CODE 4 GovTech
Building Digital Public Goods

OPEN SOURCE GIS TOOL

Issue Ticket

By - Shivam Gupta
Under - eGovernments Foundation

INTRODUCTION

The Open Source GIS Tool is a platform designed ***to help people use geographic and satellite information*** to solve real-world problems. It supports sustainable water management, resource distribution, goods storage and other location-based projects. By providing user-friendly tools and various features for analysing maps and data, we empower communities to make informed decisions, optimize resource allocation and collaborate effectively.

PROBLEM STATEMENT

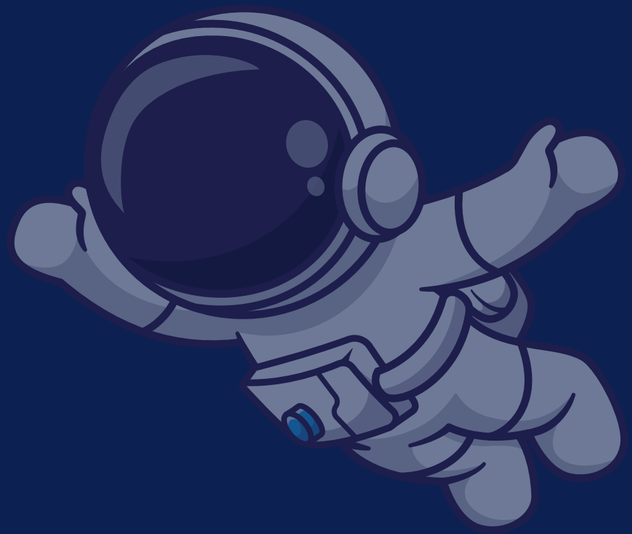
Many stakeholders, including urban planners, engineers, policymakers, and community groups ***lack accessible and user-friendly GIS tools*** to effectively address complex challenges such as sustainable water management and resource distribution.

Existing GIS solutions often ***require significant technical expertise and financial resources***, limiting their adoption and impact. This leads to suboptimal decision-making, inefficient resource allocation, and hindered community participation in planning and development processes.

