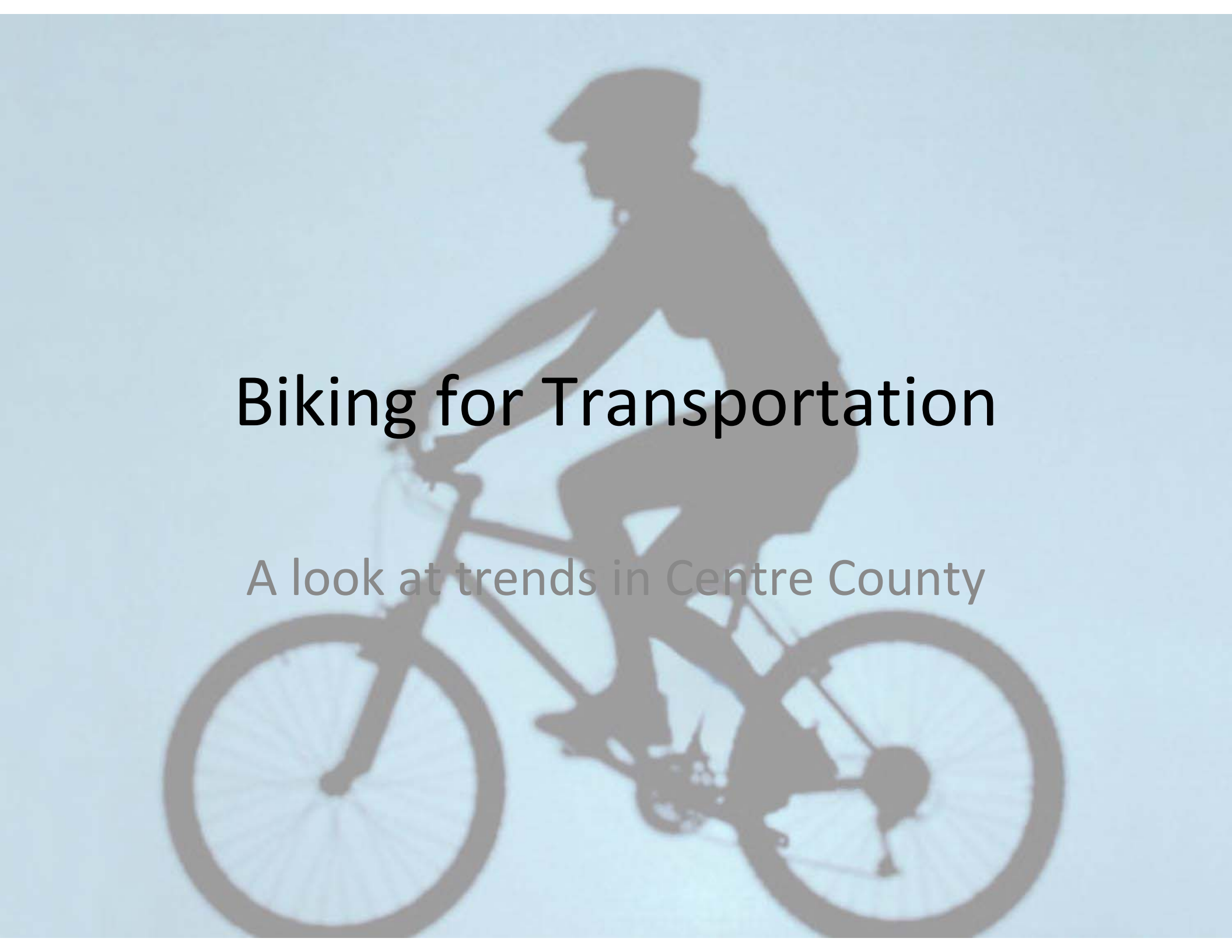


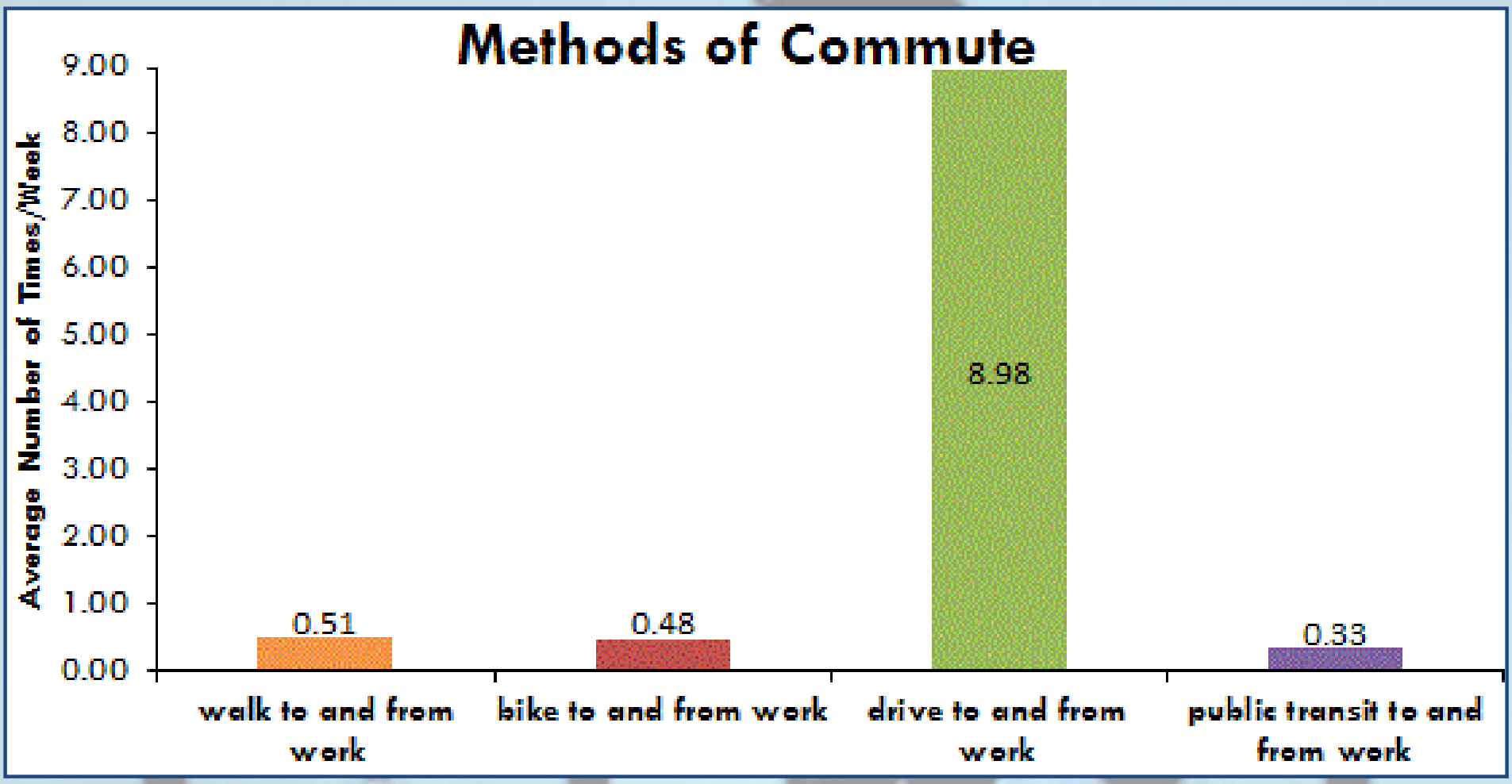
Biking for Transportation

A look at trends in Centre County

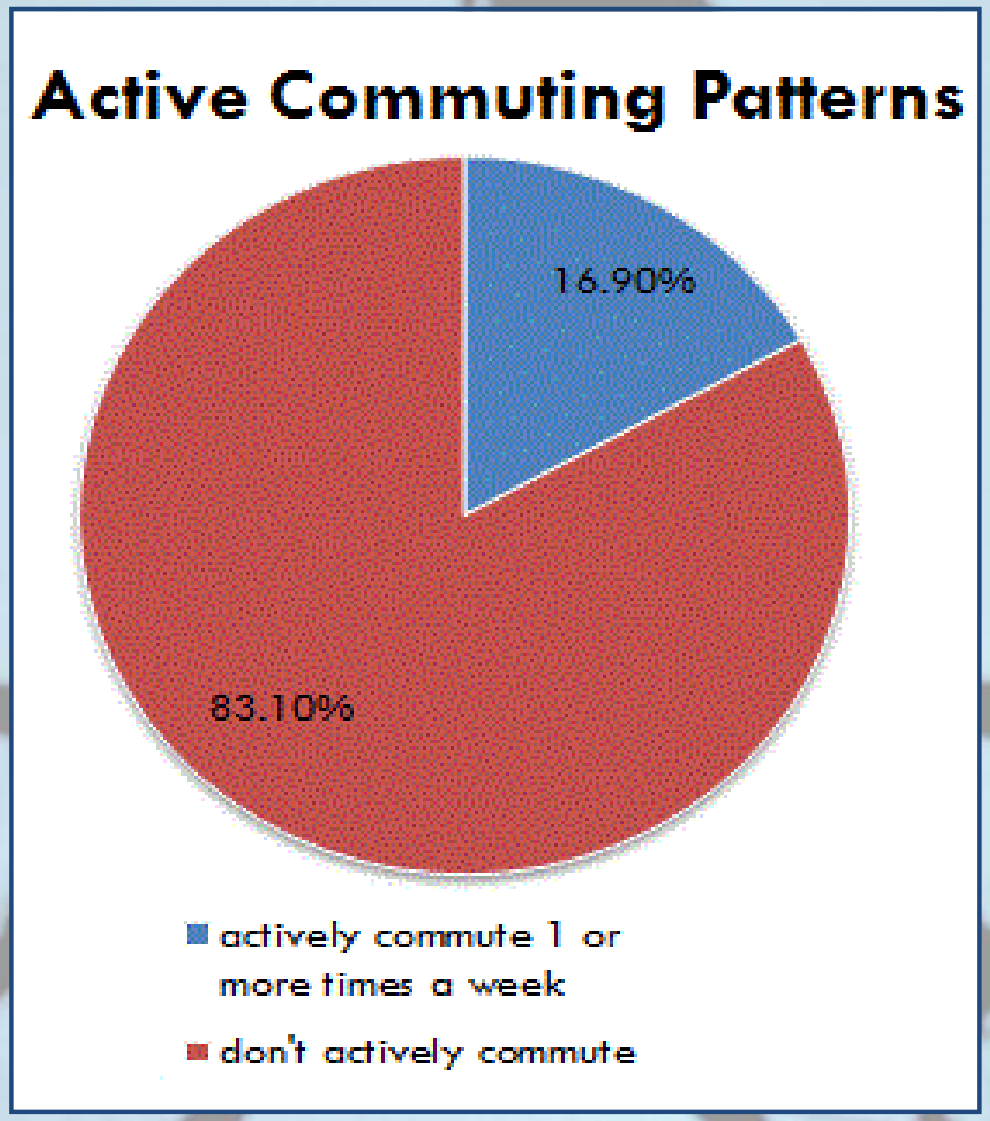
Centre County Survey

- In order to gain insight on Centre County's active commuting habits, we reached out to local residents and employers with an online survey from June-December 2011. 473 people responded.
  - The average age was 45 years
  - 96.6% were Caucasian, 75.2% were female
  - 46.3% had a graduate school education or higher
  - 42.3% were educators in grades K-12, 16.6% were in higher education
  - 95.1% work a full-time job
  - 50.2% of respondents were overweight or obese

