# Generalizing Slotting Strategy

**Goal:** Given a csv file representing a grid of any size containing pick frequency data (like in LAB 12) output a completed and optimized new grid containing the SKU locations.

Problem assumptions:

1. Must take a warehouse grid of frequency data of any size (rows,aisles) as a CSV file
2. **Dock location**
3. **Obstacle locations (if any)**
4. Unique SKUs are at each position (row,aisle)
5. SKU0 is located at (0,0), SKU1 → (0,1); row-wise across the grid
6. A = top 20% B = 30% C = 50% (allow for user defined %s)

Problem functions:

1. Load frequency grid.
2. Flatten the grid to skus.
3. Conduct pareto
4. Calculate abc classes.
5. Assign skus to slots.
6. Distance calculation from dock
7. Customizable dock position
8. Check all SKUs assigned with no conflicts
9. Create accessibility zones based on distance

Problem output (goal):

1. New warehouse layout with SKU assignments
2. Calculate improvement over original layout
3. Automatic explanations for placement decisions
4. Generate both grid and explanation text
5. Show before/after travel distance metrics