IBM Center for
The Business of Government

# Tools to Innovate:
## Data Analytics, Risk Management, and Shared Services

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The IBM Center for The Business of Government is pleased to present this special report, *Tools to Innovate: Data Analytics, Risk Management, and Shared Services*.

Today, governments have access to a variety of tools to successfully implement agency programs. For example, Data Analytics—especially of financial data—can be used to better inform decision making by ensuring agencies have the information they need at the point of time that it can be most effective. In addition, governments at all levels can more effectively address risks using new Risk Management approaches. And finally, Shared Services can not only save money, but also stimulate innovation, improve decision-making, and increase the quality of services expected by citizens.

The IBM Center has published a variety of reports related to these topics and accordingly, we have brought key findings on these topics together in the compilation that follows. We welcome your thoughts on these issues, and look forward to a continued dialogue with government leaders and stakeholders on actions to help agencies achieve their mission effectively and efficiently.

*By Michael J. Keegan, Forum Editor*

# Introduction: From Data to Decisions to Action— The Evolving Use of Data and Analytics in Government

In a world inundated with all kinds of information, timely, relevant, and more predictive data can drive better decision making. Private sector companies have been analyzing data successfully for some time to gain a competitive edge, improve decision making, achieve better financial outcomes, and improve customer service. Now, government agencies, operating in a similarly data-intensive environment, are pressed to do the same. Although the competitive edge for government agencies isn't the same as the private sector, today's government executives seek a performance edge, which involves increasing the efficiency of operations, effectively meeting their missions, mitigating risks, and increasing citizen engagement and public value.

Data are deeply woven into the very fabric of our lives with the proliferation of mobile technology and the acceleration of computational power. Within this context, it is no surprise that government agencies will grapple with how to integrate their disparate data sources, build analytical capacities, and move toward a data-driven decision-making environment. Data analytics can be a powerful tool to help government executives leverage all sorts of data, big or small. Analytics uses data—structured and unstructured—to uncover patterns, identify opportunities, seek parallels, formulate predictions, and inform decisions. It has the potential to transform information into insights—taking diverse volumes of data and predicting the most likely outcomes of key decisions or events. These insights can enhance an organization's performance. In the end, it is about using data to strengthen agency decision making and inform government action.

From 2011 to 2014, the Partnership for Public Service and the IBM Center for The Business of Government collaborated on three reports and a series of podcasts on using data and analytics:

- **The Power of Analytics –** This report set out to study federal agencies' use of analytics and how it helped them achieve better program results. It focuses on identifying leading practices that illustrate how data informs decisions and drives meaningful and positive program changes.

- **Building an Analytics Culture –** The second report examines what it takes to build analytics into an agency's decision-making process and culture. The report includes concrete steps for building a disciplined approach to analytics and profiles seven agencies that are using analytics to achieve better results.

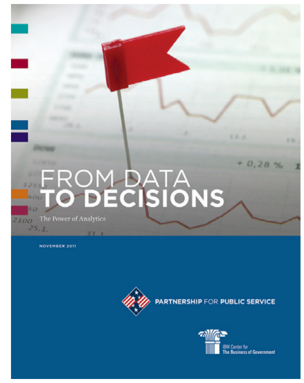
- **Lessons From Early Analytics Programs –** The third report examines long-standing programs and how they have advanced and evolved over time to be a sustainable component of an operation. It highlights five analytics-based efforts that were begun—in one case, more than 25 years ago. Based on these cases, the authors identify a series of lessons that they saw as important if analytics are to be successfully embedded in an agency's culture.

- **Conversations on Big Data –** The fourth and final contribution is a series of podcast interviews with federal leaders in which they describe how they are using data analytics to prevent and counter tax fraud, improve training, respond to emergencies, protect investors, keep our food supply safe, and more. These podcast conversations are designed to provide insights into the essential ingredients for a successful analytics program and offer advice from leaders whose agencies are benefiting from analyzing data.

This forum is dedicated to highlighting the insights, findings, best practices, challenges, and successes outlined in each of these efforts. This forum's contributions are largely edited excerpts from each of the reports referenced above and from conversations with government executives.

# The Power of Analytics

*Edited by Michael J. Keegan*




*The initial contribution to this forum sets out to study federal agencies' use of analytics and how analytics helped them achieve better program results. It focuses on identifying leading practices that illustrate how data informs decisions and drives meaningful and positive program changes. It is excerpted from the first report of the Partnership for Public Service and IBM Center collaboration,* From Data to Decisions: The Power of Analytics.

Batting average isn't the best way to determine the effectiveness of a hitter. The Oakland Athletics learned this while doing statistical analyses of players and trying to build a winning team during its 2002 season. "They took everything that happened on the baseball field and sliced it and diced it to its most elemental parts," Michael Lewis, author of the book, *Moneyball* said in a radio interview. The A's surprised just about everyone with their new-found success on the field, besting teams that had millions more to spend on recruiting top players.

Federal agencies don't field baseball teams, obviously. But they too collect valuable data that tell important stories about how they're doing in carrying out their missions. Virtually every agency collects data but many struggle to turn the information into useful information that can inform and drive decisions. Yet, trends in that data can pinpoint problems, underscore successes and steer officials toward alternatives and perhaps better ways of carrying out their programs.

Agencies that have extracted the important lessons from their data and relied on the information to manage performance have reduced marine accidents, improved the quality of the care patients received in nursing homes and improved how Social Security services are delivered. The data became useful information that staff relied on to analyze programs and improve results and, yes, sometimes hit the ball out of the park.

Whether agencies have fully immersed themselves in analyzing data or have just begun the process, some basics have become apparent. If agencies want to improve program effectiveness and efficiency, they need to manage performance; and to do so, they have to measure it. The measures they choose need to be meaningful and linked to a desired goal or result. If ending veterans' homelessness is the goal, for example, a better indicator for success than how many housing vouchers are issued is likely to be how many veterans get into housing.

## Heed the Clarion Call

The clarion call to fix government has put great pressure on federal agencies to manage better and to be accountable and transparent in the process. In the midst of tremendous fiscal uncertainty the nation now faces, and with public attitudes toward government at an all-time low, it is more critical than ever that federal leaders base their decisions on accurate data rather than on anecdotes, incomplete information or the belief that things will work out for the best—particularly when those decisions have huge consequences on how tax dollars are sent and society impacted.

## What stories do the data tell?

All federal program managers could run their programs better by analyzing their data, but it takes effort to begin. Even if managers believe it is important and necessary, it isn't necessarily easy. At the heart of knowing how well an organization or program is performing and where leaders need to focus greater attention is analytics. Broadly defined, it is the extensive and systematic use of data, statistical and quantitative analysis, and explanatory and predictive models to drive fact-based actions for effective management. It sounds intimidating, but simply stated, analytics is the process of turning data into meaningful information that program staff and agency leaders can use to make decisions.

## Case Studies of What Works

*From Data to Decisions: The Power of Analytics* from which this contribution is excerpted, sets out to study federal agencies' use of analytics and how it helped them achieve better program results. It focuses on identifying leading practices that illustrate how data informs decisions and drives meaningful and positive program changes. In particular, its authors sought to determine how employing good data led to changes in how agencies think about their programs and how this led to programmatic insights that influenced their decisions. Seven programs in eight agencies (one program is collaboration between two agencies) that had experience using analytic strategies and techniques were reviewed. Three programs were reviewed in depth with some lessons taken from four others. We focused on mission programs in agencies to illustrate how using analytics can lead to beneficial changes that help agencies meet program goals. We believe the techniques these agencies have used are transferable to other agencies, regardless of previous experience using data.

The four agency programs examined in greater depth are:

- Department of Housing and Urban Development (HUD) and Department of Veterans Affairs (VA) jointly administered Veterans Affairs Supportive Housing (HUD-VASH) program;
- Safety Management System (SMS) in the Federal Aviation Administration (FAA); and
- Department of Health and Human Services' (HHS) Center for Medicare & Medicaid Services (CMS) Medicare Program; specifically the nursing homes and transplant programs.

The full report also highlights compelling programs from four other agencies, which includes:

- Coast Guard's Business Intelligence system (CGBI);
- "Click It or Ticket" campaign by the National Highway Traffic Safety Administration (NHTSA);
- Department of the Navy's Naval Aviation Enterprise (NAE); and
- Social Security Administration's (SSA) use of mission analytics in customer service.

For more a detail treatment of these programs, please download the full report at businessofgovernment.org/report/data-decisions-power-analytics.