Method and Frequency of Commute



Active Commuting in Centre Co



Some Interesting Trends

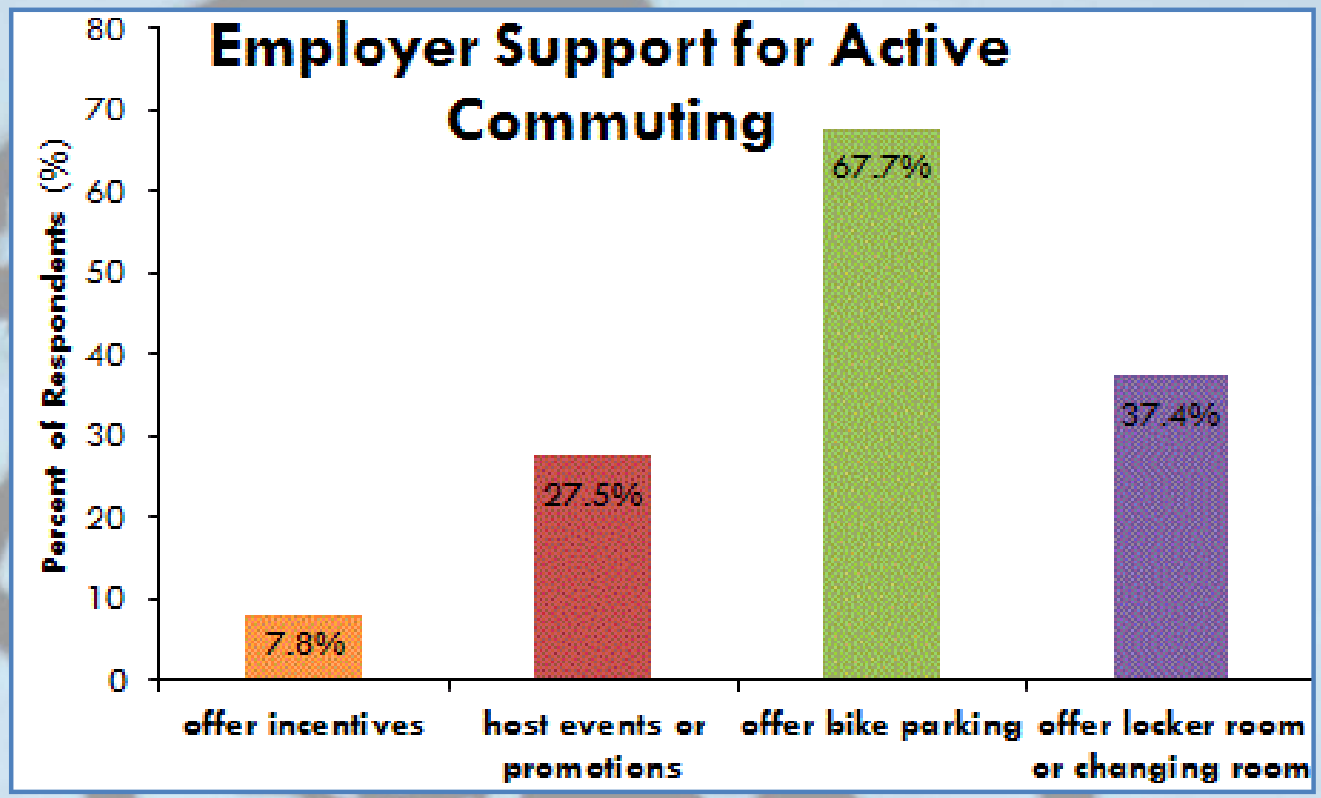
- There was no difference in active commuting between those who work full time and those who work part time
- People who have a graduate degree actively commute more than those with less education
- There was no difference in terms of gender or age for those who actively commute
  - Different than the general population
- 60.3% say their community is bike friendly, but 90.3% never bike to work
- 63.7% say their community is pedestrian friendly, but 90.5% never walk to work
- Those who are at worksites with less than 25 employees and over 1,000 employees were most likely to actively commute
- Respondents who are of normal weight were more likely to actively commute than those who are overweight or obese
  - There was no relationship with chronic disease and active commuting

What Influenced Active Commuting?

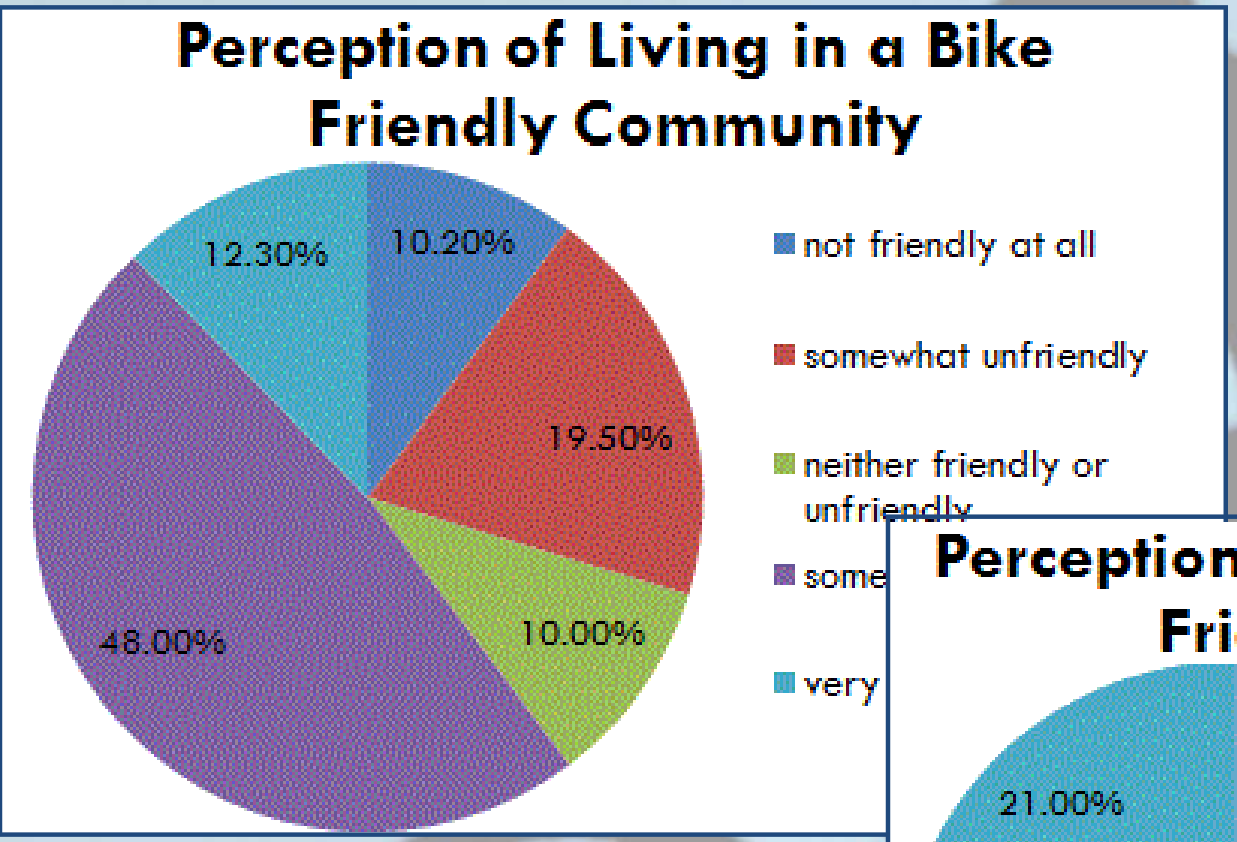
- Social networks
  - 95% of people believe their co-workers do not walk or bike to work
  - People who believe that their coworkers actively commute were more likely to active commute themselves
  - Those who have a spouse or partner that actively commutes are more likely to actively commute as well
- Among those with Children:
  - 31.8% of those with children talk to them about the reasons for the way they get to school
  - 29.7% of those with children say their children are not eager to bike or walk to school

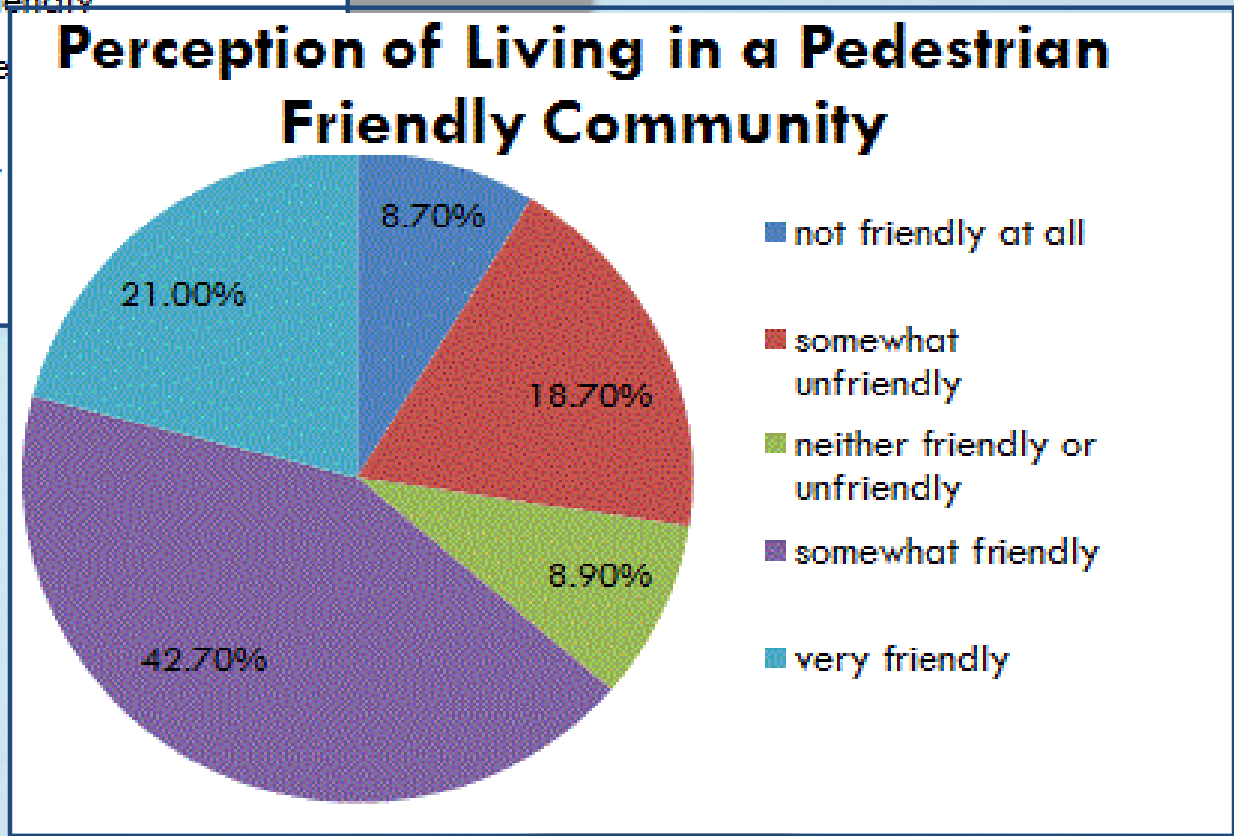
What Influenced Active Commuting?

- Employer
  - Those who reported more employer support for active commuting were more likely to walk and bike to work.



What Influenced Active Commuting?

