

THE MAYOR'S OFFICE OF
**NEW URBAN
MECHANICS**



City of Boston
Analytics Team



YEAR IN REVIEW

LETTER FROM THE CHIEF

Fifteen years in, MONUM's innovative spirit persists—sometimes quietly, but undeniably there, hand in hand with all the innovators at City Hall.

We've joined the call to make Boston a home for everyone. With trust in government low, the basics matter more than ever: trash pickup, snow removal, response times.

The impulse toward reliable service makes sense. So why prototype when a government has the power to simply execute?

Because execution isn't so simple. (The original 311 application sitting on our servers can't be updated anymore, while opening a restaurant or building a porch still takes far too long.)

In these pages, you'll find us meeting this moment: performing acupuncture on sometimes sclerotic systems. We partnered with departments on 311 modernization, permitting reform, waste reduction, elections, and the Rodent Action Plan. We improved construction inspection and mapped commercial vacancies. Our merger with Analytics brought welcome reinforcements—data expertise, process improvement



know-how, and evaluation chops. We're building new systems that can join and update the old: a street address management system and a referencing system for bike lanes and all other public right of way assets.

Experimentation still matters—and it's often delightful to see what works. Every piece of furniture we divert from the trash stream saves the city money, so we piloted furniture reuse in Allston to find out where to start. We helped Haymarket vendors investigate methods to prevent their carting costs from increasing. We created new methods for ballot counts and updated polling locations for this year's elections—one of the most visited pages we made. We reimagined the permitting journey and tested tools for evaluating public space design.

Sometimes our work feels like a free-flowing department of care—going where Boston residents and our City Hall colleagues actually are, tending to the infrastructure we have.

These projects are a small sampling of how we showed up, and we're proud of them.

*Warmly,
Shin-pei*

SHIN-PEI TSAY
Chief Research and
Data Officer



MAKING GOVERNMENT MORE OPEN

Building trust means being open about our work and regularly sharing our progress. It also means listening to Boston residents—like learning from their experiences with permits, understanding why some neighborhoods deal with more construction noise, and using their feedback to improve City services. Together, we've built tools like polling place finders, a better BOS:311 app, and stronger open data resources.



*Our work toward Making
Government More Open in 2025*

36,000+

VIEWS ON OUR POLLING
LOCATIONS MAP

A magnifying glass is positioned over a large red number, symbolizing increased search activity.

5%

INCREASE IN ANALYZE
BOSTON SEARCHES



BUSINESS OWNERS
SUBMITTED PERMIT
APPLICATIONS WITH

50%

FEWER ERRORS DUE
TO OUR PROCESS
IMPROVEMENTS

WE HELPED INCREASE NORTHEASTERN
UNIVERSITY'S ANNUAL PAYMENT IN LIEU OF
TAXES (PILOT) CASH PAYMENTS TO THE CITY
FROM \$1,900,000 IN FY25 TO

