



CITYWIDE ANALYTICS TEAM

2016 Year in Review

OUR MISSION

In 2016, Boston's Citywide Analytics team continued our efforts to improve quality of life in Boston and enhance the city's operations. We engaged with a variety of stakeholders—City departments, members of the public, private enterprises, and research institutions—forming valuable partnerships and sharing insights along the way.

We launched experimental pilot programs and built predictive models to improve health and safety. We created dashboards, maps, applications, and tools to improve government services and help others apply data and analytics in their own work. We also began development of a new, more accessible open data platform, Analyze Boston.

With plenty of interesting challenges left to tackle, here is a brief look back at some of the things that our team accomplished in 2016, and a preview of what we have planned for the year ahead.

OUR TEAM

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HIGHLIGHTS



Restaurant Inspections. Starting last June, inspectors have been utilizing predictive modeling to prioritize restaurant inspections by combining past inspection history, restaurant characteristics, complaints, and other city data. The number of inspections finding critical violations has increased by 20-25%, helping the City reduce the spread of foodborne illness by more quickly identifying problems so that restaurant owners can correct them.



Trafficking Dashboard. As part of the Mayor's continued commitment to battling human trafficking, we launched a new dashboard to help policy makers and the Mayor more easily monitor episodes of human trafficking in the City. The tool is designed to identify patterns which can help in the forming of appropriate responses and tactics, and collects data from a variety of different sources such as posted online ads, internet searches, and the Boston Police Department.



CityScore. Launched in January of 2016, CityScore is designed to inform the Mayor, City managers, and the public about quality of life and the performance of City government by aggregating key performance metrics in one place. Over the course of the year, CityScore has provided insight to help improve the performance of core City services such as 311, Public Works, and EMS.



EMS Ambulance Allocation. We worked with Boston EMS to analyze how to best allocate resources in response to a growing call volume. Focusing on a subset of calls, incidents, and outcomes over multiple years, the analysis has prompted EMS to adjust the priority of calls to increase resource availability for higher-need medical incidents. We're also investigating how to increase ambulance response efficiency and levels of care for some of the City's most vulnerable residents.



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Vision Zero Safety Concerns Map. As part of the City of Boston's Vision Zero traffic safety initiative, we developed an interactive, crowdsourced map for residents to report issues and areas of concern on city streets. This map enables users to record problems with crosswalks, signals, street or sidewalk conditions, or other transportation related issues. It serves as a tool for the Vision Zero Task force to collect feedback from Boston residents and develop targeted strategies to improve safety on Boston's streets

DDJ and PDI Initiatives. In the Fall, the City of Boston signed on with the White House's Data Driven Justice (DDJ) and Police Data (PDI) initiatives. Through these programs, we will continue explore data driven approaches towards law enforcement. This includes building trust through greater transparency, and helping divert those with mental illness away from prison and into treatment.

BOS : 311

311 Call Center Improvements. After noticing the 311 Call Center's CityScore was below 1, we worked with the team to build dashboards and reports to better highlight performance trends and more quickly identify issues. To supplement these tools, we also developed a broader performance improvement strategy that aims to improve call center efficiency and increase constituent satisfaction, with implementation beginning in early 2017.

WHAT'S COMING IN 2017

Analyze Boston. With support from the Knight Foundation and in partnership with the Boston Public Library, we are releasing a new open data platform in 2017: [Analyze Boston](#). Built on the open-source CKAN platform, Analyze Boston is designed to make open data more accessible for everyone. The site helps users to easily find high-quality and up-to-date datasets on important topics such as schools, housing, and law enforcement, and allows us to share the products of the community's work with other users. With its release, we will also be launching a data literacy training initiative for librarians, City staff, and the public.



Analytics x BFD. We are excited to expand our collaborations with the Boston Fire Department on a variety of important projects in areas such as fire prevention, firefighter health and safety, optimized routing and scheduling, and much more.

Crash Predictions. We recently launched a collaborative project to predict crashes on Boston streets. This project will combine data on traffic patterns and hazards from a wide variety of sources—including traffic sensors, GPS location data, historical crash records, Waze incident reports, and crowdsourced maps of safety concerns—to generate dynamic forecasts of the likelihood of crashes at locations throughout the city. These predictions will help us to better understand both short-term and long-term dangers and improve our efforts to make the Boston's streets safer for pedestrians, drivers, and cyclists alike.



And much more! We are planning other projects for later this year aimed at improving traffic conditions, providing better information to teachers and school administrators, reducing homelessness and addiction, identifying building hazards, developing new tools for managing the City's finances, expanding data literacy, and much more. We'll be updating the team's website and Analyze Boston regularly and look forward to sharing more of our work with the public throughout 2017.