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Modernizing Government with a Robust Data Analytics Platform

✦ Using data to measure performance and accountability was a push in the federal government long before the President's Management Agenda called for evidence-based policy-making and strongly encouraged federal agencies to monitor and measure their performance.

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“With accurate data, I can instantaneously make a decision about the budget of the entire organization simply by looking at my dashboard, as can my entire team. We could not do that nine months ago when they were using a spreadsheet and old data.”

— CFO
federal healthcare agency

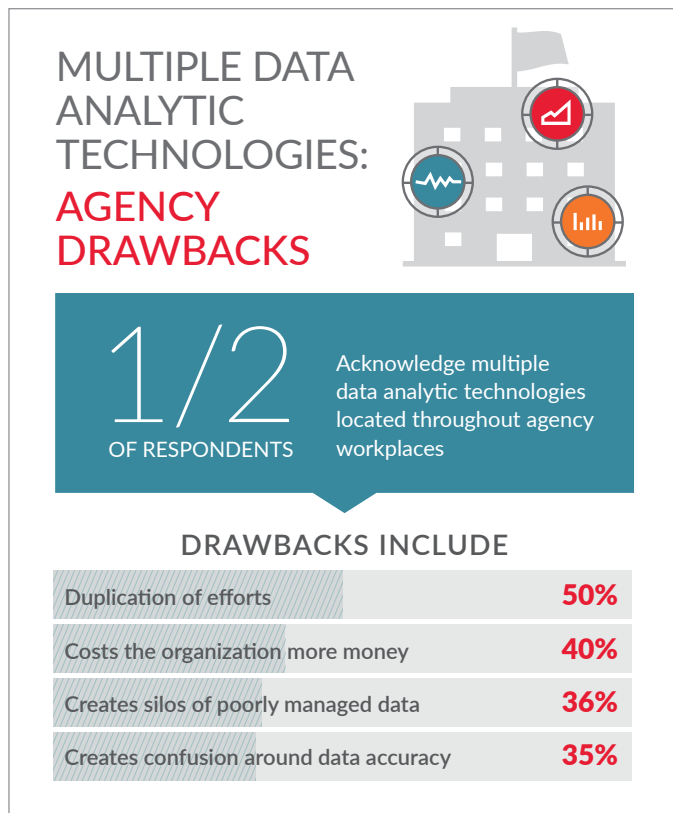
With passage of the Modernizing Government Technology Act in December of 2017, federal agencies must look at their technology infrastructure and bring it into the 21st century and begin transitioning from legacy systems to a modern infrastructure, moving to the cloud and using data to operate more efficiently — the key aspects of IT modernization. And starting in 2018, federal agencies will see greater emphasis on reporting their progress toward complying with such acts as The DATA Act of 2014 and the Government Performance Results Act of 2010. Compliance needs to occur, all while also maintaining strict budget guidance and keeping technology secure.

How do agencies demonstrate they’re making progress? Data. Federal agencies must harness the vast amounts of data they collect around program results and budgets to show how they are achieving their mission and delivering real progress against their mission goals and objectives — and how much it is costing. They must also use that data to make better decisions.

Analytics give agencies the ability to tap into the power of their data for faster, deeper insight. With more robust analytics that make it easier to blend data from a variety of disparate sources, agencies can explore the data in ways not available even a few years ago. With modern analytics platforms, they now can easily access any data source to quickly answer questions they might not have ever thought of before. And in doing so, they are seeing how they can use data to achieve an evidence-based policy-making standard within their organization. That allows them to look at how they deliver programs and services and make changes that positively impact their mission.