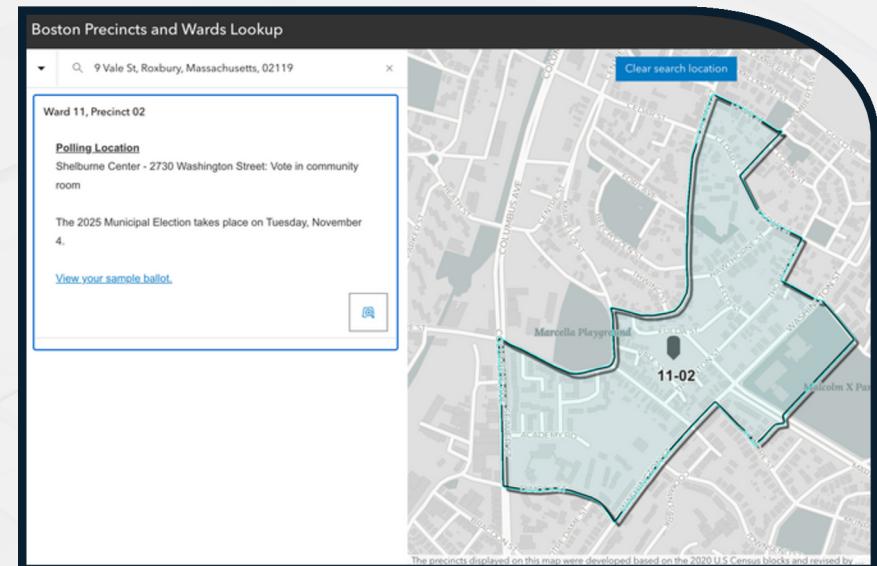
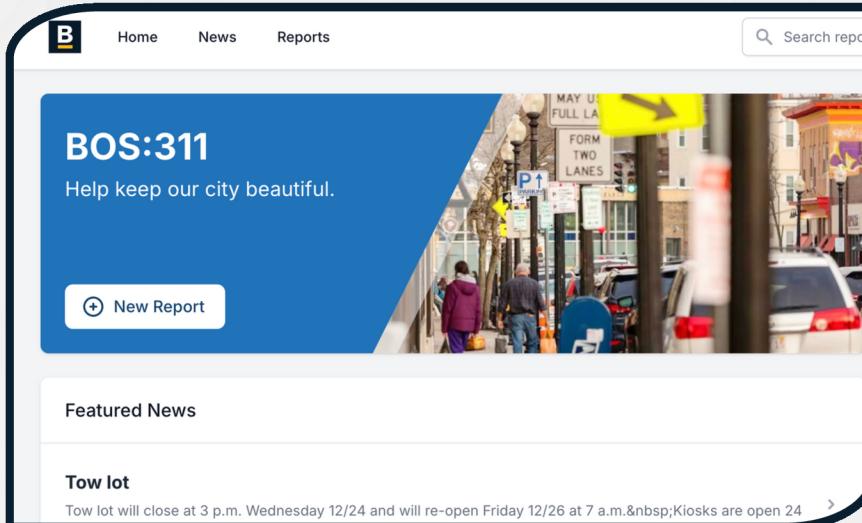
\$2,600,000

IN FY30

BETTER 311 DATA

Boston 311 is one of the most popular ways that residents report issues like potholes, broken streetlights, or missed trash pickups. This year, we helped modernize the system behind 311 to serve people for years to come.

A key goal of the 311 Technology Modernization project is to improve transparency and accountability. The new system produces much more usable and extensible data that we update to Analyze Boston, our open data portal. We redesigned the 311 service requests open dataset, organizing the data more intuitively and publishing materials about how to interpret the data. This will make it easier for a resident to find the most accurate category for their request and for Analyze Boston users to easily use data from the new system.



WHERE'S MY POLLING LOCATION?

Helping people easily find out where to vote is one of the essential ways we can ensure a smooth voting experience across the City. This year, Boston adopted a new district map based on data from the 2020 United States census, which means that the City Council was required to redraw the boundaries for its nine district seats to ensure equal representation. This meant that voters in some precincts had different voting locations than they did in previous elections.

To help voters navigate that change, we built a [Polling Locations Map](#). Residents can search for their address and find out their ward, precinct, and voting location. With over 36,000 views by the general election, the map helped thousands of voters stay civically engaged.

REDUCING STREET REPAIR DISRUPTIONS FOR RESIDENTS

While it's nothing new to be frustrated by ongoing construction, a long bout of noise and disruption alongside confusing and conflicting signage made residents in East Boston seek out answers from the City.

Multiple simultaneous projects concentrated in the neighborhood created this situation. But perhaps complicating the matter were the challenges that our public works teams faced ensuring that patched streets met safety standards. Mapping the workflow of the Public Works Construction Inspection Unit, we discovered that inspectors had to enter data on bad patches manually and they didn't have a clear way to communicate with utility workers.

We worked with the inspectors to identify a more ideal process and created an automated way to report bad patches to utility workers. We also created a dashboard for inspectors to check the work on an ongoing basis. Real-time communication and progress tracking help inspectors and utility workers finish projects on time. These tools not only help residents in East Boston, they can be used in all neighborhoods, which means safe, accessible sidewalks and streets throughout our city.



WHAT'S THE IDEAL PERMITTING PROCESS?

Permitting in any city can be a frustrating experience. But what would be an ideal experience, if you had to seek a permit to renovate your house, start a new business, or host a block party in your neighborhood?

