



Can Employers Really Impact Commuter Mode Choice?

An MIT Case Study

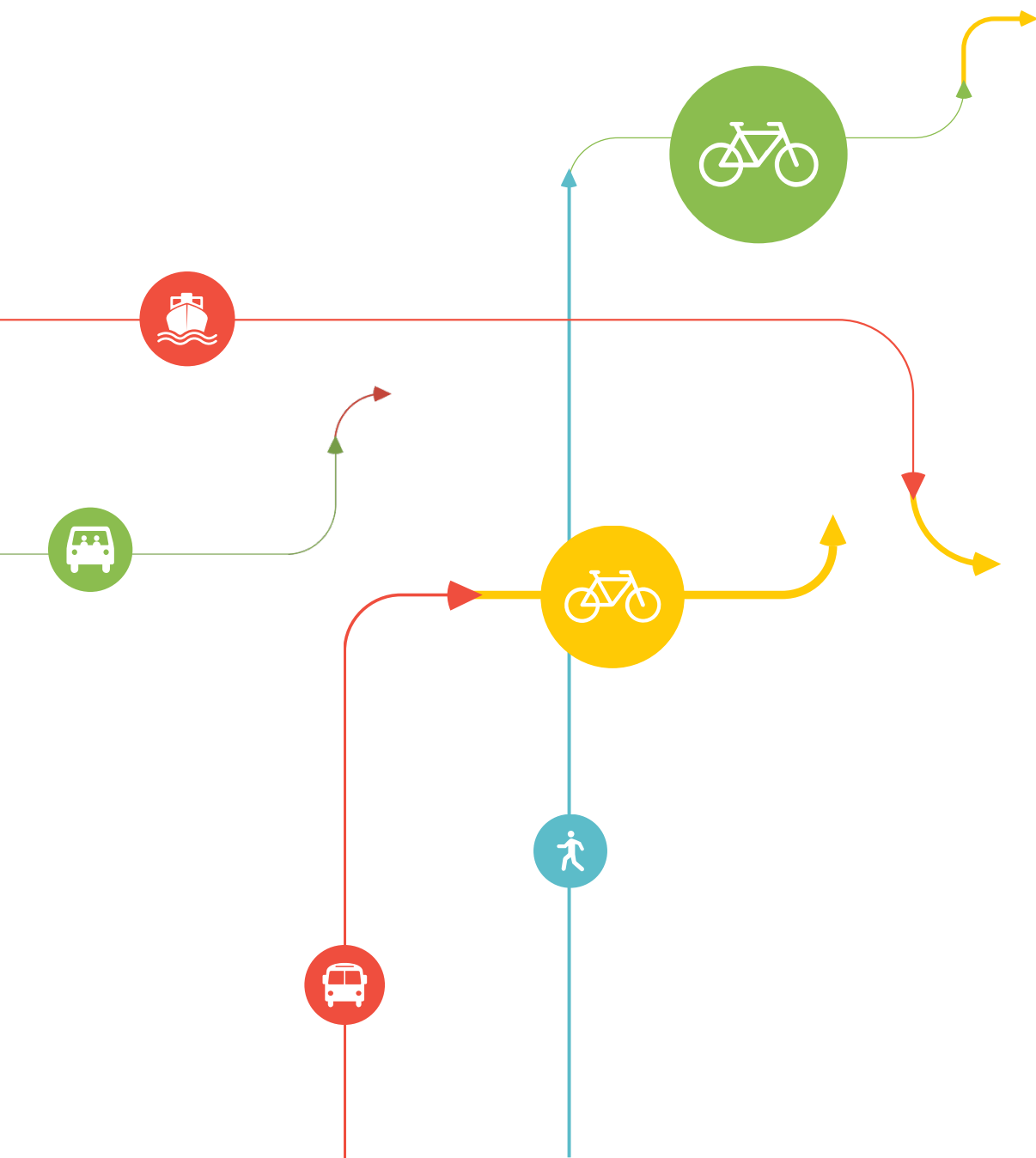
December 1, 2016

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accessMIT

MIT Massachusetts
Institute of
Technology



Outline

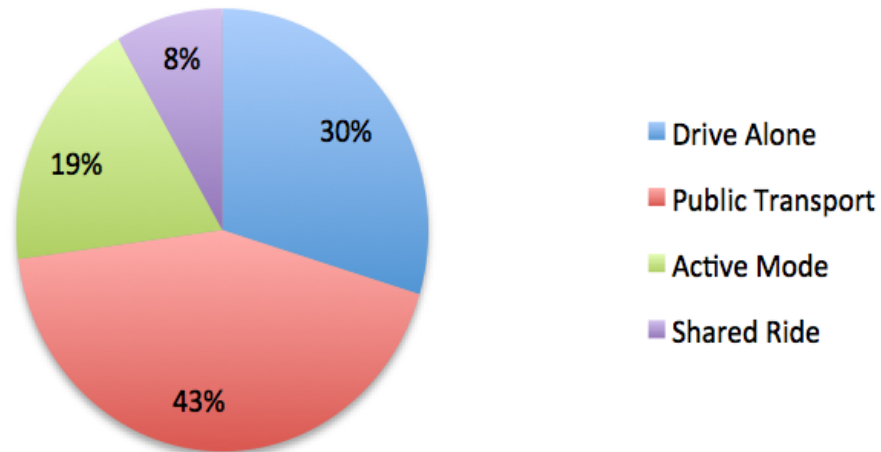
- Current Snapshot of MIT Commuter Behavior & Programs
- *Access MIT*: Background and Implementation
- Implementation Challenges and Lessons Learned
- Next Steps



