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VISOR

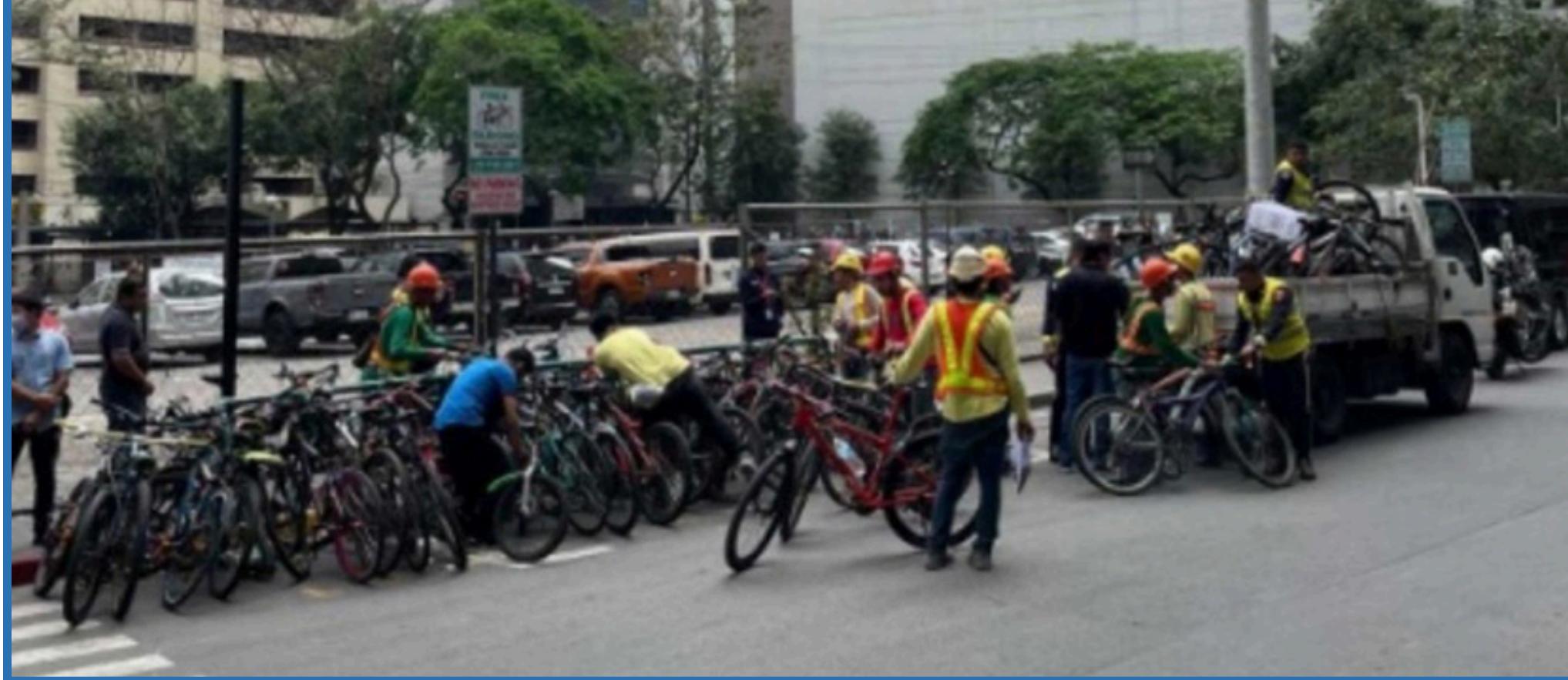
BIKES > CYCLE

# Makati impounds dozens of bicycles for ‘unruly’ parking

We have a long way to go toward making our cities more bike-friendly

FRANK SCHUENGEL

MARCH 31, 2023 | 9,722 VIEWS







77% of cyclists in  
Metro Manila are  
essential workers





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# gabaoike

Engineering Safer Streets for All Filipinos





gabaike

“gabay” + “bike”





# How might we transform Metro Manila's streets into safe, accessible spaces through creating a data-driven bicycle parking ecosystem ?



