

## Project Planning Logic on Sustainable Smart-city Ai Assistant using IBM Granite LLM(Cityp-AI-rtnr)

A **Sprint** fixed period or duration in which a team works to complete a set of tasks. An **Epic** is a **big task or project** that is too large to complete in one sprint. It is broken down into **smaller tasks (stories)** that can be completed over multiple sprints.

A **Story** is a small task . It is part of an **Epic**. A **Story Point** is a number that represents how much effort a story takes to complete. (usually in form of Fibonacci series)

- 1- Very Easy task
- 2- Easy task
- 3- Moderate task
- 5- Difficult task

### Project Summary

- **Project Name:** CityP'AI'Rtnr – Smart City Sustainability Assistant
- **Backend:** FastAPI (served via Uvicorn)
- **AI Model:** IBM Granite (ibm-granite/granite-3.3-2b-instruct)
- **Frontend:** Streamlit or HTML/JS

### Sprint Planning Table

#### Sprint 1: Project Setup & Base Features

Task	Story Points	Assignee
Set up FastAPI project with Uvicorn	4 SP	Backend Developer
Integrate IBM Granite API	5 SP	AI Engineer
Design base frontend layout (Streamlit/UI)	4 SP	Frontend Developer
Add static Eco Tips module	4 SP	Full Stack Dev
Test FastAPI + Streamlit/HTML + model connection	2 SP	All Members
<b>Total</b>	<b>19 SP</b>	—

## **Sprint 2: AI Functionality and Core UX**

<b>Task</b>	<b>Story Points</b>	<b>Assignee</b>
Build Chat Assistant using IBM Granite prompts	6 SP	AI Engineer
Create frontend input box + display responses (chat UI)	4 SP	Frontend Developer
Implement KPI Forecast logic (basic algorithm)	6 SP	Backend + AI Eng
Add routing in FastAPI for modular endpoints	2 SP	Backend Developer
Test Chat + KPI functionality	2 SP	Full Stack / QA
<b>Total</b>	<b>20 SP</b>	

## **Sprint 3: Reporting, Styling, Deployment**

<b>Task</b>	<b>Story Points</b>	<b>Assignee</b>
Add Sustainability Report Generator	6 SP	Backend Developer
Final frontend styling (sidebar, colors, responsiveness)	4 SP	Frontend Developer
Deploy via Uvicorn with public access (LocalTunnel / Colab)	4 SP	Full Stack / DevOps
Final documentation (README, usage guide)	2 SP	All
Final integration testing	2 SP	All
<b>Total</b>	<b>18 SP</b>	

## Summary

Item	Value
Total Sprints	3
Max Velocity Per Sprint	$\leq 20$ SP
Total Story Points	~57 SP
Team Members	4
Run Server	uvicorn main:app --reload /python main.py

## Average Sprint Velocity Calculation

Average Velocity= $19+20+18/3=57/3=19$

**Team's velocity is 19 story points per sprint.**

## Technologies Used

Layer	Tool/Tech
Backend	FastAPI + Uvicorn
Model	IBM Granite LLM
Frontend	Streamlit or HTML/JS
Hosting	Local + VS Code or Colab