

Project Design Phase-I
Proposed Solution Template

Date	3 October 2022
Team ID	PNT2022TMID12758
Project Name	IOT based Smart Crop Protection for Agriculture
Maximum Marks	2 Marks

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)	To develop a smart crop protection system that helps the farmers in protecting the crop from the animals and birds which destroy the crop. Also, this system must help farmers to monitor the soil moisture levels in the field and also the temperature and humidity values near the field. And also, with the help of this system, farmers must be able to control the irrigation system through mobile application.
2.	Idea / Solution description	Our idea is in such a way that it gives a solution to the above problem statement. Our idea is to develop a smart crop protection system that helps the farmers in protecting the crop from the animals and birds which destroy the crop. Also, our idea would help farmers to monitor the soil moisture levels in the field and also the temperature and humidity values near the field. And also, with the help of this system, farmers would be able to control the irrigation system through mobile application.
3.	Novelty / Uniqueness	Even though there are many existing solutions for this problem they failed to satisfy the needs of farmer. The existing irrigation system is just time basis. If the system is set to on a for a particular time, it will be switched on during that time even when there is a rain in the farm. Whereas our system takes into account the environmental conditions and based on that irrigation system is controlled which leads to saving water. And the other novelty is farmer can control the irrigation system from the place where he/she resides rather than coming to the field because of IOT whereas this is not possible in present systems. And also, when the animal or bird is detected in the field, it not only indicates the farmer who is in the remote place but also produce alarm to make animals or birds run away.

4.	Social Impact / Customer Satisfaction	When this IOT system is introduced to the farmers, then farming becomes automated and it can be in the control of farmers always. And also, anyone who is interested in farming but cannot be in farm always, can also do farming with the help of this system since this system provides all the comfort to do farming from the remote place. It also helps the farmers to get good yield. Not only that, the irrigation system used here will also help the farmers to save water which is the most precious resources.
5.	Business Model (Revenue Model)	Our main target is the farmers. So, we have planned to visit the farmers about the importance of this system and what all the benefits they get on using this system. And also, we target on the industries, who are very much into irrigation system to discuss and make them understand about the need for this system. Though farmers take good care of their crops, sometimes without their knowledge animals can come and destroy the entire field which affects their yield and ultimately their profit decreases abruptly. This problem is solved on using this system and hence the farmers would also get good yield which increases their profit.
6.	Scalability of the Solution	Our solution can be scaled for any further future uses. Because the solution we have provided suits for all types of farms in general.