## Different Stages of Maturity

The review of these programs shows agencies at different stages of maturity in using analytics and illustrates the agencies' continuum of progress as they journey from collecting data to analyzing it for using it to manage their programs.* Some agencies, such as NHTSA and SSA, have decades of experience using data to set goals. Others, such as HUD, are newer in the data arena but now are implementing agency-wide analytics programs. But, at all of the agencies we reviewed, regardless of the level of sophistication in their analytics programs, data analysis helped provide insights into how to improve programs. And, all of the agencies found they needed to change agency culture to take full advantage of an analytics mindset.

## Data Are Only the Starting Point

Collecting the data is only the first step. They needed to be analyzed, turned into information and made accessible to staff and executives, to meet varying needs, and be understandable to different audiences. The value of the data came from the stories this information told. Agencies also had to develop meaningful performance measures to assess progress on how far they were in achieving their program goals. We found that those measures changed over time and it was important that they stay meaningful and reliable and are tied to results.

## Common Practices from Data to Insight to Decision Making

The agencies highlighted in the full report and referenced in this forum were similar in the ways they gathered data and turned the information into knowledge that improved their program results:

- Leaders focused on transparency, accountability, and results.

## Myths Associated with the Process of Analytics and Measuring Results

### Agencies need the latest technology to be successful

It's not necessarily about the tools—it's about the process of analyzing data. Technology is only an enabler. Agencies can build successful analytics programs with readily available desktop software. "The tool is secondary," said PIO David Zlowe at VA. "What matters is leadership's commitment to make decisions using analytics." While robust and sophisticated business intelligence tools provide opportunities to view data in many ways, as well help to expand the use and acceptance of analytics, agencies can successfully use and grow their capacity to analyze data without these tools.

### Everything needs to be measured

Some agencies have hundreds of ways of measuring performance, but it's not the number of measures that are important; it's making sure measures are meaningful and valid and are core to accomplishing the mission. Using fewer measures, but ones that are specific, relevant, and timely, is more useful for reaching mission-critical objectives. "They think that collecting it [metrics] means something, but it's the analyzing that means something," said COO Estelle Richman at HUD.

### Direct control over the activities measured is essential

Some agencies have argued that they can't develop effective performance measures because delivery partners are "in control" of the results, since they provide the service or administer the program. However, the programs we reviewed demonstrated they were able to overcome barriers, build collaborative relationships and work with delivery partners toward common goals. "It became apparent that if we were going to make further progress, we would need to enlist more partners," said Thomas Hamilton, Director, Survey & Certification Group, CMS. "How do we partner and reach agreement on a common goal? We need metrics to do that."

### Focus on performance measures first and everything else will follow

Success is as much about building relationships to create an analytics culture as it is about collecting data. When both the people requesting information and those providing it believe that they share a common purpose, such as ensuring air safety or eliminating veterans' homelessness, it builds buy-in and fosters an analytics culture.

### The performance measures are the outcomes

A meaningful set of measures is a means to an end, not the end itself. Measures are indicators that show progress against a goal and, ideally, generate meaningful discussions on a program's progress—what's working, what isn't and why. With these measures, leaders can more accurately assess program performance. "It's not about the metrics," said David Zlowe, PIO at VA, "it's about the performing of the mission."

### Leadership in analytics has to start at the top

Some agencies have built an analytics culture that started within a component in a department rather than from the top down. While leadership unquestionably is a necessary ingredient, an analytics program doesn't have to start at the top. FAA's Safety Management System, for example, started in a component organization before it expanded agency-wide. It is now promoted by top agency leadership.

- Staff had a clear line of sight from where they stood to the desired goals and outcomes.
- Agencies invested in technology, tools, and talent.
- Agencies cultivated and leveraged partnerships across the agency and with partners who deliver services.

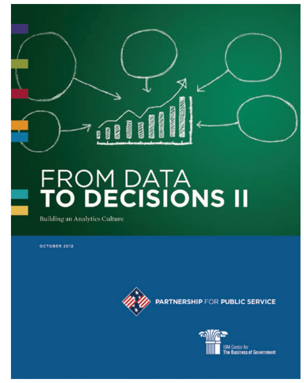
In reviewing agencies on their road from data to insight to decision making, it became clear that developing an analytics mindset is a not a short-term effort, but an evolutionary process that takes time and a commitment to performance management. Managers must weave into their organizations' fabric a dedication to continuous improvement.

Finally, research indicated that some agencies may be derailed by myths that surround the process of analytics and measuring results. It is important to debunk these myths.

**Key Findings**

- The analytics process turns data into meaningful information that program staff and agency leaders can use to make good decisions.
- Leadership support and analytics are cornerstones of performance management, which requires supervisors and managers to identify problems, assess progress, and share results.
- For analytics to become accepted widely, leaders should set expectations and call for accountability.
- Non-experts, whether leaders or line employees, need data that they can access easily, understand, and tailor to their needs.
- Collaborating with partners and stakeholders enables agencies to share data for analytics use, improving results.
- Sharing data requires transparency.
- The goal is to foster analytical insights, whether agencies have state-of-the-art data tools or less advanced software.
- For analytics to succeed, employees need a supportive environment, training, and encouragement to use and experiment with data. ◘

* Analytics maturity refers to the extent to which an organization uses analytics for making decisions and the level of sophistication of the analytic approaches or tools applied. Common elements for assessing maturity include the quality and accessibility of data, organization-wide focus, leadership involvement, tools and technology, and staff talent.




# Building an Analytics Culture

*Edited by Michael J. Keegan*

*The next contribution to this forum examines what it takes to build analytics into an agency's decision-making process and culture and is excerpted from the second installment of the Partnership for Public Service and IBM Center collaboration,* From Data to Decisions II: Building an Analytics Culture. *It includes concrete steps for building a disciplined approach to analytics and profiles seven agencies using analytics to achieve better results.*

The initial effort highlighting the power of analytics in government sparked an overwhelmingly positive response from agency leaders and federal performance management practitioners who asked, "Where do we go from here? How do we get an analytics program started?" Their reactions demonstrated a hunger to understand how to develop and grow an analytics culture within their agencies and incorporate it into how they perform their missions. Building an analytics culture looks at day-to-day practices that can help build and sustain an analytics culture, drive meaningful changes, and achieve mission results. The goal of this research is to provide practical approaches, practices or strategies that agency program managers can apply. The authors hope that sharing compelling stories of how agencies are developing, growing, and sustaining their analytics and performance-management approaches will shed light on key steps and processes that are transferable to other agencies.

Through this effort, we set out to learn what is working for managers and staff and what is not; specifically: how they are using analytics, how they got started, what conditions helped to grow their approaches, what challenges arose and why, and what success looks like. There were many parallels in approach across agencies and programs. Driven by budget realities and the push for more data-driven actions, agency managers were examining their programs in a disciplined, comprehensive way to determine how they conduct their business.

As part of this effort, four focus groups representing a cross-section of agencies and a mix of roles—managers, program staff and analytics staff –were convened. We reviewed analytics efforts at the program level in seven agencies that vary in their missions, size and reach:

- Federal Emergency Management Agency (FEMA) Recovery Directorate, the FEMA Logistics Management Directorate, and the Transportation Security Administration , all within Department of Homeland Security;
- Bureau of Indian Affairs
- Air Force
- Internal Revenue Service
- Food and Drug Administration, Center for Drug Evaluation and Research, Center for Devices and Radiological Health, National Institutes of Health, National Institute of Biomedical Imaging and Bioengineering and National Institute of Allergy and Infectious Disease, all of which are under the Department of Health and Human Services.

We targeted a range of agencies whose diverse missions would enhance the transferability of our findings. A full description of the agencies we studied and more details on why they were selected can be found in the complete report, which can be downloaded at businessofgovernment.org/report/data-decisions-ii.

Building an analytics culture involves:

- Starting with a systematic and disciplined approach.
- Making analytics the way you do business.
- Getting the people piece right.

## Start with a Systematic and Disciplined Approach

Where does an agency start in its effort to build or expand the use of analytics for making program decisions? What are key steps or actions that will create a culture that values and uses data for program management day to day?

The first step is to get a solid understanding of the agency's program goals and objectives. Revisit the basic activities an agency, unit, or program performs and what resources, conditions, and other factors go into those activities; tie those activities directly to what they are intended to achieve; and then link those results to the agency's goals. Focusing on these details will help agencies employ a data-driven approach to managing programs, help them identify the critical information needed to gauge progress and measure results, and ensure that only those activities that are key or essential to meeting desired results are performed.