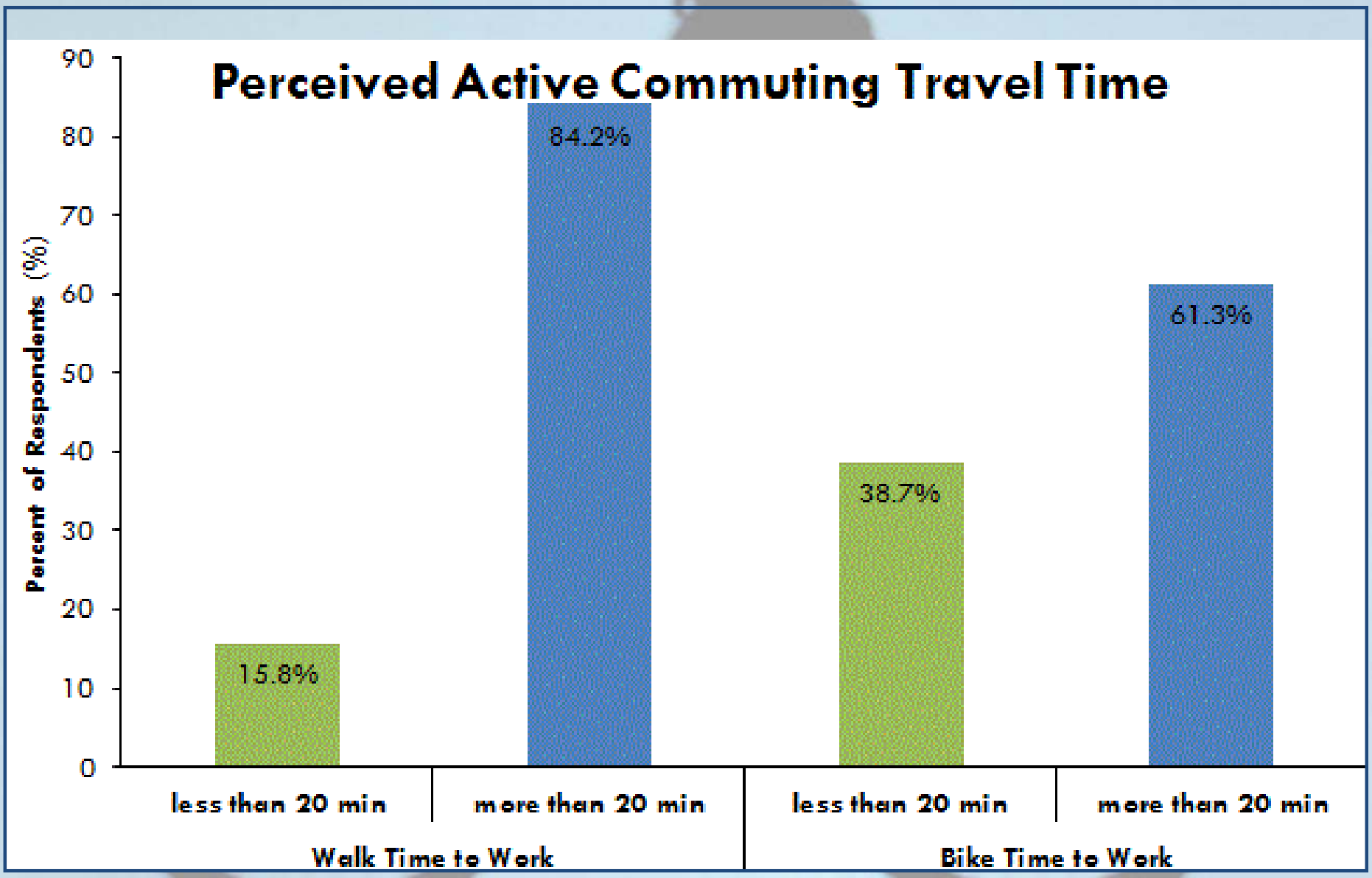




What Influenced Active Commuting?

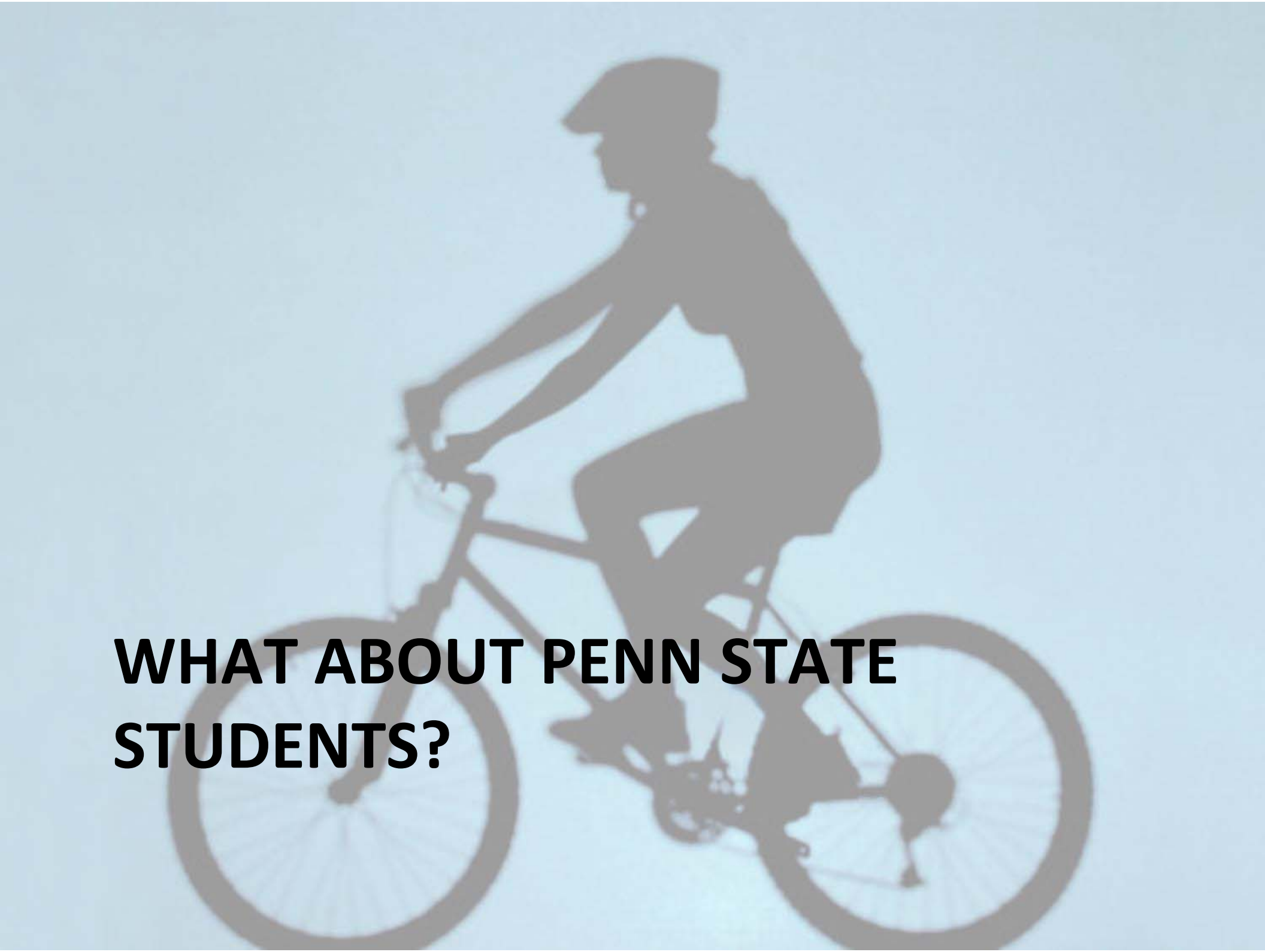
- 27.7% reported a lack of on-street bike lanes prevented them from biking to work
  - 26.4% say that it isn't a barrier at all
- 24.9% reported poor maintenance of pedestrian paths or sidewalks in bad weather
  - 24.9% believed they were well maintained
- 30.2% indicated bike lanes and paths are not well maintained in poor weather
- 31.6% believed speed and volume of traffic along their route was a barrier and 6.6% indicated that crime was a concern
- 22.5% indicated that the terrain (e.g. hills) along their route was a barrier to actively commuting
- People who perceived their community was supportive of walking and biking were more likely to actively commute

Biggest Influence: Distance



Differences in AC by Centre Co Zip

Zip	Number of Active Commuting trips/week
16801 (SC area)	1.70
16803 (SC area)	2.0
16823 (Zion)	0.25
16827 (Boalsburg)	0.42
16841 (Blanchard)	0
16844 (Julian)	0
16851 (Lemont)	0
16865 (PA Furnace)	0
16866 (Phillipsburg)	0
16868 (Pine Grove Mills)	0
16870 (Stormstown)	0.24
16875 (Spring Mills)	0.33



WHAT ABOUT PENN STATE STUDENTS?

Penn State Student Survey

- A survey was distributed through email and flyers to current students through the month of September 2012. 875 people responded.
  - The range of ages was from 17-48 years old with a mean age of 21
  - 62.7% were female and 37.3% were male
  - 75.4% were Caucasian
  - There were students from 16 colleges. The top three colleges represented:
    - Arts and Architecture (20.1%)
    - Health and Human Development (19.8%)
    - Science (13.4%)
  - 72.3% of participants where in a normal weight range while 27.7% were either overweight or obese
  - 64.8% live off campus, 31.2% live on campus

Travel to Campus

- Walking was the most common mode of transportation for all seasons
  - Most common season for biking was summer
  - Most common season for driving was summer
  - Most common season for CATA was winter
- The mean number of active travel trips (walking or biking) per week for undergraduate students was 12.2 while graduate students had a mean of 4.5 active travel trips per week

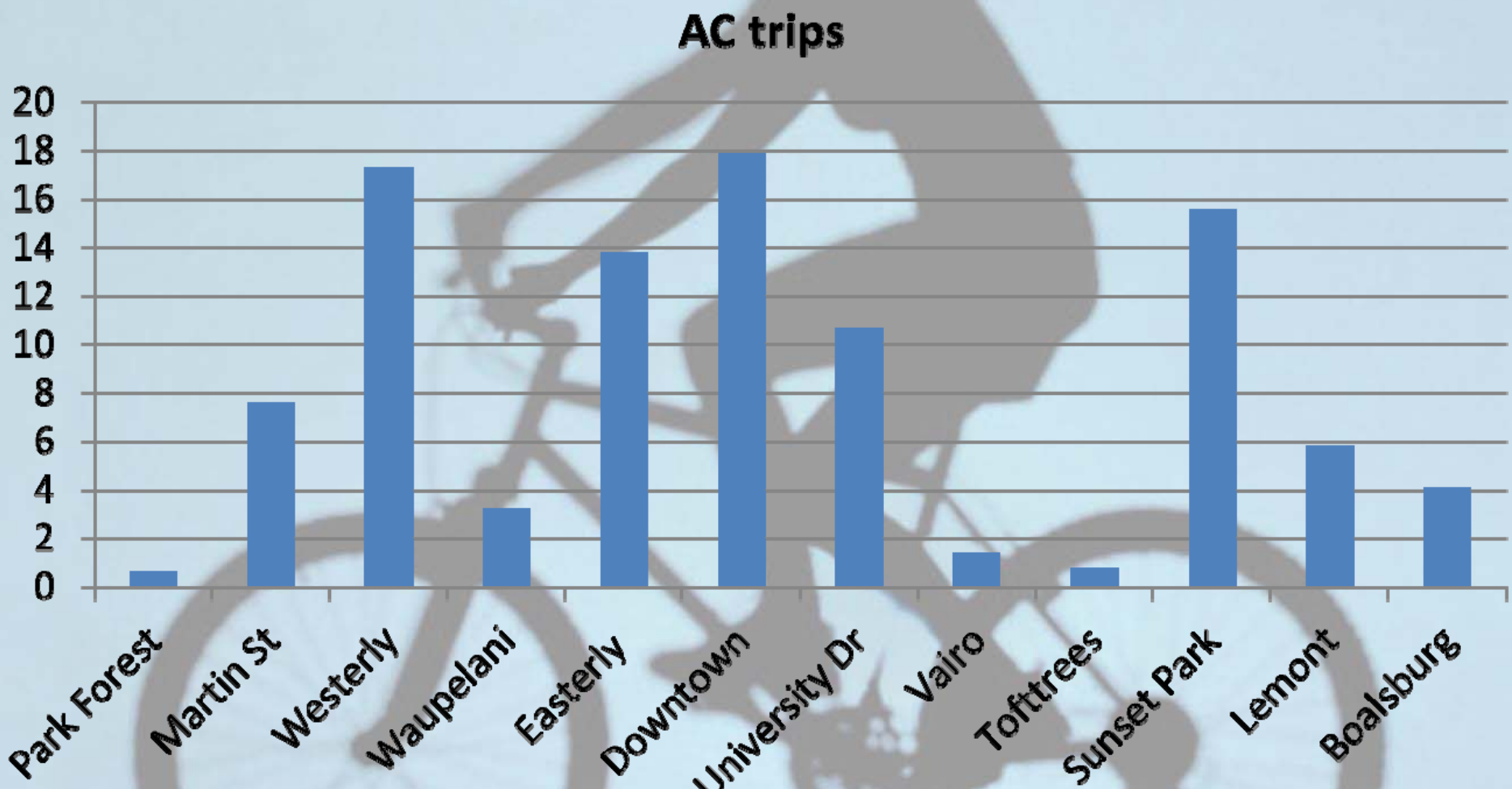
Some Differences for Travel

- The number of active trips between races differed somewhat significantly:
  - Hispanics of any race had a mean of 11.2 active travel trips per week
  - Non-Hispanic White had a mean of 10.8 active travel trips per week
  - Non-Hispanic Blacks had a mean of 10.6 active travel trips per week
  - Asian Americans had a mean of 6.9 active travel trips per week

