

Public Spend Forum.org

The global destination for public procurement | @PSpendForum



Billions in the Balance

Removing Barriers to Competition & Driving Innovation in the Public-Sector IT Market

A Public Spend Forum Study on Public Sector IT Programs

Raj Sharma

CEO of Censeo Consulting Group,
Co-Founder, Center for Innovation and Public Value

David C. Wyld

C.E. Laborde Professor of Management,
Southeastern Louisiana University

Sponsored by



censeo
CONSULTING GROUP

Public Spend Forum Editorial Board and Contributors

Jason Busch

Group Managing Director, Spend Matters and Azul Partners

Kareem El-Alaily

Managing Director, Censeo Consulting Group

William Greenwalt

Former Deputy Undersecretary of Defense and Congressional Staffer

Dr. Timothy Laseter

Professor of Practice, Darden School of Business

Joe Sandor

Hoagland-Metzler Endowed Professor of Practice in Supply Management, The Eli Broad College of Business, Michigan State University

Raj Sharma

CEO, Censeo Consulting Group; Co-Founder, Center for Innovation and Public Value

Peter Smith

Lead Editor, Spend Matters UK

David Wyld

C.E. Laborde Professor of Management, Southeastern Louisiana University

About Public Spend Forum

Public Spend Forum (PSF) is the global destination for public-sector procurement. PSF aims to convene a community focused on better management of spending and taxpayer dollars. PSF provides best practice insight, industry news, and open discussion for the entire community, including policymakers, practitioners, and contractors. PSF is a joint-venture between Censeo Consulting Group and Spend Matters.

About Censeo Consulting Group

Censeo Consulting Group is a strategy and operations consulting firm, with a passion and focus on the public good. Censeo works with mission-focused organizations in the public, private, and nonprofit sectors to dramatically improve organizational performance and drive operational excellence. Censeo is uniquely focused on having a positive impact and making a difference in the world.

Table of Contents

Executive Summary 1

Introduction and Background 6

Study Findings 9

Recommendations 17

Conclusion 27

Sources 28

Executive Summary

The federal government spends over \$80 billion per year on information technology (IT). Add to that what state and local governments spend, the total reaches in excess of \$200 billion in public expenditures. This spending is important in many ways. IT spending often addresses major public policy areas such as healthcare and border security. Because government programs are often unique and at an unparalleled scale, they challenge us to build solutions that could become an innovation engine for the economy.

Recent failures, like the front-page news related to HealthCare.gov, have brought to the mainstream issues with how government purchases and manages IT. Unfortunately, this problem has been around for a long time, and has spared no president or political party. The U.S. Government Accountability Office (GAO) highlighted in 2008 that “more than 400 active information technology projects, representing more than \$25 billion in spending . . . had been delayed for more than a decade and cost billions more than originally budgeted.”¹ A more recent study by the Standish group found 94% of government IT projects fail!²

Finally, it seems there is a serious movement afoot to fix the problem of IT failures. Whether it is congressional bills like the Federal Information Technology Acquisition Reform Act (FITARA) or the White House appointing senior aides to manage fixes to the IT process, there is recognition that this problem requires focused attention.

1. U.S. Government Accountability Office (GAO), *INFORMATION TECHNOLOGY: OMB and Agencies Need to More Effectively Implement Major Initiatives to Save Billions of Dollars* (GAO-13-796T), July 25, 2013.

2. Patrick Thibodeau, “Healthcare.gov Website ‘Didn’t Have a Chance in Hell’: The Failure Rate for Software Development Projects Is High Generally, Particularly Large Ones Like Healthcare.gov, Says Standish Group Data,” *Computerworld*, October 21, 2013.

With that in mind, Public Spend Forum led an analysis on what ails public-sector IT. We've recommended practical fixes to stop the bleeding. We scoured the best literature and studies, spoke to experts within and outside government, and brought our own expertise to bear having worked with both private-sector and public-sector organizations.

The good news: while large IT systems are difficult to implement no matter the environment, there are approaches across the private- and public-sector landscape that are proven to work. If implemented, they can remove barriers to entry and lead government partners to provide more innovative solutions that are likely to solve problems and save taxpayer dollars.

The caveat: these approaches require true leadership (not “lip service”), talent, and a shift from a culture of “checking the box” to one of smart risk-taking.

Below, we have distilled our findings and recommendations that we cover at length throughout this paper.

What's Wrong with Government IT?

Government is a challenging environment. As David Van Slyke, business and government policy professor at Syracuse University recently observed, “The policy environment, the multiplicity of goals, the unevenness of who has access to what information, as well as the uncertainty about the product and the funding itself, make the public-sector environment more complex (than the private sector).”³

Add to this complex environment a risk-averse and “check the box” culture, we end up with a slow, prescriptive, and cumbersome process that is unable to keep up with the fast-changing technology environment, creates barriers to entry for new and existing suppliers alike, and leaves little flexibility for any partner to propose innovative solutions.

Our findings fall into five specific areas:

3. Emily Jarvis, The solution to procurement woes, people? *Govloop*, January 28, 2014.

- **No alignment on problem or desired outcomes**—Many IT programs are doomed to fail because there is no agreement on what problem we are trying to solve or what success looks like. “Does everyone know what they’re trying to achieve?” asks Phil Bertolini, deputy county executive and CIO of Oakland County, Michigan. Without early alignment, all other subsequent phases of a program are set up for failure.
- **Weak leadership and governance**—Lack of alignment on problem or outcomes stems from weak leadership and a weak governance structure. Most senior leaders and program executives are not around long enough to run large IT programs from beginning to end, and they often lack the management skills or authority necessary to make tough executive decisions. Even when teams are in place, they are often working with conflicting incentives.
- **“Check the box” culture**—The culture of government procurement is focused on compliance, and—most importantly—avoiding becoming a front-page story. Making a mistake in a large IT program can often mean public embarrassment in the federal government. This risk-averse culture means program timelines stretch out for months and years to get through the multiple layers of reviews, approvals, and sign-offs. For smaller companies, these are sometimes insurmountable barriers to selling to the government, given the cost and uncertainty.
- **Requirements too prescriptive**—Requirements are often layered upon each other based on input from a myriad of stakeholders, without effective or early engagement of partners. Lacking effective program leadership or clear outcomes, every requirement becomes important. Risk aversion in government also leads to one-sided risk-management such as excessive terms and conditions. The net effect: many companies choose not to compete, or when they do, they often “check the box” themselves rather than provide solutions that they believe will solve the problem.
- **Slow procurement process and closed markets**—Layers of rules and policies result in an overly slow procurement process. Large-scale IT programs can take half a decade or more to roll out. One impact of the slow procurement process: government agencies have created large, multiyear “contracting vehicles” to speed up the cycle, but in the process created “closed markets” that also act as a barrier to innovation.

What Can We Do to Fix Government IT?

While we can propose to change the culture of government or take on yet another reform effort, the only way to drive real change is by creating more examples of success, program by program. Our recommendations are based on examples of proven success and actions that can be taken now by each and every government program.

- 1. Establish clear lines of authority and accountability.** We must put in place an executive-in-charge and a program executive with the authority and management know-how to make key decisions. These two individuals must be able to engage and build trust with stakeholders and should ultimately be held accountable for results.
- 2. Develop a simple needs and outcomes statement, instead of voluminous RFPs.** More is not always better when it comes to requirements. Instead of Bible-size documents to describe requirements, programs should focus on clearly defining need and success measures (or outcomes). All key stakeholders should sign off on a simple needs and outcomes statement that can be shared with the market.

“We simply say, ‘Here is our problem, we want the most brilliant solutions out there, and then we are going to let you fly.”

