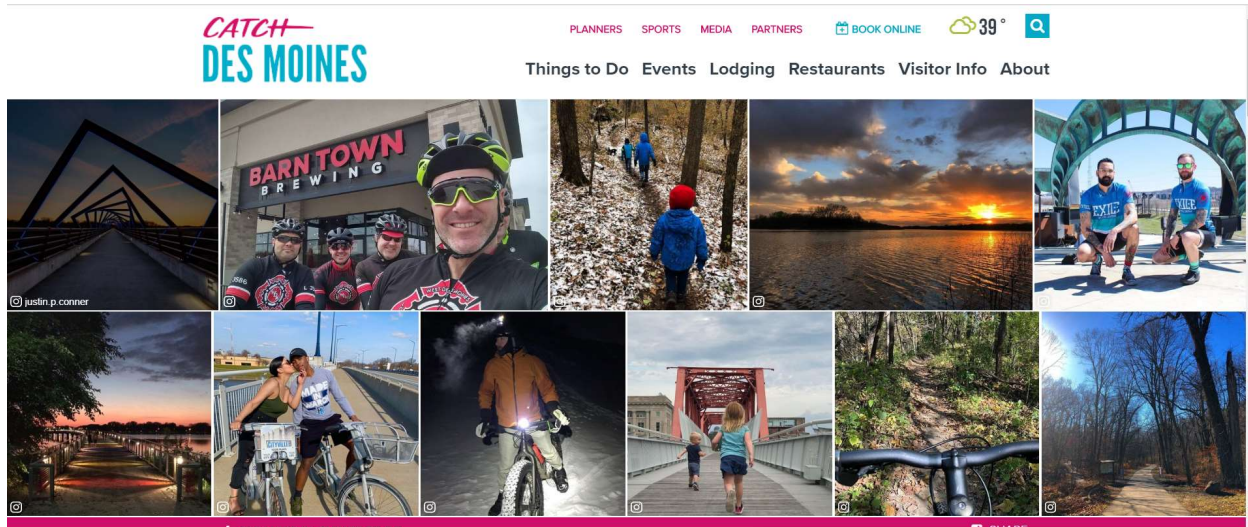


# The Des Moines, Iowa Investment Opportunity

## Bike Ride Sharing



### Investor Analysis Overview

This analysis is focused on answering the following questions:

- 1) In the sharing economy, what is the investment opportunity in the secondary transportation market – specifically bike sharing?
- 2) Is there opportunity specifically in Des Moines, Iowa for starting a Bike Sharing company and what is that potential?
- 3) Using Citibike in New York City, are there useful comparisons between existing bike sharing companies and the opportunity in Des Moines?
- 4) Along with the opportunity, what are the investment risks involved in a Des Moines Bike Share startup?
- 5) How much startup capital are we seeking and what is the projected return on the investment?

### Reference Resources

- 1) U.S. Census Data - <https://www.census.gov/quickfacts/desmoinescityiowa>
- 2) Des Moines Tourist website - <https://www.catchdesmoines.com/things-to-do/>
- 3) CrunchBase Business Research - <https://www.crunchbase.com/lists/bike-share-companies/86873843-a7d7-4d17-8319-79fe27c05c22/organization.companies>
- 4) Citibike Data Download For Aug – CSV File – included in Git Hub Repository
- 5) Citibike Aug Report – pdf file included in Git Hub Repository
- 6) Citibike-Des Moines Bike – data spreadsheet included in GitHub Repository

## Quick Market Overview of Secondary Transportation Market

According to CrunchBase Research firm, in the last 15 years, over 150 bike-share startup companies have been created using a combination of private venture capital, subsidies and sponsorships from local city government. Multiple investment drivers exist, to include:

- The Sharing Economy.
- Development of new technologies such as GPS, smartphones, online payment systems, asset tracking devices and others supporting very diverse business models.
- A need for cities to reduce greenhouse gases, mandated in some cities and counties in response to global warming.
- Last Mile – providing solutions and encouragement for commuters to take public transportation with bike shares taking care of the “last mile” between public transportation drop off and the riders final destination (place of work, or home).
- As a launch point to expand into other transportation modalities such as electric bikes, scooters, and even micro-EV cars.
- Revenue Business from Advertising, placement ads, etc.
- First Mover Advantage – in most cities, ride-share companies obtain permission from the local government to operate as a monopoly. As of now, Des Moines does not have another company applying for permits to operate, but that could change so its important to move quickly.

