



CITYWIDE ANALYTICS TEAM

2018 Year in Review

OUR MISSION

The Citywide Analytics Team is the central data organization for the City of Boston. We use data, process improvement, and technology to make life better for everyone who lives and works in Boston.

Mayor Walsh created our team in 2015 with the goal of developing innovative programs and improving performance across all parts of City government. Our work helps tackle many of Boston's greatest challenges, from public health and education to transit access and economic mobility, and our team plays a key role in major City initiatives such as [Imagine Boston 2030](#) and [Vision Zero](#).

We also support departments throughout the City by providing the tools, infrastructure, and expertise to empower every City program to make data a central part of their day-to-day workflows.

OUR TEAM

Maria Borisova	Lawrence Brown	Timothy Condon	Stefanie Costa Leabo
Jon Daniels	Rebecca Gray	Max Handler	James Huessy
Joyce John	Elizabeth Kazakoff	Claire Lane	Albert Lee
Mieka Lewis	Youshe Li	Sam Lovison	Kim Lucas
Rajesh Mannepalli	Lubov McKone	Brian McMahon	Courtney Moores
Jonathan Porter	Kayla Patel	Luis Sano-Espinosa	Arturo Sedo
Matt NK Smith	Christopher Stephens	Andrew Therriault	Bill Toussaint

2018 AT-A-GLANCE

We Grew The Team! We increased capacity to take on more projects, thanks to our 2018 new hires: Albert Lee (Data Platform Engineer), Jon Porter (Data Engineer), James Huessy (Data & Performance Analyst), Chris Stephens (Data Quality Analyst), Brian McMahon (Data Engineer), Matt Smith (Principal Data Scientist), Rebecca Gray (Data & Performance Analyst), Tim Condon (Data & Performance Analyst), and Kim Lucas (Open Data Program Manager).



The Analytics Team worked on

60+ PROJECTS

The Analytics Team collaborated with all

13 CITY CABINETS

The Analytics Team hosted

5 SUMMER FELLOWS

Analyze Boston received

626,387 PAGE VIEWS



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HIGHLIGHTS FROM 2018



Vision Zero. For the first time ever, the City of Boston now publishes crash and fatality data related to [Vision Zero](#). Thanks to collaboration with *public safety agencies*, the *Transportation Department*, and *Digital Team*, data is available through [Analyze Boston](#), the City's open data portal, and automatically feeds the Vision Zero [map](#) and [dashboards](#). These tools allow the public better insight into traffic crashes and fatalities and provide value to transportation planners seeking to mitigate risks across the city.



Reducing Greenhouse Gas Emissions. Boston's Building Energy Reporting and Disclosure Ordinance (BERDO) is a critical tool for achieving our Climate Ready Boston goals of reducing our carbon footprint. We worked with the *Environment Department* to automate and clean [data](#) collected from Boston building owners, in order to more effectively enforce BERDO, expand public awareness of buildings' energy usage and find opportunities to improve efficiency through targeted outreach programs.



Short-Term Rental Regulation. We supported implementation of the citywide Short-Term Rental [Ordinance](#) by building data structures critical for evaluating short-term rental eligibility, creating the Short-Term Rental [Eligibility Dataset](#) and leveraging Analyze Boston for its use, and analyzing baseline data on short-term rental properties in the city.



Roslindale Bus Lane Pilot. We were asked by the *Transportation Department* and the MBTA to assess the bus lane pilot's effect on general traffic on the Washington Street corridor. We used Waze jam data to create a year over year analysis of travel delays, and found that the average time of traffic delays generally decreased during the pilot. BTM and MBTA data confirmed these findings, and the bus lane was made [permanent](#).



Arts & Culture Map. The *Mayor's Office of Arts & Culture* wanted better data and insights to inform grant programming and strategic planning to promote advocacy for the arts. We worked with them to bring together different datasets from internal and external sources, collect cultural event information from websites, and build an up-to-date database of cultural assets.



Tree Watering & Inspections. We created a suite of apps, dashboards, and maps to assist the *Parks Department* in monitoring the health and weekly watering of newly planted trees. By leveraging these tools, the city is better positioned to protect the investments we make in new street trees.



