Grand Rapids Bike Share Feasibility Study

Steering Committee Meeting #4
December 21, 2017

Agenda

- Outreach summary
- Service area
- Pricing recommendations
- Financial projections
- Next steps and timeline

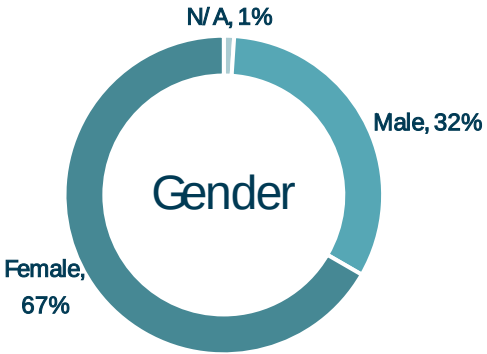
Outreach summary

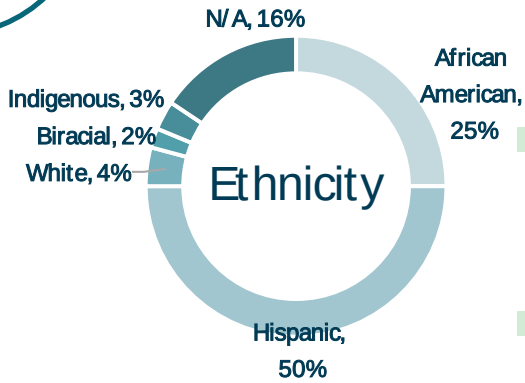
Focus group demographics

96
participants

10
zip codes

13-66
ages

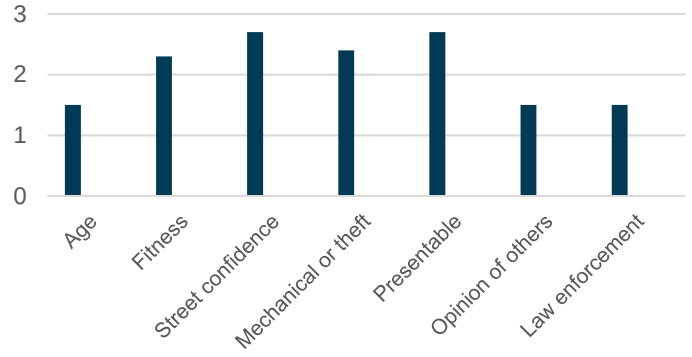




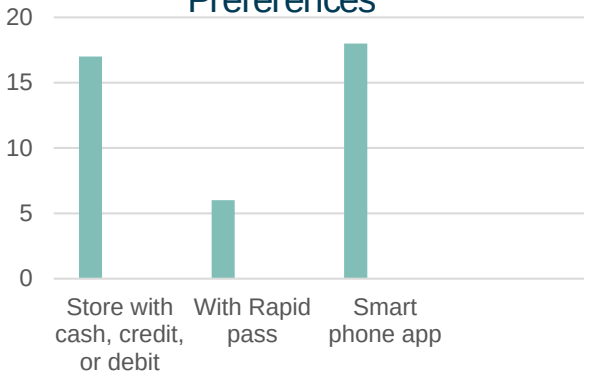
Before today, how familiar were you with bike share?

How likely would you be to use bike share?

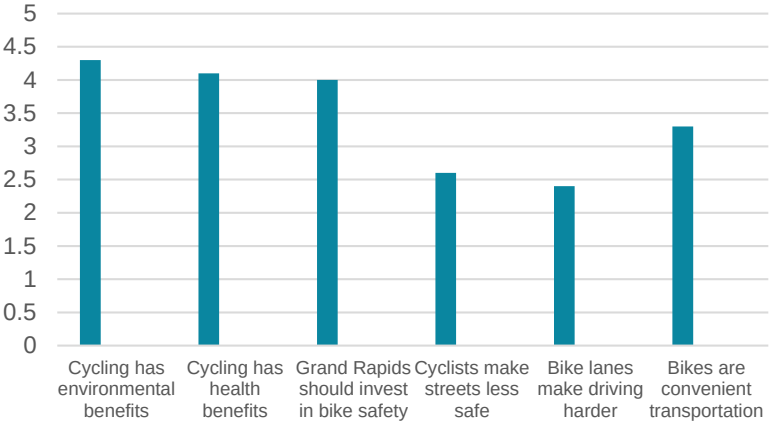
Concerns Related to Riding a Bicycle in Grand Rapids



Bike Share Purchase Preferences

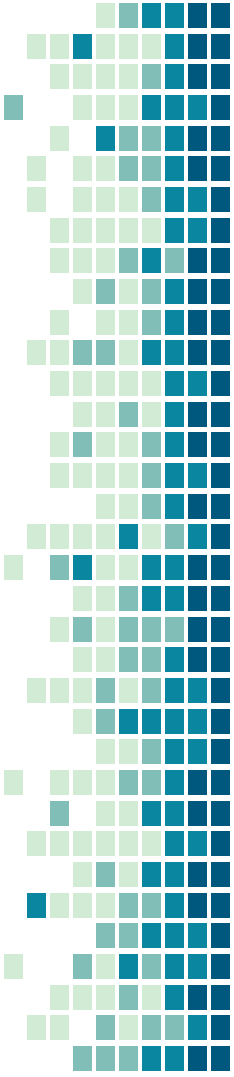


Degree of Agreement with Statements



Common concerns

- Personal liability
- Personal safety
- Learning curve
- Access and utility



Top questions for the City

What will the cost be for residents?

How will payments be managed?

Where will stations first be implemented?

Will this be more accessible to white residents than people of color?

If bike breaks down, who is responsible?

Who would educate bike riders and how?

What about educating car drivers?

Will hiring to support bike share be inclusive and representative?

Additional Outreach Activities

Open Houses

1st Ward (John Ball Park Zoo) – October 10
2nd Ward (Creston Plaza Community Center – November 8
3rd Ward (Seymour CR Church – October 19
Downtown Residents meeting – October 25

BID/CID Meetings

Uptown BID/CID – October 4
Westside CID – October 6
Michigan Street CID – October 11
Neighborhood Business Alliance – Oct. 18
Downtown Businesses – Oct. 27
Southtown CID – November 15
North Quarter CID – November 16

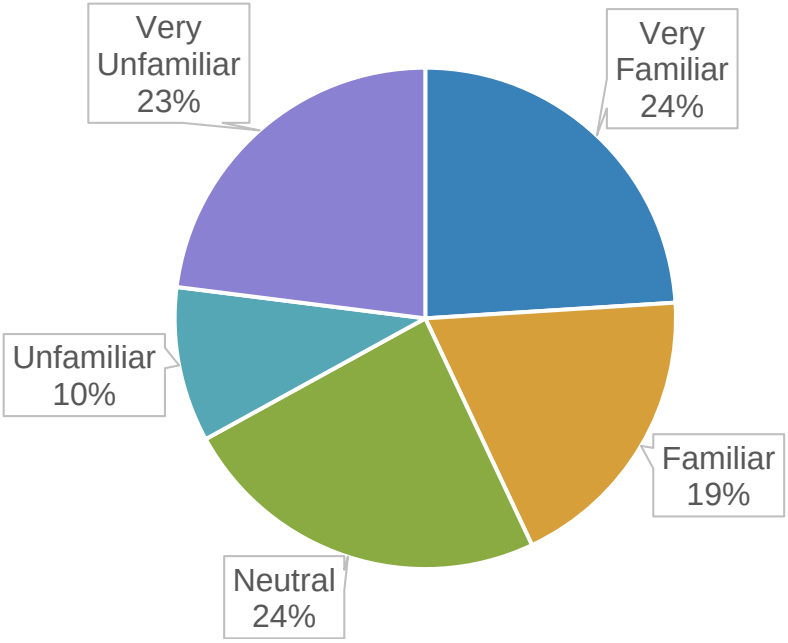
Other Meetings/Opportunities

Cultural Marketing Group – Sept. 14
Convention/Arena Authority – Oct. 6
Workshop at Start Garden– Oct. 10
Downtown Businesses – Oct. 27
Internal Design Team – Oct. 25
El Mejor Radio interview – Nov. 9
All Neighborhood Association Meeting – Oct. 18
DGRI Mobility Alliance Meetings – Oct. 23, Dec. 4