As part of a larger multi-department effort for [Boston's New Era of Permitting](#), we conducted five focus groups with homeowners, contractors, and developers to gather insights from firsthand experience with construction and renovation projects. We learned what specific parts of the process are burdensome and how people need to become experts to navigate the process.

The focus group participants also provided their future visions and ideas for improving permitting. Based on feedback, we drafted journey maps that visualized the ideal process for permitting. By talking to people affected by the problem, we're able to make sure residents are a part of building solutions.



DESIGNING DATA STRATEGIES WITH YOUTH

When the data we need doesn't exist yet, sometimes the easiest way to gather it is by going into the field and gathering it ourselves. The City faced this challenge when trying to connect entrepreneurs to vacant commercial spaces and storefronts. We didn't have a complete understanding of where vacant spaces were located and we didn't know how different types of businesses were distributed across different neighborhoods.

With youth summer workers, the Analytics Team co-developed a data collection methodology to visit priority commercial hubs across Boston, including Downtown Crossing, the Blue Hill Ave corridor in Mattapan Square and the Centre-South corridor in Jamaica Plain. Youth workers collected detailed information on every storefront business in these areas attached to their specific location, making it easy to compare data across different areas and summarize the information. This information helps the City support entrepreneurs and understand where gaps might exist for business types across neighborhoods.

REDUCING WASTE

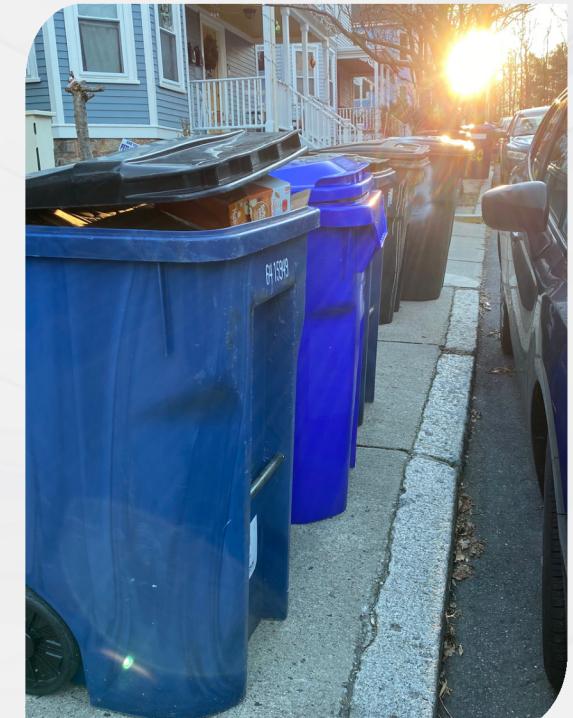
In Boston, we produce about 250,000 tons of residential waste each year and throw away an estimated 260 million pounds of food. Creating less waste helps lower greenhouse gas emissions, reduces a major food source for rodents, and can even clear up space on the curb during trash collection times, impacting the City's waste management contract. This year, we talked to residents about their waste management behaviors and explored ways to divert food and furniture from being thrown away and redistribute resources to people in need. We also researched ways to inform and educate residents about managing waste. All of these efforts can contribute to a healthier and more sustainable future.



DATA-DRIVEN RODENT MITIGATION

The City's launch of the [Boston Rodent Action Plan](#) (BRAP) came with a lot of ambitious goals. We collaborated with the BRAP Working Group, which includes the Mayor's Office, Public Works, and Basic City Services, among many other departments. Together, we facilitated the application of data and user insights to improve resource efficiency and reduce waste, a major food source for rodents.

One avenue for rodent mitigation involves digital tools. This year, we piloted rodent-resistant trash can toppers and measured their effectiveness through sensor and camera data. We're creating a tool that detects rodent hotspots, which can help BRAP to proactively inspect areas in the City with more rodent activity. We partnered with [Northeastern University's Scout Labs](#) to prototype a public-facing rodent mitigation zone dashboard to spark public engagement. We also hosted a hackathon with [Engineering Hope](#), a group of college technologists. Participants proposed better tracking and reporting systems for rodent sightings and a biomarker-tracking system to estimate rodent populations in sewers.



