## **Brainstorming Template –**

## **Sustainable Smart City Assistant**

### **🗓 Date: 25 June 2025**

### **👥 Team ID: LTVIP2025TMID37298**

### **📌 Project Name: Sustainable Smart City Assistant**

### **🎯 Maximum Marks: 4 Marks**

### **1. 💡 Brainstorming Goal:**

Generate innovative ideas for improving citizen engagement, sustainability awareness, and accessibility of smart city services using AI-driven assistant tools.

### **2. 🧑‍🤝‍🧑 Target Users:**

* Urban citizens (ages 18–60)
* Municipal officers
* Policy makers
* Environmental activists
* Smart city planners

### **3. ❓ Key Questions to Explore:**

* How can citizens track environmental metrics in real-time?
* How can we simplify complex policy documents?
* How can people provide feedback and suggestions easily?
* What features will encourage sustainable behavior?
* How to integrate data from multiple city departments?

### **4. 🧠 Raw Ideas (from Team Discussion):**

* Use IBM Granite LLM to summarize policy PDFs in natural language.
* Integrate Pinecone for vector-based search of civic documents.
* Offer AI-powered eco-tips based on real-time air and water quality.
* Add chatbot-based complaint and feedback mechanism.
* Create visually engaging dashboards for KPIs.
* Enable voice-based input for elderly or differently-abled users.
* Generate downloadable reports for awareness or community groups.

### **5. 🎯 Top 3 Feasible Ideas (Shortlisted):**

|  |  |  |
| --- | --- | --- |
| **Idea** | **Description** | **Benefit** |
| **Policy Summarizer** | Uses LLM to simplify and summarize government policies | Enhances understanding and transparency |
| **Eco Tips Assistant** | AI generates personalized sustainability tips based on location and season | Promotes eco-conscious behavior |
| **Civic Feedback Portal** | Simple UI to submit complaints or ideas with tracking | Improves citizen participation |

### **6. 🛠️ Tools/Technologies Considered:**

* **LLM:** IBM Granite (via Watsonx)
* **Vector DB:** Pinecone
* **Frontend:** Streamlit (with option menu navigation)
* **Backend:** FastAPI
* **Data sources:** Real-time air, water quality APIs

### **7. 🚀 Next Steps:**

* Refine UI mockups based on these ideas.
* Assign tasks to integrate feedback, policy summary, and KPI visualization.
* Collect sample data to test AI modules.