Hack-A-Street

Pre-Work Kit

Objectives of the Pre-Work Kit:

- ❏ Help you organize your ideas
- ❏ Prepare a strong foundation for your presentation
- ❏ Align your goals with the judging criteria
- ❏ This pre-work kit will serve as the basis for your presentation

Instructions

- ❏ Make a copy of this Google Slide.
- ❏ Fill out each slide with your team's information, insights, solutions, and references.
- ❏ This deck will serve as the basis for your presentation.
- ❏ Upload your completed Pre-Work Kit deck in this **Google Folder** by **Jan. 18, 1:30 PM.**

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IAI

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Challenge Insights & Proposed Solution

Understanding the Problem

How might we transform Metro Manila's streets into safe, accessible spaces by creating a data-driven bicycle parking ecosystem that empowers cyclists to find secure parking while enabling cities to make evidence-based infrastructure decisions?

Proposed Solution

*TLDR: **Gabaike** is a data-driven platform that transforms bike parking data into infrastructure intelligence. It combines a gravity model algorithm with community-driven usage data to optimize rack placement while giving cyclists instant access to available parking spaces.*

Key Innovation: While others' map show where bike racks are, we predict where they should be - creating a continuous feedback loop between user behavior and urban planning that improves with every ride.

Key Impact Areas

Economic Impact : 40% increase in business district foot traffic through Smart rack placement using community-driven cycling data

Time Efficiency : 600,000 hours saved in parking searches monthly through AI-powered navigation to available spaces

Urban Safety : 50% reduction in sidewalk obstruction through Gravity model optimization for strategic infrastructure

References Used

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❏ Aiza A. Fernandez,Victor Conrad B. Alinio, Ratnakar D Bala. (2024). Modernized Tuba: A 15-Minutes City Approach Towards A Sustainable And Modernized Community Of Tuba, Benguet. Library Progress International, 44(3), 12574-12585.

❏ Schuengel, F. (2023). *Makati impounds dozens of bicycles for 'unruly' parking*. https://visor.ph/bikes/makati-impounds-dozens-of-bicycles-for-unruly-parking/#:~:text=The%20bikes%20were%20apparently%20removed,a%20flawed%20mindset%20with%20this.

❏ Banerjee, S., Kabir, M. M., Khadem, N. K., & Chavis, C. (2020). Optimal locations for bikeshare stations: A new GIS based spatial approach. Transportation Research Interdisciplinary Perspectives, 4, 100101.

❏ Sha, K., & Chen, W. (2024, October). Study on the Planning of Shared Bicycle Parking Spots Based on Public Participation. In Proceedings of the 2024 2nd International Conference on Management Innovation and Economy Development (MIED 2024) (p. 164). Springer Nature.

Thank you for answering the Pre-Work Kit!

You will have **5 minutes** to present your work.

We're excited to see your brilliant ideas. Best of luck!

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