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Leveraging Behavioral Science to Reduce Car Commuting

An MIT Case Study





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Adam Rosenfield
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accessMIT

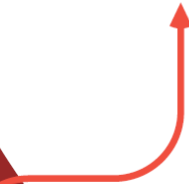


Massachusetts
Institute of
Technology

accessMIT

A broader vision that seeks to provide MIT with affordable, flexible, and low-carbon mobility choices.

Why Access MIT?



A black and white photograph showing a large, modern, dome-shaped building (the New York Coliseum) in the foreground, surrounded by a vast parking lot filled with cars. In the background, the New York City skyline is visible across a body of water. The image illustrates the transformation of a neighborhood from old factories and abandoned buildings into a modern urban space.

**Transforming a neighborhood from
old factories, abandoned buildings,
and... parking lots**

To a vibrant sense of place



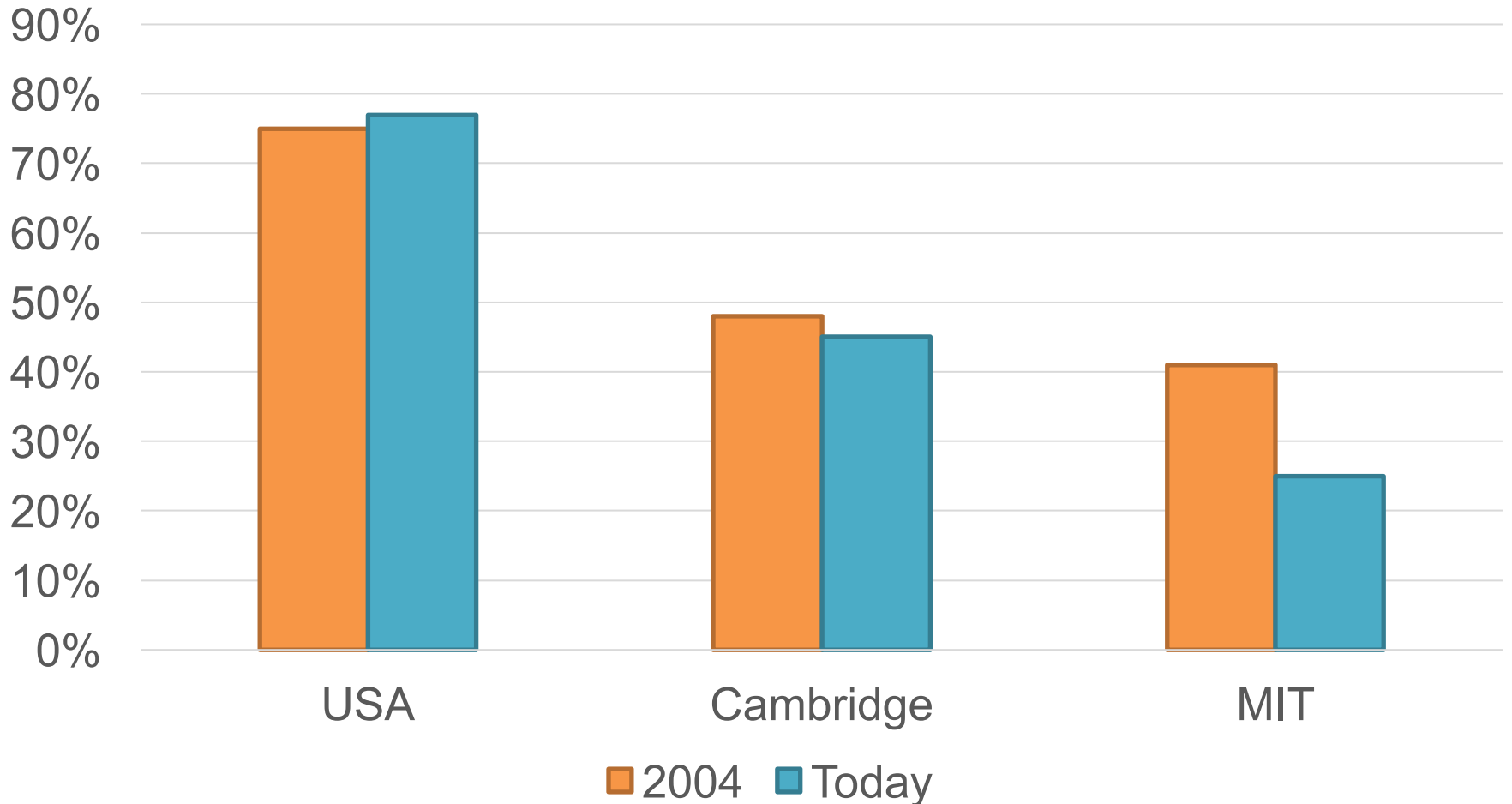
From parking lots...



