Project Design Phase - 1
Problem Solution Fit

Date	23 October 2022
Team ID	PNT2022TMID38157
Project Name	Smart Farmer – IOT Enabled Smart Farming Application
Maximum Marks	4 Marks

1. CUSTOMER SEGMENT(S)
Who is your customer?
i.e. working parents of 0-5 y.o. kids

C

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. CUSOMER

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 is challenging to use many sensors. Success requires an unrestricted or ongoing internet connection.

5. AVAILABLE SOLUTIONS

AS

Which solutions are available to the customer 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 irrigation process is automated. To automate the watering operation, field parameters and meteorological data were gathered and processed. Efficiency is limited over small distances, and data storage is challenging.

2. JOBS-TO-BE-DONE / PROBLEMS

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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 parameters and then process them using a centralized processing system. IoT uses the cloud to send and store data. Farmers utilize the Weather API to aid in choice.
With the use of mobile applications, farmer make s judge.

9. ROBLE ROOT CAUSE

R

What is the real reason that this problem exists? What is the back story behind the need to do this job?

It was hard for farmers to perform agriculture because of the often changing and uncertain weather and climate. When deciding whether to water your plants, these factors are crucial. When a farmer isn't there, it's hard to keep an eye on the field, which can cause crop damage.

7. BEHAVIOUR

B

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. Green peace)

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

3.TRIGGERS

PR

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. 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: Lack of knowledge in weather forecasting →Random decisions →low yield.
AFRER: Data from reliable source → correct decision →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 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

CH

1. ONLINE
What kind of actions do customer take online? Extract online channels from 7 #

2. ONLINE
What kind Of actions dO custOmers take offline? Extract Offline channels frOm #7 and use them fOr custOmer 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.