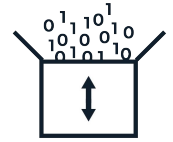
Boston Marathon Dashboard. We worked with MEMA and the *Boston Regional Intelligence Center* to develop an operations dashboard for the 2018 Boston Marathon that tracked runners progress from the start to the finish line and allowed *Emergency Management* to coordinate services according to the volume of runners entering Boston at any given time.



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Increasing Data Literacy. We helped launch the [Civic Data Ambassadors Program](#), a free course that teaches librarians the basics of data analysis and how to use Analyze Boston. The six-week online course was a collaboration with the *Engagement Lab at Emerson College*. More than 30 librarians, many working in the *Boston Public Library* system, enrolled in the course. This will inform additional, cross-departmental data literacy engagements in 2019.



Parks Planning. The team worked with the *Parks Department* to develop an application that allows open space planners to look at the demographics of walk zones surrounding parks and open space in the City. Each open space was assigned a different walk zone depending on its size to enable planners to deliver better park services and programs that meet the needs of the local community of each park.



Automated KPI Reporting. We made significant improvements to the city's performance management program by automating the reporting of departmental key performance indicators. This reduces the reporting burden on departments, increases reporting frequency, and ensures higher data quality.



Local Update of Census Addresses. To prepare for the 2020 Census we reviewed and updated the US Census Bureau's residential address list in collaboration with the *Assessing Department*, *Elections Department*, *Department of Neighborhood Development* and the *Boston Planning and Development Agency* - finding over 50,000 new potential addresses.. This work will help ensure an accurate decennial census count for Boston, which will determine the allocation of more than \$675 billion annually in federal funding.



DAS/Small Cell Permitting. We worked with our colleagues in the *Department of Innovation & Technology* and *Public Works* to develop an application that alerts vendors who request permits to install small cell antenna in the City that are within 100 feet of an existing installation. The application searches new submissions and automatically emails vendors if they are in violation of the 100 foot buffer.



MBTA Performance. We designed the third iteration of an MBTA Performance dashboard which condenses on-time performance metrics from the MBTA's API into a single view with indicators that help provide context for city leadership regarding the experience of public transit commuters in Boston.





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SUMMER FELLOWS 2018

OUR FELLOWS

Rebecca Gray | Boston University
Kenny Warner | Columbia University
Maia Woluchem | MIT

Sarah Howard | Middlebury College
Noah Whitehead | US Army
[Learn more about our fellows](#)



Reducing Health Insurance Churn. Rebecca worked with the *Mayor's Health Line* to improve processes with the goal of reducing health insurance churn. She developed an application that will notify applicants with provisional health insurance of key deadlines for submitting needed documentation to retain insurance coverage, and built custom reports for the MHL team.



Mapping BCYF Facilities. Sarah developed an [interactive map application](#), that allows constituents to search for community centers that have any combination of facilities (batting cages, pools, basketball courts, etc.).



Ticket Analysis. Kenny analyzed data from 700,000+ code enforcement tickets issued since 2010 to better understand where, when, and why tickets are being issued, to whom, why certain tickets are not being paid, and which entities are committing the most violations.



Emergency Medical Services Billing. Noah analyzed insurance claim data from Boston EMS to better understand reimbursement trends for ambulance transports. Part of his work led to the development of eight key performance indicators for the billing company to ensure effective monitoring of the revenue cycle going forward.



Housing Discrimination. Maia worked with the *Office of Fair Housing and Equity* to create a web application that allows them to analyze investigations and complaints as well as investigate results against measures of social vulnerability across the city.

WHAT'S NEXT FOR 2019?



New Data Warehouse. The Analytics Team is implementing a new Data Warehouse and ETL Platform that will be our central data repository enabling us to streamline data pipelines and workflows and work more collaboratively.

And much more! We'll continue to work with departments to make the City more effective and efficient. Stay tuned for project collaborations with the *Age Strong Commission*, *Office of Food Access*, *Department of Neighborhood Development*, *Mayor's Office of Workforce Development*, and the *Administration & Finance cabinet*.