**Project Overview**

Team ID: LTVIP2025TMID20497

Project Name: Sustainable Smart City Assistant Using IBM Granite LLM

**1.1 Problem Statement**

The "Sustainable Smart City Assistant Using IBM Granite LLM" is an AI-powered solution aimed at enhancing urban sustainability and governance. It leverages IBM's Granite Large Language Model to process and analyze city data efficiently. The assistant supports modules like policy summarization, citizen feedback analysis, KPI forecasting, and eco-friendly recommendations. It provides real-time insights for administrators to make data-driven decisions. Ultimately, it aims to create smarter, greener, and more responsive urban environments.

**1.2 Key Problems Identified:**

1. **Limited Citizen Engagement** 
   * Citizens lack accessible channels to provide feedback on city services
   * Government struggles to collect and analyze citizen input systematically
   * Communication gap between city officials and residents
   * Delayed response to community concerns and suggestions
2. **Environmental Monitoring Gaps** 
   * Insufficient real-time monitoring of air quality, water usage, and energy consumption
   * Lack of predictive analytics for environmental trends
   * Limited awareness among citizens about sustainable practices
   * Difficulty in tracking progress toward sustainability goals
3. **Policy Document Management Issues** 
   * Large volumes of policy documents difficult to search and retrieve
   * Time-consuming manual processes for policy analysis
   * Lack of semantic search capabilities for relevant information
   * Limited accessibility for citizens to understand policy implications
4. **Data-Driven Decision Making Deficits** 
   * Absence of integrated KPI monitoring systems
   * Limited forecasting capabilities for city metrics
   * Reactive rather than proactive city management
   * Insufficient anomaly detection for early intervention
5. **Resource Optimization Challenges** 
   * Inefficient allocation of city resources
   * Limited visibility into departmental performance
   * Lack of comprehensive reporting mechanisms
   * Difficulty in measuring sustainability impact

**1.3 Target Audience Impact**

* City Officials: Need intelligent tools for data-driven decision making
* Citizens: Require accessible platforms for engagement and information
* Policy Makers: Need efficient document management and analysis tools
* Environmental Agencies: Require real-time monitoring and reporting capabilities