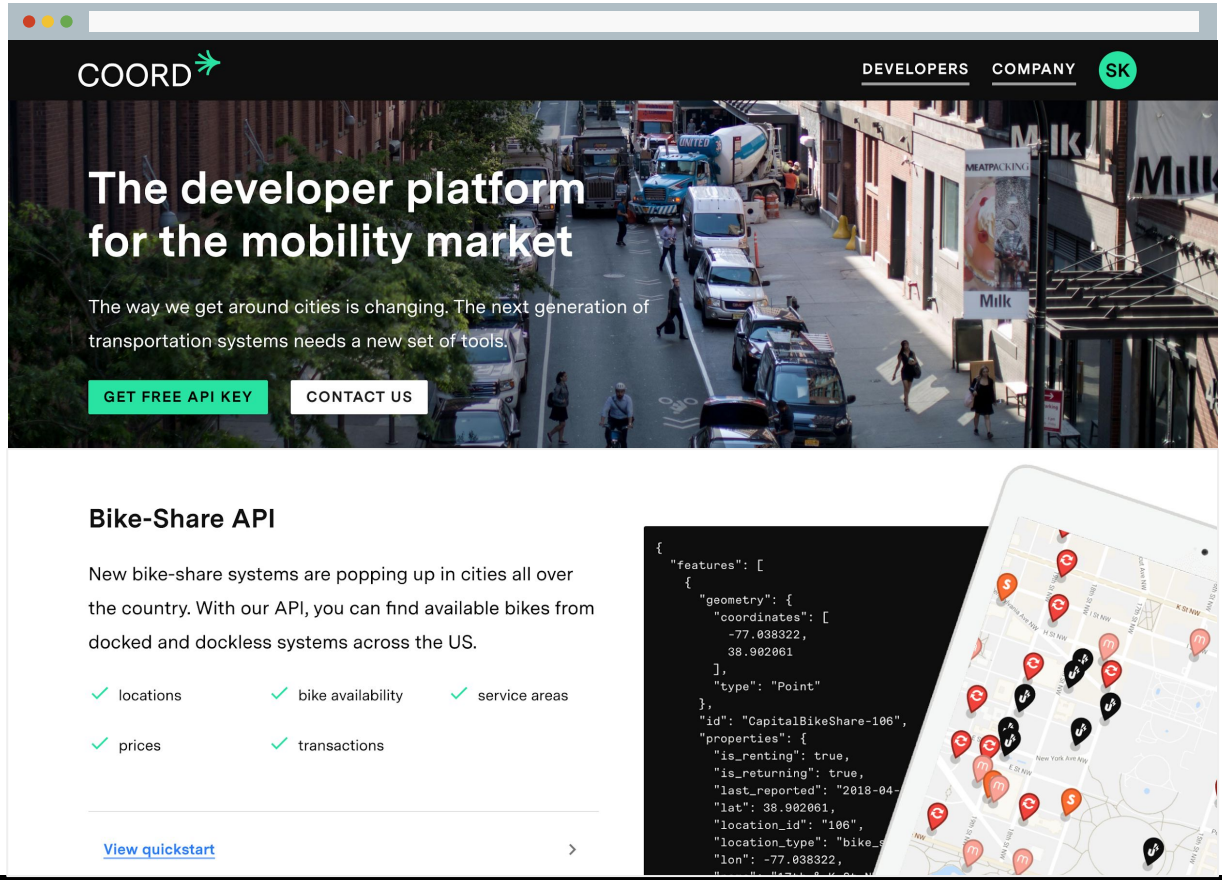
The developer platform for the mobility market

PRODUCT

A single API suite that enables any app to integrate mobility services.



BIKE-SHARE

Bike share and shared mobility is growing in the US and globally.

Lime was valued for $1B after being founded in 2017.

Jump Bikes (formerly Social Bicycles) sold to Uber for $200M.

Motivate (system that support 80% of US bike trips in 2017) sold to Lyft for $250M.

Bird Scooters was valued for $2B valuation after less than 2 years of operations.

More systems, more bikes, more rides!