Differences By Weight Status

- The number of active trips per week to campus varied depending on BMI category
  - Normal weight individuals had a mean of 11.3 active travel trips to campus per week
  - Overweight individuals had a mean of 9.7 active travel trips to campus per week
- Obese individuals had a mean of 6.0 active travel trips to campus per week
- Overweight & obese students were less likely to report having a bike rack at their residence and were more likely to live further from campus

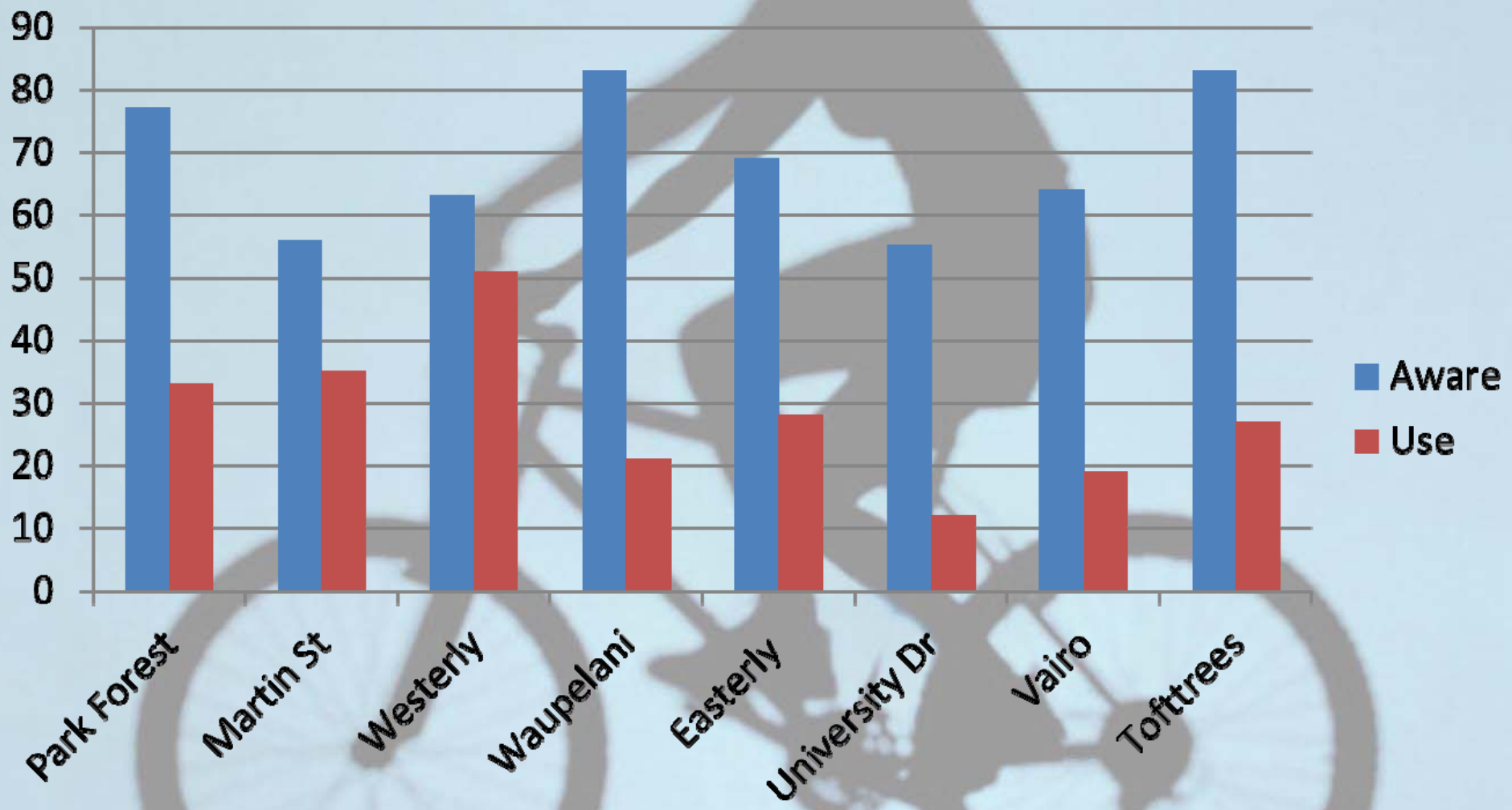
Differences By Neighborhood



Bike Lane Knowledge &Use

- Awareness of bike lanes and usage
  - Park Forest aware 77%, use 33%
  - Martin St aware 56%, use 35%
  - Westerly parkway aware 63%, use 51%
  - Waupelani aware 83%, use 21%
  - Easterly aware 69%, use 28%
  - University Dr aware 55%, use 12%
  - Vairo aware 64%, use 19%
  - Tofttrees aware 83%, use 27%

Bike Lane Knowledge and Use



Bike Lane Use & Knowledge Findings

- Students who actively travel to campus reported more knowledge and use of bike lanes
- Students who report a greater self-confidence in their biking skills both in State College and on campus reported more active travel
- Time was the largest influence on travel mode choice

STATE COLLEGE TRAVEL & SPENDING STUDY

Warning!

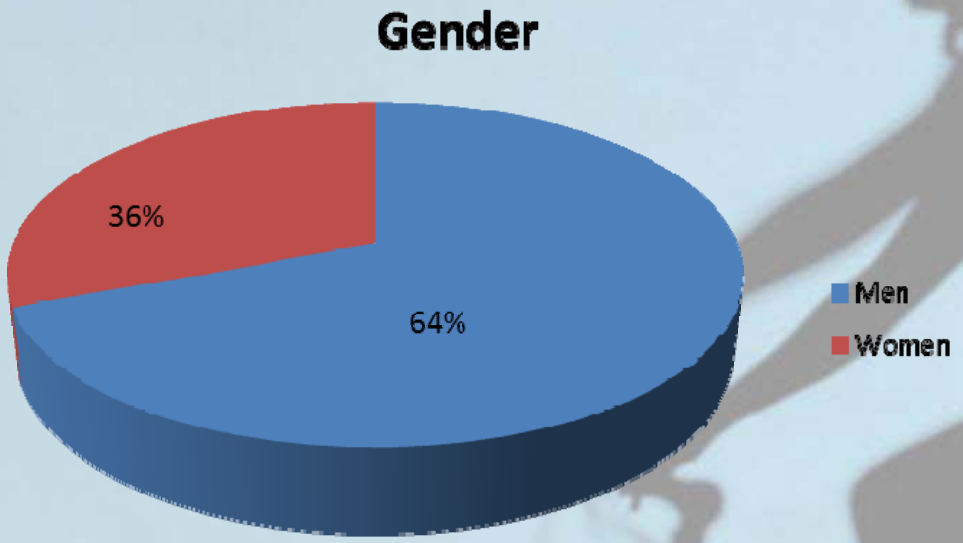
Survey

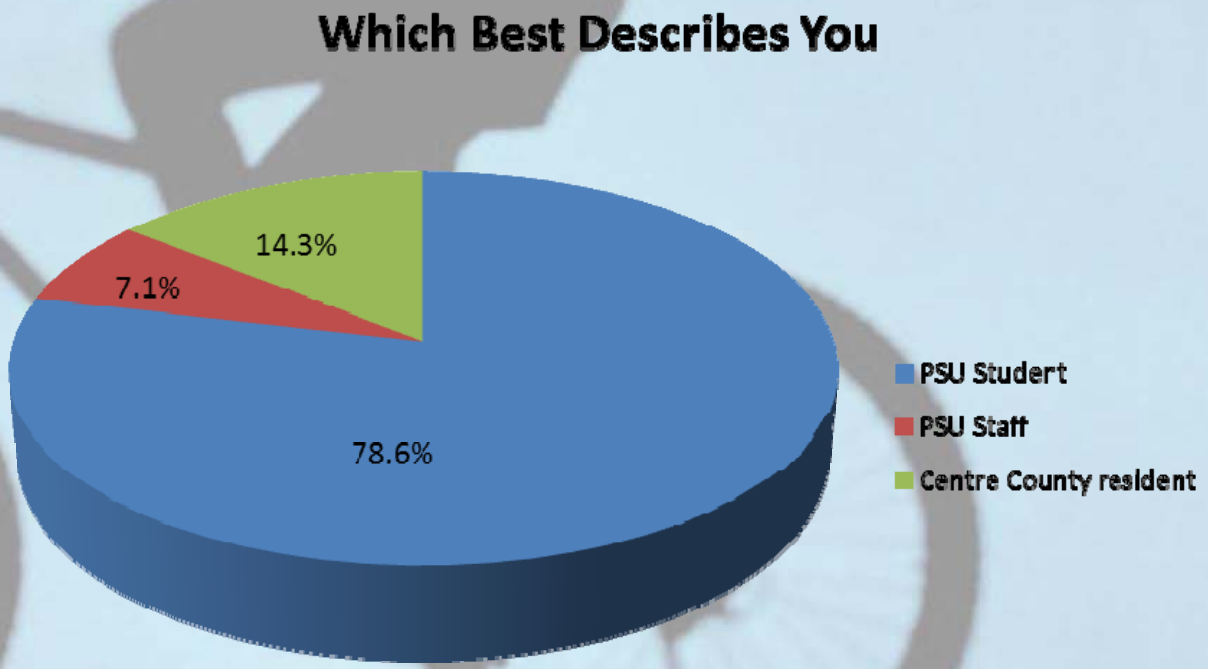
- Based on a study done in Portland, OR
- Examines spending behavior and travel mode
- Intercept surveys of people leaving State College businesses
  - How they got there
  - How much they spent
  - Other questions

Our sample

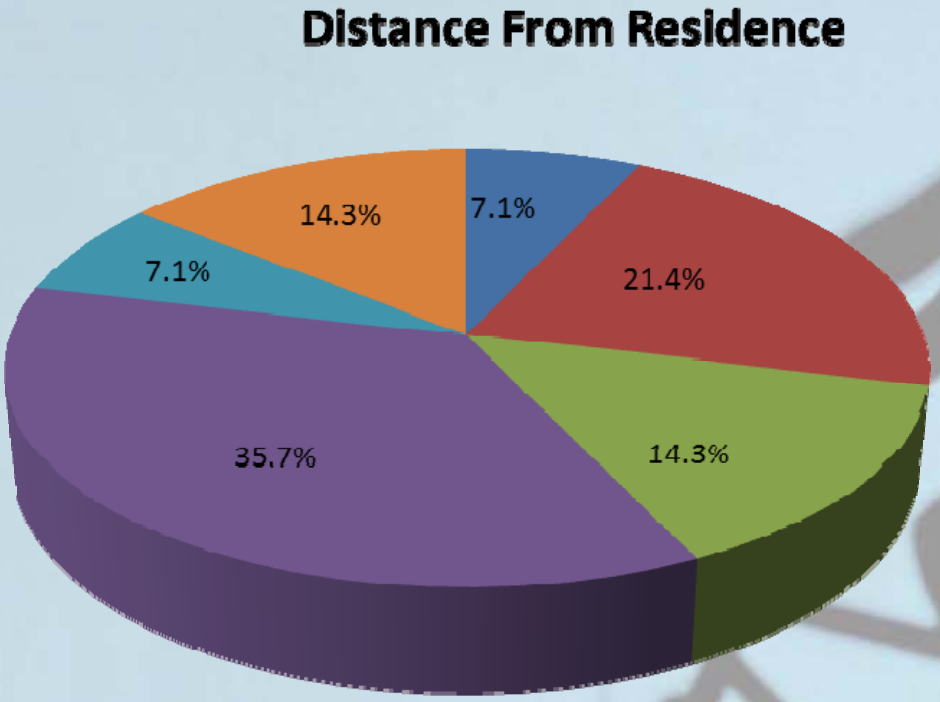
- April-August 2013
- 280 Adults
- 51% Male
- 64% Penn State Students, 6% Faculty/staff, 10% State College resident, 8% Centre Co resident, 12% outside
- How did you arrive downtown?
  - 72% Walked
  - 5% Biked
  - 8% Took the bus
  - 15% Drove
  - 6% Were a passenger in a car

