

Bike Share Ridership in the United States

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Overview

- “Motivate” is a privately held company based in NYC.
- Motivate operates 7 bicycle sharing systems in public-private partnerships with local governments in the US:
 - Capital Bikeshare in Washington, DC
 - Hubway in Boston, MA
 - Divvy in Chicago, IL
 - Citibike in New York, NY
 - Ford GoBike in San Francisco, CA
 - Biketown PDX in Portland, OR
 - CoGo in Columbus, OH

The Motivate logo is displayed on a teal rectangular background. The word "motivate" is written in a bold, lowercase, yellow sans-serif font. Below it, the phrase "get going" is written in a smaller, lowercase, black sans-serif font.

motivate
get going

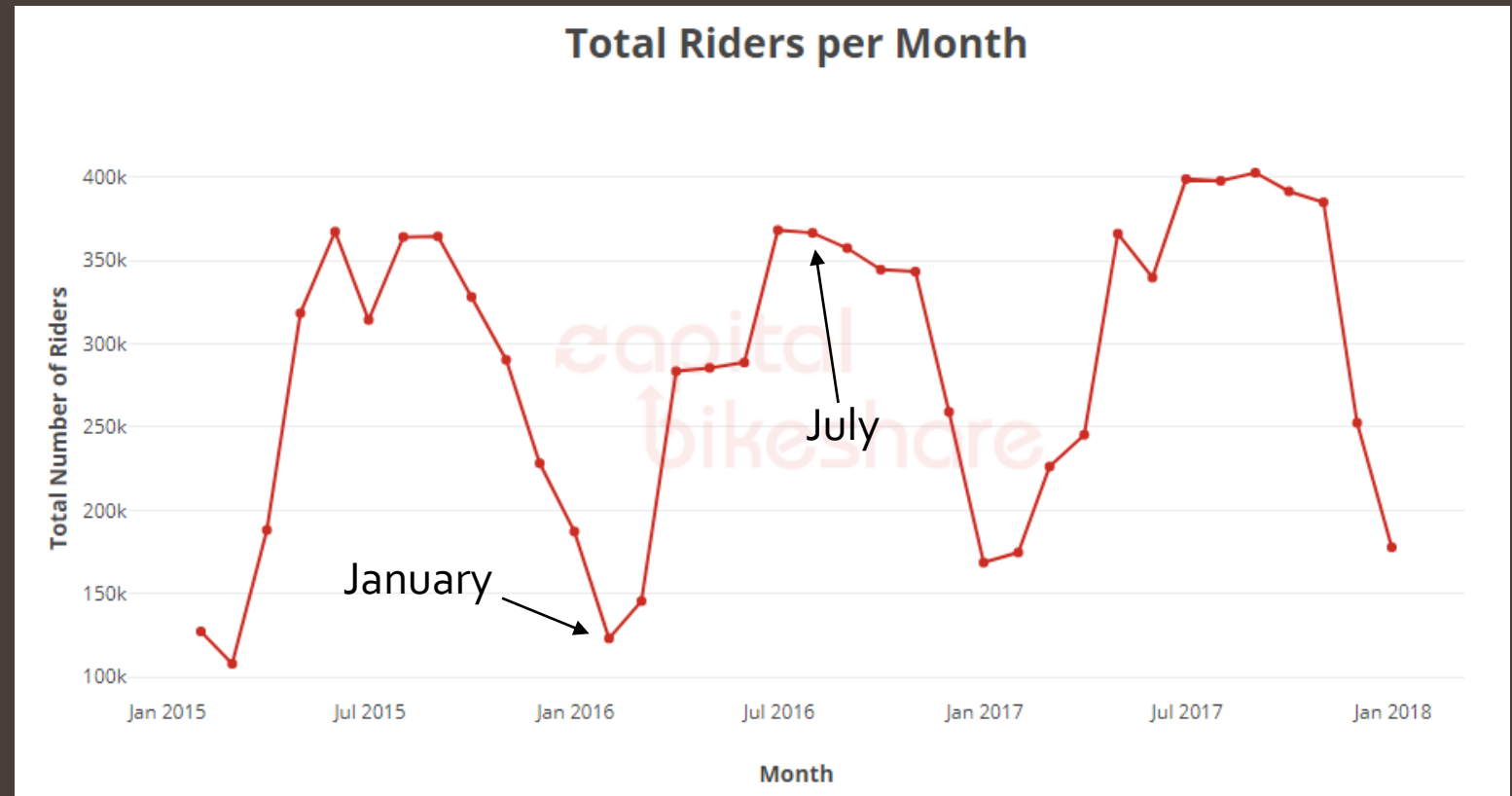
The Data

This analysis focuses on 3 Datasets from 3 sources:

- **Capital Bikeshare** trip history [data](#), 12 csv files
- **Hubway** trip history [data](#), 35 csv files
- **Divvy** trip history [data](#), 16 csv files
- 3 Year period: 2015 – 2017
- Variables:
 - Trip start day/time
 - Trip end day/time
 - Duration
 - User type
 - Member
 - Casual
 - Gender, self-reported (Hubway & Divvy only)
 - Male
 - Female

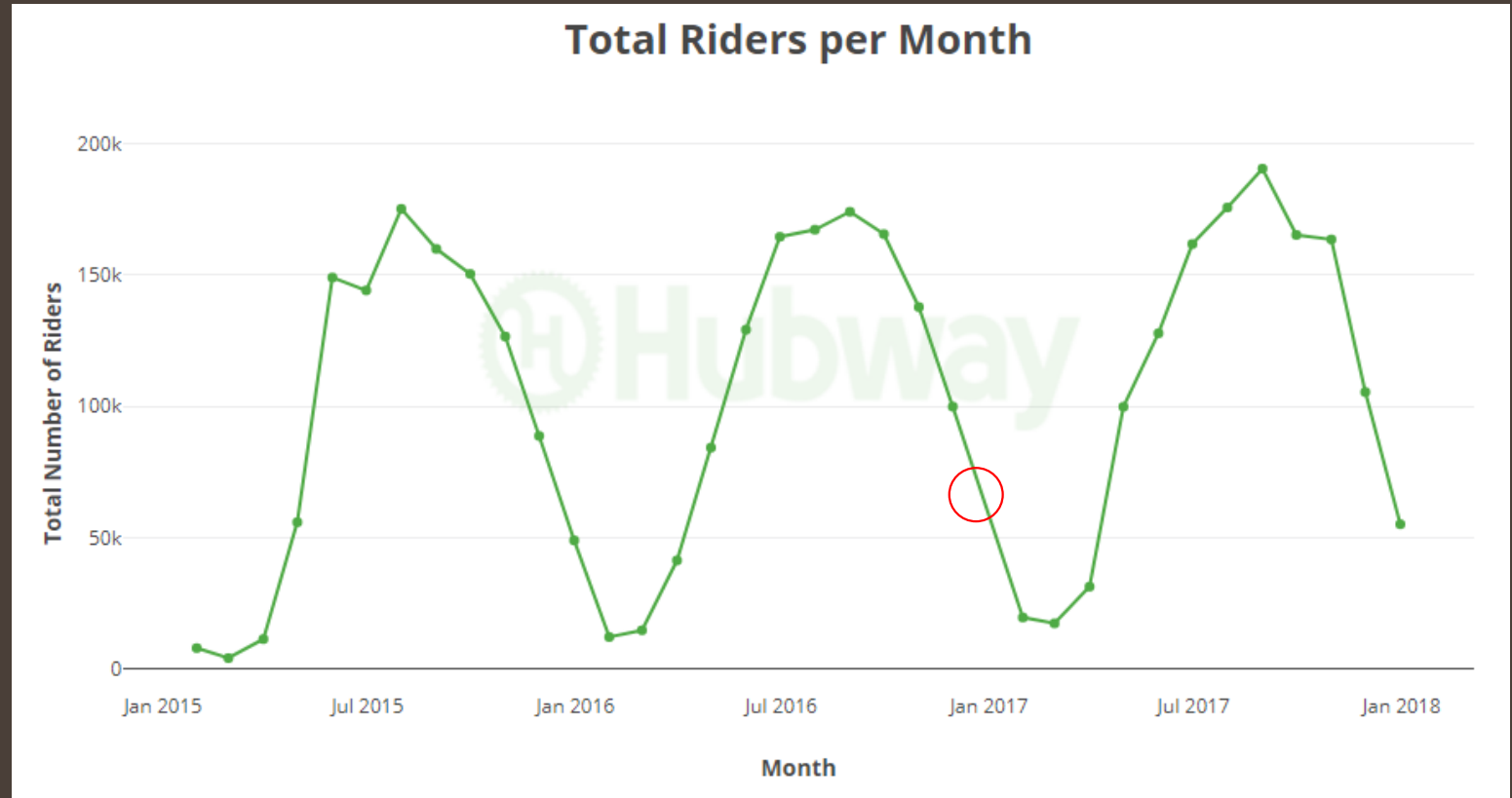
Capital Bikeshare (DC)

