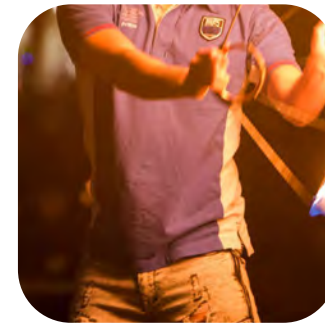
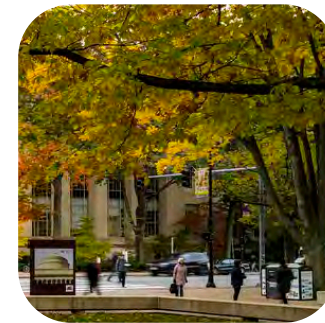
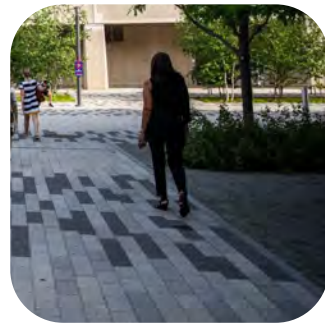


Town Gown Report to the City of Cambridge



Presentation to the Planning Board
February 4, 2020

Institute Priorities

Schwarzman College of Computing

- AI education, research, and innovation
- Ethical and societal implications of technology
- Connective tissue for MIT's five schools
- Building “dual competence” for all students

The Engine

- “Tough Tech” startups working on transformative technologies
- 501 Mass Ave location invested in 20 companies
- Fusion power, cell therapy, robotics, farming, energy, advanced materials
- Expansion to 750 Main Street will launch 100 new companies and 800 entrepreneurs

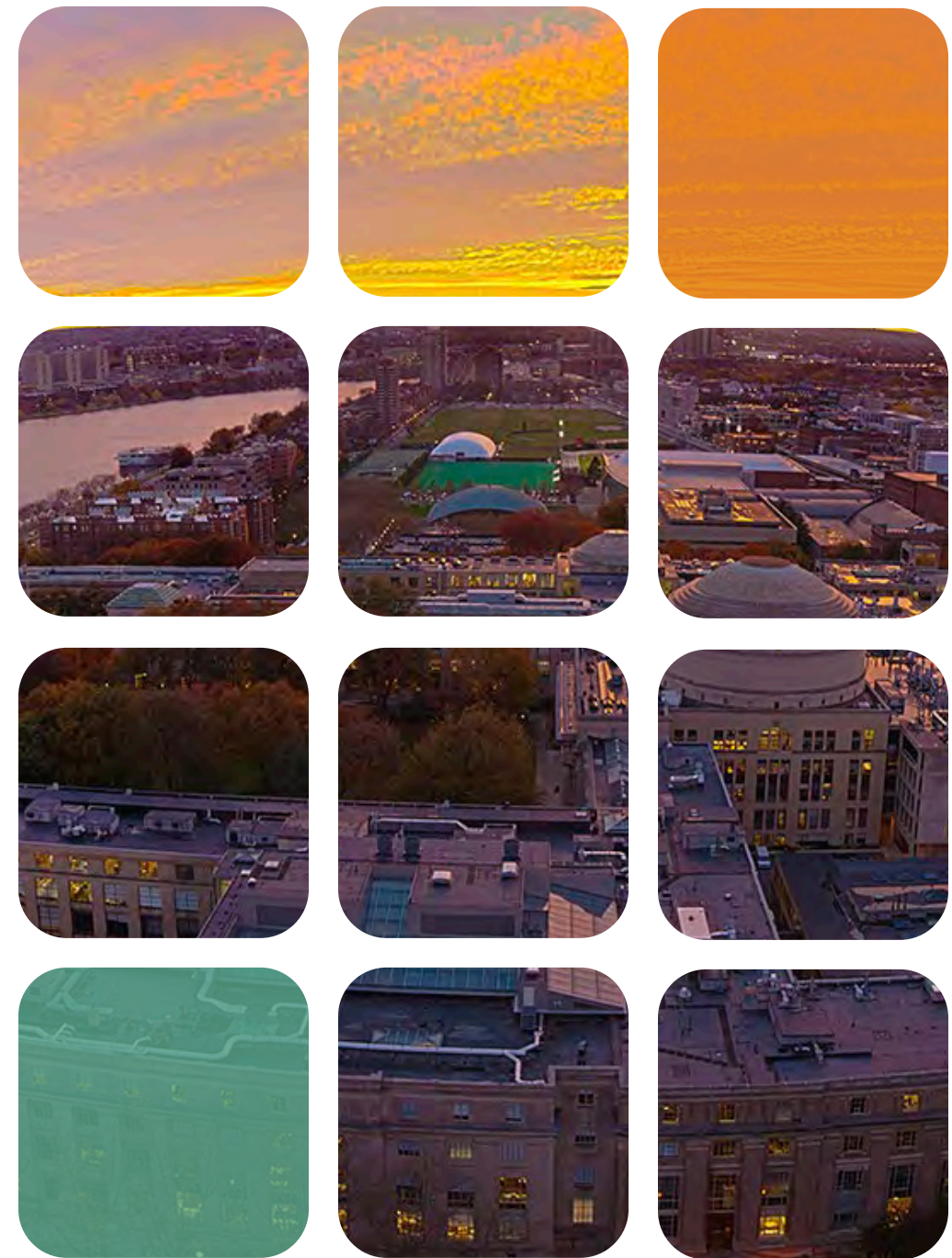
Institute Priorities

Graduate Housing

- Prepared to meet Volpe zoning commitment of 950 new graduate student beds
 - Kendall residence hall: 250
 - Reconfigured spaces: 150
 - Proposed West Campus residence hall: 550

Sustainability and Resiliency

- On track to reduce emissions by at least 32% by 2030
- Flood risk model with City complete by 2021
- Access MIT is significantly changing commuting behavior
- “Climate Positive” by 2025



Sustainability

Julie Newman, Director

Creating a carbon neutral MIT



Advancing carbon neutrality through on and off-site strategies

- Scaling up efficiency investments
- Renewing Central Utilities Plant
- Converting from steam to hot water distribution
- Investing in renewable energy
- Preparing for electrification of campus and transportation



The climate situation has reached its tipping point

We need to move our campus faster to be...