HAYMARKET WASTE REDUCTION AND FOOD RESCUE

Vendors at Boston's historic Haymarket were ending up with excess inventory and struggling with unclear guidelines to dispose of extra food. The market's vendors are largely cash-only and don't use many digital tools for inventory or waste. Haymarket Pushcart Association (HPA) saw an opportunity to save money on trash management by diverting food to food rescue organizations.

We teamed up with the Office of Food Justice, Department of Public Works, and RecyclingWorks Massachusetts. We leveraged the strong social network at the market to co-design improvements that utilized the knowledge of more experienced vendors. After analyzing the waste life cycle, observing the market, and speaking with organizers, we developed clear signage for the waste compactors in the market's top four languages. We also created "Otto's Guide," a food purchasing resource to reduce the amount of food that went unsold. The name is a nod to the well-respected leader of the market, creating trust and buy-in with vendors. Much of the food that is recovered at Haymarket is picked up by volunteers and brought to the Greater Boston Collaborative Food Access Hub. This work ensures perfectly good food is transported to our neighborhoods where it can feed families in need.



ALLSTON CHRISTMAS FURNITURE PICKUP

City data shows over half of all moving permits are issued in June, July, and August each year, in anticipation of September 1st, when most of the City's leases turn over. This annual moving frenzy has earned a local nickname: Allston Christmas. This informal holiday marks the date that thousands of residents leave their unwanted furniture and home goods up for grabs on the curb. This year, we explored ways to divert waste around Allston Christmas and year-round, keeping curbs clear and connecting residents in need with good-condition furniture.

We launched a one-day Coordinated Furniture Pick-Up Pilot on August 25th in Brighton following a recommendation from a Harvard Kennedy School collaboration. Partnering with Household Goods, a furniture bank, the pilot collected 54 pieces of furniture from 28 households, redirecting the furniture to those in need. The pilot aimed to test the City's operational and logistical plans for coordinated furniture pickup. We wanted to understand if this service could scale across Boston, and the pilot successfully tested operational and logistical plans, with pickups completed in an average of eight minutes, faster than expected. It also showed strong resident demand.



BETTER TOOLS FOR BETTER PUBLIC SERVICES

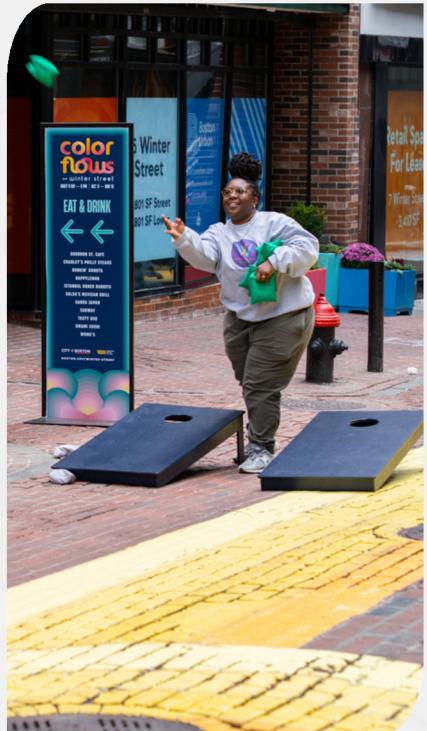
We're also improving services year round, especially when it comes to mattress pickup. When residents want to recycle an old mattress, they can request free mattress pickup from the City. However, many people faced frustrating error messages, even if they lived in eligible buildings. This issue arose because the City didn't have an authoritative dataset of addresses for all buildings. Free mattress pickup is only available for buildings with six units or fewer and City employees had to merge data from various sources to check eligibility and resolve errors. We built a tool that lets more City employees create and use standardized, authoritative addresses, eliminating the need for different teams to cobble together their own information. We're building the connection between the centralized Street Address Management System, a collection of datasets that serve as an authoritative source for streets, addresses, and buildings, and the mattress pickup application, with a release planned in the new year.



CATALYZING A THRIVING PUBLIC REALM

A thriving public realm means building vibrant and inclusive public spaces, from parks, to streets, to plazas. This ensures everyone, from our youngest residents to our oldest, feel safe and welcome in our City. From building more spaces for kids to learn how to ride bikes to researching and evaluating how to make public spaces more accessible, we're building a City that serves everyone.





