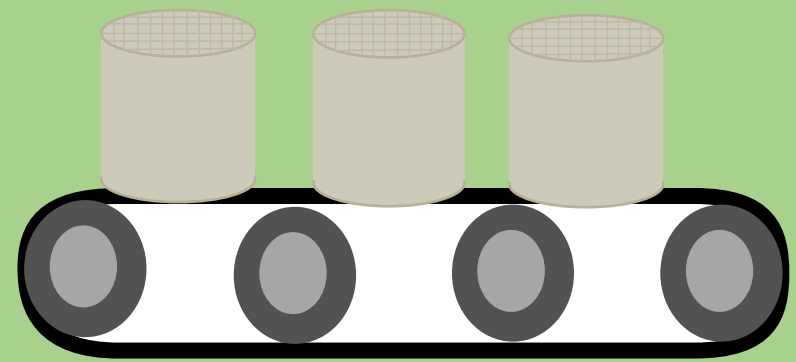


Objective

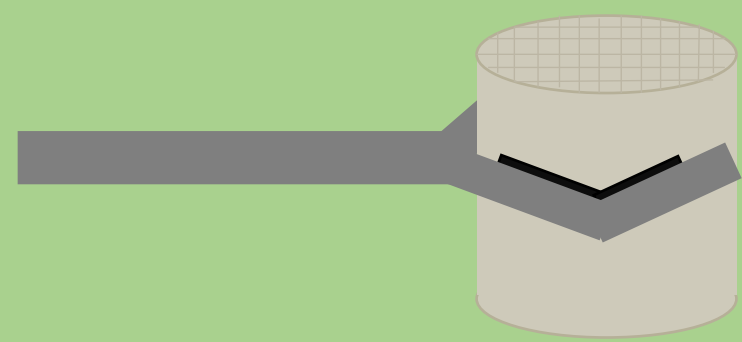
Develop an alternative method for handling ceramic substrates that eliminates damage to the part