❑ fossil fuel free

Aggressively reduce energy use

Enable the campus for a greener power grid, renewable sources, and emerging energy solutions

❑ climate positive

Broaden GHG boundaries
Scope 3: travel, commuting, other

❑ climate resilient

Advance mitigation strategies for storm water flooding, sea level rise, and heat risk

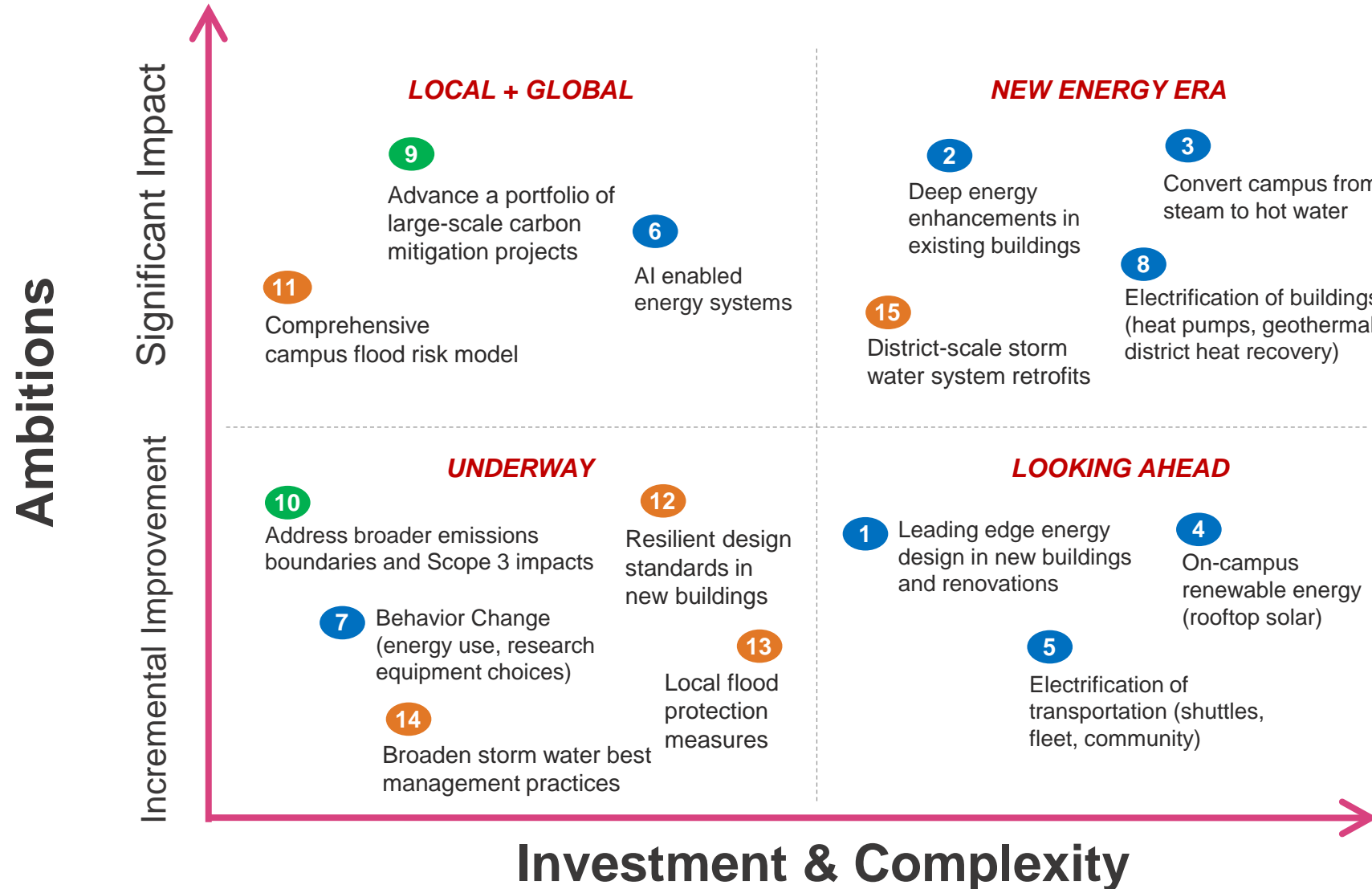
Accelerating actions

- 1 **Leading edge energy design in new buildings and renovations**
- 2 **Deep energy enhancements in existing buildings**
- 3 **Convert campus distribution from steam to hot water**
- 4 **On-campus renewable energy** rooftop solar
- 5 **Electrification of transportation** shuttles, fleet, community
- 6 **AI enabled energy systems** building temperature set points
- 7 **Behavior change** energy use, research equipment choices
- 8 **Electrification of buildings** heat pumps, district heat recovery, geothermal
- 9 **Advance a portfolio of large-scale carbon mitigation projects**
- 10 **Address broader emissions boundaries and Scope 3 impacts**
- 11 **Comprehensive campus flood risk model**
- 12 **Resilient design standards in new buildings**
- 13 **Advance local flood protection, sealing, walls & barriers**
- 14 **Broaden storm water best management practices**
- 15 **District-scale storm water system solutions**

Prioritizing ambitions and actions

Legend

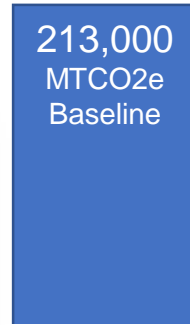
- fossil fuel free
- climate positive
- climate resilient



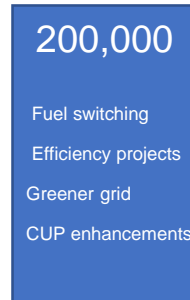
Implementing Carbon Neutrality

Our Campus

Reduce our footprint



2014



Today



2025



2030

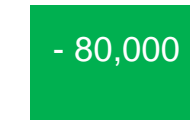
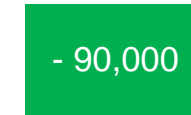
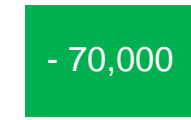
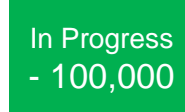
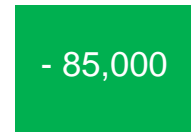
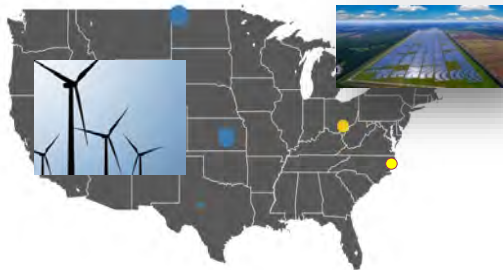


2050

Technology
Pivot?