*—Aneesh Chopra,
former chief technology officer of the United States.⁴*

- 3. Engage the market early.** The market should be engaged from the start, not after requirements have been drafted. Programs should openly engage industry and be ready for new and innovative solutions, ultimately with the goal of aligning to the market instead of having the market align to archaic legacy processes.
- 4. Develop a cost/outcome (ROI)-focused program IT strategy.** The most important metric for any program should be cost/outcome, not labor rates, not costs on their own. Programs should clearly articulate how outcomes will be achieved. The program strategy should also avoid

4. Justine Browne, “Bringing Innovation to Procurement,” *GovTech*, March 4, 2014.

monolithic contracts that lock out most vendors and allow for flexibility to use multiple contracting options.

5. Encourage smart risk-taking. Programs need to move away from monolithic systems that get rolled out at one time to smaller pieces that get tested as prototypes and improved through market feedback. Programs need to use a “Minimum Viable Product” philosophy to focus only on the most critical needs to launch a solution.

6. Reduce burdensome requirements and speed up the procurement process. Government needs to unburden the procurement process from requirements and terms and conditions that create barriers to entry and detract companies from competing. Programs should prioritize requirements, based on outcomes and allow for “bake-offs” among vendors. Government should also “lean” the procurement process to make it faster and less costly for all.

Fixing government IT is going to require patience and will. But that does not mean we have to wait for years for some major reform legislation. No bill is ultimately going to solve the woes of IT programs. It is going to take serious leadership and talent and a change to government’s culture of avoiding failure at any cost. Obviously, that approach to risk has not worked and has cost taxpayers hundreds of billions of dollars. It’s time for a different approach.

Introduction and Background

The federal government spends approximately \$80 billion on information technology (IT) every year, buying everything from computers to complex systems. Add to that what state and local governments spend, the total reaches more than \$200 billion in public expenditures. This spending is important in many ways. IT programs are often mission-critical, addressing major issues like healthcare and border security. Because government programs are often unique and at an unparalleled scale, they challenge us to build solutions that could become an innovation engine for the economy.

Unfortunately, as has recently come to light in a major public way, we don't spend our IT program dollars very well. Consider the following two studies:

- According to a joint Standish Group/*Computerworld* study, 94% of the more than 3,500 public-sector IT programs with costs of \$10 million or greater have failed. 94%!⁵
- According to a U.S. Government Accountability Office (GAO) report, among 400 IT projects representing more than \$25 billion in spending, many had been *delayed for more than a decade and cost billions* more than originally budgeted. That's *billions* more!⁶

For some specific examples, we just need to look at Table 1. Beyond the high-profile healthcare exchanges, other famous failures include the Secure Border Initiative and the FBI Case File System. What's important to note is that these failures have spared no one. These IT missteps span decades, presidents, and political parties.

5. Patrick Thibodeau, "HealthCare.gov Website 'Didn't Have a Chance in Hell': The Failure Rate for Software Development Projects Is High Generally, Particularly Large Ones Like HealthCare.gov, Says Standish Group Data," *Computerworld*, October 21, 2013.

6. U.S. Government Accountability Office (GAO), *INFORMATION TECHNOLOGY: OMB and Agencies Need to More Effectively Implement Major Initiatives to Save Billions of Dollars* (GAO-13-796T), July 25, 2013.

Table 1: Examples of Recent Federal Government IT Failures

- Department of Defense's (DOD) Air Force Expeditionary Combat Support
 - DOD's Defense Integrated Military Human Resources System
 - Department of Homeland Security's (DHS) Computer-Assisted Passenger Pre-screening System (CAPPS II)
 - DHS' Electronically Managing Enterprise Resources for Government Effectiveness and Efficiency (eMerge2)
 - DHS' Next-Generation Homeland Security Information Network
 - DHS' Secure Border Initiative Network (SBI-net)
 - Federal Bureau of Investigation's (FBI) Virtual Case File (VCF)
 - General Services Administration's (GSA) ePAuthentication Program
 - National Archives and Records Administration's (NARA) Electronic Records Archive (ERA)
 - National Polar-Orbiting Operational Environmental Satellite System
 - Office of Personnel Management's (OPM) Retirement Systems
 - Veterans Affairs' (VA) Scheduling Replacement Project
 - VA's Core Financial and Logistics System (CoreFLS)
 - VA's Financial and Logistics Integrated Technology Enterprise
 - VA's Health Information Systems and Technology Architecture—Foundations Modernization (VistAPFM)
-

Source: U.S. Government Accountability Office (2013) *INFORMATION TECHNOLOGY: OMB and Agencies Need to More Effectively Implement Major Initiatives to Save Billions of Dollars*

While the narrative on these IT failures tends to center on wasted taxpayer dollars, the impact reaches far beyond money. The programs these systems support touch the lives of ordinary citizens, and failure often means hardship for many of our fellow citizens. IT failures also mean we are not using enormous amounts of money to spur innovation and create jobs that could help us build a stronger economy.

Our Study

While the iron was hot and the topic of government IT projects under public scrutiny, the Public Spend Forum felt it was necessary to provide a perspective and a voice. Leveraging the experience of our experts and advisors, we conducted a study focused on large-scale IT programs (not commodity IT) with the goal of:

- Identifying the root causes of IT program failures that can be addressed without major legislative or policy reform
- Developing practical recommendations that can reduce the costs or improve the outcomes of IT programs.

To conduct the study, we scoured the best literature, government oversight reports, studies, and articles addressing the topic. We also conducted interviews and roundtables with leading IT experts from the public and private sectors, including:

- **Phil Bertolini:** CIO and Deputy County Executive, Oakland County, Michigan
- **Linda Chuan:** Head of Strategic Sourcing, Salesforce
- **William Cooper:** Associate Vice President and Chief Procurement Officer, University of California
- **Clay Johnson:** CEO, Department of Better Technology
- **Joseph Jordan:** President, Public Sector, FedBid and Former Administrator of the Office of Federal Procurement Policy (OFPP)
- **Steve Kelman:** Weatherhead Professor of Public Management at Harvard University's John F. Kennedy School of Government and Former Administrator of the Office of Federal Procurement Policy
- **Mike McNerney:** Cybersecurity Strategist and Startup Advisor, based out of Palo Alto, California, and former Cyber Policy Advisor in the Office of the Secretary of Defense
- **Jonathan Reichental:** Chief Information Officer (CIO), City of Palo Alto, California
- **Anthony Robbins:** Vice President, Brocade
- **Stan Soloway:** President, Professional Services Council
- **Richard Spires:** Former CIO, Department of Homeland Security (DHS) and the Internal Revenue Service (IRS)
- **Simon Szykman:** CIO, Department of Commerce
- **Marc Tuitou:** CIO, City of San Francisco, California
- **Jerry Williams:** CIO, Department of Education (DOE).

When appropriate and requested, we have kept comments anonymous.

Study Findings

So what did we find? First, government is a challenging environment for working on IT projects. As David Van Slyke, business and government policy professor at Syracuse University, recently observed, “The policy environment, the multiplicity of goals, the unevenness of who has access to what information, as well as the uncertainty about the product and the funding itself, make the public-sector environment more complex (than the private sector).”⁷

These issues, among others, lead to a slow, prescriptive, and cumbersome process that is unable to keep up with the fast-changing technology environment. As Mark Headd, digital chief for the city of Philadelphia, put it in a recent NPR interview, “Governments don’t move at the same pace as technology does, and certainly the procurement process doesn’t.”⁸

To focus on the practical, we examined issues that can be addressed without requiring major policy or legislative changes. We are intentionally omitting issues such as the government budget process, which we will address in a subsequent paper.

We grouped our key findings into two themes:

- 1. What problem are we solving? No alignment on the needs or desired outcomes of programs, stemming from poor governance.**
- 2. A “check the box” culture, and a broken requirements and procurement process that inhibits competition and limits innovation.**

We discuss each of these in more detail below.

