Project Title: Smart Farmer – IoT Enabled Smart Farming Application

Project Design Phase-I - Solution Fit

Team ID : PNT2022TMID31713

Define CS, fit into CC

1. CUSTOMER SEGMENT(S)

CS

Who is your customer?

A farmer who raises crops is the target market for this product. Our intention is to assist them by remotely monitoring field conditions. This product prevents the demise of agriculture.

6. CUSTOMER

C

What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

It's tough to use many sensors at once. For success, you must have limitless or constant internet access.

5. AVAILABLE SOLUTIONS

AS

Which solutions are available to the customers when they face the problem

or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper

Using IoT, the watering process is automated. To automate the watering operation, field characteristics and meteorological data were gathered and analysed. Efficiency is limited over small distances, and data storage is challenging.

Explore AS, differentiate

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

2. JOBS-TO-BE-DONE / PROBLEMS

J&P

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

This product's function is to employ sensors to collect different field characteristics and then process them through a centralised processing system. IoT uses the cloud to send and store data. Farmers utilise the Weather API to aid in decision-making Through mobile applications, farmers may make decisions.

9. PROBLEM ROOT CAUSE

What is the real reason that this problem exists? What is the back story behind

Farmers found it challenging to pursue agriculture because of the frequently changing and unpredictable weather and environment. Considering these elements is crucial when determining whether to water your plants. When the farmer is not on the field, it is impossible to supervise the field, which might cause crop damage.

7. BEHAVIOUR

What does your customer do to address the problem and get the job done?
i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

To counteract the consequences of extra water from heavy rain, use a suitable drainage system. the use of pest-resistant hybrid plants.

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

3. TRIGGERS

TR

What triggers customers to act? i.e., seeing their neighbor installing solar panels, reading about a more efficient solution in the news.

It is difficult for farmers to supply enough irrigation. Reduced yields and lower profits are consequences of inadequate water supplies for farmers. Weather forecasting is difficult for farmers.

4. EMOTIONS: BEFORE / AFTER

EM

How do customers feel when they face a problem or a job and afterwards?
i.e. lost, insecure > confident, in control - use it in your communication strategy & design.

BEFORE: Poor weather predicting skills; irrational choices; poor return.
AFTER: Reliable data, an informed choice, and a high yield

10. YOUR SOLUTION

SL

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

Our device gathers information from several sensor kinds and transmits the values to our primary server. The Weather API is also used to get weather information. The farmer uses a smartphone application to make the final decision about irrigation of the crop.

8. CHANNELS of BEHAVIOUR

CH

8.1 ONLINE
What kind of actions do customers take online? Extract online channels from #7

8.2 OFFLINE
What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

ONLINE: Giving the farmer access to information on the pH and moisture content of the soil by way of the internet. The user will receive online help for utilising the product

OFFLINE: Education camps will be held to spread awareness of the value and benefits of automation and IoT in the advancement of agriculture.