Optimizing Inventory Warehouse Location: ENCS Support Team

Overview
The Penn State Enterprise Network and Communication Services (ENCS) group is looking to relocate its current warehouse facility located at University Support Building II to the Scientific Stores Building located on the Penn State University Park campus. Due to increasing demand, a larger and more efficient warehouse is needed to facilitate the growth and capabilities of ENCS.

Objectives
- Collect data insights from managers and staff
- Observe and document the processes
- Identify criteria to be evaluated
- Build scale model of new facility
- Brainstorm solutions
- Recommend and document next steps

Approach
- Observe the process first-hand and gather information from staff
- Gather staff and sponsor feedback regarding common issues, concerns, and proposed solutions
- Develop a Recommended Weight Limit (RWL) for each staff member to minimize health risks
- Identify relationships based on frequency and logic for all staff members and areas within the Scientific Stores Building
- Use Systematic Layout Planning (SLP) and Spiral, an optimization software, to create initial warehouse layout
- Work with staff and sponsor in an iterative process to obtain feedback on proposed layout in order to create the optimal warehouse layout
- Construct a LEGO model to provide a 3D visual representation of the warehouse design that allows staff members to adjust their areas

Outcomes
Through this project, ENCS was provided with the optimal warehouse layout for the new location at Scientific Stores Building. The proposed layout takes into consideration ergonomic issues, relationships based on logic and frequency of interactions, and shelving requirements during maximum capacity.