7. Emily Jarvis, The solution to procurement woes, people? *GovLoop*, January 28, 2014.

8. Elise Hu, “A Few Places Where Government Tech Procurement Works,” *NPR-All Tech Considered*, November 11, 2013.

Theme 1: What problem are we solving? No alignment on the needs or desired outcomes of programs, stemming from poor governance.

“Government agencies are spending billions of dollars on IT programs that are redundant and lack clear goals,” said Senator Tom Carper back in 2008.⁹ Unfortunately, we don’t think much has changed since then. As Scott Keough, president of Contraqer, and a former consultant who worked on the 2010 Census decennial, put it, IT projects are “doomed to fail from the very beginning,” precisely because “the focus is on the process and the how rather than on the outcome.”

Finding 1A: What problem are we solving? No alignment on problem or desired outcomes.

Many IT programs are doomed to fail because there is no clearly defined problem or agreement on what success looks like. “Does everyone know what they’re trying to achieve?” asks Phil Bertolini, deputy county executive and CIO of Oakland County, Michigan, and someone that White House leaders have identified as a “champion of change.”

Even worse, programs often don’t get a chance to define the problem or desired outcomes, because legislators have done it for them. Goals and timelines that don’t necessarily solve the real root issues leave a program scrambling from the start, to live by whatever unrealistic expectations may have been set for political reasons.

When a program does have the flexibility to define its goals, it’s a challenging process. Given the multitude of stakeholders for any given program, getting everyone to agree to common goals and outcomes is a Herculean task. It requires executives that stick around for a long time, strong program managers, and a willingness to push back. Often, these conditions don’t exist, as discussed in Finding 1B.

The impact of not having an agreed-upon problem or outcome cascades to all other aspects of a program. Generic metrics like “cost and schedule” become more important even if they don’t solve a problem. Vendors are selected and measured on similar criteria.

9. Roy Mark, “GAO: Billions Wasted on Federal IT Projects,” *eWeek*, July 31, 2008.

Finding 1B: Too Many Cooks, Everyone's In Charge.

Lack of a problem statement and alignment on success outcomes often stem from a weak program governance structure and poor program management. But this isn't due to a lack of trying. Rather, this problem is driven by:

- (1) The complexity of stakeholders within the government
- (2) Senior leaders who lack the authority to make objective decisions
- (3) Misaligned metrics that incentivize inconsistent behaviors.

Complexity of stakeholders—The sheer size and scope of large government IT programs makes getting a handle on who the stakeholders are and their ideal level of involvement daunting. Figuring out how to align them around a common goal requires great skill, experience, and trust.

“There are a lot of stakeholders in government, a lot of people that can screw you up,” said Richard Spires, who recently served as the CIO for DHS. “If you have stakeholders pulling you in different directions and there’s no way to adjudicate that easily, then it becomes a really big risk factor.”

Senior leaders and governance with limited authority—Compounding the volume of stakeholders is a weak governance structure in many IT programs. Most senior leaders and program executives are not around long enough to run large IT programs from beginning to end, and they often lack the management skills or authority necessary to make tough executive decisions. This issue is not new and has been highlighted for many years,

A Common IT Failure

The case of the TECS (not an acronym) system is a prime example of an IT project gone wrong. Immigration and Customs Enforcement (ICE) recently cancelled this in-house developed system meant to be used by customs officers to determine if a person may legally enter the country. A recent GAO report noted that ICE had invested \$64 million in a custom-developed case management system. However, in the end, ICE's tech executives cancelled the project and instead opted for a commercially available off-the-shelf solution. The GAO found that more communication and engagement with companies would have likely saved the agency from trying to “reinvent the wheel” and instead take advantage of market capabilities.

including in the 25-point plan developed by the Obama administration¹⁰ to address IT programs.¹¹

Without agreed-upon program outcomes and without strong leaders to keep teams aligned with those outcomes, every need and every stakeholder request becomes important. The result: resources are wasted on needs and requirements that don't align with a program's intended purpose, while more important needs go underfunded.

Misaligned metrics and incentives—A strong leader isn't enough to keep a large program team aligned. The team must also be measured and incentivized in a way that keeps everyone working toward a common purpose. This is often not the case. For example, while IT program managers may be working to achieve a certain outcome, contracting officers may simply be measured on the degree to which they comply with regulations. In our interview, Richard Spires noted the issue of misaligned incentives as a significant barrier to building a cohesive team.

As Dugan Petty, Oregon's former CIO and procurement director, who now serves as a senior fellow for e.Republic's Center for Digital Government, noted, "Often, it's about whether the jurisdiction has met the procurement laws first, and perhaps secondly whether or not they actually achieved the outcomes they were looking for."¹²

Theme 2: A "check the box" culture, and a broken requirements and procurement process that inhibits competition and limits innovation.

"My advice [to small businesses] is not to go for a federal contract. A startup is going to bleed to death."

—Mike McNerney, an advisor to startups in Silicon Valley and a former Department of Defense executive, at the Public Spend Forum Roundtable in Silicon Valley

10. Vivek Kundra, *Report from the U.S. Chief Information Officer: 25-Point Implementation Plan to Reform Federal Information Technology Management*, December 9, 2010.

11. Henry Kenyon, "Status Check: 25-point IT Plan Making a Difference," *FCW.com*, September 23, 2011.

12. Justine Browne, "Bringing Innovation to Procurement," *GovTech*, March 4, 2014.

The intent of any public procurement system is to get the best solution at the best value for any given need. Doing so means being able to attract the best suppliers with the brightest ideas and solutions.

The reality is that the government’s “check the box” culture—created by layers and layers of regulations and a cumbersome requirements and procurement process—scares away the best suppliers. The requirements process itself ends up in biblical-length request for proposals (RFPs) that presume to have all the answers, leaving vendors no flexibility to apply their expertise or creativity in proposing innovative solutions.

Just like great candidates for any job opening, great suppliers have many options for their business. They often choose not to work with government. Or for those that do, they have given up trying to be the innovator in government and instead know that the only way to write winning proposals is to “check the box.”

The result is an ineffective competitive process that creates barriers to entry and limits innovation. Below, we discuss these findings in more detail.

2A: “Check the box” Culture.

“If you step out [on] the ledge half an inch, you’re worried about the IG [Inspector General] report, the GAO report, your boss getting called to the Hill, and then you bearing the brunt of the repercussions.”

*—Joe Jordan, former head of the White House
Office of Federal Procurement Policy¹³*

The culture of government procurement is focused on compliance, following rules and regulations, and—most importantly—avoiding becoming a front-page story. Making a procurement mistake in a large IT program can often mean public embarrassment in the federal government.

Joe Jordan, who stumped for more agile development and pilots during his time in the Office of Federal Procurement Policy, said it best, “In the public sector, you have a host of people who will call you incompetent if something fails.”

13. Sean Lyngaas, “Improved Pentagon Acquisition Requires Tolerance of Risk,” *FCW*, April 25, 2014.

Beyond the fear of embarrassment, the culture of compliance is propagated by a human resource system where people are incentivized to follow procedures rather than driving towards “outcomes” or taking informed risks.

The impact is clear. For government programs, this “check the box” culture means program timelines stretch out for months and years to get through the multiple layers of reviews, approvals, and sign-offs.

For smaller companies, these are sometimes insurmountable barriers to selling the government a product or service. As Clay Johnson, a former Presidential Innovation Fellow and the head of the Department of Better Technology noted, “Contracting officers and CIOs like dealing with the same companies, where the level of cultural trust is there. ‘How do we do this? Same way we’ve always done it.’”

2B: Requirements process is too prescriptive.

Risk aversion in government procurement also leads to one-sided risk-management measures and prescriptive requirements that hamper competition and leave little flexibility for vendors to provide innovative solutions.

