Intro:

Hello judges and potential clients! We are group 6 presenting you our take on the dust sensor device made for our client at Mill St. brewery. So to start off, what is the problem that we need to solve?

> **"*So What?*". Motivate the problem. This will require some research and rehearsal. You need to be very crisp and clear about what problem you have solved.**

After the first client meeting we formed a problem statement regarding our clients needs. ****show and read the problem statement on the slides*.*** A device that will monitor dust concentrations coming out the case filter and a level sensor that will monitor the level of malt in the silo. This correlates directly to what the client is in need of and we indeed found a solution for our client and are pleased with the current solution that we have created.

> **"*Who Cares?*". Explain the basic user requirements, as well as current solutions and alternatives and why solving the problem is important.**

Our user requirements are accuracy, reliability, and ease of use. We built our prototypes and our final design around these margins. Our current solution collects dust concentration on top of the case filter whilst working with a level sensor in order to keep dust concentration at a secure level for our client and recommend actions using our code on what the client should do if dust levels get to an inadequate level. This problem is important since it can slow down the brewing process and we want our client to have the most efficient and simple process possible.

> ***"Why you?"* and *"Why now?".* Explain the differentiation in your design or the key aspects that make your product better and needed right now.**

The key aspect that makes our design superior is the use of two devices whilst still keeping it low cost. This design shows that if one of the sensors shows inaccuracy the other will still be able to measure dust concentration. On top of that, our device is low maintenance since the level sensor rarely needs to be checked and the dust sensor never comes into contact with any major debris nor dust particles. It is tested and ready to use with no malfunctions. The use of two devices makes our design unique and reliable in order to provide the best possible solution for our client.

1 minute pitch:

Hello judges and potential clients! Our group, Group 6, has a solution for Mill St. Brewery's problem of monitoring dust concentrations and malt levels. We developed a device to monitor dust concentrations coming out of the case filter and a level sensor to monitor the level of malt in the silo. Our device focuses on accuracy, reliability, and ease of use. It uses two devices to monitor dust concentrations and keep them at a secure level. If dust levels reach inadequate levels, our code recommends actions to maintain optimal conditions. Our design is unique because it uses two devices while keeping it low cost. This ensures that if one sensor shows inaccuracy, the other can still measure the dust concentration, making our design superior to other solutions in the market. The device is low maintenance and tested, with no malfunctions. Thank you for your time and consideration. We believe our solution can help Mill St. Brewery improve their brewing process and efficiency.

2 minute demonstration:

- Show every part of our device works (code, level sensor and dust sensor)
- Show code/serial monitor that displays our results
- Show Web App we designed for the data collecting
- Explain the whole process in the mean time