Global

Reduce emissions in the world



- 1 Leading edge energy design in new buildings and renovations
- 2 Deep energy enhancements in existing buildings
- 3 Convert campus distribution from steam to hot water
- 4 On-campus renewable energy (rooftop solar)
- 5 Electrification of transportation (shuttles, fleet, community)
- 6 AI enabled energy systems
- 7 Behavior change (energy use, research equipment choices)
- 8 Electrification of buildings (heat pumps, district heat recovery, geothermal)

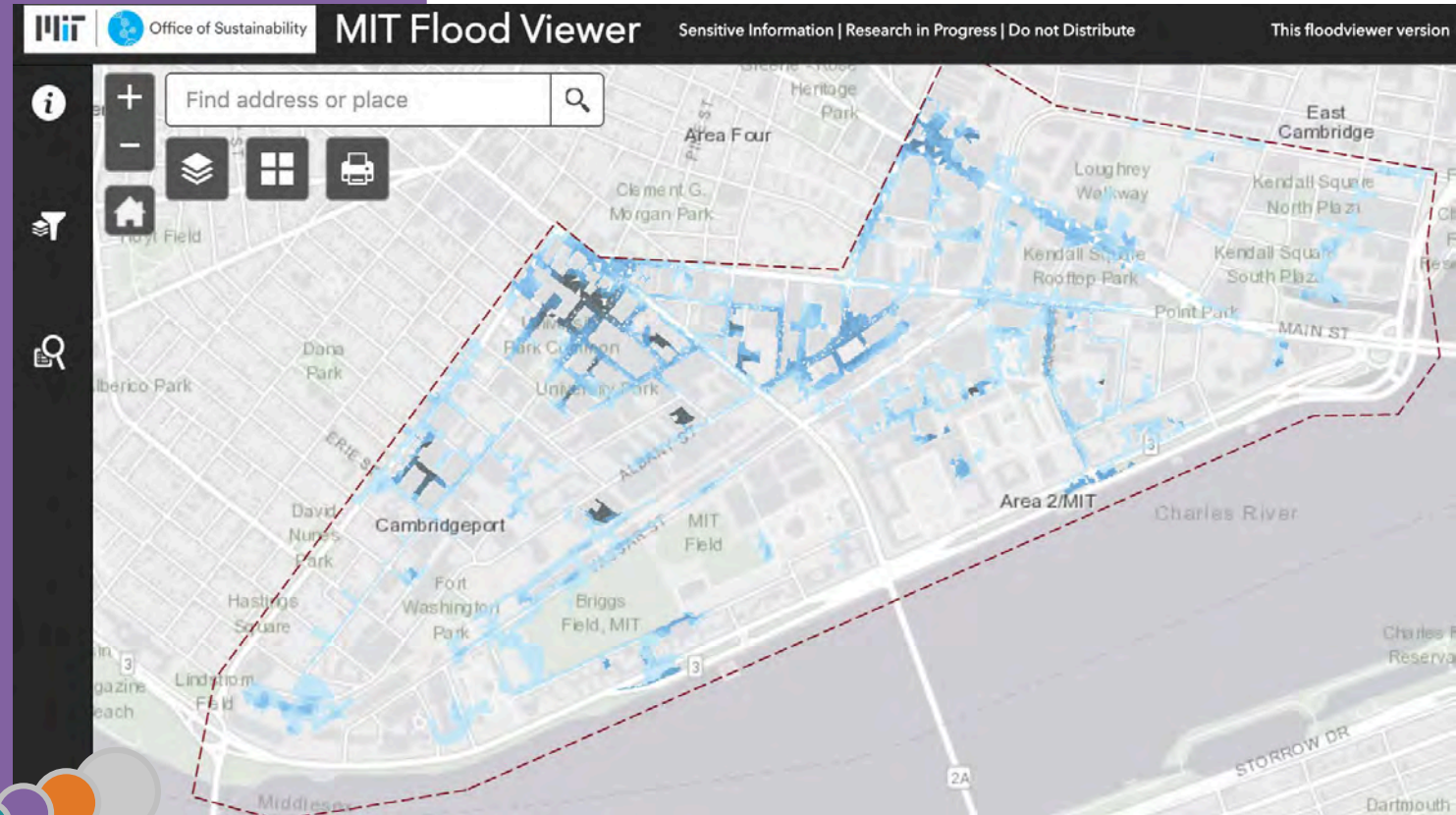
- 9 Advance a portfolio of large-scale carbon mitigation projects
- 10 Address broader emissions boundaries and Scope 3 impacts

“Climate Positive” by 2025

Resiliency Planning

MIT Flood Viewer

- Developing a climate flood risk model to evaluate impact of future storms at present, 2030, 2070
- Integrating MIT flood risk data with City of Cambridge
- Building a campus flood risk visualization tool
- Evaluating buildings and systems for likelihood and consequence of flooding
- Prioritizing “no-regrets” flood protection measures