One-sided risk management—Requirements are often developed with the goal of shifting risk from the government and onto vendors. “Probably the most overarching value we imbue in the procurement system is risk aversion,” noted Mark Headd, former chief data officer of Philadelphia. “In fact, much of the complexity and cost of the current system, for both governments and vendors, can be attributed to the desire to reduce the risk assumed by governments when partnering with outside firms.”

Similarly, a recent IJIS Institute report on “*Strategies for Procurement Innovation and Reform*” noted: “While buyers have a responsibility to reduce their own risk, sellers frequently respond by raising their prices to a level proportionate to their perception of the risk—thus, unnecessarily inflating the costs.”¹⁴

The National Association of State Chief Information Officers (NASCIO) also noted the issue of one-sided risk in a 2012 report stating: “Vendors considering competing for state IT contracts may be chased away by high bond

14. IJIS Institute, *Strategies for Procurement Innovation and Reform*, December 10, 2013.

percentage requirements. This can lead to reduced competition and actually push out small businesses that would otherwise participate.”¹⁵

Dugan Petty, Oregon’s former CIO and procurement director, led a task force in 2009 that explored terms and conditions—such as performance bonds and indemnity clauses commonly used for IT agreements—which resulted in more than 100 revisions to Oregon’s IT contract terms and conditions. “The state backed down its efforts to place all responsibility on the contractor to make it more in sync with what was going on in the marketplace,” remarked Petty.¹⁶

Requirements too prescriptive, not prioritized, and not aligned to market—Government requirements and the resulting RFPs tend to be very long and prescriptive. Due in part to the input provided by multiple stakeholders, requirements are layered upon each other without any prioritization. Lacking effective program leadership or clear outcomes (as discussed in 1A and 1B), every requirement becomes important. Some examples of prescriptive requirements are inclusion of brand names, specification of detailed personnel qualifications, and limiting past performance criteria (e.g., experience having utilized a specific, proprietary government system).

David Gragan, senior procurement executive at the U.S. Consumer Protection Financial Bureau, suggests that complex IT procurements cannot be trusted to traditional procurement, because of the mindset that tighter specifications lead to better procurements. “Almost the opposite is true . . . if we are asking experts to help us solve complex problems using technology, then why don’t we let them use their imaginations?”¹⁷

Instead of asking for imaginative solutions in the early planning stages of a program, the government traditionally develops lengthy requirements and then releases them to industry for comment. This often results in requirements not aligned with current innovations in the market. Anthony Robbins, vice president at data center vendor Brocade noted, “Currently the federal system is aligned with legacy systems that have and continue to fail.

15. National Association of State Chief Information Officers (NASCIO), *Leaving Performance Bonds at the Door for Improved IT Procurement: NASCIO IT Procurement Modernization Series: Part II*, August 2012.

16. Justine Brown, “Bringing Innovation to Procurement: Almost No One Likes the Procurement Process. Here Are Some Ideas for Changing It,” March 4, 2014.

17. *Ibid.*

We need to invest in the future. Legacy platforms become more risky, and they fail at a rate that is too high.”

2C: Procurement process moves too slow and creates closed markets.

“Buying technology requires nimbleness and flexibility. Using a system that was designed to buy pens to buy a complex item like a technology system just doesn’t work, and that’s been proven over and over.”¹⁸

*—David Gragan, senior procurement executive
at the U.S. Treasury’s Consumer Financial Protection Bureau*

Slow procurement process—Layers of rules and policies designed to protect government result in an overly slow procurement process. Large-scale IT programs can take half a decade or more to roll out, with government requirements or chosen technology becoming obsolete by the time implementation is complete.

“IT is still evolving at breakneck speed . . . the idea that you can sit down for four or five years, building [a system] in the same way is just clearly nuts,” said Chris Chant, former director of the G-Cloud Programme and executive director of Direct Gov and Digital Engagement, UK Government Cabinet Office.

Closed markets—One impact of the slow procurement process is that government agencies have created large, multiyear “contracting vehicles” that preselect a set of vendors and compete new requirements among that limited pool. While one goal of these vehicles is to speed the acquisition process, an unintended consequence is a closed market, where companies with new, innovative ideas are in effect locked out of the contracting process or choose not to engage in the government market.

Finally, processes as straightforward as registering to do business with the government can get cumbersome and act as a barrier to entry. Exploring ways for vendors to easily register and work with the government should be streamlined, according to Clay Johnson. “If I sell to the government, if a contracting officer says register on the System for Award Management (SAM.gov), the value proposition is actually relatively low,” said Johnson. “Generating billable hours is likely far off. For a lot of people, the front door is immediately closed.”

18. Ibid.

Recommendations

While we can propose to change the culture of government, transform talent and human resources or take on yet another reform effort, the only way to drive real change is by creating more examples of success, program by program. Our recommendations are based on examples of proven success and actions that can be taken now by each and every government program *today*.

Our recommendations incorporate the success stories we uncovered in our research as well as the key success factors identified in our study. We divide the recommendations into six specific areas:

- 1. Establish clear lines of authority and accountability**
- 2. Develop a simple needs and outcomes statement, instead of voluminous RFPs**
- 3. Engage the market early**
- 4. Develop a cost/outcome (ROI)-focused program IT strategy**
- 5. Encourage smart risk-taking**
- 6. Reduce burdensome requirements and speed up the procurement process.**

Recommendation 1 (Prerequisite): Establish clear lines of authority and accountability.

Given the multitude of stakeholders for any given government IT program, strong leadership and a well-defined governance process are prerequisites to shepherd the program from the start. In fact, the GAO found that

Key Success Factors for IT Program Success

Through our research, we have identified common key success factors (KSF) that are present—to one degree or another—in successful IT projects in the federal sector. These can be categorized into four general areas: Purpose, Governance, Process and Culture.

Purpose

It is vital to develop a common purpose for the project with clear, common agreement on what is to be accomplished, and how “success” is defined and measured. This can best be accomplished by a four-step process:

- Striving to have clear alignment on the goals for the major IT program
- Gaining clarity as to what the expectations are for the project from all parties’ perspectives, thereby clearly establishing agreed-upon outcomes
- Working through a process wherein stakeholders examine the possible constraints that could impact the major IT program at each stage of development and implementation, and developing a common understanding of the issues involved
- Using this shared perspective to enable project stakeholders to coalesce around collaboratively developed and mutually agreed upon expectations—milestones that can be objectively measured—which will enable the parties to track project performance.

Governance

“Problem” projects almost universally experience major program management issues. On the flip-side, major IT initiatives that succeed have numerous common elements related to program governance. These elements include clear and effective executive sponsorship, lines of accountability and decision-making, outreach efforts, and two-way communications. A key way to get the governance of a major IT program “right” is to engage in active stakeholder management. By segmenting stakeholders into critical and noncritical groups and engaging them accordingly, such efforts can be more focused, targeted, and deliver far more impactful results.

Process

It is vital that meaningful, current market research and engagement be integrated into the development process at the earliest stages of any project. We need to change how procurement operates to; better mesh with the reality of how fast IT changes across the board today. In short, we need to find ways to make procurement more agile.

Culture

The fourth and final KSF is one that is really intertwined with all of the preceding ones, and that is the need to get the people and culture issues “right” when it comes to managing major IT programs, regardless of the setting. Without establishing the right culture and putting the right people in place, with the right incentives to motivate them, it is impossible for a project to achieve the outcomes desired by stakeholders. There are several common people-related KSFs, including:

- Having strong, truly committed leadership that supports the project
- Having management that is focused on results (rather than exclusively on process)
- Having stable, quality core leadership for the program
- Having the right people from across stakeholder groups working on the project together
- Having the right incentives in place—particularly regarding the acquisition staff—to reward contributions to project success.

program leadership is the number one key success factor for large IT projects that work.¹⁹

If a program does not meet the guidelines below for leadership and governance, WE SHOULD NEVER FUND IT.

