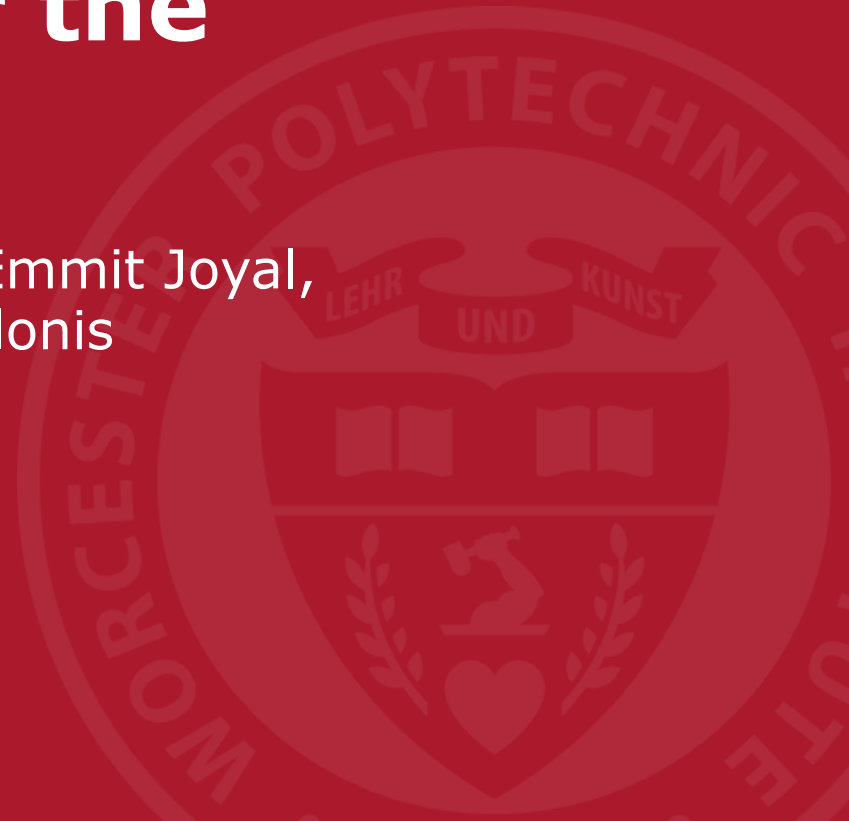




WPI

Promoting Alternative Transportation for the WPI Community

By Dusty Cyr, Anthony Hannoush, Emmit Joyal,
Michael Josephs, and Anthony Mikelonis



Sustainability and Transportation



Why is sustainability important to WPI?

- **Sustainability** – “creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations.” (EPA)
- “WPI's campus-wide efforts in energy and resource conservation and reduction in the harmful environmental impacts of our operations, are all directed toward enhancing the long-term sustainability of WPI's activities and the environment of which we are a part.” (WPI Sustainability Task Force)
- WPI has a desire to be sustainable

How is transportation related to sustainability?

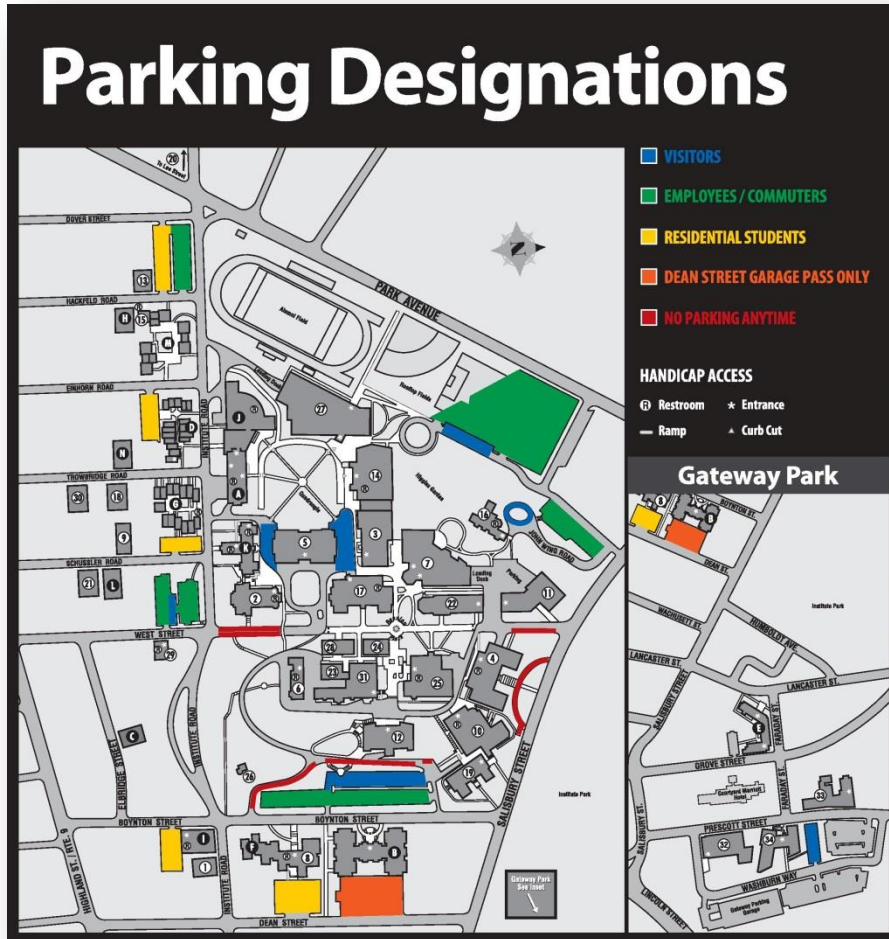
- **Sustainable transportation** - any form of transportation that has a low impact on the environment
 - fuel-efficient public transit such as city buses and commuter rails
 - carpooling
 - non-motorized methods of transportation such as walking and cycling

("Sustainable Engineering and Ecological Design," 2013)



The Problem

The WPI Community relies heavily on personal vehicle use.



Harmful Effects of Personal Vehicles:



Our Research Goals

This project aims to encourage and promote alternative transportation for the WPI community.

- Which forms of alternative transportation can reduce the amount of personal vehicle use?
- What forms of alternative transportation already exist for WPI community members?
- Which modes of alternative transportation do commuter students, faculty and staff who drive personal vehicles say would change how they travel?
- How safe is the area around campus for bicycling and walking? Is it reasonable to suggest promoting walking and bicycling)?

Methodology



Research the current alternative transportation options already existing for WPI community members



More sustainable:

Less sustainable:



Research what other colleges and cities have done to encourage and promote alternative transportation



UC Davis



UNH



Clark University



Duke University

Understand from where and how WPI community members travel to and around campus.

- <http://wpimaps.weebly.com/>
- Survey of WPI Community

Population	Count	% of Survey Takers	% of Population
Freshman	120	12%	11.5%
Sophomore	119	12%	13.0%
Junior	145	15%	16.7%
Senior	125	13%	11.8%
Total Undergrads	509	52%	12.9%
Graduate Students	138	14%	7.1%
Total Students	647	66%	10.9%
Staff Member	215	22%	50.6%
Faculty Member	105	11%	21.6%
TOTAL:	967	99%	14.1%

Produce a list of recommendations to the WPI Department of Facilities and other relevant groups to promote and encourage alternative transportation.



WPI

Promoting Alternative Transportation for the WPI Community

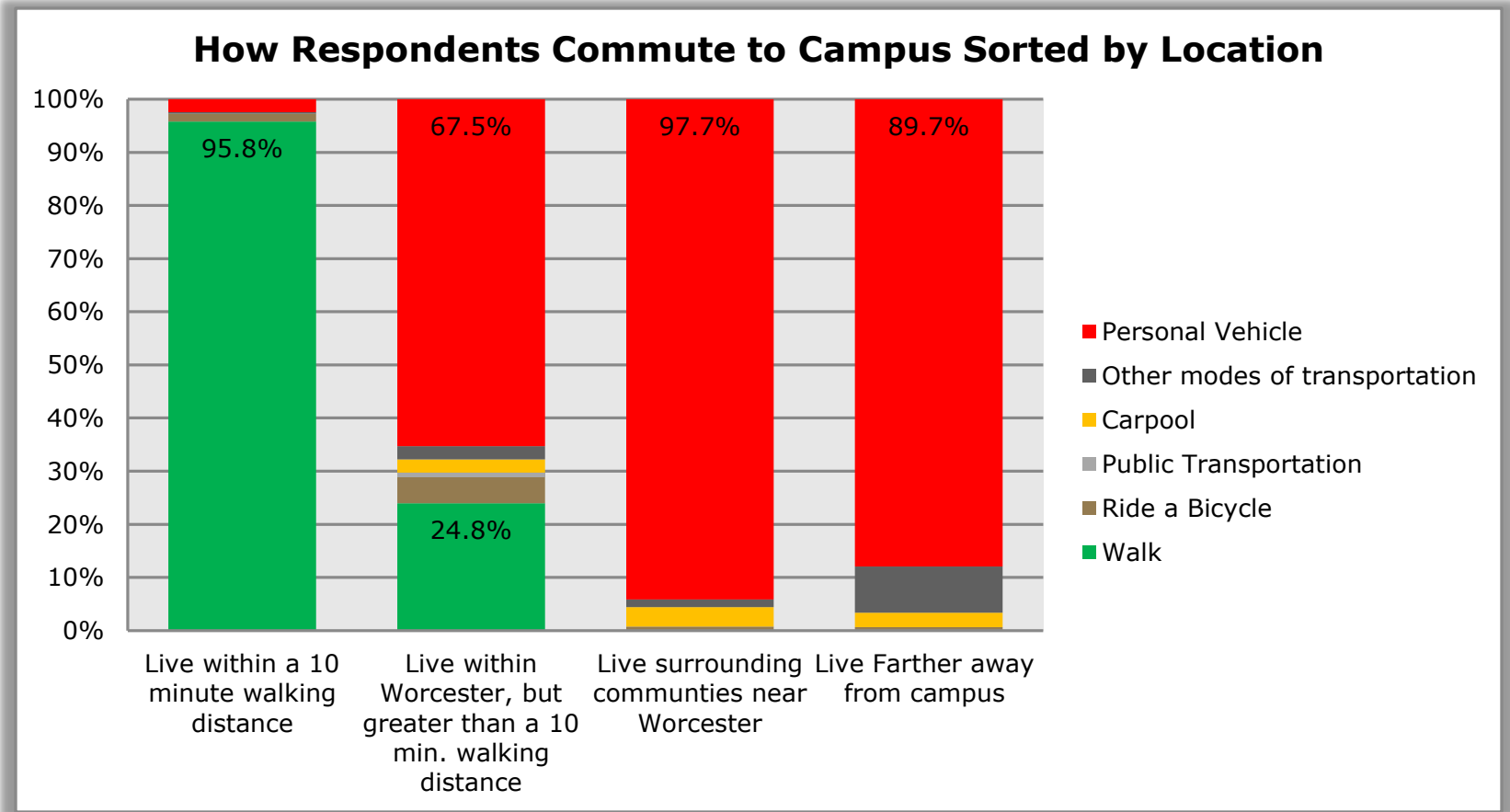
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Findings and Recommendations

