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How Government Agencies Can Achieve More with Modern Analytics

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Introduction

The President's Management Agenda (PMA) stakes out a bold position on data—in fact, much bolder than many people recognize.

The PMA puts data front and center, identifying data as a strategic asset and one of three drivers of transformation in the federal government. This shift to data-driven decision-making and evidence-based policy-making has important ramifications for agency analytic programs.

The PMA builds on the work that agencies are already doing to develop data initiatives that provide insights on a wide-range of programs, with focus on improving mission performance, accountability, and transparency. In part, the PMA serves to identify data as a top priority—Cross-Agency Performance (CAP) Goal #2—seen as vital to achieving other PMA goals.

But the PMA doesn't stop there. The primary intent of CAP Goal #2 is to reset how agencies think about data initiatives. Many data initiatives have evolved organically, building on traditional data management strategies and capabilities. Achieving CAP Goal #2, however, requires a new approach.

"Investments in policy, people, processes, and platforms are key elements of this transformation and require cross-agency cooperation to ensure an integrated Data Strategy that encompasses all relevant governance, standards, infrastructure and commercialization challenges of operating in a data-driven world," the PMA states.

Ultimately, the foundation for this goal—the foundation for this sweeping vision of data-driven decision-making—is a modern data analytics platform.

A fragmented environment

At present, many agencies rely on a wide array of tools and strategies to support their data initiatives. Typically, the problem is that agencies developed these initiatives when the concept of data analytics was seen as a distinct, specialized function, rather than an enterprise concern. They tended to collect and manage data on a program-by-program basis, often using different data analytics technologies.

The surge of big data initiatives in recent years has highlighted the value of data as a strategic asset and led to the creation of larger and larger data stores. But these initiatives also have tended to evolve within individual program offices; each office selecting its own analytics solutions without reference to a larger data strategy and without realizing the value of data elsewhere in the organization.

In a 2018 survey conducted by Market Connections, one half of respondents said that this was the case at their agencies. The problem for agencies using different data analytics solutions are duplication of efforts (according to 50% of respondents), increased costs to the organization (40%), silos of poorly managed data (36%) and confusion around data accuracy (35%).

Clearly, agencies should be concerned about the duplication of efforts and wasted money that results from a fragmented environment. And concerns around the management and accuracy of data are likely to grow as agencies move toward adopting data-driven decision-making. Even as agencies collect increasing volumes of data, they will not be able to fully leverage the value of that data beyond its use with individual programs if it remains siloed and inaccessible.

This environment also makes it difficult to cultivate the kind of data literacy that is needed to support data-driven decision-making. Because of the technical hurdles involved, data initiatives are driven by the technology and data experts, not the program leaders and team members who use the data.

Another challenge with traditional data analytics programs are the outputs. Typically, this means static PDF reports that can be difficult to interpret by anyone who is not a data expert. These reports also provide no means for further exploration. Any questions that might arise from studying a report can be answered only by generating yet another static report.

These reports have even less value to anyone outside the program, who has less context for interpretation and no opportunity for follow–up, further limiting the usefulness of the data.

Four key components of the Federal Data Strategy

Enterprise data governance
Set priorities for managing government data as a strategic asset, including establishing data policies, specifying roles and responsibilities for data privacy, security and confidentiality protection, and monitoring compliance with standards and policies throughout the information lifecycle.

Access, use and augmentation
Develop policies and procedures and incent investments that enable stakeholders to effectively and efficiently access and use data assets.

Decision-making and accountability
Improve the use of data assets for decision-making and accountability for the federal government, including both internal and external uses.

Commercialization, innovation and public use
Facilitate the use of federal government data assets by external stakeholders at the forefront of making government data accessible and useful through commercial ventures, innovation, or for other public uses.

The foundation of data-driven decision-making

The Federal Data Strategy, however it evolves, requires a very different kind of environment.

One of the four key components of the strategy is the development of policies and procedures that "enable stakeholders to effectively and efficiently access and use data assets"—which includes making data available "more quickly and in more useful formats."

This dovetails with the requirement to "improve the use of data assets for decision-making and accountability," in part by providing "high quality and timely information to inform evidence-based decision-making and learning." The strategy also emphasizes the importance of providing external stakeholders with easier access to government data.

Taken together, the PMA and the Federal Data Strategy assume four key attributes of a data environment:

Accurate. The data that is used and analyzed must first and foremost be accurate. It must be collected from reputable sources and not have been altered in any way. Data that's not accurate has no value, so accuracy is foundational to a solid data environment.

