**Project Title: Smart Farmer - Iot Enabled Smart Farming Application** **Project Design Phase-1 Solution Fit** **Team ID:** PNT2022TMID02873

Define CS, fit into CC

### 1. CUSTOMER SEGMENT(S) CS

The customers of this product are the farmers who cultivate crops. Our aim is to assist, aid and help them to monitor the field parameters remotely and to keep track of the parameters. This product saves the agriculture from extinction.

### 6. CUSTOMER CONSTRAINTS CC

Deployment of huge number of sensors is difficult. It requires an unlimited or continuous internet connection to be successful.

### 5. AVAILABLE SOLUTIONS AS

The irrigation process is automated using IoT. weather data and field parameters were obtained and processed to automate the process of irrigation. The drawbacks are high cost of installation, efficient only for short distance, difficulty in storing the data.

Explore AS, differentiate

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

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

The objective of this product is to obtain the different field parameters using sensor and process it using a central processing system. Cloud is used to store and transmit the data by using IoT. Weather APIs are employed to assist the farmer in making decision. The farmer could take decision through a mobile application

### 9. PROBLEM ROOT CAUSE RC

The frequent change or unpredictable weather and climate, made it difficult for the farmers to do agriculture. These factors play a major role in making decision whether to water the plant or not. The monitoring of the field is hard when the farmer is out of station, thus leading to crop damage.

### 7. BEHAVIOUR BE

Using proper drain system to overcome the effects of excess water due to heavy rain. Using hybrid varieties of crop that are resistant to pests.

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

Identify strong TR & EM

### 3. TRIGGERS TR

Farmers facing issues in providing proper irrigation. No proper supply of water leads to reduced production which affects the profit level of the farmer. Farmer's struggle to predict the weather.

### 4. EMOTIONS: BEFORE / AFTER EM

:**Before:** Lack of knowledge in
weather forecasting →Random decisions →low yield

**After:** Data from
reliable source → correct decision →high yield

### 10. YOUR SOLUTION SL

Our product collects the data from different types of sensors and it sends the value to the main server. It also collects the weather data from API. The ultimate decision whether to water the crop or not is taken by the farmer using a mobile application.

### 8. CHANNELS of BEHAVIOUR CH

**8.1 ONLINE :**
Providing online assistance to the farmer, in providing knowledge regarding the pH and moisture level of the soil. Online assistance to be provided to the user in using the product

**8.2 OFFLINE :**
Awareness camps to be organized to teach the importance and advantages of automation and IoT in the development of agriculture.

Identify strong TR & EM