



ACTION INSIGHTS | RESEARCH FINDINGS FOR CITY LEADERS

How to Build Your Organization's Data Muscle

Summarizing peer-reviewed original research published in the academic journal

DATA & POLICY

RESEARCHERS

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When it comes to data use in local government, technology and technical skills are not enough. A comparative study of three US cities supported by the Bloomberg Harvard City Leadership Initiative identifies the organizational and leadership practices that strengthen governments' use of data.

Mayor Peter Saenz of Laredo, Texas, faced a conundrum in the summer of 2018. Despite a booming economy, low unemployment, and rising land values, Laredo consistently ranked among the poorest cities in the nation, with nearly three in ten residents living in poverty.¹ To help, graduate student Santiago Mota collected data from various city agencies to create “heat maps” identifying local conditions (such as single-parent households, income levels, health concerns, and transportation issues), block by block, that could be driving poverty. Mota found that residents of Laredo’s downtown had benefited little from the city’s economic boom. During regular briefings on the project, he discussed his findings with city officials, who planned to use the maps to understand the situation and resources needed in specific neighborhoods and identify which efforts were making a difference. The maps also became part of Laredo’s Open Data Project, which allowed residents to access findings and carry out their own inquiries.

It wasn’t fancy new technology—or even Mota’s technical expertise—that made the difference in Laredo. Instead, it took a mayor who nominated the issue for action and created space for using data in new ways. It also took departments willing to collect and share information, and staff prepared to ask questions and make data-informed decisions. But how do organizational resources and individual skills add up to real capabilities for solving urban problems? [Our study in Data & Policy](#) investigates the patterns of behavior that allow groups of people to use skills and technology to generate insights from data and apply them towards better results. Unlike technology or technical skills, data capabilities cannot be outsourced. As one city official in the study noted, they must be built internally, “like a muscle.” The study also shows that leaders play a critical role in boosting their organization’s data capabilities by creating the space and conditions necessary for data-informed work.

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Comparing Data Capabilities Across Three US Cities

To better understand what shapes the development of data capabilities, we interviewed members of three cross-departmental teams selected from nine US cities. They were participating in a two-year program to address property distress and abandonment. Teams were selected based on their level of success in using data to tackle the problem at hand, as evaluated by two program managers who worked closely with all nine teams. Since all teams had similar funding, technology, and technical assistance—and since all faced a similar challenge—the approach allowed us to examine how differences in team capabilities (rather than resources or expertise alone) related to outcomes.

Our analysis revealed the key factors associated with teams' ability to leverage existing skills and resources towards a better use of data in tackling the challenge at hand: *processes* or formal practices related to data use; *routines* or established patterns of actions across group members; and team members' *attitudes* or level of enthusiasm regarding the value of data in how they approach and carry out their work. We also explored the role of leaders in building organizations' data capabilities.

We found that mayors can make a critical contribution to effective data use by serving as role models and removing roadblocks. Senior managers can also help by selecting the right team members, securing resources, and keeping up employees' motivation.

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The highest-performing team had formal processes and routinized behaviors around data use, including tracking systems, reporting protocols, weekly data-centered meetings, cross-functional "show-and-tell" sessions led by a senior department leader, and regular check-ins with the mayor, who habitually requested data to track progress on projects and was described as a "source of inspiration." The lowest-scoring team, on the other hand, took an ad-hoc approach, with no regular data meetings and no formalized process to collect and share data within the organization. The team relied on outside vendors for many data-related tasks.

Building Your Organization's Data Muscle: Takeaways for City Leaders

The study identifies four takeaways for local leaders looking to strengthen their own organizations' data capabilities.

1 Focus on the problem first

Put the challenge front and center; then ask what data you need; then see what technology, skills, processes, and behaviors are required to use data effectively.

2 Invest in building routines

Talent and training are important, but so are regular data-informed meetings, protocols, and other practices that make data use a lasting habit.

3 Build capabilities in-house

Invest in your organization's in-house "data muscle," and don't fully outsource the capabilities you need to make data-informed decisions. Vendors can supplement.

4 Cultivate data champions

Ask questions that need data-based answers and build [a culture of curiosity](#). Hire, retain, and reward data enthusiasts who grow the data muscle.

Further Reading

[“The ‘Missing Link’ in Data-Informed Governance: An exploratory study of data-related capabilities”](#)
Data & Policy

[“Using Data to Solve Urban Problems”](#)
Bloomberg Harvard City Leadership Initiative

[“Building a Data-Informed City Hall”](#) Module
Bloomberg Harvard City Leadership Initiative

[“Mayor Curtatone’s Culture of Curiosity: Building Data Capabilities at Somerville City Hall”](#)
Bloomberg Harvard City Leadership Initiative

[“City Leader Guide on Organizational Culture Change”](#)
Bloomberg Harvard City Leadership Initiative

Endnotes

¹ Christina Pazzanese, “A Summer of Service to Cities: Mapping Patterns of Poverty in Laredo, Texas,” *The Harvard Gazette*, September 25, 2018, <https://news.harvard.edu/gazette/story/2018/09/harvard-fellows-help-mayors-improve-lives-through-bloomberg-partnership/>. The subsequent details in this paragraph also draw from this article.

ACTION INSIGHTS

Action Insights summarize findings from academic research. They offer management and leadership guidance you can put to use in your work, and they link to the underlying studies.

The Bloomberg Harvard City Leadership Initiative, located at the Bloomberg Center for Cities at Harvard University, is a collaboration between Harvard Kennedy School, Harvard Business School, and Bloomberg Philanthropies to equip mayors and senior city officials to tackle complex challenges in their cities and improve the quality of life of their residents.

The Initiative advances research and develops new curriculum and teaching tools to help city leaders solve real-world problems. By engaging Harvard graduate students in research and field work, the Initiative supports current city leaders while investing in future generations. The Initiative also advances the field of city leadership through teaching, research, and new curricular materials that help city leaders drive government performance and address pressing social problems.

This Action Insight summary was authored by Fernando Fernández-Monge, Quinton Mayne, Jorrit de Jong, and Yamile Nesrala



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