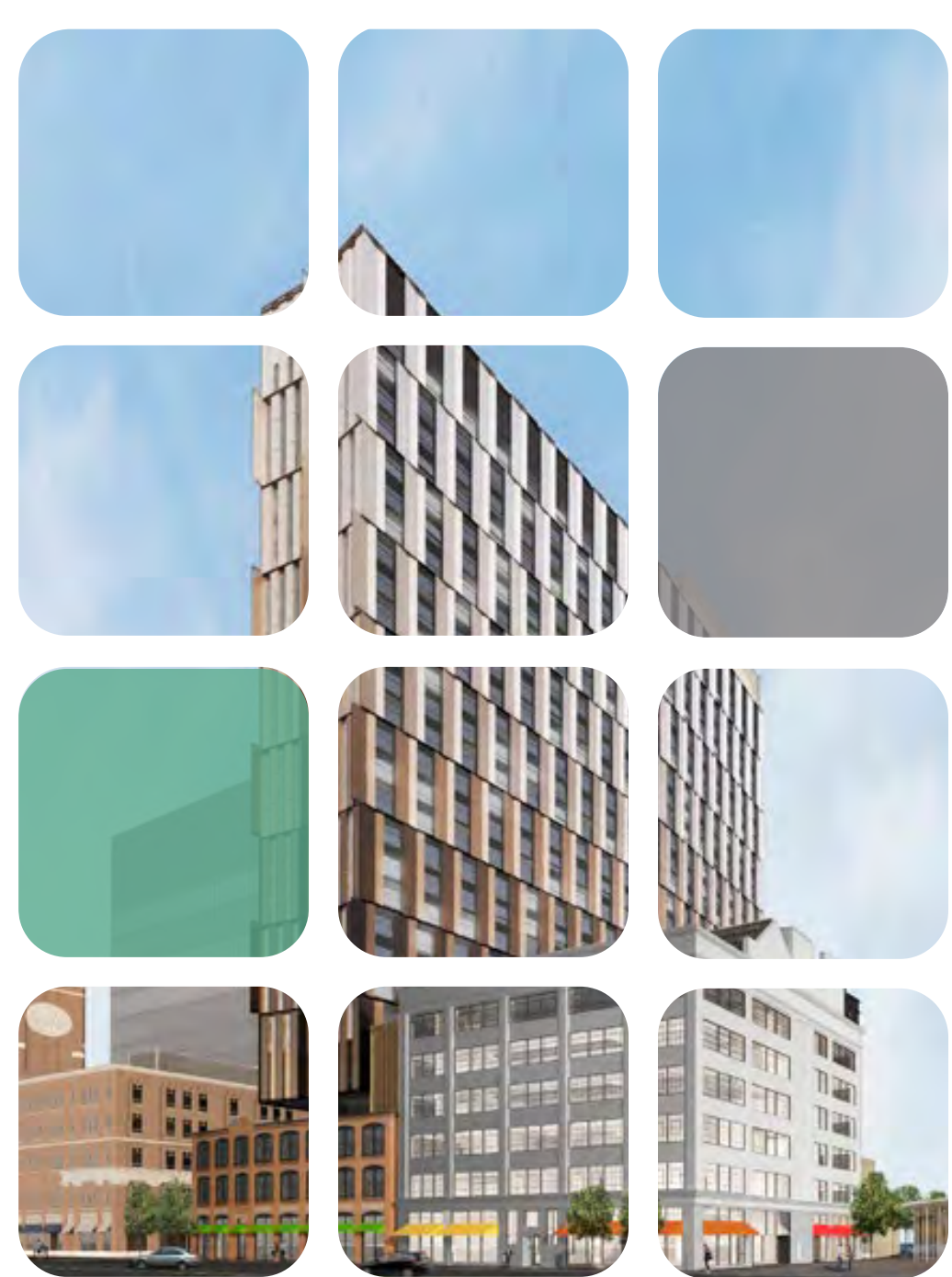


ACCESS MIT: Encouraging a low-carbon commute

- Today ~350 fewer people are parking per day in gated lots
- 14.9 % drop in parking from 2016-2019.
- ~2,000 more people are using MBTA per day using their MIT IDs 2016-2019.

“We can all learn from MIT’s experiment in changing commuter behavior”

- *Boston Globe Spotlight on Transportation*
11.25.2019



Campus Planning

Jon Alvarez, Director

Student Housing



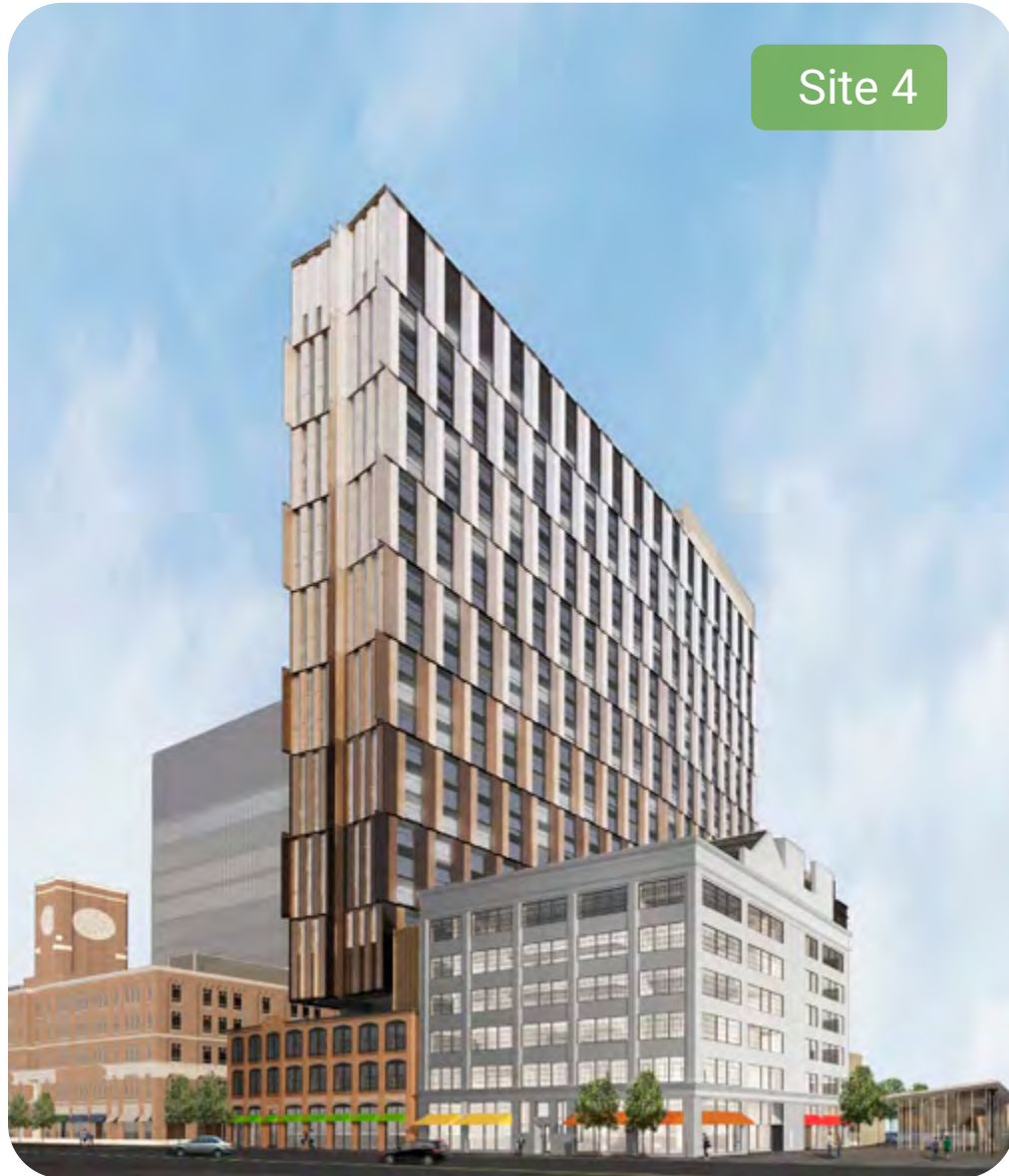
Vassar Street Undergraduate Residence
Opening Fall 2020



