Project Title: Real Time River Water Quality Control and Monitoring System

Project Design Phase – 1
Problem Solution Fit

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Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

Who is your customer?

The persons who need to check the water quality are our customers

E.g.: Industries and normal people

6. CUSTOMER — 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.

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

Explore AS, differentiate

Which jobs-to-be-done (or problems) do you address for your customers?

RC

The only constraint that prevents the customers from taking actions is quality of water because the water may be contaminated by fertilizers and algal bloom

There are some solutions through which the water quality can be monitored.
People in the past had no monitoring equipment's they just filtered the water and consumed as hot water

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

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

There could be more than one; explore different sides.

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.

7. BEHAVIOUR — BE

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

The major jobs to be done are checking the water quality and trying to control the quality of water by promoting the use of manures instead of using those chemical fertilizers

The real reason behind this problem is use of fertilizers in farm land. As a result, during rainfall the fertilizers are flooded to river water and the water get polluted. To avoid this farmer can use manures and natural fertilizers instead of chemical.

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Identify strong TR & EM

3. TRIGGERS TR

The quality of water triggers the people to use the water quality monitoring system

4. EMOTIONS: BEFORE / AFTER EM

Before the people had a fear of quality of water

After using the monitoring system the people's fear about the quality of the water is resolved

10. YOUR SOLUTION SL

The device comprises of a micro controller interfaced with pH and turbidity sensors for measuring the pH and turbidity level of the water.
The device is connected with the GSM module which notifies the water quality parameters as message to the board members.
A Cloud storage is available for storing the collected data.
A web application is created that is connected with cloud storage. Users can access the web application to check the water status of an area.

8. CHANNELS of BEHAVIOUR CH

8.1 ONLINE

The people need to login to the web application to check the quality of the water

8.2 OFFLINE

The people can spread awareness among people regarding the web application usage using which they can check the water quality of an area

Extract online & offline CH of BE