



# **Grand Rapids Case Study— Community and Economic Benefits of Bicycling**

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**Michigan Department of Transportation**

**FINAL REPORT**

**Final Report**

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# **Grand Rapids Case Study— Community and Economic Benefits of Bicycling**

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# Grand Rapids Case Study – Community and Economic Benefits of Bicycling

## Introduction

This report on the community and economic impacts of bicycling in Grand Rapids is one of five case studies developed for the Michigan Department of Transportation (MDOT) by BBC Research & Consulting and R. Neuner Consulting (the study team). The research on Grand Rapids was conducted as part of the first phase of a study of economics and bicycling throughout Michigan. The study objectives include:

1. Estimating the community and economic benefits of bicycling in Michigan;
2. Estimating the community and economic benefits of bicycling in five case study communities throughout the state;
3. Providing in-depth qualitative information on links between bicycling and the economy according to business owners, government officials and bicycling advocates;
4. Estimating the economic benefits to Michigan from out-of-state participation in bicycling events; and
5. Estimating the economic benefits to Michigan from bicycle-related tourism.

Phase I of the project addressed the first three objectives and Phase II addresses the fourth and fifth objectives. The combination of the statewide and community specific research provides an opportunity to examine the specific ways policies and infrastructure impact local businesses and residents in the context of bicycling statewide. Additionally, the diverse nature of bicycling in the five case study communities gives stakeholders throughout Michigan an understanding of the many roles bicycling can play in a local economy. As a result, the case study reports can be a useful starting place for residents in investigating the economic benefits of bicycling in communities that were not studied as a part of this research.

Figure 1 provides a map of Michigan showing Grand Rapids, the other four case study communities and the state capital, Lansing.

**Figure 1.**  
**Case study communities**

Note:

\* Southwest Detroit and the Conner Creek Greenway Corridor.

Source:

BBC Research & Consulting, 2013.



This report includes the following subsections, detailing findings related to bicycling in the City of Grand Rapids:

1. Overview;
2. Economic and community benefits of bicycling in Grand Rapids;
3. Data sources;
4. Household spending and bicycle-related manufacturing;
5. Health benefits of bicycling;
6. Bicycle commuting and reduced absenteeism – corporate support of bicycling;
7. Events and tourism;
8. Community support and infrastructure; and
9. Background on bicycling in Grand Rapids.

For more information on the methodology and data sources, please see Section II – Methodology and Appendix B – Data Sources from the full statewide report.

The case study is accompanied by an infographic highlighting key statistics from the research.

## 1- Overview

The City of Grand Rapids is the second largest city in Michigan with a total population of nearly 190,000 residents. It serves as the central city in a metropolitan area containing more than 1,000,000 residents. It is located in western Lower Michigan and is home to a number of colleges and universities. It was recently ranked by the W.E. Upjohn Institute as the leader in job creation in the Midwest for large cities. Grand Rapids has made substantial investments recently in bicycle facilities and has a goal of installing 100 miles of bicycle lanes by 2015.

This case study provides an estimate of the community and economic benefits of bicycling in the City of Grand Rapids along with key information from local residents detailing the links between the economy and bicycling. This combination of data helps the reader quantify the impacts of bicycling on the economy while providing background and context from key Grand Rapids stakeholders on how bicycling enhances the Grand Rapids economy.

Given the relative lack of specific data on bicycling in Grand Rapids, the analysis relies on information from a variety of sources including:

- Numerous stakeholder interviews with Grand Rapids officials, business owners, residents and bicycle advocates;
- A household survey conducted with city residents; and
- A variety of secondary data sources including the United States Census Bureau's American Community Survey, the Michigan Department of Community Health, and the United States Centers for Disease Control and Prevention.

## 2- Economic and Health Benefits of Bicycling in Grand Rapids

Below is a summary of the annual economic and health benefits estimated for Grand Rapids associated with bicycling:

- Household spending on bicycling related items (from bike-specific and general retail establishments) - \$8.3 million;
- Manufacturing - \$2.6 million;
- Avoided health care costs - \$13.5 million;
- Reduced absenteeism - \$10.3 million; and
- Event and tourism spending - \$4.3 million.

These benefits total to approximately \$39.1 million annually. The remainder of the report provides more information on each of the key components of the overall economic and community benefits.

Along with the substantial benefits documented above, several key themes emerged from interviews with stakeholders in Grand Rapids that show the connections between bicycling and economic success as viewed by local officials, the business community and bicycling advocates:<sup>1</sup>

- Bicycling is a key component of placemaking and a strategy that many in the business community embrace as a tool for talent attraction and to position Grand Rapids as a competitive, vibrant city.
- The region has the largest bicycle industry presence in the state, including two international firms.
- Local government commitment has led to major strides in bicycling infrastructure in a short period of time.
- Bicycling fits into a larger commitment to sustainability in Grand Rapids. Grand Rapids has the most LEED certified buildings per capita in the United States and was named "America's Greenest City" by Fast Company magazine.
- There is a strong and growing bicycle racing culture in the Grand Rapids region. The relationship between racing and recent investments in bicycling is an area that warrants further study.

In the words of Matt Ruiter, general manager at Velocity Cycles, a custom bicycle rim and wheel manufacturer:

*"Bicycling is a viable form of transportation in Grand Rapids. Riding a bike isn't just about getting somewhere and saving gas, it makes people healthier, hungrier ... From a local economic perspective, there's a serious trickle-down effect."*

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<sup>1</sup> While qualitative information collected from various stakeholders in Grand Rapids proved to be of great value, the views and opinions expressed by stakeholders cited in this report do not necessarily represent those of MDOT.

### 3- Data Sources

A number of data sources were used in calculating the overall economic and community benefits and reporting on bicycling in Grand Rapids including:

**The American Community Survey (ACS)** – The ACS is a survey conducted by the United States Census Bureau on an ongoing basis. It provides statistically reliable information on residents throughout the United States for a variety of topics including basic demographics, employment, transportation and payments for essential goods and services.<sup>2</sup>

**2013 Michigan Department of Transportation Household Survey on Bicycling** – As part of the study, an online household survey was conducted to collect information from Michigan residents about their bicycling habits and spending. Responses were collected through outreach to statewide bicycle organizations, social media, cards distributed in each of the case study communities and post cards mailed to a random selection of households in Grand Rapids. A total of 314 responses from households in Grand Rapids were collected. Estimates regarding bicycling participation among all Grand Rapids households were calculated using the 132 responses collected from the mailed post card surveys. A copy of the survey instrument is included Appendix C of the Phase I report.

