

Project Design Phase-I

Problem Solution Fit

Date	15 OCTOBER 2022
Team ID	PNT2022TMID47521
Project Name	IOT based smart crop protection system for agriculture
Maximum Marks	4 Marks

Define CS, fit into CL	1. CUSTOMER SEGMENT(S) CS <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <ul style="list-style-type: none"> ➤ Commercial farmers ➤ Crop importers </div>	6. CUSTOMER LIMITATIONS <small>EG. BUDGET, DEVICES</small> CL <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <ul style="list-style-type: none"> ✓ Limited land ✓ Security concerns ✓ Soil related problem ✓ High adoption cost </div>	5. AVAILABLE SOLUTIONS <small>PLUSES & MINUSES</small> AS <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <ul style="list-style-type: none"> ✓ Proper fencing around the land ✓ Creating web application which make easy to farm the crop </div>	Explore AS, differentiate
	2. PROBLEMS / PAINS <small>+ ITS FREQUENCY</small> PR <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <ul style="list-style-type: none"> ✓ High cost ✓ Climate changes ✓ Difficult to monitor </div>	9. PROBLEM ROOT / CAUSE RC <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <ul style="list-style-type: none"> ✓ Livestock will graze the crop, if there is an lack of animal or bird feed ✓ Less productivity will affect their profit </div>	7. BEHAVIOR <small>+ ITS INTENSITY</small> BE <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <ul style="list-style-type: none"> ✓ Adapting to current technology for crop protection ✓ Basic practices of crop protection </div>	
Identify strong TR & EM	3. TRIGGERS TO ACT TR <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <ul style="list-style-type: none"> ✓ Agricultural practices ✓ From this crop protection method farmers can easily make efficient production in yield </div>	10. YOUR SOLUTION SL <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p><i>“IoT based Smart crop protection system for agriculture”</i></p> <p>This system also helps farmers to monitor the soil moisture levels in the field and also the temperature and humidity values near the field. The motors and sprinklers in the field can be controlled using the mobile application.</p> </div>	8. CHANNELS of BEHAVIOR CH <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p><small>ONLINE</small></p> <p>ONLINE: The Data send through application for the farmers to know about the farms.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p><small>OFFLINE</small></p> <p>OFFLINE: The control action is taken by the farmers to monitor the farms. Harvesting and storage</p> </div>	Extract online & offline CH of BE
	4. EMOTIONS <small>BEFORE / AFTER</small> EM <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>BEFORE: Frustration due to crop damage and low yield Mental illness</p> <p>AFTER: It will easier to make more yield</p> </div>			