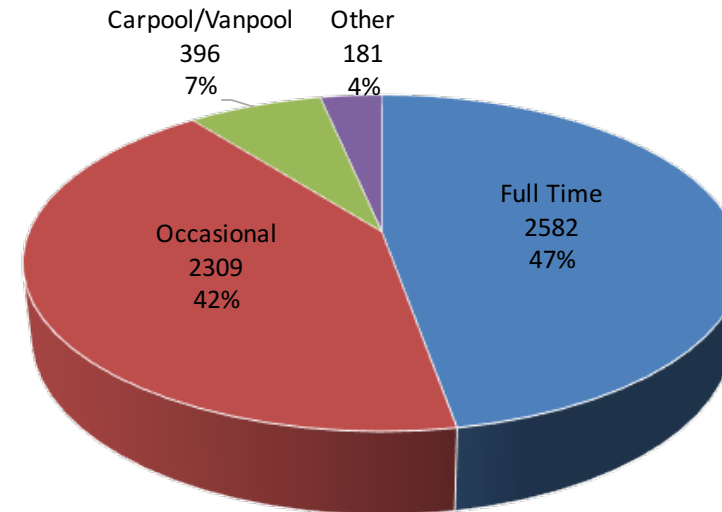
Current Snapshot of Commuter Behavior & Programs

Recent Travel Behavior at MIT

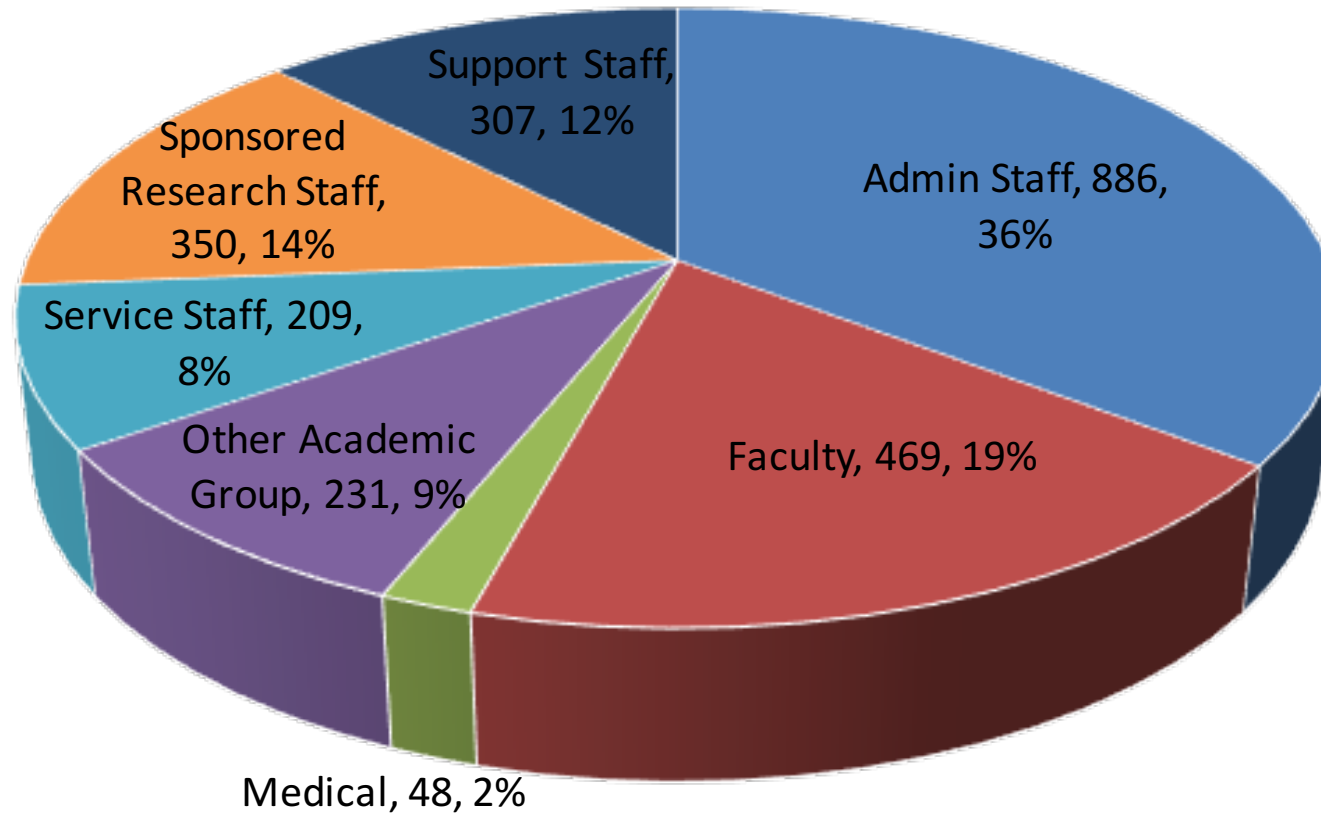
2014 Commuter Survey Mode Share



MIT Parking Permits



Who are the 2,582 Employee Full-Time Parkers?

