Project Title: Smart Farmer - IoT Enabled Smart Farming **Project Design Phase-I - Solution Fit** **Team ID:** PNT2022TMID27433

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) CS

- ✓ Farmers
- ✓ Chemical manufacturing companies

6. CUSTOMER CONSTRAINTS CC

- ✓ Budget
- ✓ Poor Network Connection
- ✓ Lack Devices like Smart Phone, Laptop etc.

5. AVAILABLE SOLUTIONS AS

Alternative solution for IoT based irrigation system is the traditional method where farmer need to work physically themselves by managing time and work flow.

Pros:

- ✓ Required amount of water is known to the farmer.

Cons:

- ✓ Poor time management
- ✓ Heavy work load for farmers to work physically.
- ✓ More farmers are need to have control over the field

Explore AS, differentiate

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

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

- ✓ The system will monitor the water level of the field to save excess water.
- ✓ It will also notify the weather conditions to the farmer, so that the farmer can water the crops only when needed.
- ✓ It can also be used to detect the chemical leakage in chemical manufacturing factories.

9. PROBLEM ROOT CAUSE RC

The real reason that this problem exists is that farmer's carelessness in having control over their field.

The back story behind the need to do this job is that, if the job is left undone then the crop growth level reduces and result of yielding will be unfortunate.

7. BEHAVIOUR BE

Directly related : To find the water level monitoring installer, calculating water usage, electricity usage and benefits of the solutions that the farmer looking for.

Indirectly Associated : Farmers learn this installed system by using it whenever required and just need to volunteer the system whether everything is perfect on farmers end.

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

Identify strong TR & EM

3. TRIGGERS

- ✓ The water gets wasted during irrigation and cannot be used for other activities. So there will be so much wastage of water.
- ✓ The rainfall these days are unpredictable these days and due to this the crops are getting destroyed each year, this causes a major economic loss for the farmers.
- ✓ The chemical manufacturing industries are witnessing many accidents due to chemical leakage.

4. EMOTIONS: BEFORE / AFTER

BEFORE:

The farmers are concerned about the unpredictable rainfall that occurs due to drastic climate change due to global warming.

AFTER:

By using the system they can be able to know when it rains, so that they will water the crops only when it is needed.

10. YOUR SOLUTION

The system which we have proposed can be able to indicate the level of water in the field and also be able to monitor the weather conditions of the location. The crops will be watered if the temperature exceeds more than the desired temperature to prevent the crops from getting parched and also if the water gets supplied more than the required amount the crops will get rotten. The atmospheric conditions also plays a vital role in the growth of crops, so these parameters can also be assessed by the customers and take necessary measures to prevent the problems.

This system can also be used to indicate the chemical leakage in chemical factories, which prevents heavy loss and can save many lives.

8.CHANNELS OF BEHAVIOUR

8.1 ONLINE

- ➢ The water level and the weather conditions of the location detected by the sensors will be sent to the cloud platform and can be viewed by the customers online from anywhere.

8.2 OFFLINE

- ➢ The customers has to install the sensors at locations where they have to know the water level and weather condition for watering the crops.