**Michigan Department of Community Health (MDCH)** – The Michigan Department of Community Health provides health services to millions of Michigan residents each year and maintains information on the rate of certain diseases and medical conditions such as stroke and heart disease. MDCH data estimating the number of stroke and heart disease cases and the average direct and indirect costs associated per case were used to estimate the number of such cases and costs incurred in Grand Rapids. These estimated costs were applied to the World Health Organization’s estimate of the percent of stroke and heart disease cases attributable to inactivity, thereby allowing an estimation of costs avoided by active cyclists (those who ride two days a week or more).

**The Centers for Disease Control and Prevention (CDC)** – The CDC is operated by the United States Department of Health and Human Services and collects data on health problems throughout the country. CDC data were used in calculating avoided health benefits due to bicycling, as described above.

**Dun & Bradstreet (D&B)** – D&B provides information on businesses by industry and location. Data from Hoovers, a D&B subsidiary, provides information on the revenues and employment of bicycle-related manufacturers and retailers throughout the state.

Where appropriate, this case study provides comparisons between other economic research related to bicycling and the results of this study.

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<sup>2</sup>For commuting by bicycle data were taken from the U.S. Census Bureau; American Community Survey; 2008-2012 5-Year Estimates, Table S0801 Commuting Characteristics by Sex. For information on the population and number of households in Michigan, data were taken from U.S. Census Bureau; American Community Survey; 2008-2012 5-Year Estimates, Table DP02 Selected Social Characteristics in the United States. Both tables were accessed at <http://factfinder2.census.gov/>.

**In-depth stakeholder interviews.** – As a part of this study, key public officials, business owners and representatives of community organizations were interviewed about bicycling and the local economy. A list of interview participants is included in Appendix D of the statewide report.

#### 4- Household Spending and Bicycle-related Manufacturing

In the household survey, respondents were asked to quantify their total annual household spending on bicycling. Spending on bicycling includes bicycles, components, equipment and maintenance. A significant amount of households do not spend money on bicycling, but approximately one-quarter of households reported spending at least \$100 annually, while a handful of households spend considerably more than \$100 annually.

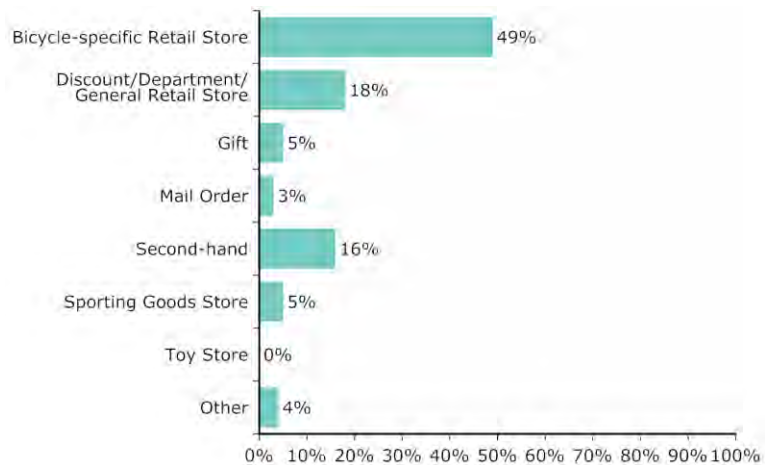
Based on the distribution of spending, the average Grand Rapids household spent roughly \$114 on bicycle-related equipment in 2013. This is slightly above the national \$90 per-household spending reported by the Outdoor Industry Association in 2012, and it is higher than the statewide average of \$46 per household.<sup>3</sup> Using the average household spending from the survey along with ACS data regarding the total number of households in Grand Rapids (72,785), the total spending on bicycle-related retail purchases in 2013 was approximately \$8.3 million.<sup>4</sup>

As shown in Figure 2, the most frequently reported type of retail establishment for bike purchases was a bike-specific retail shop. Such businesses were the source of about half of all bike purchases, while 18 percent of survey respondents’ primary bicycles came from general retail stores. Another 16 percent reported obtaining their bicycle second-hand from sources like garage sales and classified advertisements.

**Figure 2.**  
**Primary Bicycle Source**

Source:  
BBC Research & Consulting from 2013  
Michigan Department of Transportation  
Household Survey on Bicycling

n = 74



#### 4.1 - Bicycle retailers in Grand Rapids.

In addition to information from the household survey, data were also collected from Dun & Bradstreet about bicycle retailers in Grand Rapids.

<sup>3</sup> The Outdoor Recreation Economy, Outdoor Industry Association accessed at : [http://www.outdoorindustry.org/images/researchfiles/OIA\\_OutdoorRecEconomyReport2012.pdf?167](http://www.outdoorindustry.org/images/researchfiles/OIA_OutdoorRecEconomyReport2012.pdf?167)

<sup>4</sup> U.S. Census Bureau; American Community Survey; 2008-2012 5-Year Estimates, Table DP02 Selected Social Characteristics in the United States.



Dun & Bradstreet maintains business listings for the United States and reports information such as revenue and employment. Using these data, BBC collected information on bicycle-related retail establishments in Grand Rapids. The average three-year revenue for these businesses in Grand Rapids was more than \$1.7 million. Dun & Bradstreet also reported that these businesses employ approximately 21 individuals. These data serve as a conservative estimate of the bike-specific retail sales and employment in Grand Rapids given that there may be new businesses founded since the data were collected and that many establishments that might be bike-specific shops may be categorized more broadly by Dun & Bradstreet (for example as a sporting goods retailer).

Bicycle retailers interviewed for the study reported that increased bicycling is having an impact on the bicycle retail environment in the city and region. According to Nate Phelps, the owner of Central District Cyclery,

*“This community is developing an identity around biking and livability. Five years ago that would not have happened. People are talking about Grand Rapids as its own thing, putting its own spin on things.”*

Representatives from Grand Rapids’ bicycle industry firms reported growing sales figures, but did not provide specific data on the increase in revenues. One representative reported that their company had increased the number of dealers they supply by 25 percent in the past year and that they had to turn dealers away in 2013.

