# Project Design Phase-I
# Problem Solution Fit

| Date | 03 October 2022 |
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| Team ID | PNT2022TMID38737 |
| Project Name | Efficient Water Quality Analysis and Prediction Using Machine Learning |
| Maximum Marks | 2 Marks |

### 1.CUSTOMER SEGMENTS

There are various categories of customer of high-quality water in the public, private, and government sectors.

### 6.CUSTOMER CONSTRAINS

Customers can use a web application to analyse the water quality by simply providing a few water characteristic data, but they do need some fundamental prerequisites, such as a network connection, a system or a mobile.

### 5.AVAILABLE SOLUTIONS

Have information on the water's colour, odour, pH level, and other characteristics to evaluate if it is safe to drink or not.

**PROS**
Solution within a second

**CONS**
Accuracy is not 100 %

### 2.JOBS TO BE DONE/PROBLEM

Gather the historical information about the quality of the water based on its many features and qualities in the chemical and physical compositions of nature.

### 9.PROBLEM ROOT CAUSE

All living things are harmed by improper maintenance of rainwater and surface water from rivers that are combined with industrial waste and certain other human-generated contaminants.

### 7.BEHAVIOUR

Customers must have up-to-date information about the water's status in order for machine learning models to accurately anticipate whether the water is excellent or harmful.

Basic knowledge of water characteristics and web usage for the easy way to solution.

### 3.TRIGGERS

General information about the water by using sensors and give those values to the application will give all the details of water quality.

### 4.EMOTIONS:BEFORE/AFTER

Without prior knowledge of water quality and drinking it leads to be causing various diseases and loss of life.

### 10.YOUR SOLUTION

**Simply entering the current water data to the web app which gives the analysis of water prediction.**

**Using past historical data of water to predict and analyse the water in current scenarios.**

### 8.CHANNELS OF BEHAVIOUR

**ONLINE**

Customer can use the web app by simply entering the current URL of the website.