

Project Design Phase
Proposed Solution Template

Date	03 DECEMBER 2025
Team ID	PNT2025TMID01163
Project Name	Predicting plant growth stages with environmental and management data using Power BI
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Farmers struggle with unpredictable weather and soil conditions, leading to inefficient resource use. Traditional farming relies on manual observations, which are often inaccurate and time-consuming.
2.	Idea / Solution description	A power BI-based real-time dashboard integrating live data from sensors, satellites, and weather APIs. Provides interactive visualizations and predictive analytics to help farmers make data-driven decisions.
3.	Novelty / Uniqueness	Unlike static reports, our dashboard updates in real-time for accurate insights. Combines multiple data sources like weather, soil, and crop health into a single platform.
4.	Social Impact / Customer Satisfaction	Helps reduce crop failure risks by predicting optimal farming conditions. Supports sustainable farming by improving resources efficiency, reducing water and fertilizer waste.
5.	Business Model (Revenue Model)	farmers and agribusinesses can access insights via subscription-based model Partnerships with government agencies and agri-tech firms for large-scale implementation.

6.	Scalability of the Solution	Can integrate AI-driven recommend actions for precision farming in future updates. Expendable to include IOT sensors for real-time soil health monitoring.
----	-----------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------