Key Goals

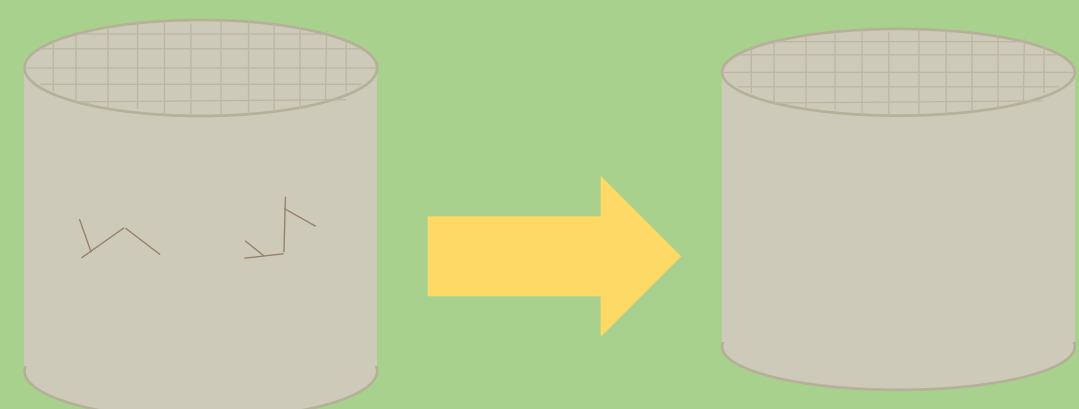
Results in a Lean Manufacturing System



Test with Samples



Eliminate Part Damage



Project Background

Mixing

Cutting

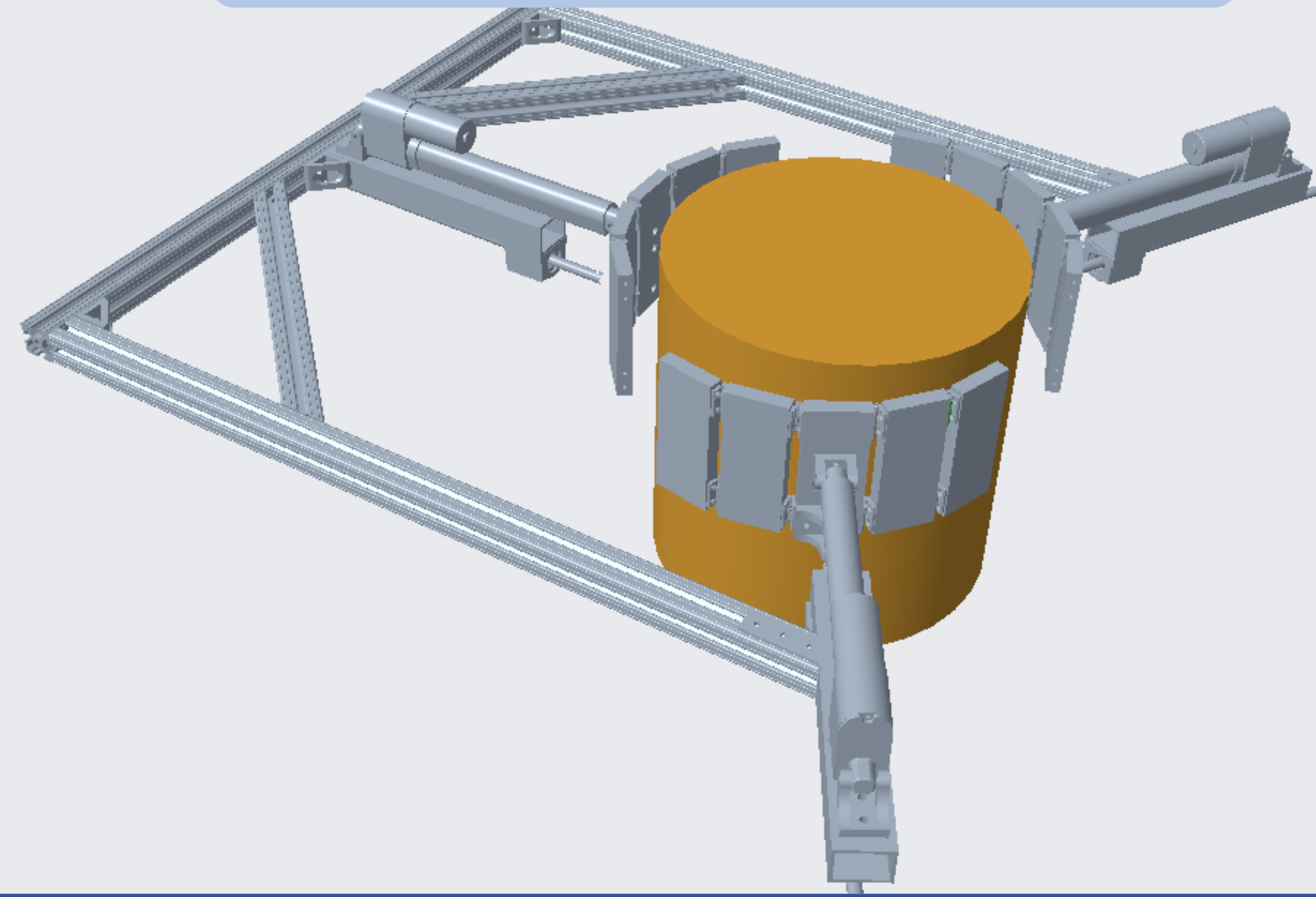
Handling

Extruding

Firing

Finishing

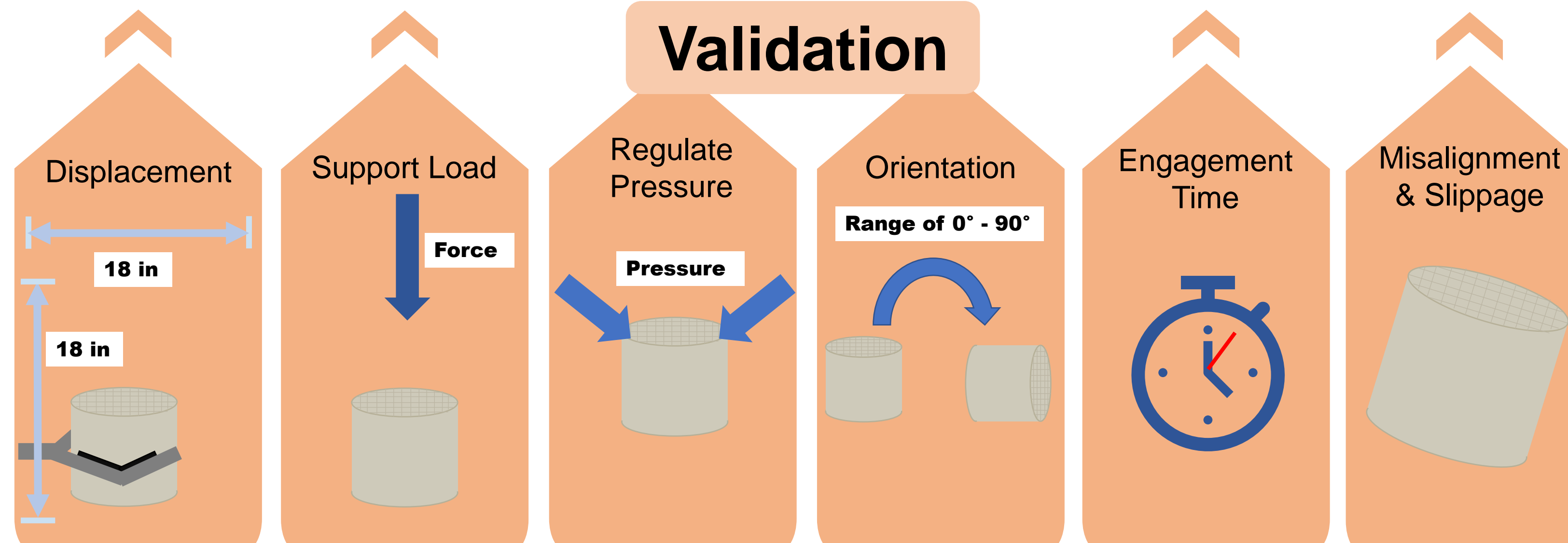
Final Design




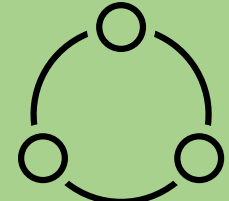
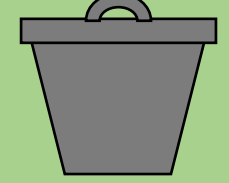
Sequence

- 1 Lower handler to correct position, determined using feedback from a proximity sensor
- 2 Handler closes in on ceramic filter while pressure is regulated using force sensors
- 3 Test fixture will lift handler vertically and horizontally and place the undamaged ceramic down

Validation



Future Operations

- Change in Overhead cost 
- Cycle time less than or equal to 30 seconds 
- Decrease scrap rate 
- Optimize on current facility layout 