Project Design Phase-I
Proposed Solution Template

Date	12 October 2022
Team ID	PNT2022TMID01130
Project Name	Project – IOT Enabled Smart Farming
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)	- Poor Internet Connectivity in Farms - High Hardware Costs - Disrupted Connectivity to the Cloud
2.	Idea / Solution description	• <u>Poor Internet Connectivity in Farms:</u> The Ultra High Frequency (UHF) and Very High Frequency (VHF) broadcast bands are also capable of multiplying the strength of Wi-Fi signals so this is best solution for poor internet connectivity • <u>High Hardware Costs:</u> Tethered Eye helium balloons are used These aerial sensors generate a stream of continuous images of the farm conditions, which are used to refine the data collected by sensors on the ground. As a result, this approach helps reduce hardware costs while facilitating more precise data collection. • <u>Disrupted Connectivity to the Cloud:</u> farmers need to embrace technologies that facilitate data-driven operations in order to improve yield, reduce operational costs, and ensure environmental sustainability. By helping farmers overcome these challenges for implementing IoT technology in rural areas, FarmBeats can help farmers realize all of the benefits of farming with data.
3.	Novelty / Uniqueness	• <u>Monitoring Soil Quality:</u> Farmers usually use a sampling method to calculate soil fertility, moisture content. Thus, this sampling doesn't give accurate results as chemical decomposition varies from location to location. Meanwhile, this not much helpful. To resolve this thing, it plays an essential role in Farming. Sensors can be installed at a uniform

		distance across the length and breadth of the farmland to collect the accurate soil data, which can be further used in the dashboard or mobile application for the farm monitoring. • Smart Irrigation on Agriculture Land: In smart irrigation, automated sprinkler systems or intelligent pumps are used. Soil moistures sensors are used in different areas to get the moisture of the soil in agricultural land. Based on the results from the soil moisture sensors, the intelligent pumps or intelligent sprinklers are turned On/Off.
4.	Social Impact / Customer Satisfaction	• Reduce the ecological footprint of farming. • Help feed the increasing global population. • Provide food security in climate change scenarios. • Achieve higher yields while reducing operating costs.
5.	Business Model (Revenue Model)	• Global smart agriculture market to grow $54,949.90 million in revenue
6.	Scalability of the Solution	The Ultra High Frequency (UHF) and Very High Frequency (VHF) broadcast bands are also capable of multiplying the strength of Wi-Fi signals so this is best solution for poor internet connectivity.in range of 3 to 30 megahertz it will work better