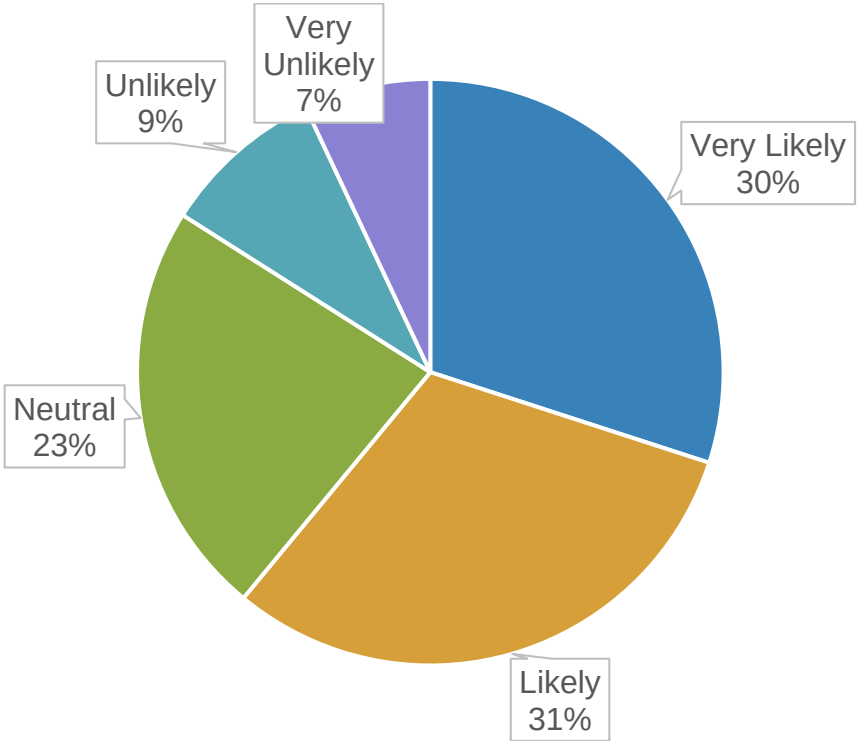
Pop-Ups at Community Events

- Beer City Growler Cyclocross Race (Wilcox Park) – October 7
- Kisscross Cyclocross Race (Highland Park) – October 8
- Founders 20th Anniversary Event – October 14
- Grilled Cheese Competition (Fuller Park) – October 14
- GVSU bus stop under US-131 – October 18
- WM Latino Health 5k Run (Roosevelt Park) – October 21
- Eastern and Alger Pop-Up Market – October 21
- Age Friendly Communities Workshop – October 23
- East Hills Neighborhood Annual Meeting – October 23
- Creston Neighborhood Annual Meeting – October 26
- Greater GR Bicycle Coalition Annual Meeting – November 14

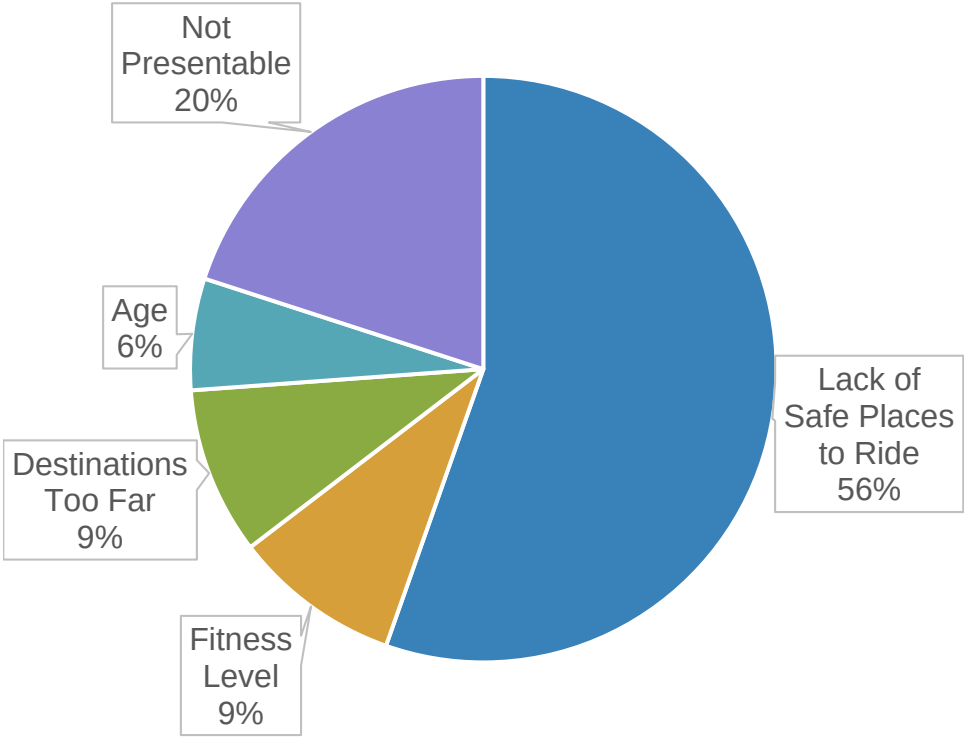
Familiarity with Bike Share



Likelihood to Use Bike Share



Concerns about Bicycling



Common Concerns

- Personal safety in traffic
- Safety concerns with sidewalk riding
- Distracted and aggresive drivers
- Better network connectivity
- More bike parking citywide

Common Themes

- Great idea "I'm sold – where do I sign up?"
- Use with transit
- Access to/from cheaper parking
- Helpful for getting around events
- Ride for errands, with friends, for fun
- Quicker than walking

Draft Recommendations

1. Educate potential bike share users in culturally competent ways.

2. Find partners to provide free or low cost helmet options and bicycle safety training.

3. Produce bike safety videos for viewing on smart phones (partner with Driving Change).

4. Develop a bike share ambassadors program.

Draft Recommendations

5. Communicate in both English and Spanish (and other languages where necessary).

6. Make it easy for people to try bike share.

7. Provide access via smart phone, bundled, and cash purchase options.

8. Integrate access and payment with Rapid "smart card" passes; investigate integration with parking payment.

Draft Recommendations

9. Equip bicycles with baskets big enough to carry groceries, merchandise, or small bags.

10. Improve bike network connectivity and access to high quality bike facilities in neighborhoods with bike share (connect with ongoing bike plan development).