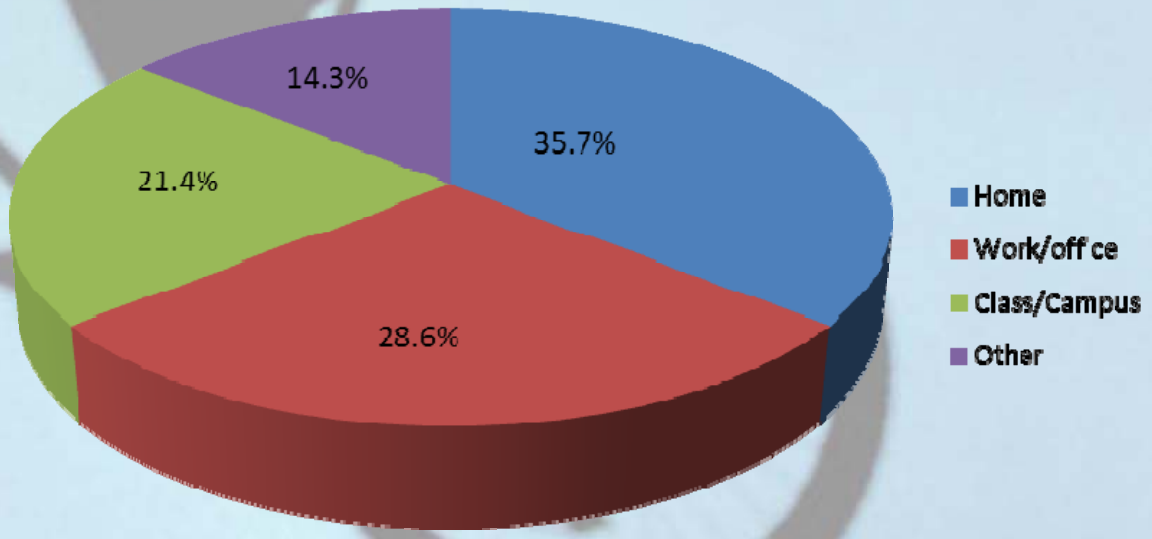
Bikers


Gender
36%
64%
Men
Women

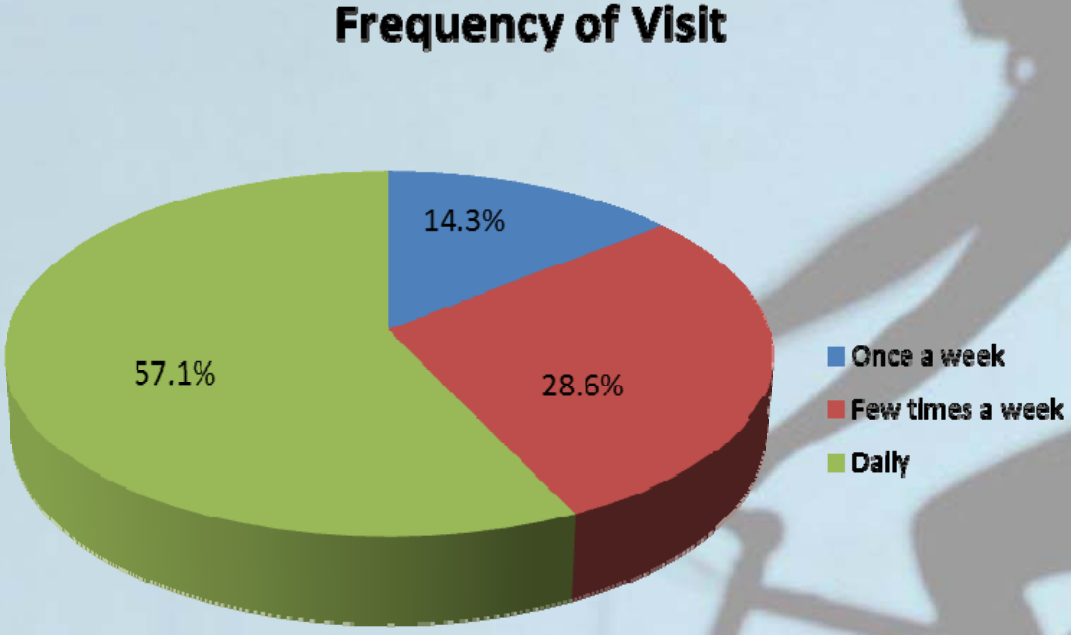

Which Best Describes You
14.3%
7.1%
78.6%
PSU Studert
PSU Staff
Centre County resident

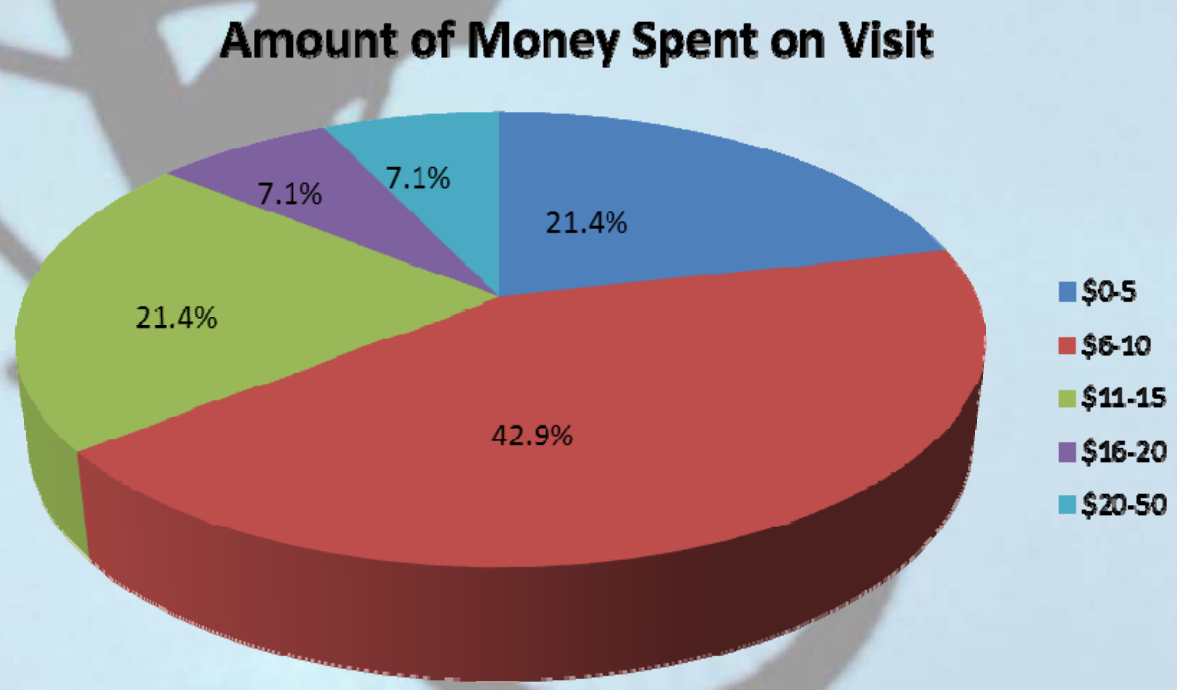
Bikers


Distance From Residence
7.1%
21.4%
14.3%
35.7%
7.1%
14.3%
less than 0.5
0.5-1
1.0-2.0
2.0-3.0
3.0-4.0
5.0-6.0

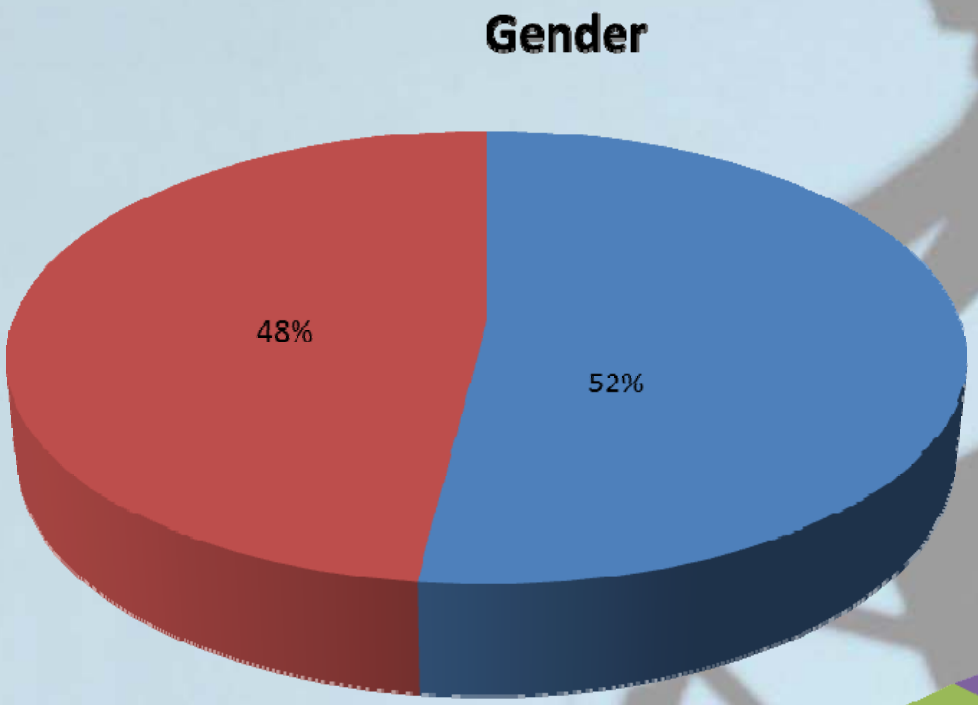

Where Before Visit Downtwon
35.7%
28.6%
21.4%
14.3%
Home
Work/off ce
Class/Campus
Other

