**Project Title:** Efficient water quality analysis& Prediction using machine learning **Project Design Phase-I** - **Solution Fit Template** **Team ID:** PNT2022TMID25978

or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital note taking

advantages are protecting human health and user friendly.

Disadvantage is the some of the water quality analyser is high cost

**5. AVAILABLE SOLUTIONS**

Which solutions are available to the customers when they face the problem

What constraints prevent your customers from taking action or limit their choices

of solutions? i.e. spending power, budget, no cash, network connection, available devices.

Easy method the low cost.

**6. CUSTOMER CONSTRAINTS**

**1. CUSTOMER SEGMENT(S)**

Who is your customer?

i.e. working parents of 0-5 y.o. kids

the people who need to check their quality of drinking water and to check the quality of river water for fishes.

**Explore AS, differentiate**

**Define CS, fit into CC**

i.e. directly related: ﬁnd the right solar panel installer, calculate usage and beneﬁts; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

**7. BEHAVIOUR**

What does your customer do to address the problem and get the job done?

The efficient water quality analysis include the system

measures such as temperature, hardness, alkalinity,

and pH to ensure the general quality and different

uses of water

**9. PROBLEM ROOT CAUSE**

What is the real reason that this problem exists? What is the back story behind the need to do this job?

i.e. customers have to do it because of the

change in regulations.

The presence of certain contaminants in our water can lead to health issues, including gastrointestinal illness, reproductive problems and neurological problems

Hence to check the quality of drinking water is very important.

**J&P**

**2. JOBS-TO-BE-DONE / PROBLEMS**

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

Predicting the urban water quality is a challenging task since the water quality varies in urban spaces non-linearly and depends on multiple factors, such as meteorology, water usage patterns, and land uses, so this project aims at building a Machine Learning(ML) model to Predict Water Quality by considering all water quality standards indicator.

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

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

**Identify strong TR & EM**

**& M**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Identify strong TR & EM** | **TRIGGERS**  To estimate the number of bacteria present and to allow for recovery of microorganisms in order to identify them.  What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efﬁcient solution in the news. | **YOUR SOLUTION**  It makes the people to check the quality of water by checking the temperature, pH, alkalinity and to ensure that any microorganisms such as virus and bacteria present in water. It helps to customer to drink the healthy water | **BEHAVIOUR**  Check the quality of water by checking for any microbes present in water and by checking the temperature, alkalinity, etc. to provide the good water |  |
| **EMOTIONS: BEFORE / AFTER**  How do customers feel when they face a problem or a job and afterwards?  i.e. lost, insecure > conﬁdent, in control - use it in your communication strategy & design.  Water is considered as a vital resource that affects various aspects of human health and lives. The  Quality of water concern for people living in urban areas. The quality of water serves a powerful environment determinant and a foundation for the prevention and control of waterborne diseases |