WINTER STREET PUBLIC LIFE STUDY

Design pilots are helpful for testing new ideas, but sometimes they overlook how people interact with public spaces and each other. By looking beyond retail and pedestrian data, we can better understand how people interact in newly designed public spaces. From September to November 2025, the Planning Department's Urban Design team, in partnership with Downtown Boston Alliance and design consultant firm, Groundswell, launched an activation titled "Color Flows" on Winter Street in Downtown Crossing as the first expression of its Design Vision. We assessed the impact of the intervention to support its continuation beyond November.

With our partners, we assessed the impact of the intervention. This includes intercept surveys, observations of visitor behavior, multiple location intelligence, and surveys for business owners and downtown residents. We're also measuring social media engagement, foot traffic, and count data from MBTA stations. The outcome will help the City build a practice of evaluating our public space interventions across the city.

SCALED PROJECT: BIKE TOWNS

In 2023, we piloted a program to make play more accessible to kids. We installed a play shed in the Fields Corner neighborhood of Dorchester, expanding access to recreational toys and equipment. In 2024, working with the Mayor's Office of Early Childhood and Parks and Recreation, we worked to create the City's first Bike Town. Bike Towns, or traffic gardens, are miniature street networks where kids can learn to ride bikes in a car-free environment. These small-scale street networks often feature pretend traffic features which help kids learn to safely navigate urban street systems. The success of this work set the stage to scale Bike Towns and bike equipment across the City!

This year, we used state funding to scale these projects to more of Boston's public parks. With this support, we collaborated with the Mayor's Office of Early Childhood to build four new bike storage sheds. You will find these sheds soon at Hunt-Almont Park in Mattapan, East Boston Greenway in East Boston, Moakley Park in South Boston, and Ringer Park in Allston. By engaging with the community and our partners in the Parks and Recreation department, we expanded access to bike equipment and safe learning spaces.



SPOTLIGHT ON SUMMER FELLOWS

Each summer, we bring on a team of creative, curious, and entrepreneurial summer fellows to join our team. Their diverse skillsets add momentum to vital projects, bring innovative perspectives into City Hall, and drive impact across the City.



