Ideation Phase
Brainstorm & Idea Prioritization Template

Date	31 January 2025
Team ID	LTVIP2025TMID60817
Project Name	Sustainable smart city assistant using IBM GRANITE LLM
Maximum Marks	4 Marks

Sustainable Smart City Assistant (Using IBM Granite LLM) Template ;

Problem Statement 1 (PS-1)

I am a city planner in a mid-sized urban municipality
I'm trying to develop a roadmap for making my city more sustainable and efficient
But I lack real-time insights and advanced tools to analyze energy usage, mobility patterns, and environmental impact
Because the existing systems are siloed, outdated, and not integrated with AI or data analytics
Which makes me feel frustrated, overwhelmed, and concerned about missing critical opportunities for improvement

---

Problem Statement 2 (PS-2)

I am a sustainability officer exploring smart city initiatives
I'm trying to convert my city operations into a sustainable, AI-enabled ecosystem
But I don't have access to an intelligent assistant that can provide insights, automate tasks, and align with our city's green goals
Because current solutions are either too generic, lack localization, or are not scalable across departments
Which makes me feel stuck, unsupported, and hesitant to propose ambitious projects to stakeholders

---

Step 1: Team Gathering, Collaboration, and Select the Problem Statement

Goal: Assemble a cross-functional team and define the focus of your assistant.

🔷 **Suggested Participants:**

- Urban planners

- Sustainability experts

- Data scientists

- AI/ML engineers (familiar with IBM Granite LLM)

- City administrators

- UX/UI designers

- Citizens (optional for public feedback sessions)

🔷 **Problem Statement Examples:**

- **"How can we use AI to reduce urban energy waste and carbon emissions?"**

- **"How can a virtual assistant powered by Granite LLM improve public transportation efficiency in smart cities?"**

- **"What assistant capabilities could enhance citizen engagement for sustainability goals?"**

Use collaborative tools like **MURAL**, **Jamboard**, or **Miro** to collect and vote on the top problem statement.

Step 2: Brainstorm, Idea Listing, and Grouping

Goal: Generate as many ideas as possible for the assistant's features, capabilities, and user interactions.

🔷 **Brainstorm Prompts:**

- What tasks could the assistant automate for sustainability?

- What kind of data would it need (traffic, energy, weather, etc.)?

- How should it interact with users (voice, chat, app integration)?

- How can we ensure ethical AI usage and citizen privacy?

🔷 **Sample Ideas:**

- AI chatbot that gives real-time public transport updates & eco-routes

- Energy consumption dashboard with predictive analytics

- Smart waste management assistant for city departments

- Digital twin integration for sustainability modeling

- Resident-facing assistant that rewards sustainable behaviors

- Suggests green building upgrades based on energy data

- Uses natural language to process city regulation questions

🔷 **Group Ideas Into Clusters:**

- Citizen-Facing Features

- City Administration Tools

- Data Integration and IoT

- Sustainability Education & Nudging

- Predictive & Prescriptive Analytics

- Ethical AI and Compliance

Use virtual sticky notes to collect, cluster, and tag ideas.

Step 3: Idea Prioritization

Goal: Evaluate and select ideas to implement, based on value, feasibility, and impact.

🔷 **Prioritization Matrix Axes:**

- **X-Axis:** Impact on sustainability goals

- **Y-Axis:** Technical feasibility with IBM Granite LLM

Place all brainstormed ideas on a 2x2 prioritization matrix:

- **Quick Wins** (High Impact, High Feasibility)

- **Big Bets** (High Impact, Low Feasibility)

- **Low-Hanging Fruit** (Low Impact, High Feasibility)

- **Long-Term Innovations** (Low Impact, Low Feasibility)

🔷 **Example Prioritized Ideas:**

Idea	Impact	Feasibility	Priority
Eco-route voice assistant	High	High	✅ Quick Win
Digital twin + LLM simulation	High	Medium	⚠️ Big Bet
Real-time sustainability quiz chatbot	Medium	High	✅ Low-Hanging Fruit
AI policy auditor	Medium	Medium	⚙️ Medium Priority

🧠 **Turning into IBM Granite LLM-Powered Assistant**

🔧 **Implementation Hints:**

- Use **Granite LLM for natural language understanding** and generation (e.g., summarizing energy reports, answering citizen queries).

- Connect with **Watsonx.ai**, **IoT data streams**, and **urban planning APIs**.

- Ensure **explainability (XAI)** and **data governance** using IBM's AI Ethics tools.

- Develop in phases: MVP → Feedback → Iteration

🔁 Bonus: Share & Iterate

- Store outcomes in a **shared MURAL board or IBM Design Thinking workspace**

- Schedule regular follow-ups

- Keep the assistant development agile, citizen-centered, and open to iteration

---