**Ideation Phase**

**Empathize & Discover**

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| Date | 31 January 2025 |
| Team ID | LTVIP2025TMID34374 |
| Project Name | Sustainable smart city assistant using IBM Granite LLM |
| Maximum Marks | 4 Marks |

**Context**

**Product:** Sustainable Smart City Assistant  
**Powered by:** IBM Granite LLM  
**Target User:** Urban Resident in a Mid- to Large-sized City (e.g., Smart city pilot citizen, commuter, eco-conscious resident)

**Empathy Map Canvas: Sustainable Smart City Assistant**

**What does the user hear?**

* Recommendations from friends about apps that help reduce carbon footprint
* Local government or utility company communications about smart grid usage
* News about rising energy costs and environmental concerns
* Public campaigns on sustainable living and mobility (e.g., EV incentives, public transport upgrades)

**What does the user see?**

* Smart kiosks, digital signage around the city displaying energy usage tips
* Mobile apps offering real-time data on transport, waste, and energy
* Reports of air quality, noise levels, traffic congestion on digital dashboards
* Other citizens using green transport modes (e-bikes, electric buses)

**️ What does the user say and do?**

* "I want to reduce my energy usage but don’t know where to start."
* "It’s hard to understand my carbon footprint."
* "I care about sustainability, but I need actionable steps."
* Uses smart devices, checks city assistant for updates, tracks energy or transit data

**What does the user think and feel?**

* Wants to contribute to a better environment, but feels overwhelmed by the data
* Frustrated with lack of integration between different city services
* Curious about personal impact and how to reduce waste or emissions
* Appreciates AI recommendations that feel personalized and non-intrusive

**Goals**

* Minimize personal environmental footprint (energy, waste, transport)
* Save money through energy-efficient choices
* Access integrated smart city services in one place
* Make informed decisions (e.g., best time to commute, recycle, consume electricity)

**Pains / Challenges**

* Too many disconnected apps or systems
* Difficult to interpret technical or environmental data
* Inconsistent data between providers (weather, energy, transport)
* Limited understanding of long-term impact of small actions

**IBM Granite LLM Integration**

**How IBM Granite LLM Helps:**

* **Natural Language Interface:** Allows users to ask questions like “How can I reduce energy use this week?” or “What’s the greenest route to work today?”
* **Data Synthesis:** Combines data from utilities, transit systems, and environmental sensors into simple, actionable insights
* **Personalization:** Learns user preferences (e.g., bike commuting, energy-saving habits) to offer tailored suggestions
* **Sustainability Nudging:** Offers timely nudges (e.g., “Today is a great day for public transport, air quality is excellent”)

**Summary:**

By reimagining the empathy map in a smart city context, the **user** becomes an **active citizen** engaging with a **centralized, AI-powered assistant** that helps them make **smarter, greener decisions** in real time. The IBM Granite LLM plays a key role in making the interaction natural, adaptive, and impactful.

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