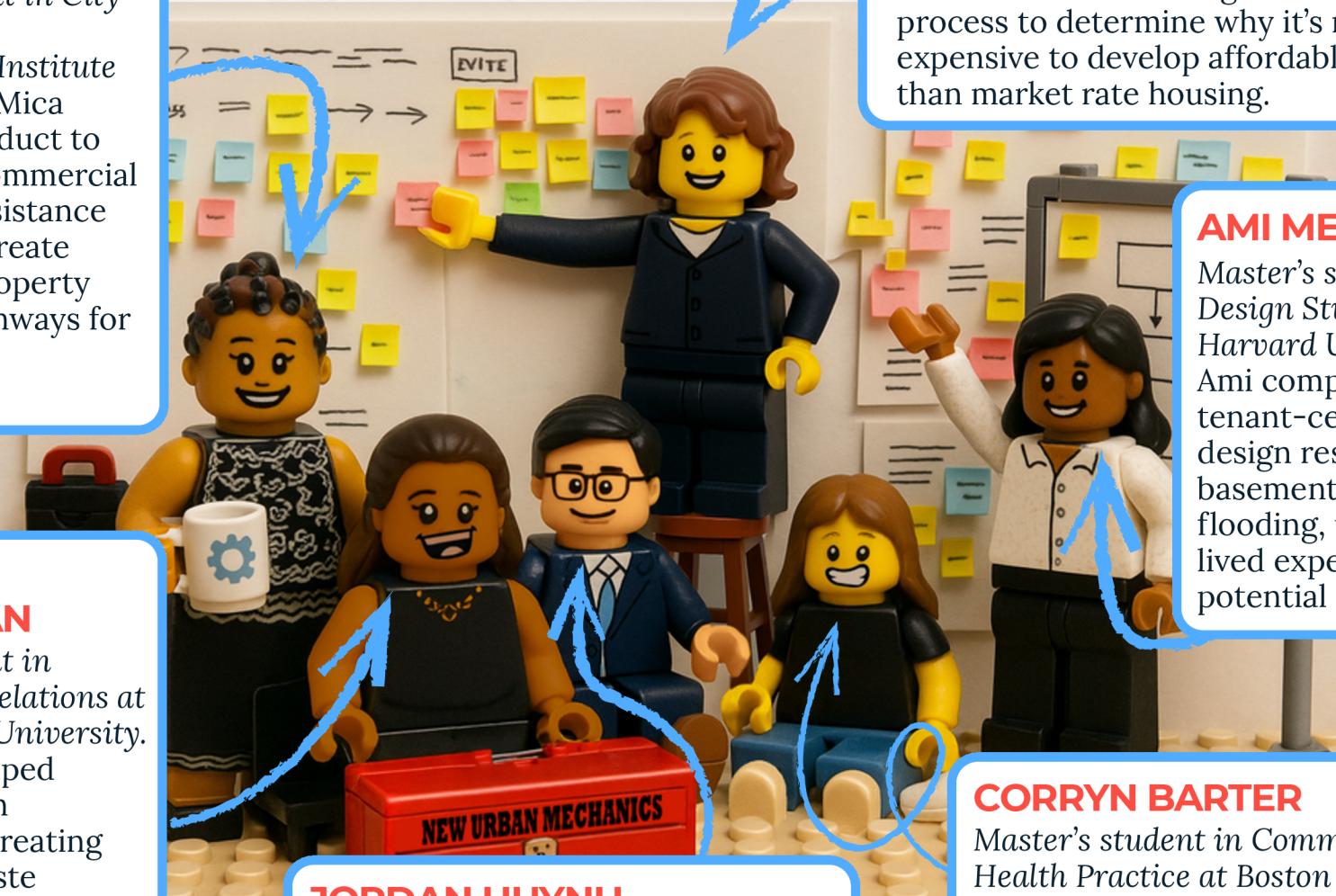
2025 MONUM AND ANALYTICS SUMMER FELLOWS

MICA CAINE

Master's student in City Planning at Massachusetts Institute of Technology. Mica designed a product to support the Commercial Acquisition Assistance Program and create commercial property ownership pathways for Boston's small businesses.

KRITHIGA NARAYANAN

Master's student in International Relations at Johns Hopkins University. Krithiga developed communication strategies for creating sustainable waste solutions and behavior change to meet the City's waste-reduction goals.



AMY ROGIN

Master's student in City Planning at Massachusetts Institute of Technology. Amy researched the housing development process to determine why it's more expensive to develop affordable housing than market rate housing.

AMI MEHTA

Master's student in Design Studies at Harvard University. Ami completed tenant-centered design research on basement apartment flooding, uncovering lived experiences and potential solutions.

JORDAN HUYNH

MEd, Boston Public Schools teacher. Jordan used data visualization and storytelling to highlight key insights from the city-wide Youth Speaks Boston survey.

CORRYN BARTER

Master's student in Community Health Practice at Boston University. Corryn designed a series of social stories, trauma-informed youth narratives that support Boston Public Schools students in understanding and adapting to upcoming school closures and grade reconfigurations.

SUMMER FELLOW PROJECT HIGHLIGHT: YOUTH SPEAKS STORYTELLING THROUGH DATA

Jordan Huynh came to the MONUM Summer Fellowship with a track record of serving Bostonians. As a fifth-year Boston Public Schools teacher, he experiences the impacts of Boston's support systems and infrastructure everyday. He came to MONUM with an interest in City life and its impact on kids. "I see how kids and their families experience the interconnection of schools, transportation, economic opportunity, parks—everything that our city has to offer," he recalled, "I see the multitude of ways that the City of Boston has provided and supported our kids and their families and areas where I think there's improvement to be made."

Jordan's fellowship built upon his expertise in connecting with and advocating for youth. He created a [Story Map](#) to visualize insights from the Youth Speaks Boston survey, a needs assessment conducted by the Office of Youth Engagement and Advancement (OYEA). With over 1,400 responses from residents aged 14 through 25, the survey aimed to find better ways to support young people outside of work and school. The Story Map contains a data dashboard, which allows youth-serving professionals to filter data by demographics like neighborhood, age, race, education level, and gender. Jordan's work illustrated key insights from the quantitative survey data and qualitative focus group data, informing improvements to youth programming, safety, health, and well-being.