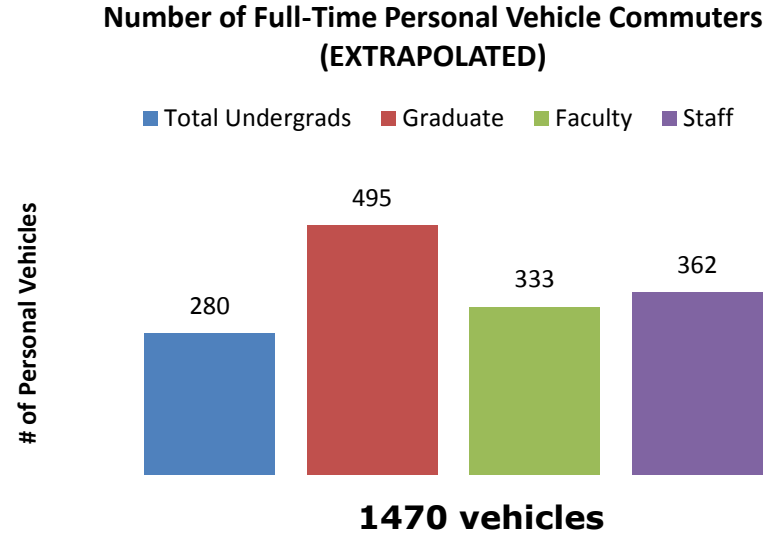


There is a lot of work to be done for WPI's current transportation situation...



We recommend that WPI’s Carpool World website be improved, and that the WPI Office of Student Life, WPI Human Resources, and the WPI Department of Facilities promote and advertise it heavily.

Large Number of Personal Vehicles:

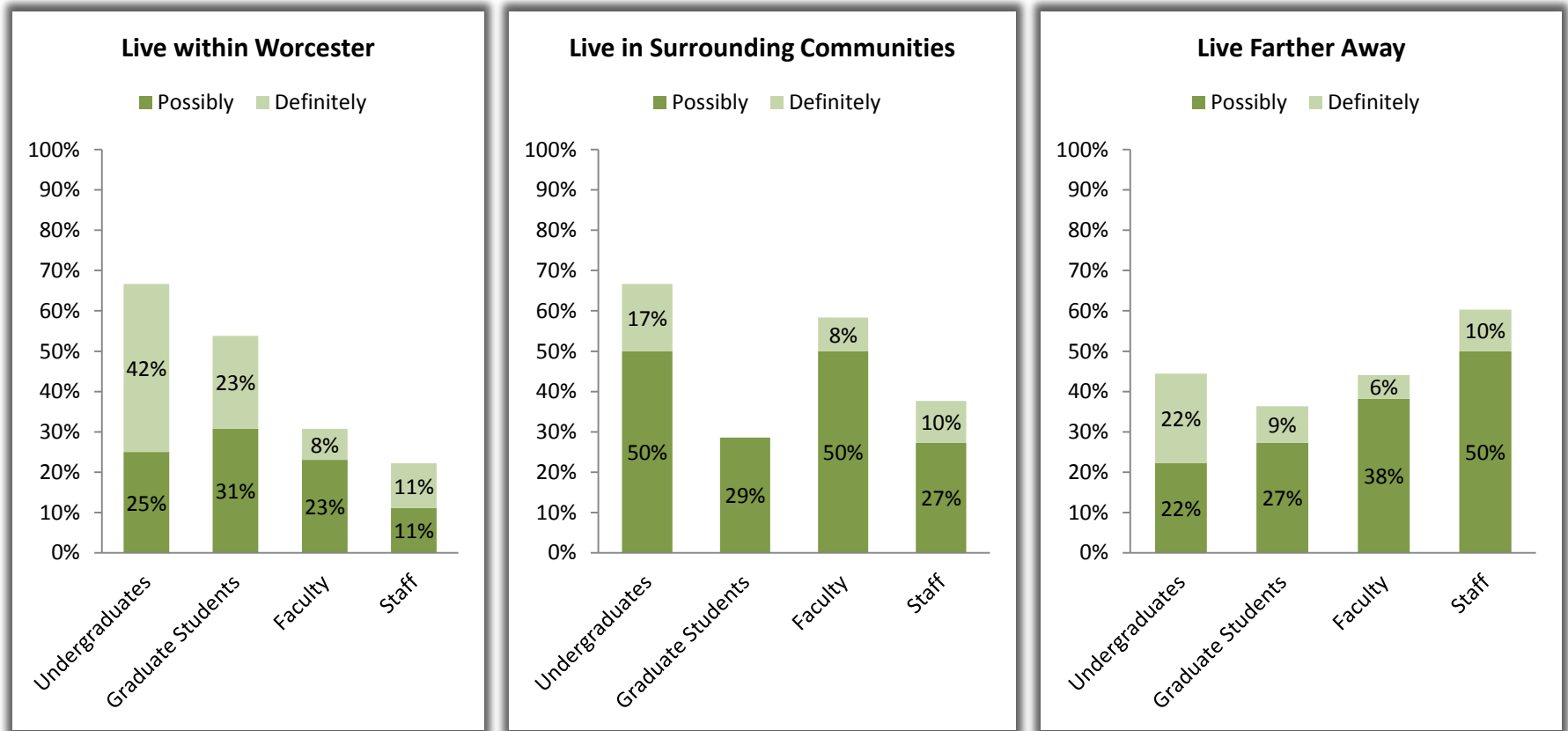


Mode of Alternative Transportation	“Never used it”	“Never heard of it”
WRTA Bus System	74%	4%
MBTA Commuter Rail	34%	5%
Zipcar	83%	3%
Carpool World Website	47%	52%
SNAP and Gateway Shuttles	38%	2%

Carpool World is only option that most do not know about

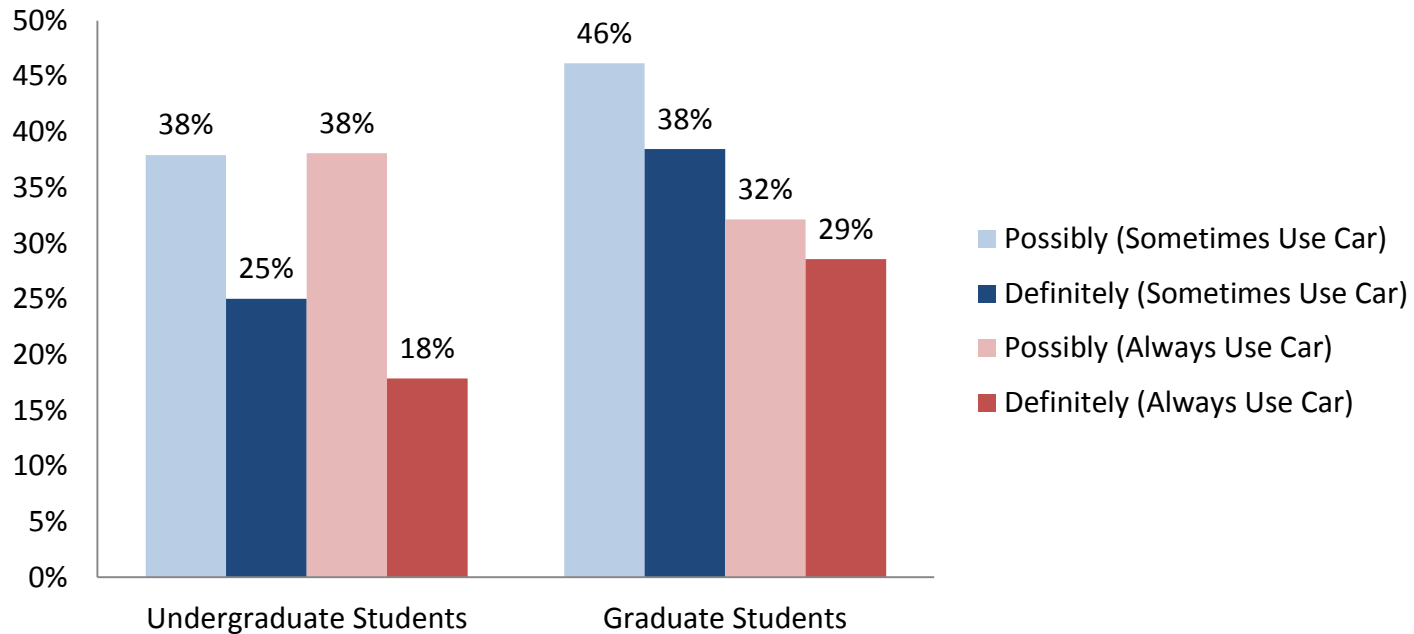
We recommend that WPI's Carpool World website be improved, and that the WPI Office of Student Life, WPI Human Resources, and the WPI Department of Facilities promote and advertise it heavily.