**4.2 - Non-bicycle-specific retail spending.** Given that there are many types of retailers in Grand Rapids that sell bicycles, the study team used results from the household survey on bicycle spending along with the reported distribution of type of establishment to estimate total bicycle-related spending at general retail establishments. Using this information, bicycle related spending by Grand Rapids households represents approximately \$2.2 million in annual sales.

**4.3 - Bicycle-related manufacturing in Grand Rapids.** Grand Rapids is home to a diverse bicycle industry, including global bicycle manufacturing and component firms, including CycleSafe, Velocity USA, Inc., and TerraTrike / WizWheels, Inc.

Local firms pointed to West Michigan’s legacy in furniture making and Michigan’s manufacturing base as providing competitive advantages. Several firms use Michigan suppliers to meet their production needs, including prototyping, welding, powdercoating, and other manufacturing services. According to Richard Hartger, CEO of CycleSafe, a Grand Rapids secure bicycle parking manufacturer:

*“It is really important for us to find good quality suppliers, including those that are ISO 9001 certified. Our partners in West Michigan are great and reflect the kind of production capability we have here.”*

As reported by Dun & Bradstreet, Grand Rapids bicycle-related manufacturers have at approximately \$2.6 million annually in revenues and account for 23 jobs in the local economy. As with bicycle retailers, some bicycle-related manufacturing may be classified in a broader

industry category and thus this represents a conservative estimate of the manufacturing-related benefits from bicycling in Grand Rapids.

## 5- Health Benefits of Bicycling

The study team used information from a variety of sources to estimate the health and workplace benefits derived from bicycling in Grand Rapids.

**5.1 - Health benefits from physical activity.** Physical activity helps reduce the risk of a number of costly medical conditions. Several studies quantified the value of physical activity in terms of avoided health costs. The study team quantified benefits to Grand Rapids from physical activity based on avoided costs for treatment of strokes and heart disease. The information came from a variety of sources including:

- Data on the proportion of the conditions caused by physical inactivity from the World Health Organization;<sup>5</sup>
- The annual number of cases of these conditions in Michigan from the Centers for Disease Control and Prevention (CDC) (strokes) and the Michigan Department of Community Health (MDCH) (heart disease);
- The annual direct and indirect costs per case from the Michigan Department of Community Health; and
- The proportion of residents who reported riding their bike two or more days each week in the household survey.

Using statewide heart disease and stroke case data from CDC and MDCH, it was estimated that Grand Rapids experiences approximately 540 cases of stroke and 2,100 cases of heart disease annually that require hospitalization. These case numbers were applied to MDCH's cost per case estimates of about \$90,000 for stroke and \$88,000 for heart disease and the World Health Organization's (WHO's) estimation that 10 percent of stroke cases and 20 percent of heart disease cases are attributable to inactivity.

Applying the rates and costs of cases for Michigan to the proportion of active bicyclists in Grand Rapids, the study team estimates that the total avoided costs for strokes and heart disease in Grand Rapids due to bicycling is approximately \$13.5 million. A number of other costly medical conditions can also be linked to reduced physical activity including diabetes and some forms of cancer. The study team was not able to find adequate data to estimate the potential avoided health costs for these diseases.

## 6- Bicycle Commuting and Reduced Absenteeism - Corporate Support of Bicycling

2012 American Community Survey (ACS) also provides some data on bicycle commuting in Grand Rapids, reporting the total commute share at 0.9 percent.<sup>6</sup> The ACS asks participants to

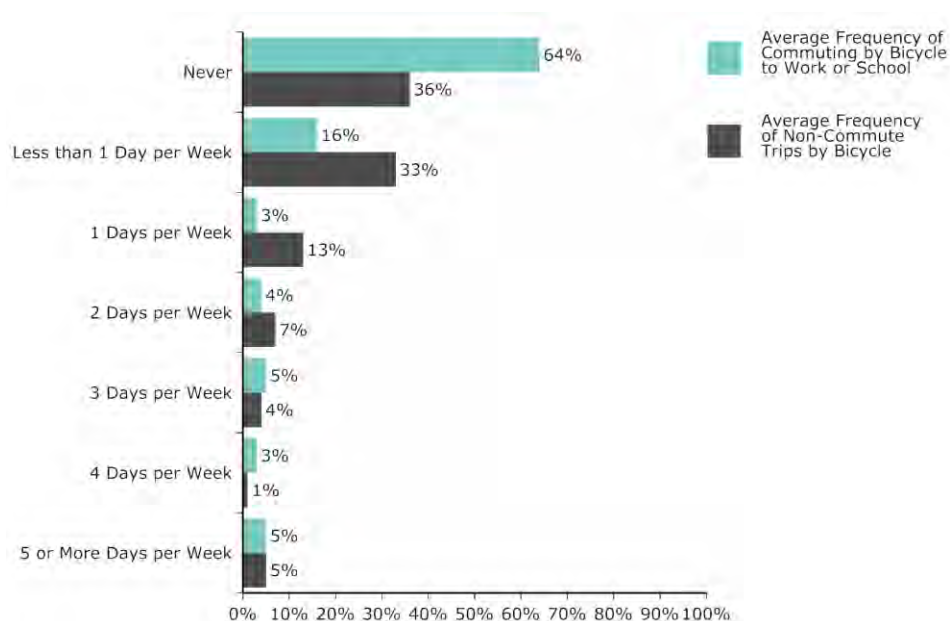
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<sup>5</sup> *The World Health Report 2002: Reducing Risks, Promoting Healthy Life.*

report their commute by asking how respondents “usually” commuted to work over the past week and directs respondents to only report the type of transportation which accounts for the majority of the distance. As a result, it may underreport the prevalence of bike commuting in Grand Rapids given that some individuals may not “usually” bike and that many bike commuters may combine their bike commute with other types of transportation including transit and carpooling.

The study team also asked cyclists in the household survey about how often they use their bicycle for commuting or other types of transportation. Results are shown in Figure 3 below. While most responding cyclists report never commuting to work or school by bicycle, about one-third do so at least occasionally. Non-work/school transportation by bicycle, including running errands or attending social events, is more common.