New West Campus
Graduate Residence
Permitting in 2020



MIT Kendall Square Gateway



Site 4



Site 5

MIT Gateway

2020:

- Graduate student housing & childcare facility
- Admissions and MIT Forum
- Innovation & Entrepreneurship Hub
- MIT Press Bookstore & other retail

2021:

- MBTA headhouse
- MIT Museum
- New wayfinding

Academic Projects



College of Computing



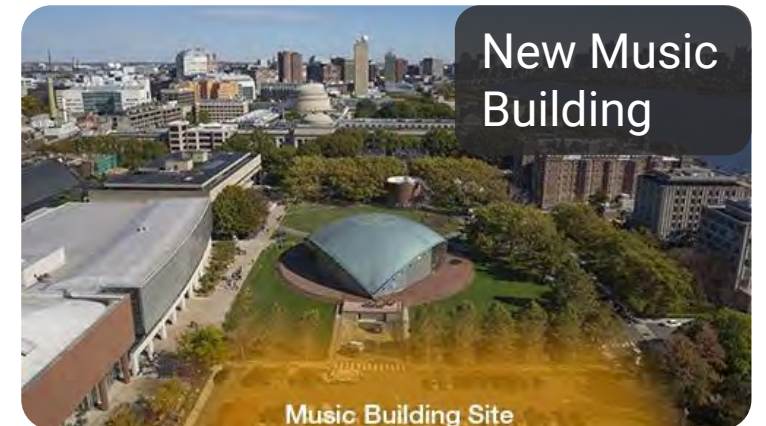
Central Utility Plant Expansion



Metropolitan Warehouse Renovation



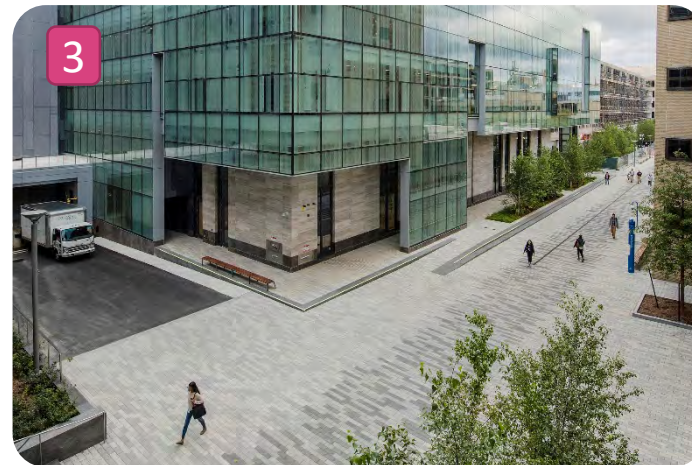
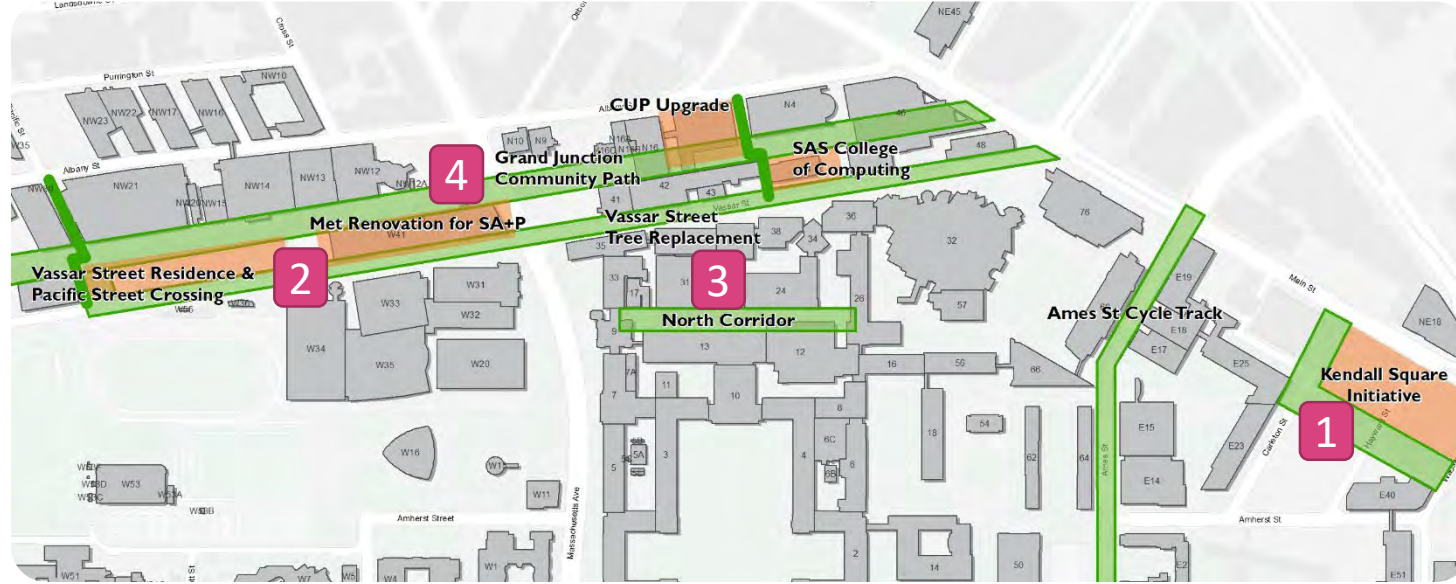
Green Building Addition