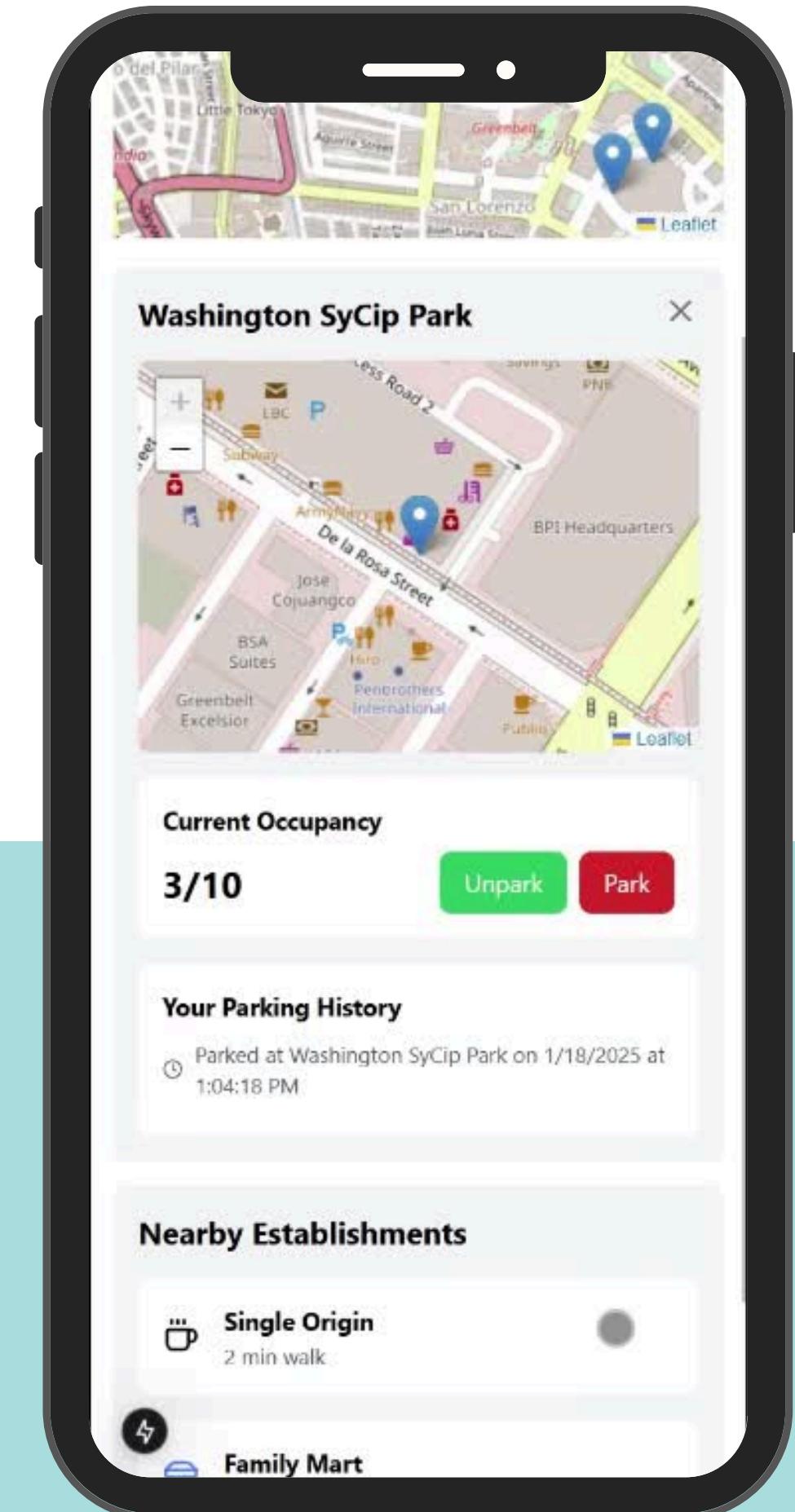


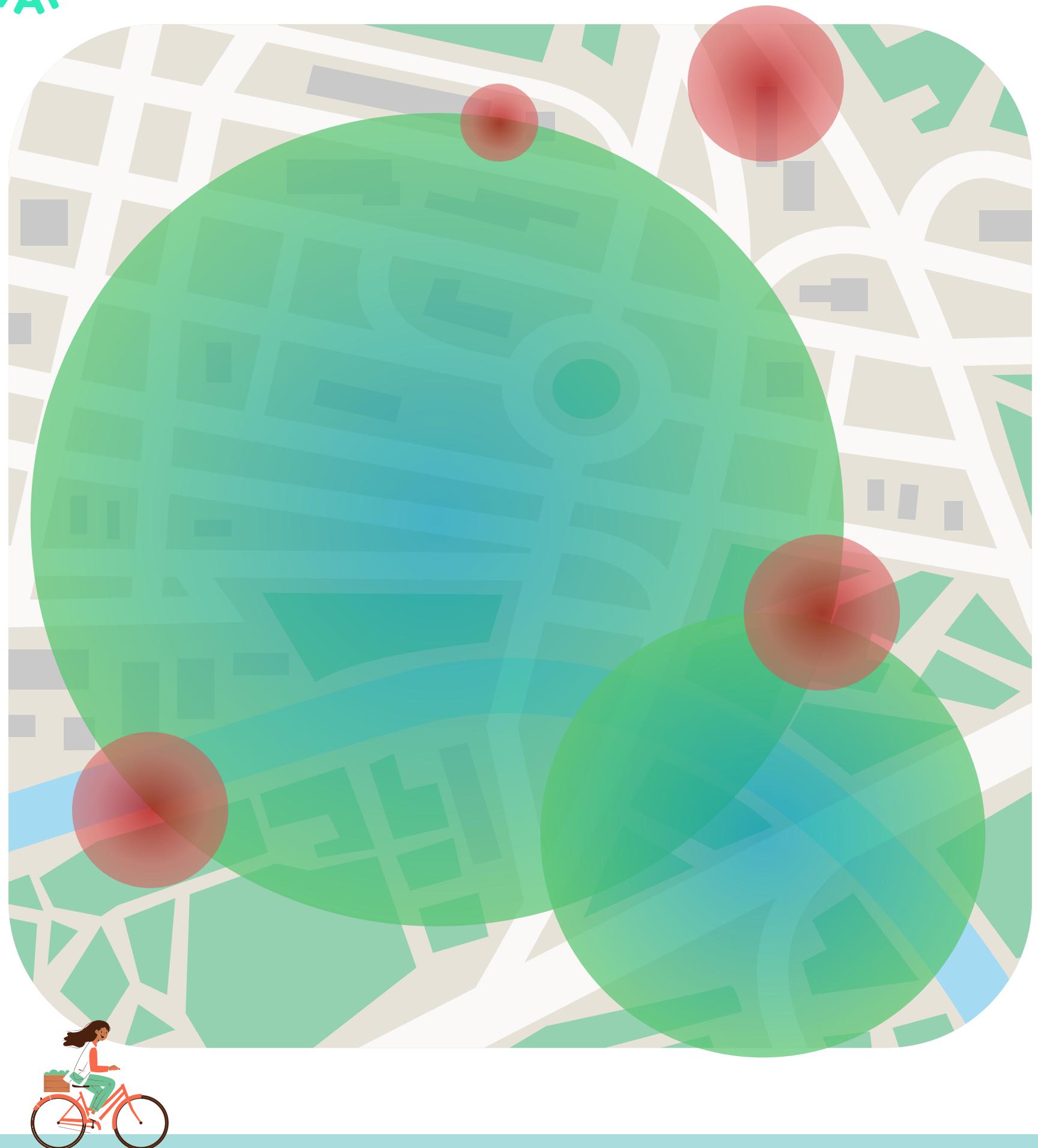
# The Solution:





# Simulation



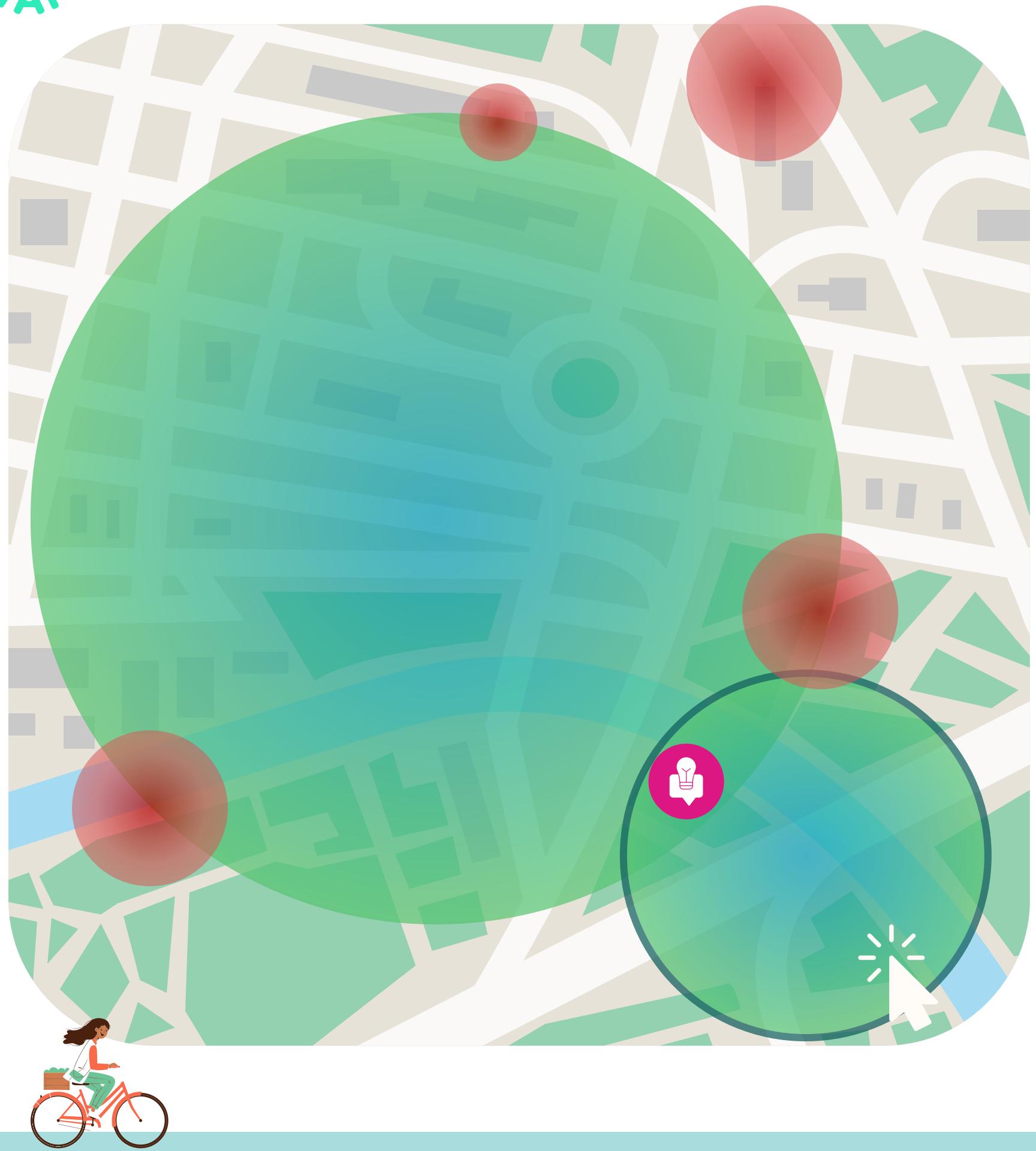


## Proximal Urban Planning through Huff's Gravity Model

Our **Spatial Analytics Engine** leverages real-time mobility data to optimize cycling infrastructure placement through **advanced gravitational modeling**. The system employs a modified Huff model algorithm, incorporating both **location saliency coefficients (LSC)** and **distance decay parameters** calibrated specifically for Metro Manila's urban topology.

