



# GIO.G: A Generator for Indoor-Outdoor Graphs to Simulate and Analyze Urban Environments

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[github.com/admtlab/GIO.G](https://github.com/admtlab/GIO.G)

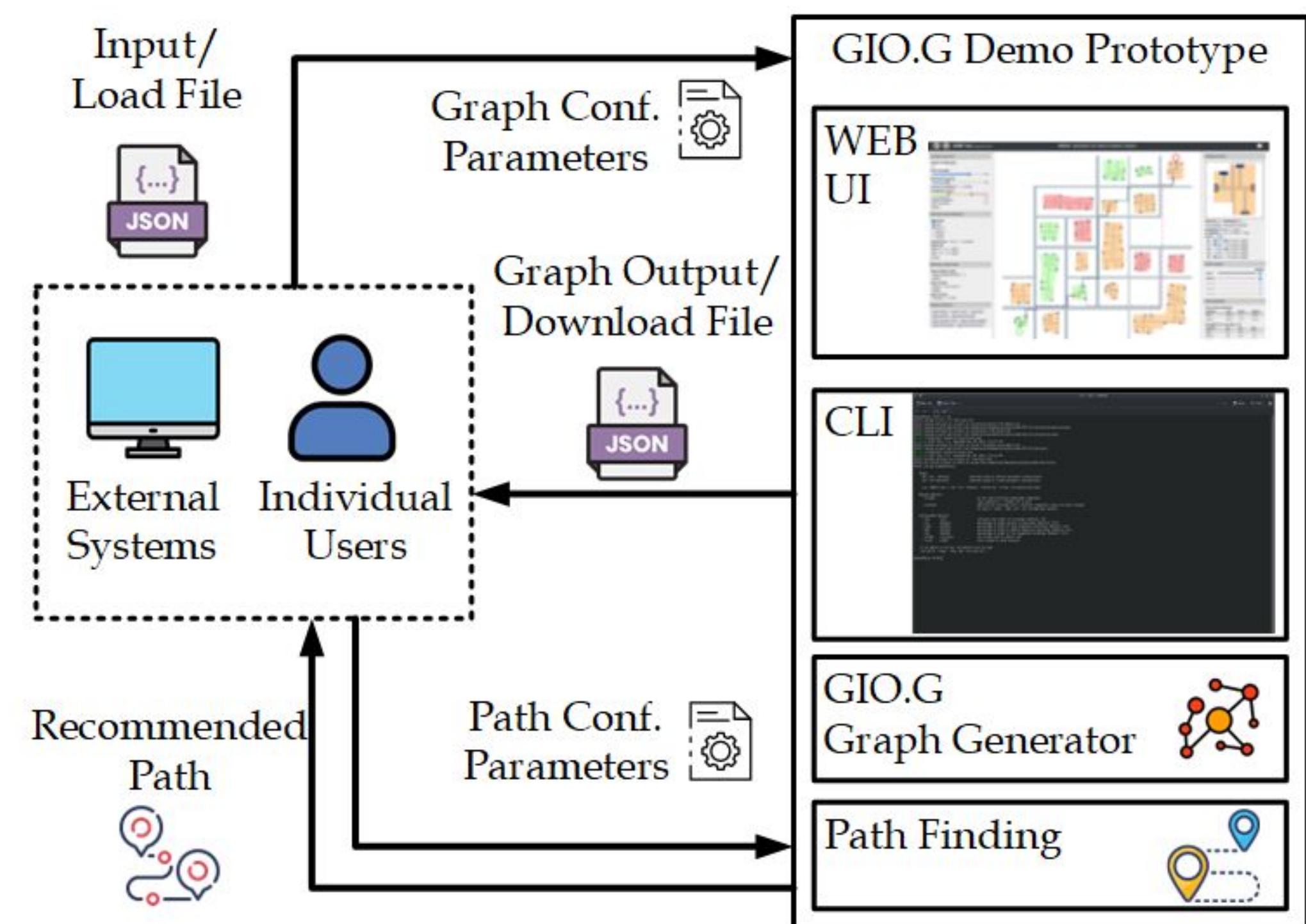
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## Motivation

- There is a distinct lack of usable, publicly available, **pedestrian-focused datasets of urban environments**.
- As an individual, it is extremely time- and labor-intensive to create these datasets.
- GIO.G** fills this gap by enabling the creation of Indoor-Outdoor graphs simulating an Urban Environment.