Respondents (who commute by car) who said that easier carpooling would change how they travel...



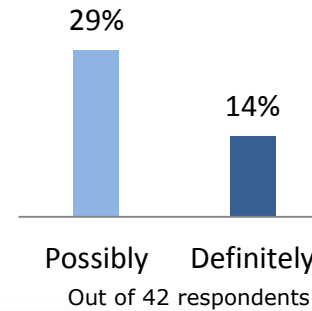
We recommend that the WPI Department of Facilities create a free or inexpensive bike rental program, and provide more infrastructure such as air pumping stations and bike rooms around campus.

On/Near-Campus Respondents Who Would Change Their Habits with Free/Inexpensive Bike Rentals

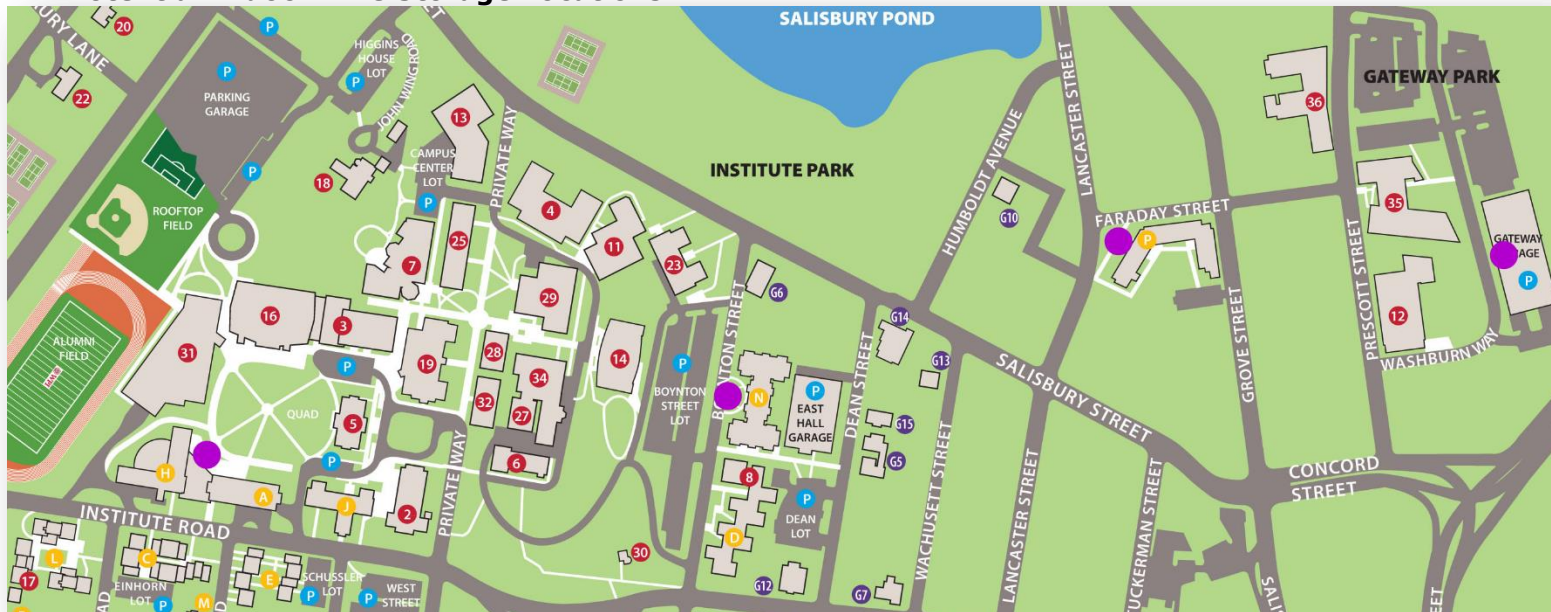


We recommend that the WPI Department of Facilities create a free or inexpensive bike rental program, and provide more infrastructure such as air pumping stations and bike rooms around campus.

Key Area: Respondents who drive \geq once a week to Gateway who said that a free/inexpensive bike rental program would change how they travel

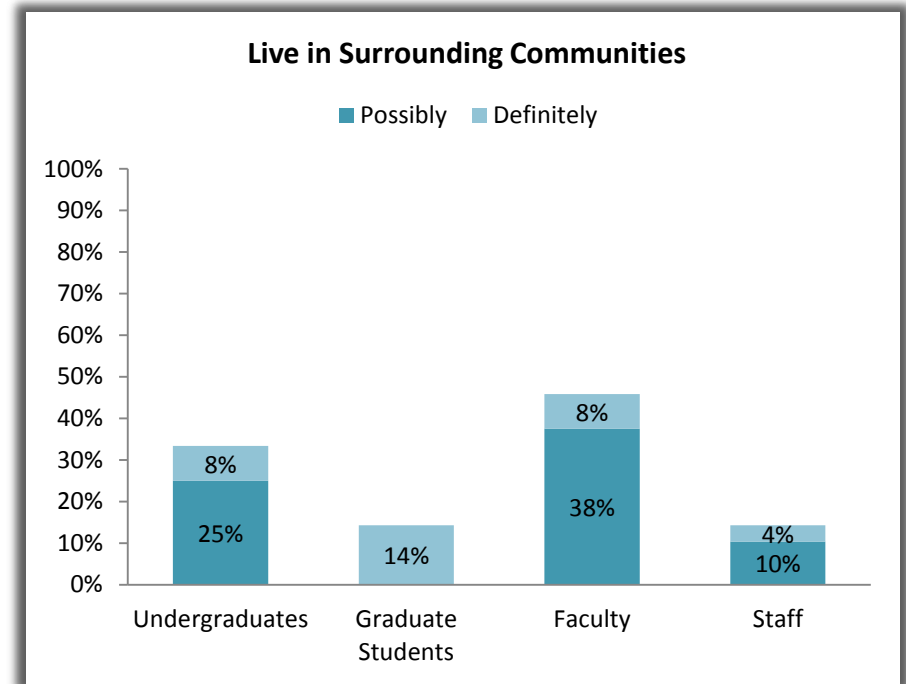
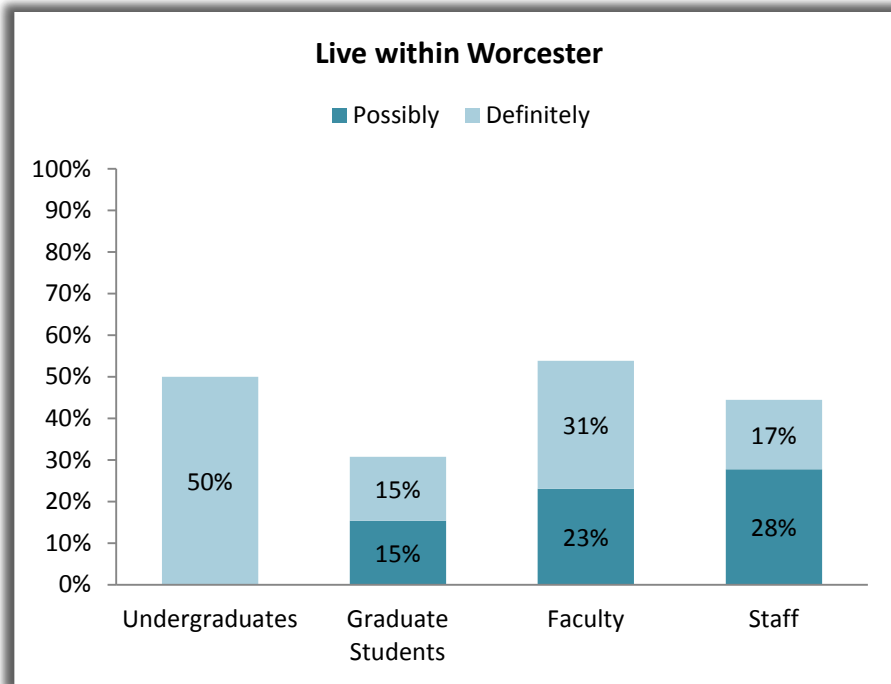


Potential Indoor Bike Storage Locations:



We recommend that the WPI Department of Facilities install a WRTA Information Ticker and/or WRTA kiosk in the Rubin Campus Center.

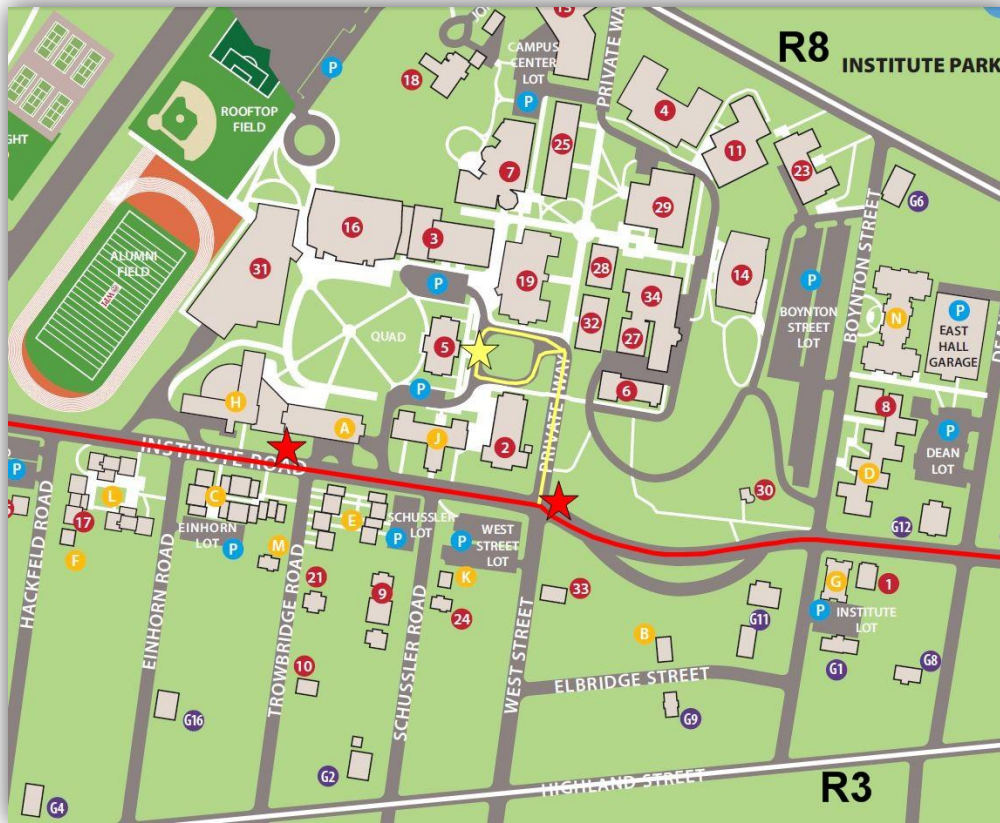
Respondents (who commute by car) who said that more frequent or convenient WRTA routes would change how they travel...