11. Partner with major employers to facilitate commuting via bike share.

12. Feature riders who are representative of the Grand Rapids population in ads and communications about bike share.

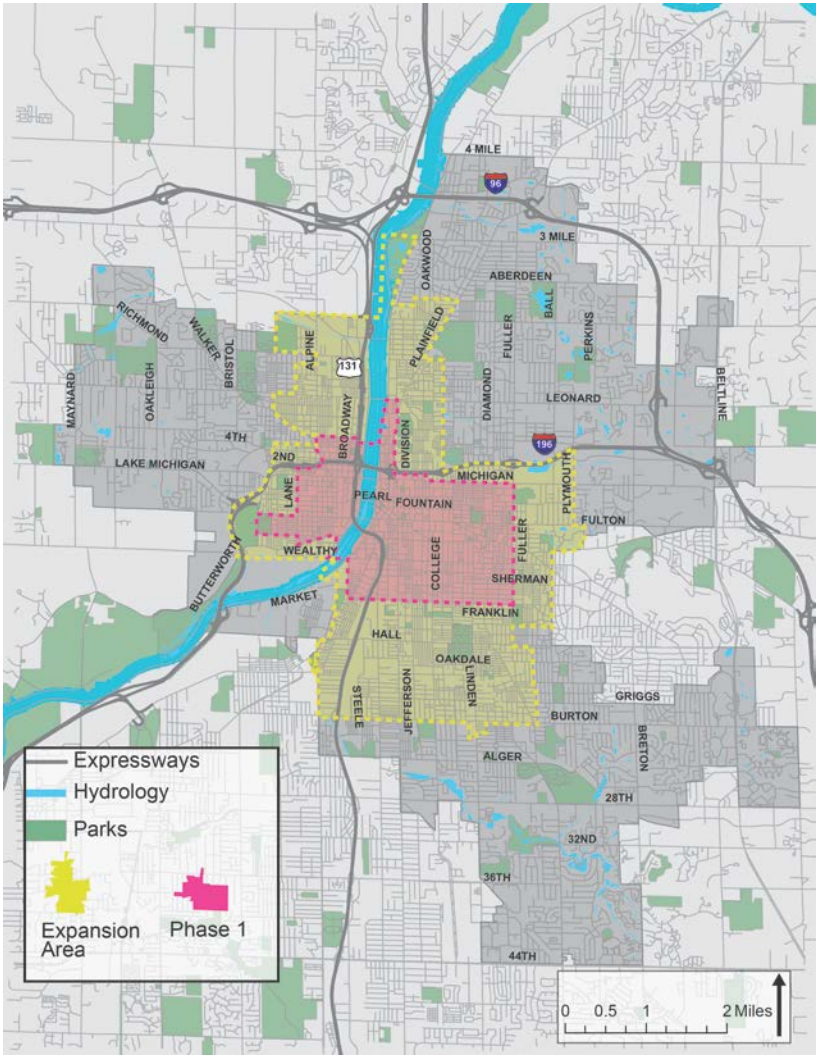
Decisions for today

Major Decisions

- ~~Bike share system go/ no go?~~ GO
- ~~System type?~~ HYBRID
- ~~Organizational structure?~~ PUBLIC/ NON- PROFIT PARTNERSHIP
- Service area and phasing?
- Pricing recommendations?

Service area

Overall Service Area *plus* Draft Phase 1 Service Area

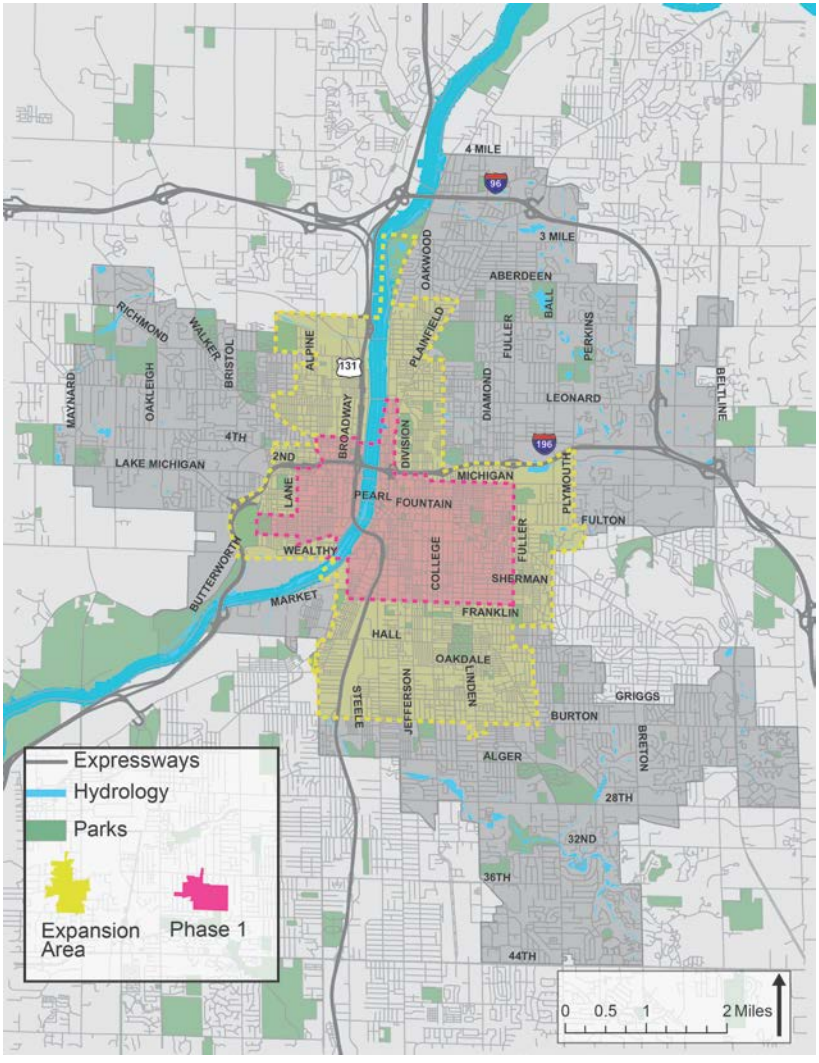


Draft Overall Service Area

Area = 13.3 sq. mi.
Pop. = 88.761
Pop. Density = 6,675 people/sq. mi.
Jobs = 83,858

Draft Phase 1 Service Area

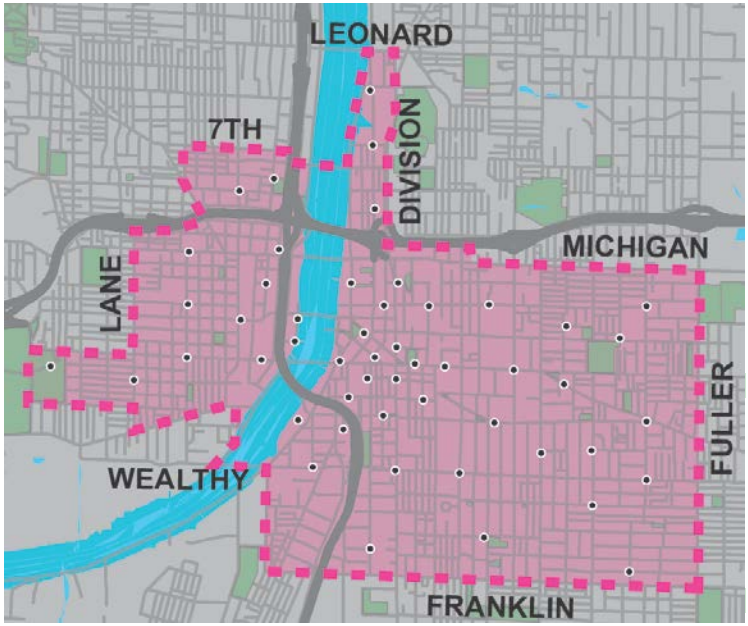
Area = 4.5 sq. mi.
Pop. = 28,987
Pop. Density = 6,441 people/sq. mi.
Jobs = 60,555



Phase 1

Stations: 45
(assumes 15 full stations and 30 hubs)*_

Bikes: 450



** Dots on map are not recommended station/hub locations; they are just placed to representative density of 45 sites over the draft Phase 1 service area.*