By instituting systematic processes, agencies start building so they can look critically at what they do and thoroughly understand how their activities can lead to better results. As part of this endeavor, agency program managers are examining what they do now, what they need to do to improve, and what resources are available. They are systematically mapping out the roles and activities of staff and stakeholders and refining performance goals, data, and metrics that are in place, or should be. And they are comparing data they need with what they collect and analyzing performance measures to examine how they affect results. These analyses highlight the causes and effects of individual and agency actions, including unintended consequences. Using this knowledge to make decisions holds great promise for improving agency performance.

To travel down the analytics road, managers must challenge time-worn assumptions and embrace qualitative measures that are linked to impact. As with any new activity, managers need to be comfortable experimenting and learning and then making changes that improve performance. The agencies we reviewed also deemed it important to find a common language to make sure terms were defined the same way for all—whether they were working with program staff, analytics staff, subject-matter experts, or stakeholders.

Together, they challenged assumptions by re-examining and asking basic questions about performance measures. Are they meaningful? What do they measure? What should be measured? Are the right data being collected? Are they reliable? They revisited data that had been collected to see if it was useful for achieving results. They

### Steps to Get Started

Put together a team that includes people familiar with the work being performed, staff with analytical skills, and subject-matter experts. Bring in key partners and stakeholders and include people who aren't part of the process but who have a vested interest in the outcome and are willing to challenge the status quo.

1. Ask questions even if they can't be answered with current data. The exercise will help highlight what data or other types of information are needed. In fact, craft questions with the understanding that asking the questions will lead to data gathering.
2. Using the questions as a starting point, brainstorm to define a current process or activity and what a future, improved version or result might be, focusing on top issues and agreeing on a desired outcome or outcomes.
3. Take large issues and break them into smaller, workable components. This will provide a quick demonstration of the value of data, which can stoke interest in analytics and convince staff to use analytics in their work. An incremental approach can, not only rapidly show benefits, but allow the process to be tested to learn what can be improved and refine data analysis requirements—all of which can help to determine what automated tools or systems are needed. Pilot projects also afford the opportunity to demonstrate proof of concept and the value of the planned actions for all involved; including that they are doable. The "proof" can go a long way toward laying the foundation for buy-in.

focused on the questions and the clarity of their goals rather than on the systems or technologies for processing the data. And they tried to be rigorous and disciplined about each stage so that the questions asked and actions taken were consistent each time. In some cases, they set up pilot programs and learned from interim results what needed to be adjusted.

## Make Analytics the Way You Do Business

For analytics to become an integral part of agency activities, leaders must live by example, using data for decisions in an open and transparent manner. Leaders can be at any level within an organization, but making analytics a way of doing business requires them to be relentless in their efforts to make decisions based on facts, rather than relying on gut instinct or conventional wisdom. Incorporating analytics into day-to-day management activities can change attitudes, transform how work is done and affect results. However, to allay fear in the workplace, the analytics emphasis needs to be on learning how to improve performance, not on placing blame.

### Steps to Get Started

1. "Prepare the troops" by explaining the importance of data and communicating a vision of how that data will be used in decision making; and share, share, share. Provide clear and meaningful information to employees and important stakeholders that communicates what the team is doing and learning, as well as the next steps. Everyone directly impacted by the work of the team needs to be kept in the loop.
2. Get to know the data and understand what they mean. Then lead by example, using information from the data to make decisions.
3. Encourage collaborative partnerships across the agency with other agencies and with key partners and stakeholders outside the federal government.
4. Take the initiative and show passion for working on problems that stymie organizational performance. Fight complacency and seek opportunities for changing business as usual.
5. Raise issues, demonstrate knowledge about them, and suggest ways to do a job better or achieve better results. Question data and help identify ways to improve data quality and usefulness.

## Getting the People Piece Right

Leaders need to communicate the importance of analytics and build the staff capacity to take advantage of them. They also need to understand how employee morale and performance are connected to how well an organization functions. An effective way to institute or expand an analytics program is by working with program staff individually or on a project to demonstrate the usefulness of data analytics, according to agency analytics teams with whom we spoke.

Part of the effort includes using change-management strategies as an agency builds and grows an analytics culture. The shift in how agency work is done challenges business as usual and compels employees to do things differently; this can cause great unease. Steps for introducing change and gaining acceptance for it include communicating purpose and vision, engaging staff and stakeholders, eliciting feedback, and sharing information.

Agencies we spoke with are bringing in frontline program people, analytics staff, subject-matter experts, and stakeholders as they apply systematic approaches for gaining a deeper understanding of their activities. They hope to improve performance and make it routine

### Steps to Get Started

1. Tap the expertise of others—inside and outside the program, workgroup, and agency—by building networks and communities of practice and sharing knowledge and expertise with colleagues.
2. Recruit multidisciplinary staff and people with experiences outside the agency or immediate workgroup who can challenge conventional wisdom, think beyond the status quo, and bring valuable insights, knowledge, and lessons learned from other experiences. Get a fresh perspective by tapping people from different disciplines to look at data and approaches.
3. Provide opportunities for employees to move from program or line offices to analytics staff offices within one agency, and among line and staff offices in other agency organizations, to broaden knowledge and perspective and to share their expertise. This can be done through work details, cross-functional teams or rotational assignments or reassignment, and can benefit both staff and the agency.

to achieve results based on analytics. They are building relationships within and between agencies and identifying shared goals among stakeholders. The approach also helps to break down silos that have walled these partners off in the past.

Enhancing staff capacity to analyze data and getting staff to share knowledge within and across agencies are important ingredients for sustaining an analytics program. The more that staff members understand how to analyze and use data, the more they appreciate the power of analytics to carry out an agency's or program's work effectively.

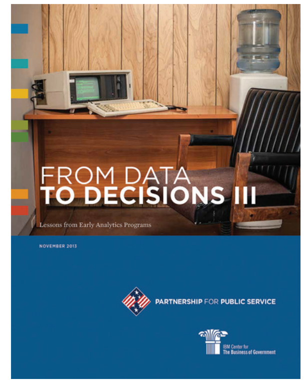
## Conclusion

Analytics is an essential component of good management and a foundation for effective performance management and sound decision making. However, there is no single path to success for building, growing, and sustaining the use of analytics for better performance. As our stories show, there are many roads to get there. It is a learning process. Curiosity and the desire to perform well drive the use of analytics. For the agencies we studied, success often bred success. These organizations approached analytics efforts in a systematic, disciplined way that everyone in the organization could observe and understand. Revisiting the basics—mission, goals, objectives, inputs, processes, activities, outputs, and outcomes—and studying how all of the aspects connect, are fundamental to identifying the data needed for an agency to effectively manage and attain the desired results.

Along with a disciplined approach for data collection and analysis, which lends support for good management practices, the way to sustain improvement is to gain acceptance from staff and stakeholders and support from leadership. Top leaders can be in the analytics driver's seat or support initiatives started elsewhere in the agency, but along the way, it is critical for people to feel ownership of the processes. Most important is that leaders incorporate analytics as a way of doing business, making data-driven decisions transparent and a fundamental approach to day-to-day management. When an analytics culture is built openly, and the lessons are applied routinely and shared widely, an agency can embed valuable management practices in its DNA, to the mutual benefit of the agency and the public it serves.

**Key Findings**

- To get started with an analytics program, create a team with agency experience, analytical skills, and subject-matter expertise.
- Craft questions about work processes and other agency activities that will lead to data gathering and improvements by: defining a current process, describing an improved state, focusing on top issues that need to be addressed, and agreeing on a desired outcome.
- Determine tools or systems needed and show benefits rapidly; then test and refine data requirements.
- Communicate accomplishments and next steps clearly and meaningfully to get people on board.
- Know and understand the data collected and use it to make decisions.
- Encourage collaborative partnerships internally and with other agencies and partners outside the federal government.
- Bring in people from various disciplines who will examine data and approaches from different perspectives. ◘




# Lessons from Early Analytics Programs

*Edited by Michael J. Keegan*

*The third contribution to this forum examines long-standing programs and how they have advanced and evolved over time to become a sustainable component of an operation. This contribution is excerpted from the third installment of the Partnership for Public Service and IBM Center collaboration,* From Data to Decisions III: Lessons From Early Analytics Programs.

Today's senior managers are tempted to begin analytics programs before determining the mission-essential questions they are seeking data to answer. Older data-based analytics efforts often grew out of the discoveries of line employees who made connections and saw patterns in data after receiving new software or hardware that helped them make sense of what they were studying.

