# Project Design Phase - I

# Problem Solution Fit

| Team ID | PNT2022TMID21890 |
|---------|------------------|
| Project Name | Project - Efficient Water Quality Analysis and Prediction |

## Problem-Solution fit canvas 2.0

Purpose / Vision

**Define CS, fit into CC**

**1. CUSTOMER SEGMENT(S)** — CS

People, Residential, Commercial, Lab testing

**6. CUSTOMER CONSTRAINTS** — CC

Water is essential for every one to sustain. If the water is not in good quality it may cause diseases The disease caused by the impure water is avoided with this application..

**5. AVAILABLE SOLUTIONS** — AS

The available solution is finding water quality index (WQI) and water quality class(WQC).

With the help of WQI and WQC the ph levels of water can be calculated.

**Explore AS, differentiate**

**Focus on J&P, tap into BE, understand RC**

**2. JOBS-TO-BE-DONE / PROBLEMS** — J&P

Check the quality of water.

Check whether the water is usable or not.

Gives the reason for un-usability

Customer can check the water quality by themselves without expert's support.

**9. PROBLEM ROOT CAUSE** — RC

Identify appropriate solution.
Collect sufficient amount of data.
Identify the associated casual factor

**7. BEHAVIOUR** — BE

the study attempts to assess the users water use behavior using available resources, prevailing socio-economic conditions and personal aspects of users.This research work suggests the need for ensuring water quality is important before use

**Focus on J&P, tap into BE, understand RC**

**Identify strong TR & EM**

**3. TRIGGERS** — TR

With the help of this application.users can avoid the fear of water quality.Since the user knows the quality of water they are going to use ,they can avoid most of the health issues that are caused by poor quality water

**4. EMOTIONS: BEFORE / AFTER** — EM

Before there is no technology to analysis the Quality of water so there is some fear with the quality of water, After it is easy to calculate the water quality with the help of this application.

**10. YOUR SOLUTION** — SL

The data from different sources are taken and with help of a water quality analyst we will be getting an idea about the constraints where we start to get the data and preprocess it.
By using some ML algorithms and some analysis methods the hardness,conductivity and turbidity are identified and the results are provided based on this.

**8. CHANNELS of BEHAVIOUR** — CH

8.1 ONLINE
The application helps to notify the data preprocessing information

8.2 OFFLINE
By attaining the standard quality of satisfy all parameterit is consider as pure water.

**Extract online & offline CH of BE**