**Figure 3.**  
**Average Frequency of Commuting and Non-work/school transportation among Bicyclists**



Source: BBC Research & Consulting from 2013 Michigan Department of Transportation Household Survey on Bicycling  
 n = 74; 75

Local businesses have helped encourage increased commuting in Grand Rapids, such as Steelcase, Inc., a global company headquartered in Grand Rapids that develops and manufactures furniture products and services for workplaces. Steelcase has an employee presence on the Active Commute Week planning team, and is a key corporate partner in promoting bicycling in the Grand Rapids region. In 2012, they added an indoor bike storage facility for employees at their global headquarters, which serves more than 900 employees. The parking facility is a designated, secure room with easy access to the outside of the building, and includes storage

<sup>6</sup> U.S. Census Bureau; American Community Survey; 2008-2012 5-Year Estimates, Table S0801 Commuting Characteristics by Sex.

bins and clothing / helmet hooks. Steelcase representatives indicated that the use of the room has been increasing according to data monitoring the card access system in the facility.

Sean Fahey, a Steelcase representative, cited several reasons for investing in this kind of infrastructure, including reducing employee health care costs, promoting sustainability, and attracting talented employees:

*“Our mission is to create great experiences wherever work happens. If you take a walk around our building or look at what we’re involved in, it is about creating a great experience for our employees.”*

One local stakeholder pointed out that other large employers are starting to support bicycling by promoting biking to work, including the GGRBC’s Active Commute Week.

**6.1 - Reduced absenteeism.** Increase bicycling for transportation or recreation can have benefits for employers. The London School of Economics estimates that active cyclists in the workplace miss one fewer day of work per year than non-bicycling workers,<sup>7</sup> and research published in the Journal of Occupational and Environmental Medicine estimates that one work day absence equates to an average of \$341 in lost productivity. Using the proportion of active cyclists in Grand Rapids along with an estimate of the cost of absenteeism per day, the study estimated that the total benefits to Grand Rapids due to reduced absenteeism are approximately \$10.3 million.

## 7- Events and Tourism

Grand Rapids has a strong bicycle racing culture, backed up by several major bicycling events. Major events include the Gran Fondo, the Kisscross Cyclocross Series, the Lumberjack 100, and the Barry-Roubaix.

The Kisscross race series has grown to a total of 6 to 8 races a season. The race series started with about 35 people at their first event in 2005, to a record of 201 at an event in 2012. In 2013 they averaged 150-160 racers per event.

Another are race, the Barry-Roubaix, is now the largest gravel road race in the United States. In 2013, the race had just fewer than 3,000 registrants (the race started in 2009 with 290 registrants). 29% of the 2013 registrants were from outside Michigan, including more than 400 riders from Illinois and nearly 200 from Indiana. Since the race began in 2009, racers have attended from 28 states and from Ontario. Race organizers estimated that the 2013 event has a total economic impact of more than \$407,000.<sup>8</sup>

Bicycling is fitting into non-bike related events, as well. One local bike shop offered tours of ArtPrize, an international art competition in Grand Rapids with more than \$500,000 in prizes.

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<sup>7</sup> The British Cycling Economy Gross Cycling Product Report. London School of Economics

<sup>8</sup> *The Founders Brewing Barry-Roubaix 2013 Event Summary*. Provided by the event organizers. The report makes assumptions about meal and transportation costs for all racers and lodging costs for riders traveling more than 200 miles and applies those estimates to the number of participants.

Additionally, several large, regional employers have been involved in the bicycling community for the last decade by sponsoring bicycle events and racing teams, including Spectrum Health and Priority Health.

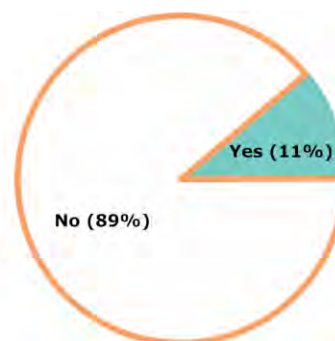
**7.1 - Results from the household survey.** As shown in Figure 4, about 10 percent of Grand Rapids residents reported participating in a bicycle event or taking a trip related to bicycling during the past year. Those who did report this type of participation typically only attended a few events.

**Figure 4.**  
**Percent of Residents that Participated in a Bicycling Event or Bicycling-Oriented Vacation in Michigan in the Past Year**

Source:  
BBC Research & Consulting from 2013  
Michigan Department of Transportation  
Household Survey on Bicycling

n =132

Have you participated in an organized bicycle event in Michigan (e.g. Bike Ypsi Fall Ride, Tour de Troit) or taken a vacation in Michigan during which bicycling was a key activity (i.e. bicycling-oriented vacation) in the past 12 months?



The study team used information from the household survey to estimate the total spending at events by cyclists from Grand Rapids. Respondents were asked to estimate their expenses for food, travel and other expenses. Based on this information, the study team estimates that cyclists in Grand Rapids spend approximately \$4.3 million annually on bike-related events and travel.

In Phase II of the study, the study team further quantifies the impacts of event and tourism spending on the statewide economy.

## 8- Community Support and Infrastructure

A substantial public sector commitment has helped Michigan's second-largest city make major strides in bicycling in a very short period of time. The city's entire on-road infrastructure was installed since 2011, with 0 miles of bike lanes in 2010 to 41.6 miles of on-road facilities in 2014 as reported by Mayor George K. Heartwell in his 2014 State of the City Address.<sup>9</sup> The city invested approximately \$71,000 in the first year of this expansion and plans to spend approximately \$91,000 per year until 2017 to build and maintain the network.<sup>10</sup>

Local government has also dedicated city staff resources to bicycling. Grand Rapids is the only Michigan community to have a dedicated non-motorized coordinator or engineer at the city government level. The position is currently temporary, but has been in place for the last 14 months. City officials reported that it will continue well into 2014, and that they are working on

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<sup>9</sup> State of the City Address. Honorable George K. Heartwell, Mayor of the City of Grand Rapids. January 11, 2014.

<sup>10</sup> See why Grand Rapids wants to add 100 miles of bike lanes by 2017. Accessed at: [http://www.mlive.com/news/grand-rapids/index.ssf/2012/04/see\\_why\\_grand\\_rapids\\_wants\\_to.html](http://www.mlive.com/news/grand-rapids/index.ssf/2012/04/see_why_grand_rapids_wants_to.html)

funding to make it permanent. Despite funding challenges, Suzanne Schulz, the Director of the Planning Department for the City of Grand Rapids, says that this investment is critical:

*“The Grand Rapids community has not found funding challenges to be an acceptable answer for waiting to build a more accessible transportation system. We need to build an accessible system. Our city demands that of us, and it is becoming an expectation of how we do business. Money is a challenge, but it can’t be an excuse.”*

Policy changes that include bicycling as a component of planning decisions underpin some of the City’s bicycling growth. The City re-wrote its zoning ordinance in 2007, adding requirements for bicycle parking, and adopted a complete streets resolution in March 2011.