The report highlights five analytic efforts that started before the terms "big data" and "analytics" were in use, let alone in vogue. Examining programs that have been in operation for a longer period of time provides a better understanding of how they have advanced and evolved over time to become a sustainable component of a program's operation.

A more detailed assessment of these analytics efforts can be found in the full report from which this contribution is based, and available for download at businessofgovernment.org/report/data-decisions-iii. These include cases from the U.S. Agency for International Development (USAID), the Centers for Disease Control and Prevention (CDC), the Defense Department (DoD), the Animal Plant Health Inspection Service (APHIS), and the Veterans Health Administration (VHA). Based on these cases, lessons were identified as important for analytics to be successfully embedded in an agency's culture.

## Lessons Learned from the Case Studies

### Collaborate with other agencies to collect data and share analytics expertise

Save money and effort, and increase the speed of analytics adoption, by acquiring data and services, such as collection, analysis and modeling tools, from other agencies. Analytics pioneers shared and added to one another's data and expertise in a variety of ways.

- Most often, they used legal authorities to buy data and the experts and software to analyze it.
  - — Some used the government-wide provisions for interagency acquisitions under the 1932 Economy Act.
  - — Others relied on agency-specific authority, such as the participating agency program and service agreements provided for under the 1961 Foreign Assistance Act, which created USAID and permits it to use other agencies' resources when they are

uniquely suitable for technical assistance in education, health, housing or agriculture.

- Another form of interagency agreement, a memorandum of understanding, enabled U.S. Custom and Border Protection (CBP) to collect data and USDA's APHIS to analyze it, helping both agencies meet their mission goals.
- The National Aeronautics and Space Administration (NASA) has created research and development programs whose funding is contingent on recipients' promoting their products to other agencies that can apply them and might invest in developing them further.
- CDC used grant money to help public health labs acquire the equipment they use to process DNA samples for matching against the PulseNet database.
- Annual science days give FEWS NET collaborators insights into each other's work on famine, preventing duplication and augmenting other projects across participating agencies.

### Develop data to determine return on investment for analytics programs

Mature analytics programs have struggled to define and measure the outcomes of their efforts. New projects too are challenged to demonstrate return on their data investments. Reporting improved outcomes, such as increased numbers of foodborne illness outbreaks detected or enemy combatants identified, is a bottom-line requirement for mission analytics programs. But just reporting better outcomes is not sufficient, especially now that sequestration is compelling programs to compete fiercely for scarce dollars. Demonstrating return on investment (ROI) is no longer optional. The most powerful ROI estimates mix real-world results and cost-benefit analysis.

Long-term data users often had no ROI measures when they began, but developed and adapted them as their projects evolved:

- Most initially reported improved mission outputs and outcomes; for example, increases in CDC's identification of foodborne illness outbreaks and of DoD's numbers of biometrics matched with the subjects on the high-value-target watch list.
- Increasingly, however, agencies are called upon to deliver cost-benefit and ROI metrics in monetary terms so that agency leaders can compare program costs to determine whether data-based efforts are more or less cost effective than alternate strategies.
- To demonstrate ROI, mission analytics programs learned to devote resources to develop data to track financial and other results related in whole or in part to analytics.
- Predictive analytics programs are still refining their cost-benefit metrics and findings and must take care in estimating costs avoided; for example, ensuring they report all actual and projected costs.
- To improve their ROI estimates, analytics programs can employ surveys and audits, use experimental methods such as secondary screening, and increase and enhance the data they collect.

### Give agency leaders clear, concise analysis and proof of adoption and results they can use to support data-driven programs

Although most analytics users wish everyone would immediately understand and appreciate their findings, it doesn't always happen. Among the toughest ROI to demonstrate is for analytics programs that marshal data about unpopular truths to persuade reluctant leaders in government and other organizations to act. Presentation is especially important for top officials whose time and attention are limited but whose support is vital. Data visualization—charts, graphs, maps and models—make analytical findings easy to comprehend quickly.

Data program developers with long track records found they had to deliver analysis leaders could use and support:

- The absence of a powerful sponsor can hobble an analytical effort, even when it shows mission achievements, as DoD biometrics backers have discovered—especially now, when programs vie for funding as budgets are cut.
- Mature programs struggled when delivering analytics-based messages leaders didn't want to hear; but these programs made headway when those behind them persisted in presenting the supporting data.
- Program managers learned to use leaner, punchier, and more visual methods to present their findings so that senior officials could absorb them and get the main points quickly.
- Programs that grew from the grassroots survived resistance by demonstrating their effectiveness in terms of broad user adoption.

### To encourage data use and spark insights, enable employees to easily see, combine and analyze it

Standardize data so users can look across it by time, entity, geography, source, and other attributes to find linkages and patterns and share information. Letting intended users test-drive analytics tools and muck around in the data spurs discoveries that can save time, ease adoption, and ensure success.

Projects built on user insights:

- Moved beyond using data exclusively to measure or compare employee and organizational performance by providing tools that enabled staff to combine, analyze and use data when, where and how they needed it to speed and ease the work process.
- Incorporated guidance provided through users' insights, implementing good ideas from the grassroots and recognizing those who suggested them.
- Refined analytics tools by watching how employees used them to greatest effect, but without disrupting work flow.
- Made sure that those who collected data also benefited directly from it or clearly understood how it improved mission delivery.
- Capitalized on employees' zeal for the agency's mission to help them overcome reluctance to adopt analytics.
- Reflected honesty about the potential for analytics to change agency operations and the jobs of those performing them.

### Leaders and managers should demand and use data and provide employees with targeted on-the-job training

Once early analytics adopters demonstrated the value of data-driven approaches by showing they saved money, improved outcomes or avoided costs, they sought to institutionalize the use of analytics. They found that one sure way to do this was to teach leaders to demand data. Making analytics standard operating procedure means building it into the agency's culture and climate. It pervades the culture when managers at all levels use data in planning, measuring results, budgeting, hiring, and running programs, and when they demand that employees' work activities and requests are data-based as well. That requires on-the-job training in data analysis.

Instilling analytics in all agency activities became a goal once early programs demonstrated gains. It's an ongoing process involving:

- Standardizing data to enable users to look across collections by time, entity, geography, source, and other attributes to find linkages and patterns and to share information.
- Providing formal and on-the-job education.
- Training that's appropriate to the organization and the employee's position.
- Teaching leaders to base their decisions on data, so that they, in turn, require employees to muster analytics to support their cases for funds, staff, space, and other resources.
- Launching centers of excellence with expertise in data analytics, the organization's operations and policies. CMS, for example, houses policy experts along with statisticians in its analytics laboratory. Policy people provide expertise on what is appropriate to bill to Medicare so that the fraud prevention system can be trained to identify what isn't.
- Spawning data evangelists who encourage use of data-driven techniques and tools beyond their own units across organizations.

## Conclusion

The experiences of agencies with mature, data-driven programs reinforce many of the findings in our previous reports:

- Leaders' attention and support are critical, so make sure the analysis speaks to them.
- Users will make or break the move to data-driven operations, so listen to them, make their work easier, and make mission analytics a carrot, not just a stick.
- Find ways to collaborate within and outside your organization to get data, analysis, expertise, and even funding.

What early data users didn't do was consciously set out to use "big data." Instead, they asked hard questions and sought data to answer them: How can we detect foodborne illness outbreaks sooner? How can we estimate the quality of a crop months before it is harvested? How can we identify veterans most at risk of hospitalization or death and then target the right care to keep them healthier and at home? How can we focus inspections on the containers that are most likely to hold insects?