35M

US bike-share trips

In 2017

57.5K

New bikes added

In 2017

44%

Dockless bikes (of all shared bikes)

In 2017

Sources: NACTO (https://nacto.org/bike-share-statistics-2017/)

THE PROBLEM

New types of systems which don’t fit neatly into the docked standard:

- Dockless
- E-bikes
- Scooters

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Data is also siloed inside apps and individual feeds

COORD

A single set of API calls for all systems

Search for Systems

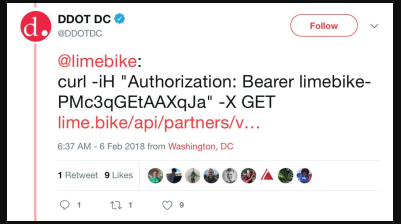
Find Docks and Bikes

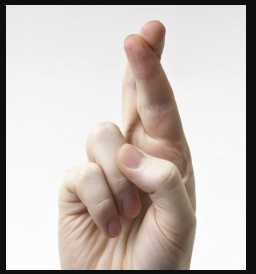
Get Prices

DATA SOURCES

NABSA
NORTH AMERICAN BIKESHARE ASSOCIATION

sobi
SOCIALBICYCLES





GBFS

General Bikeshare Feed Specification

All GBFS-compliant systems list their feeds at github.com/NABSA/gbfs

Social Bicycles

A well-documented API! System areas, bikes, hubs, and more.

Now JUMP Bikes/Uber, also have their data.

Cities

Cities have open data repositories, or list required data sources.

Luck

Occasionally vendors add undocumented cities! It's like a transit treasure hunt!

github.com/ubahnverleih/WoBike

DATA ACQUISITION CHALLENGES

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The web is hard - feeds go down.

Also, the current GBFS standard doesn’t list service areas, so we built them for 60+ systems!

Here’s how we did it…

HOW WE DETERMINE SERVICE AREAS - DOCKLESS

APIs

Social Bicycles provides an API to get service areas.

New GBFS should include this too!

Maps

City permits may include maps.

Apps also show areas, so the user knows where to return the bike.