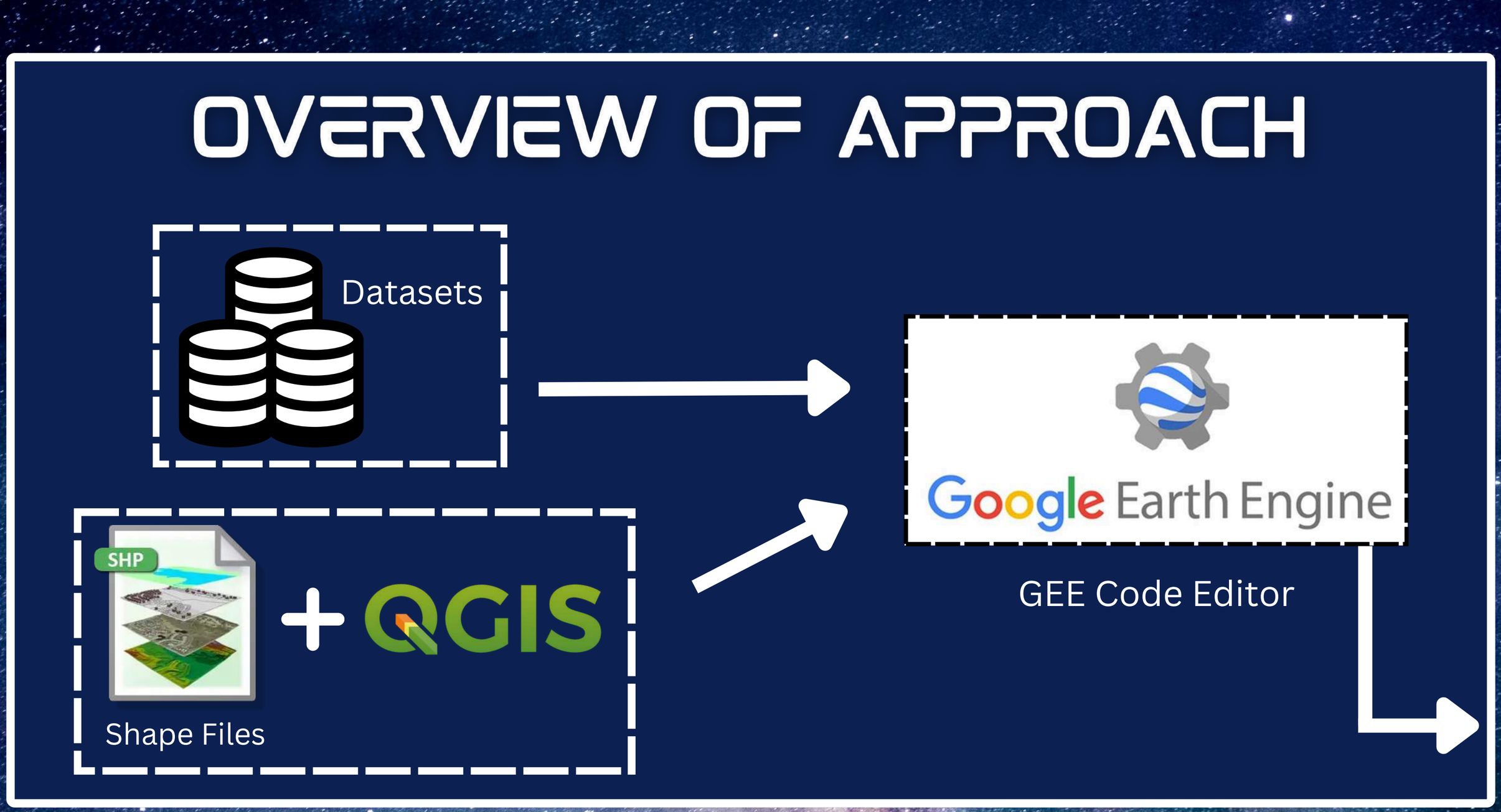
STAKEHOLDERS / USERS

Essentially, anyone who needs to make data-driven decisions that involve geographic information can benefit from this tool.

- **Urban Planners**
- **Engineers**
- **Policymakers**
- **Non-governmental Organizations (NGOs**
- **Community Groups**
- **Government Agencies**
- **Researchers and Academics**



OVERVIEW OF APPROACH



OVERVIEW OF APPROACH

Choose ROI

Any Polygon

Ward, District...

Choose Features

Roads & Routes

Population Density

Buildings Detection

Household Estimation

Output

DEMO TIME

Let’s see how these features actually work and help us in streamlining our work.

THE FUTURE PATHWAY

This project is far from complete, and I aim to make it the best it can be by achieving the following goals.

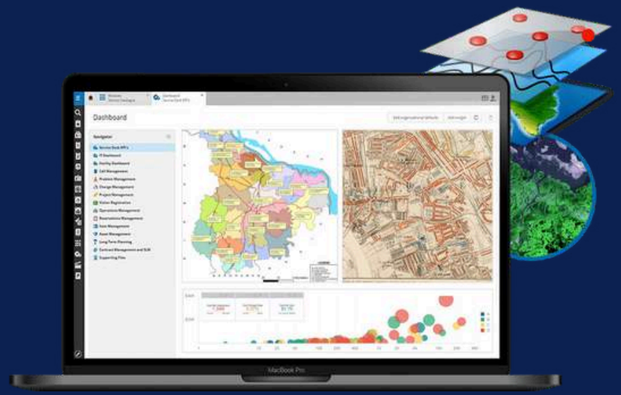
More Features (like storage facility layer)

Computer Vision Model for more accurate detections.

Algorithm Development for distribution of services

THE FUTURE PATHWAY

Shift everything to Stand-alone Python program using GEE API, Geemap, Folium etc.



Develop a user-friendly web application with an intuitive UI

Case Study Implementation: Apply tool to an African region to demonstrate its effectiveness in water management and planning.

THANK YOU