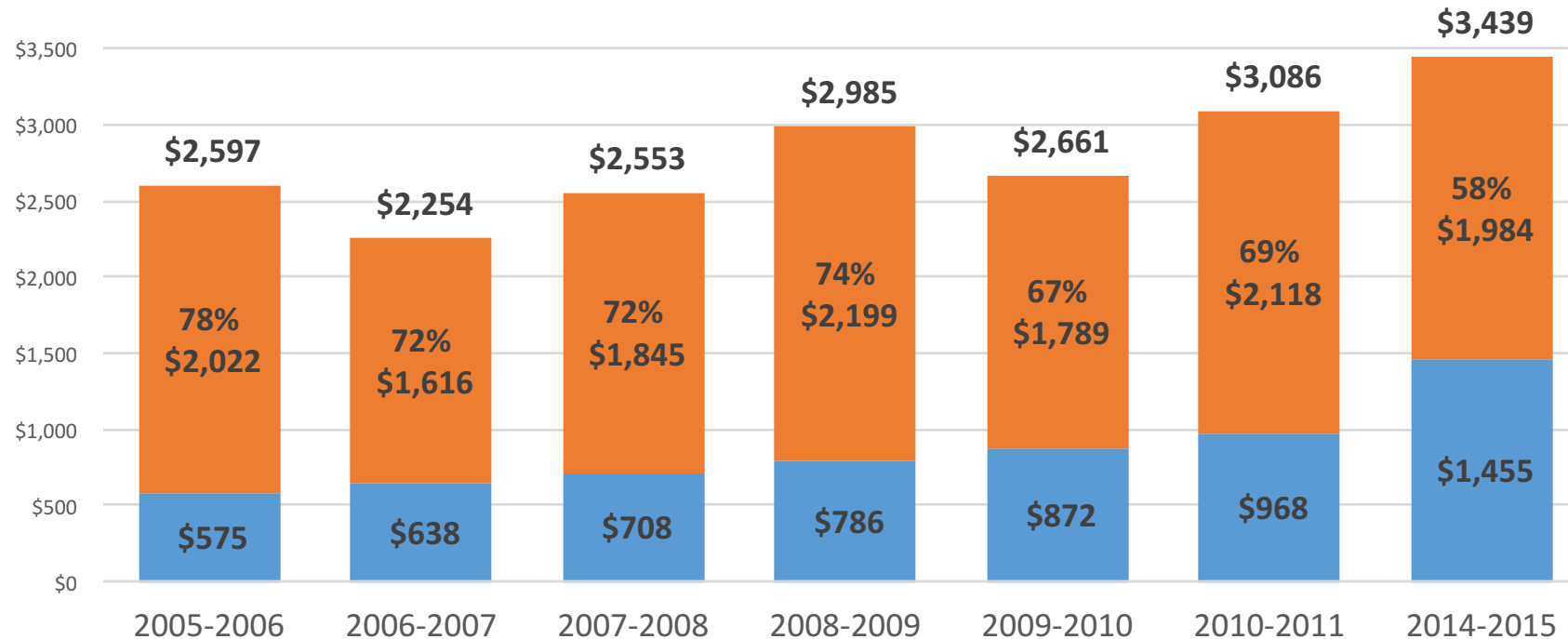


Source: MIT Office of Parking and Transportation

Subsidy History

- 3,700 Employee Parking Spaces

Employee Parking - Annual Expense per Space



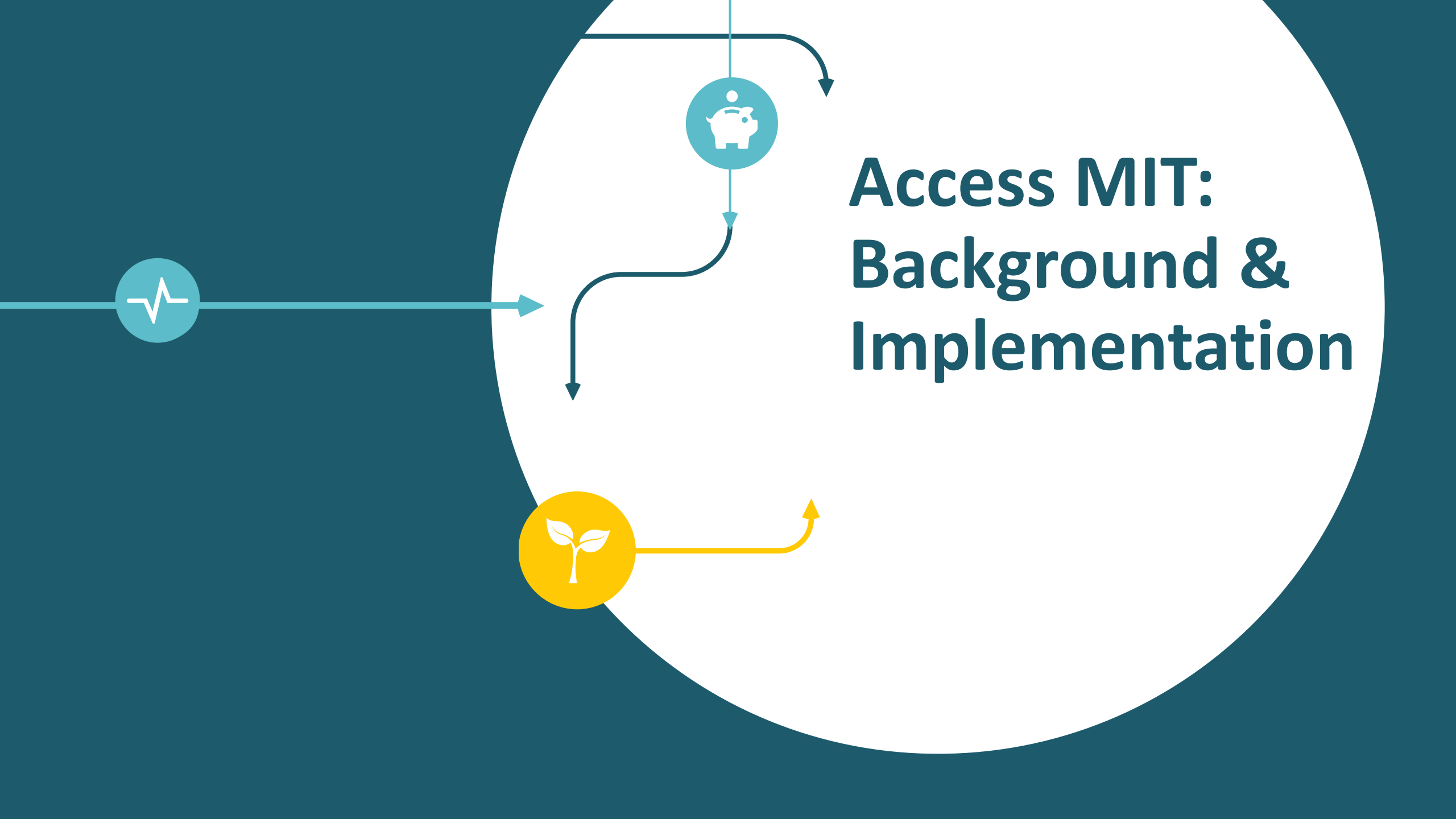
Prior Commuting Programs at MIT

Annual “Full-time” Parking	2,582 parkers	\$1600/yr
Occasional Parking	2,725 parkers	\$85/yr+\$8.50/day
Vanpools	163 members	Free
Carpools	567 members	\$800/year
Emergency Ride Home	750 employees	Free
Smartway Elite Discount	43 parkers	Free
Qualified Bike Benefit	250 participants	
Hubway	1,968 active members	\$25/year
Zipcar	6,283 active members	\$25/year
Monthly Transit Passes	70,000 annual passes	50% subsidy
Private Transit Reimburse.	60 employees	50% subsidy
4 Campus Shuttle Routes		Free
25 EV charging stations		Free
AccessMyCommute Dashboard		

Current challenges at MIT

- Construction will reduce parking inventory 20% over next 2 years: 800 parking spaces
- Traffic Congestion and GHG Emission concerns
- How do we reduce vehicle trips to campus?





