Armstrong World Industries, Inc

Overview
The main problem at the Marietta plant is that the storage space for goods in process, raw material and finished goods is disorganized, and is dispersed throughout five of the eleven of their main facilities. The plant has a great deal of unused space as well as space taken up by useless objects. This has led to a lot of wasted time for plant workers and engineers alike, and our plan is to analyze these problems and develop a new storage system that will optimize the storage facilities at the Marietta plant.

Objectives
The main objectives were the following:
- To reduce wasted space and optimize the Armstrong Marietta plant layout to lower transportation times
- To create doe models of the original and redesign of the Marietta facility using Arena software
- To analyze output data generated from Arena model to compare original vs. modified layouts
- To create CAD drawings of original and redesigned facility layouts

Approach
- Describe the approach your team took to solve the problem using a bulleted list of steps
- For example, talk about how you gathered the customer needs and/or requirements
- Did you do some concept generation and selection?
- Did you review relevant patents, analyse existing products/processes, etc.?
- Did you have to visit the sponsor and gather data from them?
- What sort of simulation models/analyses did you use to evaluate different alternatives?
- Did you create CAD models?
- Did you fabricate a prototype? multiple prototypes? etc.
- Did you perform testing?
- How did you validate your model/results?
What sort of results did you generate? How did you analyse them?

Outcomes
- Armstrong will save on forklift fuel costs as a result of this project
- Forklift travel times were reduced between 3-15 minutes per trip
- The project placed finished goods in a centralized location
- The project placed raw materials at their point of use
- The project placed packaging materials at their point of use
- Dependency on Building 25 was eliminated for raw material and finished goods
- Red Cross placed in more desirable space