We recommend that the WRTA and WPI Department of Facilities work together to get a WRTA stop on campus.

"A WRTA bus stop right on or at the main campus would be helpful"

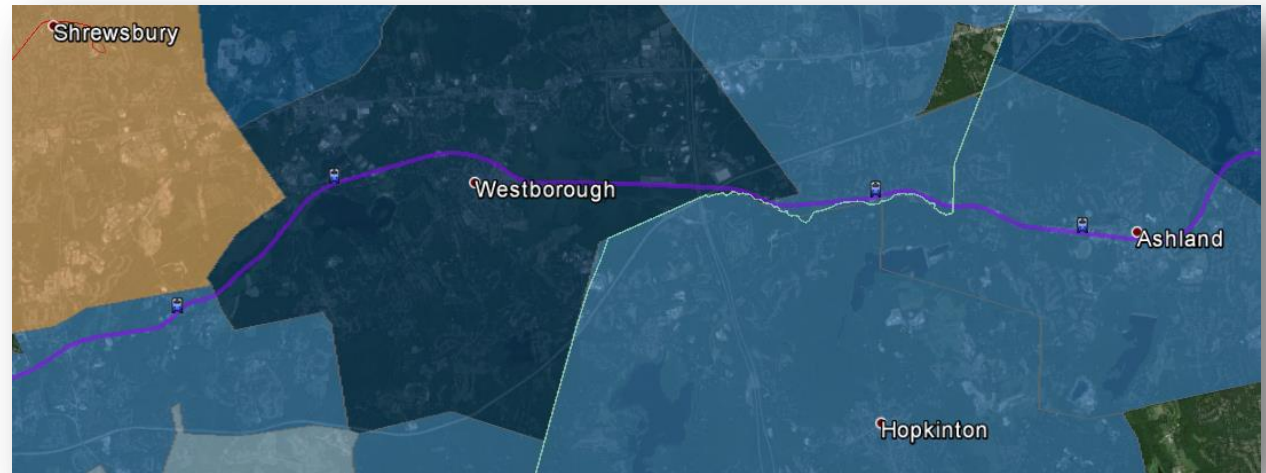
"Add a WRTA bus stop on campus"



Visualization

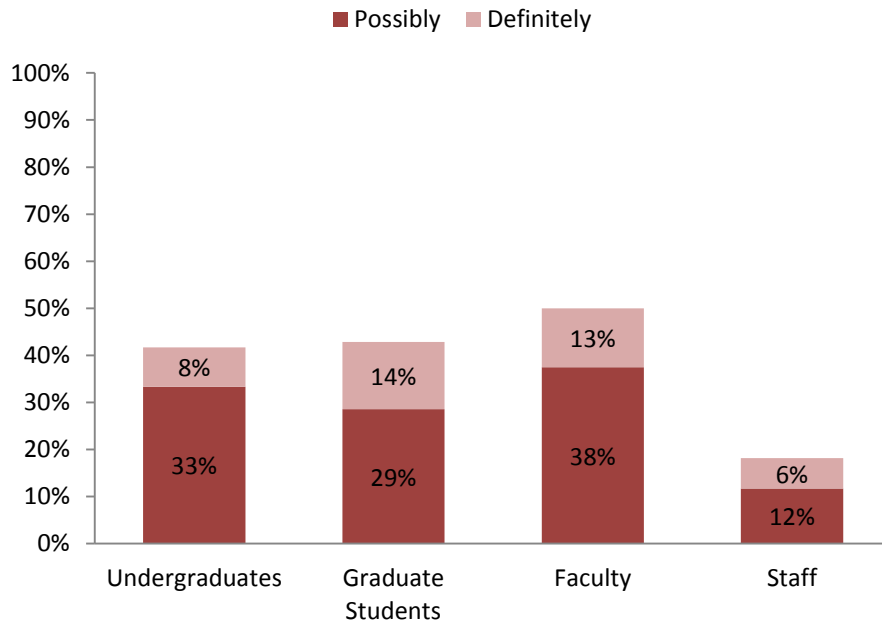
We recommend that WPI Human Resources work with the MBTA to offer a reduced-price rate for the Commuter Rail.

The commuter rail cuts through the areas of many employees (43 faculty, 24 staff)...

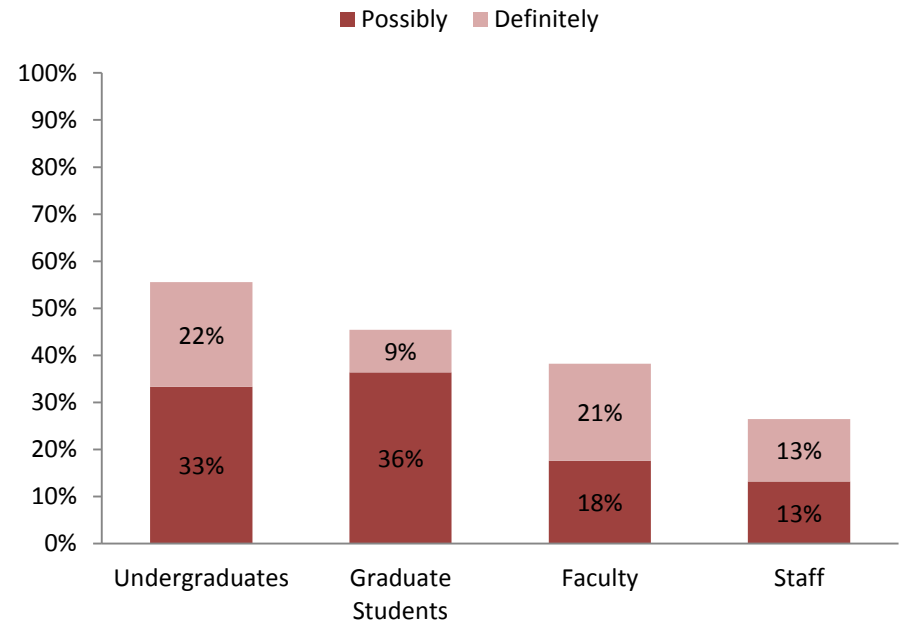


We recommend that WPI Human Resources work with the MBTA to offer a reduced-price rate for the Commuter Rail.

Commuters who would change their habits with a better MBTA (Surrounding Communities)



Commuters who would change their habits with a better MBTA (Farther Away)



We recommend that WPI Human Resources work with the MBTA to offer a reduced-price rate for the Commuter Rail.

	Cost/Day	Monthly Pass	Cost/Semester
South Station (Boston)	\$20.00-\$26.00	\$314.00	\$1256.00
Newtonville	\$11.00	\$184.00	\$736.00
West Newtonville, Auburndale	\$10.00	\$167.00	\$668.00
Wellesley (Hills, Farms, Square)	\$9.00	\$151.00	\$604.00
Natick, West Natick	\$8.00	\$134.00	\$536.00
Framingham	\$7.00	\$118.00	\$472.00
Ashland, Southborough	\$6.50	\$109.00	\$436.00
Westborough	\$6.00	\$100.00	\$400.00
Grafton	\$5.00	\$82.00	\$328.00

Better Options:

MBTA Semester Pass

MBTA Online Corporate Pass

Tax Deductions

We recommend that the WPI Web Development Office create a clear, updated, and central website with information about all alternative transportation options for WPI community members.