A number of Grand Rapids stakeholders, including city officials, see bicycling as a relatively low-cost path to economic development and talent attraction for Grand Rapids. Officials at the City of Grand Rapids see a multitude of benefits from improving bicycle facilities in the City, including direct fiscal benefits, and less road and car parking infrastructure to maintain. They also see a host of indirect benefits. As Piotr Lewak, a Senior Project Engineer for the City of Grand Rapids, said:

*“If we cut total vehicle miles traveled down by a certain percentage, we can have a dramatic impact on air pollution, obesity, congestion, and our quality of life. People can live closer to work because they have another mode of transportation to choose from.”*

The City is not alone in its increased commitment to bicycling. At the regional level, the Grand Valley Metro Council recently added CMAQ as an eligible funding source for non-motorized projects. This is a “major step forward” for addressing the growing bicycle ridership in the region, according to Abed Itani, the director of transportation planning for the Council. Previously, communities had to rely solely on local road funding for bicycle-related projects.

**8.1 - Talent attraction and placemaking.** Another important aspect of bicycling according to many of the stakeholders interviewed is that making Grand Rapids more bike-friendly will help businesses attract a talented workforce. A recent study from the University of Michigan suggested that one reason for reduced driving among young adults in the U.S. was the preference for biking and walking<sup>11</sup>. While more research is needed on the link between planning decisions and talent attraction, many of the business representatives interviewed see bicycling as important their recruiting:

*“That business case for retaining and attracting talent is something people in Grand Rapids understand. City leaders get it. Downtown Grand Rapids, Inc. gets it. Any employer that needs innovative people gets that. They support bicycling because it’s a key component of talent attraction.” – Tom Tilma, Greater Grand Rapids Bicycling Coalition*

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<sup>11</sup> *The Reasons for the Recent Decline in Young Driver Licensing in the U.S.* Brandon Schoettle and Michael Sivak, The University of Michigan Transportation Research Institute, August 2013.

The growth of downtown Grand Rapids as a residential and entertainment destination has included bicycle infrastructure improvements. The Downtown Development Authority (DDA) has an on-street bicycle parking corral program, and creates a yearly parking plan. Businesses across the City are asking to get bike parking facilities for their customers and employees. In 2013, the DDA implemented a plan to install six on-street bike corrals for four months in different areas of downtown Grand Rapids. The total cost for installing the 6 on-street corrals and 139 U-shaped racks was approximately \$55,350. The city also spent \$5,000 on a marketing campaign to tell residents about the increase in bike parking in the downtown area.<sup>12</sup>

As Suzanne Schulz said,

*“We’re seeing a greater push toward secure bike parking. More developers are adding this, because people are demanding it.”*

The impact of parking infrastructure on the number of cyclists visiting local businesses in the downtown area has not been documented in Michigan; a few studies have documented benefits from increased bike parking.<sup>13</sup> Further research could help better quantify the impacts of such facilities on businesses in communities like Grand Rapids.

**8.2 - Value of bicycle infrastructure.** Residents in Grand Rapids also report substantial value from the availability of quality bicycle infrastructure. Survey respondents were asked to quantify the value placed on bicycle-specific infrastructure such as bicycle lanes, cycle tracks and shared-use pathways. As shown in Figure 5, about 40 percent of residents placed an annual value of accessing bicycle infrastructure at more than \$100. Nine percent of respondents even placed an annual value of more than \$5,000 on the ability to use bicycle infrastructure.<sup>14</sup>

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<sup>12</sup> Each U-rack cost \$250 while the bike corrals, which provide parking for 12-18 bikes cost \$2,100. Source: *More than 200 bicycle parking spots coming to downtown Grand Rapids*, Accessed: [http://www.mlive.com/news/grand-rapids/index.ssf/2013/02/more\\_than\\_200\\_bicycle\\_parking.html](http://www.mlive.com/news/grand-rapids/index.ssf/2013/02/more_than_200_bicycle_parking.html) and *Downtown Grand Rapids bike corrals to displace 6 metered parking spaces for 12 months*. Accessed at: [http://www.mlive.com/news/grand-rapids/index.ssf/2013/02/downtown\\_grand\\_rapids\\_bike\\_cor.html](http://www.mlive.com/news/grand-rapids/index.ssf/2013/02/downtown_grand_rapids_bike_cor.html)

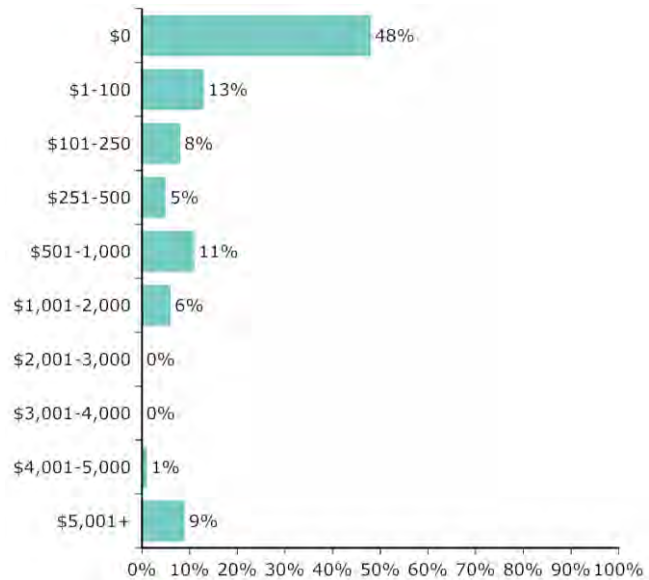
<sup>13</sup> Researchers in Portland report that business owners cite increased customers, improved seating opportunities, and better visibility of their businesses from the street *Bike Corrals: Local Business Impacts, Benefits, and Attitudes*. Drew Meisel, Portland State University School of Urban Studies and Planning. In Melbourne, Australia research suggests that converting a car parking space to a bicycle corral is an effective way to increase revenue in business districts. *Economic impact of bicycle corral parking in Melbourne, Australia*, Simon Stainsby.