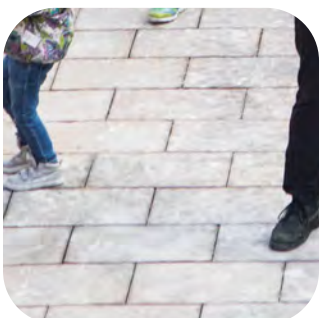
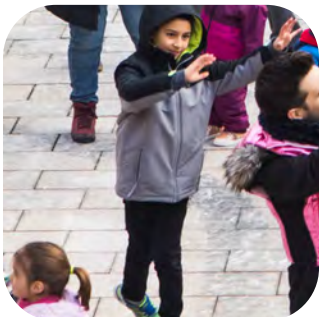


New Music Building

Music Building Site

Streetscape & Open Space





Open Space Programing

Jess Smith, Director

Types of Programs and Activities



Self-Serve

Activities people can engage in on their own, encouraging “dwell time.”

- playful furniture
- games
- interactive displays



Daily programs

Ongoing, scheduled activities

- evening networking events
- lunchtime performances
- weekend workshops



Festival-style

Multiple activities throughout the spaces

- hackathons
- block parties
- Cambridge Science Festival

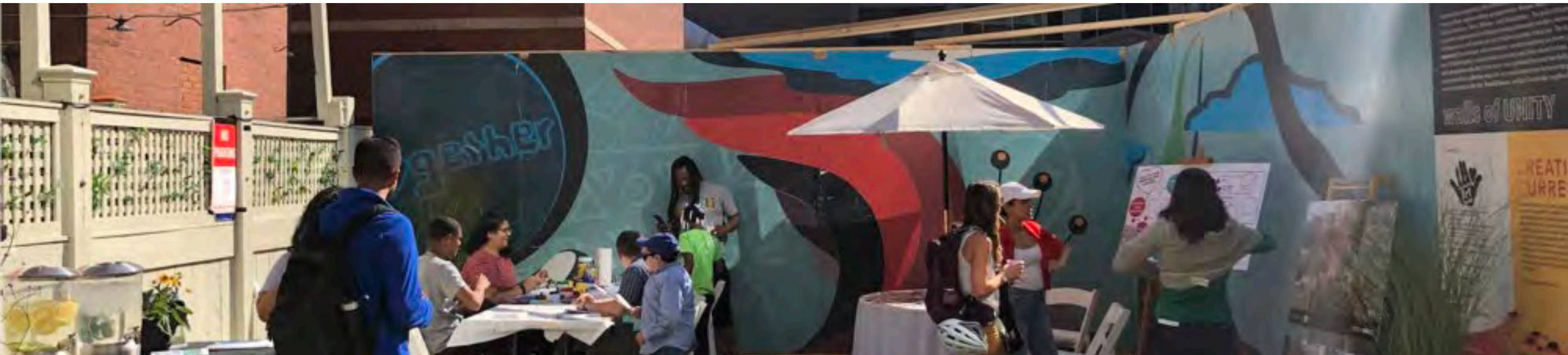
Programs will be organized into categories such as: **fitness/wellness, family/children, social/networking, arts/culture, and MIT showcase** - demos/activities

Key Audiences

The MIT
Community

Cambridge
Residents

People who work
in Kendall Square



Key Questions for Program Planning

- Will the program help us attract and engage one (or more) of our key audiences?
- Will the program tell MIT's story in an interesting way?
- Is the program designed to be welcoming and inclusive?
- Does the program or activity strengthen the area's innovation ecosystem?





