

Ideation Phase

Empathize & Discover

Date	31 January 2025
Team ID	LTVIP2025TMID36237
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
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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
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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”)
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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.

