

# Project Design Phase-I – solution Fit

**Project title:** - SmartFarmer - IoT Enabled Smart Farming Application

**Team ID:** PNT2022TMID09801

<p><b>Define CS, fit into CC</b></p> <p><b>1. CUSTOMER SEGMENT(S)</b> Who is your customer? i.e. working parents of 0-5 y.o. kids</p> <p><b>CS</b></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><b>4. CUSTOMER CONSTRAINTS</b></p> <p>What constraints prevent your customers from taking action to solve their problem? i.e. spending money, budget, no cash, network connection, available devices</p> <p><b>CC</b></p> <p>Using a large number of sensors is difficult. An unlimited or continuous internet connection is required for success.</p>	<p><b>5. AVAILABLE SOLUTIONS</b> What solutions are available to the customers when they face the problem? i.e. need to get the job done? What have they tried in the past? What pros &amp; cons do these solutions have? i.e. pen and paper</p> <p><b>AS</b></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><b>Explore AS, differentiate</b></p>
<p><b>Focus on JAB, fit into BE, understand AC</b></p> <p><b>2. JOBS-TO-BE-DONE / PROBLEMS</b> Which jobs to be done for problems do you address for your customers? There could be more than one, explore different roles</p> <p><b>JAB</b></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><b>9. PROBLEM ROOT CAUSE</b> What is the one reason that this problem exists? What is the root cause behind the need to do this job?</p> <p><b>RC</b></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><b>7. BEHAVIOUR</b> What does your customer do to address the problem and get the job done? i.e. directly related, find the right other people involved, calculate usage and benefits, indirectly associated customer spend time and on supporting work (i.e. transportation)</p> <p><b>BE</b></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><b>Focus on JAB, fit into BE, understand AC</b></p>
<p><b>3. TRIGGERS</b> What triggers customers to act? i.e. seeing their neighbor's smiling sheep, getting, walking down a new efficient solution to the work</p> <p><b>IT</b></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><b>4. EMOTIONS: BEFORE / AFTER</b> How do customers feel when they face a problem on a job and afterwards? i.e. how stressed, confident, in control, etc. or a new communication strategy to design</p> <p><b>EM</b></p> <p>BEFORE: Lack of knowledge in weather forecasting → Random decisions → low yield. AFTER: Data from reliable source → correct decision → high yield</p>	<p><b>10. YOUR SOLUTION</b> If you are working on a growing business, how does your solution address this still to the money and then how much is the order? If you are working on a new business proposition, how long it took and how old is the service and how up with a solution for the problem customer business, solving a problem and address customer behaviour</p> <p><b>SL</b></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><b>8. CHANNELS of BEHAVIOUR</b> <b>8.1 ONLINE</b> What kind of channel do customers use to interact? i.e. direct or indirect from 40</p> <p><b>8.2 OFFLINE</b> What kind of channel do customers use to interact? i.e. direct or indirect from 40</p> <p><b>CH</b></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>