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

Date	23 June 2025
Team ID	LTVIP2025TMID37462
Project Name	Sustainable Smart-city AI Assistant using IBM Granite LLM
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)
FR1	Smart City Chat Assistant	FR1.1: Users can ask questions about sustainability practices
		FR1.2: AI assistant responds with relevant smart city data
		FR1.3: Handles multilingual queries and gives localised answers
FR2	Eco Tips Generation	FR2.1: AI generates daily/weekly eco-friendly tips
		FR2.2: Users can view and bookmark tips
FR3	KPI Forecasting (Energy, Water, Waste)	FR3.1: Users can request future predictions on sustainability KPIs
		FR3.2: Graphical representation of forecast data
FR4	Sustainability Report Generator	FR4.1: AI generates summary reports based on city metrics
		FR4.2: Users can download/share reports
FR5	Interactive Dashboard with Data Visualizations	FR5.1: Real-time data display of smart city metrics (e.g., air quality)
		FR5.2: Filter/search by zones or categories
FR6	User Authentication & History	FR6.1: Login/Register functionality
		FR6.2: User query and report history management
FR7	Admin Interface (Optional)	FR7.1: Manage tip content and monitor user queries

Non-functional Requirements:

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

NFR No.	Non-Functional Requirement	Description
NFR1	Performance	System must respond to user queries within 3 seconds
NFR2	Availability	The AI Assistant should be available 99.5% of the time
NFR3	Scalability	Must support at least 100 concurrent users initially
NFR4	Usability	UI must be accessible, responsive, and mobile-friendly
NFR5	Maintainability	Codebase must support easy updates and integration of new features
NFR6	Security	All data transmissions should be encrypted (HTTPS), with user auth
NFR7	Interoperability	Should integrate external APIs like smart city sensors, sustainability DBs
NFR8	Reliability	AI responses should be consistently accurate and backed by training data