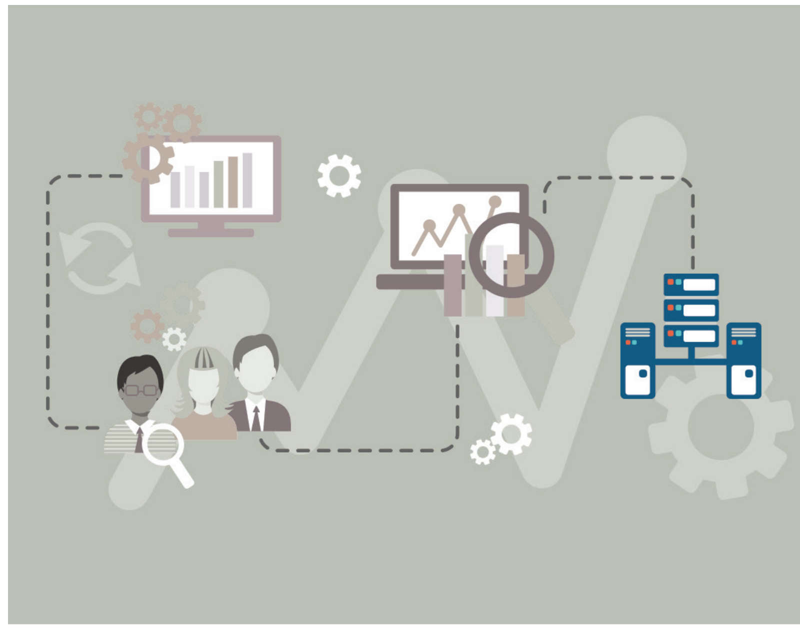
What patterns of billing and behavior reveal fraud? Those questions and others propelled these users to collect and analyze data, which then became standard operating procedure and helped their programs evolve. ◘

# Conversations on Big Data

*A podcast series on putting analytics to work at federal agencies*

*Edited by Michael J. Keegan*

*The fourth contribution to this forum is excerpted from the* Conversations on Big Data *podcast series, which is the final installment in the Partnership for Public Service and IBM Center collaboration on Data to Decisions. These podcast conversations are designed to broaden the perspective to additional agencies as well as revisit some of those covered in the previous reports profiled in this forum; provide insights into the essential ingredients for a successful analytics program; and offer advice from leaders whose agencies are benefiting from analyzing data. The federal leaders who participated in this series have successfully implemented key data-driven programs and will discuss how they are using data analytics to prevent and counter tax fraud, improve training, respond to emergencies, protect investors, keep our food supply safe, and more.*



## Conversations on Using Analytics to Improve Mission Outcomes

We provide highlights from these federal leaders on the most important ingredients for a successful analytics program. (You can watch the video of the panel discussion and listen to each of the seven podcast interviews too.) The executives profiled complex programs in several agencies that have a wide impact on citizens, who benefit greatly from leveraging data as a strategic asset in program operations. What follows are some highlights from those executives and salient take-aways for government and stakeholder groups who are implementing key data-driven programs.

**Steve Beltz**

*Assistant Director, Recovery Operation Center, Recovery Accountability and Transparency Board*

"You have to have good data, good analysts and good tools; what I refer to as a three-legged stool approach. If you're missing just one of those components, you're going to sell yourself very short on the program and not be able to do a full analysis. Where I see most agencies fail is with the analysts. They can't shortchange themselves on that. You can have the best data and tools in the world but if you don't have the right person who knows how to ask the right questions, you'll get nothing. Somebody has to know how to understand the answer and then dig deeper."

**Malcom Bertoni**

*Assistant Commissioner, Planning, Food and Drug Administration*

"You need to have champions both on the analytical side and on the program side—some data junkies who really love measuring and understanding and analyzing how an organization ticks, and some program managers on the front lines who get it, who are willing to embrace it and work with the analysts and improve their organization to make that part of their organizational culture."

**Lisa Danzig**
*Associate Director for Personnel and Performance, Office of Management and Budget*

"Engage a set of people who think this could be worthwhile and/or already have a problem or goal they're trying to achieve and that you could apply this to. This helps you avoid that cycle of collecting hundreds of metrics that aren't relevant to the problem. It helps tie together the people who ultimately are going to be the advocates—who are the people with the problems and the goals."

**Carter Hewgley**
*Director of Enterprise Analytics, Federal Emergency Management Agency*

"Find a champion at the leadership level in your organization. Assess the culture as it is. If people are not into it, you're going to have to have a different strategy than if they are already on board. Then, you've got to demonstrate a quick win early. Pick a problem they care about and show them really quickly that, 'Hey, if you did this differently you could save money or you could improve the quality of outcome for the people you're trying to serve, or you could just make people's lives easier."

**Gerald Ray**
*Deputy Executive Director, Office of Appellate Operations, Social Security Administration*

"The key thing is to put the data scientists with subject matter experts. You have to have someone who is very knowledgeable about your program so they can help the data scientists map through the issues you need to analyze. The data scientists are generally very good at doing the analysis themselves. But you also need the subject matter experts to tell them what part of what they're finding is relevant and what's not, and to guide them and change the direction to get it more on task and more appropriate for what you need."

**Dean Silverman**
*Senior Advisor to the Commissioner, Office of Compliance Analytics, Internal Revenue Service*

"Agency leaders and analytics leaders need to learn how to experiment, or use what I would call test-and-learn techniques. I would aim at the hard problems. It sounds counterintuitive, but don't be afraid to point combined operating IT and data analytics teams at big issues and keep them on a short development cycle. I'd make everyone focus on and measure outcomes, not outputs. Lastly, I'd own analytics at the highest level of the organization, especially if you want to create change."

**Lori Walsh**
*Chief, Center for Risk and Quantitative Analytics, Securities and Exchange Commission*

"There are three fundamental pieces. First is having the right data available. Analytics can help fix holes in data but fundamentally, analytics requires good data. The second piece is the right computing infrastructure and tools, and more sophisticated processing of data. If you're a nationwide program, you need a good network of computing capabilities so people can work together seamlessly as if they were next door to each other. The third piece of a good analytics program is subject matter expertise. You can do all the analytics in the world on all the data you want, but if you don't have a focus on what you're trying to find, you won't be successful."

## Conclusion

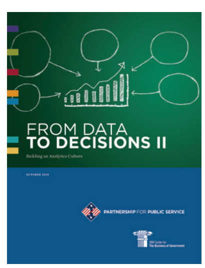
This forum, *From Data to Decisions to Action: The Evolving Use of Data and Analytics in Government*, concludes by sharing perspectives of select government executives who have taken action and realized the value of using data and analytics to improve mission outcomes. These executives lead complex programs in key agencies that have the greatest impact on citizens. They all underscore the benefits derived from leveraging data as a strategic asset in program operations.

Since 2011, the Partnership for Public Service and the IBM Center for The Business of Government have collaborated in studying the evolving use of data and analytics in government. This forum provides an overview of this effort, from illustrating the power of analytics, to identifying the key ingredients for building an analytics culture. It offers a snapshot of lessons learned from early analytics programs and shares insights from government executives who are implementing key data-driven programs. Its goal is to summarize this valuable collaboration between the Partnership and the IBM Center and help agencies continue to enhance their ability to leverage analytics in a way that improves mission results.

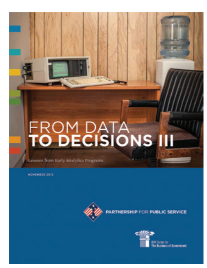
In the end, we hope that these insights are instructive and ultimately helpful to today's government leaders and managers. For a more in-depth exploration of the reports and podcasts introduced in this forum can be found at www.businessofgovernment.org/brief/using-data-analytics-improve-mission-outcomes.

### TO LEARN MORE


**From Data to Decisions: The Power of Analytics**




**From Data to Decisions II: Building an Analytics Culture**




**From Data to Decisions III: Lessons From Early Analytics Programs**

**Conversations on Big Data**

**You can download all these resources at www.businessofgovernment.org/brief/using-data-analytics-improve-mission-outcomes**

# The DATA Act Moves Forward

*By Dan Chenok*

**On June 10, I had the honor of helping to open the DATA Act Summit. The event brought government and industry leaders together to discuss how best to implement this important statute, which will provide for better visibility into financial activities across the government. A year and a month after enactment, the Administration's actions to carry out DATA Act provisions—along with support and involvement from industry partners—all point to a successful path forward.**

Across the government, agencies are working under leadership from the Office of Management and Budget (OMB) and the Department of Treasury to implement the Digital Accountability and Transparency Act (DATA Act). This statute, which we first wrote about a year ago in two posts, calls upon OMB and Treasury to ensure that the government carries out spending transparency activities that include:

- Make publicly available specific classes of Federal agency spending data, with more specificity and at a deeper level than is currently reported
- Require agencies to report this data on USASpending.gov
- Create government-wide standards for financial data
- Streamline agency reporting requirements

Various activities demonstrate the breadth of commitment to successful implementation by key stakeholders, including leadership and outreach from the Administration; the DATA Act Summit; and other government/industry collaborative perspectives. Some highlights follow.

## Administration Leadership

OMB and Treasury—led by OMB Controller Dave Mader, Treasury Assistant Secretary Dave Lebryk, and their outstanding executive and staff teams—have led a strong cross-agency governance effort to implement the DATA Act. This has come in the context of the Administration's longstanding initiatives around open data and open government, and at a time when a growing number of agencies have established Chief Data Officer positions to help catalyze a broad range of data programs.

