

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	31 January 2025
Team ID	PNT2025TMID01160
Project Name	Predicting Plant Growth Stages with Environmental and Management Data Using Power BI
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Data Collection	Manual data input option Historical plant growth data upload
FR-2	Data Processing	Machine Learning model for growth stage prediction Data Cleaning and preprocessing Trend analysis using Power BI
FR-3	Visualization	Power BI dashboard for real-time monitoring Graphs & charts for historical data comparison Growth stage timeline view
FR-4	Sustainability Tracking	Resource usage dashboard for water & fertilization CO2 impact tracking for sustainability farming
FR-5	Report Generation	Generate periodic reports (weekly,monthly) Export reports in PDF,Excel

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The system should have user friendly interface,ensuring ease of use for farmers and researchers
NFR-2	Security	Implementation authentication and encryption to protect user data and prevent unauthorized access
NFR-3	Reliability	The system should provide accurate plant growth predictions with minimal errors
NFR-4	Performance	The platform process and analyze data efficiently ,with dashboards loading under 3 seconds
NFR-5	Availability	Allowing users to access the system without interruptions
NFR-6	Scalability	The system should be able to handle an increasing numbers of users ,IOT devices and data points without performance degradations