

Massachusetts Fine Tunes Public Works Through Data Analytics

Many agencies in the state aren't taking full advantage of data and its ability to test the efficacy of state programs.

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"In theory, there is no difference between *theory and practice*. In practice, there is." – Yogi Berra, of course

In theory, data-driven government and performance management should be widespread in local government, given the abundance of technology available and the clear interest in running the most efficient and effective operations. In practice, it's not, at least not here in Massachusetts.

Public works provides a clear example. Elected officials and the public want to know about the effectiveness and efficiency of their public works operations. How well are they performing?

In many public works departments in Massachusetts, the question is fundamentally unanswerable. To know how well a department is performing requires knowing what work it is completing, and the majority of public works departments in the Commonwealth do not comprehensively track the work they do. Many do not have a work order system at all and rely on Post-It notes and printed-out emails to assign work. Others have work order systems that are being partially or intermittently used, or that are being used widely, but with no consistent training on data entry. In all of these cases, the result is information that is not useful for reporting or management.

Even in those municipalities with data, it is rare that data is regularly analyzed for management decisions. Few public works departments have the necessary staff – people who have *both* the skills *and* the time – to analyze data on a regular basis and act upon the results.

Ironically, if these departments could use data to tell their stories, those stories would often be about how the departments are now doing more work than they were 10 years ago with fewer staff than they had then. And they're doing that work with old and deteriorating vehicles and equipment.

This lack of foundational data is widespread:

- How efficient is fleet maintenance, and are vehicles costing more to repair than it would cost to replace them? There's no way to tell, because maintenance is not tracked by vehicle in most municipalities.
- What is driving overtime costs in a particular department? Pinpointing the drivers of overtime is anecdotal, because there is frequently no "cause" code logged when overtime is incurred.
- Are police officers issuing citations at the times of day and places with the highest numbers of accidents? The data on accidents and the data on citations has never been exported to the same map and compared in many departments.
- Are public safety dispatch shifts staffed to reflect the average numbers of calls at different points across the day and night? In many places, the data has not been reviewed and analyzed in this way.

The list could go on and on.

For three years, the [Government Analytics Program](#) (GAP) at the Collins Center for Public Management in the McCormack School of Policy and Global Studies at UMass Boston has been helping municipalities and other government entities in the Commonwealth use data to answer foundational questions like those and to change their cultures to become more data-driven. Through a team of centrally-supervised and trained analysts, each working directly with a portfolio of cities and towns, GAP provides on-the-ground support to municipalities on all aspects of data and analysis. Focusing on the issues most important to each municipality, GAP encourages an internal, collaborative approach and starts with existing data in order to hunt for quick wins that will build support for expanding the work. Along the way, GAP provides group and one-on-one training to department staff so that they can understand and use data and data analysis techniques. GAP's "sharing economy" model begins to give municipalities a sense of the value of being data-driven in an affordable way. GAP has served 55 different clients to date, ranging in population from 1,500 to over 600,000 and representing the full diversity of Massachusetts communities. The majority of clients range in population from 10,000 to 100,000.

Beyond the data work itself, one of the major benefits of the GAP approach is the ability of the analysts to act as catalysts for sharing ideas, solutions, and best practices. With the program's large number of participating municipalities, GAP is a powerful tool for breaking down silos. Analysts are able to collaborate and use information and best practices from work in other communities to solve specific problems that other municipalities may be trying to address. GAP recognizes that every department has something it can teach its peers, and every department has something it can learn from them. They just don't often have efficient ways of finding one another.

This model of customized, outsourced analytical support via a public university was designated (under its prior name, the Massachusetts Municipal Performance Management Program) a Bright Idea by the Ash Center's [Innovations in American Government Program](#). Massachusetts municipalities interested in joining GAP should click [here](#). Municipalities outside Massachusetts with an interest in strategizing how to bring this program to your state should email Michael.Ward@umb.edu.