JORDAN HUYNH
MONUM Summer Fellow



Lindsey Boozer, Deputy Director of OYEA commended Jordan's multidisciplinary skillset and the momentum MONUM and Analytics brought to their project, saying, "The MONUM Summer Fellowship was an incredible opportunity to bring additional capacity, creativity, and skillset to our project. Additionally, bringing on a fellow from a different professional background brought an extra layer of perspective and creativity outside of the typical City of Boston methods and strategies." This collaboration of skills and expertise across City departments bolstered the project's effectiveness.

Since returning to school in the fall, Jordan has brought insights from City Hall back to the classroom. From connecting students to programs that match their interests and connecting families to City services, he's bridging the gaps to better support youth and families across Boston.



15 YEARS OF

THE MAYOR'S OFFICE OF

NEW URBAN MECHANICS



2009

BOS:311 (then called Citizens Connect) was launched as an app that lets residents report issues in their community using smartphones.

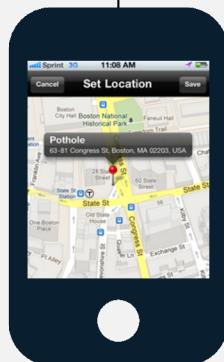


An idea was hatched to launch an **Office of New Urban Mechanics**.



2010

Mayor Menino created MONUM.



2012

We launched the summer fellowship and later added an annual fellowship.



2014

First Public Space Invitational calls for ideas to make public spaces more inviting.

2011

We launched **City Worker** as a workforce companion app to BOS:311.



2013

We piloted **side guards** on 18 public works trucks to reduce cyclist fatalities, and it later scaled to a citywide requirement.



2015

We launched the **City Hall to Go** truck.

2015

We hosted a street arcade to celebrate the **ParkBoston** app's expansion to all 8,000 metered parking spaces in the city, allowing residents to use quarters to play games instead of paying the meter.



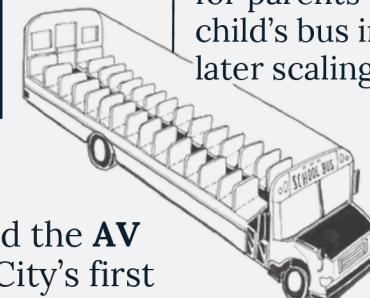
2015

Housing Innovation Lab launched.



2016

We updated the **Where's My School Bus?** web app for parents to track their child's bus in real time, later scaling to Zūm.



We created the **AV Club**, the City's first digital storytelling effort.



2017

We piloted Boston's **Accessory Dwelling Units** (ADUs) program in three neighborhoods. It later expanded to all neighborhoods, and financing and additional ADU types have been added to the program.



2017

We launched an **Autonomous Vehicle Testing Program** that later informed the Massachusetts autonomous vehicle testing legislation.

2017

We launched **Boston Saves**, a program that helps families save and plan for their child's future by giving each Boston Public Schools K2 kindergartner an account with \$50.

2018

We showcased the **Plugin House** on City Hall Plaza, demonstrating the possibilities of backyard homes and smaller living.

2021

We launched **What the Tech**, a video series exploring technology on Boston's streets.



2020

We hired the City's first Public Realm Manager.



2022

We created a faster, clearer, and improved experience for residents to throw **Block Parties**.

2024

We collaborated with departments citywide working on heat mitigation strategies to implement **BCYF Cool Spots**, outdoor misting towers, and pop-up cooling stations.

2025

We joined forces with the Analytics Team.

**WHAT'S
NEXT?**

**DESIGNING A
FUTURE BOSTON
WHERE EVERYONE
FEELS WELCOME**



THE TEAM

SHIN-PEI TSAY, CHIEF RESEARCH AND DATA OFFICER

THE MECHANICS OF 2025

MARCY OSTBERG, DIRECTOR

AMIRA MADISON, SUPPORTING INDIGENOUS COMMUNITIES PROGRAM MANAGER | ANNA VANREMOORTEL, PROGRAM MANAGER | CAROLINE SMITH, DIRECTOR OF CIVIC DESIGN | KATHLEEN CARROLL, PROGRAM MANAGER | NATE LASH, PROGRAM MANAGER | PAIGE ROOSA, DIRECTOR OF THE MAYOR'S HOUSING INNOVATION LAB (ILAB) | TAARINI DAS, COMMUNICATIONS INTERN | THADDEUS BROWN, PROGRAM MANAGER