Refer back to this table:

Mode of Alternative Transportation	"Never used it"	"Never heard of it"
WRTA Bus System	74%	4%
MBTA Commuter Rail	34%	5%
Zipcar	83%	3%
Carpool World Website	47%	52%
SNAP and Gateway Shuttles	38%	2%

- *"A few problems I have noticed with WPI transportation are that the information about routes/schedules is not well organized or widely publicized. "*
- *"If the options were made clearer (such as saying which bus lines go where of interest when), that might be really helpful."*
- *"More publicizing of the WRTA bus schedule and WPI transport options would improve alternative transportation near WPI."*

Could avoid comments like:

- *"Buses from MBTA in Worcester to WPI are ??? don't even know how that could be done."*
- *"The link from the train station to WPI seems weak or not available."*
- *"Perhaps transport over to Price Chopper would be useful."*

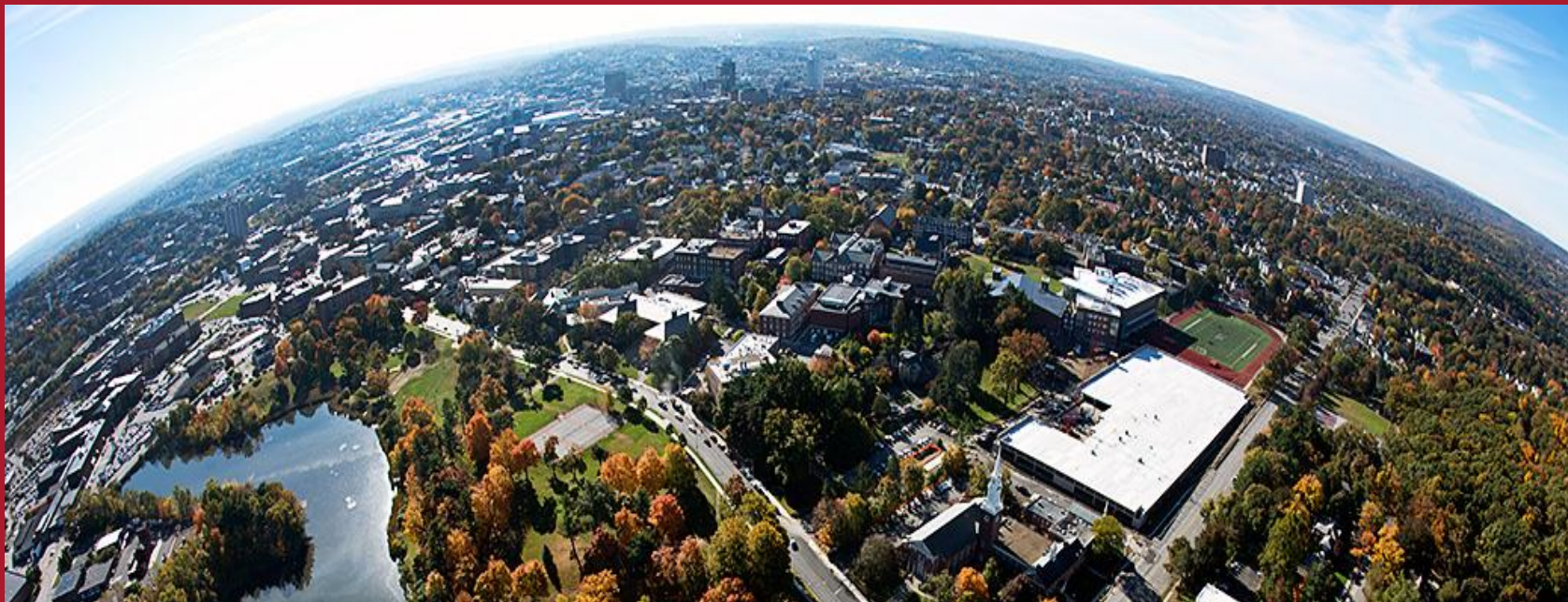
Summary of Recommendations

We recommend...

1. WPI's **Carpool World** website be improved, and that the WPI Office of Student Life, WPI Human Resources, and the WPI Department of Facilities promote and advertise it heavily.
2. The WPI Department of Facilities create a **free or inexpensive bike rental program**, and provide more infrastructure such as air pumping stations and bike rooms around campus.
3. The WPI Department of Facilities **install a WRTA Information Ticker** and/or **WRTA kiosk** in the Rubin Campus Center.
4. The WRTA and WPI Department of Facilities work together to get a **WRTA stop on campus**.
5. WPI Human Resources work with the MBTA to offer a **reduced-price rate** for the **Commuter Rail**.
6. The WPI Web Development Office create a **clear, updated, and central website** with information about all alternative transportation options for WPI community members.

Special Thanks to:

- Professor Kristin Boudreau & Professor Richard Vaz, our advisors
- Mrs. Elizabeth Tomaszewski, our sponsor from the WPI Department of Facilities
- Mr. Stephen O'Neil, Administrator of the WRTA
- Mr. Gregory Snoddy, Associate Dean of Students
- Ms. Deborah Graves, Executive Assistant to the Provost
- Ms. Cynthia J. Pellegrino, Director of Human Resources



Questions or Comments?

