Lee Industries Flow Model Project

Overview
The problem given to our team by Lee Industries was to develop a simulation model for their manufacturing facility. The modelling software SIMIO was the medium to make this model as realistic as possible compared to the way they manufacture kettles. Their facility is a custom job shop in which various sizes of kettles having only certain parts are made. The model was to be capable of analysing alternative demand scenarios to make visible bottlenecks and areas of concern.

Objectives
The main objectives of this project were to analyse and interpret data given by Lee Industries and use SIMIO to develop a model that can be useful to the employees at Lee in the future.

Approach
- Data sorting
- Data analysis
- Create Process Flow Diagram
- Development of models to represent sub-processes
- Use “sub-models” to begin framework for final model
- Transfer given data into the model as inputs
- Validate model using given data for “time in system”
- Create Experiments
- Run experiments using alternative demand scenarios

Outcomes
The main outcome of the project was a simulation model that represents the Lee Industries manufacturing floor. This model can easily be modified with exact data that Lee Industries have to decide if more stations for a certain process are needed or to hire more workers. We also worked with a future Lee employee when creating the model.