Project Title: IoT Enabled Smart Farming Application | **Project Design Phase-I - Solution Fit Template** | **Team ID:** PNT2022TMID53630

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

Farmers are our main customers. With the help of our device the farmer would be be in a position to make decisions on his own.

6. CUSTOMER CONSTRAINTS — CC

- High hardware costs
- Security and privacy
- Reliability

5. AVAILABLE SOLUTIONS — AS

There are several research papers for Smart farming using IOT.The pros in it are real time monitoring of data using various sensors. The cons are the data which are collected by sensors are not securely transmitted to the farmer and most of them use network devices such as ZIGBEE, LORA, GSM which when wind or rain arrives affects the point-to-point communication

Explore AS, differentiate

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

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

- **Sensors based project**-Farmers can't continuously check temperature, humidity, soil moisture levels.
- **Smart Phone monitoring and consumer interactions:** Values change dynamically in the dashboard and it is application-based monitoring with cloud-based system software

9. PROBLEM ROOT CAUSE — RC

Farmers need to be monitoring the crops all the time for checking the temperature, humidity and soil moisture values. It increases the manpower in farming. Our system reduces the manpower and is an automatic system so they don't need to interfere in it.

7. BEHAVIOUR — BE

- The customer needs to find the right product installer.
- The farmer needs to know the complete working of the product for better usage and for long life span.

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

Identify strong TR & EM

3. TRIGGERS — TR

- Irrigation control
- Environment monitoring
- Soil health

4. EMOTIONS: BEFORE / AFTER — EM

The customers feel unhappy if the product isn't functioning properly during those times, they should not loose hope and confidence, instead they can call the product installer for seeking help.

10. YOUR SOLUTION — SL

Our product will assist farmers by obtaining the real-time data from the farmland to take necessary steps during unfavorable conditions. Our proposed product uses NodeMCU and real time sensors. Farmers can monitor all the sensor parameters by using a web **/** mobile application **/** dashboard even if the farmer is not near his field and do the necessary actions.

8. CHANNELS of BEHAVIOUR — CH

- If our product becomes successful, we would launch them in websites and hardware stores.
- The customers can buy the product through online websites.
- The customers can also get the product by visiting the stores.

Identify strong TR & EM