Project Design Phase-I
Proposed Solution Template

Date	23 September 2022
Team ID	PNT2022TMID23510
Project Name	Project - **SmartFarmer - IoT Enabled Smart Farming Application**
Maximum Marks	2 Marks

PROPOSED SOLUTION

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Developing a smart application for farmers to make farming as automated and in smart way.
2.	Idea / Solution description	(i)Internet of Things (IoT) implementation in this field has resulted in the term smart farming. (ii)IoT in smart farming is the future of precision farming and results in high quality produce and healthy cattle. (iii)With the use of many smart farming sensors, and wearables, one can get real-time update with a touch of the screen.
3.	Novelty / Uniqueness	The innovative approach has (i)climate based- crop risk management tools (ii)household bioeconomic models approaches (iii)whole farm dynamic models
4.	Social Impact / Customer Satisfaction	(i)With IoT, companies can enjoy benefits like better crop productivity and improved worker safety. (ii) They can use less fertilizer, water and pesticides. Because farmers can decrease the fertilizers and pesticides they use, there is less runoff into groundwater and rivers. This results in a lower impact on the ecosystem.

5.	Business Model (Revenue Model)	**maintenance-as-a-service:** Agriculture is a traditional sector and mature market with many established players in areas like equipment and machine manufacturing, seeds & chemicals, whole sellers, food processing industry and service provision. Therefore, it is very difficult and expenses for new players to enter the market, build up a brand recognition among farmers and establish a distribution network.Therefore,to win established corporate as distribution partners for startup companies and use the even the corporate customer relation infrastructure to serve startup clients.
6.	Scalability of the Solution	Since most smart farming data are small files that lead to many small files, Hadoop cannot be effective without a distributed system equipped with a high-performance computing system. To address this problem, the Hadoop Distributed File System (HDFS) has been designed to process large (and small size) datasets.Using cloud computing technology in a smart farming platform is another solution that can address scalability challenges related to capacity due to flexible and robust data collection, management, and processing capabilities.