Project Design Phase-I
Proposed Solution Template

Date	24 September 2022
Team ID	PNT2022TMID47541
Project Name	IoT Based Smart Crop Protection System for Agriculture
Maximum Marks	2 Marks

Defining the Problem:

Farmer needs a way to monitor and protect his agricultural land so that he will get a good yield.

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Krishna is a is a busy businessman who needs a way to spend his time on monitoring, watering the plant and protecting his agricultural land so that he doesn't wants to hire labour for these work.
2.	Idea / Solution description	**Idea for watering the fields** • Automated crop protection using sensor • Automated water irrigation • Use sprinkler irrigation method • Rain Water Harvesting for water scarcity **Idea using Sensors** • Soil moisture sensing • Use rain sensor to sense rain **Idea for Monitoring the field** • Create mobile app for monitor • Using advanced technology for monitoring **Ideas for Crops protection from animals and birds** • Using bright lights to catch insects during night time • Automatically spraying the natural pesticides

		• Use ultra-sonic waves to protect crops from bugs and animals
3.	Novelty / Uniqueness	This project helps the farmer to reduce their work and time. While comparing with other method, this is the most efficient and effective method. Here farmer need not monitor his agricultural land every time, everything is automated and can be done manually if needed. It can easily be handled by both educated and uneducated people. This project is not particularly made for killing or disturbing the animals and bugs but it keeps them away from the crop. In this way our system differs from other system.
4.	Social Impact / Customer Satisfaction	Through this project the customer can easily handle, monitor and control all the equipment and sensors used for crop growth and protection. It avoids unnecessary wastage of water to harvest the plants. Compared to the normal farming techniques it is more accurate and secure. The customer also gets notified about each and every actions happening in the agricultural land, so need for the customer to visit the agricultural land often. Compared to normal agriculture we can spent minimum of cost and control at anywhere at any time. It improves protection from animals and insects. It gives high production.
5.	Business Model (Revenue Model)	As this project requires less manpower which leads to spending less amount and increases gain. Compared to human being, sensors protects the land efficiently, so there will no chance for damage of crops which leads to high yield and profit.
6.	Scalability of the Solution	As every farmer is nowadays suffering from loss, our project will definitely help them. This project can be taken to regional and national level, as there is need for such project.

		If the project gets success in our agricultural land, we can help the farmers who are suffering from drought and loss due to the need of maximum manpower to guard the land and plucking of weeds.