

Project Design Phase-I – solution Fit

Project title: - SmartFarmer - IoT Enabled Smart Farming Application

Team ID: PNT2022TMID06004

<p>1. CUSTOMER SEGMENT(S) Who is your customer? i.e. ending persons of 0-5 y.o. old</p> <p>CS</p> <p>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.</p>	<p>4. CUSTOMER CONSTRAINTS</p> <p>What constraints prevent your customer from taking action to solve their choices? i.e. spending power, budget, no cash, network connection, available devices</p> <p>CC</p> <p>Using a large number of sensors is difficult. An unlimited or continuous internet connection is required for success.</p>	<p>5. AVAILABLE SOLUTIONS What solutions are available to the customer when they face the problem? i.e. 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</p> <p>AS</p> <p>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.</p>
<p>2. JOBS-TO-BE-DONE / PROBLEMS Which jobs to be done for problems do you address for your customer? There could be more than one, explore different roles</p> <p>JAP</p> <p>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.</p>	<p>6. PROBLEM ROOT CAUSE What is the one reason that this problem exists? What is the root cause behind the need to do this job?</p> <p>RC</p> <p>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.</p>	<p>7. BEHAVIOUR What does your customer do to address the problem and get the job done? i.e. directly related, find the right other person involved, calculate usage and benefits, indirectly associated customer spend time and on accompanying work i.e. (transportation)</p> <p>BE</p> <p>Use a proper drainage system to overcome the effects of excess water from heavy rain. Use of hybrid plants that are resistant to pests.</p>
<p>3. TRIGGERS What triggers customer to act? i.e. seeing their neighbor's smiling when getting, feeling stress in their efforts when in the field</p> <p>TR</p> <p>Farmers struggle to provide adequate irrigation, inadequate water supply reduces yields and affects farmers' profit levels. Farmers have a hard time predicting the weather.</p> <p>4. EMOTIONS: BEFORE / AFTER How do customers feel when they face a problem or a job and afterwards? i.e. how stressed / confidence in research / non-stress / time / communication / savings / design</p> <p>EA</p> <p>BEFORE: Lack of knowledge in weather forecasting → Random decisions → low yield. AFTER: Data from reliable source → correct decision → high yield</p>	<p>10. YOUR SOLUTION If you are thinking on designing business, how does your customer achieve this job in the future and how have you made it for them? If you are working on a pure business proposition, how long it took and how did it in the market and how you will address this for multiple customer businesses, when a problem and address customer behaviour</p> <p>SL</p> <p>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.</p>	<p>8. CHANNELS of BEHAVIOUR 8.1 ONLINE What role of digital in customer behaviour? What digital channel connects them to it? 8.2 OFFLINE What kind of channel do customers prefer offline? How do offline channels drive it? and how does the customer behaviour</p> <p>CH</p> <p>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</p> <p>OFFLINE: Awareness camps to be organized to teach the importance and advantages of the automation and IoT in the development of agriculture.</p>