## GIO.G Demo

- Web Interface:**
  - Enables the user to send configurations to GIO.G, edit existing graphs, or interact with applications
- GIO.G:**
  - Takes a user given graph configuration and returns a possible Indoor-Outdoor graph and foot-traffic data
- Path Finding Application:**
  - Example application of GIO.G and Indoor-Outdoor Graphs

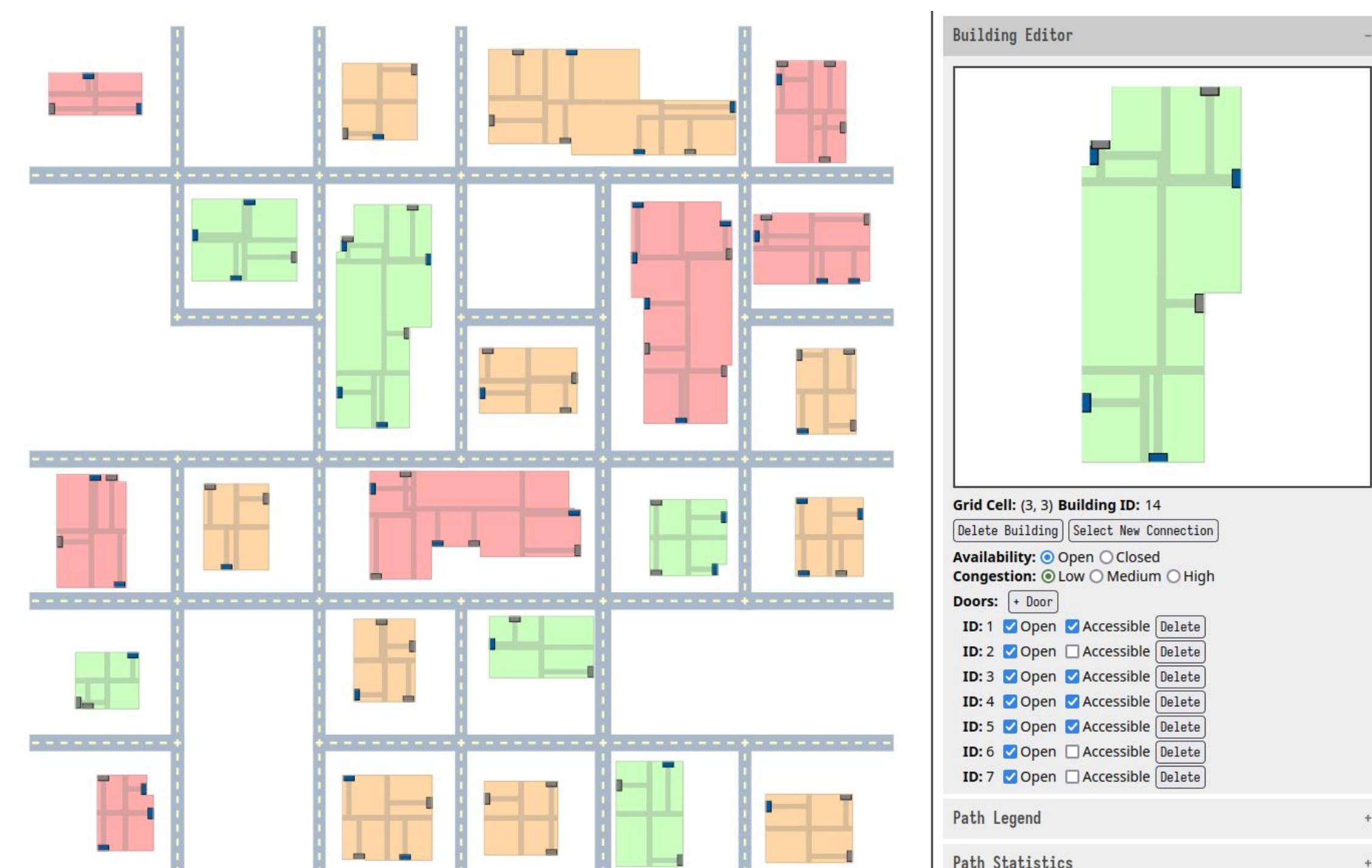


## Graph Configuration

- GIO.G uses a number of **user-defined environmental parameters** to randomly model a possible Indoor-Outdoor Graph.

