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

Date	29 October 2022
Team ID	PNT2022TMID21422
Project Name	IOT Based Smart Crop Protection System 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 Visibility	Sense animals nearing the crop field & sounds alarm to woo them away as well as sends SMS to farmers using cloud service.
FR-2	User Perception	The Data values of Temperature, Humidity, Soil moisture from sensors are received as SMS
FR-3	User Understanding	Based on the sensor data value we get the information about the condition of farming land.
FR-4	User Action	The User needs to take action like deep plowing, crop rotation, fertilizers, strip cropping, scheduled planting operations.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Mobile Support Users must be able to interact in the same roles & tasks on computers & mobile devices where practical, given mobile capabilities.
NFR-2	**Security**	Data requires secure access to register and communicate securely on devices and authorize users of the system who exchange information
NFR-3	**Reliability**	It has a capacity to recognize the disturbance near the field and doesn't give a false caution signal.
NFR-4	**Performance**	Must provide acceptable response times to users regardless of the volume of data that is stored and the analytics that occur in the background. Bidirectional, near real-time communications must be supported. This requirement is related to the requirement to support industrial and device protocols at the edge.
NFR-5	**Availability**	IOT Solutions and domains demand highly available systems for 24 x 7 operations. Isn't a critical production application, which means that operations

		or production don’t go down if the IOT solution is down.
NFR-6	**Scalability**	System must handle expanding load & data retention needs that are based on the upscaling of the solution scope, such as extra manufacturing facilities and extra buildings.