- Capital Bikeshare launched in September 2010.
- 10,277,677 rides taken between January 2015 and December 2017.
- As expected, low ridership in winter months.



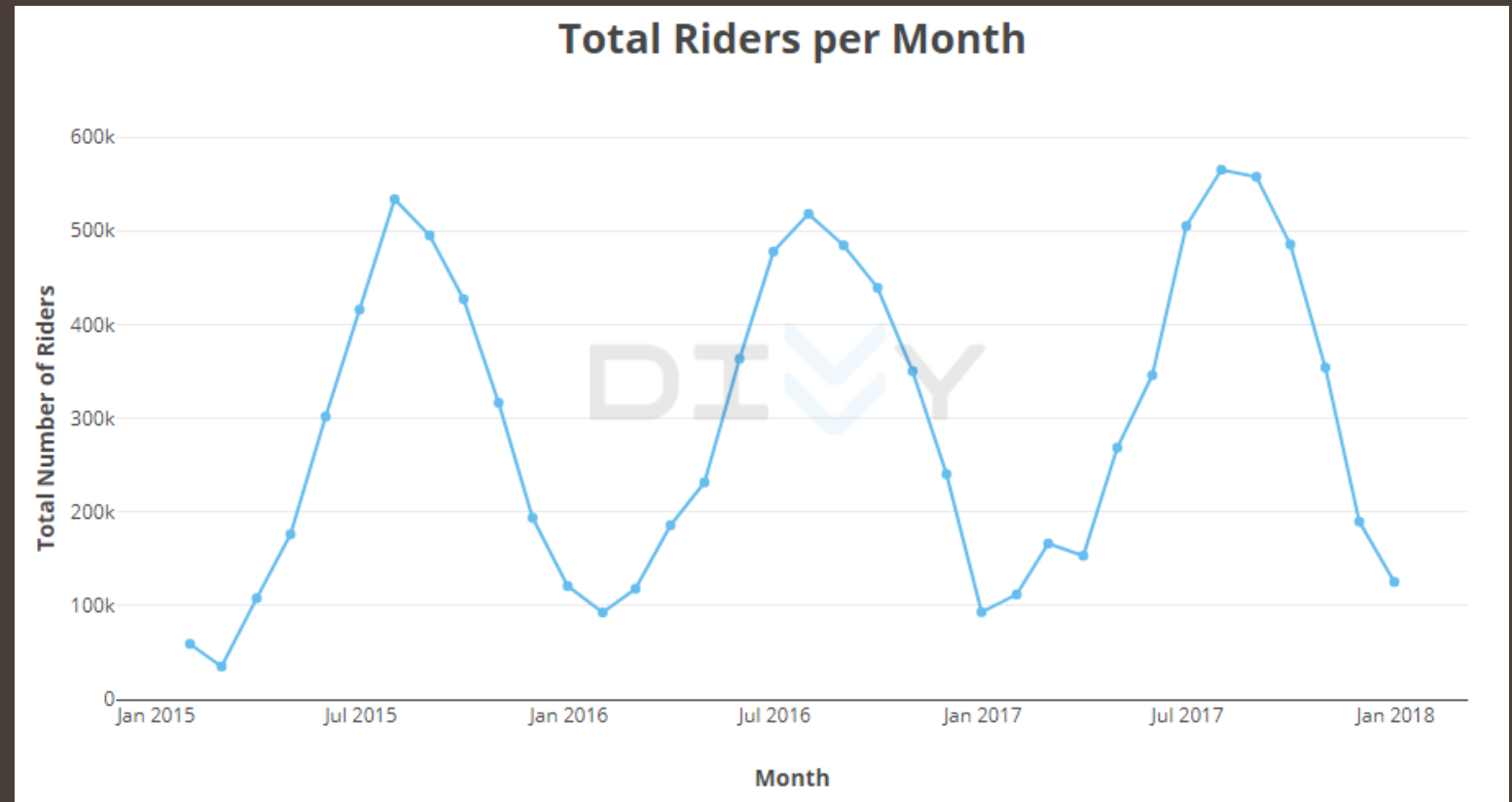
Hubway (Boston)