Appoint senior leadership and a qualified/empowered program executive in charge—Large-scale IT programs must have two positions in place from the start:

- **A senior executive-in-charge** that has the authority to make key decisions and can be held accountable for program results. This executive must have the trust of the agency’s leadership (including the secretary or similar head of an agency), be respected across the organization, and have the ability to connect and build trust with stakeholders.
- **A “qualified and empowered” program executive** with relevant expertise and experience in the program domain, but more importantly key management skills to guide large-scale programs. While technical competencies are important in this role, more important are the communications and relationship skills required to build trust among stakeholders. This person must have the conviction, willingness, and ability to “push back” against demands made by stakeholders that do not align with the desired outcomes of the program. This push-back can only happen if, as Stan Soloway (president of the Professional Services Council) reminded us, everyone involved in the initiative not only has the encouragement of top agency executives, but also cover from them.

Identify and engage key stakeholders from the outset—“We place a high premium on [engaging stakeholders], having a change and adoption plan that addresses all stakeholders,” said Dan Warn, who is an executive with IT solutions provider BravoSolution. Similarly, at Harvard Kennedy School’s Ideasphere conference in May, participants in a session on effective policy design recommended “meaningful stakeholder engagement” as critical to the success of any government program.

19. U.S. Government Accountability Office (GAO), *INFORMATION TECHNOLOGY: Leveraging Best Practices to Help Ensure Successful Major Acquisitions* (GAO-14-183T), November 13, 2013.

The program executive, along with the senior executive in charge, must map out and develop a plan for engaging all key stakeholders from the start. In segmenting stakeholders, some stakeholders may be directly involved in standing up and implementing the program (e.g., integrated program team). Others may formally become part of the governance structure, engaged to provide feedback at critical milestones. Others may be engaged to solicit input during different stages of the program. Ultimately, all key stakeholders need to be aligned toward the same goals and outcomes (as discussed in Recommendation 2).

Recommendation 2. Develop a simple needs and outcomes statement, instead of voluminous RFPs.

“We simply say, ‘Here is our problem, we want the most brilliant solutions out there, and then we are going to let you fly. We’d still protect the integrity of the public dollar, but we’d figure out a way to let the private sector be inventive.”

*—Aneesh Chopra,
former chief technology officer of the United States.²⁰*

The advice of Aneesh Chopra is right on. More is not better when it comes to requirements. We need to move away from the notion that somehow improving requirements means writing a 100-page document with prescriptive requirements. Instead, programs must focus on writing succinct statement of needs and outcomes. This simple document, developed and approved through the governance structure, would become the foundation for all subsequent activities, including prioritizing needs, selecting vendors, and managing performance.

In developing a needs and outcomes statement, a program must:

Define the need—First and most importantly, stakeholders need to agree on the problem or need. While this sounds simple, different stakeholders often have differing perspectives on the problem or are focused on symptoms. Therefore, it is important that all key stakeholders provide their input and then align on a needs statement.

Define and prioritize outcomes—Once the need is defined, stakeholders identify what outcomes need to be produced to meet the need—or

20. Justine Browne, “Bringing Innovation to Procurement,” *GovTech*, March 4, 2014.

simply stated, what success looks like if the need is met. This may start with broader ideas and then be translated into specific outcome measures.

For example, outcomes for an asset management system could be defined as reducing duplication of equipment and improving overall utilization relative to capacity. Similarly, a system focused on processing retirement paperwork could have an outcome of getting retirees their benefits accurately and on time.

In addition to defining outcomes, it is also important to prioritize them as not every outcome can be as critical as every other. This prioritization is extremely important for all subsequent activities in a program as they provide a filter for prioritizing requirements, vendor selection criteria, etc.

Develop a needs and outcomes statement—The result of the above two steps is a simple needs and outcomes statement that also includes a short description of the environment. There is no procurement regulation that

When It's Done Right—The Western Hemisphere Transportation Initiative

Protecting the nation's borders required a massive upgrade to the technology used by both DHS and U.S. Customs and Border Patrol (CBP) officers. In 2007, DHS began its acquisition for the Western Hemisphere Transportation Initiative (WHTI), a \$324-million program that former DHS CIO Richard Spires points to as a success, thanks to the active involvement of the agencies' leadership. "WHTI implemented more sophisticated license plate readers and identification capability at border crossings," said Spires. "The program hit its marks, both on cost and schedule, and it delivered the functionality it promised."

Both Spires and the GAO credit the involvement of leadership and engagement with stakeholders. Spires stressed that a strong governance model is imperative to program success. "You need to have an honest dialogue across senior levels," he said. GAO wrote: ". . . CBP officials noted that communication with the WHTI stakeholders was greatly enhanced by the use of a consistent message that described, for example, the goals of the program, deployment plans, privacy implications of using radio frequency identification infrastructure, and impact of the program on select groups. . . . CBP officials stated that this standardization created a consistent, unified vision and ensured that the message stayed on course."^a

CBP also created a mock port as a fully functional test facility for the new technology. Users were able to test both the software and hardware as it was developed and provide their feedback to continually improve the technology. By June 2009, the technology had been rolled out to 39 land ports, accounting for 95% of land border traffic.

a. U.S. Government Accountability Office (GAO), "INFORMATION TECHNOLOGY: Leveraging Best Practices to Help Ensure Successful Major Acquisitions: Statement of David A. Powner, Director of Information Technology Management Issues," November 13, 2013.

prohibits the government from issuing such a document. Furthermore, other vehicles such as Broad Agency Announcements (BAA) are increasingly being used to source new innovations.

Recommendation 3: Engage the market early.

The federal government “is operating with a cold-war mentality, building big systems, with budgets and processes aligned to support legacy systems.”

*—Mike McNerney, former Cyber Policy Advisor
in the Office of the Secretary of Defense (OSD)
and current advisor to startups in Silicon Valley.²¹*

As the White House “mythbusters” campaign has pointed out, there is no regulation that prohibits open dialogue with industry. Engaging the market early leads to innovative problem solving and better alignment with industry capabilities. However, participants in our study, including our lively discussion in Silicon Valley, pointed to misalignment with the marketplace as one of the most costly practices undertaken in public-sector procurement.²²

Engaging the market while developing a needs and outcomes statement lets the government better understand what is technically possible, learn more about innovative practices, and uncover what other government agencies are doing. Engaging the market early is also likely to lead to better alignment with where the market is going, versus aligning to legacy processes.

Market engagement can take many forms, from sending out simple needs statements to leveraging BAAs. Two-way, open dialogue is also critical as part of this process, as opposed to the many so-called “industry days” conducted by government that often take the form of government agencies reiterating their requirements with no meaningful dialogue. The work of the U.S. General Services Administration (GSA) on soliciting market feedback while developing strategies for various solutions is a great example of collaborative market engagement.

21. Jonathan Messinger, “Risk Aversion Prevents Innovation in in Public Sector IT,” *Public Spend Forum*, February 25, 2014.

22. *Ibid.*

Recommendation 4: Develop a cost/outcome (ROI)-focused program IT strategy.

As a program moves forward, it should focus on developing a return on investment (ROI)-focused program strategy that inherently follows the guidelines below:

- **Focus on minimizing cost/outcome**—Instead of generic criteria like price, schedule, and performance, the most important measures of success for any program are the degrees to which it achieves its defined outcomes, and how cost effective it is in achieving those outcomes. In other words, the most important measure is cost/outcome. In effect, this is a proxy measure for ROI of a government program.
- **Implement flexible IT architecture**—Develop a flexible target architecture that allows for adoption of new technologies, as recommended recently in the American Council for Technology (ACT)-Industry Advisory Council’s (IAC) 7S for Success Framework
- **Emphasize prototyping and “MVP”**—Implement a rollout approach that segments major parts of the system/program and allows for “bake-offs” and prototyping among vendors for different parts of the solution (e.g., registration process, data interface, and exchange). The program should also allow for “smart risk taking” and Minimum Viable Product (MVP) rollout approaches, as discussed in Recommendation 5.
- **Avoid monolithic acquisition approaches**—Use an acquisition strategy that avoids a “monolithic RFP” and instead leverages existing procurement vehicles but also allows for use of alternative vehicles. Programs must also leverage new flexibilities being built into the procurement system, such as increased threshold for “simplified acquisition” to \$500,000.