Access MIT: Background & Implementation

New commuter incentive package

- Incentive package (and broader vision) collectively referred to as *AccessMIT*, includes
 - Shift to daily parking pricing (minimal annual permits)
 - Free universal bus & subway transit pass (embedded in staff ID)
 - Increased commuter rail monthly pass subsidy (from 50% to 60%)
 - New parking subsidy at transit stations (50%)
 - Online commuter dashboard (incentives & gamification)
 - Integration with existing programs (carpools, bike benefit, etc.)



Daily parking prices

- Current annual permit price: \$1,760
- Starting Sept. 15, 2016, permit holders will pay:
 - \$100 annual permit fee, plus \$10 per day (capped at \$1,760)
- Rationale:
 - Make costs more salient
 - Remove sunk cost, thereby encouraging daily choice of modes when combined with universal transit pass



Universal transit pass

- All benefits-eligible employees can receive new ID card with unlimited local MBTA bus and subway access
- Institute-wide expansion of former *MobilityPass* pilot project
 - Pilot demonstrated that 31% of regular parkers given a transit pass commuted by transit at least 1 day per month, and 8% take transit at least once a week
 - 4% initial reduction in parking
- New program is no longer opt-in



Public awareness campaign

Switch modes. And love your commute.

AccessMIT was designed to promote integrated, multimodal transportation options for employees. The challenge is, how do you get someone to re-consider their commute?

By offering them a great new commuter benefits package, highlighted by testimonials of people who love their commute.

This concept helps people get into a new mindset—a new mode of thinking—by profiling real MIT commuters who find interesting ways to get to work. And enjoy the unexpected quality of life benefits of their commute.



accessMIT



I'm in climate action mode

John Sterman is a professor who not only teaches about system dynamics and sustainability—he sees them in action, every day. He's committed to a healthy, low-carbon commute so he bikes to work rain, snow, or shine. Because driving less makes a big difference to our campus, community, and the planet.

John Sterman

*Jay W. Forrester Professor of Management,
MIT Sloan School of Management*

Your commute counts. Switch it up.
web.mit.edu/accessmit



Version 1



We're in harbor cruising mode

For Kiley, commuting isn't just about quality of life, it's a way of life. After all, if you can bring your best friend on a beautiful MBTA ferry ride across Boston Harbor every morning, why wouldn't you? And one less car on the road makes a big difference to our campus, community, and the planet.



Kiley Clapper (and Gunner)
*Academic Administrator,
Department of Civil and Environmental Engineering*

Your commute counts. Switch it up.
web.mit.edu/accessmit



Version 2

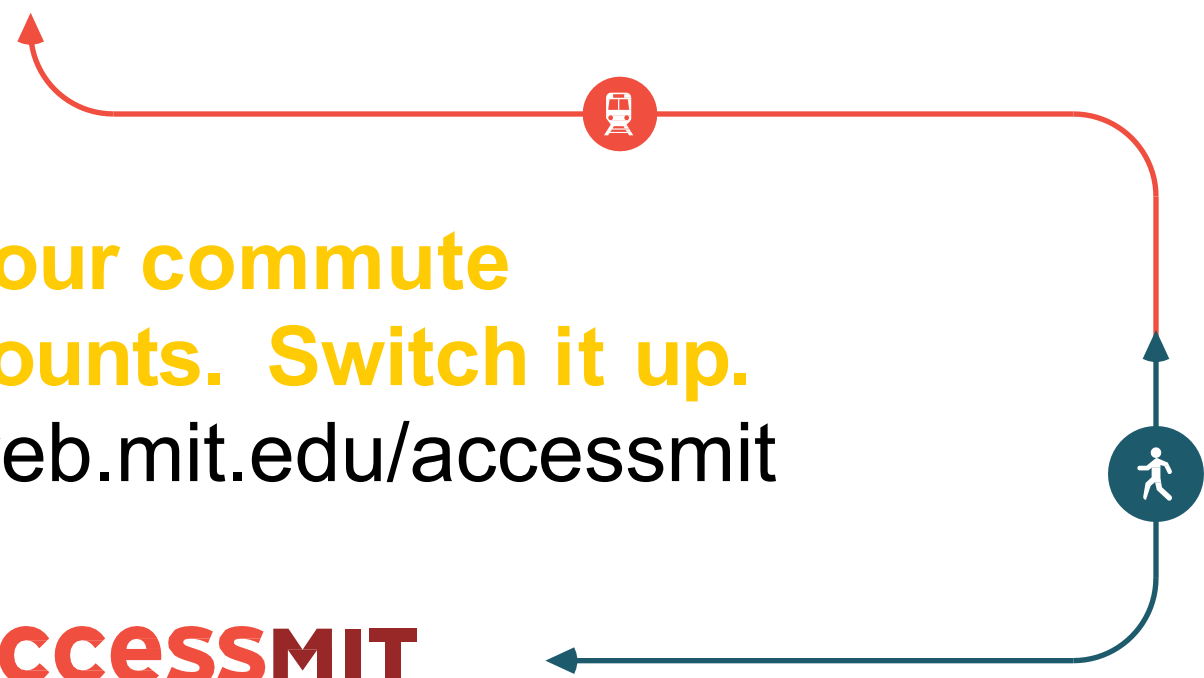
Share a ride with a friend. Love your commute.