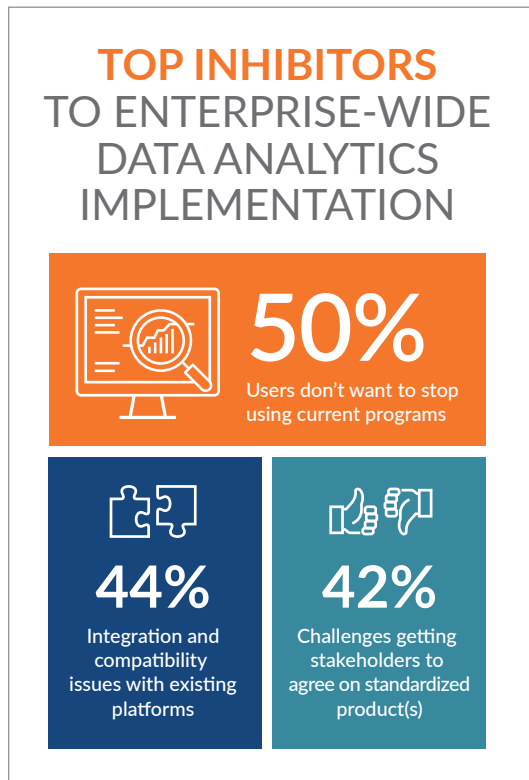
One example from a federal CFO is improper payments, a hot button in the federal government. According to the CFO, 79 percent of improper payments are clerical errors and not fraud. When looking at those payments in rows and columns in a spreadsheet, however, it is impossible to accurately analyze them effectively — and every payment appears as fraud. He says with clean data presented in a visual dashboard, his team has the ability to see what is really happening with improper payments.

As the ability to access, analyze and use data becomes easier and easier, are federal agencies taking advantage of business intelligence analytics to facilitate these tasks? To answer this question, Tableau commissioned Market Connections to learn how agencies collect, analyze, and report the data, as well as the challenges they face. Here are the key findings.



Data Analytics in Federal Agencies

According to more than half of respondents, agencies have multiple data analytic products scattered throughout departments, workgroups and desktops. They recognize this has drawbacks, including duplication of efforts (50% of respondents), cost (40%), creating silos of poorly managed data (36%) and confusion around data accuracy (35%).



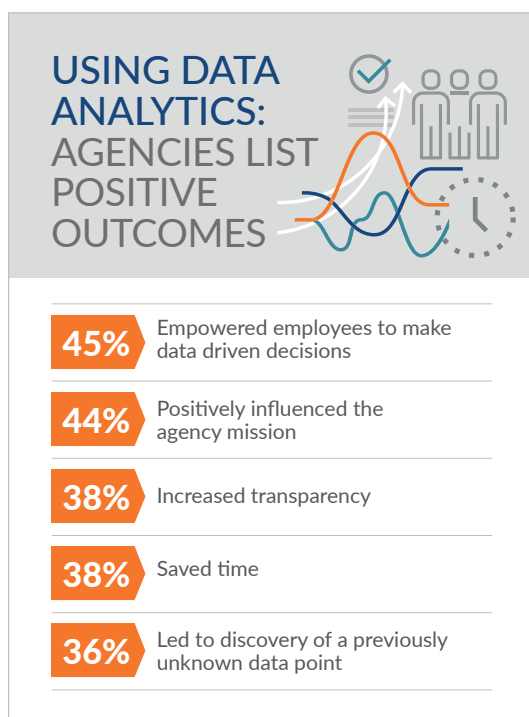
Despite the drawbacks of using multiple tools, respondents find adoption of a single data analytics platform within their agency a challenge. Fifty percent of respondents cite that the top reason for not standardizing on a platform is that end users do not want to stop using the tools they are currently using. Integration and compatibility issues with existing platforms (44%) and challenges getting stakeholders to agree on standardized product(s) (42%) also top the list.

Still, agencies have seen the benefits of using a single data analytics platform versus multiple tools.

- Speeds up the process of data analysis, 68%
- Encourages smart decision making based on fact, 65%
- Provides clearer insights through data visualization, 62%
- Eases ability to share data, 50%
- Promotes collaboration, 42%
- Nurtures an atmosphere of inquiry and investigation, 30%

Nearly half of respondents say data analytics platforms empower employees to make data driven decisions (45%), and that number jumps to 54% for those in an IT role within the agency. Respondents also say using a data analytics platform positively influences the agency mission (44%), saves time (38%) and increases transparency (38%).