Many of these elements have been adopted in the tools and processes that Phil Bertolini, CIO of Oakland County, Michigan, put in place and are available on the Oakland County website.²³

²³. Materials available at <http://oakgov.com/IT>.

Recommendation 5: Encourage smart risk taking.

“The federal procurement environment’s aversion to risk and its glacial pace are the biggest barriers to innovation and attracting more suppliers.”

—Federal Computer Week Article on Public Spend Forum’s Silicon Valley Roundtable²⁴

How do we move away from a culture where “checking the box” is more important than achieving a program’s objectives? It won’t be easy. First, Congress and the media need to stop sensationalizing every project gone wrong, but also highlight things gone right, like the example below from Palo Alto.

When Jonathan Reichental, CIO of Palo Alto, started his job, the city’s website overhaul had been stalled for years. Stakeholders resisted launching the site because of the fear that not all features would meet all user needs, which would open the city up to criticism. Rather than further delaying the program, Reichental labeled the site as a “beta test” and pushed forward with the release. The result: the city received enormous feedback from citizens that it then used to improve the site.

“We asked the public to try it and tell us if they could find what they wanted and what was missing,” said Reichental. “It allowed us to use a low-risk approach to garner an enormous amount of feedback before our big go-live.”

While this example is focused on a municipal website, the project contains many key principles that government can undertake on larger-scale initiatives:

- **Minimum Viable Product Philosophy**—MVP focuses on prioritizing the most basic needs, and then evolving. As explained by Eric Ries, the creator of the Lean Startup methodology: “The idea of minimum viable product is useful because you can basically say: Our vision is to build a product that solves this core problem for customers.”²⁵

24. Mark Rockwell, “In Search of a Bolder Procurement Process,” *FCW*, February 24, 2014.

25. Eric Ries, “Venture Hacks Interview: “What is the Minimum Viable Product?,” *Startup Lessons Learned*,” March 23, 2009.

Participants at our Roundtable in Silicon Valley pointed to examples of MVP as a parallel to the waterfall approach for large programs. As Chris Chant explained, the advantage of starting small is that “by focusing on the user need continuously, building in small teams, building iteratively, you can do it in stages, bit by bit, make sure it’s flexible, make sure it can change to ever-changing user needs.”

- **Let the market provide feedback**—As the Palo Alto website example demonstrates, the market is the best way to get feedback. Richard Spires, former CIO of DHS noted, “It’s very difficult to define requirements upfront. [The market will] give you plenty of feedback. I believe in this incremental approach with its lower risk.”
- **Conduct iterative pilots**—Instead of the big-bang roll-out, government needs to pilot functionality using the MVP philosophy. Buying small also allows the government to do multiple “bake-offs” and prototypes, where multiple solutions can be tried against each other. Former Presidential Innovation Fellow Clay Johnson advised: “Keep it small and restrained... over the course of one month, we’d see which is most successful out of those pilots, and attach clear metrics as to how those pilots work. After the pilots are completed, we pick the one that works the most, and allow it to grow.”

This approach requires a different mindset, one that moves away from monolithic systems that get rolled out at one time, to smaller pieces that get tested as prototypes and improved through market feedback.

Recommendation 6: Reduce burdensome requirements and speed up the procurement process!

Our final recommendation is to unburden the requirements and procurement process to allow for more innovative solutions and more meaningful competition. Reducing requirements will benefit new entrants, and also allow companies that already work with the government to propose their best, most innovative solutions. Specific actions include:

- **Set prioritized and outcome-focused requirements**—As discussed throughout this paper, government ought to focus on outcomes and prioritize its most critical needs rather than writing prescriptive requirements. It also needs to be open to receiving innovative ideas and not

force a “check the box” mentality on vendors when responding to government requirements.

- **Use innovative procurement methods (such as bake-offs)**—Rather than always relying on large, omnibus agreements, many of our interviewees pointed to the need for smaller, nimbler procurements that allow for bake-offs. Jerry Williams, CIO of the Federal Student Aid at DOE stated, “Agencies will find greater success when they break these big projects into more manageable—and smaller—chunks.” Richard Spires, former CIO of DHS, emphasized, “Rather than go with these large procurements, get yourself a contract vehicle that has a handful of development contractors. As you launch projects, you can run mini-competitions amongst them. If Company A is meeting the grade, great. If not, say ‘Sorry, we’re going to run another mini competition.’”
- **Speed up the procurement process**—The Office of Federal Procurement Policy, along with GSA, needs to apply “lean” thinking to the procurement process and eliminate steps that don’t add value. As has already been proposed through congressional legislation, the overall size of simplified acquisitions (where procurements of a certain size can be done through a streamlined process) need to be increased to allow for faster procurements.
- **Reduce burdensome regulations and terms/conditions**—The government ought to undertake a comprehensive study to better understand regulations and terms/conditions that detract companies from competing in the market. As examples, both Oregon and NASCIO have shown such a study can lead to a more competitive and less costly process.

Conclusion

Fixing government IT is going to require patience and will. But that does not mean we have to wait for years for some major reform legislation. No bill is ultimately going to solve the woes of IT programs. It is going to take serious leadership, talent, and a change in government's culture of avoiding failure at any cost. Obviously, that approach to risk has not worked and has cost taxpayers hundreds of billions of dollars. Now it is time for a different approach.

As a next step, we encourage the White House to establish a taskforce at the most senior levels, comprised of government, academia, and industry to drive a practical plan for improving IT programs comprised of the recommendations we propose in this report.

We also recommend a revised scorecard be drawn up to review IT programs, building on the work that has already been done by the Obama administration. We recommend that congressional appropriators use a similar scorecard when deciding to fund programs.

Ultimately, we recommend that the most critical and largest government IT programs be scrutinized and followed to ensure they are on a path for success. As we said in our recommendations, the only way we can change government IT is by creating more and more successes.

All of this would go a long way to helping restore faith in government actually “working” at a time when IT success equals government success.

Sources (Interviewees and Roundtables)

For our study, along with our research into the best available academic, industry, and government research on IT, we conducted interviews with IT leaders and thinkers from both the public and private sector, including:

- **Phil Bertolini:** CIO and Deputy County Executive, Oakland County, Michigan
- **Linda Chuan:** Head of Strategic Sourcing, Salesforce
- **William Cooper:** Associate Vice President and Chief Procurement Officer, University of California
- **Clay Johnson:** CEO, Department of Better Technology
- **Joseph Jordan:** President, Public Sector for FedBid and Former Administrator of the Office of Federal Procurement Policy
- **Steve Kelman:** Weatherhead Professor of Public Management at Harvard University's John F. Kennedy School of Government and Former Administrator of the Office of Federal Procurement Policy
- **Mike McNerney:** Cybersecurity Strategist and Startup Advisor, based out of Palo Alto, California, and former Cyber Policy Advisor in the Office of the Secretary of Defense
- **Jonathan Reichental:** CIO, City of Palo Alto, California
- **Anthony Robbins:** Vice President, Brocade
- **Stan Soloway:** President, Professional Services Council
- **Richard Spires:** Former CIO, Department of Homeland Security and Internal Revenue Service
- **Simon Szykman:** CIO, Department of Commerce
- **Marc Toutou:** CIO, City of San Francisco, California
- **Jerry Williams:** CIO, Department of Education.

