

**Project Design Phase-II**  
**Solution Requirements (Functional & Non-functional)**

Date	15 October 2022
Team ID	PNT2022TMID35809
Project Name	Project – IOT based Smart Crop Protection for Agriculture
Maximum Marks	4 Marks

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Requirements	<ul style="list-style-type: none"><li>• Protect the Crop fields from the Animals and birds through the Mobile App.</li><li>• Monitors the temperature. and Moistures of the Soil.</li><li>• Automatic Irrigation system.</li><li>• Identified threats notified by sms.</li></ul>
FR-2	User Registration	<ul style="list-style-type: none"><li>• Registration through websites or app.</li><li>• Registration through Gmail.</li><li>• Verification and OTP confirmation through gmail and sms.</li></ul>
FR-3	Payments Options	<ul style="list-style-type: none"><li>• Cash on delivery.</li><li>• Net Banking.</li><li>• UPI Payments.</li><li>• Credit/Debit cards.</li></ul>

FR-4	User Complaints	<ul style="list-style-type: none"> <li>• Send the Complaints to the manufacturer through Gmail or through the websites where they initially know about it.</li> <li>• Help option and complaints option will be available in web or app.</li> <li>• Customers can complaint through customer care services.</li> </ul>
FR-5	Product Delivery and Installation	<ul style="list-style-type: none"> <li>• Door step Delivery.</li> <li>• Free installation with 2 year warranty.</li> <li>• Product can be purchased through the app or from the location of company stores.</li> </ul>
FR-6	Return Policy	<ul style="list-style-type: none"> <li>• The Defected Product will be taken back within a week.</li> <li>• Product will be replaced and in extreme cases amount will be refunded.</li> </ul>

## Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	<ul style="list-style-type: none"><li>• Product can be used without any complications.</li><li>• They can easily use this product after reading the instructions provided along with the products.</li><li>• They are provided with user manual.</li></ul>
NFR-2	<b>Security</b>	<ul style="list-style-type: none"><li>• Secure the application from others by using passwords or patterns based on user wishes.</li></ul>
NFR-3	<b>Reliability</b>	<ul style="list-style-type: none"><li>• Hardware need frequent check.</li><li>• Software Service is Periodically Updated.</li><li>• Hardware service can be done by company service man periodically.</li></ul>
NFR-4	<b>Performance</b>	<ul style="list-style-type: none"><li>• The application is user friendly and the time taken to execute the functions is very less.</li><li>• User can handle the equipment by manual instruction and functionality remains unchanged.</li></ul>

NFR-5	<b>Availability</b>	<ul style="list-style-type: none"> <li>• It can be used at anywhere by the user at anytime whenever requires.</li> <li>• Access and controlling can be done at anytime from the place where we are.</li> </ul>
NFR-6	<b>Scalability</b>	<ul style="list-style-type: none"> <li>• The product will cover the total area of the user's crop field and connect the entire field area to the user 24/7.</li> </ul>