As importantly, OMB and Treasury have run a very open process to introduce implementation. A team led by OMB's Karen Lee and Treasury's Christina Ho have engaged in a variety of outreach efforts, including solicitation of comments and perspectives from the public and industry that informed the recent issuance of OMB's implementing guidance document and first set of standards. Given the specific timeframes in the statute, OMB's openness to public engagement is noteworthy and bodes well for substantive input to improve these standards over time, and for understanding how best to implement those standards in a way that makes financial transparency real. OMB used a similar process to develop guidance for the Federal Information Technology and Acquisition Reform Act (FITARA), which we have written about previously—this open development process sets an excellent model for future OMB management guidance.

## Data Summit

The June 10 DATA Act Summit, led by Hudson Hollister's Data Transparency Coalition and supported by partnering organizations such as the Association of Government Accountants and the American Council for Technology and Industry Advisory Council (ACT-IAC—note that I currently serve as Chair of IAC), focused on key priorities from Congress. The Senate's DATA Act leader Mark Warner delivered a keynote address; the Administration was represented by multiple panels of leaders from OMB, Treasury, and the agencies, as well as GAO and the IG community. The discussion at the Summit pointed out the important result that financial transparency can bring to effective and accountable operations by government on behalf of citizens. The sessions also reinforced the challenges of developing standards that will make the benefits of transparency sustainable and interoperable across agencies. Speakers also addressed critical success factors for implementation that include culture change, a focus on data users, technology leadership, reduced reporting burden, and impact on core financial management.

## ACT-IAC DATA Act Initiative

In support of the DATA Act's implementation, ACT-IAC has an ongoing Shared Interest Group (SIG) project addressing Transparency in Federal Financials, with multiple components:

- The DATA Act Think Tank at ACT-IAC's Management of Change conference in May, which will soon be followed by a report detailing the results of these interactive sessions.
- A DATA Act Forum on July 29, which will focus on DATA Act Implementation. This Forum will engage Government and Industry leaders' critical success factors and lessons learned, and will dive into the advantages of leveraging public-private relationships with respect to tackling some of the DATA Act challenges. The Forum will feature two interesting tracks:
  - — A *Data Zoo* of open data success stories. The *Data Zoo* will highlight best practices and showcase the positive impact that open federal financial data can have on decision-making across government and industry. Agencies and industry partners will demonstrate successful applications of government data with visuals and interactive tools. Projects will demonstrate the enormous potential of government data and inspire participants to capitalize on financial data within their own organizations.
  - — A Datathon, in which participants will devise research questions around efficiency, spend tracking, and reduced burden, and design a data-driven approach to answering the questions. The session will launch the inquiry areas on a knowledge-sharing site (Idea Scale) in advance of the event.
- Finally, the ACT-IAC initiative also promotes the release of various white papers that address key aspects of DATA Act implementation:
  - — February 2015: *Setting the Standard—Developing the Framework for DATA Act Implementation*
  - — June 2015: *Transparency Enabling Transformation: The Benefits to Agencies through Implementation of the DATA Act*
  - — June 2015: *Developing a DATA Act Implementation Plan*
  - — COMING SOON: *Data Quality—Letting Data speak for Itself; DATA Act Infrastructure Guidance; Unique Entity Identifiers*

## A Promising DATA future ahead

It is not often that a statute with broad bipartisan support reinforces an Administration initiative that has strong and active engagement across government and industry. The path forward for the DATA Act benefits from this set of factors, and prospects for implementation. ◘

# Improving Government Decision Making through Enterprise Risk Management

*By Douglas W. Webster and Thomas H. Stanton*

## Six Steps to Successful Implementation of Enterprise Risk Management in the Federal Government

Based on research for this report, the authors believe that progress is being made to infuse federal agencies with more effective risk management, but as noted in the previous section, challenges remain. The authors' own experiences, supplemented by insights from interviews, suggest several approaches. In the end, as managers of agencies that practice more effective risk management attest, the effort can pay off.

Perhaps the greatest danger for an agency or other organization is that risk management becomes a largely empty gesture of compliance with a set of documented actions rather than a meaningful process that adds value to decisions.

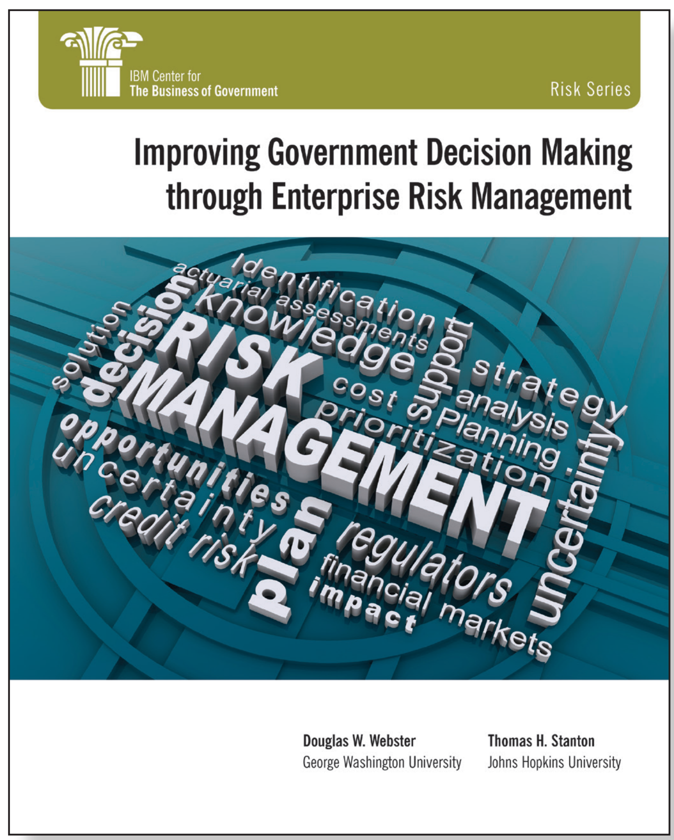
In government it is often the agency head, or perhaps the agency chief operating officer, who plays an essential role in ensuring that risk management actually adds value to agency decisions rather than merely serving as a symbolic compliance function. There are important ways in which the agency head can influence the quality of risk management at an agency. In simplest terms, there are six key steps that need to be taken to implement risk management in a government agency.

### Step One: Establish a Risk Governance Framework

The first step is to define key players' roles and responsibilities. This needs to be done both government-wide and within each agency. Many different organizations are now involved to some extent in risk management in government. Based on our research, we believe the following roles are essential in implementing risk management in the federal government and individual agencies can help to foster such a culture:

#### Government-wide

- **The Office of Management and Budget** should continue to encourage agencies to create cultures and processes that support ERM. OMB should inform budget examiners of the principles of ERM so that, in annual budget reviews, they ask agencies to identify major risks and explain how these are being addressed.
- Working through the **President's Council on Integrity and Efficiency (PCIE),** OMB should work with inspectors general to ensure a common understanding of how risk management offices and IG staffs can work together in a manner that best advances mission



*Douglas W. Webster is a Senior Fellow with the George Washington University Center for Excellence in Public Leadership, where he teaches Enterprise Risk Management.*

*Thomas H. Stanton teaches at Johns Hopkins University. He is President of the Association for Federal Enterprise Risk Management (AFERM) and a former member of the federal Senior Executive Service.*

achievement, while allowing the IG staff to maintain its required independence. If the agency risk function and agency IG can devise ground rules so that they operate as mutually supportive lines of defense, they can achieve much more than if the IG function were to chill the flow of risk information to decision makers who need it to enhance agency performance and forestall potentially major adverse events.