Sources (Literature Review)

Bahel, J. (2009, October 28). Why Big IT Projects Fail. *CIO Insight*, (103), 14.

Bensaou, M. M., & Earl, M. (1998). The Right Mind-Set for Managing Information Technology. *Harvard Business Review*, 76(5), 118–128.

Bloch, M., Blumberg, S., & J. Laartz (2012, October). *McKinsey Research: Delivering Large-Scale IT Projects on Time, on Budget, and on Value*. Retrieved July 6, 2013, from http://www.mckinsey.com/insights/business_technology/delivering_large-scale_it_projects_on_time_on_budget_and_on_value.

Boomer, L. (2006, July 10). Why So Many Technology Projects Fail. *Accounting Today*, 20(12), 24–29.

Brocade (2013, October). *White Paper: The Necessity of Network Modernization: Investing in the Transformation of Federal Networks Today Can Dramatically Save Time and Money—Now and in the Future*. Retrieved December 22, 2013, from http://www.brocade.com/downloads/documents/white_papers/brocade-necessity-network-modernization-wp.pdf.

Brown, J. (2014, March 4). Bringing Innovation to Procurement, *GovTech*. Retrieved March 24, 2014, from <http://www.govtech.com/budget-finance/Bringing-Innovation-to-Procurement.html>.

Brown, T. L. (2013, August 30). *A Guide for Agency Leaders on Federal Acquisition: Major Challenges Facing Government*. Washington, DC: IBM Center for the Business of Government). Retrieved January 25, 2014, from <http://www.businessofgovernment.org/report/guide-agency-leaders-federal-acquisition>.

Cash, J. I., Earl, M. J., & Morison, R. (2008). Teaming Up to Crack Innovation & Enterprise Integration. *Harvard Business Review*, 86(11), 90–100.

Cerpa, N., & Verner, J. M. (2009, December). Why Did Your Project Fail? *Communications of the ACM*, 52(12), 130–134.

Chenok, D. (2012, June 19). Contracting: OMB's Effort to Dispel Bad Information Takes a New Step, *FCW.com*. Retrieved February 16, 2014, from <http://fcw.com/articles/2012/06/30/comment-dan-chenok-myth-busters.aspx>.

Fabbi, M. & Curtis, D. (2010, 17 November). Debunking the Myth of the Single-Vendor Network. *Gartner Research* (ID Number: G00208758). Retrieved February 2, 2014, from <https://www.gartner.com/doc/1471937>.

Fisk, R. (2008, July 30). How to Guarantee Your Next IT Project Fails. *Third Sector*, 29.

Flyvbjerg, B., & Budzier, A. (2011). Why Your IT Project May Be Riskier Than You Think. *Harvard Business Review*, 89(9), 23–25.

Follett, J. (2012, June 7). As Federal Budgets Shrink, State, Local IT Spending on the Rise, *CRN*. Retrieved February 2, 2014, from <http://www.crn.com/news/channel-programs/240001725/as-federal-budgets-shrink-state-local-it-spending-on-the-rise.htm>.

Gallagher, S. (2013, September 17). De-dupe Time: GAO Finds \$321 Million in Redundant Government IT Spending—One and a Third F-35 Fighters Wasted on Redundant IT Projects? It Could Be Worse, *Ars Technica*. Retrieved January 23, 2014, from <http://arstechnica.com/information-technology/2013/09/de-dupe-time-gao-finds-321-million-in-redundant-government-it-spending/>.

Gansler, J. S., & Lucyshyn, W. (2013, December 12). *Eight Actions to Improve Defense Acquisition*. Washington, DC: IBM Center for the Business of Government. Retrieved December 30, 2013, from <http://www.businessofgovernment.org/report/eight-actions-improve-defense-acquisition>.

- Gorans, P., & Kruchten, P. (2014, January 24). *A Guide to Critical Success Factors in Agile Delivery*. Washington, DC: IBM Center for the Business of Government. Retrieved February 5, 2014, from <http://www.businessofgovernment.org/blog/business-government/achieving-success-agile-delivery>.
- Grossman, I. (2003, May). Why So Many IT Projects Fail . . . And How to Find Success. *Financial Executive*, 19(3), 28–29.
- Gulla, J. (2012, March). Seven Reasons IT Projects Fail: Avoiding These Pitfalls Will Help Ensure Success. *IBM Systems Magazine*. Retrieved February 13, 2014, from http://www.ibmssystemsmag.com/mainframe/tipstechniques/applicationdevelopment/project_pitfalls/.
- Howard, A.B. (2014, February 13). How to Outfox a Broken Procurement System and Other Digital Government Lessons from the U.K. *NextGov*. Retrieved February 15, 2014, from http://www.nextgov.com/cloud-computing/2014/02/how-outfox-broken-procurement-system-and-other-digital-government-lessons-uk/78803/?oref=nextgov_today_nl.
- Hu, E. (2013, November 11). A Few Places Where Government Tech Procurement Works, *NPR-All Tech Considered*. Retrieved November 30, 2013, from <http://www.npr.org/blogs/alltechconsidered/2013/11/11/243799076/a-few-places-where-government-tech-procurement-works%20on%20Feb%2008,%202013>.
- Hu, E. (2013, October 23). U.K. Official Urges U.S. Government to Adopt a Digital Core, *NPR-All Tech Considered*. Retrieved November 30, 2013, from <http://www.npr.org/blogs/alltechconsidered/2013/10/23/240268497/u-k-official-urges-u-s-government-to-adopt-a-digital-core>.
- IJIS Institute (2013, December 10). *Strategies for Procurement Innovation and Reform*. Retrieved March 19, 2014, from http://www.ijis.org/docs/procurement_report.pdf.
- Ingersoll, W. (2007, March 26). IT Projects: Doomed to Fail? *Traffic World*, 271(12), 23.

- Jarvis, E. (2014a, January 27). Why Are Large Procurements So Complex? HealthCare.gov vs. Deepwater, *GovLoop*. Retrieved January 31, 2014, from <http://www.govloop.com/profiles/blogs/why-are-large-procurements-so-complex-insights-on-healthcare-gov->.
- Jarvis, E. (2014b, January 28). The Solution to Procurement Woes, People?, *GovLoop*. Retrieved January 31, 2014, from <http://www.govloop.com/profiles/blogs/the-solution-to-procurement-woes-people>.
- Jeffries, A. (2014, March 31). The Obamacare Deadline Is Today, Except When It Isn't, *The Verge*. Retrieved April 2, 2014, from <http://www.theverge.com/2014/3/31/5564436/today-is-the-last-day-to-sign-up-for-obamacare-this-year-sort-of>.
- Kenyon, H. (2011, September 23). Status Check: 25-Point IT Plan Making a Difference, *FCW.com*. Retrieved November 22, 2013, from <http://fcw.com/articles/2011/09/23/omb-25-point-plan-changing-it-management.aspx>.
- King, M. H. (2013, November 15). GAO Hits the Bull's Eye in Identifying Commercial Best Practices as the Key to Successful Information Technology Investments, *GovLoop*. Retrieved January 21, 2014, from <http://www.govloop.com/profiles/blogs/gao-hits-the-bull-s-eye-in-identifying-commercial-best-practices>.
- Klein, E., & Soltas, E. (2013, December 3). After Obamacare, Will Americans Ever Trust the Government Again? *The Washington Post*. Retrieved January 2, 2014, from <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/12/03/wonkbook-after-obamacare-will-americans-ever-trust-the-government-again/>.
- Kundra, V. (2010, December 9). *Report from the U.S. Chief Information Officer: 25-Point Implementation Plan to Reform Federal Information Technology Management*. Retrieved October 21, 2012, from <https://cio.gov/wp-content/uploads/downloads/2012/09/techstatreport.pdf>.
- Lyngaas, S. (April 25, 2014). Improved Pentagon Acquisition Requires Tolerance of Risk, *FCW.com*. Retrieved May 2, 2014, from <http://fcw.com/articles/2014/04/25/dod-acquisition.aspx>.

