Overview
This team was faced with the challenge of creating a new plant layout to be used for the construction of a new production facility for TAFCO, a manufacturer of industrial sized refrigerators and freezers. The current facility is sprawled across over 100,000 square feet and does not create a productive environment for TAFCO. Storage is an issue as panels are strewn across the facility and carts are over used to the point that they become inefficient.

Objectives
The objective of this project was to create a new plant layout in CAD. Additionally, the team was to reduce the storage footprint and cart use throughout the facility by reducing the need for travel between work cells.

Approach
- Visited the facility to gain understanding of the issues faced by TAFCO
- Collected information about current layout: CAD drawings, common issues
- Assessed customer needs via verbal communication with plant manager
- Created plan to approach layout problem using Muther’s Method
- Segmented plant design process and brainstormed solutions to different issues within plant
- Found 60% gain in efficiency from initial layout created
- Tested feasibility of new layout by communicating with sponsor and team about needs and requirements of the plant
- Integrated segmented design recommendations involving docking, door room layout, cart usage and 5S methodology

Outcomes
The outcome of this U-shaped production layout and the team’s findings are as follows:
- The sponsor will save ~$136,000/yr as a result of this new facility
- ~2730 hours will be saved each year in travel time between stations
- The U-shaped production layout will allow for cross-docking
- Use of 5S methodology will create a lean facility