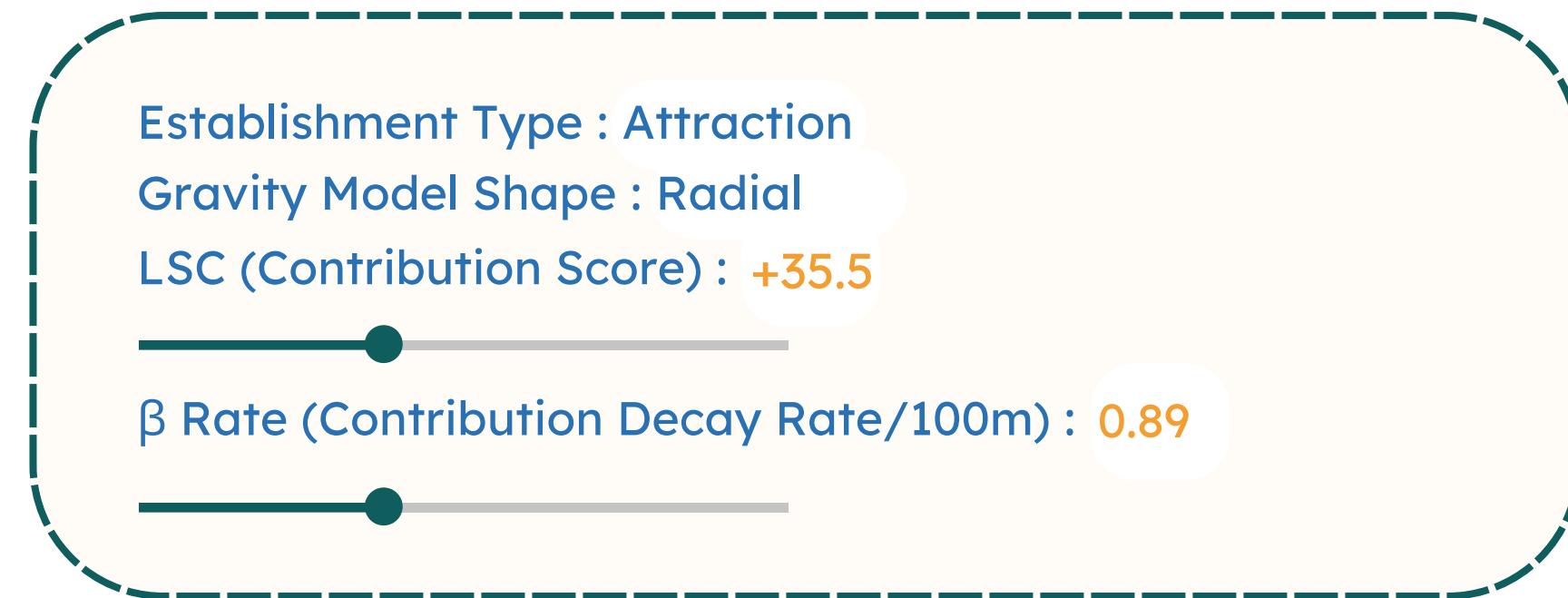
- Spatiotemporal pattern recognition using GPS trajectory data
- Dynamic weighting matrices accounting for temporal variations in urban mobility
- Multi-variable location optimization incorporating both Euclidean and network distances
- Calibrated distance decay functions ( $\beta$ ) derived from empirical movement patterns





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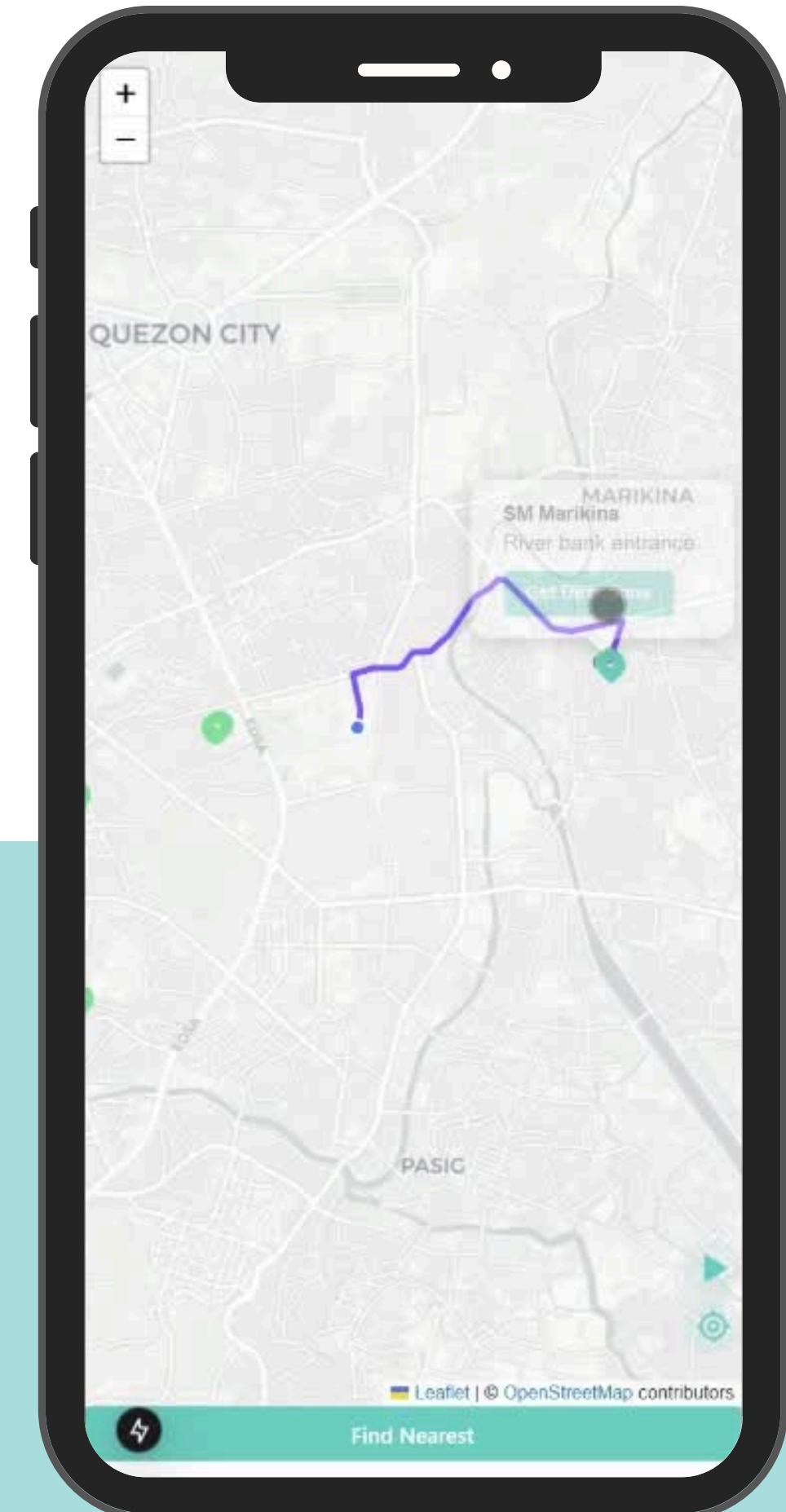


