Design & Analysis of Chicago’s Bike Share System

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Presentation Overview

Heat Mapping → Service Area Plan → Ridership Analysis

Outreach → Site Selection: Map Level → Station Siting
Heat Mapping

- Used a combination of rasterized data sets to combine into a map to help inform team about bike share impact in the city
- Final output was “potential”, “equity” and a combination of both
Population Density
Employment Density
Ages 20 - 39
% Ped/Bike Commuters
HH Median Income
Non-White Population
Educational Attainment
Business Concentration
Barriers (Network Connectivity)
Parks
L Boardings
Bus Boardings
L Frequency
Bus Frequency
“Potential”
“Equity”
Potential x Equity

POTENTIAL x EQUITY = SLAM DUNK
Ridership Analysis

- Developed a regression-based method for estimating ridership for areas without any bike share stations
- Need a set network of stations to run regression on
- Single most indicative factor is the system design itself
- Feeds into station sizing determination
- Iteratively informs station expansion, relocations, and adjustments
Service Area Planning

- Builds on heat map
- Determine station density in different neighborhoods and service area limits
- MUST be contiguous
Outreach

- Interactive website: divvybikes.com
- Stakeholder Meetings
- Pop-up Meetings
- Traditional Public Meetings
Target Intersection

Sam Schwartz Engineering D.P.C.
Someone suggested this 6 months ago

Intersection of N/S Hyde Park Blvd and E/W Hyde Park Blvd.

I'd use this location for: Home

2 Comments

Also serves the Hyde Park Arts Center, Bridgeport coffee, the car repair place (what better place to bike home from), and would serve as an auxiliary station for Kenwood Academy

Hyde Parker around 6 months ago

This place has several bus stops, where all this high-rise area residents commute.

NMAR around 10 days ago
Map-level Site Selection

• “Dots on a map”
• Implement the service area plan at an intersection level
• Review critical stakeholder input, public input and use knowledge of city
• ID what a station is serving
Station Siting

Let’s go on a field visit with Tim to see how it is done!