<sup>14</sup> It is important to note that while respondents reported a high value for a network of bicycling infrastructure, this does not suggest that Grand Rapids should implement taxes or fees for residents to access this infrastructure. Bicycle registration and fee collection have been considered by a few jurisdictions in the past decade and have not been implemented or have been repealed for a variety of reasons (Ottawa: <http://www.ottawasun.com/2012/01/13/staff-to-council-no-bicycle-licences>; San Diego: <http://calbike.org/san-diego-repeals-bicycle-license-law/>; Minneapolis and Minnesota: <http://www.dot.state.mn.us/bike/other.html>, Long Beach: <http://latimesblogs.latimes.com/lanow/2011/02/long-beach-eliminates-bike-registration-law-that-dealt-steep-fines.html>).

**Figure 5.  
Annual Value of Bicycling  
Infrastructure**

Source:  
BBC Research & Consulting from 2013 Michigan  
Department of Transportation Household Survey  
on Bicycling

n = 132



A few studies have attempted to quantify the impact of installing specific infrastructure elements (such as a protected bike lane or cycle-track). One of the more comprehensive studies, conducted by the New York City Department of Transportation, showed that protected bike lanes increased retail sales by locally based businesses by 49 percent.<sup>15</sup> Further research is needed to verify if these findings hold for non-protected bike infrastructure and in communities like Grand Rapids.

## 9- Background on Bicycling in Grand Rapids

The household survey and stakeholder interviews also provided information on the nature of bicycling in Grand Rapids including:

- Overall ridership;
- An overview of recreational riding;
- Barriers to increased bicycling; and
- The promotion and encouragement of bicycling in Grand Rapids.

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<sup>15</sup> *Measuring the Street: New Metrics for 21st Century Streets*. New York City DOT.



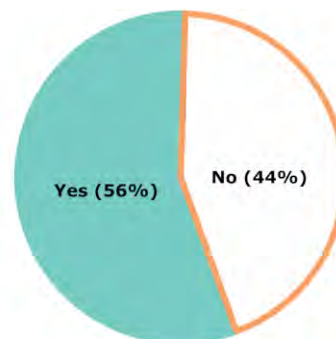
**9.1 - Overall ridership.** As shown in Figure 6, slightly more than half of the adult residents of Grand Rapids reported riding a bike in the past year. Those respondents who report having ridden a bicycle in the past 12 months are considered “bicyclists” in this report.

**Figure 6.  
Residents Who Have Ridden in  
the Past Year**

Source:  
BBC Research & Consulting from 2013 Michigan  
Department of Transportation Household Survey  
on Bicycling

n = 131

**Have you personally  
ridden a bicycle for any  
reason in the past year?**



According to the stakeholder interviews, the recent investment in bicycle infrastructure is having a positive impact on the number of people choosing to bicycle in Grand Rapids. Stakeholders reported that a combination of off-road trails and on-road facilities are having a positive influence on the City’s growing bicycle ridership.

*“I see more everyday riders than I see people in spandex. I see more and more bikes all the time. It’s more than the upwardly mobile. It’s a mode of transportation that is affordable and reliable. You don’t have to wait for a bus. It’s growing across the community in every economic sector and it is happening because of the increased infrastructure you see all over this city.” – Keith Winn, Catalyst Partners*

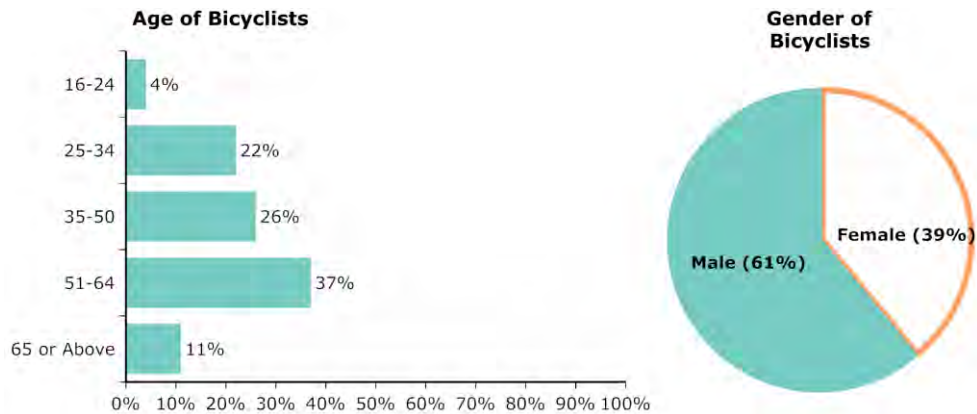
The Greater Grand Rapids Bicycle Coalition has organized four bike counts at the same location over the past three years. The total number of riders has increased from 437 in fall of 2011 to 688 in fall of 2013; an increase of 60 percent. The counts also showed a substantial decrease in sidewalk use by cyclists on one corridor where a bike lane was installed and a smaller decrease on another corridor where a bike lane was installed.<sup>16</sup> Across all years of the count, more than 40 percent of bicyclists indicated that they would have used an automobile if they were not using a bicycle.

**9.1.1 - Demographics.** The household survey provides demographic information about residents who reported riding in the last year. As seen in Figure 7, approximately 60 percent of cyclists in Grand Rapids were male, and more than 70 percent were 35 years or older.