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# Simulation



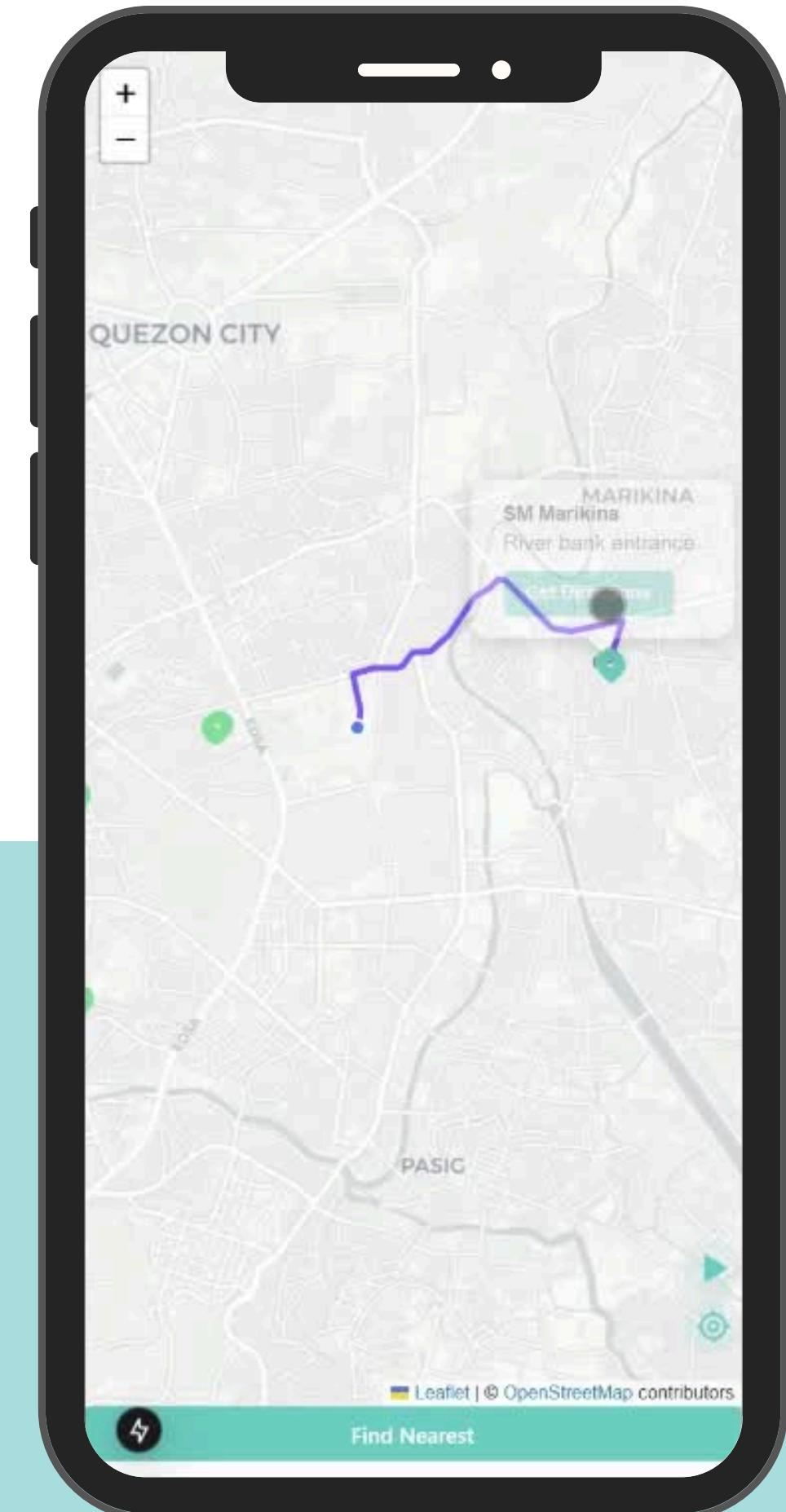


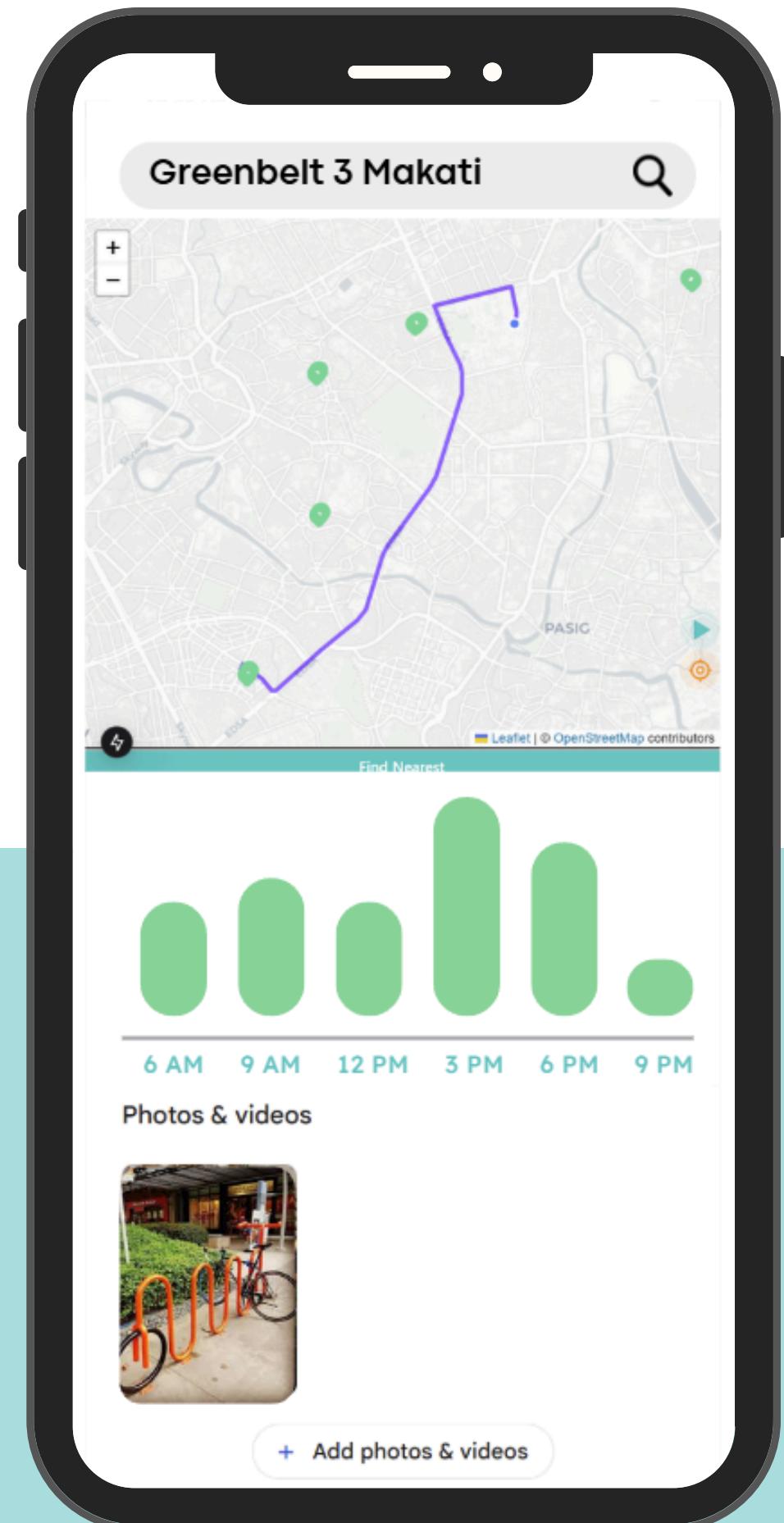
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# Simulation





## Interactive Dashboard (Data Visualization Tool)

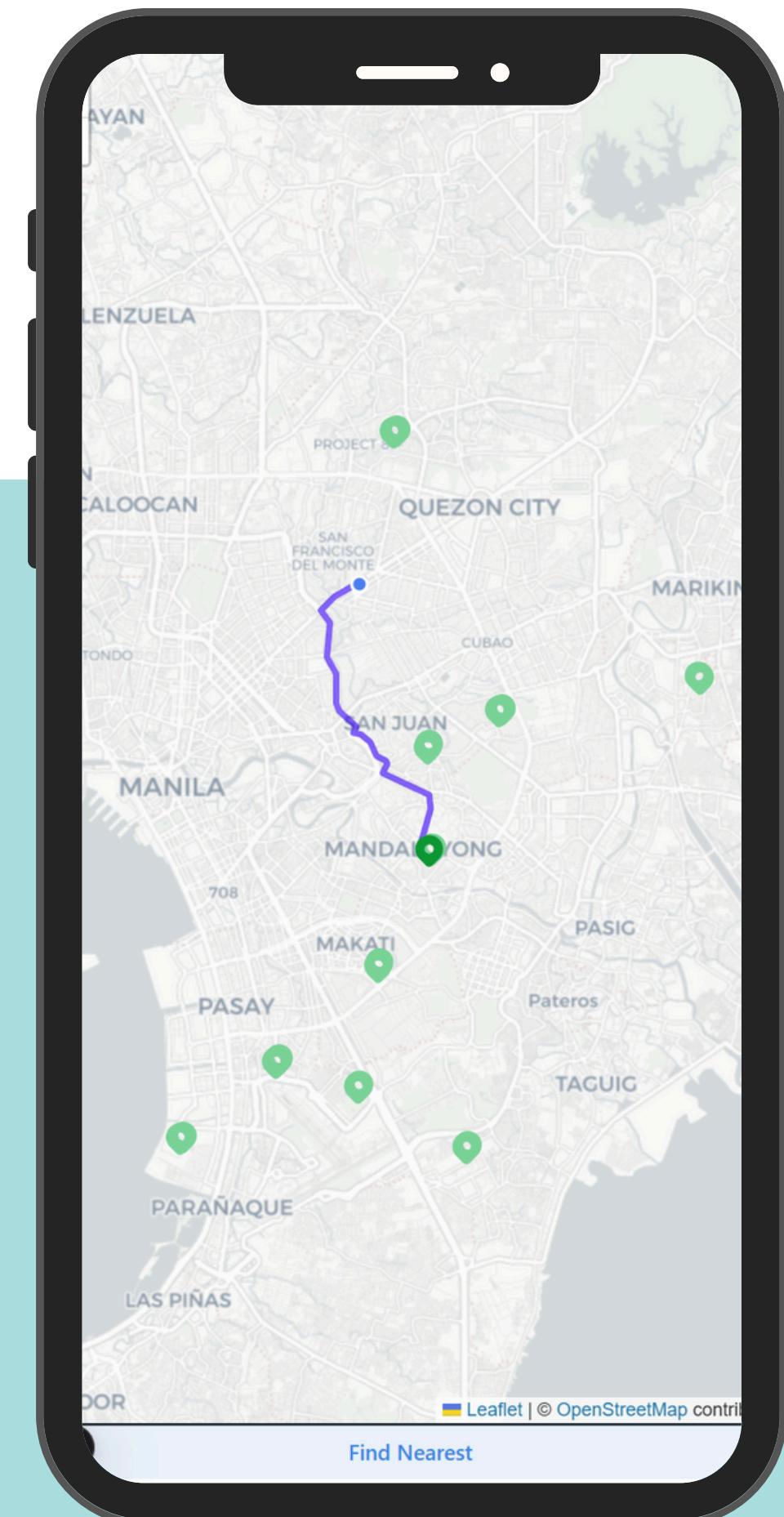
Our business dashboard reveals the invisible patterns: peak hours aligning with business operations, foot traffic converting to sales, and capacity data that justifies infrastructure investment. This isn't just about parking – it's about seeing cyclists as valuable customers who drive economic growth.