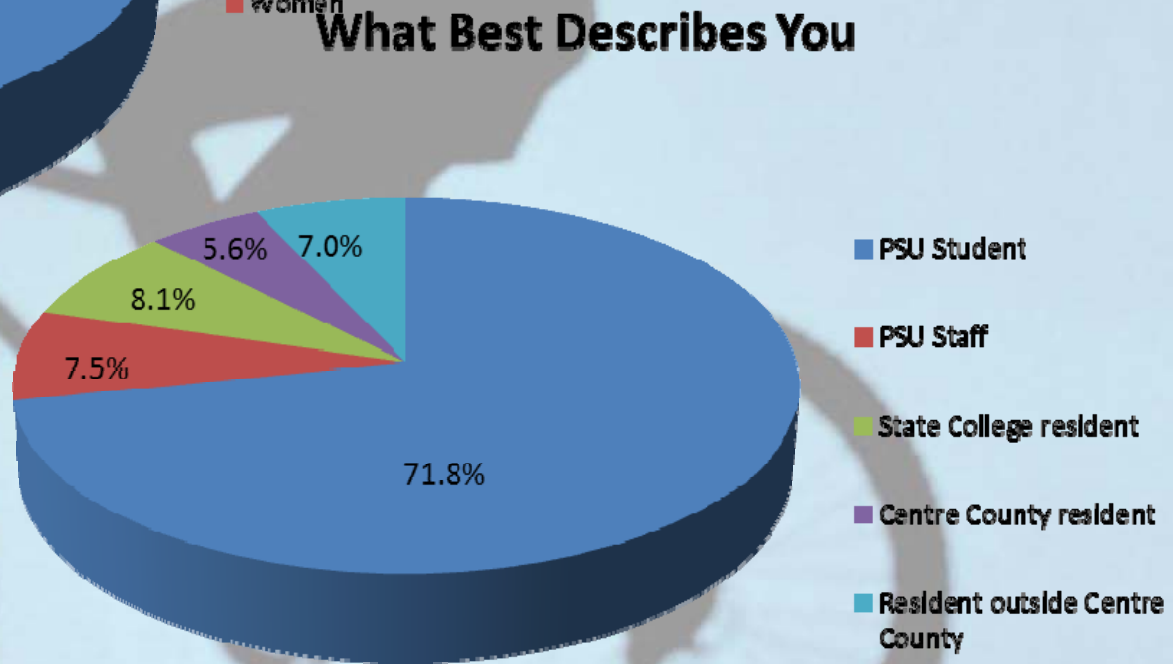
Bikers


Frequency of Visit
14.3%
28.6%
57.1%
Once a week
Few times a week
Daily

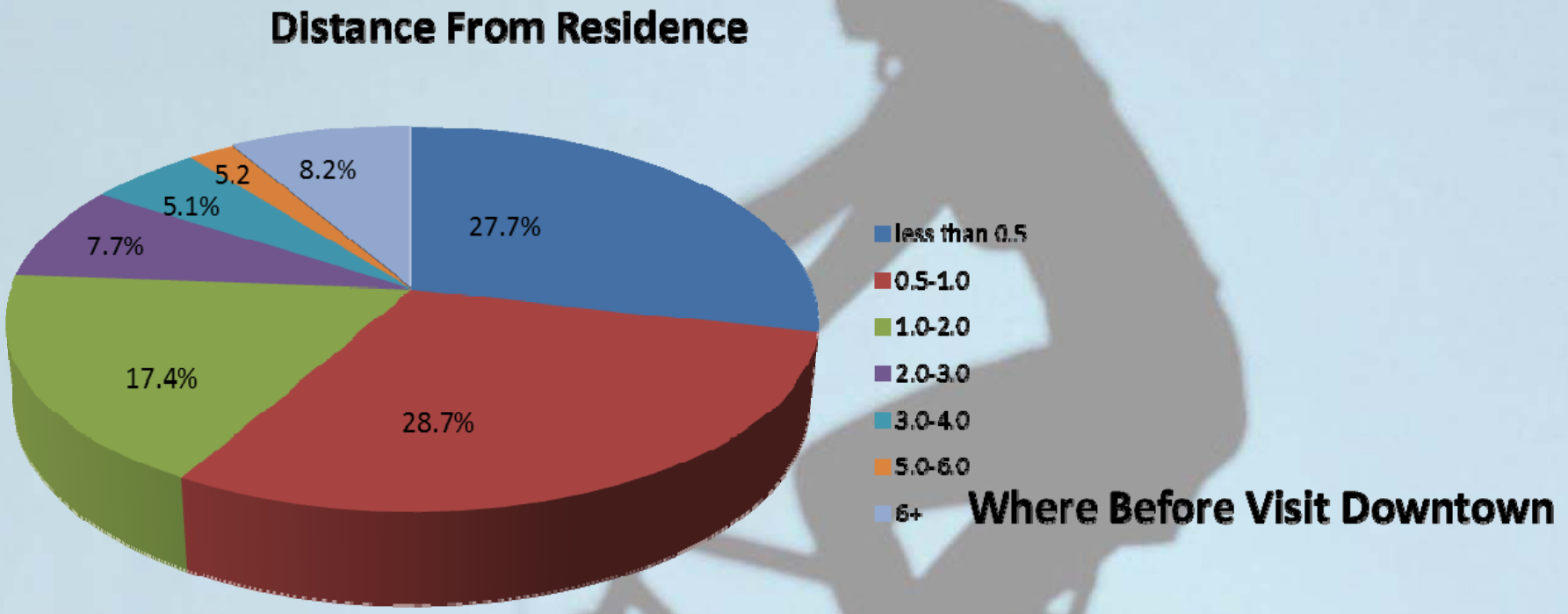

Amount of Money Spent on Visit
21.4%
42.9%
21.4%
7.1%
7.1%
$0-5
$6-10
$11-15
$16-20
$20-50

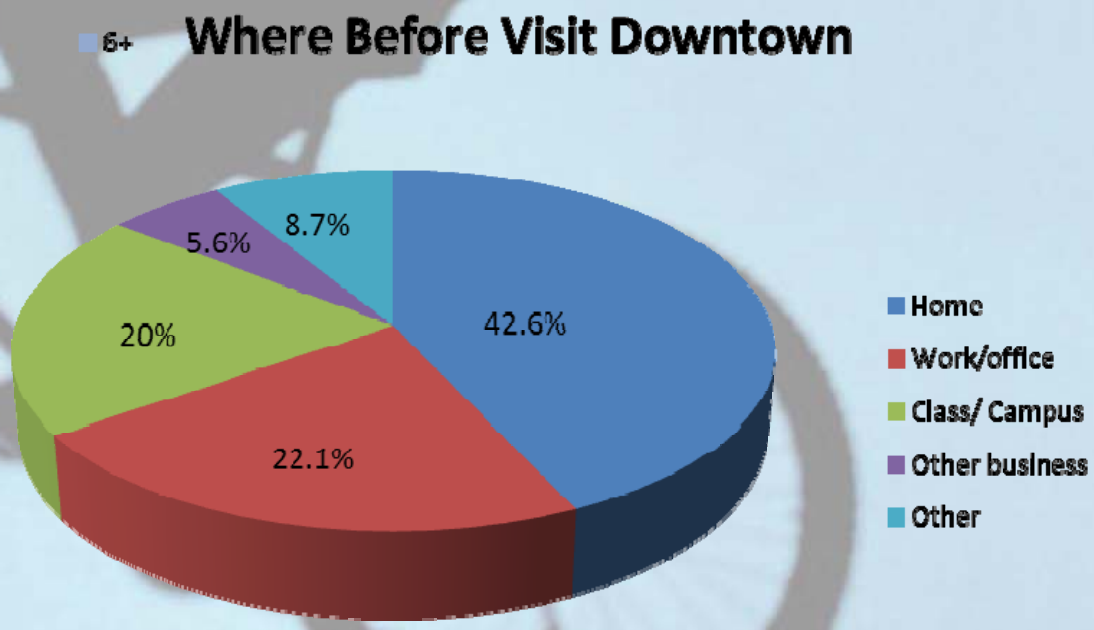
Walkers


Gender
48%
52%
Men
Women

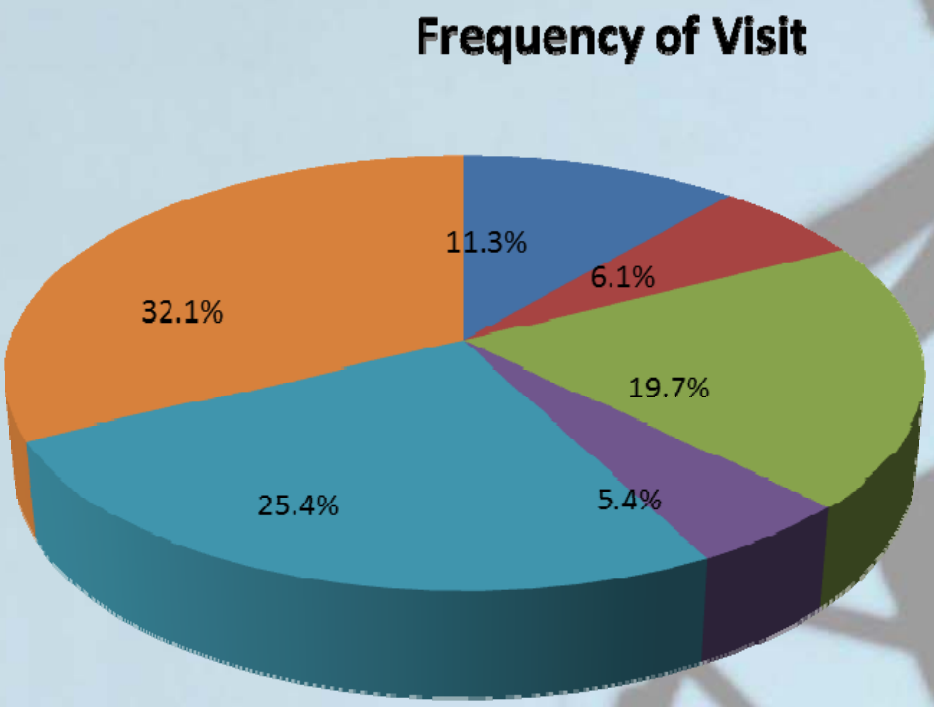

What Best Describes You
5.6%
7.0%
8.1%
7.5%
71.8%
PSU Student
PSU Staff
State College resident
Centre County resident
Resident outside Centre County

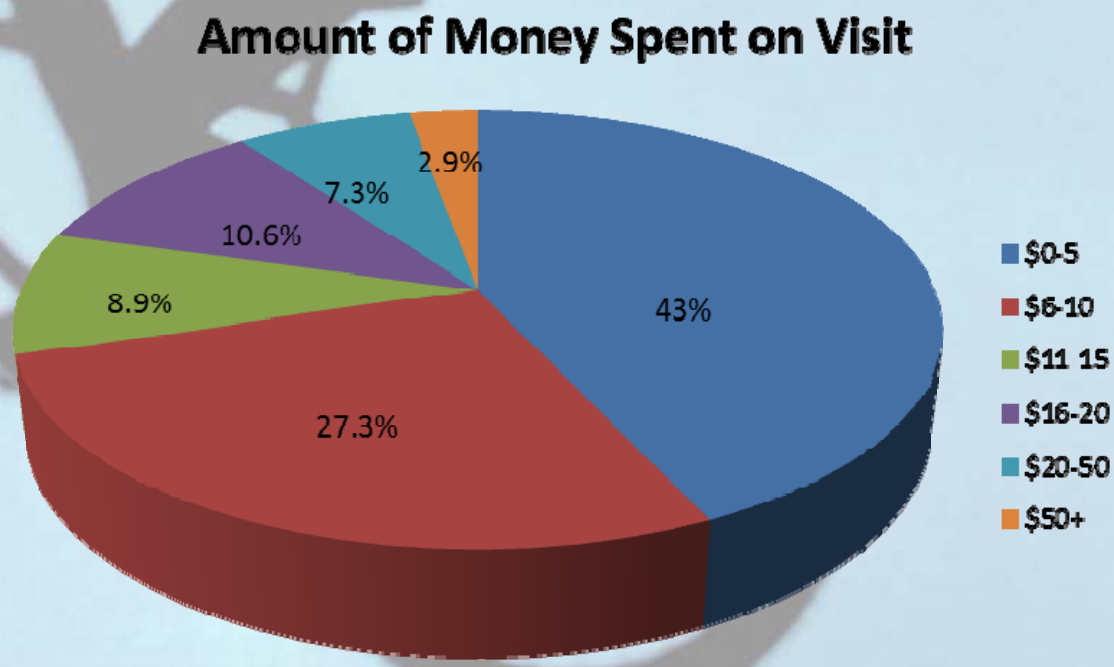
Walkers


Distance From Residence
27.7%
28.7%
17.4%
7.7%
5.1%
5.2
8.2%
less than 0.5
0.5-1.0
1.0-2.0
2.0-3.0
3.0-4.0
5.0-6.0
6+

