

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

Date	24 March 2025
Team ID	PNT2025TMID06680
Project Name	Global Food Production Trends and Analysis A Comprehensive Study from 1961 to 2023 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	Gather food production data from multiple sources (FAO, USDA, etc.)
		Collect crop-wise production statistics (Rice, Wheat, Maize, etc.)
		Include regional production data (Asia, Europe, Americas, etc.)
FR-2	Data Processing	Clean and preprocess global food production datasets
		Handle missing or inconsistent data values
		Aggregate data by year, region, and crop type
FR-3	Analysis & Insights	Identify trends in crop production over time
		Compare production growth across regions
		Detect major shifts in food production due to climate or policies
FR-4	Visualization	Develop Power BI dashboards to display production trends
		Create interactive charts for crop-wise analysis
		Provide forecasting insights for future production
FR-5	Reporting & Decision Making	Generate reports for policymakers and agronomists
		Offer insights for optimizing global food distribution
		Recommend actions to improve sustainability in production

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Simple and intuitive UI/UX for non technical users

NFR-2	Security	Implement authentication ,role-based access and data encryption
NFR-3	Reliability	Ensure consistent data accuracy and uptime
NFR-4	Performance	Dashboard should load with in 5 sec for large data set
NFR-5	Availability	System should be available 99.9% of the time
NFR-6	Scalability	Support increase data volume and additional user without performance drops.