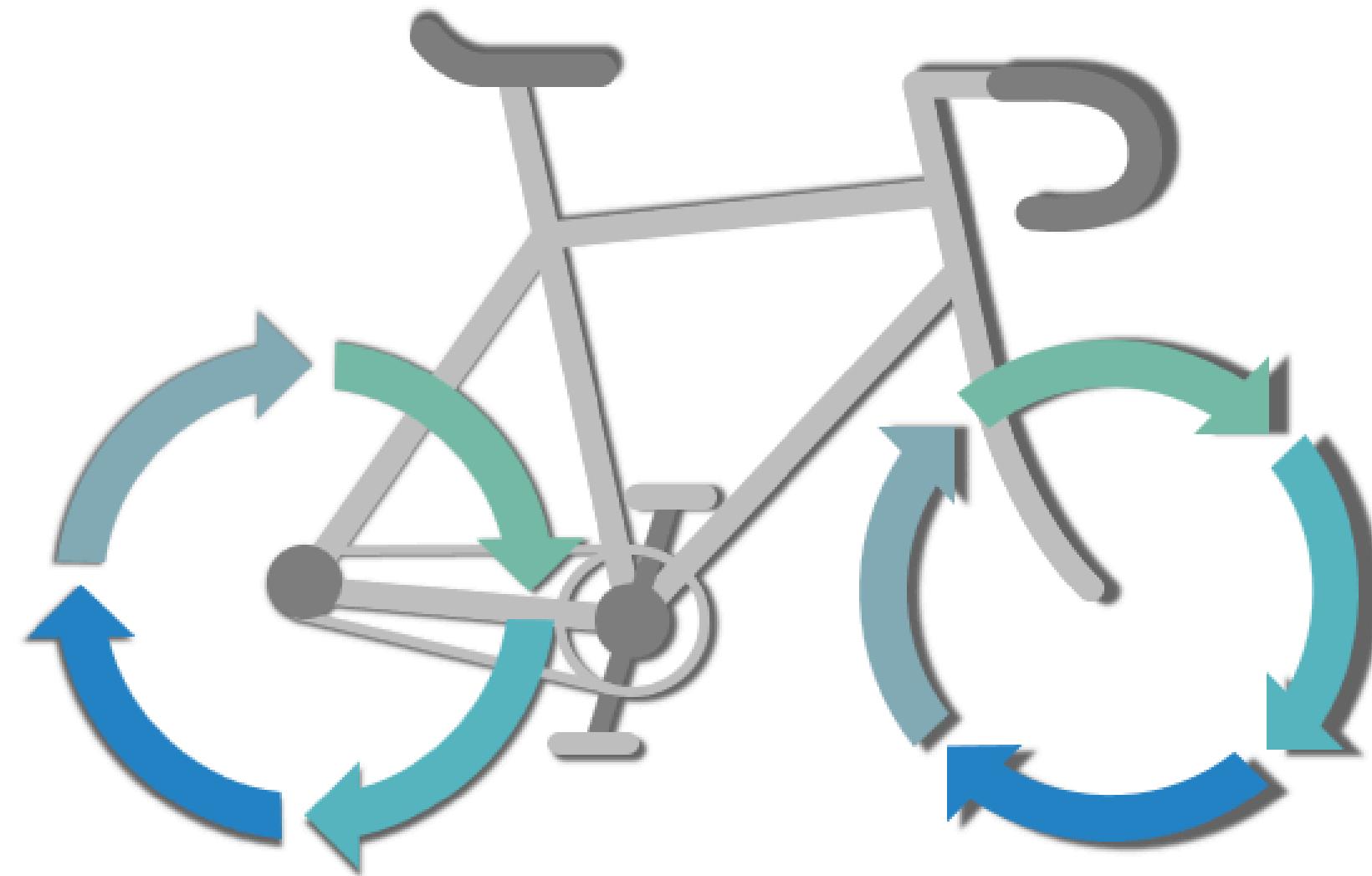
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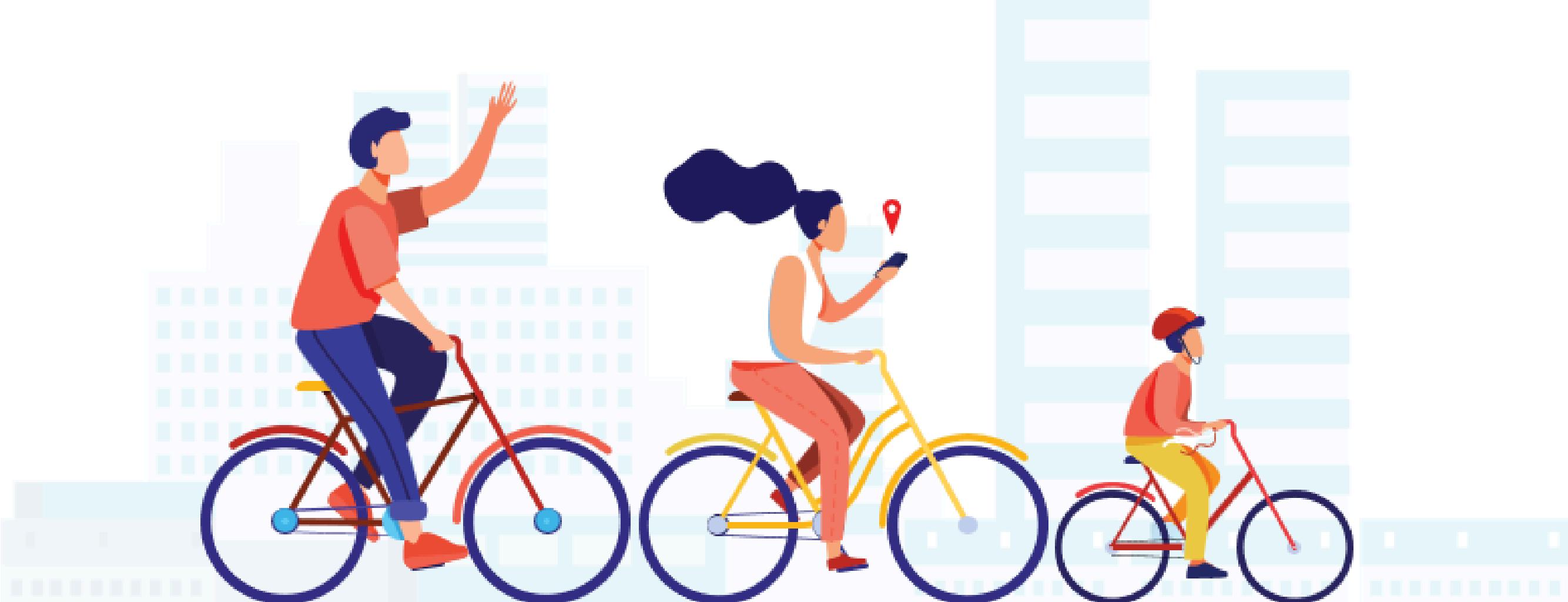