One-third of respondents (36%) say that analytics tools have helped them discover a previously unknown data point. While this number varies significantly between defense and civilian agencies (43% versus 29%, respectively), it does point to the underlying value of a modern analytics platform: everyone in the organization can quickly access data to drive deeper insights and discover those “unknown unknowns.”



Why Use a Data Analytics Dashboard

It is not enough to gather the data. Without accurate, timely data presented in a way that is easy to analyze and report, that data is virtually meaningless.

“Data visualization really speaks to senior management in a way that raw numbers cannot. Metrics become more meaningful.”

— survey respondent

Spreadsheet use for data analysis is rife throughout government. The challenge with spreadsheets is that people don’t naturally consume data in rows and columns. People consume data visually and in color. A robust data analytics dashboard will deliver the kind of information that quickly lets anyone in the organization fully understand what’s going



on: it allows decision-makers at every level of the organization to identify trends and patterns and identify unknown factors that do not easily reveal themselves in rows and columns.

Agencies are discovering previously unknown data points, increasing transparency and accountability on their activities (such as discovering what percentage of improper payments are truly waste and fraud) because throughout the agency, people can see and understand what is occurring in real time.

Accessing data in real time is critical for decision making, yet with traditional business intelligence tools, it can take months to get the report and require a heavy investment of already scarce IT resources. The need for faster insight is one reason people go back to their favorite spreadsheet time and again — they can do the analysis themselves and it's faster, says Robert Dolan, Tableau Market Segment Director for Public Sector. It's easier, and people know how to use spreadsheets. And they don't need to wait for IT to create a report or make modifications to an existing dashboard.

Dolan adds that the challenge for everyone is that if you can't use the data to make a decision in real time, the analytics are useless. That's why a successful business intelligence platform is intuitive enough to allow for self-service and ad-hoc data exploration, and with IT-managed security and governance.

A strong analytics platform takes a variety of data sources and brings them together into one visually appealing dashboard that allows fast, powerful analysis of data through the use of different visual properties, including color, Dolan says. A strong platform will also do this securely and provide strong data governance, security rules, and regulatory compliance within IT.

"We're seeing people who are not IT, pull information from these dashboards. They are able to ask questions, drill down, and bring in other data sources and other views to better understand what's going on in their area so that they're better informed. They tell us they are making more confident decisions about their next steps, rather than looking at a bunch of rows and columns of data and hoping that they're making the right guess," said Dolan.

Dolan's team hears agencies are reluctant to explore these tools because they think it will require a full "rip and replace" of technology across the agency. But, he says, a platform such as Tableau can leverage existing data and analytics technology investments, giving federal agencies the robust analytics platform they need instead of a collection of tools. And, with the platform in place, IT can focus on the larger issues of data governance, security and compliance and give users a stronger self-service framework to create and modify dashboards and reports.

Conclusion

"Data analytic tools have given users an ability to quantify actions, effort and trends so that managers and commanders have a greater understanding of the work and accomplishments of different sections in the organization. It also allows for better apportionment of resources"

— *survey respondent*

A modern analytics platform, like Tableau's, is fast, intuitive and easy to use. The learning curve for such a platform can be much easier than traditional BI platforms, which means people who have never used traditional business intelligence dashboards can easily use it on a daily basis. Robust analytics platforms also help IT with governance and security and business with usability, ad-hoc analysis, and deeper, real-time insights.



As federal agencies pull data to comply with federal mandates, a new modern data analytics platform can increase their confidence in the data they report. The ability to access and use data more accurately than ever before ultimately improves services while reducing costs.

About the Study

The blind, online survey of 200 respondents included 44% federal civilian and 50% DoD/military respondents, with the remaining 6% federal judicial and legislature. Almost two-thirds (63%) evaluate or recommend data analytic tools and solutions, 34% make the final decision regarding providers offering data analytic tools, 44% manage or implement data analytic tools, and 52% are end users. Primary job functions include executive management — IT, program management, operations/administration, executive management — non-information technology, IT/MIS/IRM, and engineering.

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For more information visit: www.tableau.com.

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