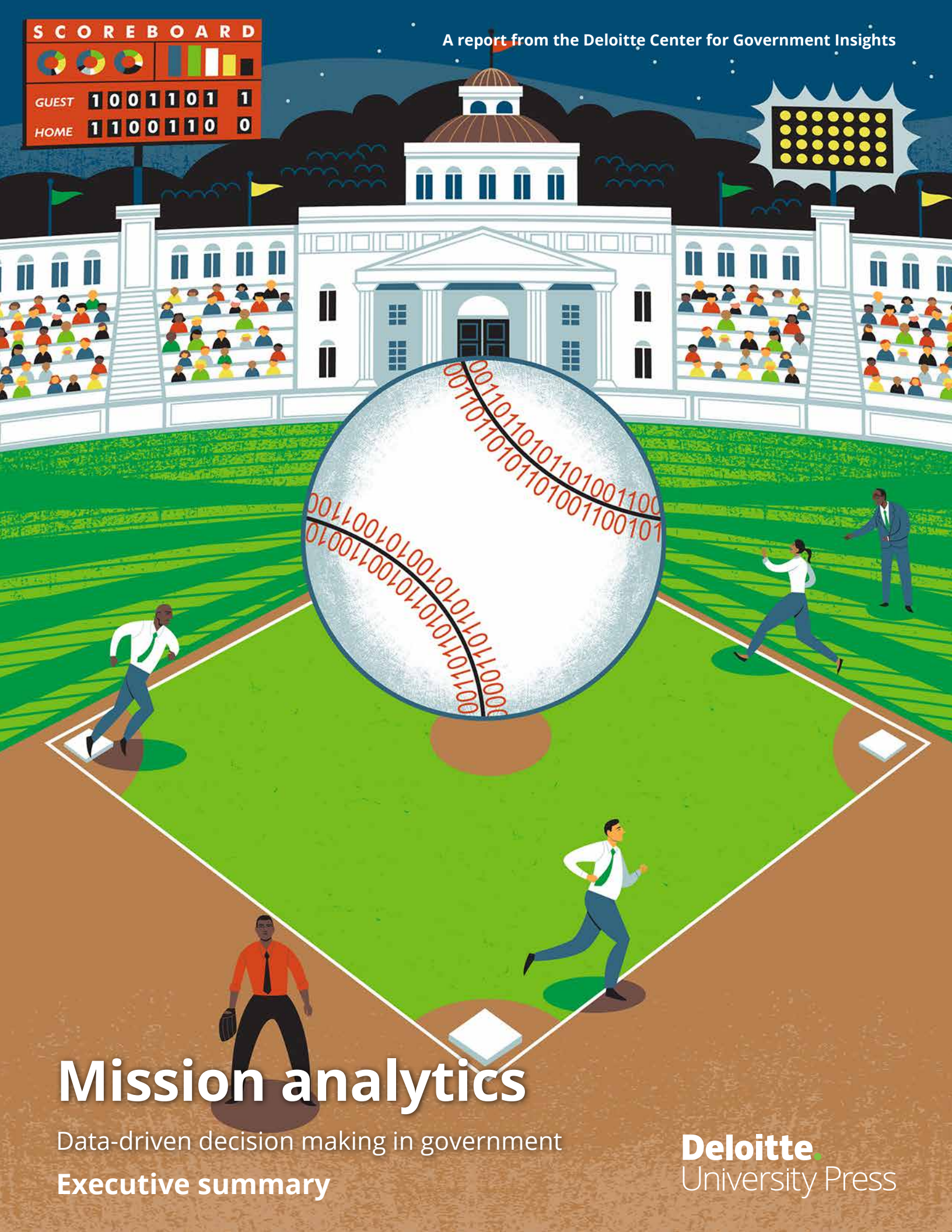


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A report from the Deloitte Center for Government Insights



Mission analytics

Data-driven decision making in government

Executive summary

Deloitte
University Press

Government has reached a tipping point for data-driven decisions



Big data and evidence-based decision making are transforming the world, from health care to retail sales—and increasingly transforming the public sector as well. Data analytics can allow governments to allocate their resources for maximum effect. But unlike for-profit companies, government agencies face unique challenges in defining and measuring success.

IN fact, despite numerous efforts, successful data-driven resource allocation has been quite rare in government—until recently. Since around 2010, two factors have rendered data-driven mission management much more achievable: dramatic advances in information technology, and the rise of data science, visualization, and analytics.

These developments have made it easier for government officials to access and *understand* the statistics

that illuminate mission success—to make sense of operational data and turn them into usable insights for the critical mission of resource allocation.

We examine some cases in which new data tools are achieving results through what we call the “mission analytics framework,” and offer some guidelines for avoiding common data and measurement pitfalls.

Use smarter analytics to save time, money, and energy

GOVERNMENTS manage three main categories of resources: people, physical assets, and money.

People

Human capital is generally the biggest and most critical resource that an agency has to manage, often exceeding a third of the total budget.¹ Data analytics can help agencies decide how to deploy staff for maximum effectiveness. For instance, Pennsylvania's Bureau of Child Support Enforcement uses a "payment score calculator" to advise caseworker outreach to noncustodial parents.



Equipment and physical assets

The second major category of resources includes physical assets, from weapons systems to field offices. Modern analytic tools support more objective decisions for allocating these assets. For example, the United States Immigration and Customs Enforcement (ICE) uses a data-driven approach to choose new international office locations.

Money

The third critical resource government employs to achieve its mission is funding, such as grants, loans, and guarantees. For the federal government, grant funding is a \$600 billion question: How should government agencies decide which organizations should receive a grant? One agency using data to manage money is the United States Federal Railroad Administration (FRA), whose enterprise data store helps forecast the effect of its investments on outcomes.

