Project Title: IoT Based Smart Crop Protection System for Agriculture **Project Design Phase-I - Solution Fit** **Team ID:** PNT2022TMID2926

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) CS

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

Farmers who fails to protect the crops from the attacks of wild animals.

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.

- Financial affective.
- Power consumption.
- Less availability of workers.
- Unable to take care of crops 24x7.

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

- Use of traditional or electric fences around the field which is harmful.
- Detecting the animals and birds then scare them using motion detection which is not harmful.
- Etc.

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.

- Crops are vulnerable to attack and easy to cause damages
- Its unable maintain the crops properly.
- Even uncertainty weather condition can damage crops.

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.

- Fields are nearby forest areas or hilly regions, where wild animals easily attacks the crops.
- Temperature and humidity are not in proper level in all over field, which causes the serious problems

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)

Direct related: Our technology as a solution which follows wildlife laws that doesn't affects the animals as well as the crops which helps the farmers to yield more crops.

Indirect associated: Farmers can learn about how to utilize modern technology to increase agriculture system.

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.

To break the stereotype that farmers are not able to earn lot compared to other working fields.

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.

Before: Anxiety, fear of losing their investment and financial crisis.

After: It makes easier to yield more crops than the previous year harvesting.

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 crop protection system for agriculture"

An IOT crop protection system helps the farmers in protecting the crop from the animals and birds which destroy the crop. This system also helps farmers to monitor the soil moisture levels in the field and also the temperature and humidity values near the field. The motors and sprinklers in the field can be controlled using the mobile application even when they are not near the fields.

8. CHANNELS of BEHAVIOUR CH

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

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

Online: Sends notification as a alert messages via mobile phones to the farmers incase of any attacks by the animals.

Offline: Actions may taken by farmers directly while they are present in the field.

Identify strong TR & EM