Project Design Phase-I
Proposed Solution Template

Date	01 October 2022
Team ID	PNT2022TMID11096
Project Name	Project – IoT Based Smart Crop Protection System 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)	Develop Affordable app-based solution for Soil health monitoring and suggest which crop to be sown based on it and also Develop smart solution to protect crops from wild animals ,predicting potential pest,disease,insect attacks on crop and prediction of crops.
2.	Idea / Solution description	We are about to propose a solution for monitoring different parameters of his field like soil moisture, temperature, and humidity using sensors such as soil moisture sensors, temperature sensors and a humidity sensor. These sensors can be stationary or portables such as handheld probes. **A temperature sensor is for detecting and measuring the hotness and coolness present in the environment and converts those inputs into an electrical signal. A humidity sensor is to detect and measure the water vapour or water droplets present in the atmospheric air and with those inputs it measures the humidity present in the air.**
3.	Novelty / Uniqueness	• Modernizing the current traditional methods of agriculture • Internet of Things (IoT) enables various applications of **crop growth monitoring** and selection, **automatic crop protection** decision support.
4.	Social Impact / Customer Satisfaction	One of the greatest advantages of a smart crop protection system is its ability to save water. In general, traditional watering methods can waste as much as 50% of the water used due to inefficiencies in irrigation, evaporation and overwatering. Our system use sensors for real-time or historical data to inform watering routines and modify watering schedules to improve efficiency. Users can configure these systems to manage crop protection on demand.

5.	Business Model (Revenue Model)	Consequently, the solution to the problem addressed by in our problem statement is **smart crop protection system** by modernizing the current traditional methods of agriculture. **ESP8266 IoT based Smart Crop Protection system** to modernize and improve the productivity of the crop.
6.	Scalability of the Solution	An important and unexpected factor in the experiments was the impact of the network. This IoT based system were successful in replicating a large scale smart farm environment considering the number of sensors. we expect a smaller number of sensors, due to costs and farm sizes.