We're in harbor cruising mode

Kiley Clapper (& Gunner)
Academic Administrator

Your commute counts. Switch it up.
web.mit.edu/accessmit

accessMIT





Jarvis Smith

*Staff Accountant,
Office of the Vice President for Finance*



I'm never in bumper-to-bumper mode

As a staff accountant, Jarvis Smith knew that skipping the drive to MIT didn't just make environmental sense—it makes financial sense. He loves the T ride from Ashmont Station so much, he'll likely never drive his car to work again. Now he saves time, saves money on gas, and saves himself plenty of frustration.



Your commute counts. Switch it up.
web.mit.edu/accessmit



Version 2

I'm never in bumper- to-bumper mode

Jarvis Smith
Staff Accountant



Ditch the car and the cost. Give public transit a try.



Your commute counts. Switch it up.
web.mit.edu/accessmit



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Maureen Ratigan

*Director of Benefits,
Human Resources Department*

I'm in de-stress mode

Maureen Ratigan is Director of Benefits in Human Resources, so she knows that a great commute can save lots of precious resources—including time, money, and your state of mind. So she switched from her car to the commuter rail, and has loved the benefits ever since.

Your commute counts. Switch it up.
web.mit.edu/accessmit



Cecilia Stuopis
Director of MIT Medical




I'm in keep it flexible mode

As Director of MIT Medical, Cecilia knows that an alternative commute is better for your health. So, whenever she can, she takes the Boston Express Bus to Boston—and leaves her car at the lot, and her stress far behind. See how switching up your commute improves our campus, community, and your well-being.


Your commute counts. Switch it up.
web.mit.edu/accessmit

AccessMyCommute Dashboard



HomeDashboardAdminIncentivesTools

AdamLanguage



Adam Rosenfield

My StatsEdit Profile

25

25.0 mi

Non-SOV Trips

Non-SOV Distance

1ST WALKING TRIP

10 WALKING TRIPS

25 WALKING TRIPS

And 3 more!

A Start

B Destination

Easily compare transportation modes and track your distance

Let's Go!

Log Your Trips

November 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19

Log TripsHistory

How did you get to work?
Log your trips here.
Select dates on the calendar to log trips

Departure Time8:30 AM

Return Time4:30 PM

No Return Trip

Consider carpooling with your MIT colleagues?
Use the 'Favorite Trips' widget on the right to find carpoolers in your neighborhood!

Favorite Trips

Recent Searches

Joining a carpool? Enter the IDJoin

Shared Trips

A 143 Albany St, Cambridge, Massachusetts, 02139

B 77 Massachusetts Ave, Cambridge, Massachusetts, 02139

Department Challenge (Over 50 Members)

Top 10 Results — View all results.

Networks	MULTI-MODE CHALLENGE
1 McGovern Institute for Brain Research	7.97%
2 RLE Area	5.87%
3 Division of Comparative Medicine	5.79%
4 Chemical Engineering	5.41%







AccessMyCommute Dashboard

- Key features
 - Automated commute tracking and trip records
 - Trip planning tool
 - Carpool facilitation
 - Lottery and rewards program
 - Departmental Leaderboard
- Customization of *RideAmigos* platform
 - Single sign-on
 - Automatic trip generation and logic
 - Integration of *Moves* app for biking and walking



Dashboard: Trip Planning

- Trip planning with real-time information
 - Provides trip information for all mode options
 - Compares modes by time, cost, sustainability
 - Can match prospective carpoolers

May 23, 2016 @ 9:15 PM		Revise Search
	Carpool 4 Results	
	Vanpool No Results	
	Transit 1 Result	6 lbs CO2 10.4 mi 32 min
	Walk 1 Result	0 lbs CO2 1,572 calories 9.9 mi 3 hr 26 min
	Bike 2 Results	0 lbs CO2 600 calories 10.5 mi 1 hr 1 min
	Drive 1 Result	10 lbs CO2 \$3.40 12.0 mi 25 min

Dashboard: Commute Statistics

My Stats and Trip Logs

MY STATS

MY TRIPLOGS

Show my statistics for All Time

210 Trips Logged	694.9 mi Distance Logged	
197 Non-SOV Trips Logged	646.6 mi Non-SOV Distance Logged	
0 Calories Burned*	330 lbs CO ₂ Reduction*	\$75.62 Money Saved*

Close

*estimated results

Non-SOV = Non-Single Occupant Vehicle

Incentive design and implementation

Sustainable Commute Rewards

Take advantage of your commuting choices and redeem points you've earned by commuting sustainably for various cash prizes below. Points are awarded for your daily (round-trip) commute as follows:

Drive-alone: 1 point/commute

Uber/Lyft, etc.: 1 point/commute

Dropped off: 2 points/commute

Transit: 2 points/commute

Carpool/vanpool: 2 points/commute

Telework: 2 points/commute

Walkers/Bikers: 3 points/commute

To ensure you are receiving all of the points you've earned make sure you've registered your carpool and/or signed up for the Moves app. Instructions for both can be found in the Help section.

Although you may redeem points at any time by pressing the "redeem" button below, lotteries will be conducted and prizes will be distributed at the end of the program. Points are redeemable through May 13th, 2016. Look for TechCash rewards to appear on your MIT ID automatically after the end of the program. The winner of the grand prize will be notified of their win, and provided instructions for picking up their gift card.

Happy Commuting!