Kendall & Volpe

Michael Owu

Managing Director, Real Estate

Kendall Square



165 Main Street
apartment building



Brothers
Marketplace

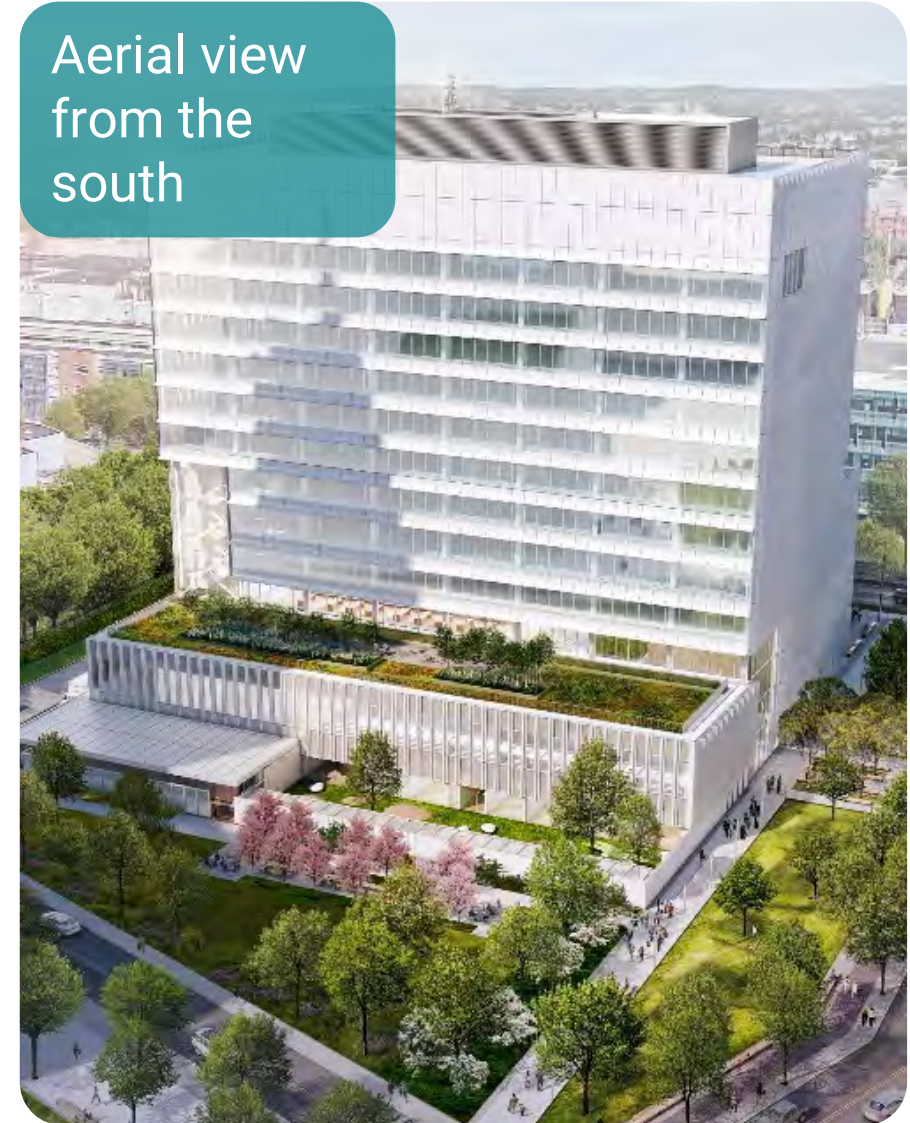


Shy Bird
restaurant

New DOT Volpe Facility



Maya Lin art installation



Aerial view from the south

Renovations



139 Main St.
Completed and
occupied in
2019



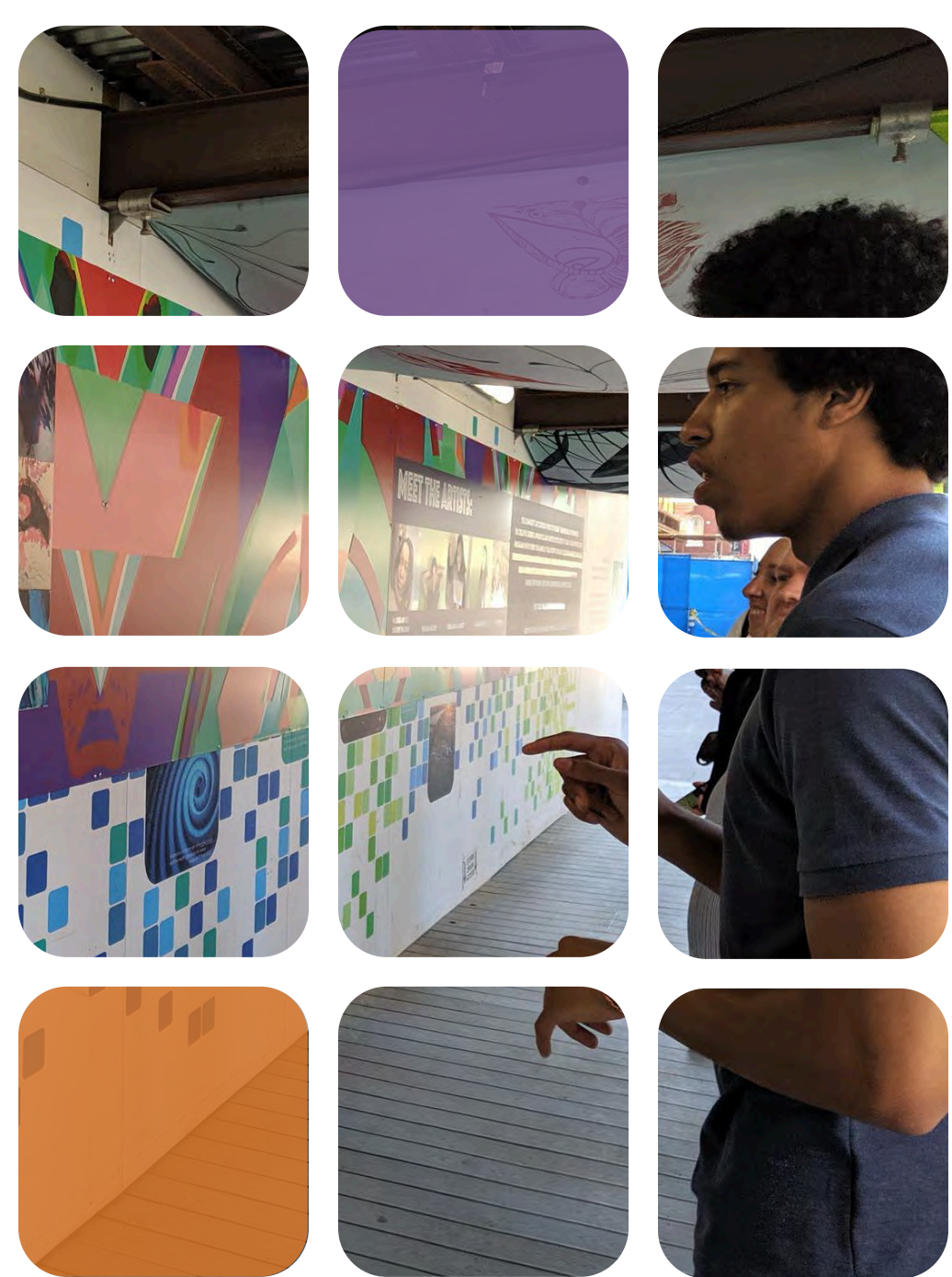
730 & 750 Main St.
Construction
commenced in 2019



792 Main Street
Construction completed
and occupied in 2019

3rd Annual Volpe Block Party at Sennott Park





Community Outreach

Sarah Gallop, Co-Director

The Job Connector by MIT



THE JOB CONNECTOR
by MIT

Job Opportunity

Hiring Fair for 907 Main, The Dial, and Blue Owl

The Job Connector by MIT is hosting a hiring fair for 907 Main, a new boutique hotel with two restaurants opening soon in Central Square.