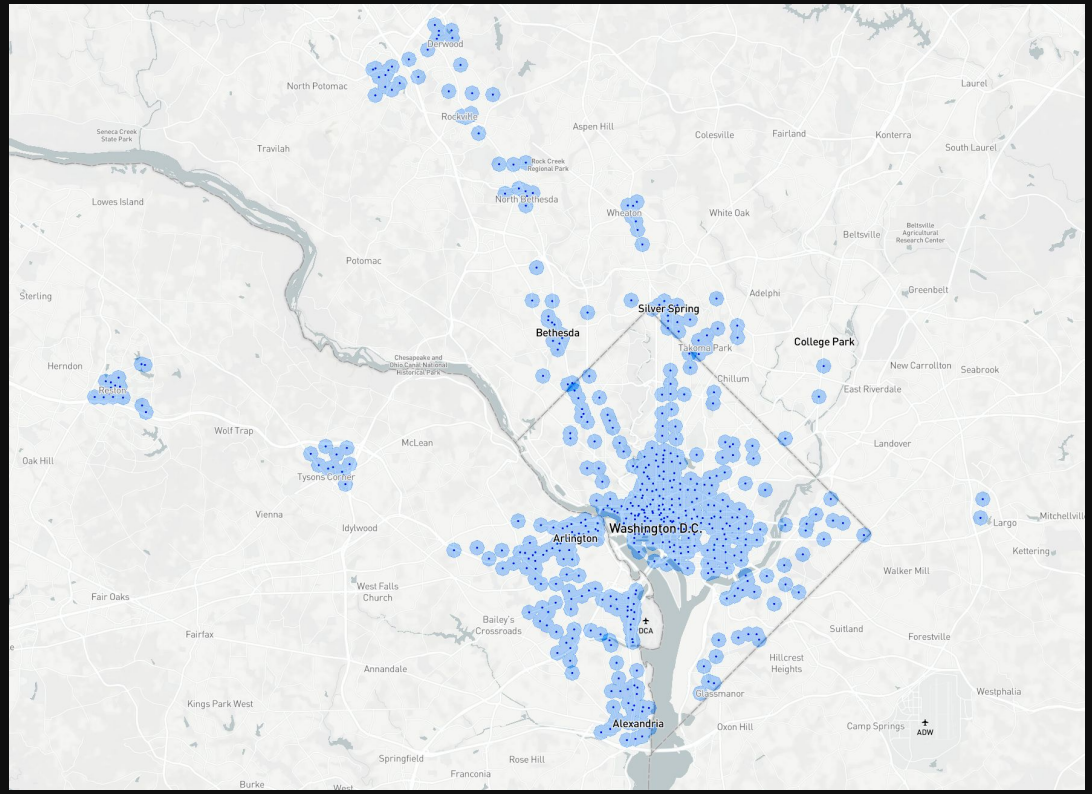
Permits

If all else fails, the permits usually list areas, even if it's just city limits.

COORD

HOW WE DETERMINE SERVICE AREAS - DOCKED

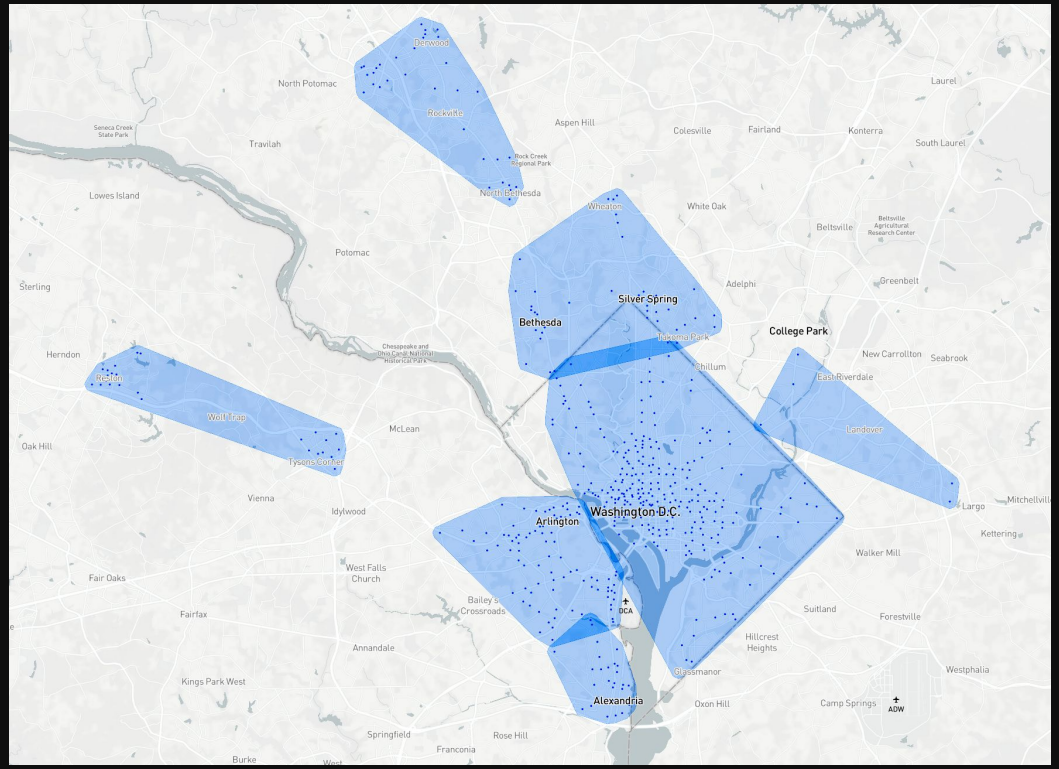
1. Get all dock locations
2. Make a circular buffer around each
3. Merge the buffers



