

Project Design Phase-I
Problem – Solution Fit Template

Date	26 September 2022
Team ID	PNT2022TMID18045
Project Name	Project - IoT Based Smart Crop Protection System for Agriculture
Maximum Marks	2 Marks

1. CUSTOMER SEGMENT(S)

CS

- ❖ Farmer.
- ❖ Person who is fond of cultivation.
- ❖ Companies who cultivates crops in their fields.
- ❖ Land Owners who gave their lands for cultivation purpose on lease.

6. CUSTOMER CONSTRAINTS

CC

- ❖ Supply of water is the main concern in cultivating the crops.
- ❖ Careless situation like animal attacks leads to less production.
- ❖ Climate changes plays a crucial role in soil, humidity and moisture level.
- ❖ Over supply of water leads to the destruction of the crops .

5. AVAILABLE SOLUTIONS

AS

- ❖ Not taking location into account, which determines whether we can able to cultivate crops or not in this land.
- ❖ Helps the farmer to increase the crop yield and he can maximize the profit .
- ❖ If the sensors are not maintained properly will leads to affect the crops and yields.

2. JOBS-TO-BE-DONE / PROBLEMS

J&P

- ❖ To maintain the sensors and water level of the crops carefully.
- ❖ Monitoring animals and insects attacks in the field.
- ❖ With the help of information gathered from the sensors and environment conditions we can notify the farmers.
- ❖ Careless situation led to reduce cultivation.
- ❖ Stay alert for the entire 24/7 duration.

9. PROBLEM ROOT CAUSE

RC

- ❖ Many farmers are spending their valuable time in protecting the crops from animal and birds instead of spending in any other productive work. Which may ultimately lead to low overall productivity.
- ❖ The crops are seriously affected due to the climatic changes .
- ❖ If the crops are affected by animals and birds leads to loss of money .

7. BEHAVIOUR

BE

- ❖ To monitor the environmental factors of the crops like temperature, soil Moisture, and Humidity in Air for better growth of the crop.
- ❖ Easier for farmers to gain profit more by using this system rather than investing in man power.
- ❖ Since time changes rapidly into the technical world will enhance the crop yields and farmer need to spent much time in guarding the agriculture fields.

3. TRIGGERS

TR

- ❖ Being hungry to earn more profits.
- ❖ To make themselves to adopt to the new technologies .

4. EMOTIONS: BEFORE / AFTER

EM

Before : No knowledge in smart farming, fear in less production/cultivation.

After : Hike in profit, increasing the production.

10. YOUR SOLUTION

SL

- ❖ Helps the farmer to improve crop production and profit.
- ❖ It helps in avoiding the situation where crops are destroyed by animals and birds which results in less yield of production.
- ❖ Helps monitoring the environmental factors of the crops like temperature, soil Moisture, and Humidity in Air for better growth of the crop.

8. CHANNELS of BEHAVIOUR

CH

8.1.ONLINE: With the help of IOT we can able to store the real world information safely and secure manner

8.2.OFFLINE: With the help of this system , Humidity and Temperature Sensor monitoring the field can be done which in turn increases the crop yield effectively and efficiently