

## **Optimization of BAE Systems' HybriDrive Propulsion Systems Manufacturing Floor through Discrete Event Simulation**

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**Abstract:** The team from Binghamton University is working with BAE Systems in Endicott to simulate and optimize their current manufacturing processes. This resulted in identifying opportunities to increase production throughput by at least 30%. Through collaboration with BAE Systems employees, the team was able to develop a simulation of the manufacturing floor using Simio. The model incorporates three lines, workers and their shifts, flotron fixture constraints, and build plans for 2020. This file allows BAE Systems to estimate results from their manufacturing floor. In future work, the company can incorporate more data to enhance the accuracy of the model using the team's work instructions. The team used the results from the simulation to compile a list of recommendations revolving around lean principle implementation to improve production yield. BAE Systems will be able to revise processes and simulate the increasing demand on their manufacturing floor to make accurate business decisions moving forward.

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