February 22 from 12pm-5pm
The Job Connector by MIT
792 Main Street
Cambridge, MA 02139

Job opportunities include:
Front Office Manager, Host, Housekeepers,
Bartender, Server, Sous Chef, and much more.

Apply in advance at:
<http://www.haycreekhoteles.com/careers>

MIT | Office of Government & Community Relations

Want help polishing your resume? Email jobconnector@mit.edu

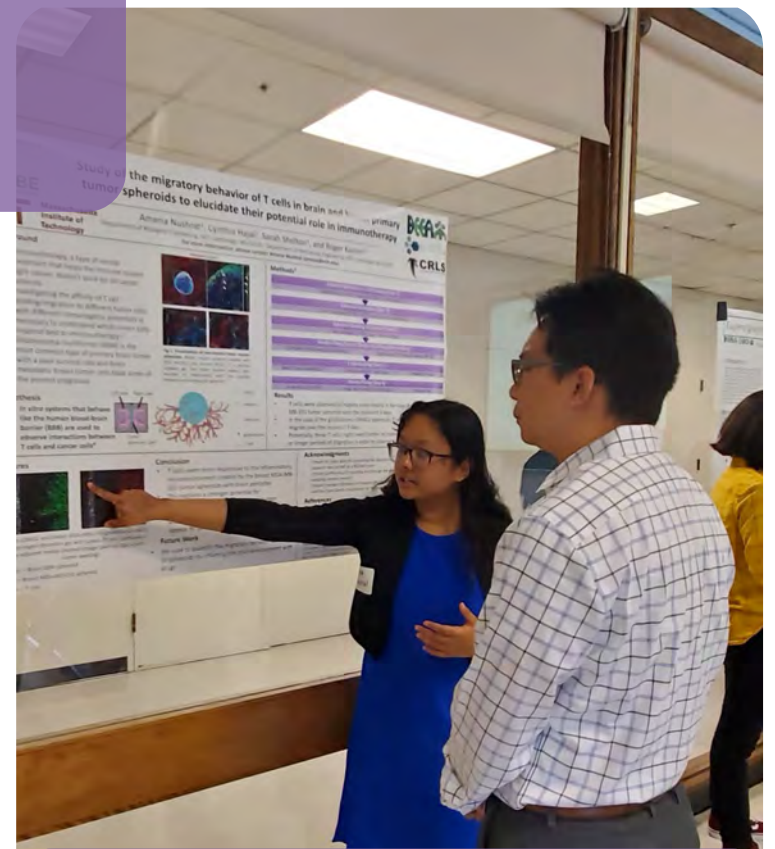
K-12 Programs



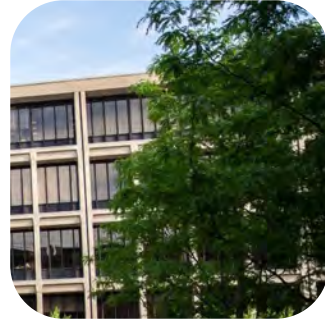
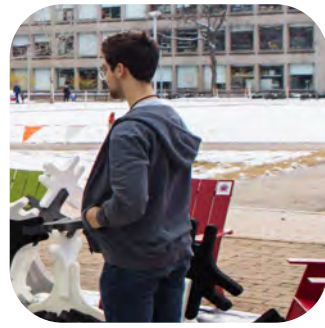
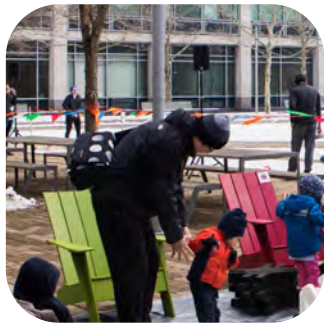
The Tech Experience



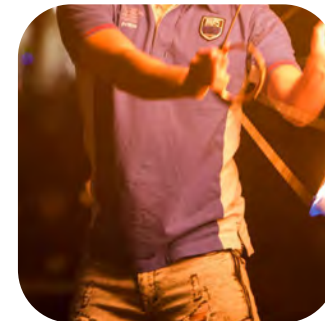
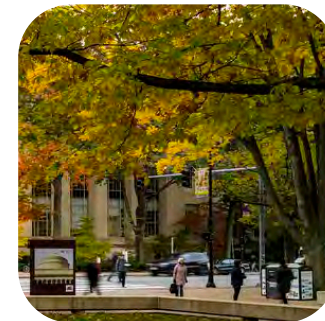
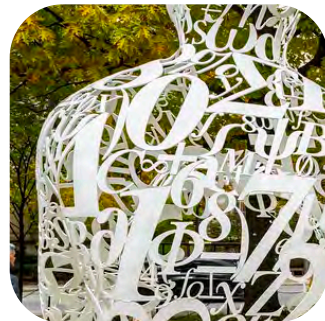
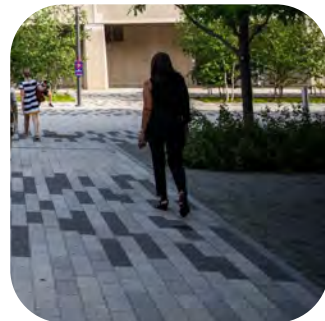
CPS/SS Teacher Meet-up



BEEAM



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