Select a reward:

- ☐ **Lottery entry - \$500 American Express gift card lottery (1 available) (5 points)**
- ☐ **Lottery entry - \$100 TechCash lottery (5 available) (1 point)**
- ☐ **\$0.10 TechCash (1 point)**

Please make a selection

 **redeem**

Start Date: Mar 1, 2016
End Date: Apr 29, 2016
Contact: Corey

YOU HAVE

6

POINTS

Dashboard: Departmental Leaderboard

Teams/Networks (Top 100) Search		Participation Based Challenge
1	McGovern Institute for Brain Research	8%
2	Nuclear Science & Engineering Area	7%
3	Architecture	6%
4	RLE Area	6%
5	Division of Comparative Medicine	6%
6	Residential Life Programs Area	6%
7	Economics Area	6%
8	MIT Press	5%
9	Chemical Engineering	5%
10	VP for Institute Affairs Area	5%



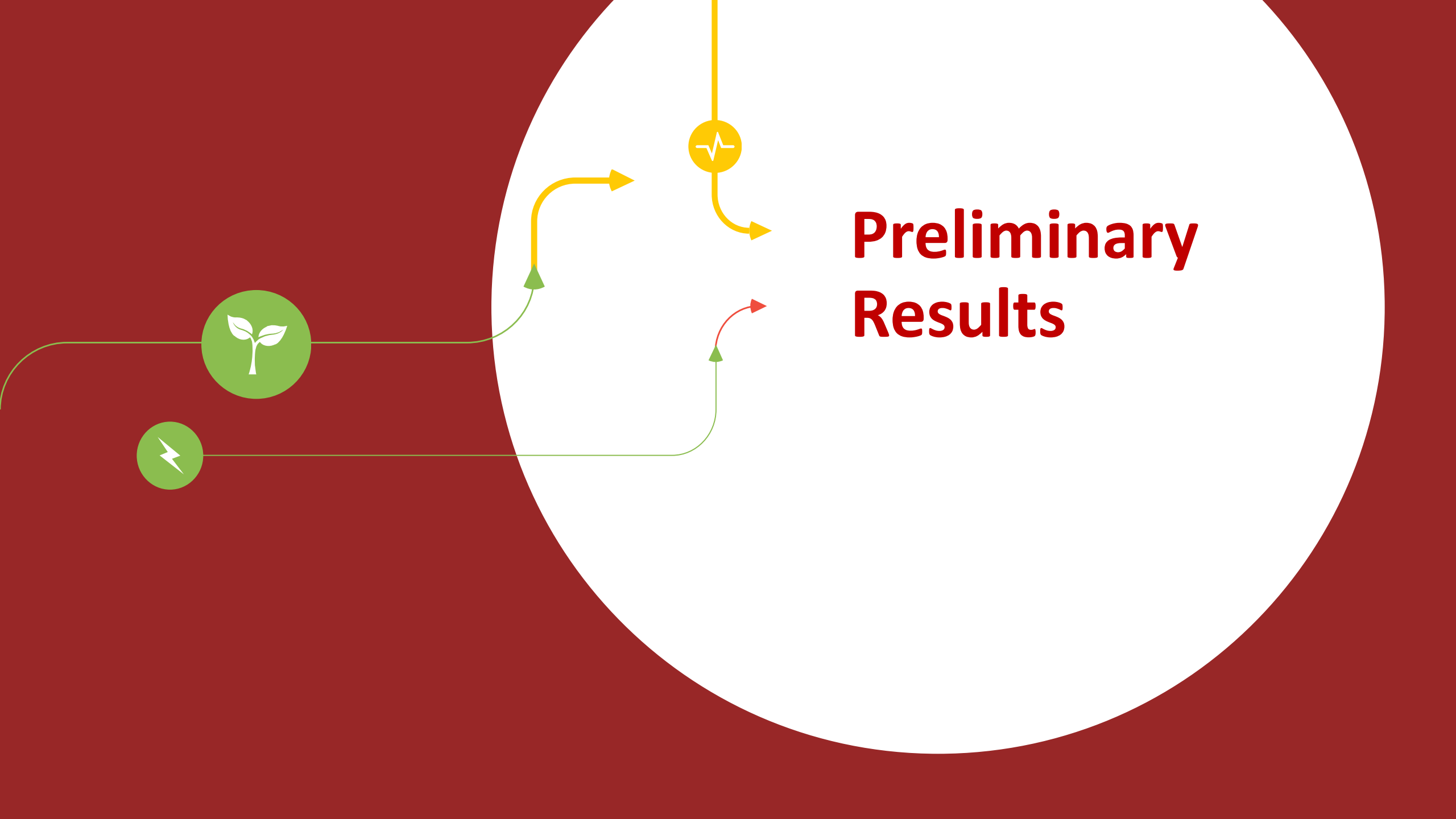
Practical Motivations

- Goal: achieve **10%** reduction in parking demand over two years
 - Trying to reduce parking demand rather than paying for new parking facilities
- Create more equitable and flexible options for employees that better reflect the external costs of commuting by various modes
- Initial focus on putting Universal Pass in place and evaluating it
 - University / employer distributes passes to entire population, and bears burden of payment
 - Combat technical weaknesses
 - Payment based on surveys or usage estimates as opposed to measured billing leads to unknown effect on fare revenue
 - Most prior implementations in auto-oriented areas
- Reducing parking demand supports MIT's sustainability and climate change initiatives



Research Questions

- How can MIT incentivize its employees to make sustainable travel choices?
- Is the universal transit pass concept workable and effective for both employers and transit agencies in a heavily transit-oriented environment?
 - Issues
 - Construction costs and parking subsidies
 - Heavy existing transit usage increases costs for all participants
 - Pay per use & Smartcards
 - Many more pedestrians and bicyclists
 - Voluntary participation vs. regulatory impetus