- Hubway launched in July 2011.
- 3,627,544 rides taken between January 2015 and December 2017.
- Missing Data for December 2016.



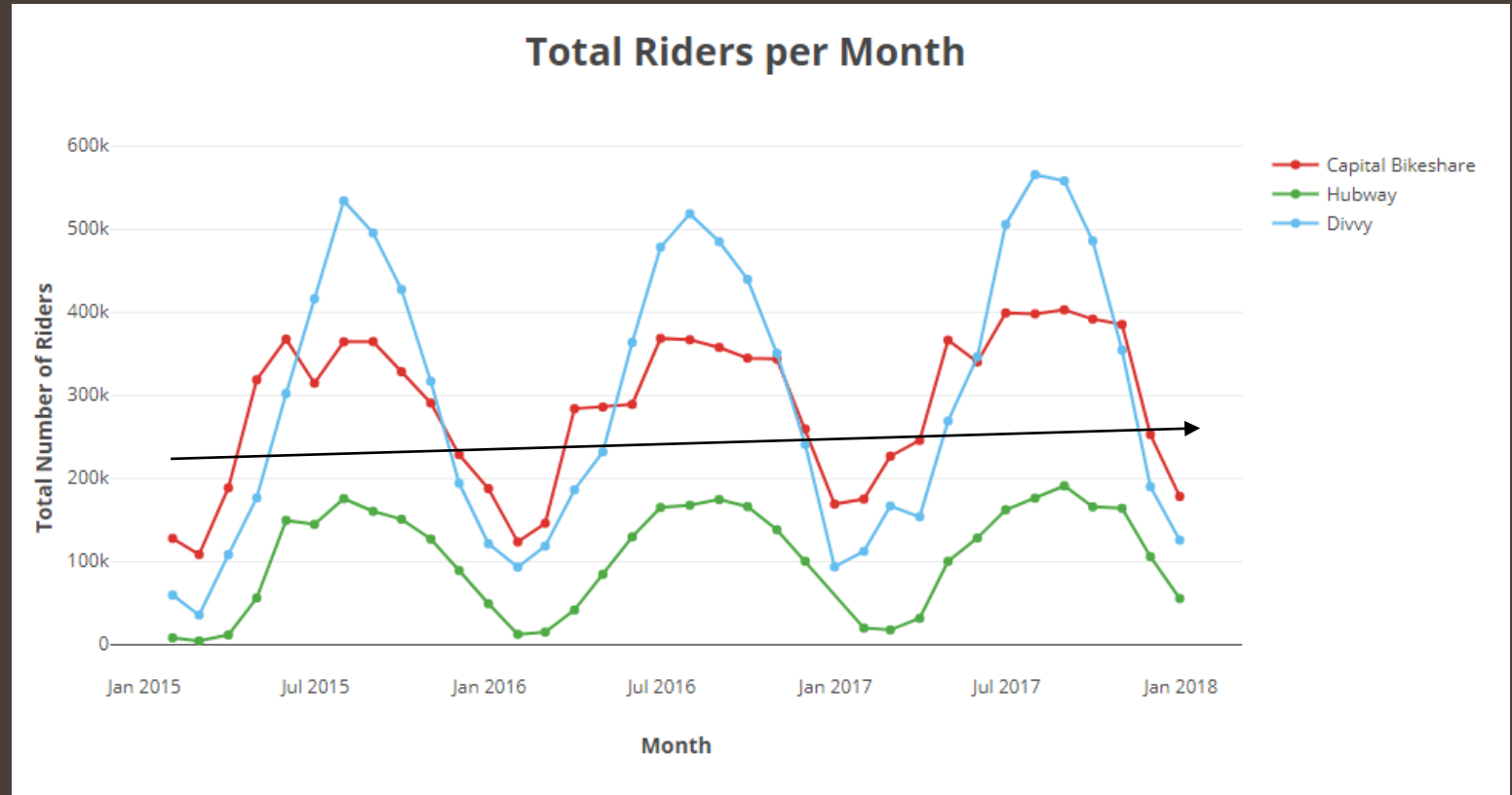
Divvy (Chicago)

