

## Project Design Phase-I

### Problem Solution Fit

Date	01 October 2022
Team ID	PNT2022TMID30928
Project Name	IoT based smart crop protection system for agriculture

Define CS, fit into CL	<b>1. CUSTOMER SEGMENT(S)</b> <span>CS</span> Farmer's, who are not near their field.	<b>6. CUSTOMER LIMITATIONS</b> <small>EG. BUDGET, DEVICES</small> <span>CL</span> 1) High adoption costs, security concerns. 2) Not aware of the implementation of IoT in agriculture.	<b>5. AVAILABLE SOLUTIONS</b> <small>PLUSES &amp; MINUSES</small> <span>AS</span> Monitor different parameters and mobile or web application make easily to farm the crop field.	Explore AS, differentiate
	<b>2. PROBLEMS / PAINS + ITS FREQUENCY</b> <span>PR</span> <ul style="list-style-type: none"> <li>It's difficult to monitor and control</li> <li>Can't know if the application doesn't work properly.</li> </ul>	<b>9. PROBLEM ROOT / CAUSE</b> <span>RC</span> 1) If temperature, PH level, humidity & light intensity makes the serious cause for the environment. 2) Farmer affected by less productivity which will affect in their profit.	<b>7. BEHAVIOR + ITS INTENSITY</b> <span>BE</span> <b>Direct related:</b> Tries to find a solution to prevent this problem <b>Indirect related:</b> Located in rural where internet connectivity might not be strong enough to facilitate fast transmission speeds.	
Identify strong TR & EM	<b>3. TRIGGERS TO ACT</b> <span>TR</span> Create opportunities to lift people out of poverty in developing nations. (Over 60%)	<b>10. YOUR SOLUTION</b> <span>SL</span> <i>"IoT based Smart crop protection system for agriculture"</i> It help farmers grow more food on less land by protection crops from pests, diseases and weeds as well as raising productivity per hectare. It avoids animals from entering the fields.	<b>8. CHANNELS of BEHAVIOR</b> <span>CH</span> <b>ONLINE:</b> The Data send through application for the farmers to know about the farms.	Extract online & offline CH of BE
	<b>4. EMOTIONS</b> <small>BEFORE / AFTER</small> <span>EM</span> <b>BEFORE:</b> Finances, Heavy work overload and conflict in relationship. <b>AFTER:</b> It will be easier to make more yield in field		<b>OFFLINE:</b> The control action is taken by the farmers to monitor the farms.	