Phase 1 Demographics

Phase 1 covers 10% of GR's area and 14%* of the population but includes…

14% of GR's nonwhite population

22% of GR's residents under the poverty line

26% of GR's zero-vehicle households

*32% of GR's population lives w/in 1/4 mile of Phase 1

Phase 1

31%

nonwhite

$33,919

median household income

25%

zero-vehicle households

City of GR

30%

nonwhite

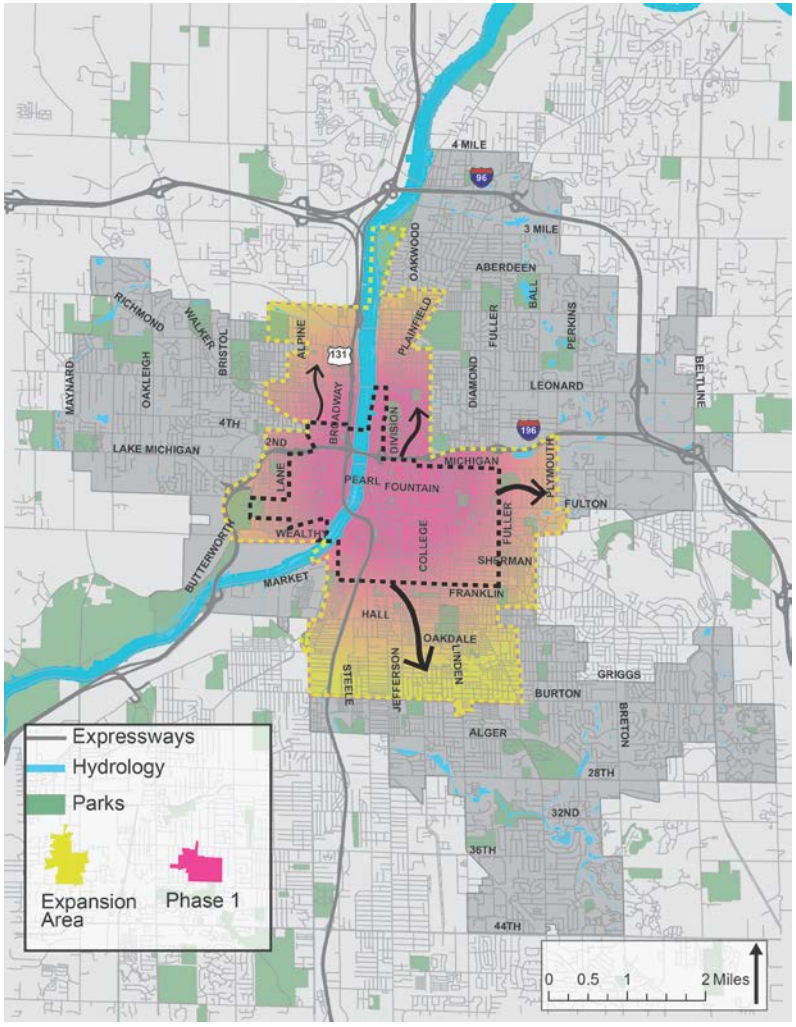
$43,091

median household income

13%

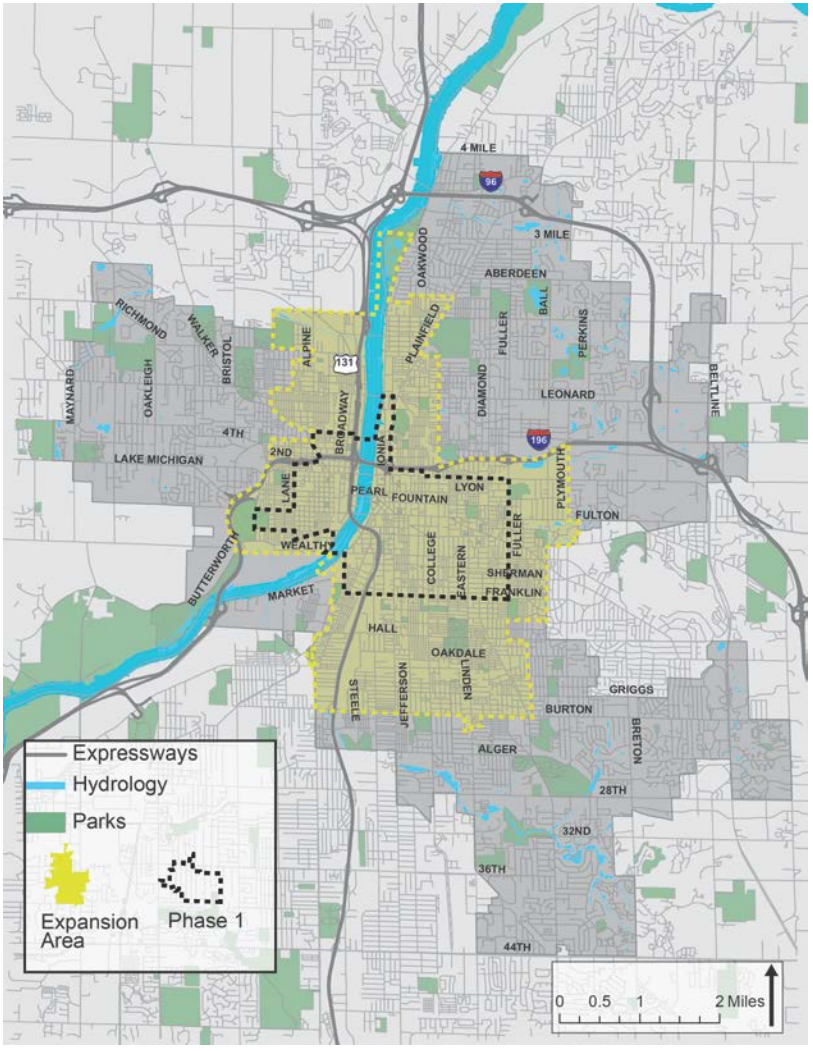
zero-vehicle households

Organic growth vs. distinct phases



Overall Service Area (aspirational)

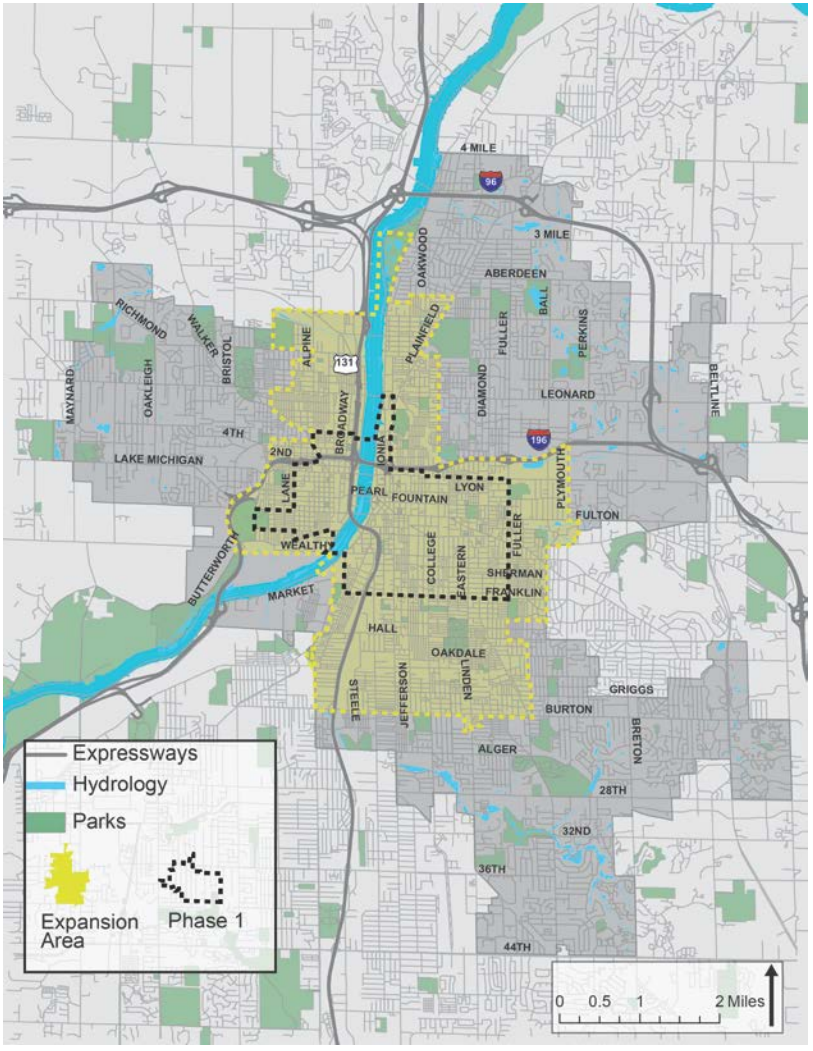
Area: 13.3 sq. miles
Population: 88,761
Density: 6,675 people/sq. mile
Jobs: 83,858



Overall Service Area (aspirational)

Stations: 100 (assumes 35 full stations, 65 hubs miinmum)

Bikes: 800+



Overall Service Area Demographics

The expansion area covers 30% of GR's area and 42% of the population but includes…