## Mapping 100 strategic locations in year 1



### LONG-TERM VISION:

Development of **data-driven street design guidelines** that become the blueprint for other Southeast Asian cities

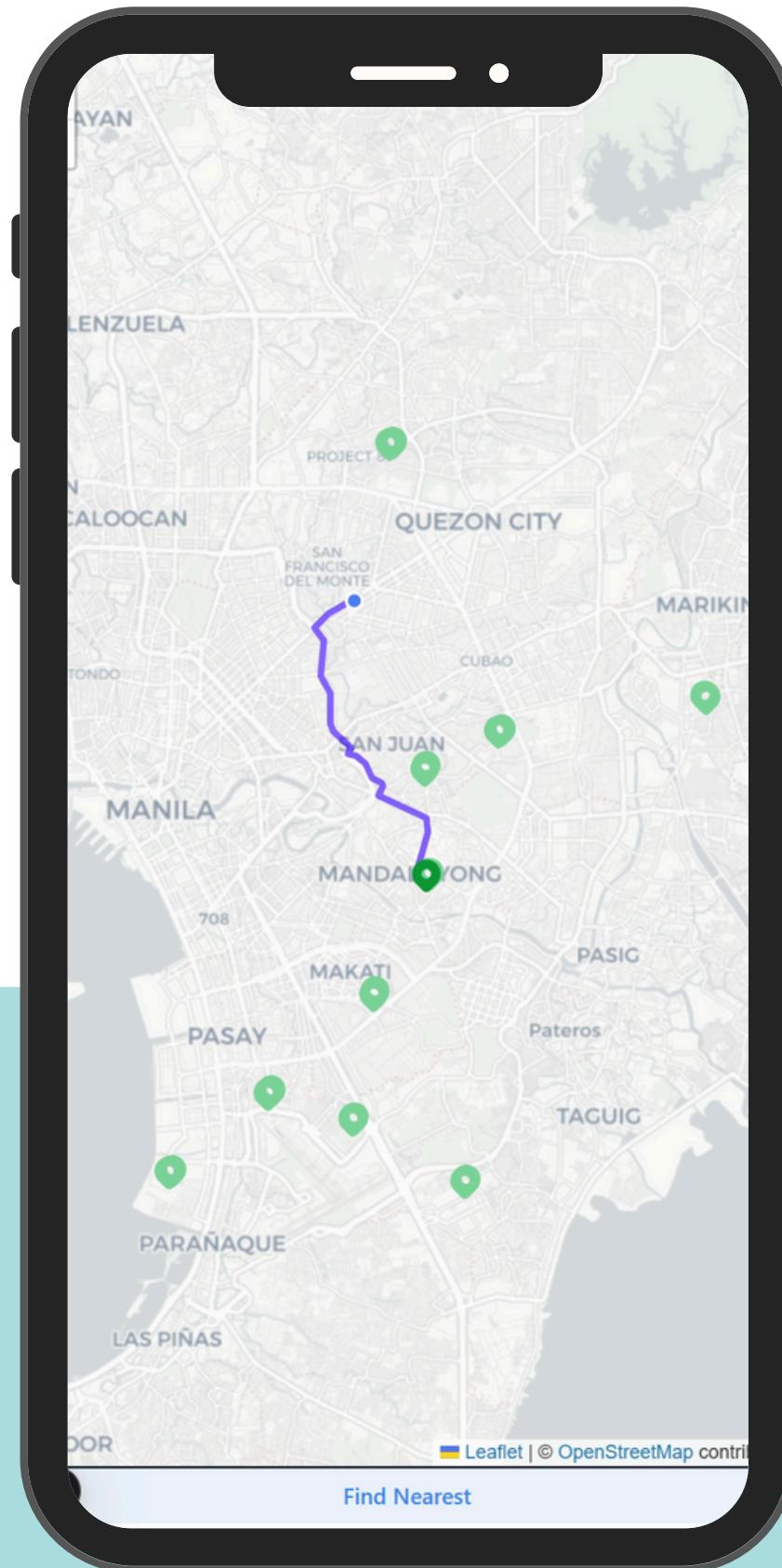


A model for inclusive urban mobility.



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Let's build this  
future **together.**



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# THANK YOU