The four stages to becoming a data-centric organization

MANY government agencies *want* to use data to improve their resource decisions, but may lack a clear roadmap for doing so. Our research shows that most agencies that transform themselves into data-centric organizations go through four stages. We call this the *mission analytics journey*.

Step 1: Make your mission measurable

The first step is to define the mission in ways that make it quantifiable. The premise is that specific and challenging goals, combined with continual analysis and feedback, can improve performance.² For instance, the United States Department of Agriculture's Economic Research Service (ERS) broke its mission into quantifiable outcomes, allowing it to align resources to mission-critical elements.

Step 2: Collect mission-critical data

Defining and refining mission-critical measures is only the first step on the mission analytics journey. The enterprise then must create a platform that allows for the collection, storage, and dissemination of all relevant data. Different datasets may have to

be brought together to gain a full picture of mission performance.³ The FRA, for example, built an enterprise data store by tapping into internal and external data sources.

Step 3: Use analytics to move from data to insights

The third step in the journey is to build tools to pull meaning out of the data compiled and measured during the first two steps. Performance information has little significance in itself. It should be translated into *meaning* to become valuable. To do this, Washington, DC's Child and Family Services Agency built a statistical model to identify children most at risk.

Step 4: Translate insights into organizational action




Insights without actions are of little value. Agencies that successfully use data analytics to improve their operations rely on feedback mechanisms to translate insights into concrete operational changes.⁴ Virginia's Department of Social Services' "managing by numbers" approach, which helps to reduce pending benefit applications in the state, offers an example.

Overcoming the obstacles to data-driven mission management

WHILE these success stories are inspiring, the journey to data-driven mission management is not without challenges. These challenges span across the cultural and systemic

aspects of government. Our research has uncovered four solutions that can help government agencies overcome common obstacles to data-driven mission management.

Figure 1. Obstacles to data-driven mission management and solutions to overcome them

		
Obstacles	Solutions	Success stories
It's hard to know what's important	Identify the most useful measure	To help reunify families, the District of Columbia winnowed down mountains of data elements into only those factors that its Children and Family Services Administration could control.
Department objective may not align with overall agency mission	Create a "line of sight" from every employee to at least one top-level agency goal	The Government Performance and Results Act Modernization Act (GPRAMA) requires agencies to identify leaders for each Agency Priority Goal (APG). This helps mission priorities to cascade down the hierarchy.
Self-assessments are ambiguous and subjective	Improve the governance and analysis of performance data	USDA Economic Research Service (ERS) created a formal data council to standardize assessments of data products across the division.
Storage formats can impede the use of operational data	Use cognitive technologies to broaden and deepen performance data	Federal Railroad Administration (FRA) plans to integrate federal- and state-level data into its existing data ecosystem using natural language processing (NLP).

Source: Deloitte analysis.

Graphic: Deloitte University Press | DUPress.com

Today's "extraordinary" will become routine

THE journey toward data-driven resource allocation requires political leadership, a commitment to sustained technological progress, and a willingness to measure and report on success transparently. Done right, it can dramatically boost performance.

Mission-driven analytics have the potential to allow government agencies to do more with limited

resources. The technology has advanced to the point at which data can be captured, collected, and analyzed efficiently. Linking data to an organization's mission may soon become commonplace. More and more public leaders, like those described in the [full report](#), will work to create a data-driven culture that promotes agency missions and the fulfillment of public purpose.



ENDNOTES

1. Elizabeth McNichol, "Some basic facts on state and local government workers," Center on Budget and Policy Priorities, June 15, 2012, <http://www.cbpp.org/research/some-basic-facts-on-state-and-local-government-workers>.
2. Performance.Gov, "Driving federal performance," <https://www.performance.gov/>, accessed September 12, 2016.
3. Eamonn Kelly, *Introduction: Business ecosystems come of age*, Deloitte University Press, April 15, 2015, <http://dupress.com/articles/business-ecosystems-come-of-age-business-trends/>.
4. See, for instance, Stephen Goldsmith, "How Louisville, Ky., is using a 'stat' program to transform the culture of government," *Governing*, June 19, 2013, <http://www.governing.com/blogs/bfc/col-efficiency-louisville-louiestat-performance-metrics-improvement-transform-government-culture.html>.

ABOUT THE AUTHORS

MAHESH KELKAR

Mahesh Kelkar, of Deloitte Services LP, is a research manager with the Deloitte Center for Government Insights. He closely tracks the federal and state government sectors, and focuses on conducting in-depth research on the intersection of technology with government operations, policy, and decision making. Connect with him at mkelkar@deloitte.com or on [LinkedIn](#), or follow him on [Twitter](#).

PETER VIECHNICKI, PhD

Peter Viechnicki, of Deloitte Services LP, is a strategic analysis manager and data scientist with the Deloitte Center for Government Insights, where he focuses on developing innovative public sector research using geospatial and natural language processing techniques. Connect with him on [LinkedIn](#), or follow him on [Twitter](#).

SEAN CONLIN

Sean Conlin is a principal with Deloitte Consulting LLP's Strategy & Operations practice. His work focuses on using structured and unstructured data to help clients achieve efficiencies and manage risk. He can be reached on [LinkedIn](#), or at sconlin@deloitte.com.

RACHEL FREY

Rachel Frey is a principal with Deloitte Consulting LLP, focusing on analytics and information management primarily for state governments. She can be reached at rfrey@deloitte.com or on [LinkedIn](#).

FRANK STRICKLAND

Frank Strickland is managing director of Mission Analytics services within Deloitte Consulting LLP. He has published widely on how to use data-driven methods to improve operations in the national security sector. He can be reached at fstrickland@deloitte.com or on [LinkedIn](#).

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