53% of GR's nonwhite population

64% of GR's residents under the poverty line

56% of GR's zero-vehicle households

Overall Service Area

39% nonwhite

$33,619 median household income

18% zero-vehicle households

City of GR

30% nonwhite

$43,091 median household income

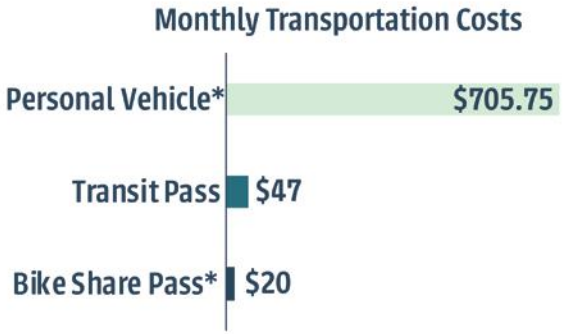
13% zero-vehicle households

Pricing

Pricing

Things to Balance

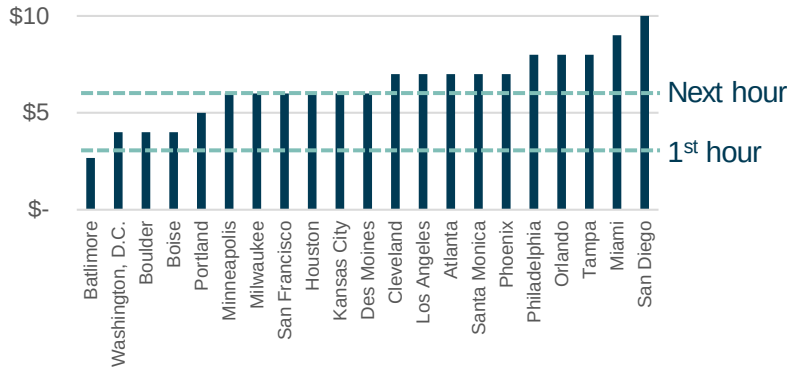
1. Affordable for everyone
2. Simple, easy to understand structure
3. Need to generate "fare box" revenue to support system operations



Suggested standard options

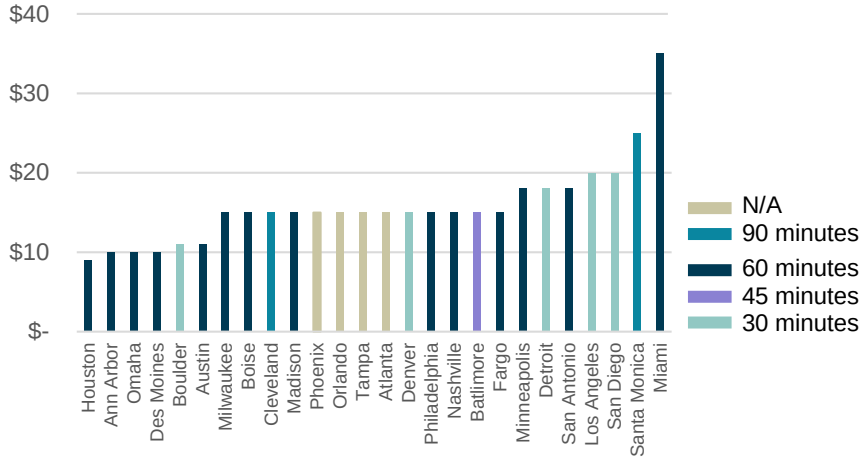
Single-ride pass

- $3 for first 60 minutes, $3 for every 30 minutes after



Monthly Pass

- $20/month
- Unlimited rides up to 60 minutes each
- $15/month if you pay for a year in full



Suggested standard options

- Single-ride pass
  - $3 for first 60 minutes, $3 for every 30 minutes after

$4.17 average single-ride pass

$2-$5 for 30 minutes

$4-$8 for 60 minutes

- Monthly Pass
  - $20/month
  - Unlimited rides up to 60 minutes
  - $15/month if you pay for a year in full

$15.77 average monthly pass

$11-$20 for 30 minute rides

$9-$35 for 60 minutes

Suggested discount options

- Discounted monthly pass
  - $5/month
  - Unlimited rides up to 60 minutes
  - Anyone with a 9-digit state benefits number (similar to Detroit's MoGo bike share system)
- Student Pass
  - $50/semester (4 months)

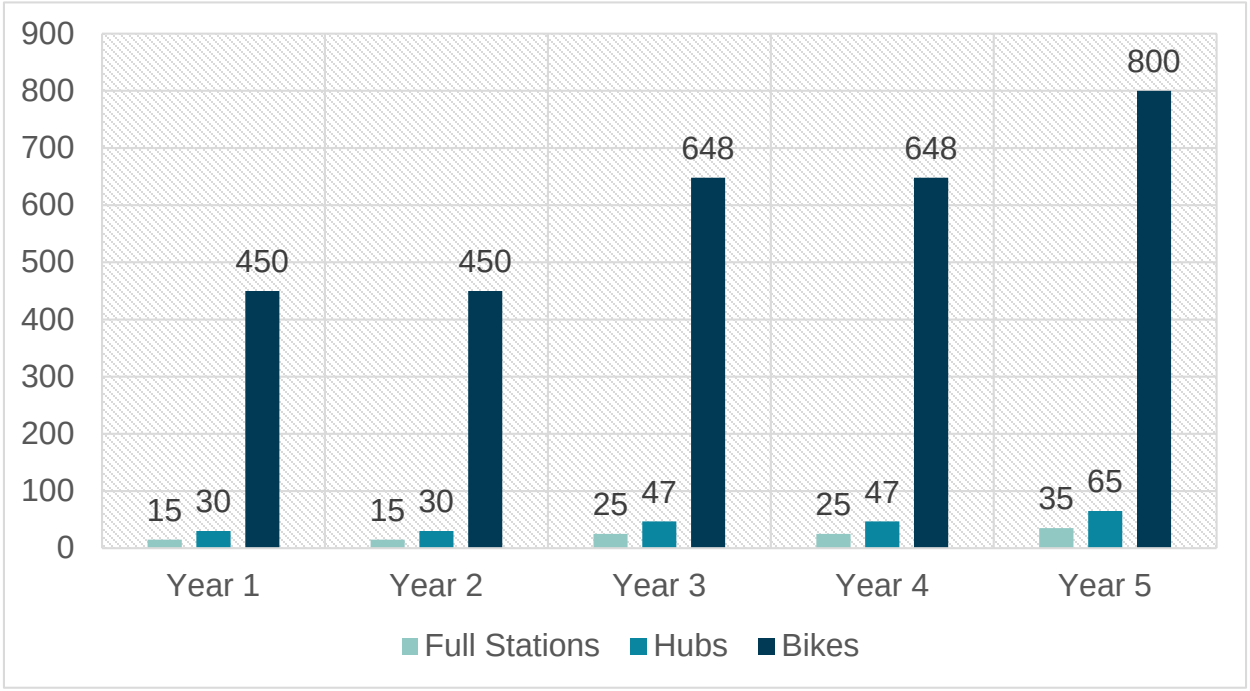
Additional pricing considerations

(need further study)

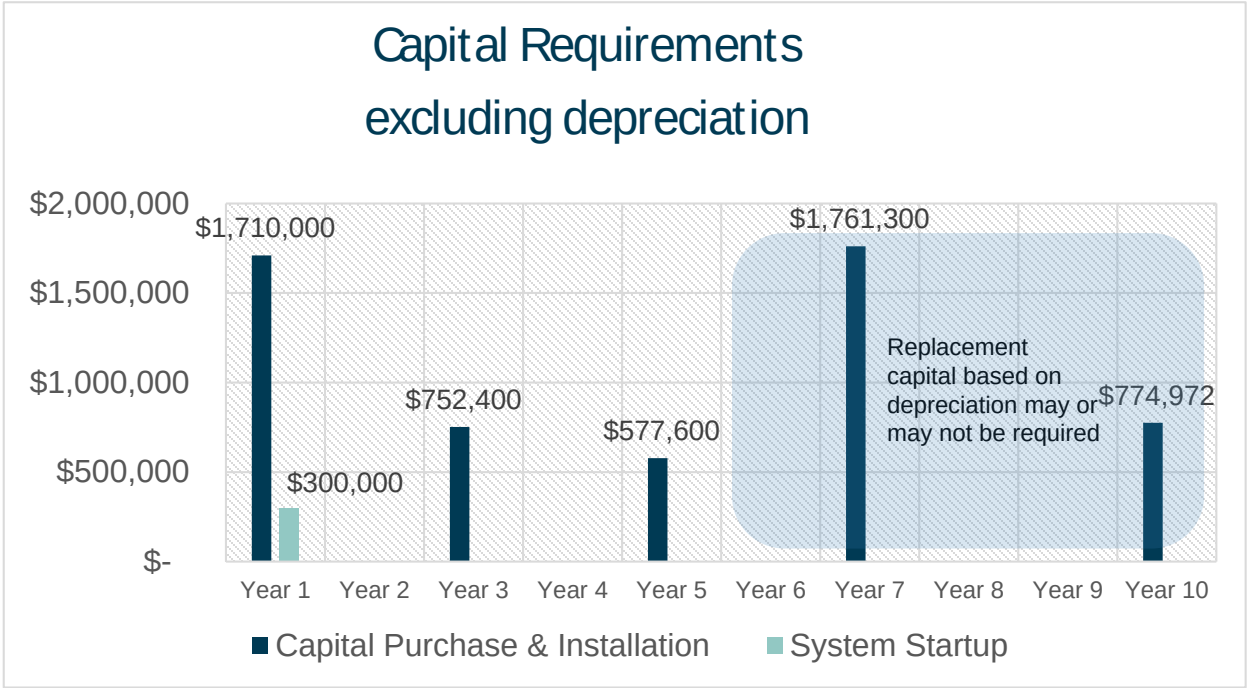
- Integration with transit pass
  - Monthly Rapid + bike share pass (~$60)
- Integration with City parking access card
- Reloadable Balance option
  - Add minutes like a cell phone/ data plan
  - $3 per 30 minutes
  - Several public requests for this type of option

