

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

Date	31 January 2026
Team ID	LTVIP2026TMIDS46998
Project Name	Measuring the pulse of prosperity: An Index of economic freedom analysis
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 Input & Configuration	<ul style="list-style-type: none"> The system shall allow selection of countries or regions The system shall allow selection of analysis period (single year or multiple years) The system shall allow selection of economic freedom dimensions The system shall allow selection of prosperity indicators
FR-2	Data Upload & Integration	<ul style="list-style-type: none"> The system shall accept Economic Freedom Index datasets The system shall accept economic indicator datasets The system shall support CSV and Excel file formats The system shall allow multiple dataset uploads
FR-3	Data Validation	<ul style="list-style-type: none"> The system shall detect missing values The system shall detect duplicate entries The system shall verify country-year consistency The system shall notify the user of data issues
FR-4	Data Pre-processing	<ul style="list-style-type: none"> The system shall clean invalid or inconsistent data The system shall normalize numerical values The system shall align datasets by country and year The system shall store processed data
FR-5	Economic Freedom Analysis	<ul style="list-style-type: none"> The system shall calculate overall economic freedom scores

		<ul style="list-style-type: none"> • The system shall analyze component-wise scores • The system shall rank countries by freedom level • The system shall classify countries as high, medium, or low freedom
FR-6	Prosperity Indicators Analysis	<ul style="list-style-type: none"> • The system shall analyze GDP per capita trends • The system shall analyze employment and unemployment rates • The system shall analyze poverty and living standards • The system shall compare prosperity across regions
FT-7	Correlation & Comparative Analysis	<ul style="list-style-type: none"> • The system shall compute correlation between freedom and prosperity • The system shall perform country-to-country comparison • The system shall perform region-wise comparison • The system shall highlight significant relationships
FT-8	Visualization & Reporting	<ul style="list-style-type: none"> • The system shall generate graphs and charts • The system shall generate summary tables • The system shall export reports in PDF or PPT format • The system shall store generated reports

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	<ul style="list-style-type: none"> • The system shall have a user-friendly interface

		<ul style="list-style-type: none"> • The system shall require minimal training • The system shall provide clear labels and instructions
NFR-2	Security	<ul style="list-style-type: none"> • The system shall restrict unauthorized access • The system shall protect stored datasets • The system shall ensure secure data handling
NFR-3	Reliability	<ul style="list-style-type: none"> • The system shall operate without failure during analysis • The system shall prevent data loss • The system shall recover gracefully from errors
NFR-4	Performance	<ul style="list-style-type: none"> • The system shall process datasets within acceptable time • The system shall efficiently handle large datasets • The system shall maintain performance during repeated runs
NFR-5	Availability	<ul style="list-style-type: none"> • The system shall be available when required • The system shall minimize downtime
NFR-6	Scalability	<ul style="list-style-type: none"> • The system shall support addition of new countries • The system shall support additional years of data • The system shall allow inclusion of new indicators