as a new business unit in 2017 to grow the company's presence in the aftermarket services space and is the fastest-growing segment of the company today. As part of its effort to considerably grow this business, Boeing is working to strategically increase vertical integration across the enterprise to, as the company has stated, "strengthen in-house capabilities and depth in key areas to offer better products that deliver greater value to our customers, grow our services business, and generate greater life cycle value."

In many cases, the company co-develops engineering designs for airplane parts and has allowed some suppliers to retain the intellectual property (IP) for those parts, in a strategic effort to focus on the aircraft's systems integration. Under this traditional model, suppliers could become sole-source providers of certain parts, which would give them pricing power for production and control over the aftermarket, all of which could increase customers' costs. With this in mind, Boeing is returning its focus to vertically integrate key design and manufacturing capabilities that are essential to the production and support of its airplanes in order to better control the value and quality being provided to customers.

To address this new business model for Boeing, the Tauber team has laid down a foundation for how the business could operate moving forward. The team has defined best practices, developed business cases, and provided recommendations for total lifecycle management across the enterprise in the commercial aircraft industry. The team evaluated and created additional criteria for identifying which parts to develop new IP for and created a business case for integrating parts into production as well – while ensuring compliance with all IP ownership and contracts. By integrating data from 14 different data sources, the team was able to scale the project evaluation scope by 500% and develop a multi-year roadmap for the business unit. As a result of the team's work, the BGS team is piloting its first-ever joint effort with the Boeing Commercial Airplanes (BCA) production team, which could produce millions in value each year.