Financial projections

Draft 5-year system plan buildout



$5.8 million of capital required over the 10 year period



** Capital cost assumptions based on a hybrid system with combination of fixed WiFi based stations, non-WiFi hubs and hybrid "smart" bikes that can be docked at stations and locked at hubs and bike racks.*

Key assumptions - Ridership

** To reflect initial start up, lower ridership estimates were used in the first year of deployment and higher ridership estimates used in subsequent years.*

Phase 1 Service Area	
Monthly Trips (low)	5,000
Monthly Trips (high)	10,000
Monthly Casual Trips (low)	1,250
Monthly Member Trips (low)	3,750
Monthly Casual Trips (high)	2,500
Monthly Member Trips (high)	7,500
Casual Users per Month (low)	500
Member Users per Month (low)	375
Casual Users per Month (high)	1,000
Member Users per Month (high)	750

Overall (Larger) Service Area	
Monthly Trips (low)	15,000
Monthly Trips (high)	35,000
Monthly Casual Trips (low)	3,750
Monthly Member Trips (low)	11,250
Monthly Casual Trips (high)	8,750
Monthly Member Trips (high)	26,250
Casual Users per Month (low)	1,500
Member Users per Month (low)	1,125
Casual Users per Month (high)	3,500
Member Users per Month (high)	2,625

Key Assumptions – Cost, Pricing

- Assumes 12 months
- Excludes any sponsor revenue

  (e.g., Capital Bike Share Arlington gets equivalent to $.34 per trip in sponsor revenue.)

Variables		
Per Bike Capital Costs	$ 3,800	
Depreciation (straightline)	20%	
Inflation adjustment	1.02	
Operating cost per bike	$ 2,400	
Operating cost per bike exp inc	5%	7% ARL -2% inf
Operating cost per bike exp inc	$ 120	
Revenue Growth	1.015	
System start up costs	$ 300,000	
Monthly member fee annual	$ 240.0	
Time 1st hour/30min blocks	$ 3.00	
90 minute ride	$ 6.00	
Neighborhood Rides Monthly	7500	

Results

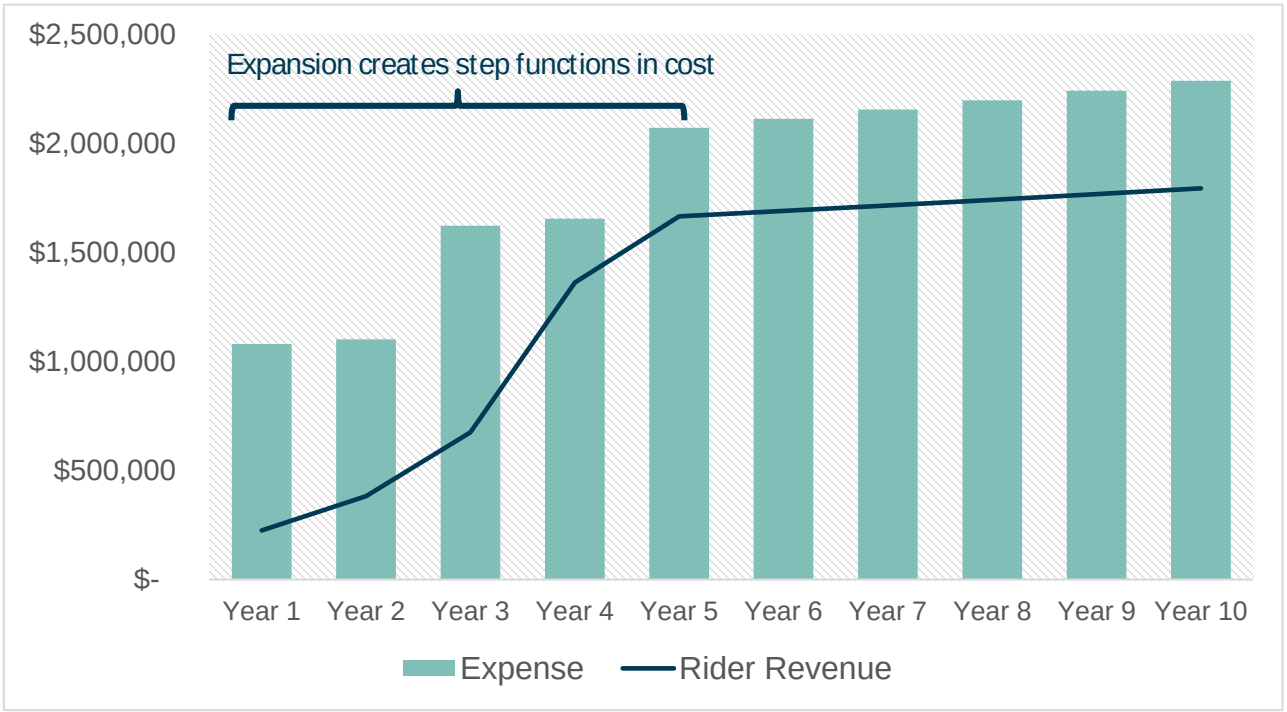
FULL SYSTEM	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Stations										
Full Stations	15	15	25	25	35	35	35	35	35	35
Hubs	30	30	47	47	65	65	65	65	65	65
Bikes	450	450	648	648	800	800	800	800	800	800
Capital Requirements										
Capital Purchase & Installation	$ 1,710,000		$ 752,400		$ 577,600		$ 1,761,300			$ 774,972
System Startup	$ 300,000									
Total Capital Cost	$ 2,010,000	$ -	$ 752,400	$ -	$ 577,600	$ -	$ 1,761,300	$ -	$ -	$ 774,972
Rider Revenue										
Annual Member Dues	$ 90,000	$ 180,000	$ 270,000	$ 450,000	$ 630,000					
Rides < I hr	$ 22,500	$ 45,000	$ 67,500	$ 191,250	$ 315,000					
Rides > 60 minutes (90 minutes)	$ 112,500	$ 157,500	$ 337,500	$ 720,000	$ 720,000					
Total Rider Revenue	$ 225,000	$ 382,500	$ 675,000	$ 1,361,250	$ 1,665,000	$ 1,689,975	$ 1,715,325	$ 1,741,054	$ 1,767,170	$ 1,793,678
Bike Share Operating Costs										
Base	$ 1,080,000	$ 1,101,600	$ 1,123,632	$ 1,146,105	$ 1,688,145					
Expansion Impact			$ 498,960	$ 508,939	$ 383,040					
Total	$ 1,080,000	$ 1,101,600	$ 1,622,592	$ 1,655,044	$ 2,071,185	$ 2,112,608	$ 2,154,861	$ 2,197,958	$ 2,241,917	$ 2,286,755
System Depreciation	$ 342,000	$ 342,000	$ 492,480	$ 492,480	$ 608,000	$ 266,000	$ 618,260	$ 467,780	$ 467,780	$ 352,260
Addtl Revenue Required	$ (855,000)	$ (719,100)	$ (947,592)	$ (293,794)	$ (406,185)	$ (422,633)	$ (439,536)	$ (456,903)	$ (474,747)	$ (493,077)
plus depreciation	$ (1,197,000)	$ (1,061,100)	$ (1,440,072)	$ (786,274)	$ (1,014,185)	$ (688,633)	$ (1,057,796)	$ (924,683)	$ (942,527)	$ (845,337)
Rider Revenue % of operating cost	21%	35%	42%	82%	80%	80%	80%	79%	79%	78%