Timely. The information collected must be current. The older data gets the less relevance and reliability it has for decision-making. While real-time data isn't always available, agencies will want to make sure that their data is relevant to the problems being analyzed.

Easy to analyze. Data that is accurate and timely will make the job of analysts easier, as will data that is organized. Data systems that use different collection or sorting methods can cause delays, impacting the timeliness of the information.

Easy to report. Data needs to be easy to analyze, so agencies can produce meaningful reports that summarize findings. If the data is accurate, timely and easy to analyze, agencies should have no problem reporting their findings.

Taken together, these attributes provide an essential framework for the primary purpose of an analytics initiative—to drive positive outcomes by creating insight in a quickly and timely manner, to shape policies and decisions.

The hallmarks of a modern analytics platform

While the PMA and Federal Data Strategy do not prescribe specific technology solutions, they point to the need for agencies to adopt a modern analytics platform. The current data environment found in many agencies—the hodge-podge of analytic tools, the reliance on static reports that are difficult to read, and entrenched data silos—will not deliver the results they need.

In theory, an agency could address many problems by standardizing on one data analytics platform, but often this is not a practical solution.

In the Market Connections survey, 50% of respondents said that users have grown accustomed to their current systems and would not want to switch. Many respondents (44%) also said there were concerns about how a new platform would work with their existing systems. Finally, 42% said that key stakeholders likely would not be able to agree on a standardized product. In short, rip-and-replace is not an option.

A modern analytics platform does not require an agency to abandon its existing IT investments. The key term here is "platform," as opposed to "product." Agencies will always have a multitude of data analytics tools. What they need now is a platform that can draw data from specialized tools and legacy systems.

Agencies understand the value of this approach. In the Market Connections survey, 68% of respondents said that having a single data analytics platform would speed up the process of data analysis, and 65% said that it would encourage smart decision-making based on fact.

A modern analytics platform also breaks down the technical barriers to data-driven decision-making by providing self-service analytic capabilities that can be leveraged by users with a wide-range of skill sets. Using interactive, visual tools, users can create queries quickly, accelerating their ability to delve into data and generate insight.

Visualization is an important part of a modern analytics platform. To cultivate and promote a culture of data literacy, agencies need to make data accessible to non-experts who might struggle to make sense of numbers displayed in rows and columns. It's even more difficult when data lives in disconnected silos.

Visual analytics levels the playing field, making it easier for users to interpret results and to collaborate with others. That's why dashboards have become such a popular management tool in both the public and private sectors. Dashboards encourage collaboration by providing common references for discussion and debate, ultimately resulting in more informed decision-making.

As agencies adopt new data analytics initiatives, it's important to note that the IT department still has a vital role to play. While end-users might drive data analysis, the IT department maintains responsibility for data governance, including security, privacy and management, and for ensuring that the platform integrates seamlessly with the larger IT environment.

Conclusion

The PMA offers agencies an opportunity. Data volume only continues to increase, but this avalanche of information offers agencies an opportunity to harness their growing data resources to fundamentally improve how they manage their programs, and their own operations. By using data as a strategic asset, and adopting a modern analytics platform, government agencies can ultimately do their most important job—serving citizens.

Modern analytic platforms bring together data analysis with visualization technologies to make working with data simple and understandable. Data can be used to improve almost every aspect of an agency's mission. There are an untold number of potential projects that data can help improve.

And agencies don't need to start from scratch, or throw out their current tools. Far from it. By incorporating existing solutions with a modern data platform, agencies will be able to see and understand their data in new and exciting ways.

The Office of Management and Budget has issued a difficult directive, but one that's achievable. The PMA lays out these ambitious goals because the nation's leaders believe in analytics. Modern analytic platforms have already helped private sector organizations improve how they operate. The federal government could also see tremendous, lasting benefits.

About Tableau

At Tableau, we understand that data is a strategic asset in all aspects of government. When presented clearly and visually, data has enormous potential for increased transparency and improving mission critical outcomes and performance in a more operationally efficient manner. With Tableau, federal, state, and local organizations can quickly and easily connect to all their data and visualize it by dragging and dropping—no arcane scripting required. To learn more about our platform, visit our Government Analytics solutions page.

Relevant resources

Modernizing Government with a Robust Analytics Platform

4 Best Practices for Data-Driven Decision-Making in Government

Culture of Self-Service Analytics

6 Myths of Moving from Traditional to Modern BI

Smart Analytics: Tableau Advances the Era of Smart Analytics

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