

Deliverable B: Needs identification and problem statement

Introduction:

In our last lecture, we heard from Bob Sylvester, a biologist who has 20 years of experience working in brewing quality and currently works in Mill Street Brewery. Mill Street Brewery is looking for a device to measure the dust condition inside a grain silo. In this document, we will focus on the information gathered from the meeting and collect them around the existing problem statement following the client's needs.

Problem statement:

Mill Street Brewery needs an efficient device to monitor the malt "dust conditions". It must prevent the filtration system from clogging by determining the amount of dust that is in the silo, therefore limiting dust throughout the production process, while remaining affordable, accessible, and easy to maintain.

Users:

The users of this product are the employees that work at the brewery and Bob/ other managers that will oversee the system.

Needs, and system clarifications:

The clients, Mill Street Brewery employees and management team, voiced several needs for this dust sensory device. This measurement system must be cost efficient, within the range of ten to twenty thousand dollars as a budget. In addition to cost efficiency, this device must be easily installed and replaced when necessary. Easy accessibility for maintenance, cleaning and regular operations

checks as well as ensuring the production isn't slowed is vital for the success of the device. The device must be easily adaptable to structures and several uses amongst their various structures. The device must not intrude on the current system to ensure the product remains organic. Ultimately the goal is to limit the amount of dust in the final product in order to ensure pure wheat and as a result, better tasting beer.

Importance of needs:

Needs number	Need	Importance
1	Cost efficient	4
2	Replaced and installed easily	5
3	Maintenance and easy access	5
4	Can't delay brewing process	2
5	Allows for process to remain organic	5
6	Full measurement of dust	3