Project Design Phase-I
Proposed Solution Template

Date	24 September 2022
Team ID	PNT2022TMID30551
Project Name	IoT-BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE
Maximum Marks	2 Marks

Proposed Solution Template:

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

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Wild animal attacks are a special challenge for farmers throughout the world. Animals cause serious damage to crops. They can damage the plants by feeding on plant parts or simply by running over the field and trampling over the crop fields. Therefore, wild animals may easily cause significant yield losses and provoke additional financial problems. Another aspect to consider is that wild animal crop protection requires a particularly cautious approach.
2.	Idea / Solution description	We are developing a drone, which monitors the entry of wild animals inside the field in the absence of farmers. In addition, it sprays fertilizers periodically and senses the presence of weeds growing along the crops.
3.	Novelty / Uniqueness	In the existing solutions, they have developed drones only for monitoring purposes. But we have proposed additional solutions for sensing weeds alongside crops and doing add-on work like spraying fertilizers and detecting crop growth.
4.	Social Impact / Customer Satisfaction	This technology will protect the crops from damage and hence farmers will not suffer from crop losses and it will result in an increase in crop yield.
5.	Business Model (Revenue Model)	Deploying drones for crop protection purposes with understandable technologyand multipurpose tasking will enhance the protection of crops. The investment in drone technologyfor crop protection is higher than in the conventional types of equipment as well as functionalities.
6.	Scalability of the Solution	Crop protection using drones in case of a wild animal breach, weed formation, and climatic hazards gives the farmers great relief from this and can fully concentrate on crop production.