- **The Government Accountability Office** should:
  - Regularly review best practices in risk management, and ERM in particular, in federal departments and agencies
  - Analyze the risk practices of particular agencies and assess the extent to which agencies are accruing vulnerabilities that their risk management processes have failed to identify and address
  - Examine the quality of decisions that management has made about tradeoffs among performance, cost, and risk that are aimed at maximizing delivered stakeholder value

## At the Organizational Level

- **Organization heads and chief operating officers** should:
  - Work to weld their top managers into a management team that thinks in terms of the agency's well-being rather than just in terms of their own parts of the organization
  - Create an organization-wide operating committee, supported by a small risk staff, to regularly identify major risks that could impede achievement of the agency's mission and objectives, prioritize these risks, and help to devise treatment plans to deal with the highest priority risks
  - Encourage a culture of communication in the agency so that all employees feel able to surface concerns for consideration by decision makers
- **Organizational heads should designate an individual to lead the risk initiative.** The head of the organization is best positioned to establish a risk function. In some organizations, this has included the designation of a risk officer and the creation of an enterprise-wide risk council comprised of key executives who meet on a regular basis. This approach helps to ensure that the risk officer has an opportunity to bring information to bear on major decisions. The organization head can ensure that the designated risk individual attends the right meetings and that he or she has access to needed resources and information. The individual designated to lead the risk initiative should focus on the following:
  - Generating appropriate information
  - Facilitating the process of managing major identified risks
- **Organization heads and chief operating officers** should enhance their budget processes so that they consider resources, targeted performance, and risk in an integrated manner. If the agency is subject to budget reductions, it will need to revise agency goals, objectives, and processes to ensure that the cuts do not create vulnerabilities that could arise if it tries to carry on its usual business practices without the resources to support them.
- **Inspectors general and other officials with oversight and audit responsibilities** should meet with the agency's risk managers and determine how best to ensure that the effectiveness of the risk function can be evaluated without chilling the necessary flow of risk-related information to the agency-wide operating committee.

## Step Two: Create Conditions for Risk Management to Be Effective

Using a functional approach, different agencies direct risk management to address different issues, often focusing on the major types of risk that they perceive. Federal credit agencies may monitor credit risk or counterparty risk. The Department of Homeland Security (DHS) has decided to focus its department-wide efforts on acquisition and investment risk; other departments and agencies are focusing increasingly on cyber risks. However, increasingly, agencies are adopting an ERM approach.

Whether an agency adopts ERM or merely focuses on specific types of functional risk, the agency head must work to ensure that information flows up and down the hierarchy so that risk-related information can flow to decision makers. To ensure information flows across the agency and, indeed, better manage the agency in general, the agency head should seek to weld heads of major units into a management team. That way, these agency "barons" can come to think of risks and rewards more in terms of the fortunes of the entire agency than merely of their own fiefdoms. This is important so that sub-agency unit heads don't seek to address risks merely by shifting them from their organizations to other parts of the agency. Especially in the context of today's rapid flow of information through the media, reputational risk is an element that ties together the fortunes of virtually everyone in an agency, and especially political appointees and senior career officials, if something major goes wrong.

It is also important to staff the risk function with the right people and tools. Reports from risk managers across government indicate that interpersonal skills, not merely analytical strength, are important attributes for staff of a risk office to possess. To do their jobs well, risk officers need to be trustworthy and trusted by senior officials in the agency. After all, unit heads are making themselves vulnerable by revealing concerns about possible major risks and vulnerabilities for which they are responsible. The risk officer must be able to make these unit heads comfortable about sharing information without fearing that it will come back to them as some form of "gotcha" in a bureaucratic fight. If a risk officer can build that trust, it can reassure the unit head, who may need resources that a risk officer can help to allocate if the vulnerability or risk is to be properly addressed. In the end, the quality of risk officers and their access to information are more important than the size of the office and its budget.

## Step Three: Integrate Risk Management into Organizational Decision Processes

To be effective, risk management must actually inform organizational decisions. Integrating risk information into the budgeting and performance management processes allows the agency to allocate limited managerial and funding resources to remediate major risks that might otherwise prevent the agency from accomplishing its mission. Integrating risk management with strategic planning allows decision makers to integrate information about major risks into the agency's planning for achieving goals and objectives. The agency head can also ensure that the risk function is represented at the table at major specialized committees that the agency may establish according to its mission and structure.

## Step Four: Protect the Risk Function

It is essential for the organizational head to protect the risk function, especially with respect to major players whose fiefdoms may expose the agency to serious risk. This was a pattern that distinguished firms that successfully navigated the financial crisis from those that went out of business or otherwise failed. For example, Thomas Stanton met with one financial firm's risk officer, who explained that she faced a troubling choice: either she would become a pain in top managers' necks as she repeatedly raised concerns about their decisions, or she would be known as the chief risk officer at a company that blew itself up. She left the company in 2006 with her reputation intact; the company fared less well and failed in 2008.

## Step Five: Build Risk Awareness into the Agency's Culture

The organization head has the ability and opportunity, as the saying goes, to set the "tone at the top." This includes establishing a culture in which feedback is heard and respectfully considered. That does not mean that the person providing the feedback is always correct; rather, the key is to respectfully hear the feedback and, if it seems credible, either to validate or invalidate it.

The organizational head, or chief operating officer, as the case may be, has access to many tools for building risk awareness into the culture. Building cooperation and collaboration into individual performance standards is a good way to encourage staff, and especially senior officials, to accept and listen to feedback about risks. Encouraging constructive dialogue between unit heads and the risk function is another important step. Allocating budget resources to address major risks that a sub-agency unit head identifies also can encourage flow of risk-related information. And there are the more subtle cues, such as locating the office of the chief risk officer near the offices of the agency head and chief operating officer, publicly recognizing the chief risk officer at agency events, and requiring unit heads to explain if a major vulnerability comes to light that the unit head failed to reveal first. The agency head will need to continue to nurture risk awareness as a cultural value so that it remains integral to the way people in the agency carry out their activities.

### Step Six: Manage Organizational Change

Moving from traditional risk management conducted in functional and programmatic silos to truly collaborative ERM entails significant organizational change management. This should not be disregarded, nor should its importance be minimized in comparison with the amount of attention that is devoted to the technical implementation of aspects of ERM. A complete set of policies and procedures reflecting best practices in ERM will be of little value if those called upon to execute the policies and procedures resist the required behavioral changes. An organization's culture must support ERM if it is to be effective.

# Risk Management for Grants Administration: A Case Study of the Department of Education

*By Young Hoon Kwak and Julia B. Keleher*

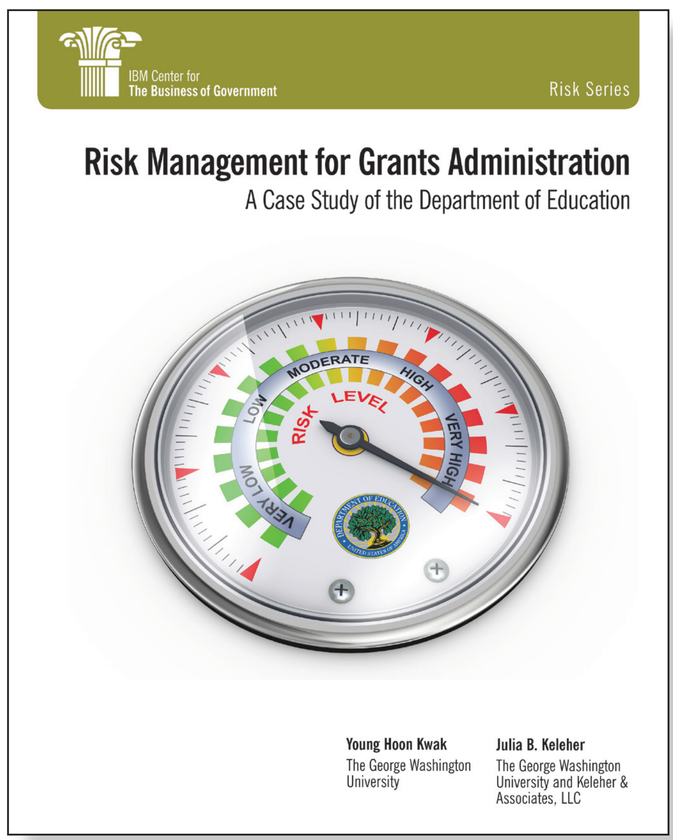
This report provides a case study of how the U.S. Department of Education (ED) developed increased capacity to design and employ risk management practices to improve grants management. The strategies and tools presented in this report can provide other federal agencies with a roadmap for establishing and/or enhancing the use of risk management practices in their organizations. The accomplishments realized at ED also demonstrate how managers and leaders can leverage risk management practices to comply with the new requirements set forth in the U.S. Office of Management and Budget's (OMB) Uniform Administrative Requirements.

Section One, "Introduction," presents an overview of ED and outlines its strategic goals and objectives. The department's strategic plan is discussed and its grant making functions are described. This section also examines how risk management supports the agency's efforts to realize its strategic goals and objectives.

Section Two, "Framework for Risk Management in Federal Agencies," provides an overview of risk management practices in federal agencies.