- Divvy launched in June 2013.
- 10,607,836 rides taken between January 2015 and December 2017.



Side-by-Side Comparison

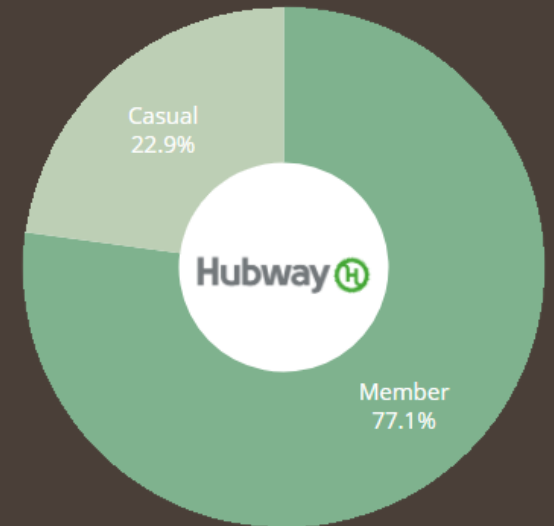
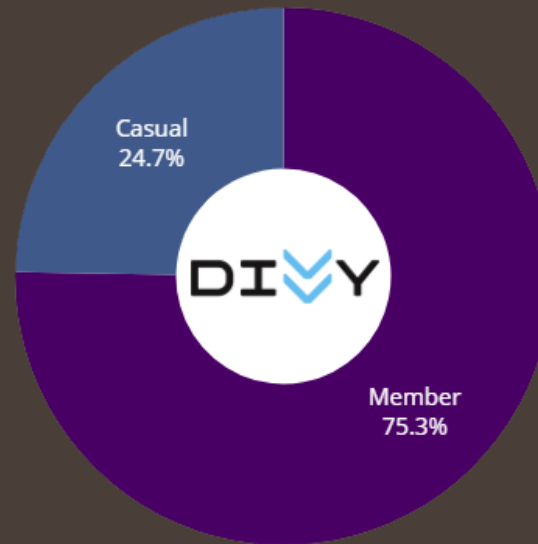
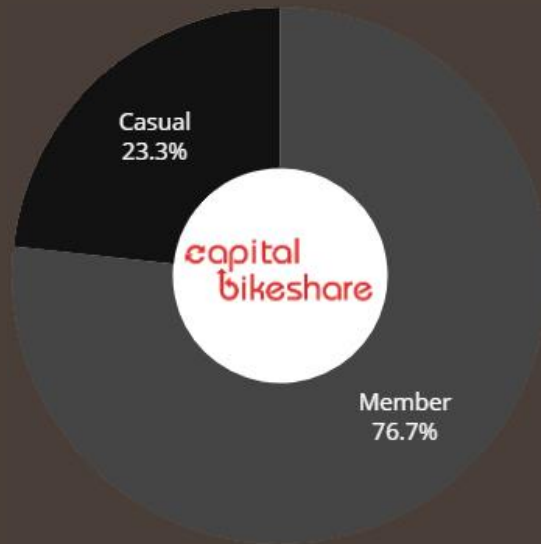
- Seasonal trend more extreme in Chicago (Divvy).