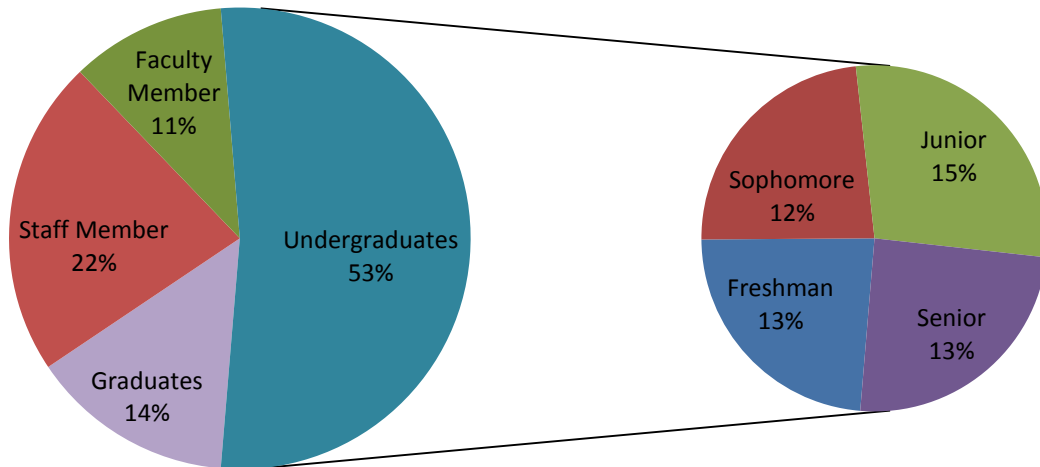


Extra Slides

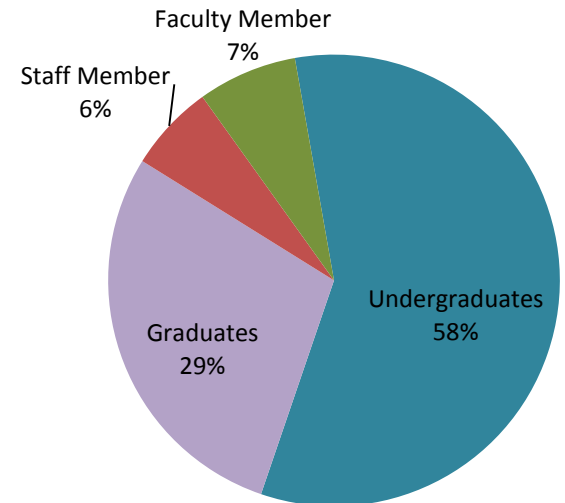


Survey Breakdown

**Survey Respondents Breakdown:
Percentage of Total Survey Takers**

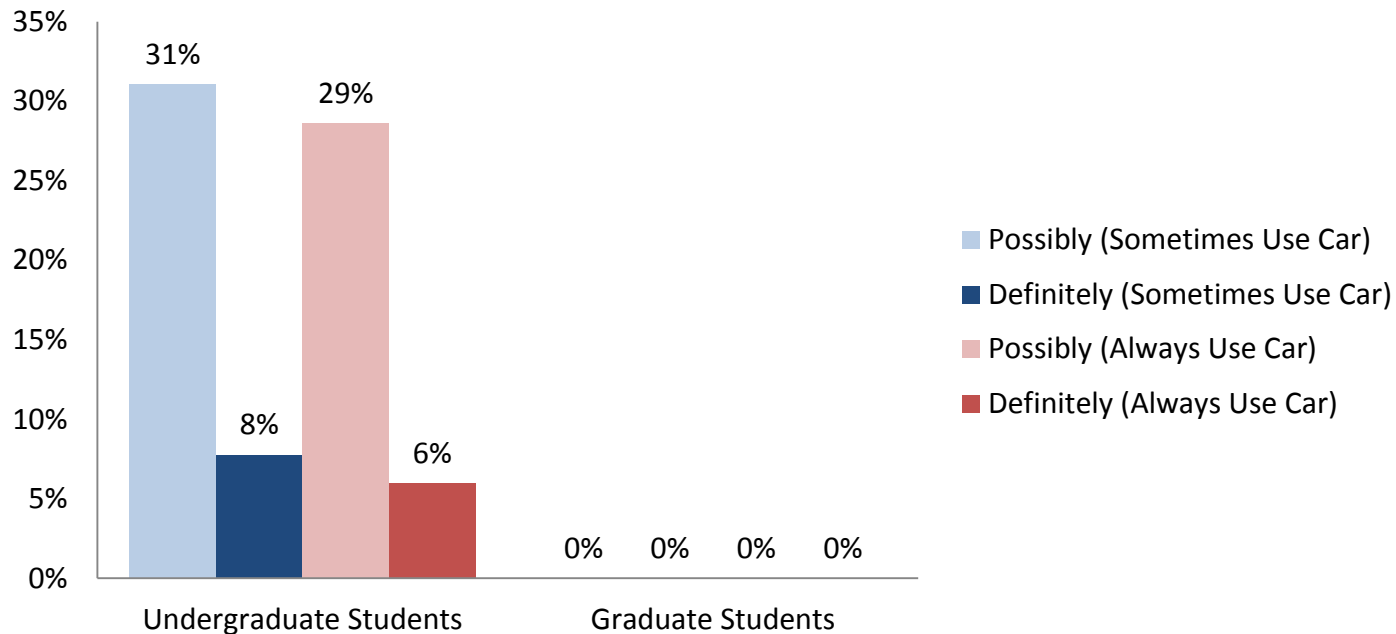


Total WPI Population



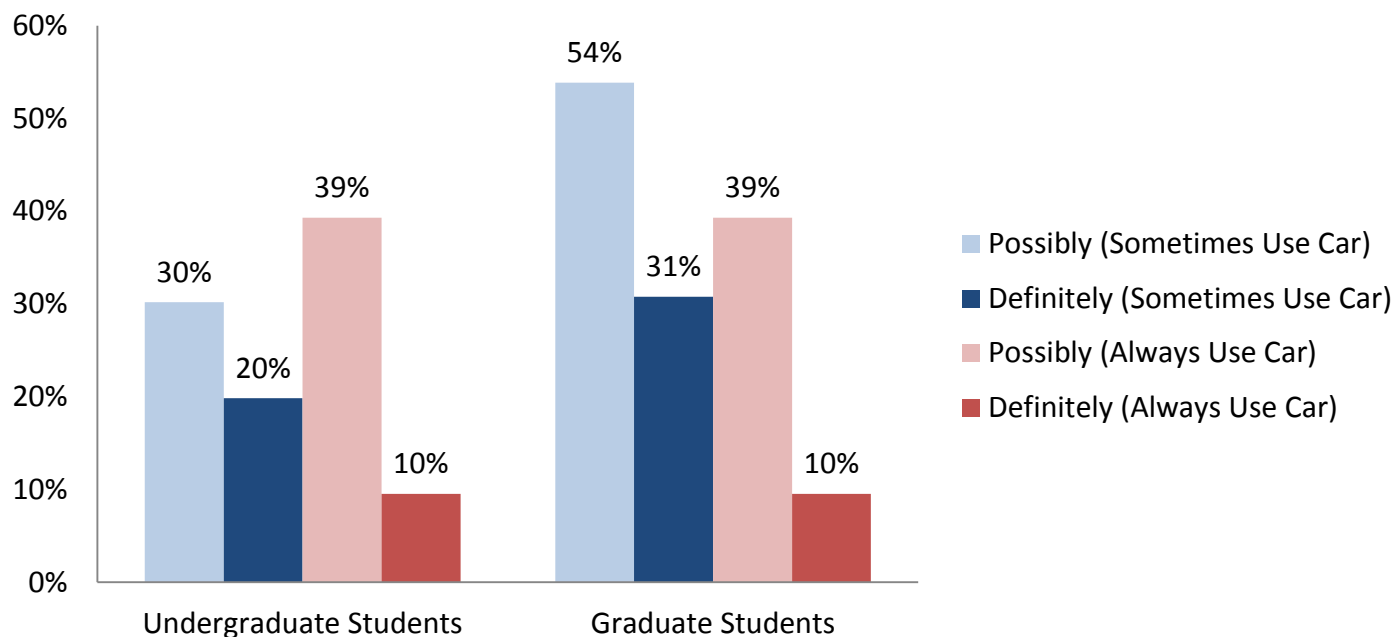
On-Campus Respondents: WRTA

On/Near-Campus Respondents Who Would Change Their Habits with More Frequent/Convenient WRTA Bus Routes



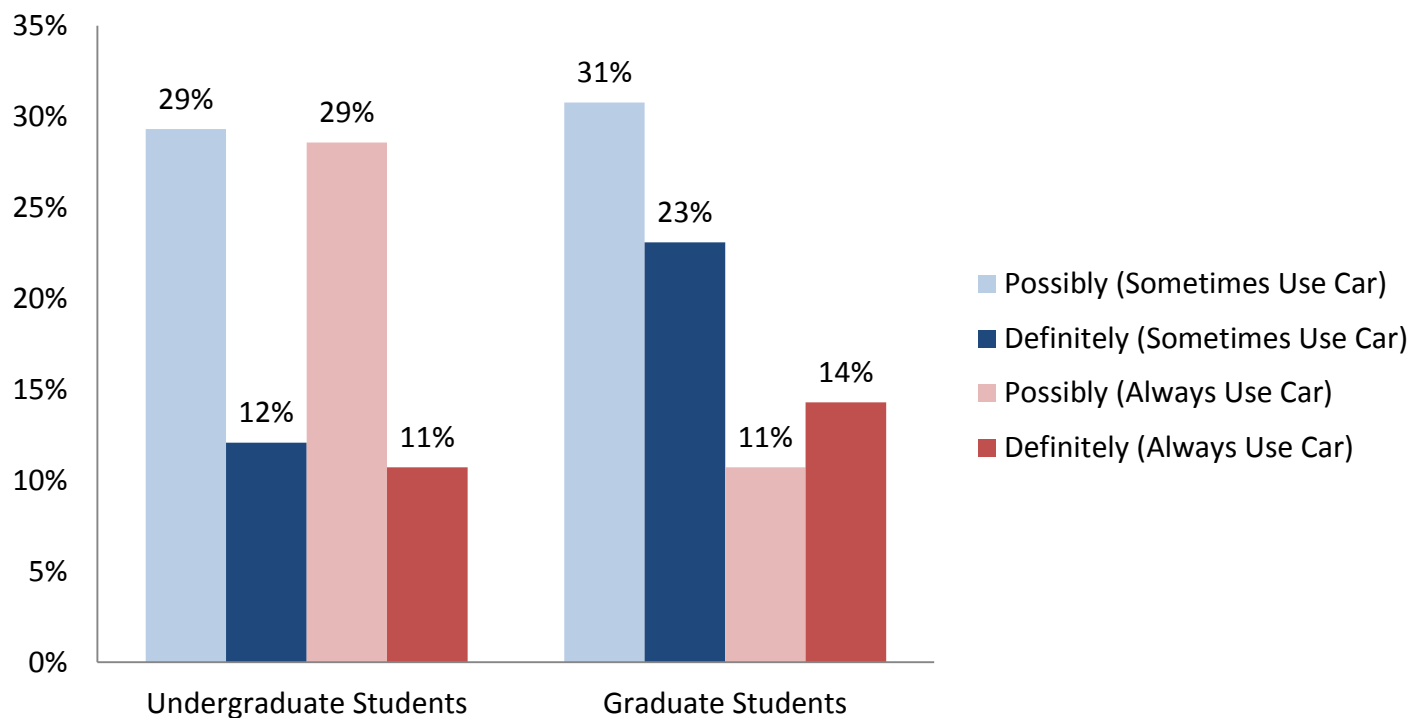
On-Campus: MBTA

On/Near-Campus Respondents Who Would Change Their Habits with a More Frequent/Convenient MBTA Commuter Rail