COORD

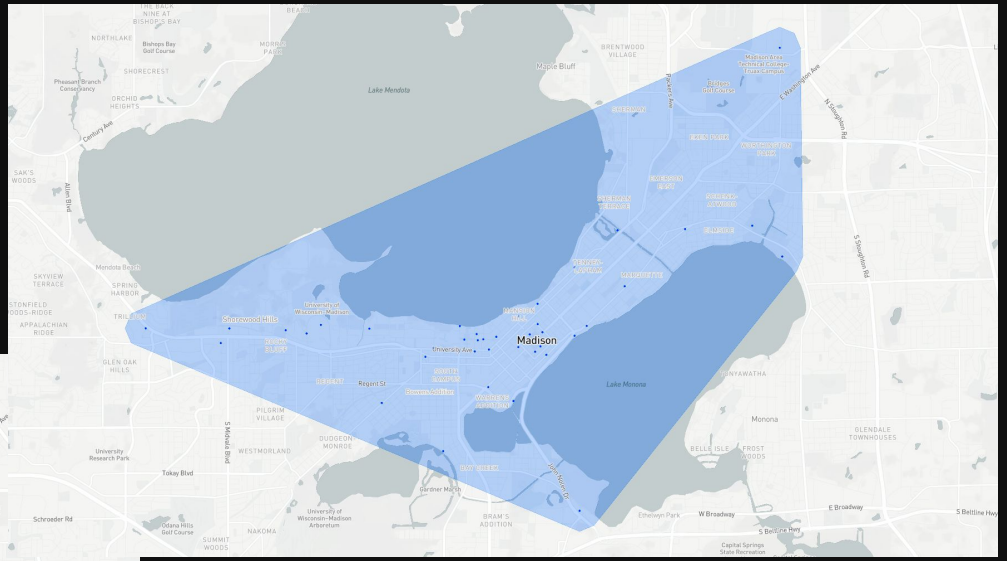
HOW WE DETERMINE SERVICE AREAS - DOCKED

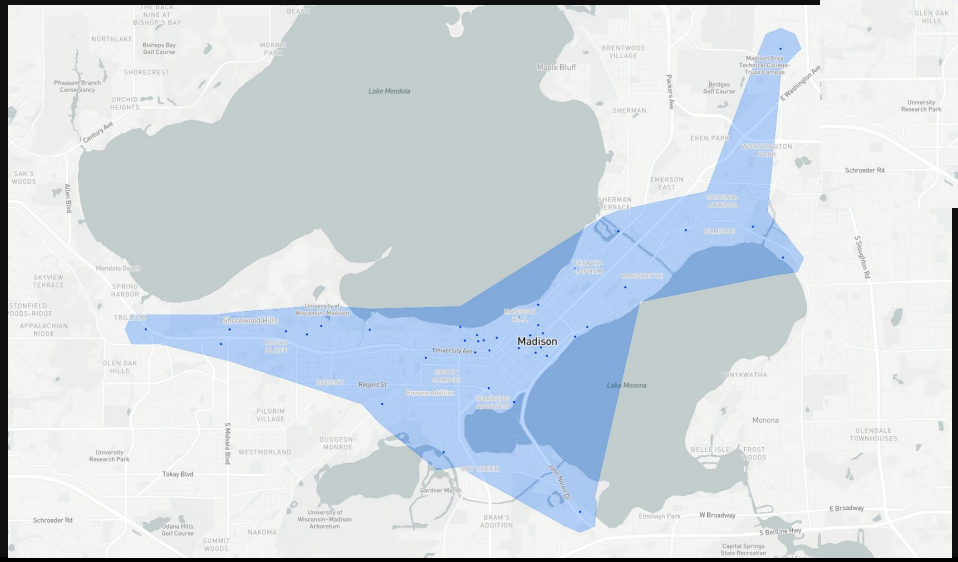
1. Get all dock locations
2. Make a circular buffer around each
3. Merge the buffers
4. Make a hull around the whole thing
5. Separate by regions, if need be!



HOW WE DETERMINE AREAS - DOCKED

Sometimes convex, sometimes concave, depends on the system!





