Project Title: Smart Farmer-IoT Enabled Smart Farming Application **Project Design Phase-I** **Team ID:** PNT2022TMID52019

Define CS, fit into CC

1. CUSTOMER SEGMENT(S)

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

CS

The main customer for our project are:
I)Farmers who wants to improve the yield of their crops.
ii)Farmers who wants to know the condition of their crops and it's environmental conditions so they could take the necessary methods immediately.

6. CUSTOMER CONSTRAINTS

CC

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.

1)The availability of device, proper Network facilities and budget are several constraints, knowledge about the application.
2) Network connectivity would be the main constraint as we use Wi-Fi which has major limitations like in coverage, scalability and power consumption.

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 is an alternative to digital notetaking

1) For smart farming, lot of IoT based solutions are there. But, one huge disadvantage of smart farming is that it requires an unlimited or continuous internet connection to be successful. This means that in rural communities, especially in the developing countries where we have mass crop production, it is completely impossible to operate this farming method. In places where internet connections are frustratingly slow, smart farming will be an impossibility.

Explore AS, differentiate

Identify strong TR & EM

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

2. JOBS-TO-BE-DONE / PROBLEMS

Which jobs-to-be-done (or problems) do you address

J&P

1)The farmers will initially find it hard to use the device as they have to get familiar with the technologies.
ii) They must be with their phone/laptop always so that they would be alarmed when they get the message/mail.

9. PROBLEM ROOT CAUSE

RC

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

Technologies keep developing but still the farmers are not able to achieve their goals ie due to the presence of excess water in the field, varying climatic conditions etc. which affects the crop. So in order to avoid this there is a need for smart farming which helps to improve the time efficiency, crop monitoring, soil management etc.

7. BEHAVIOUR

BE

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

1)The customers will reach us when they don't haveidea on how to analyze the soil and to improve the current irrigation system.
2) As in the case of weather condition monitoring, sensors for crop monitoring also collect all information like crop health, humidity, precipitation temperature, and other parameters.

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

Identify strong TR & EM

3. TRIGGERS

TR

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

Customers get triggered mainly because to save their crops and to prevent them from the damage as they feel depressed when they face the losses and it indirectly affects their family too. This device is also a budget friendly device.

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:
Depressed, loss of time, Facing more losses

After:
Confident, gets chance to spend time efficiently,95%

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.

1)To provide an alternate (ie) to avoid the network problems we are also going to introduce the manual mode where the farmers can stop the water flow /provide limited amount of water flow into the field., Make it more user friendly (like appoint the help center team to guide them whenever they are facing any trouble with our app).Additional features like create an awareness about where to get agricultural loans, government agriculture schemes and get the feedback of every farmers on every month end.
2)There will be less weed growth, Maximum use of water efficiently, Control of soil erosion and maximum crop yield.

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.

Offline:
The IoT-based smart farming not only helps in modernizing the conventional farming methods but also targets other agriculture methods like organic farming, family farming (complex or small spaces, particular cattle and/or cultures, preservation of particular or high- quality varieties, etc.), and enhances highly transparent farming.
Online:
IoT-based smart farming is also beneficial in terms of environmental issues. It can help the farmers to efficiently use water, optimize the inputs and treatments