Project Title: Smart Farmer – IoT Enabled Smart Farming Application

Project Design Phase- I - Solution Fit

Team ID: PNT2022TMID15961

Define CS, fit into CC

1. Customer Segment(S)

Who is your customer?
i.e. working parents of 0-5 y.o. kids

The customer for this product is a farmer who grows crops. Our goal is to help them, monitor field parameters remotely. This product saves agriculture from extinction.

6. Customer Constrains

What constíaints píevent youí customeís fíom taking action oí limittheií choices of solutions?
i.e. spending poweí, budget, no cash, netwoík connection, availabledevices

Using many sensors is difficult. An unlimited or continuous internet connection is required for success.

5. AVAILABLE SOLUTIONS

Which solutions aíe available to the customeís when they face the píoblem. oí need to get the job done? What have they tíied in the past? What píos & cons do these solutions have? i.e. penand papeí

The irrigation process is automated using IoT. Meteorological data and field parameters were collected and processed to automate the irrigation process. Disadvantages are efficiency only over short distances, and difficult data storage.

Explore AS, differentiate

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

2. JOBS-TO-BE-DONE / PROBLEMS

Which jobs-to-be-done (oí píoblems) do you addíess foí youí customeís? I'heíe could be moíe than one; exploíe diffeíent sides.

The purpose of this product is to use sensors to acquire various field parameters and process them using a central processing system. The cloud is used to store and transmit data using IoT. The Weather API is used to help farmers make decisions. Farmers can make decisions through mobile applications.

9. PROBLEM ROOT CAUSE

What is the íeal íeason that this píoblem exists? What isthe back stoíy behind the need to do this job?

Frequent changes and unpredictable weather and climate made it difficult for farmers to engage in agriculture. These factors play an important role in deciding whether to water your plants. Fields are difficult to monitor when the farmer is not at the field, leading to crop damage.

7. BEHAVIOUR

What does youí customeí do to addíess the píoblem and get thejob done?
i.e. Díiectly íelated: find the íight solaí panel installeí, calculate usage and benefits; indiíectly associated: customeís spend fíeetime on volunteeíing woík (i.e. Gíeenpeace)

Use a proper drainage system to overcome the effects of excess water from heavy rain. Use of hybrid plants that are resistant to pests.

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

3. TRIGGERS

What tíiggeís customeís to act? i.e., seeing theií neighboí installingsolaí panels, íeading about a moie efficient solution in the news.

Farmers struggle to provide adequate irrigation. Inadequate water supply reduces yields and affects farmers' profit levels. Farmers have a hard time predicting the weather.

4. EMOTION'S: BEFORE / AFTER

How do customeís feel when they face a píoblem of a job and afteíwaíds?
i.e. lost, insecuíe > confident, in contíol - use it in youí communicationstíategy & design.

BEFORE: Lack of knowledge in weather forecasting → Random decisions → low yield.

AFTER: Data from reliable source → correct decision → high yield.

10. YOUR SOLUTION

If you aíe woíking on an existing business, wíite down youí cuíient solution fiíst, fill in the canvas, and check how much it fits íeality.
If you aíe woíking on a new business píoposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customeí limitations, solves a píoblem and matches customeí behavioí.

Our product collects data from various types of sensors and sends the values to our main server. It also collects weather data from the Weather API. The final decision to irrigate the crop is made by the farmer using a mobile application.

8.CHANNELS OF BEHAVIOUR

8.1 ONLINE
What kind of actions do customeís take online? Extíact online channels fíom 7 #

8.2 OFFLINE
What kind of actions do customeís take offline? Extíact offline channels fíom 7 anduse them foí customeí development. #

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.

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