Project Design Phase-I - Solution Fit Template
Project Title: River Water Quality Monitoring and Control System

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

- **Villages, rural areas** - People living in rural areas who uses river water for domestic and drinking purpose.
- **Agricultural areas** - Farmers use river water for irrigation

6. CUSTOMER CONSTRAINTS — CC

- The existing river water quality and monitoring system is **too expensive** to afford, has **less detection accuracy** and consumes **high power consumption** which prevents people from implementing the system.
- In case of failure, people find it hard to recover the system.

5. AVAILABLE SOLUTIONS — AS

- As soon as one individual founds that water is contaminated this information could be passed among others throughout the area. In this way people can be prevented from using the river water. But in this way there's no assurance that everyone has received the information
- River water quality and monitoring system – since it is a manual system with a monotonous process it is very time consuming.

Explore AS, differentiate

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

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

- To send SMS to an authorized person (corporation) routinely when water quality detected does not match the preset standards, so that, necessary actions can be taken i.e, people can be alerted or prevented from using the water.
- To measure water parameters such as **pH, dissolved oxygen, turbidity level, conductivity** using sensors.

9. PROBLEM ROOT CAUSE — RC

- Chemical waste products from industrial processes are sometimes accidently discharged into river. **Eg: cyanide, cadmium and mercury.**
- Rubbish and faecal water dumping.
- Industry, agricultural and livestock farming.

7. BEHAVIOUR — BE

- No faulty connections.
- Periodic checking and maintenance should be done.
- Installation of devices should be in a perfect way.

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

3. TRIGGERS TR

- Giving alert to the people.
- Awareness over water pollution.

4. EMOTIONS: BEFORE / AFTER EM

BEFORE:

- Reluctant in using the river water for drinking.
- Fright of getting diseases like diarrhoea, cholera, dysentery, typhoid and poliomyelitis.

AFTER:

- Feeling safe and secure in using the water.
- It would leads to healthy aquatic eco-system.

10. YOUR SOLUTION SL

Improving the river water monitoring system with increased detection accuracy, low power consumption and cost effective where **pH, dissolved oxygen, turbidity level** and **conductivity** are monitored routinely when water quality detected does not match the preset standards, it sends message to the authorized person so that necessary actions can be taken to prevent river water getting contaminated.

8. CHANNELS of BEHAVIOUR CH

ONLINE:

People receive message from the corporation regarding the water quality.

OFFLINE:

People convey the information among people in the area.