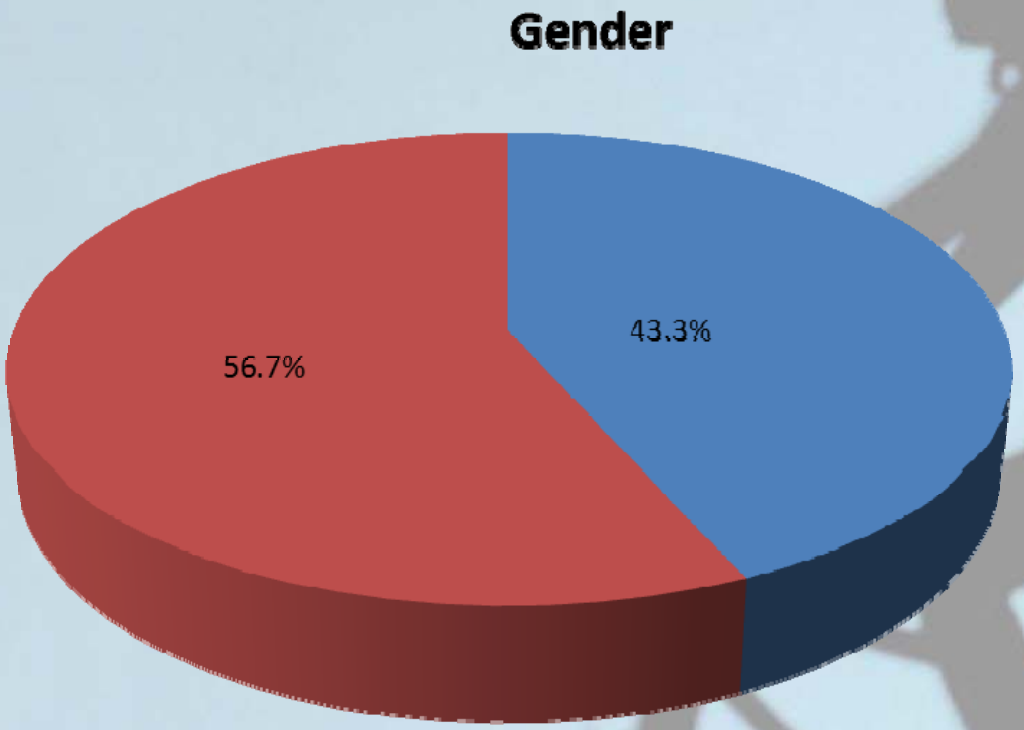

Where Before Visit Downtown
42.6%
22.1%
20%
5.6%
8.7%
Home
Work/office
Class/ Campus
Other business
Other

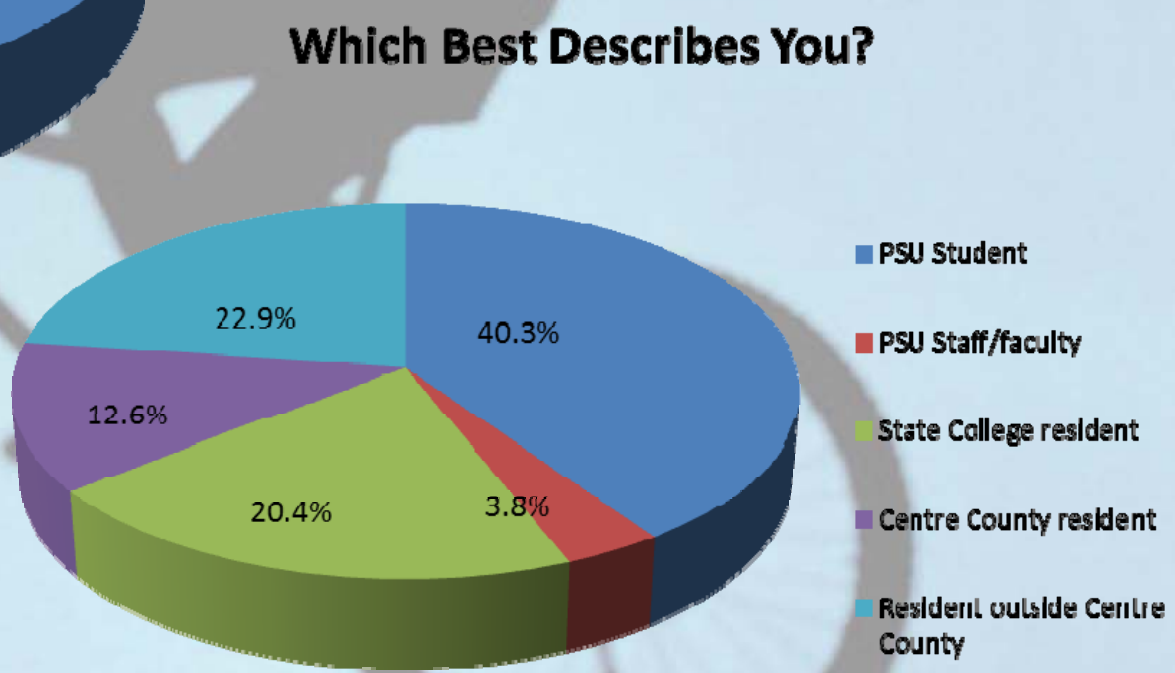
Walkers


Frequency of Visit
11.3%
6.1%
19.7%
5.4%
25.4%
32.1%
Rarely
Once a month
Few times a month
Once a week
Few times a week
Daily

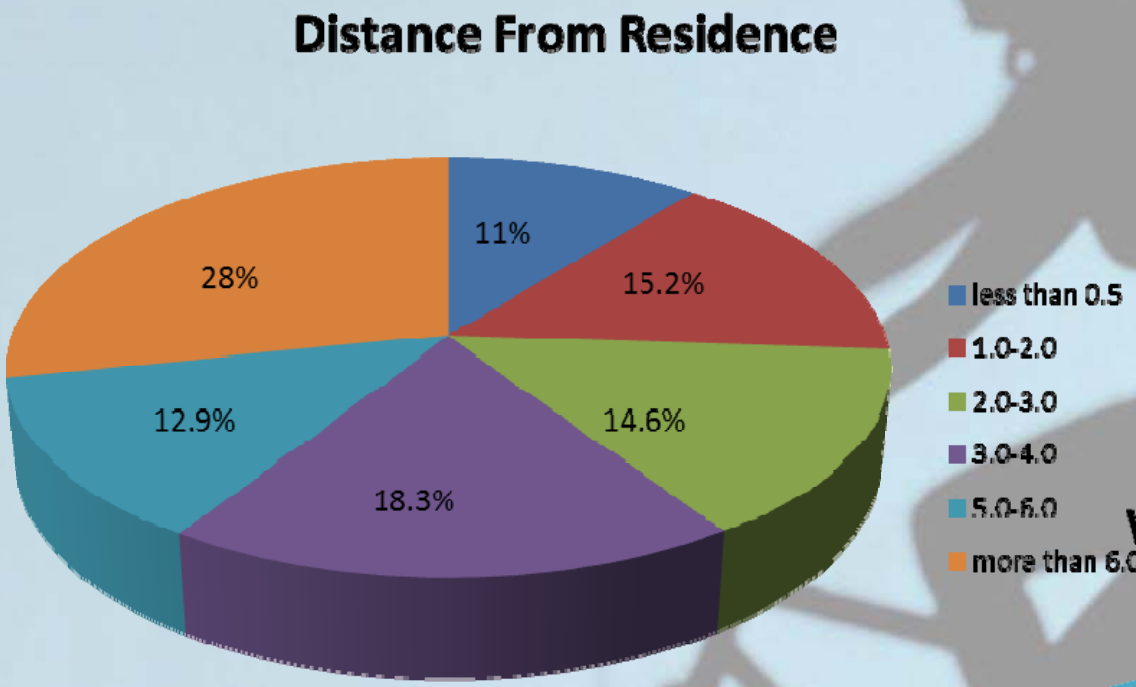

Amount of Money Spent on Visit
43%
27.3%
8.9%
10.6%
7.3%
2.9%
$0-5
$6-10
$11 15
$16-20
$20-50
$50+

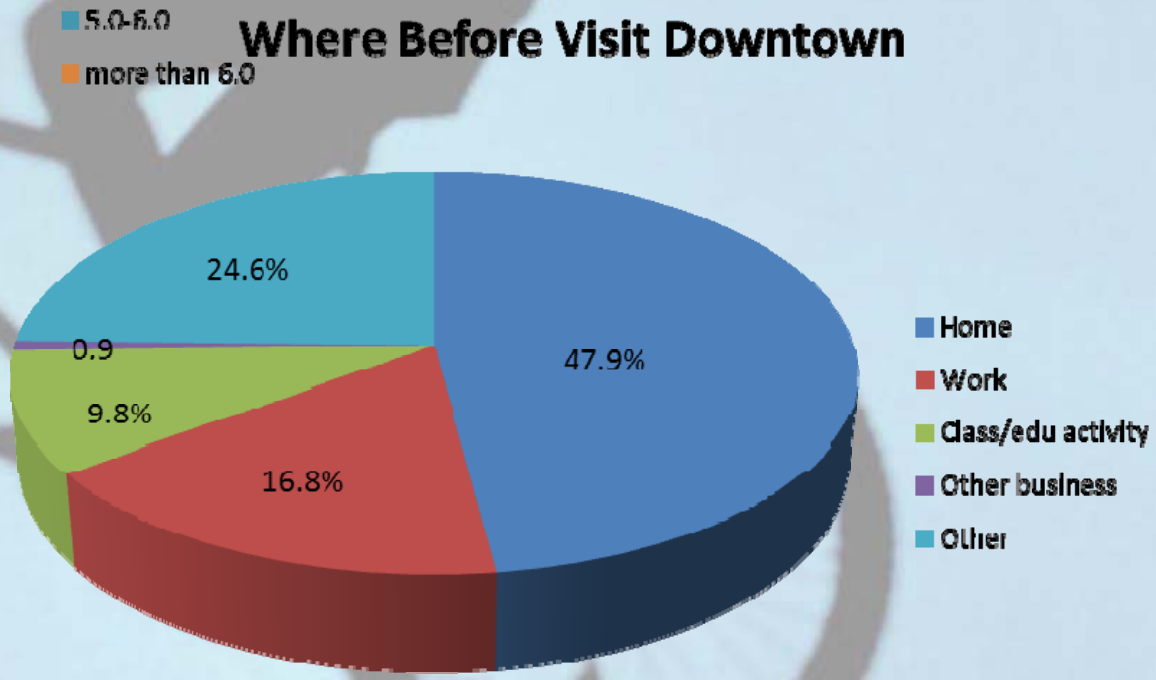
Passive Transportation (Car and Bus)



