Mission Statement
CooperVision is the world’s second largest producer of contact lenses. Currently they operate a 250,000 square foot distribution center in Henrietta, NY. CooperVision has not been able to properly determine their current capacity to complete orders within the distribution center. Consequently, they cannot predict when they will be unable to fulfill future orders due to facility and equipment constraints. The company wants to know what their current capacity is and how best to fulfill staffing requirements to meet demand. This project will address the following question: What is the maximum number of orders/picks/units this facility can process in a given time based on the current resources, equipment and software?

Customer Needs
- The computer tool alerts the user when a given demand input is not realizable given actual capacity of Facility and Equipment.
- The computer tool accurately represents the real world.
- The computer tool is able to be upgraded and/or modified in the future.
- The time required to train users is minimal and tool is user friendly.
- The computer tool allows the user to visualize all the information on a single screen.

Process Improvements
- Implemented during second 10 weeks of Senior Design
- As a team generated over 20 improvement ideas
- Created concept selection matrix to select best improvements
- Met with customer multiple times to determine customer need for improvement
- After selection process CooperVision chose two kaizen events to be held

Events focused on improving ADM labeling and the Shipping Conveyor
- Results:
  - Reduction in re-sorting of orders
  - Improvement of ergonomics
  - Improvement of order accuracy

Final Computer Tool Design
- Concepts generated & selected
- Collected data
- Refined design and formulated calculations to determine capacity
- With feedback from CooperVision staff, improvements were made to reflect the needs of the customer
- Compared historical demand and labor data to the Computer Tool in order to validate the output

Results
- Determines labor hours required for a given demand
- Warns user when an area is over capacity
- Calculates maximum capacity for each area