Project Design Phase -2
Solution Requirements(Functional&Non Functional)

Date	15 October 2022
Team ID	PNT2022TMID33962
Project Name	IOT Based Smart Crop Protection System For Agriculture

Functional Requirement:

Following are the functional requirement of the proposed solution

FR NO	Functional Requirement	Sub Requirement(story/subtask)
FR -1	Knowledge of seeds	Seeds **protect and nourish the embryo or young plant**. They usually give a seedling a faster start than a sporeling from a spore, because of the larger food reserves in the seed and the multicellularity of the enclosed embryo.
FR-2	Use of Farmer	Smart farming can make agriculture more profitable for the farmer. Decreasing resource inputs will save the farmer money and labor, and increased reliability of spatially explicit data will reduce risks.
FR-3	Use of Resourse	resource inputs in crop production include fuel for tractors and other equipment, water, machinery, fertilizer, pesticides, and packaging materials such as plastic and cardboard.
FR-4	Harvesting	The goal of good harvesting is to maximize crop yield and minimize any crop losses and quality deterioration.

		Harvesting can be done manually, using hands or knifes and it can be done mechanically with the use of rippers, combine harvesters or other machines.

Non -Functional Requirements:

Following are the non-functional reuirement of proposed solution

FR NO	Non Functional Requirements	Description
NR-1	Usability	The developed ICT agricultural tools focus on very important agricultural services such as crop disease detection, crop yield predictor will help them to estimate the crop yield which will help them to make decisions in future , recommendation of best crop will help farmers to grow crops that will benefit in their respective region, help famers to locate the pesticide vendors, weather services, discussion forum to communicate.
NR-2	Reliability	Reliability Means Consistency and Accuracy Reliability ensure that a farmer can get a field task accomplished in a timely manner ,it also reduces lost time and productivity
NR-3	Performance	The economic performance of the agricultural industry can be measured in terms of net value added at factor cost, which is gross value added adjusted for the consumption of fixed

		capital, and subsidies and taxes on production.
NR-4	Availability	The basic resources for agriculture are **sunlight, soil and water, besides the seeds and animal breeds, and human Endeavour**. Another important input is the agro technique. Agricultural production is adversely affected if any of these factors is limited, or disturbed.
NR-5	Scalabilty	Scaling means maximising the impact of agricultural interventions through horizontal or vertical approaches. Horizontal strategies often reach more project beneficiaries by, for example, increasing the size of farms or implementing a service or technological innovation over a wider geographical area.