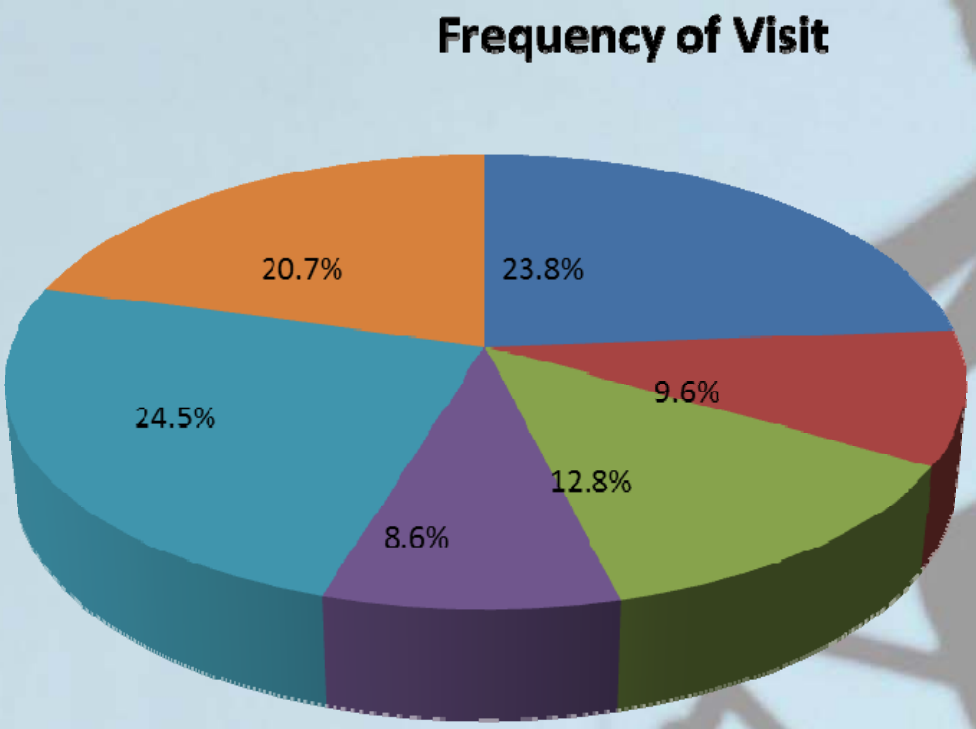


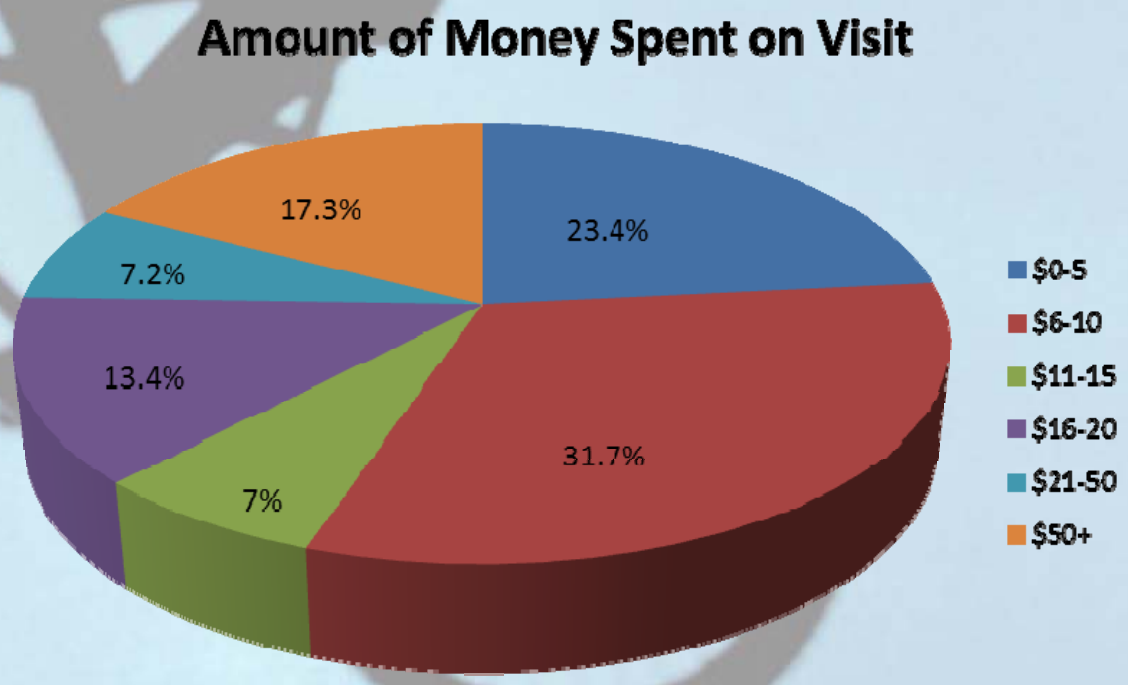
Passive Transportation





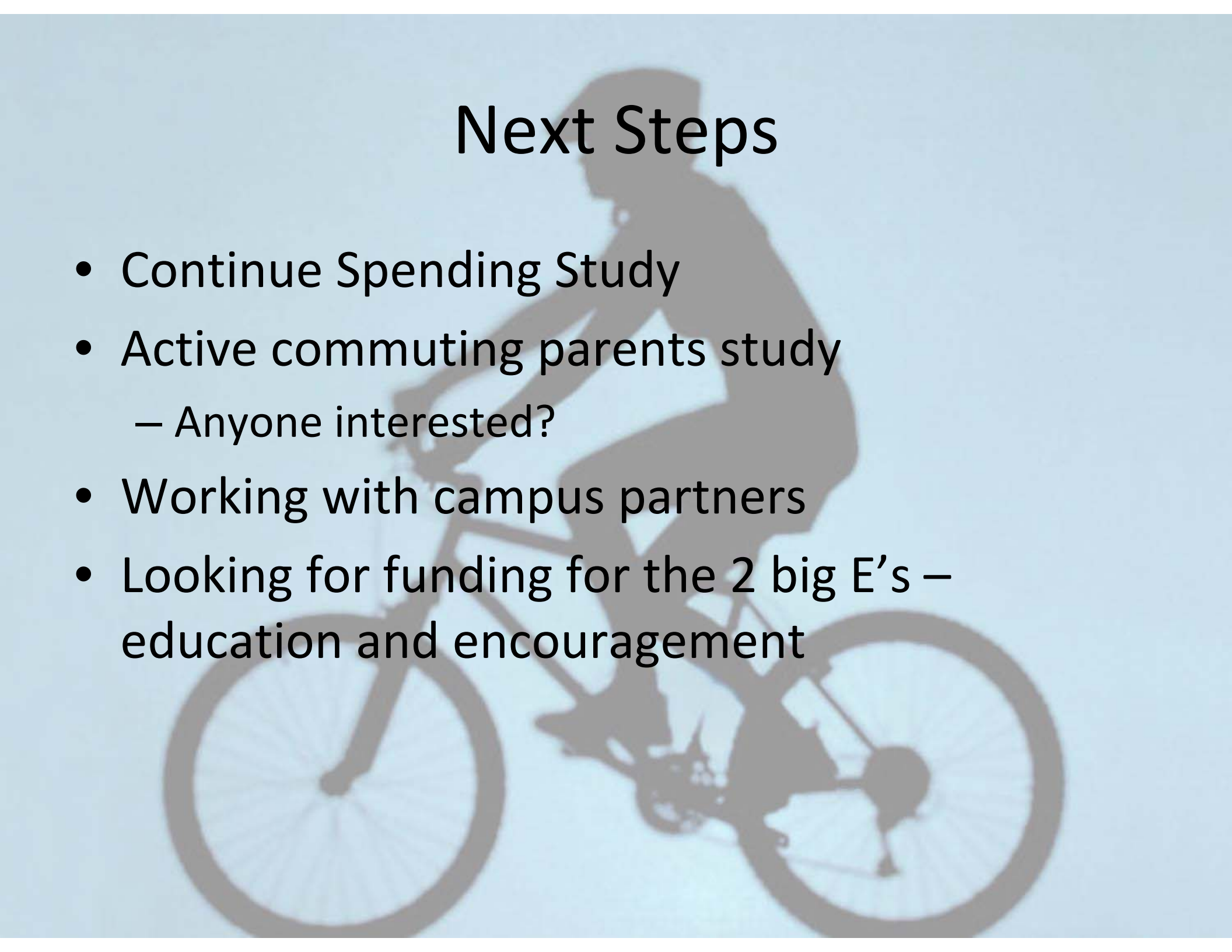
Passive Transportation





Next Steps

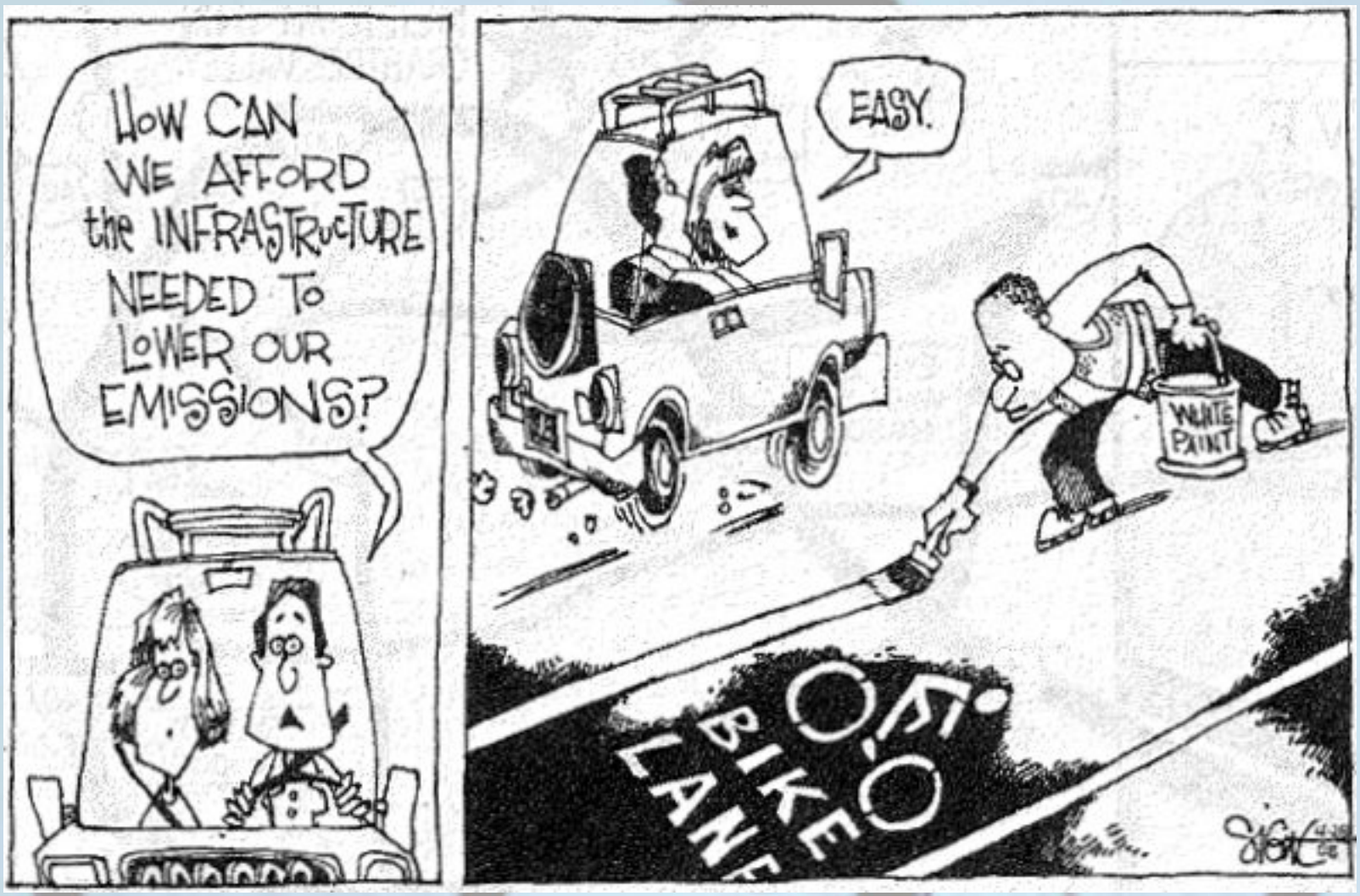
- Continue Spending Study
- Active commuting parents study
  - Anyone interested?
- Working with campus partners
- Looking for funding for the 2 big E's – education and encouragement



Many Thanks

- Participants in our studies
- Undergraduate research assistants
  - Kalli Baer
  - Kelly Kabinski
  - Jesse Calestine
  - Sarah Bricker
  - Melissa Falbo
  - Kassidy Augustine
  - Matthew Campbell

Questions


HOW CAN WE AFFORD the INFRASTRUCTURE NEEDED TO LOWER OUR EMISSIONS?
EASY.
WHITE PAINT
BIKE LANE