

Date	12 March 2025
Team ID	PNT2025TMID02840
Project Name	Global Food Production Trend and Analysis a comprehensive study from 1961 to 2023 using power BI
Maximum Marks	4

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Data Ingestion & Processing	Ability to import data from multiple sources (FAO, World Bank, USDA, climate databases).
		Automated data cleaning, transformation, and integration.
		Support for structured (CSV, Excel, SQL) and unstructured (API, web scraping) data sources.
FR-2	Data Modeling & Storage	Design an optimized data model for efficient querying and analysis
		Establish relationships between datasets (e.g., linking food production to climate and population data).
		Implement data aggregation for trend analysis at yearly, decade-wise, and country levels.
FR-3	PowerBI Report Creation	Design interactive dashboards for food production trends
		Create visualizations for staple crops (rice, wheat, maize)
		Develop regional comparison charts for fruit production
FR-4	Insights C Decision Support	Identifykeytrends in foodsecurity C production growth
		Providedata-drivenrecommendations for stakeholders
		Enableexport of reports forbusiness C policy use

FRNo.	Non-Functional Requirement	Description
NFR-1	Performance & Scalability	Efficient handling of large datasets spanning over 60 years.
		Quick loading and responsiveness for real-time analysis.
NFR-2	User Experience & Accessibility	Intuitive and user-friendly design with easy navigation.
		Mobile-friendly dashboards for remote access.
		Multi-language support for global users.
NFR-3	Security & Data Governance	Role-based access control for different users (analysts, policymakers, researchers).
		Compliance with data privacy standards (GDPR, FAO guidelines).
		Secure cloud or on-premise data storage solutions.
NFR-4	Integration & Extensibility:	Compatibility with other BI tools and enterprise systems.
		API integration for real-time data updates.