To new labs and walkable green spaces



Drive-Along Mode Share, 2004 to Present



Source: US Census & ACS; MIT Commuter Survey

Research in practice

- How can workplaces be active players in travel demand management (TDM)?
- What tools are effective for which institutions?
- How should we use campuses as an experimental testbed?



Access MIT: Program design & implementation

Goal for new program

- Reduce commuter parking demand by 10 percent over two years

New package – “Access MIT”



Shift to daily parking pricing

New package – “Access MIT”



Shift to daily parking pricing



Free universal bus & subway transit pass

New package – “Access MIT”



Shift to daily parking pricing



Free universal bus & subway transit pass



Increased commuter rail monthly pass subsidy

New package – “Access MIT”



Shift to daily parking pricing



Free universal bus & subway transit pass



Increased commuter rail monthly pass subsidy



New parking subsidy at transit stations

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New parking subsidy at transit stations



Online commuter dashboard

AccessMyCommute Dashboard

The dashboard features a navigation bar with links: Home, Dashboard, Admin, Incentives, and Tools. The user's name, Adam, is displayed in the top right corner.

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

Adam Rosenfield
My Stats Edit Profile

25 Non-SOV Trips
25.0 mi 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 Trips
History

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

Departure Time 8:30 AM
Return Time 4:30 PM
No Return Trip

Favorite Trips Recent Searches

Joining a carpool? Enter the ID ? Join

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
TOP NETWORKS	
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%

Research & preliminary results

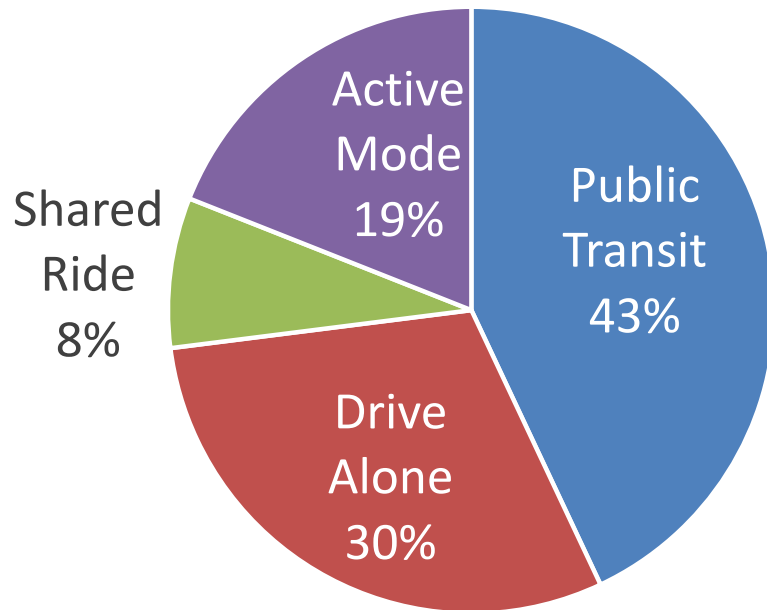


2016 Commuter Survey data

Fewer drivers, more transit users

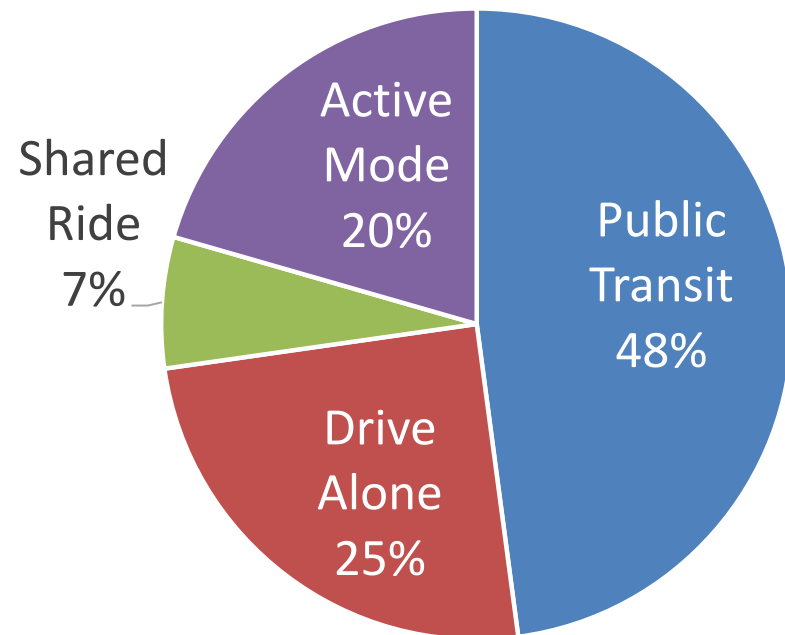
Primary Mode (Staff)