With over 150 bike ride-share companies worldwide, and equity financing varying from China’s jugernaut -- Ofo -- raising \$2.1B -- down to smaller companies like Viking Garage in Poland raising \$25,000 of initial capital – to somewhere in the middle such as Lime’s startup here in San Mateo County – raising \$765M over 5 rounds of funding and now valued at over \$1B – the bike share craze has caught on and is fast becoming a regular part of our transportation eco-system.

Yet the market is still very young, and its potential is just beginning to unfold to build Billion \$ companies. A bit like the “wild-west” there is still boundless opportunity for experimenting with different business models – either starting small and expanding or going “big-bang” with a full suite of vehicles and geographies – this market is ripe for capital, technology stacks, and entrepreneurs who want to drive the future of transportation in our cities on a local -- or global scale.

Our focus on Des Moines is driven by a number of favorable conditions to bike-sharing companies:

- Des Moines is one of the fastest growing cities in the U.S. with a vibrant Downtown of new restaurants, breweries, music festivals, museums, parks, and over 400 miles of biking trails.
- Des Moines has a population of over 216K people, well educated, with a median income of \$52,000 but very low cost of living (median house is only \$127K) making for a population who has disposable income and leisure time to enjoy the outdoors.
- With an 89% computer literacy, the chance to apply GPS, subscription services, automated charges, and smartphone technology to the bike-share business is very high, reducing operating

costs and opening up a range of technology enabled business models to drive success.

- And finally, Des Moines is rich in natural resources and hosts an eco-friendly populace who is looking for ways to decrease their carbon footprint in a fun way.

## Tableau Storyboard Details

To support this analysis, a Tableau Storyboard can be found on Tableau's Public hosting site at

<https://public.tableau.com/profile/thomas.cottrell#!/vizhome/DesMoinesBikeOpportunity/DesMoinesBikeOpportunity> This report provides additional details not found in the Tableau Storyboard.

**City Population** – this slide shows a comparison between the population of NYC and that of Des Moines for properly scaling the business. For the purposes of this analysis, it is assumed that the size of the business is proportional to the population.

**Bike Membership** – during the month of Aug, Citibike had 153,726 subscription customers. Using the same ratio as population, it is projected that Des Moines will capture about 3800 subscription customers.

**Projected Revenue** – The Revenue shows actual revenue for Citibike for the month of Aug. Des Moines is projected revenue based on the smaller number of memberships, but also factors in less \$ per ride on the fare to account for the difference in cost of living.

**Projected Trips** – Again, 2,344,224 is the actual number of trips during Aug for Citibike. Using this we show a projected number of trips for Des Moines of 60,719.

**Membership Versus Customers** – the pie chart shows that approximately 80% of the rides came from Subscribers and 20% came from Customers (non-subscribers). Citibike's Aug report further mentioned that ridership is higher for Subscribers during regular workdays (M-F) and that on weekends they see higher numbers for Customers (non-subscribers) and seasonally during tourist season.

**Investor Recommendation #1** : This might suggest a 2 prong marketing or promotional campaign. One for regular commuters and one for tourists.

**Membership By Gender** – this pie chart depicts the gender breakdown in ridership with 25% being females, about 65% being male and about 10% unknown. There is no indication in the Citibike data as to why there is such a big difference between male and female ridership.

**Investor Recommendation #4:** Further drilldown can be done to see if an opportunity exists to increase overall ridership among female participants.

**Tim of Day For Highest Utilization** – this bar chart shows that the peak ridership is during the morning and afternoon commutes (7-9 am) and (5-6 pm). The lowest use is from 12 midnight through the early morning hours at 4 am.

**Investor Recommendation #2:** This might be the best time for maintenance and cleaning to optimize the usage of each bike.

**Top Starting and Ending Locations** – of the 781 bike stations, this bubble chart shows the highest use stations (larger bubble equals higher use). The August report comments that the busiest stations are those near major public transportation hubs and tourist attractions.

**Investor Recommendation #3:** this suggest placement of bikes at hub transportation and tourist centers (bus stations, hotels, parks) etc.

**Average Trip Duration By Age** – this chart shows the average trip duration (in seconds) by age group. You can see that in general, younger riders (to the right on graph) are willing to ride longer distances of about 15 mins with an uptrend for riders <25 yrs old. Older riders show times which have wider deviations in duration probably indicating more adhoc ridership from tourists.