* No sponsorship or advertising revenue included

Gen 1 equipment replacement

Revenue & operating expense performance

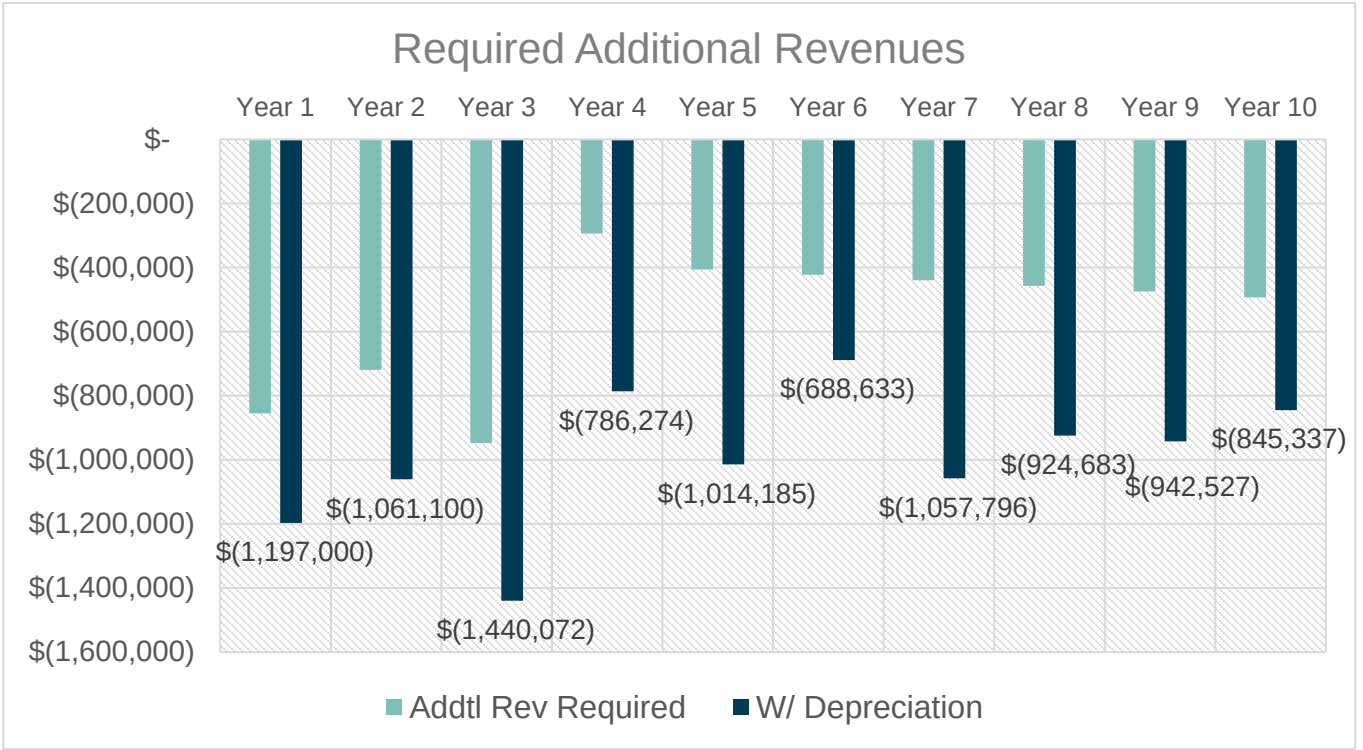
(excludes depreciation)



Sensitivity testing

FULL SYSTEM	Year 5 Base	Year 5 Double # Casual Riders	Year 5 Base Rider Fees Double (not membership)	Year 5 Drop Operating cost $400 to $200 per bike	Year 5 Double # of members
Stations					
Full Stations	35	35	35	35	35
Hubs	65	65	65	65	65
Bikes	800	800	800	800	800
Capital Requirements					
Capital Purchase & Installation	$ 577,600	$ 577,600	$ 577,600	$ 577,600	$ 577,600
System Startup					
Total Capital Cost	$ 577,600	$ 577,600	$ 577,600	$ 577,600	$ 577,600
Rider Revenue					
Annual Member Dues	$ 630,000	$ 630,000	$ 630,000	$ 630,000	$ 1,260,000
Rides < I hr	$ 315,000	$ 630,000	$ 630,000	$ 315,000	$ 315,000
Rides > 60 minutes (90 minutes)	$ 720,000	$ 1,102,500	$ 1,440,000	$ 720,000	$ 720,000
Total Rider Revenue	$ 1,665,000	$ 2,362,500	$ 2,700,000	$ 1,665,000	$ 2,295,000
Bike Share Operating Costs					
Base	$ 1,688,145	$ 1,688,145	$ 1,688,145	$ 1,406,787	$ 1,688,145
Expansion Impact	$ 383,040	$ 383,040	$ 383,040	$ 319,200	$ 383,040
Total	$ 2,071,185	$ 2,071,185	$ 2,071,185	$ 1,725,987	$ 2,071,185
System Depreciation	$ 608,000	$ 608,000	$ 608,000	$ 608,000	$ 608,000
Addtl Revenue Required	$ (406,185)	$ 291,315	$ 628,815	$ (60,987)	$ 223,815
plus depreciation	$ (1,014,185)	$ (316,685)	$ 20,815	$ (668,987)	$ (384,185)
Rider Revenue % of operating cost	80%	114%	130%	96%	111%

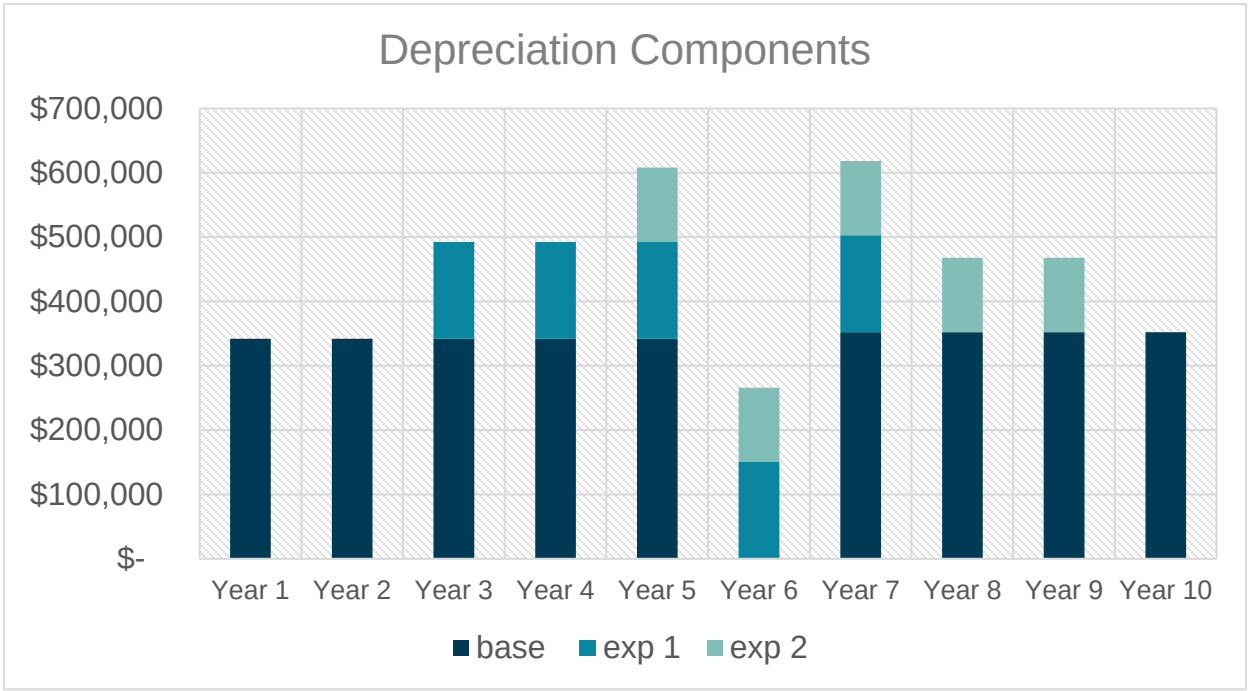
Additional revenue required to offset operating costs & depreciation