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<sup>16</sup> Bicycle Traffic Count. Greater Grand Rapids Bicycle Coalition. Accessed at: <http://www.bikegrandrapids.org/programs-and-projects/bicycle-traffic-count-results/>

**Figure 7.**  
**Age and Gender of Bicyclists**



Source: BBC Research & Consulting from 2013 Michigan Department of Transportation Household Survey on Bicycling  
 n = 73; 72

**9.2 - Recreational Riding.** There is a diverse array of bicycling going on in Grand Rapids. As Josh Duggan, a past chair of the Greater Grand Rapids Bicycling Coalition, said:

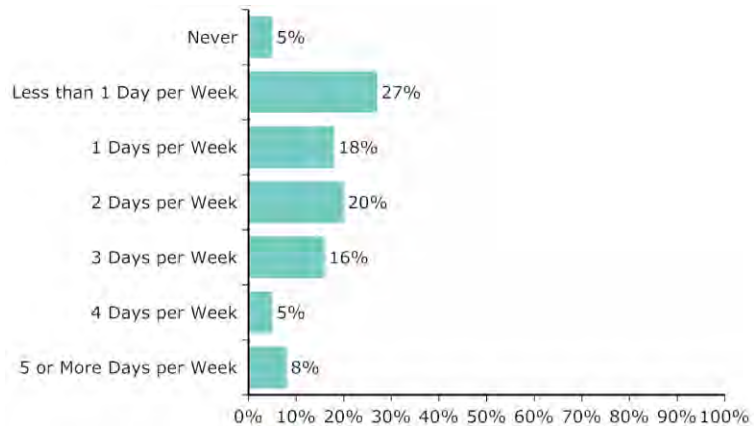
*“I love the bicycle culture here because there’s a little bit of everything. You can find BMX, roadies, mountain bikers, bike polo...whatever you’re looking for. If you seek out a kind of riding, you can find it in Grand Rapids.”*

Among residents who have ridden a bicycle in the past year, about 27 percent reported bicycling recreationally some but less than once per week, while about half report riding their bike for recreation at least two days per week. This distribution of the frequency of recreational bicycling is shown in Figure 8.

**Figure 8.**  
**Average Frequency of Recreational Bicycling among cyclists**

Source:  
 BBC Research & Consulting from 2013 Michigan Department of Transportation Household Survey on Bicycling

n = 74



**9.2.1 – Fat Bikes.** One prime area of growth in recreational bicycling in Grand Rapids is fat bikes. A “fat bike” is a bicycle with over-sized tires, designed for riding on softer terrain, such as snow and sand. Fat bikes are built around frames with large forks and stays to accommodate the wide rims required to fit their large tires.

Bike shop representatives and stakeholders alike highlighted the growing popularity of fat bikes in Grand Rapids and across West Michigan. According to a local bicycle race promoter, Michigan's natural amenities provide an opportunity to take advantage of this new bicycling trend:

*"I brushed it [fat bikes] off as dumb novelty at first, but I'm seeing more and more of them, now that they're able to mass produce the bikes, and keep costs reasonable. We're in Michigan, and there's a lot of sand and snow. It makes sense why they are growing in popularity here." – Rick Plite, promoter for Krisscross and Barry Roubaix*

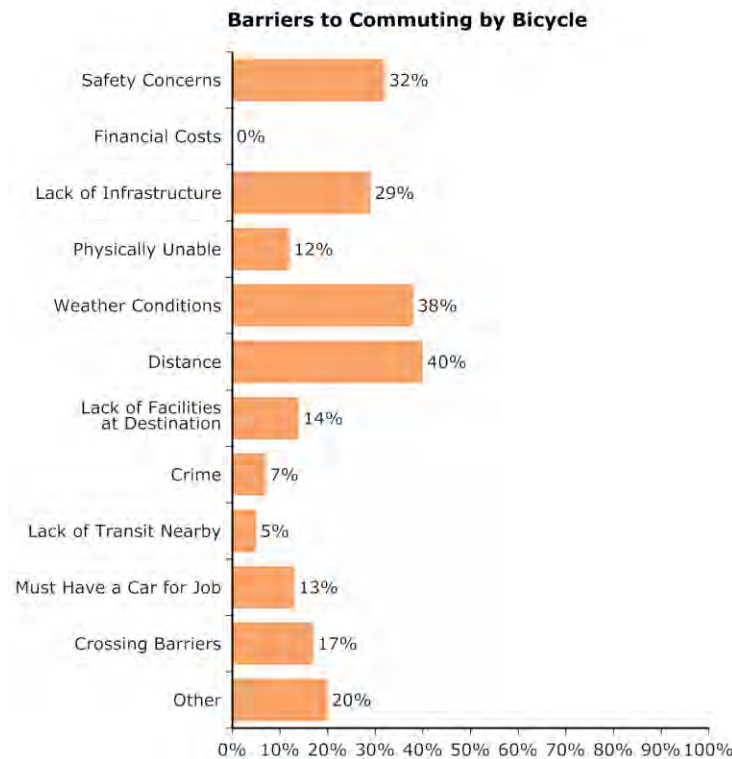
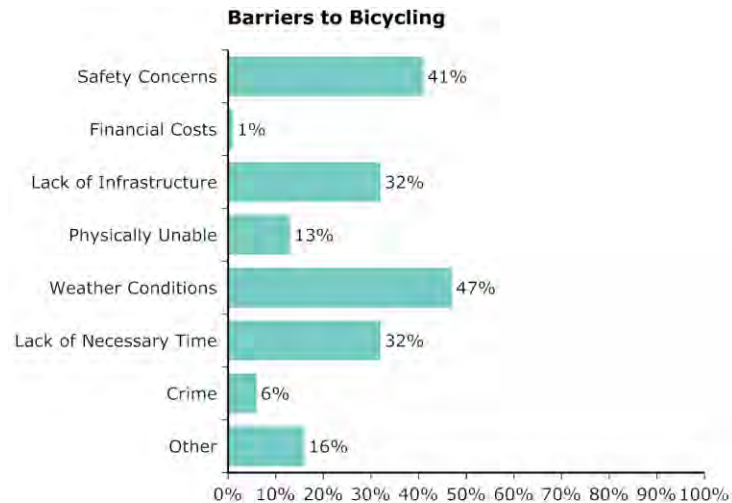
The fat bike trend is having a positive impact on the Grand Rapids region bicycle industry as well. Velocity Cycles reported that they are seeing an increase in sales of rims for fat bikes and fat bike tires through their wheel-building subsidiary, but did not provide any specific sales numbers. Sales are helping level off a typically slow winter season. The relative growth of fat bikes is an area where more research is needed. Beyond anecdotal information, there is little information, even on the national market, regarding this trend.

**9.3 - Barriers to increased bicycling.** In the household survey, residents were asked about barriers to riding more overall as well as barriers specific to commuting by bicycle. Respondents were able to cite multiple barriers rather than indicating only the largest barrier. Addressing and mitigating the most commonly stated barriers to bicycling is an effective approach to increasing ridership. The most frequently cited barriers to increased bicycling in Grand Rapids were weather conditions (47%) and safety concerns (41%).