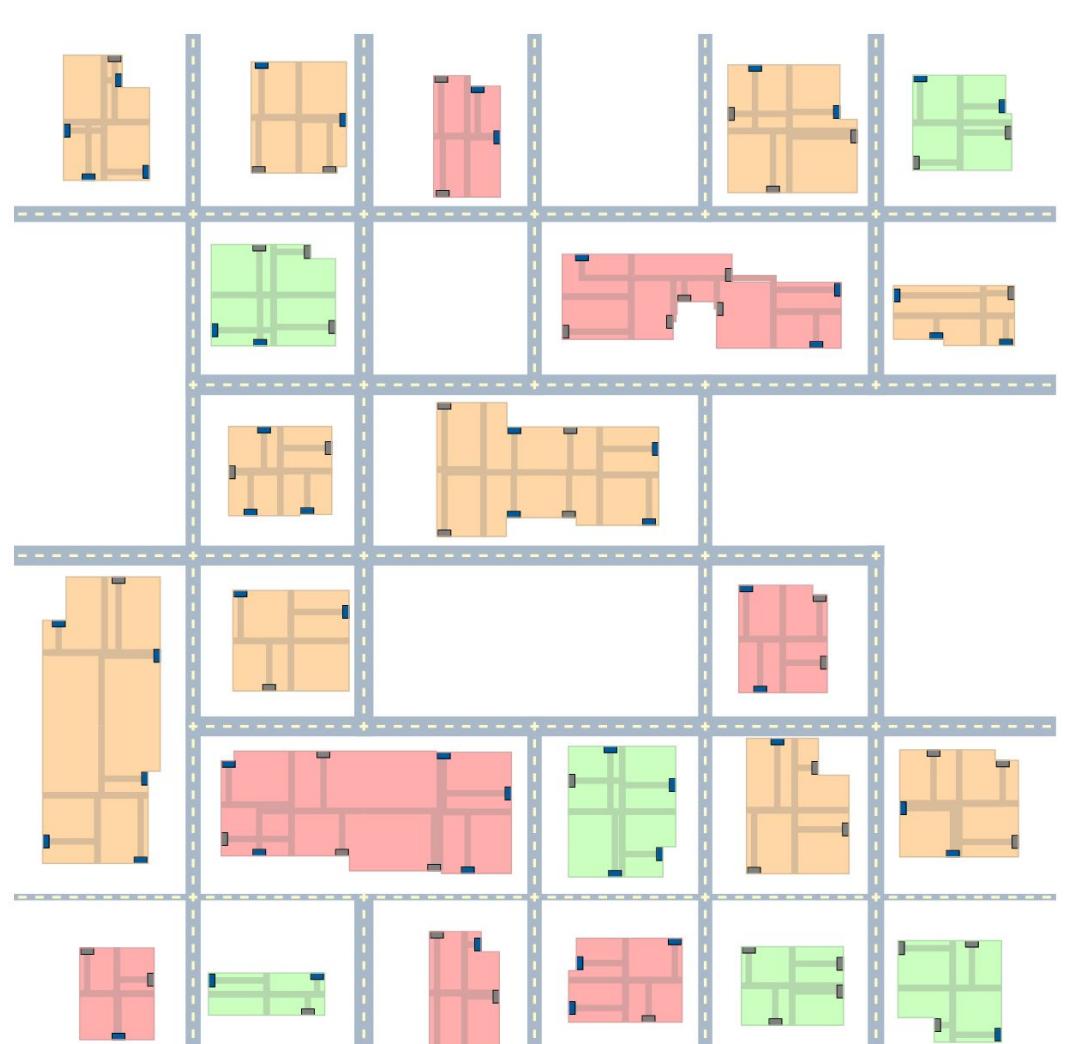
## Graph Editing

- Buildings can be **added, deleted, or merged**. Building entrances can be **added, deleted**, set whether it is **accessibility-friendly** or not.