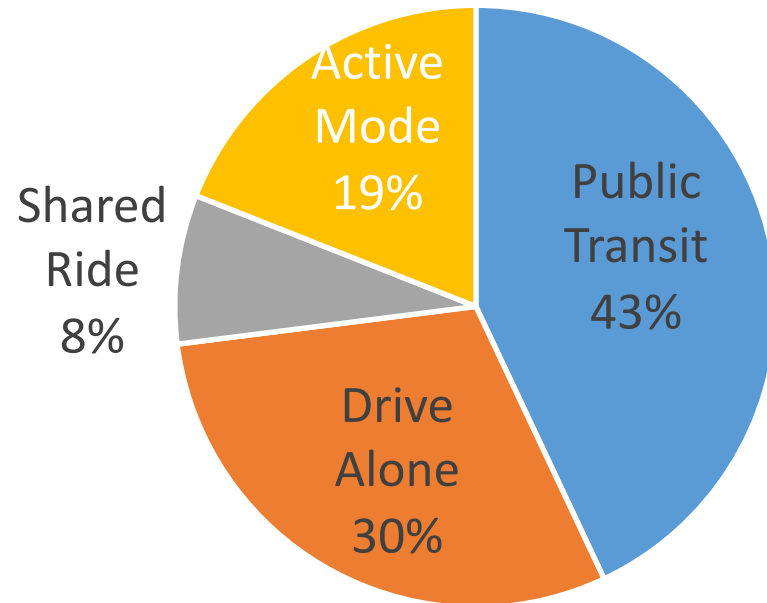


**Preliminary
Results**

Mode Choice

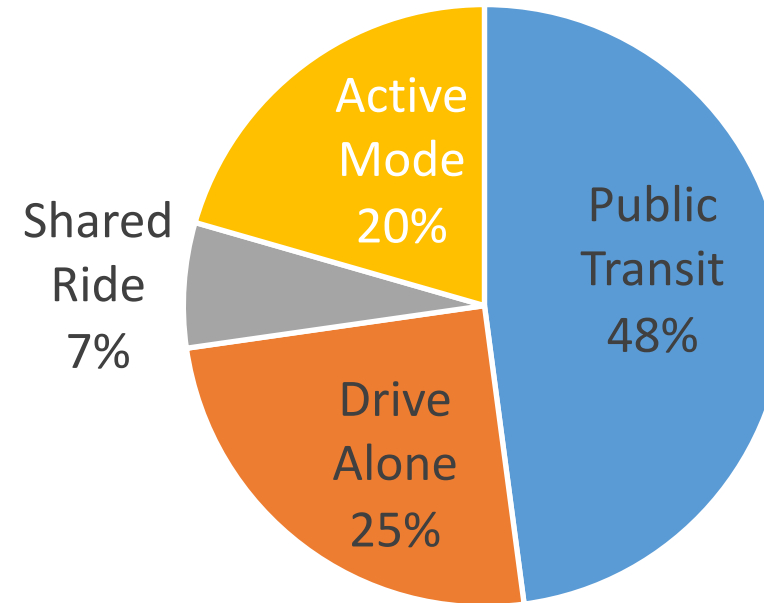
Primary Mode (Staff)

2014



N=6,386

2016

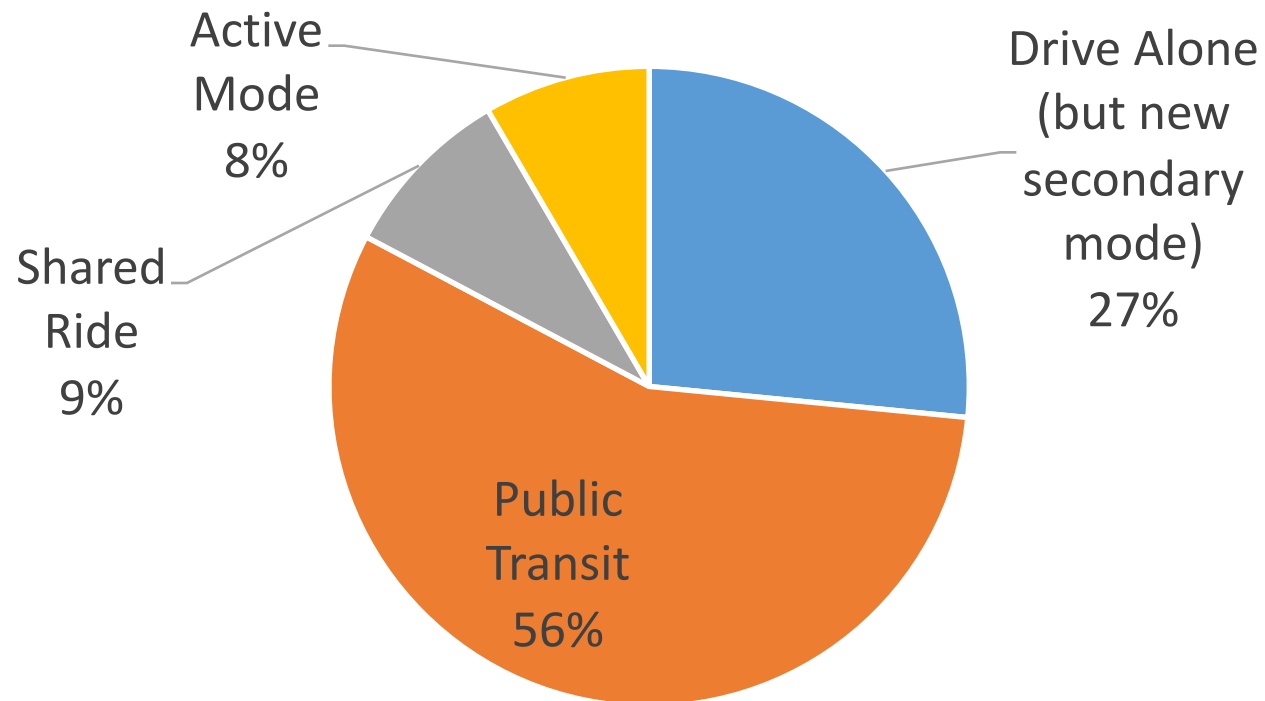


N=5,563

*Unweighted results

Changes Since Last Year

- 15% of staff who were at MIT last year *changed* their mode
- Of the drivers who changed modes:

