

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

Date	6 March 2025
Team ID	PNT2025TMID00093
Project Name	Power BI Inflation Analysis: Journeying Through Global Economic Terrain
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	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation by sending login link on Email. Confirmation via OTP
FR-3	User Login & Authentication	Multi-Factor Authentication can be implemented for more security.
FR-4	User Roles & Permissions	Define roles (e.g., Admin, Analyst, Viewer)
FR-5	Data Collection & Integration	The system must ingest data from multiple sources. (eg World Bank Open Data, FRED, IMF, RBI etc.)
FR-6	Data Cleaning & Processing	The system must remove duplicates and missing values. Convert data into a standardized format (consistent units, categories).

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 an intuitive and user-friendly interface, requiring minimal training.
NFR-2	Security	Data must be encrypted using AES-256 for storage and TLS 1.2+ for transmission. Users must authenticate via multi-factor authentication (MFA) .
NFR-3	Reliability	Data integrity should be ensured, with daily automated backups stored securely.
NFR-4	Performance	Queries on large datasets should execute within 3-5 seconds for optimal efficiency. Dashboards and reports must load within 5 seconds under normal load.

NFR-5	Availability	<p>The system must be available 24/7 with scheduled maintenance outside peak hours.</p> <p>A monitoring system should alert admins in case of downtime or service degradation.</p>
NFR-6	Scalability	<p>Infrastructure should scale dynamically using cloud-based auto-scaling solutions.</p> <p>New features should be deployable with zero downtime using a microservices architecture.</p>