**Project Title:** Smart Farmer – IoT Enabled **Project Design Phase- I** - **Solution Fit Team ID:** PNT2022TMID15443 Smart Farming Application



**1.** Customer Segment(S)

Who is your customer?

i.e. working parents of 0-5 y.o. kids

**6.** Customer Constrains

**CC**

AVAILABLE SOLUTIONS

**AS**

**CS**

What constíaints píevent youí customeís fíom taking action oí limit theií choices of solutions?

i.e. spending poweí, budget, no cash, netwoík connection, available devices

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. pen and 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.

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

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.

**2.** JOBS-TO-BE-DONE / PROBLEMS **J&P**

Which jobs-to-be-done (oí píoblems) do you addíess foí youí

**9.**PROBLEM ROOT CAUSE

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

**RC**

**7.** BEHAVIOUR

**BE**

customeís? ľheíe could be moíe than one; exploíe diffeíent sides.

What does youí customeí do to addíess the píoblem and get the job done?

i.e. Diíectly íelated: ﬁnd the íight solaí panel installeí, calculate usage and beneﬁts; indiíectly associated: customeís spend fíee time 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.

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.

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.

**Explore AS, differentiate**

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

**Define CS, fit into CC**

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



|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **3.** TRIGGERS | **ľR** |  | 10. YOUR SOLUTION **SL** | 8.CHANNELS OF BEHAVIOUR **CH** |  |
| What tíiggeís customeís to act? i.e., seeing theií neighboí installing solaí panels, íeading about a moíe efﬁcient solution in the news. |  |  | If you aíe woíking on an existing business, wíite down youí cuííent  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. | * 1. ONLINE   What kind of actions do customeís take online? Extíact online channels fíom 7   * 1. OFFLINE   What kind of actions do customeís take offline? Extíact offline channels fíom 7 and use 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. |
| 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 **EM**  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 communication stíategy & design.  BEFORE: Lack of knowledge in weather forecasting →  Random decisions → low yield.  AFTER: Data from reliable source → correct decision →  high yield. | | |