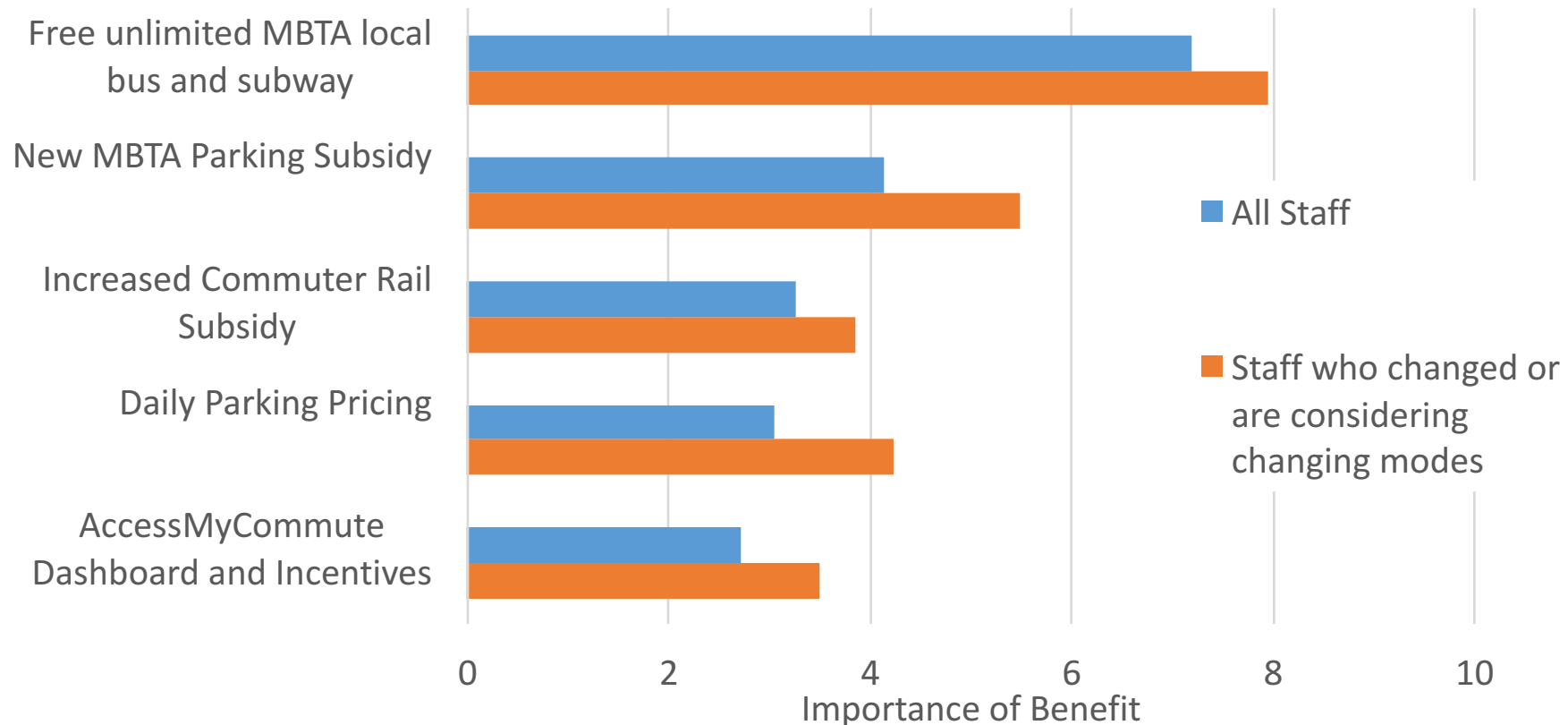


Reasons for Changing Modes

- Sample responses:
 - "Excellent benefit design - I drive when I need to or take the train when my work does not require off-site activities."
 - "Fully funded Charlie Card allowed me to save money for a new bicycle. That, combined with reduced pressure to "get my money's worth" from monthly public transportation costs has resulted in me biking more frequently."
 - "I save \$14 everyday between tunnel and MIT parking with new free pass on the T. Plus it is actually faster than driving, and much less stressful. Great forward thinking on MIT's part in helping with sustainability of the environment!"
 - "Free T Pass coupled with Occasional Parking is great for me. If it snows or rains I can drive, otherwise I can walk and T."
 - "Charlie card and parking fee change made it worthwhile to take train whenever possible (~2-3 days a week)"

Influence of AccessMIT

- AccessMIT benefits have influenced commuting decisions of majority (57%) of staff



Driving and Parking Demand

- Decrease in occupancy in gated lots during first 10 weeks (year-over-year):
 - 4% drop in weekly peak
 - 5% drop in average 11 am daily occupancy
- Comparison of daily trip diary (2014 vs. 2016):
 - 2014: Employees drove an average of **1.29** days per week
 - 2016: Employees drive an average of **1.12** days per week (**13% drop**)



Challenges & Lessons Learned

Implementation Challenges

- Wide range of stakeholders with varied interests
 - Project requires financial outlay (e.g. transit subsidy) to be recovered in long-term savings of reduced parking
- Engaging MIT community to become aware of incentives, and to take advantage of them
- Short-term: Encouraging ID card swap to obtain T-pass
- Long-term: Establishing sustained change in travel behavior



Evaluation Strategy: Stakeholders

- Employees:
 - Mode choice
 - Vehicle occupancy (e.g. carpool/ride-share programs)
 - Parking (use of MIT gated lots, ungated lots or other local parking)
 - Long-term travel behavior (home location, vehicle ownership)
 - Satisfaction
- Employer:
 - Program costs (initial and ongoing)
 - Staffing and resource requirements
 - Development potential from freed-up parking

Next Steps

- Continue roll-out of *AccessMIT* benefits including several new rounds of commuter dashboard incentives & prizes
- Launch advertising campaign to raise awareness and employee engagement
- Focus on new carpooling strategies and incentives
- Evaluate program effectiveness and offer lessons learned for other prospective employers

A diagram on an orange background features a large white circle. To the left of the circle is a yellow circle with a white piggy bank icon. A yellow arrow points from this circle to the white circle. Above the white circle is a green circle with a white plant icon. A dark blue arrow points from the green circle to the white circle. Below the white circle is a teal circle with a white heart icon. A dark blue arrow points from the teal circle to the white circle. The word "Questions?" is written in orange text inside the white circle.

Questions?

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Thank you!

