

Project Title:

IoT Based Smart Crop Protection System for Agriculture

Project Design Phase-I - Solution Fit Template

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Define CS, fit into CC

1. CUSTOMER SEGMENT(S)

CS

- Farmers who want to protect the crops from environmental factors like hot climate , wild animals ,birds and pests.
- Companies doing farming as a business in hectare.

6. CUSTOMER CONSTRAINTS

CC

- Not aware of modern technology and their functionality.
- No internet connectivity or low connectivity.
- Lack of knowledge about handling the device and communication.
- Interrupt in internet and failure of Iot device causes loss of monitoring the crop.
- Regular maintenance of smart iot device is needed.
- Implementation of some equipment is costlier.

5. AVAILABLE SOLUTIONS

AS

- Analysing the different parameters and updating the reports to farmers through web or app like temperature , humidity , moisture level of soil , pH etc...
- If any threat is detected , intimation will be through sms or notification in app
- Alarm or woo sound to protect the crop from animals on filed.
- This smart system increases the yield and productivity.

Explore AS, differentiate

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

- Field assessment will be done before harvest.
- Data report of farming field like crop growth , climatic condition etc... can be obtained at anytime from the place where we are.
- Prevents the animals entry and elimination of nesting areas in crop field.
- Crop cultivation can be done both manually and automatic with the help of modern technology.

9. PROBLEM ROOT CAUSE**RC**

- Hot climatic conditions leads to crop damage.
- Moisture and pH level of the soil is the important for crop cultivation.
- Animals , pests , weeds and several other external agents affect the crop growth.
- This decreases the yield and productivity causes poverty and growth of the nation decline.
- The profit level of farmers decreases and people will leave from doing farming thereby spread hungry over the nation.

7. BEHAVIOUR**BE**

DIRECT RELATED: farmers can find the solution based on the analysed report. Help option in the app or web portal will direct the problem to solution. Smart system will give solution to problems depending on the parameters.

INDIRECT RELATED: They can be free from this work and set to concentrate on the other work

Connectivity issue must be taken into account because it leads to communication loss.

3. TRIGGERS**TR**

This system helps to identify the threats and notify the farmers. Different parameters for good cultivation can analysed and increase the yield maximum. This will trigger the another farmer to implement smart iot crop protection system in field. This will lift out the people from poverty.

4. EMOTIONS: BEFORE / AFTER**EM**

BEFORE: Monitoring and maintaining the crop growth manually at all time is difficult. Protecting the crop growth from external agents like animals , environmental conditions is difficult job.

AFTER: Analysing the field condition and protecting crop from several agents , identification of threats are easy with the help of technology. The system will minimize the work load and maximize the productivity.

10. YOUR SOLUTION**SL**

Monitoring and controlling the field based on the report using modern technology like

“IOT BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE”.

- This system helps to monitor the field condition 24/7.
- Identify the threats and notify the farmers.
- Protects from crop damaging agents.
- Increase the yield through technology and maximize the profit.
- Analysed data report of field will be update to farmers.

8. CHANNELS of BEHAVIOUR**CH****ONLINE:**

- Field condition data report will be display through app or web.
- Both manual and automatic control of the crop cultivation can do 24/7 depending on the field report.
- Identify threats and notification can be received.

OFFLINE:

- Connectivity and maintaining the IOT smart system is mandatory at regular interval of time.
- The control action can be done based on report by traditional farming method.
- Alarm or woo sound is on field to prevent from animals.