Peak Month	CBS		Hubway		Divvy	
Jul 2015	364,015		175,321		533,711	
Jul 2016	366,458	↓	167,385	↓	518,093	↓
Jul 2017	397,680	↑	175,833	↑	565,142	↑

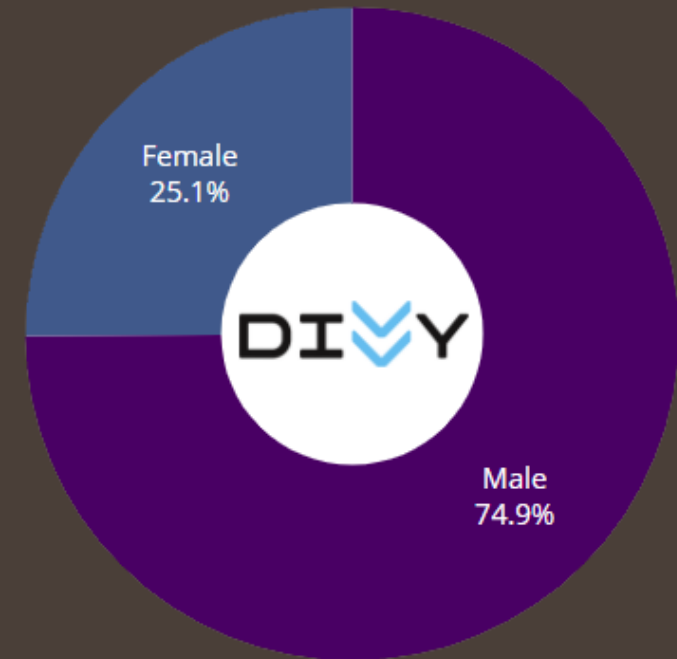
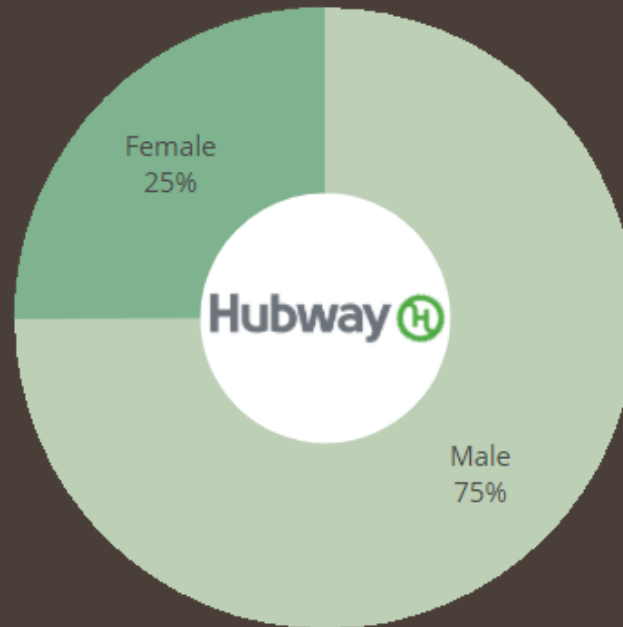
User Types

- **Member:** Registered member paying annual/monthly fee.
- **Casual:** Single trip or 24-hour pass.
- Member to casual ratio is very similar for all 3 bikeshare systems.



