

## Group #2 - Creanovation

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### Problem Statement

Due to a new sensor design, the challenge to address is the absence of an efficient and durable sensor enclosure design that meets the complex demands of modern industrial processes.

### Project Purpose

- The primary purpose is to design and develop an advanced sensor housing tailored for tracking Work In Progress (WIP) that serves as a tool in enhancing operational efficiency.
- This purpose is driven by the critical importance of real-time data display and alerting capabilities to the production floor, facilitating decision-making and to respond promptly to production demands and challenges.

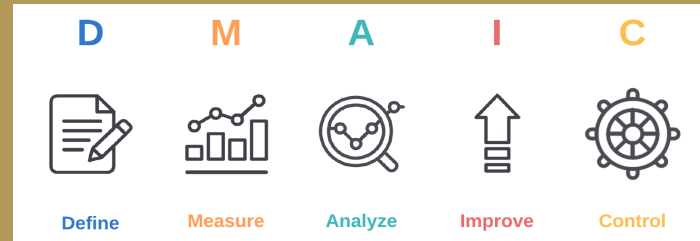
### Project Objectives

#### Main goals

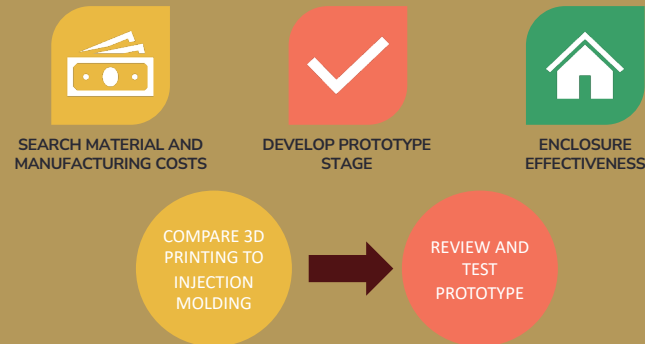
- Create an enclosure for the sensor to be used on Smart Racks
- Impact resistance to physical impacts such as minor bumps or vibrations
- Consider manufacturing options such as 3D printing and injection molding
- Ensure that LED light is visible, clear, and distinguishable
- Cost estimations
- Ensure the chosen machines meet production rate requirements while staying within budget

Objective	Relative Weight
Sensor Enclosure Design	20%
Manufacturing Process Selection	25%
Assembly Process Efficiency	15%
Cost Estimations	40%

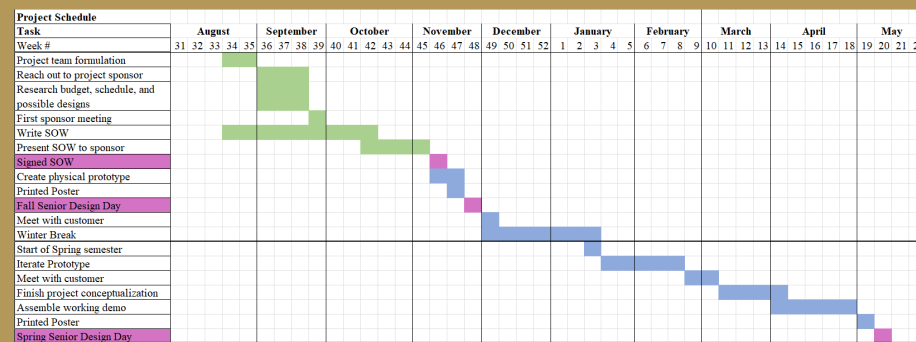
### Problem Solving/Continuous Improvement Approach



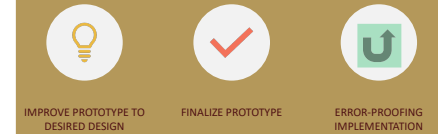
### Measure and Analyze Stages



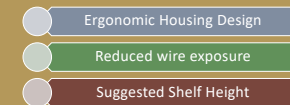
### Gantt Chart



### Improve



### Human Factors



### Future Plans

#### Completed

- Signed statement of work (SOW)
- Initial design review with sponsors

#### To-Do

- Cost estimations
- Enclosure design
- Sensor install on rack

### Team Members



From left to right:  
 TJ Butler,  
 Erin Hausmann,  
 Victor Lopez,  
 Lauren Feliciano

Sponsor: Crean Inc.  
 Instructor: Dr. Michelle Londa