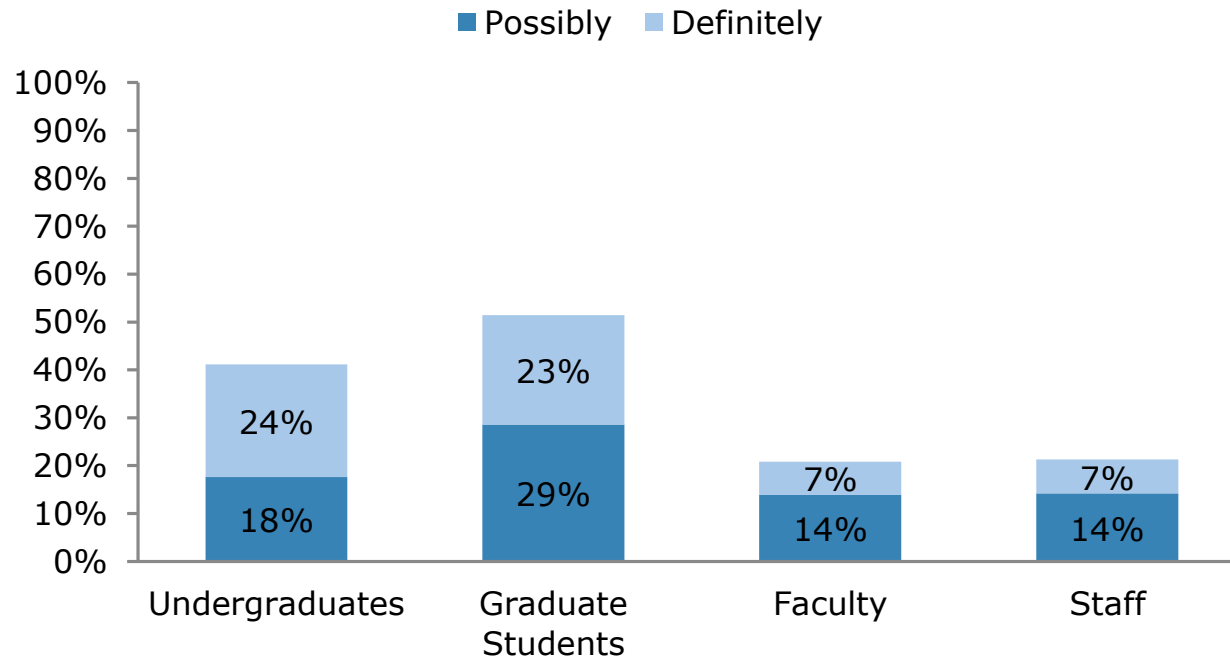
On-Campus: Zipcar

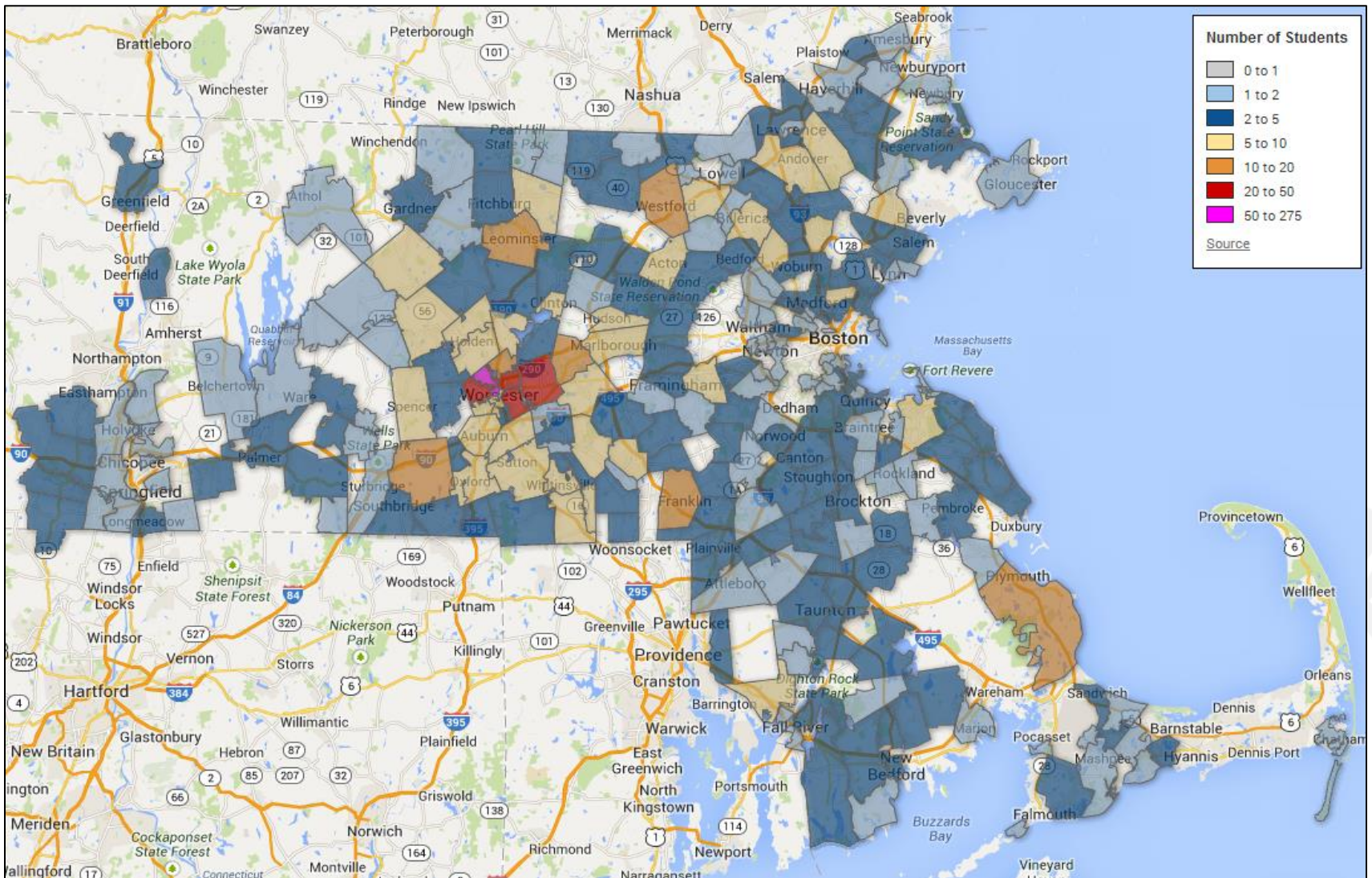
On/Near-Campus Respondents Who Would Change Their Habits with a Better Zipcar



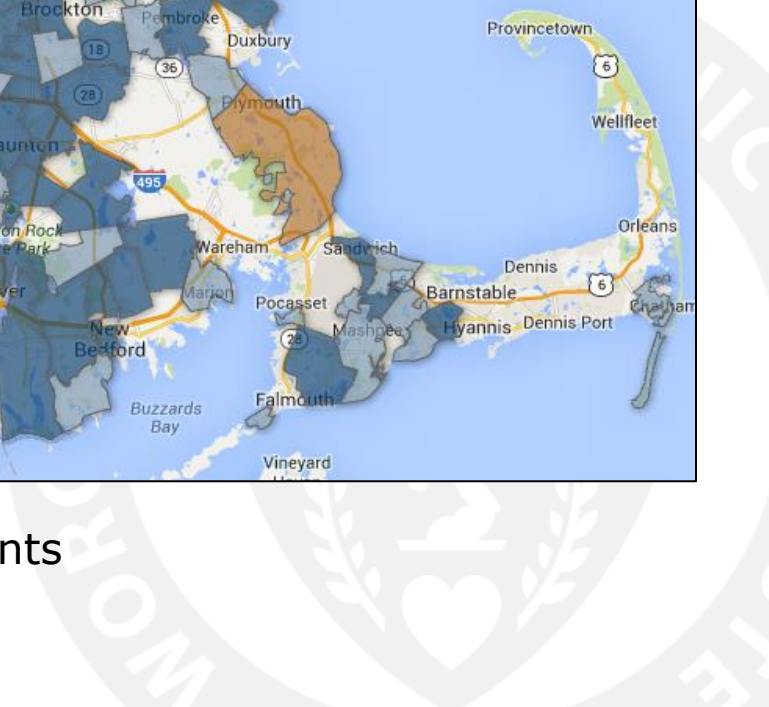
Off-Campus Bikes

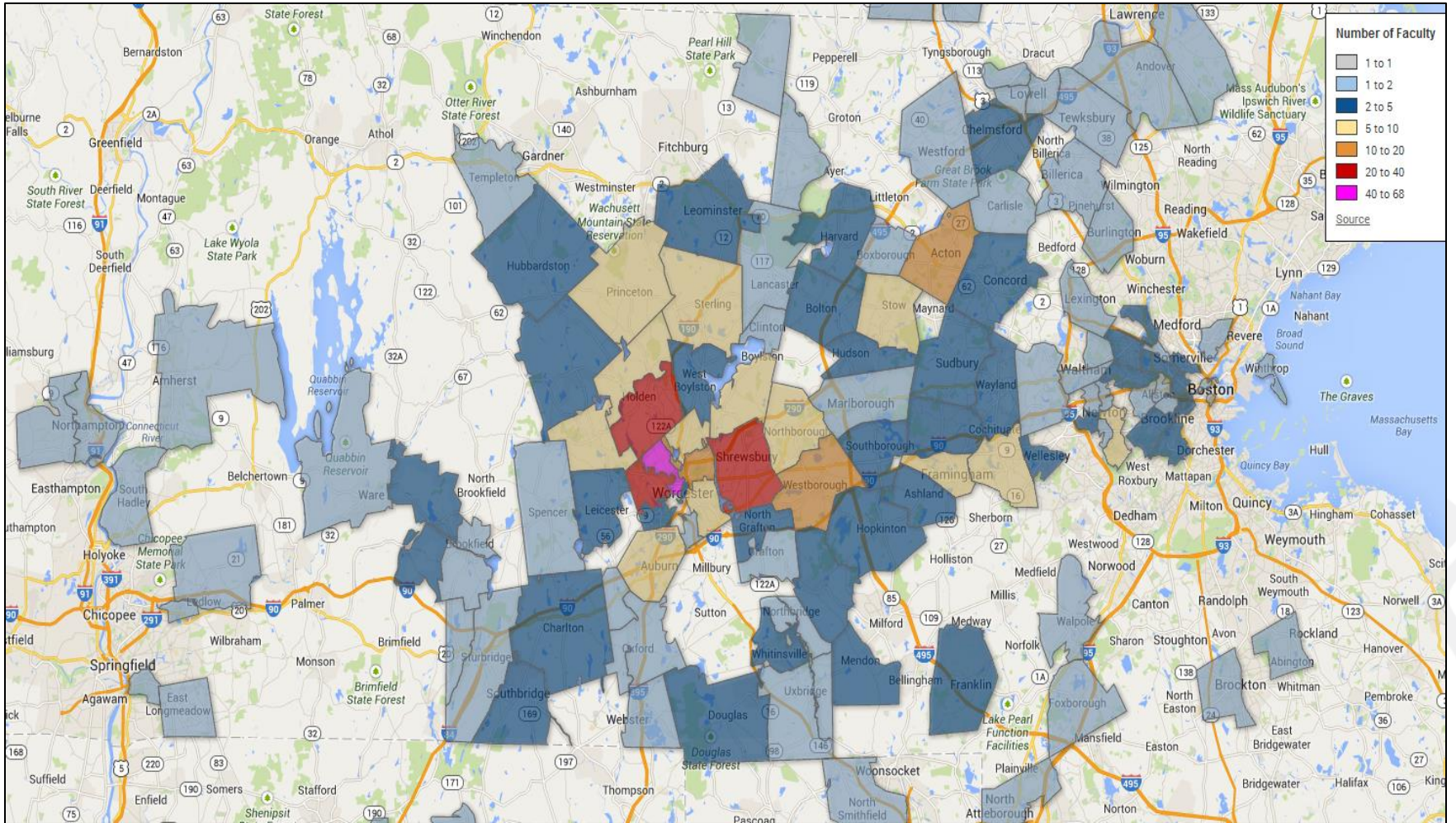
Commuters who would change their habits with Free/Inexpensive Bike Rentals



