### Problem Statement
- Our goal: Improve efficiency on production floor
- 3 Focus Areas:
  - Improve on floor communication
  - Reduce time and confusion in counting process
  - Improve efficiency/consistency in fold process

### Requirements
- Our primary requirements included:
  - Increase in counting time and accuracy
  - Folding process efficiency must decrease
  - Improve the communication on fold
  - Uphold medical manufacturing related standards

### Concepts
- Initially the team determined a variety of potential areas of improvement including:
  - Folding inconsistencies/inefficiencies
  - Tedious/difficult counting procedure
  - Unclear communication on production floor
  - Large amounts of scrap materials
  - Potential layout improvements

- We down selected to 3 areas to focus on based on:
  - Feasibility
  - Cost
  - Level of improvement

- Largest change from initial concepts was in the folding device
  - Originally used metal hinges to hold the various sides together
  - Center piece had a cutout

### Final Design
- **Manufacturing Scoreboard:**
  - Designed a manufacturing scoreboard based on previous experiences and advisement from WBV
  - Scoreboard provides clear and concise scheduling for improved communication with production floor and supervisors.
  - Will be displayed on a large screen on floor

- **Scale Counting Method:**
  - We selected a simple scale to test proof of concept
  - The scale provides an alternative to the current piece counting method using a clicker

- **Assistive Folding Device:**
  - Design is for 2597 Drape: final fold size is 7in x 7in
  - We used tying or paracord to hinge or pieces
  - Center and small sides are 7in x 7in
  - Long sides are 7in x 24in
  - MDF is clear coated in order to reduce dust particles

### Results
- **Manufacturing Scoreboard:**
  - The scoreboard has been met with positive responses from upper management
  - It allows for various tracking of efficiencies from station to station or employee to employee

- **Scale Method:**
  - The scale is successful in weighing 10 drapes at a time with very little to no inaccuracies
  - A single drape consistently weights 1.6oz
  - Is quicker and more streamlined
  - Prevent the need for recounts throughout the process

- **Assistive Folding Device:**
  - The folding device produces fold within tolerance with some being slightly out
  - The MDF material holds up well, but has shown some minor flaking

### Summary
- The team accomplished process improvements in three major areas:
  - Folding procedure
  - Counting Method
  - Communication
- We successfully produced an alternate method of floor communication and piece counting that allows for a more efficient production process
- Also, delivered 2 different prototype folding devices that can be applied or improved on

### Team & Acknowledgements
- **Team Members:**
  - Hunter Allison: B.S.E. – M.E.
  - Cameron Whaley: B.S.E. – M.E.
  - Khadevis Snead: B. S. E. – E.T.
- **Faculty Advisor:** Dr. Patrick Gardner
- **Sponsor Advisor:** Joe Rigdon