**Investor Recommendation #5:** A further drilldown on the data might reveal if this conclusion is true.

**Number of Bikes** – Citibike currently has 12,805 bikes in their fleet. It is projected the Des Moines will initially need about 400 bikes. This number can be fine tuned with actual ridership data over time.

**Bike Utilization** – this chart shows total number of seconds used during trips for each bike id. The size of the dot and deeper color is proportional to higher utilization. Ideally, utilization which is evenly distributed across all bikes should correlate with similar repairs and maintenance. High usage for some bikes might indicate a faster wearout and replacement of that bike id. The Citibike August report commented that during the month of Aug 23,500 bike repairs and or inspections were conducted on bike assets. It is estimated that this required approximately 1 hr per repair/inspection and 138 bike technicians to conduct those repairs.

**Investor Recommendation #6:** Investing in longer lasting bikes or improved service efficiency is an area which DM Bike might save significant cost and improve profitability. Applying some additional data collection and analysis to this area could yield significant returns.

## **New York City Versus Des Moines – Proforma Financials**

Des Moines is not New York City. But, in estimating how a bike sharing company might do in Des Moines, we picked key statistics around “Population” and Citibike and scaled those down proportionately for Des Moines – drawing some conclusions about how a Des Moines Bike Share company might perform. Those statistics are shown below:

## Proforma Financials

Description	NYC/Citibike (Actual- Aug 2019)	Des Moines/DM Bike - Estimated
Population	8,398,748	216,853
Revenue Per Month	\$6,431,080	\$160,000
Estimated Costs	\$1,490,000	\$63,000
Estimated Cash-Flow	\$4,941,080	\$97,000
<b>Revenue Stats</b>		
Memberships	153,726	3800
Casual Adhoc Riders	24,019	570
Rides Per Month	2,344,224	60,000
<b>Monthly Cost Factors</b>		
Number of Bikes	12,805	400
Bike Stations	781	25
Call Center Calls	18,068	500
Maintenance Requests	23,500	800
Maintenance Staff	138 people	2 people
Call Center Staff	180 people	5 people
IT/Dev Ops	5 people	2 people
Fully Loaded Cost/staff	\$8000	\$5000
Staff Costs	\$1,490,000	\$45,000
Office/Warehouse Space	Unknown	\$15,000
Vehicle Fleet	Unknown	\$3,000
<b>Initial Startup Costs</b>	<b>\$10,122,000</b>	<b>\$436,438</b>
Bikes	\$3,841,000	\$121,438
Bike Stations	\$781,000	\$25,000
Maintenance Shop	\$1,000,000 (estimated)	\$50,000
Office Space	\$2,000,000 (estimated)	\$30,000
Estimated Staffing	\$2,500,000(estimated)	\$210,000
- IT/App Dev		- 2 Dev/Ops
- Maintenance		- 2
- Call Center		- 3
-		

- Key statistics and revenue figures for Citibike were downloaded from their website for Aug 2019 Monthly Report. This report is included in the GitHub Repository.

## Startup Capital and Projected ROI

We are seeking \$500,000 in startup capital.

- We are projecting a 6 month startup time before revenue
- At full capacity we are projecting >\$50,000 per month in free cash-flow from membership fees.
- That equates to a Return of Capital within 10 months timeframe, after which the investment would earn 10%/per month – a fantastic return!
- Financial Cushion – we are projecting actual cash-flow of \$97,000/month. The difference of \$47,000 provides us a cushion for the unknown or expenses we have not anticipated.

## Risk Factors

Our analysis would not be complete without listing possible risk factors. Here is a list of some risk factors. The list may not be comprehensive and other risks should be considered by all investors.

- DM Bike must obtain permission and regulatory authority from City government to operate a bike share company.
- City government may charge rent on street space for bikes and racks. Some cities do and some do not.
- Theft of bikes may cause additional replacement costs.
- Some bike companies have higher bike maintenance costs
- Severe weather conditions could affect ridership. This could cause seasonality fluctuations in revenue.
- Ad revenue might not materialize as planned.
- Rebalancing – in large cities, bike locations must be periodically rebalanced so they are in the locations needed so bikes usage is optimized. This would result in extra expense of picking up bikes, transporting and dropping them off.
- Cleaning of bikes – these costs have not been estimated.