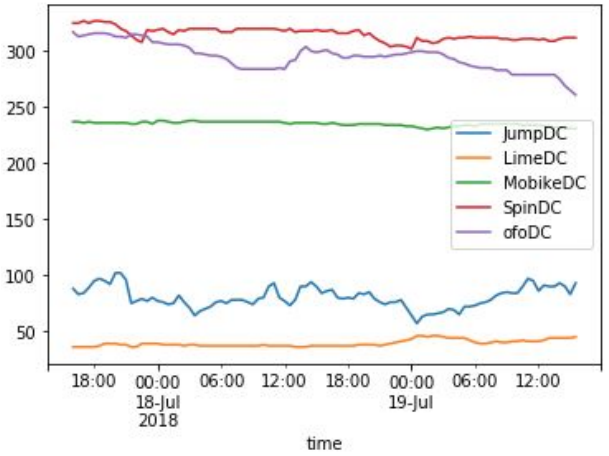
Hulls are nice - anything between bike stations is theoretically “within” the system, while things outside the outer bike stations are “outside”.

HOW WE DETERMINE AREAS - DOCKED

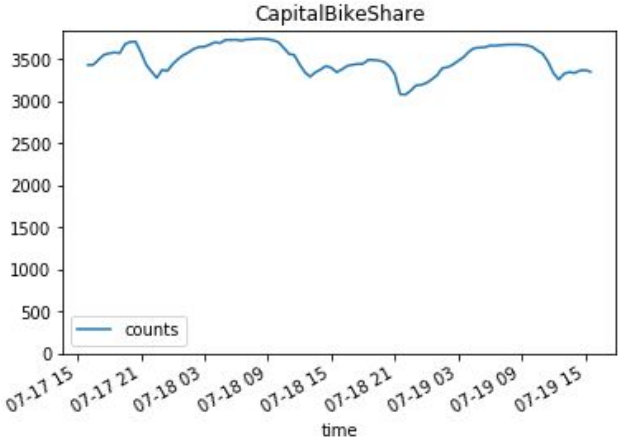
COORD

Demo!

IS THIS DATA REAL?



BEFORE MOBIKE LEFT



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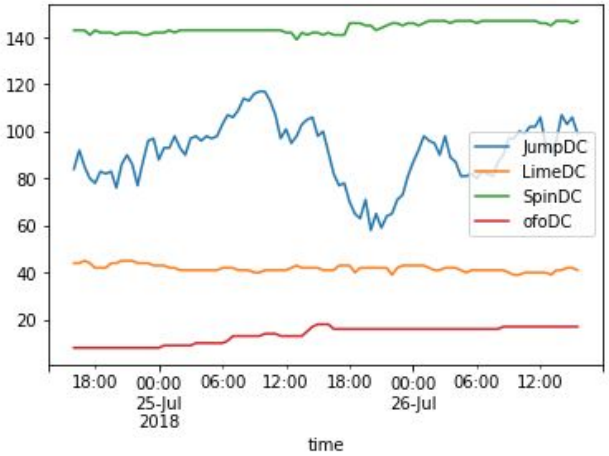
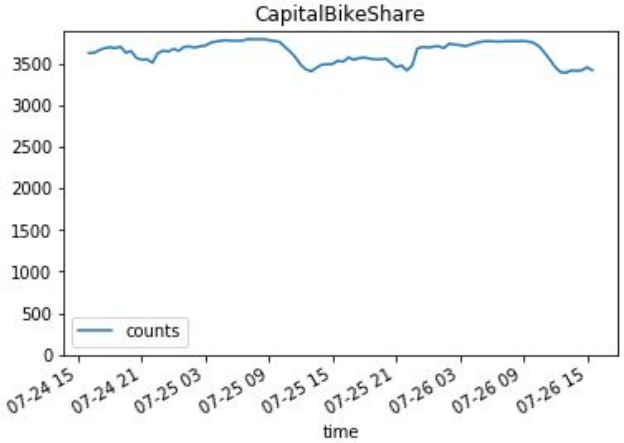


AFTER MOBIKE LEFT
(1 week later)



THINGS WE'RE THINKING ABOUT

We rely on systems and cities to make data public. We're only as good as the data the systems provide.

1. Is it better to show old data or no data?
2. What's the best way to communicate inconsistencies in the data?

UP NEXT!

We started with docked systems,

then added dockless and hubs.

Scooters are coming soon!

Join us at our Coord developer workshop next week to learn more.

COORD

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That’s it. Thanks!

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@coordcity