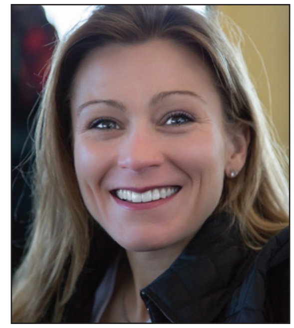
Section Three, "Department of Education's Approach to Risk Management," explains why risk management has become a central component in federal grant making at ED. The section begins with a description of new federal requirements for agencies to assess risk among potential grantees before making a grant award. Next, information on ED's approach to risk assessment is explained. The section then discusses risk management across the grant life cycle. The section concludes by highlighting how current practices of ED's Risk Management Service (RMS) satisfy OMB's new requirements to conduct risk assessments prior to making grant awards.

Section Four, "Operationalizing Risk Management at Department of Education," documents how ED has been able to continually improve its understanding and use of risk management practices. The agency's initial approach to risk management is presented and the refinements that have been made to this approach are described. This section also illustrates how increases in the availability of data on federal grants and grantees and the proliferation of new technology tools have facilitated the expansion of risk management practices at ED. This section includes descriptions of the various risk assessment tools RMS has developed to identify potential risk in ED's grant portfolio. The section concludes with a discussion of the future directions for enhancing ED's current risk assessment capacity.



*Young Hoon Kwak is an associate professor in the Department of Decision Sciences at The George Washington University School of Business in Washington, D.C.*

*Julia Keleher is a senior consultant at Keleher & Associates with expertise in leading strategic change, and creating the infrastructure necessary to sustain it.*



Section Five, "Case Studies of Risk Management Across the Grant Life Cycle," presents two case examples that illustrate the application of risk management practices at ED. The authors describe how ED updated its longstanding approach to risk assessment to improve the effectiveness and efficiency of these business processes.

Section Six, "Lessons Learned and Recommendations," concludes with a summary of the lessons learned from ED's efforts to incorporate risk assessment and risk mitigation practices into grants management. The section presents recommendations on how federal agencies can enhance the effectiveness of their risk management efforts and comply with OMB's new Uniform Administrative Guidelines.

There are four lessons learned from ED's risk management practices:

- **Lesson One:** The department benefited by creating a defined and codified business process for managing risk in the department's grants portfolio.
- **Lesson Two:** The use of an automated, data-driven risk assessment tool enabled the department to apply uniform and consistent risk assessment procedures and make better use of audit data.
- **Lesson Three:** The department's success in implementing a department-wide enterprise risk management program required the creation of new internal policies and support from agency leadership.
- **Lesson Four:** Effective risk management is an iterative process that requires thoughtful use of existing data sources and ongoing efforts to incorporate new ones.

Based on the lessons learned from ED, other agencies trying to implement risk management practices should do the following.

- **Recommendation One:** Agencies should move to a data-driven system to collect and manage data that can be used to make risk assessments.
- **Recommendation Two:** Agencies should create tools and processes that facilitate program officers' interpretation of data and standardize the decision-making process.
- **Recommendation Three:** Agencies should take advantage of the opportunity that the new OMB requirements create for improving risk management in awarding and overseeing federal grants.
- **Recommendation Four:** The introduction of new risk management practices may represent change for some federal agencies and should be accompanied by training and capacity-building programs.

Managers and leaders in grant-making federal agencies can use the information presented in this report to improve or create new risk management practices. ED's example provides managers and leaders with important insight into how they should structure planning and implementation activities. It also highlights the importance of creating the infrastructure necessary to support the development and use of risk management policies and tools. Developing a better understanding of the experience of their colleagues at ED will enable federal grants managers in other agencies to develop risk management practices that result in more effective and compliant stewardship of federal funds among grantees.

# A County Manager's Guide to Shared Services in Local Government

*By Eric Zeemering and Daryl Delabbio*

Budget stress in the wake of the recent recession has been an incentive for many U.S. local officials to explore new cooperative relationships with neighboring jurisdictions. County governments are in a strategic position to develop shared service projects and interlocal agreements for service delivery.

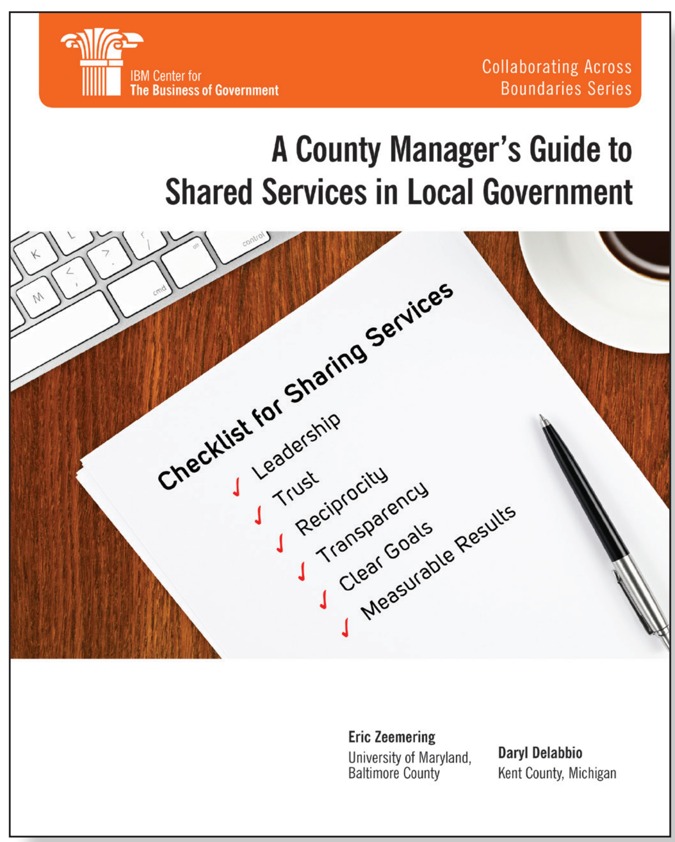
Interlocal agreements are agreements or contracts between two or more local units of governments to provide services to their citizens. Interlocal agreements between local government units are growing in popularity, and over half the U.S. county officials surveyed for this report point to increased discussions about shared service in the last year. Counties explore shared service delivery to:

- Stimulate innovation in their local communities
- Improve government decision-making
- Increase levels or quality of service
- Improve working relationships with other local governments

This report provides shared service delivery examples from county governments throughout the United States, and presents recommendations from experienced county officials about how county governments can make shared service projects successful. Based on this research, three key preconditions were found to mark the success of a shared service delivery venture:

- **Leadership:** Support from top administrators and elected officials is necessary to advance dialogue and ensure the success of shared services and interlocal agreements. Teams or task forces of participants from multiple governments may identify opportunities for cooperation and maintain momentum.
- **Trust and reciprocity:** Counties that develop a track record of cooperation with their neighbors develop trust, an asset for building new shared service efforts.
- **Clear goals and measurable results:** Specific goals for shared service projects can ensure success while confirming that the effort is worthwhile. Officials should regularly assess the services delivered through cooperation, as well as the quality of the working relationship.

Based on research and interviews with practitioners in the field, this report gives five recommendations to help county leaders form and maintain successful shared service relationships.



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## Planning a Shared Service

**Recommendation One: Create a shared services assessment team.** Bring the right participants together to discuss shared services in a transparent manner. Maintain communication with partners over time, resisting the urge to set relationships on autopilot.

**Recommendation Two: Identify strengths in participating governments.** Counties should carefully identify their areas of strength in determining where they could provide service to others, while also assessing other governments' areas of strength. Be open to innovative service delivery models, including service swapping or exchange.

**Recommendation Three: Consider pilot projects.** Small successes through pilot projects can build relationships, trust, and a track record to expand cooperation in the future.

## Implementing a Shared Service

**Recommendation Four: Discuss and document responsibilities with partners.** Almost all of the county officials interviewed for this report stress the importance of guiding cooperation with clear, documented terms written in a way that current and future county leaders will understand. Managers and policy-makers should regularly review and discuss shared service agreements.

**Recommendation Five: Make appropriate changes as needed.** Public needs and budgets change over time. Relationships that are beneficial now may not be in the future. Therefore, cooperative projects must be crafted with flexibility.

Examples and brief case studies from county governments illustrate how shared service initiatives can help counties improve working relationships with other governments while improving public service delivery. Successful shared service projects require patience and careful maintenance over time, but through cooperation, many county governments are finding innovative ways to make quality services available to the public.

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