

Project Title: IoT Based Smart Crop Protection System for Agriculture

Project Design Phase-I - Solution Fit

Team ID: PNT2022TMID38327

Problem-Solution Fit canvas

IoT based Smart Crop Protection for Agriculture

Version:1.0

to CL	1. CUSTOMER SEGMENT(S) CS Our customers are farmers who are affected by damage of crops due to various reasons like insect attacks, animal invasion, Excess water flow, etc.	6. CUSTOMER LIMITATIONS CL <small>EG. BUDGET, DEVICES</small> Customer must have minimum knowledge about using the technology.	5. AVAILABLE SOLUTIONS AS <small>PLUSES & MINUSES</small> <ul style="list-style-type: none"> • Complete control and elimination of yield-threatening weeds • Protection from diseases for healthier farm output • Protection from insects for high yields and quality 	Explore AS, differentiate
	2. PROBLEMS / PAINS + ITS FREQUENCY PR Major problems farmers face is crops being damaged by insects, animals, water and various climatic changes.	9. PROBLEM ROOT / CAUSE RC <ul style="list-style-type: none"> - Sense the animals and insects in the crop field. - Sense the water required for the crop. - Sense the required climate for the crop. 	7. BEHAVIOR + ITS INTENSITY BE Crop protector informs customer about the crop from being damaged by insect, animal, excess water flow, climatic changes, etc.	
Identify strong TR & EM	3. TRIGGERS TO ACT TR This triggers to protect the crops from insects, animals, excess water, climatic changes, unwanted plant growth etc.	10. YOUR SOLUTION SL The aim of the proposed work is to develop an IoT device for smart crop field monitoring system and automated irrigation system using the wireless sensor networks (WSN). To create an IoT device for monitoring the crop field using sensors (soil moisture, temperature, Humidity, etc...). To automate the irrigation by comparing the level of soil moisture with the threshold value.	8. CHANNELS of BEHAVIOR CH ONLINE Notifies the customer about the crops being damaged	Extr f BE
	4. EMOTIONS EM <small>BEFORE / AFTER</small> Before there is no technology to protect the crop from insects, animals, excess water, climatic changes, unwanted plant growth, etc, so many farmers committed suicides.		OFFLINE Senses the crops	