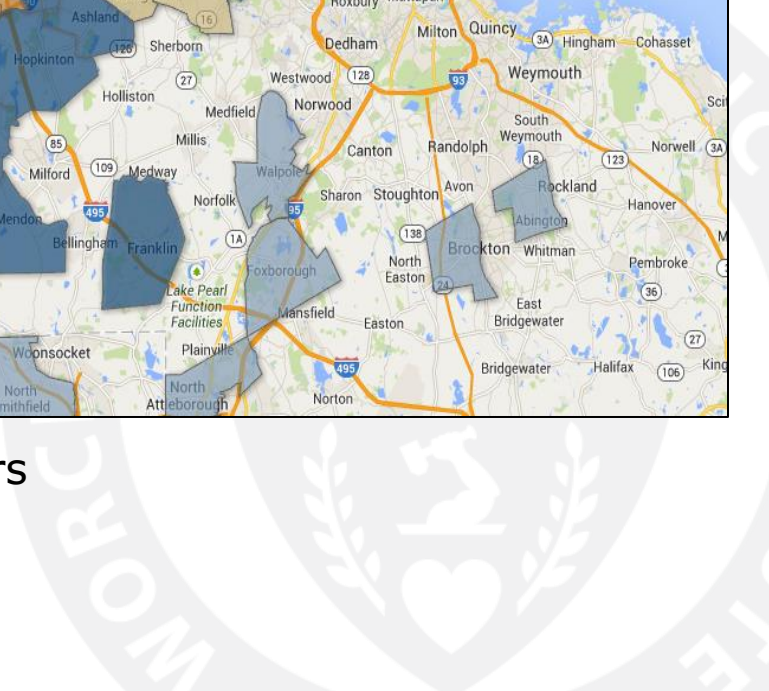


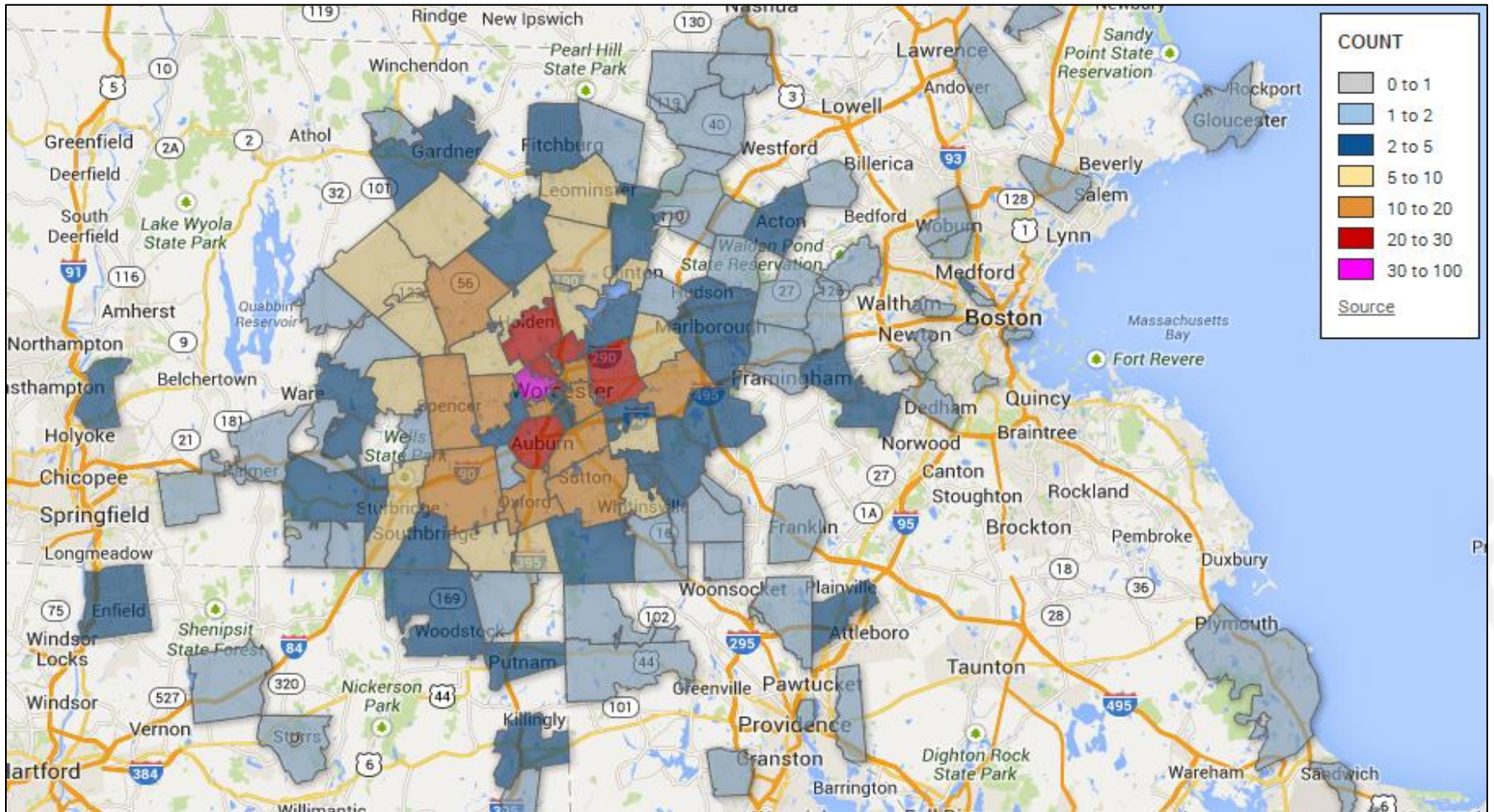
Commuter Students





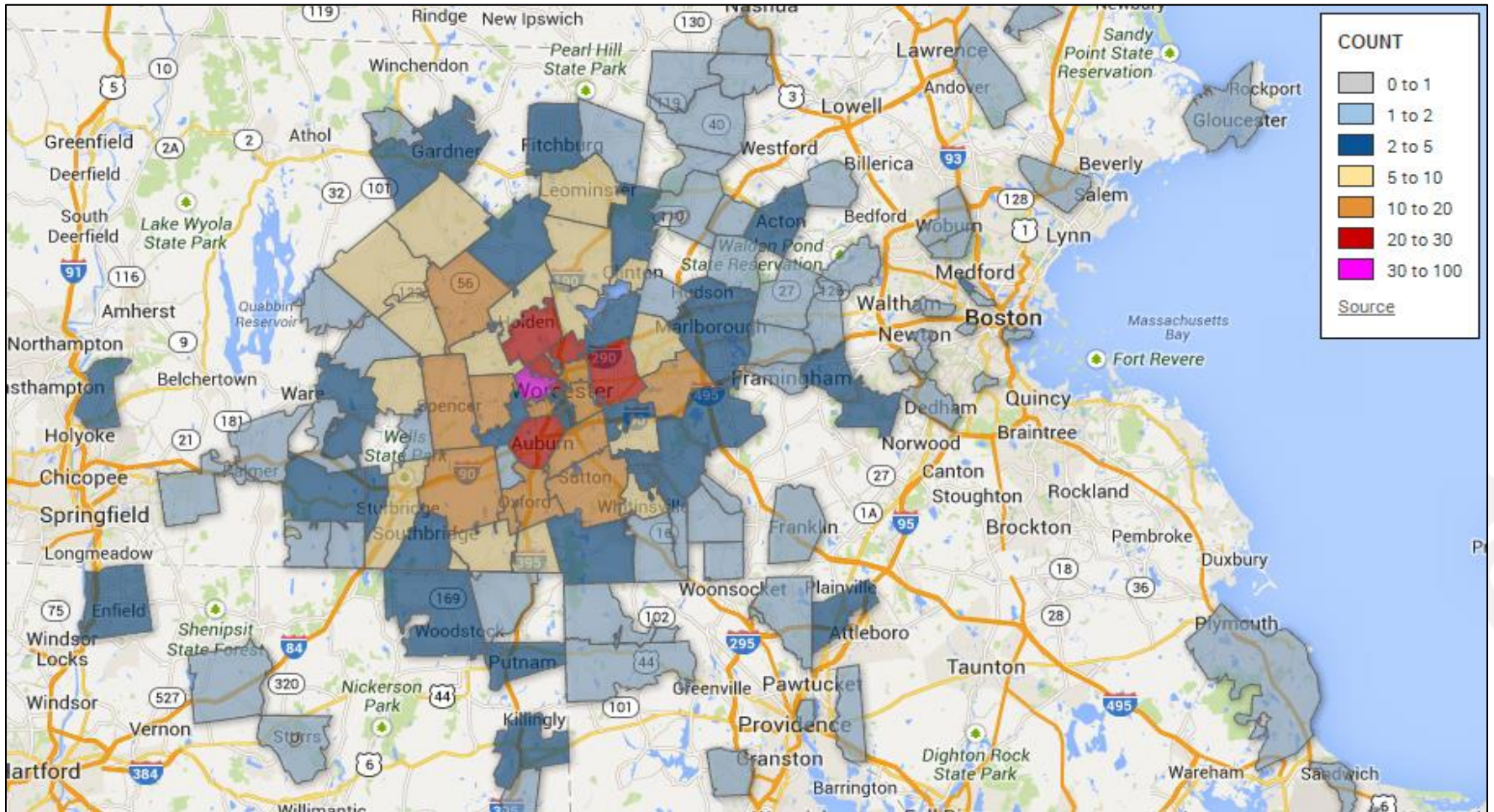
Faculty Members



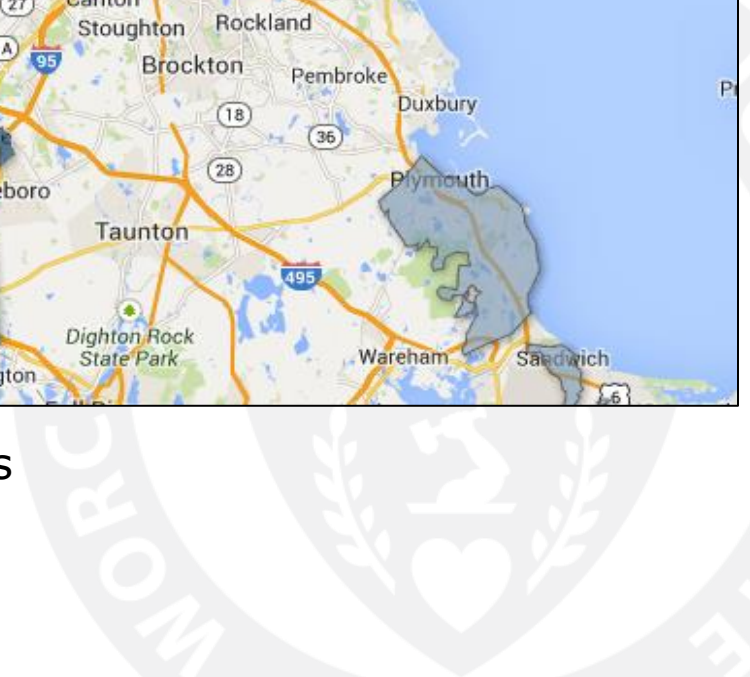


Staff Members





Staff Members



Increasing Safety and Security in areas near WPI

■ Definitely change how I would travel ■ Possibly change how I would travel