Gender

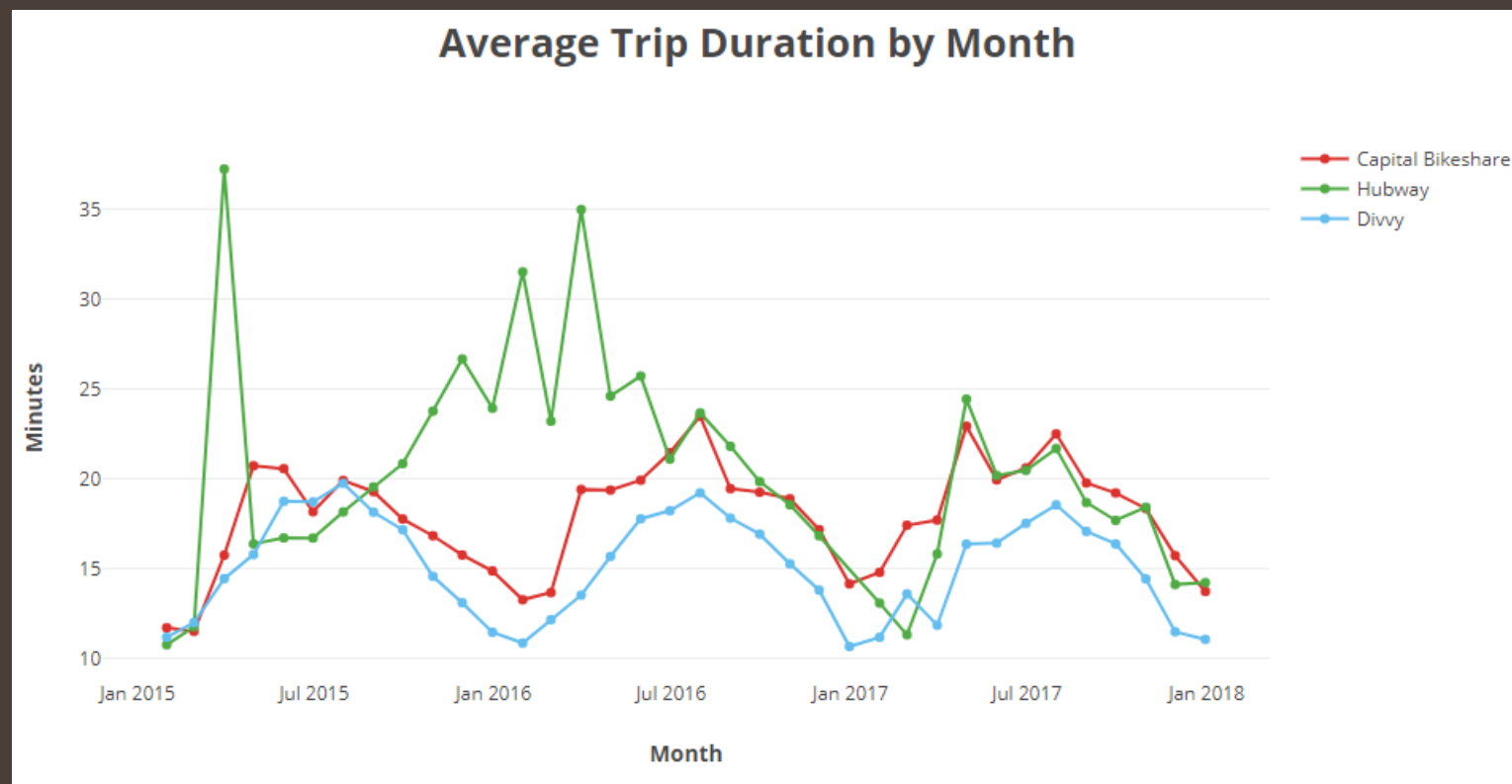
- Gender is self-reported. Capital Bikeshare does not report on gender.
- Only 25% of riders are female for both Hubway and Divvy.



Trip Duration

System	Avg Duration
CBS	18.79 min
Hubway	20.30 min
Divy	16.48 min

- Hubway users ride the longest, on average.
- Hubway users rode significantly longer on average during Fall 2015 – Spring 2016, with sudden spike in March 2015 as well.
 - Outliers: Over 3 years, 17 bikes out of station for > 100,000 hours (70 days)



Conclusions

- There is a general upward trend in bikeshare usage for bikeshare systems in Washington, Boston, and Chicago.
- Gender diversity is lacking among riders.
- Annual/monthly memberships are the most popular option.
- Unexpectedly long average trip durations in Boston, with high number of outliers on closer inspection, indicate a possible theft problem.
- Based on ridership trend, we could expect to see a slow but steady increase in ridership.