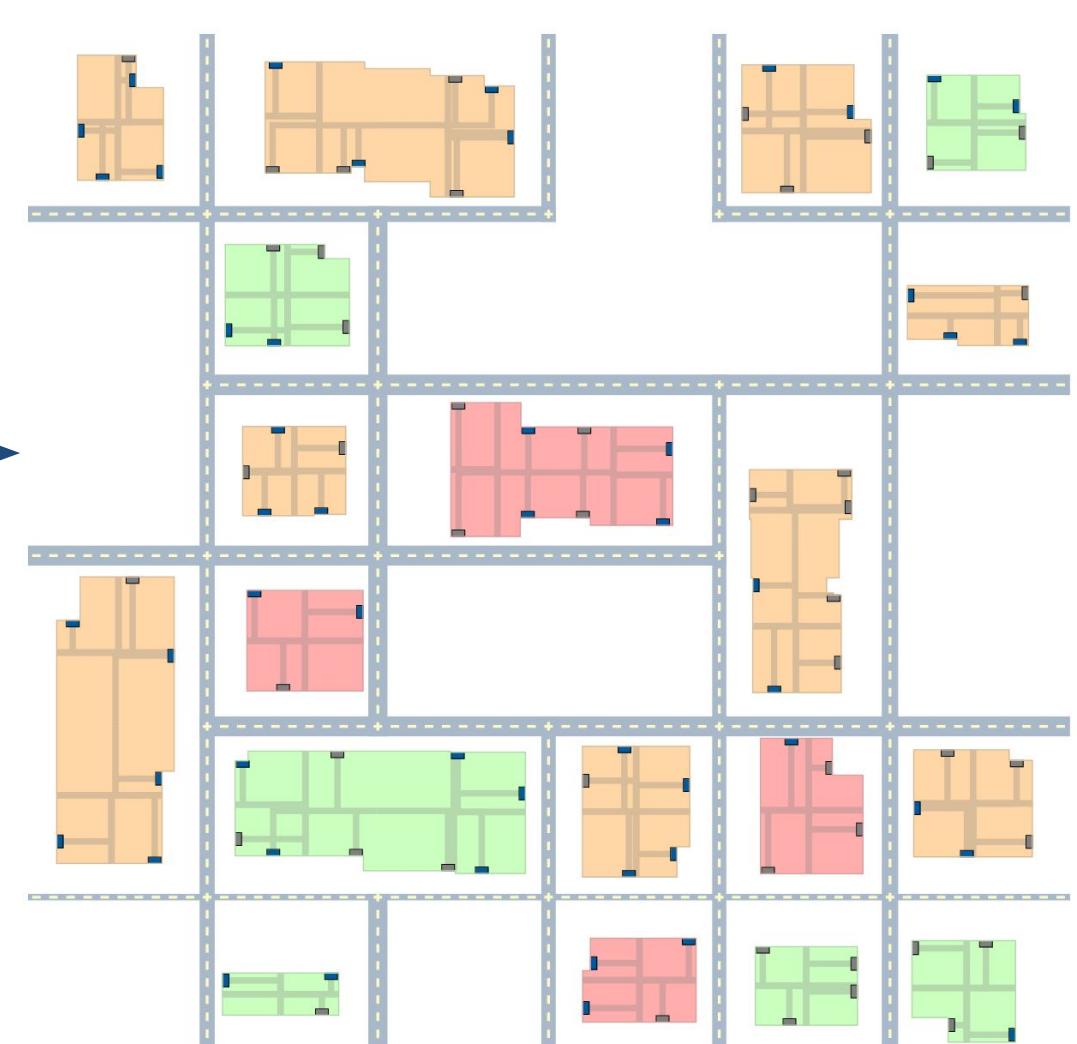


## Example Application Workflow

### Step 1: Generate Graph



### Step 2: Edit Graph



### Step 3: Run Application



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NIH award  
R01HL159805



MDM2024