

**Team: 19433**

**Engineer: Josephine Keenan**

## **Phase 2 Plan**

### **What were the outcomes of the prior phase?**

1. What did I plan to do?

There was no preset plan as this was Phase 1, but as we started to learn what the project was about I was tasked with learning how to use Edge and what needed to be updated. As well as assisting with creating a problem statement, updating the current state of the device, and researching possible cooling systems for the device.

2. What did I actually do?

In reality, I learned the basic use of Edge to get started and I started to update what we had done on Edge. I was also able to do some research on cooling systems and finished the current state of the device for the design review.

3. What did I learn? How were plan and reality different?

I learned that there are a lot of steps between getting a project and designing it. A lot of planning goes in to the process beforehand. Plan and reality were different in that I set out to accomplish a lot of things, and in reality, I did a little of each.

### **Team level goal for next phase**

Our team's goal for the second phase is to break down the design of the melter into subsystems so that we can better understand how we can provide the necessary functionality for the device. This will also help us determine more specifically where we are picking up in the design from P18433, and what we may need to change.

### **What do I plan on doing to ensure that my team has a successful review at the end of the next phase?**

1. Research more in to the cooling systems used in 3D printing to apply to our system (2-3 hours week 4)
2. Research more about El Sauce and the culture there, as well as the buildings 4Walls builds (1-2 hours, 2<sup>nd</sup> half of week 4, work with whole team)
3. Review strengths and materials notes as well as heat transfer to prepare for designing (2 hours week 5, work with Shannon and John)
4. Decided on a system for organizing files in Edge and implement (2-3 hours, week 5)
5. Work with whole team to find and decide upon heaters and compression system for device (3-5 hours, week 6)
6. Work with MECE and EE team mates to determine minimum power usage from heaters to melt plastic after estimated losses from heat transfer are taken into consideration (4-6 hours, week 6)