2014



N=6,386

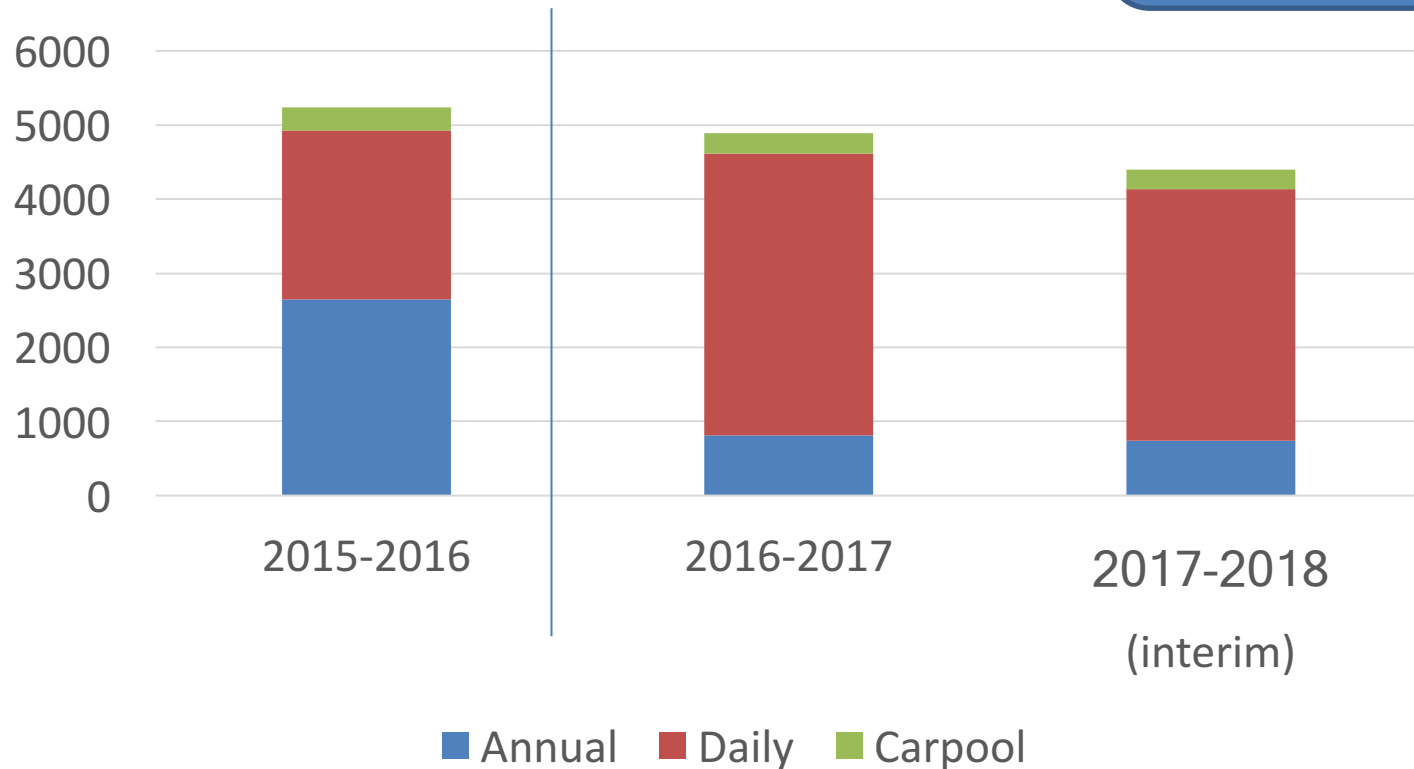
2016



N=5,563

Permit Purchases

'15-'16 to '16-'17: 7% drop
'16-'17 to '17-'18: 10% drop



Takeaways So Far: Parking

- Reported SOV mode share decreased from 30% to 25%
- Total person parking days decreased by 9%
- Peak lot utilization dropped 5%
- Continuing permit holders have not decreased parking significantly

Takeaways So Far: Transit

- ~24% more staff are using the MBTA on a regular basis
 - Staff using their T-pass have reduced parking the most (by 31%)
- Transit Accessibility:
 - Staff living in areas where transit and driving times are most similar have reduced parking the most
- MIT expense increased by \$1.5 M



Challenges & future planning



Takeaways for MIT & beyond

- Challenge of designing effective TDM strategies
 - Newton's Third Law
- Illuminating trends on Access MIT program
 - Technical design: Feedback shed light on shortcomings in program
 - System boundary: Nudges are only as effective as the things we're nudging about

What's next

- Streamline daily parking – make it work
- Simplify user experience and access to information
- Tackle carpooling
- Onward and upward

Questions & discussion

