Project Design Phase
Problem – Solution Fit

Date	28 June 2025
Team ID	LTVIP2025TMID60548
Project Name	Sustainable Smart City Assistant Using IBM Granite LLM
Maximum Marks	2 Marks

Problem – Solution Fit Template:

Problem:

City administrators face challenges in monitoring urban sustainability, analyzing lengthy policy documents, detecting anomalies in resource usage, and forecasting KPIs due to fragmented data systems and lack of intelligent tools.
Citizens also struggle to report issues, access environmental information, and receive timely responses through existing channels.

Solution:

The **Sustainable Smart City Assistant** is an AI-powered platform designed to streamline urban governance and citizen interaction. It integrates:

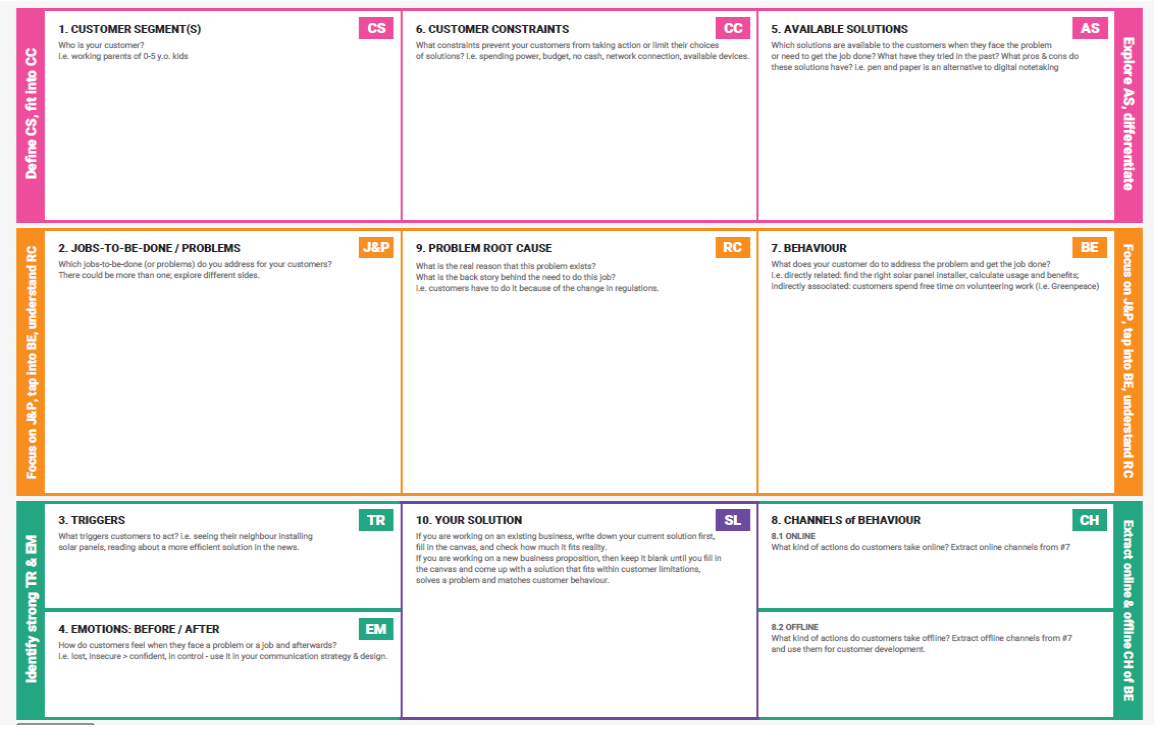
- IBM Watsonx Granite LLM for chat, summarization, eco-tips, and automated reports
- FastAPI and Streamlit for interactive dashboards and backend processing
- Pinecone vector search for policy document retrieval
- Machine learning for KPI forecasting and anomaly detection
- A citizen feedback module for real-time issue reporting and category tagging

This holistic solution bridges the gap between data, decision-makers, and the public — improving urban management, sustainability, and engagement.

Purpose:

- To solve real-world smart city governance challenges using AI and data-driven methods.
- To accelerate decision-making for city officials with automated summaries, forecasting, and anomaly detection.
- To empower citizens with a responsive feedback system and AI-generated eco tips.
- To simplify complex policy communication through semantic search and summarization.
- To promote sustainable living and active civic participation using an AI-powered assistant.
- To reduce manual workload and improve the accuracy of resource planning and environmental monitoring.

Template:



References:

1. https://www.ideahackers.network/problem-solution-fit-canvas/
2. https://medium.com/@epicantus/problem-solution-fit-canvas-aa3dd59cb4fe