**Figure 9.**  
**Barriers to Bicycling and**  
**Commuting**

Source:  
 BBC Research & Consulting from 2013 Michigan  
 Department of Transportation Household Survey  
 on Bicycling

n = 133



When asked about barriers to commuting specifically, 40 percent reported that the distance was a barrier, followed closely by weather conditions (38%). The next highest barriers to commuting were safety concerns (32%) and lack of infrastructure (29%).

**9.4 – Promotion and encouragement.** One of the most common reasons cited by stakeholders for the growth in bicycling in Grand Rapids is the influence and growth of the Greater Grand Rapids Bicycle Coalition (GGRBC). The GGRBC was started as a non-profit organization in 2009, the result of a citywide Bike Summit that drew more than 200 people together. The GGRBC serves as a voice advocating for safer and more accessible bicycling of all kinds in the Greater Grand Rapids area. The GGRBC is working to make concrete, visible improvements to the Grand Rapids metro area in order to increase healthy and safe bicycle

opportunities through advocacy and education. The GGRBC Room to Ride campaign is currently actively advocating for 100 miles of bike lanes in Grand Rapids by 2015.

The GGRBC has a staff of two, and meets with City planning officials on a monthly basis to prospect projects and discuss bicycling-related issues. In the words of Suzanne Schulz, “The GGRBC is having a real impact in pushing the City to be more bicycle-friendly.”

# Bicycling in GRAND RAPIDS



Population: 189,340

Miles of existing infrastructure: 42

*"Riding a bike isn't just about getting somewhere and saving gas...From a local economic perspective, there's a serious trickle-down effect."*

- Matt Ruiter, Velocity Cycles



Bicycling retail revenue

**\$1.7 million**

**39%**

Residents who place an annual value of at least \$100 on the ability to use bicycle infrastructure

Total annual spending associated with bicycling events and vacations in Michigan

**\$4.3 million**

**55%**

Bicyclists who bike at least twice a week

People employed by bicycling industry: 32



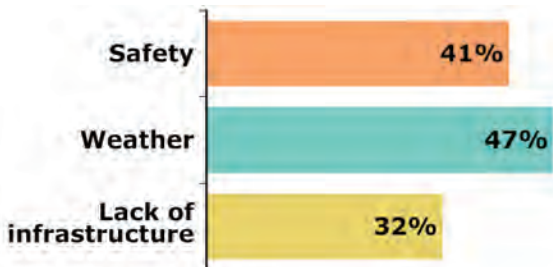
**18%**

Bicyclists who commute by bicycle at least twice a week

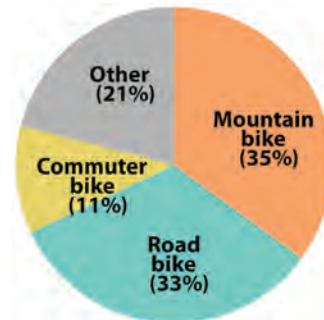
**11%**

Residents who participated in a bicycling event or bicycle-oriented vacation in Michigan in the past year

Key barriers to bicycling



Top primary bicycle types



Total annual economic impact of bicycling **\$39.1 million**

Study funded by MDOT

For more information contact Josh DeBruyn, MDOT Bicycle and Pedestrian Coordinator at [debruynj@michigan.gov](mailto:debruynj@michigan.gov)

This infographic provides a one-page snapshot of bicycling within Grand Rapids based on information gathered by BBC Research & Consulting and R. Neuner Consulting for the Michigan Department of Transportation (MDOT) as part of the first phase of a two-phase study on the economic benefits of bicycling in Michigan. The infographic is accompanied by a case study report on Grand Rapids as well as a report providing information on the state of Michigan and the data sources and methodology used for the study. A household survey was conducted with residents in Grand Rapids, which gathered the following information shown on the infographic:

- Annual spending associated with bicycling events and vacations;
- Key barriers to bicycling;
- Percent of residents who place an annual value of at least \$100 on the ability to use bicycle infrastructure;
- Percent of bicyclists who bike at least twice a week;
- Percent of bicyclists who commute by bicycle at least twice a week;
- Percent of residents who participated in a bicycling event in Michigan in the past year; and
- Primary types of bicycles used by residents.

Below is a description of the data source for other data on the infographic:

- Population – provided by the U.S. Census Bureau 2012 American Community Survey;
- Miles of existing infrastructure – gathered from interviews with local officials during the case study process;
- Bicycle Friendly Community<sup>SM</sup> Rating – a rating based on a number of metrics related to bicycling support and participation from the League of American Bicyclists;
- Bicycling retail revenue – based on the three-year average annual revenue of bicycle retailers in the City of Grand Rapids reported in Dun & Bradstreet;
- People employed by bicycling industry – based on the three year annual employment averages for retail bicycle shops and bicycle manufactures located in Grand Rapids as reported in Dun & Bradstreet;
- Total annual impact of bicycling – calculated from the following components:
  - Total household retail spending on bicycling reported by Grand Rapids residents in the household survey (\$8.3 million);
  - The total household spending on bicycle events and vacations as reported by Grand Rapids residents in the household survey (\$4.3 million);
  - The average three-year annual revenues of bicycle-related manufactures in Grand Rapids as reported in Dun & Bradstreet (\$2.6 million);
  - The avoided health care costs due to physical activity from bicycling based on (\$13.5 million):
    - The statewide rates of hospitalization for stroke and heart disease from the United States Centers for Disease Control;
    - The proportion of heart disease and stroke due to physical inactivity from the World Health Organization;
    - The proportion of residents who are physical active using their bicycle from the household survey; and
    - The average cost of hospitalization for stroke and heart disease from the Michigan Department of Community Health.
  - The avoided costs of absenteeism for Grand Rapids employees due to bicycling based on (\$10.3 million):
    - The proportion of residents who are physical active using their bicycle from the household survey;
    - The cost of absenteeism per day from the Journal of Occupational and Environmental Medicine;<sup>1</sup> and
    - The number of days per year of avoided absenteeism due to cycling from the London School of Economics.<sup>2</sup>

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<sup>1</sup> The Health and Productivity Cost Burden of the “Top 10” Physical and Mental Health Conditions Affecting Six Large U.S. Employers in 1999, by Dr. Ron Z. Goetzel, et al.

<sup>2</sup> The British Cycling Economy Gross Cycling Product Report. London School of Economics