Project Title: Real time river water quality monitoring and control system **Project Design Phase-I - Solution Fit** **Team ID:** PNT2022TMID32705

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) CS

Who is your customer?
i.e. working parents of 0-5 y.o. kids

Government sector
Farmers
Industrialist

6. CUSTOMER CONSTRAINTS CC

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.

The proposed water quality monitoring system based on WSN can be divided into three parts:

1. IOT Platform
2. Big data analytics and water quality management system

5. AVAILABLE SOLUTIONS AS

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

The main aim is to develop a system for continuous monitoring of river water quality at remote places using WSN with low power consumption , low cost and high detection accuracy.

Explore AS, differentiate

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

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

- To identify the presence of algal bloom in the tank or water bodies
- To identify the temperature and turbidity

9. PROBLEM ROOT CAUSE RC

The quality of the river water will be affected due to large amount of farm fertilizer or farm waste drain into river concentration of nitrate and phosphate increase

7. BEHAVIOUR BE

It uses less data and power. Additionally , it might serve as a best safety step for maintaining water quality

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

Identify strong TR & EM

3. TRIGGERS TR

- It is small in size, so customer find it easy
- They are able to recognize the issues with water without anyone.

4. EMOTIONS: BEFORE / AFTER EM

Before:
Trouble in identify the turbidity and temperature of river water
Rural people affected by the unpurified water
After:
Using real time monitoring, instant data allows precursors to potential issues (corrosion) to be flagged up and immediately be addressed before the major issue
The ability to make real-time decisions during critical moments can be important in preventing expensive repairs and breakdown.

10. YOUR SOLUTION SL

Creating a MPC BUOY app to prevent algal bloom using ultrasound as a control measure

8. CHANNELS of BEHAVIOR CH

ONLINE

- The cloud storage can be used to regulate the waterflow
- Used to search websites , send the mail to authorities.

OFFLINE

The proposed system includes a number of sensors to test and guarantee the water quality based on factors including pH, temperature and turbidity

Identify strong TR & EM