THE ANALYTICS TEAM OF 2025

ANALYTICS LEADS: ANNA STONEMAN, SENIOR DATA PROJECT MANAGER | CHARLIE SHEILS, DIRECTOR OF DATA AND SPATIAL ENGINEERING | JEFF LAMBART, DIRECTOR OF ANALYTICS | KAYLEIGH VOCCA, SENIOR

PERFORMANCE COACH | SEBASTIAN OLASCOAGA, DIRECTOR OF RESEARCH & EVALUATION

ANALYTICS TEAM: ADRIENNE LUCKZOW, ANALYST | ALBERT LEE, DATA ENGINEER | AMRITA SURESH, DATA PRODUCT MANAGER | AMY HOOD, PERFORMANCE MANAGER | BIANCA LEPE, DATA SCIENTIST | BRYCE RUSSELL-BENOIT, RESEARCH & EVALUATION FELLOW | DAVID FALTA, GEOSPATIAL DATA ENGINEER | ELLIS COLDREN, DATA

ENGINEER | IAN SMITH, SENIOR ANALYST | JACOB CABRAL, GEOSPATIAL ANALYST | JEFF KAPLAN, SENIOR GEOSPATIAL ANALYST | JENNA FLANAGAN, DATA ENGINEER | JOEY HEADLEY, ANALYST | JOHN SAAD, DATA

ENGINEER | MILLAN ANDREOLI, PERFORMANCE COACH | PRANIT CHOWDHARY, RESEARCH & EVALUATION FELLOW | ROBIN KUROSAWA, GEOSPATIAL DEVELOPER | TYLER LOEWENSTEIN, PERFORMANCE ANALYST |

UYEN NGUYEN, JUNIOR DATA ENGINEER



CITY OF BOSTON PARTNERS

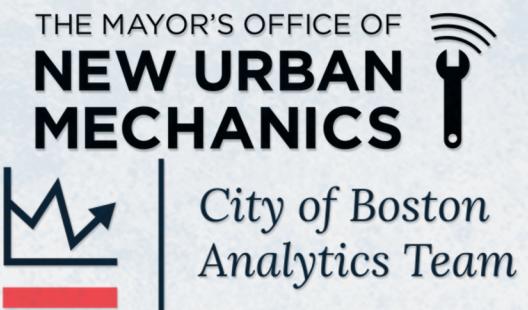
ASSESSING | BASIC CITY SERVICES | BOSTON BIKES | BOSTON WATER AND SEWER | BOSTON PUBLIC SCHOOLS | BRAP WORKING GROUP | EARLY CHILDHOOD | ECONOMIC OPPORTUNITY AND INCLUSION | ENVIRONMENT | HOUSING | INNOVATION AND TECHNOLOGY | INSPECTIONAL SERVICES | LAW | POLICY | PARKS AND RECREATION | OPERATIONS | PLANNING | PUBLIC WORKS | WASTE REDUCTION | YOUTH ENGAGEMENT AND ADVANCEMENT | ZERO WASTE BOSTON

EXTERNAL PARTNERS

BLOOMBERG CITY DATA ALLIANCE | BOSTON MAIN STREETS | BOSTON UNIVERSITY | CENTRE
FOOD HUB | CIVIC USER TESTING GROUP | DOWNTOWN BOSTON ALLIANCE | EVERSOURCE |
GROUNDSWELL | HARVARD GRADUATE SCHOOL OF DESIGN | HARVARD KENNEDY SCHOOL |
INSTITUTE ON CITIES AT BOSTON UNIVERSITY | HAYMARKET PUSHCART ASSOCIATION |
HOUSEHOLD GOODS | NATIONAL GRID | NORTHEASTERN UNIVERSITY | PILOT ACTION GROUP |
SCOUT LABS | RECYCLINGWORKS MASSACHUSETTS | TWIG+FISH

THANK YOU TO OUR PARTNERS!





For a full list of our projects and to sign up for office hours, visit www.boston.gov/mechanics



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