Sources of Additional Revenue

- Sponsorship
  - Title sponsorship (e.g., Citibike in NYC sponsored by Citibank
  - Presenting sponsorships
  - Station sponsorship (i.e., each individual station is sponsored)
- Advertising revenue
  - Stations, bikes, website, merchandise, promotional materials
  - Ads at stations currently not allowed in GR
- In-kind donations
  - Office/storage space, professional services (e.g., legal, financial, marketing), materials/consumables, operating assets
- Grants
  - Often focused around equity initiatives (e.g., expansion, targeted outreach, education and bicycle safety equipment)

Depreciation has its biggest impact in Year 5 with final expansion and again in Year 7 with possible equipment replacement



Key considerations

- Neighborhood expansion
- Seasonality (i.e., winter operations)
- Major community events
- Ridership mix (e.g., college student impact)

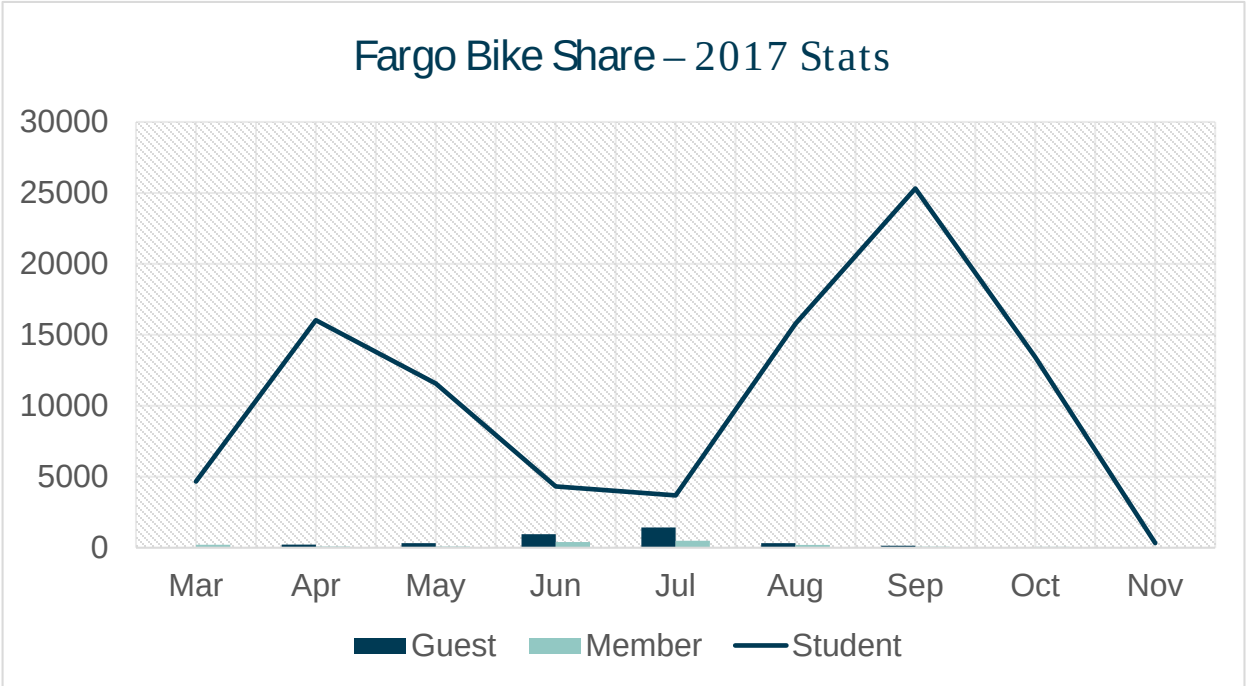
Neighborhood expansion impact

Ride Assumption / Month	7,500	27,500
COMPARISON FULL BUILD	Neigh	DTWN
Stations		
Full Stations	20	15
Hubs	35	30
Bikes	440	360
Capital Requirements		
Capital Purchase & Installation	$ 1,672,000	$ 1,368,000
System Startup		
Total Capital Cost	$ 1,672,000	$ 1,368,000
Rider Revenue		
Annual Member Dues	$ 126,000	$ 504,000
Rides < I hr	$ 67,500	$ 247,500
Rides > 90 minutes	$ 135,000	$ 585,000
Total Rider Revenue	$ 328,500	$ 1,336,500
Bike Share Operating Costs		
No inflation	$ 1,056,000	$ 864,000
Total	$ 1,056,000	$ 864,000
Addtl Revenue Required	$ (727,500.00)	$ 472,500.00
Rider Revenue % of operating cost	31%	155%

Neighborhood	
Total rides / month	7,500
percent member	50%
percent casual <1	25%
percent >1	25%
Poverty level =	37%
If neighborhood riders reflect poverty rate & poverty rate = free ride	
Ride revenues =	$ 127,575
Shortfall	$ (74,925)
If Low Income ride =	
$1.00	$ 33,300
Shortfall	$ (41,625)

Downtown at full build with high ridership levels could cross subsidize some neighborhood expansion

Seasonality and user mix will matter

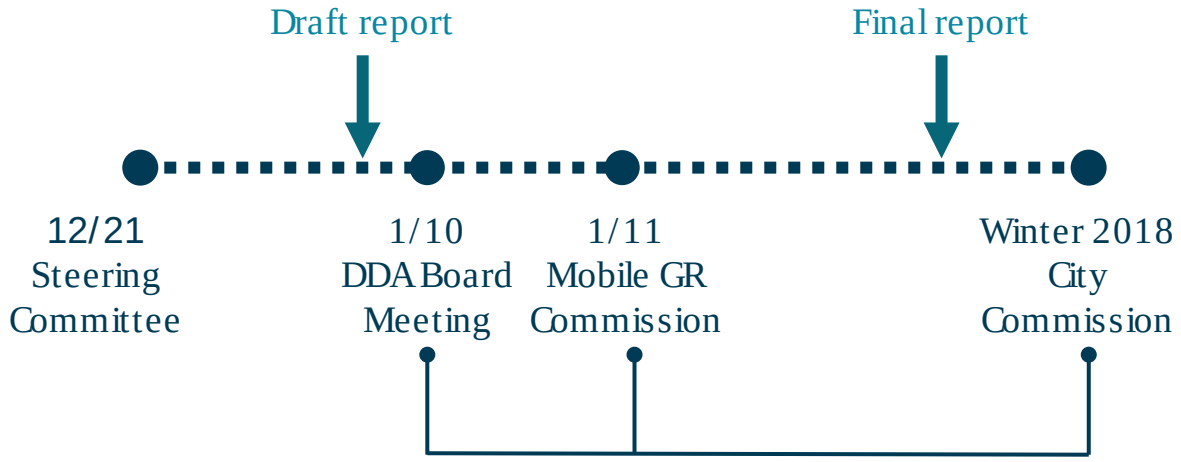


Note: Fargo's system has extremely high ridership from

Timeline & next steps

Proposed Report Structure

1. Executive Summary
2. Introduction
   - A. Biking in Grand Rapids
   - B. What is bike share?
   - C. Benefits of bike share
   - D. Innovations in bike share
   - E. Major decisions
3. Outreach summary
4. Goals
5. Business Plan
   - A. Market analysis
   - B. Governance/ operating model
   - C. System plan
   - D. Financials
   - E. Sources of funds
   - F. Marketing
6. Equity Plan
7. Critical path and timeline
8. Risks and barriers
9. Recommendations



How can you support bike share at these meetings?