Project Design Phase-I - Solution Fit

Project Title : SmartFarmer - IoT Enabled Smart Farming Application

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Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

- Agriculturists

especially farmers who cultivate crops in large area

6. CUSTOMER CONSTRAINTS — CC

- Continuous available of network connection
- Have cell phones and laptops

5. AVAILABLE SOLUTIONS — AS

- Sprayers are used to apply pesticides on crop but it require labour and not suitable for large area operations
- Farmer regularly monitor the crop production and growth but it take long time.

Explore AS, differentiate

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

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

- Farm owners who stay away from their home needs a solution to cultivate their barren land into a land suitable for cultivation of crops.
- Cope with climate change, soil erosion and biodiversity loss
- Satisfy consumers changing tastes and expectations
- Meet rising demand for more food of higher quality

9. PROBLEM ROOT CAUSE — RC

• Climate factors such as light, relative humidity, temperature, rainfall,air and water.

• Improper monitoring of crop growth cause crop damage.

7. BEHAVIOUR — BE

According to farming scientists, about 5% of crops destroyed by insects, pests, and diseases. Most of the farmers are oblivious of the use of medicines and insecticides developed in recent years. Improving the production of the crops, yields must use these medicines.

On our system use drones to plant seeds ,spray crops with water, fertilizers, pesticides and herbicides and also possess sensors to monitor crops and whether condition.

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

Identify strong TR & EM

3. TRIGGERS — TR

Farmers struggle to detect pests in large field. Initially not able to find out the pest .It causes damage to all the crops in the field.

4. EMOTIONS: BEFORE / AFTER — EM

BEFORE :Pest attack leads to loss production ,finally result will be profit loss

AFTER: Data from reliable source , then correct decision will be taken ,finally result will high yield

10. YOUR SOLUTION — SL

Continuously monitoring the crops collects all thea data from various types of sensors in drones and send the information to farmers.

Drones providing easier ways to monitor small sections of crops and entire fields remotely and also address multiple challenges in the agriculture sector. This technology is designed to increase agricultural production and improve yield of the crop.

8. CHANNELS of BEHAVIOUR — CH

- Farmers can monitor all the sensor parameters by using aweb or mobile application even if the farmer is not near his field. Monitoring the crop is one of the important tasks for the farmers.
- They can make the decision whether any pest attack in the crop by monitoring the sensor parameters and controlling it by spray pesticides using drones .

Extract online & offline CH of BE