Problem-Solution fit

Project Design Phase -I

Team ID: PNT2022TMID29705

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

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

* Municipal Corporation
* Industries
* Local people

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.

- traditional monitoring is a time consuming method
- budget problem
- requirement of maintenance service
- tedious job
- Network issue

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

- discharge only treated water
- proper wastewater management
- water treatment plants
- traditional monitoring system
- smart sensing monitoring systems

Explore AS, differentiate

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

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

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

- to provide portable water
- water quality data for the purpose of treatment of water
- to support aquatic life forms

9. PROBLEM ROOT CAUSE — RC

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.

River water get contaminated by runoff of the solid debris, untreated water and farmland wastes. Algal bloom due to nutrient enriched water leads to Eutrophication

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)

- Local people approaches the government for monitoring and controlling the river water quality
- Industries analyses the outlet treated water
- Municipality performs the water treatment process

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

Identify strong TR & EM

3. TRIGGERS — TR

What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.

Water scarcity, Eutrophication, Death of fishes

4. EMOTIONS: BEFORE / AFTER — EM

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.

suffers from water toxicity, soil infertility - poor vegetation

10. YOUR SOLUTION — SL

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

IoT based smart monitoring and controlling water quality system through the web or mobile app

8. CHANNELS of BEHAVIOUR — CH

8.1 ONLINE
What kind of actions do customers take online? Extract online channels from #7

water quality parameters data are collected and analyzed

8.2 OFFLINE
What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

from the data collected proper control measures are taken

Extract online & offline CH of BE