Date: 09.11.2022
Team I'd: PNT2022TMID36755
Project title: Proposed Solution
Project Name: IOT based smart crop protection system for agriculture

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)	An intelligent crop protection system helps the farmers in protecting the crop from the animals and birds which destroy the crop. This system also helps farmers to monitor the soil moisture levels in the field and also the temperature and humidity values near the field. The motors and sprinklers in the field can be controlled using the mobile application.
2.	Idea / Solution description	• The proposed system detects the movement of animals and birds which destroy crops and animals, A hardware prototype that uses Wireless sensor network (WSN) to detect intruders (i.e., animals and birds) in a field of crops called Agriculture Intrusion Detection System (AID). • Moisture sensor interfaced with Arduino microcontroller is used to measure the moisture level in soil. • IoT enabled motor pump, farmers can operate the motor pump from anywhere through mobile apps. • Temperature sensor connected to microcontroller is used to monitor the temperature in the farm.
3.	Novelty / Uniqueness	The uniqueness of this system is that it detects the movement of animals and alerts the farmers and senses the moisture level and automatically turns on sprinklers without any human intervention.
4.	Social Impact / Customer Satisfaction	• The device should not harm the animals and birds. • The device should can sustain the dimatic temperature • It is not possible for famers to protect the field from animals and birds at all times.

		• Improves the productivity, saves lives of farmers. • Simple solution to suite the farmer community.
5.	Business Model (Revenue Model)	• As the product usage can be understood by everyone, it is easy for them to use it properly for their safest organization. • The product is advertised all over the platforms. Since it is economical, even helps small scale farming land from disasters. • This growth is attributed to the rising product demand in light of the surging of crop production. Therefore, surging government standards and regulations for the improvement of the crop production.
6.	Scalability of the Solution	• Crop protection systems can be scaled up in many different ways. • This notion offered an effective IoT-based, real-time crop protection model based on this methodology for enhancing crop productivity. • With the addition of various technologies, this system can be scaled. Even in unfavourable circumstances, additional sensors can be utilised to monitor animal position and movement as well as soil moisture levels. • The use of this is also possible in farms and gardens. Monitoring the locations can also be done using websites and mobile apps.