- Marchand, D. A., & Peppard, J. (2013). Why IT Fumbles Analytics: Tech Projects Should Focus Less on Technology and More on Information, *Harvard Business Review*, 91(1), 104–112.
- Mark, R. (2008, July 31). GAO: Billions Wasted on Federal IT Projects, *eWeek*. Retrieved January 16, 2014, from <http://www.eweek.com/c/a/IT-Infrastructure/Billions-Wasted-on-Federal-IT-Projects-GAO/>.
- Marks, J. (2014, April 17). Three Things Federal CIOs Say About CIO Authority. *Nextgov*. Retrieved April 19, 2014, from <http://www.nextgov.com/cio-briefing/2014/04/three-things-federal-cios-say-about-cio-authority/82771/?oref=river>.
- MeriTalk (2013, March 4). White Paper: Infrastructure Independence: Set My IT Free. Retrieved December 30, 2013, from <https://www.meritalk.com/infrastructureindependence>.
- Messinger, J. (2014, February 10). ICE Drops \$64 Million on IT Project, then Drops Project, *Public Spend Forum*. Retrieved February 11, 2014, from <http://publicspendforum.org/2014/02/10/ice-drops-64-million-project-drop-project/>.
- Messinger, J. (2014, February 25). Risk Aversion Prevents Innovation in Public-Sector IT, *Public Spend Forum*. Retrieved March 5, 2014, from <http://publicspendforum.org/2014/02/25/risk-aversion-preventing-innovation-public-sector/>.
- Miller, M. (2013). People on Projects: Why Some HR Technology Projects Fail and Others Succeed. *Workforce Solutions Review*, 4(5), 35–37.
- National Association of State Chief Information Officers (NASCIO) (2012, August). *Leaving Performance Bonds at the Door for Improved IT Procurement: NASCIO IT Procurement Modernization Series: Part II*. Retrieved April 23, 2014, from http://www.nascio.org/publications/documents/NASCIO_PerformanceBonds_August2012.pdf.
- Parmar, R., Mackenzie, I., Cohn, D., & Gann, D. (2014). The New Patterns of Innovation. *Harvard Business Review*, 92(1/2), 86–95.

- Porter, M. E., & Millar, V. E. (1985). How Information Gives You Competitive Advantage. *Harvard Business Review*, 63(4), 149–160.
- Ries, E. (2009, March 23). Venture Hacks Interview: “What is the Minimum Viable Product?,” *Startup Lessons Learned*. Retrieved February 14, 2014, from <http://www.startuplessonslearned.com/2009/03/minimum-viable-product.html>.
- Rockwell, M. (2014, February 24). In Search of a Bolder Procurement Process, *FCW.com*. Retrieved February 28, 2014, from <http://fcw.com/articles/2014/02/24/in-search-of-a-bolder-procurement-process.aspx>.
- Serbu, J. (2014, February 10). ICE to Restart a Key Element of \$800 Million, Multiyear IT Program (Interview with Thomas Michelli), *WTOP Radio*. Retrieved February 13, 2014, from <http://wtop.com/893/3559720/ICE-to-restart-a-key-element-of-800-million-multiyear-IT-program->.
- Shah, S., Horne, A., & Capellá, J. (2012). Good Data Won’t Guarantee Good Decisions. *Harvard Business Review*, 90(4), 23–25.
- Sharma, R. (2012, April). Rethink Government Purchasing and Supply Chains (chapter in *Governing to Win: Enhancing National Competitiveness Through New Policy and Operating Approaches*, Charles L. Prow (ed.), pp. 105–114). Lanham, Maryland: Rowman & Littlefield Publishers, Inc. Chapter available on the Web at: <http://www.businessofgovernment.org/article/rethink-government-purchasing-and-supply-chains>.
- The Standish Group (2011). Chaos Manifesto: The Laws of CHAOS and the CHAOS 100 Best PM Practices. Retrieved February 8, 2014, from http://versionone.com/assets/img/files/ChaosManifest_2011.pdf.
- Thibodeau, P. (2013, October 21). HealthCare.gov Website “Didn’t Have a Chance in Hell”: The Failure Rate for Software Development Projects Is High Generally, Particularly Large Ones Like HealthCare.gov, Says Standish Group Data, *Computerworld*. Retrieved February 20, 2014, from http://www.computerworld.com/s/article/print/9243396/Healthcare.gov_website_didn_t_have_a_chance_in_hell?taxonomyName=Healthcare+IT&taxonomyId=132.

U.S. Government Accountability Office (2014, January 8). INFORMATION SECURITY: Agency Responses to Breaches of Personally Identifiable Information Need to Be More Consistent. Retrieved March 2, 2014, from <http://gao.gov/products/GAO-14-34>.

U.S. Government Accountability Office (2014, January 7). BORDER SECURITY: DHS' Efforts to Modernize Key Enforcement Systems Could Be Strengthened. Retrieved February 2, 2014, from <http://gao.gov/products/GAO-14-34>.

U.S. Government Accountability Office (2013, November 13). *INFORMATION TECHNOLOGY: Leveraging Best Practices to Help Ensure Successful Major Acquisitions* (GAO-14-183T). Retrieved January 7, 2014, from <http://www.gao.gov/products/GAO-14-183T>.

U.S. Government Accountability Office (2013, November 13). *INFORMATION TECHNOLOGY: Leveraging Best Practices to Help Ensure Successful Major Acquisitions: Statement of David A. Powner, Director of Information Technology Management Issues*. Retrieved January 8, 2014, from <http://www.gao.gov/assets/660/658958.pdf>.

U.S. Government Accountability Office (2013, November 6). *INFORMATION TECHNOLOGY: Additional OMB and Agency Actions Are Needed to Achieve Portfolio Savings* (GAO-14-65). Retrieved December 28, 2013, from <http://www.gao.gov/products/GAO-14-65>.

U.S. Government Accountability Office (2013, November 6). *INFORMATION TECHNOLOGY: Agencies Need to Strengthen Oversight of Multibillion Dollar Investments in Operations and Maintenance* (GAO-14-66). Retrieved December 29, 2013, from <http://www.gao.gov/products/GAO-14-66>.

U.S. Government Accountability Office (2013, July 25). *INFORMATION TECHNOLOGY: OMB and Agencies Need to More Effectively Implement Major Initiatives to Save Billions of Dollars* (GAO-13-796T). Retrieved December 23, 2013, from <http://www.gao.gov/products/GAO-13-796T>.

U.S. Government Accountability Office (2013, June 11). *INFORMATION TECHNOLOGY: OMB and Agencies Need to Focus Continued Attention*

on *Eliminating Duplicative Investments* (GAO-13-685T). Retrieved January 3, 2014, from <http://www.gao.gov/products/GAO-13-685T>.

U.S. Government Accountability Office (2013, June 13). *INFORMATION TECHNOLOGY: Additional Executive Review Sessions Needed to Address Troubled Projects* (GAO-13-524). Retrieved September 18, 2013, from <http://www.gao.gov/products/gao-13-524>.

U.S. Government Accountability Office (2012, October 16). *INFORMATION TECHNOLOGY: Agencies Need to Strengthen Oversight of Billions of Dollars in Operations and Maintenance Investments* (GAO-13-87). Retrieved September 15, 2013, from <http://www.gao.gov/products/GAO-13-87>.

Wiklund, D., & Pucciarelli, J. (2009). *Improving IT Project Outcomes by Systematically Managing and Hedging Risk—An International Data Corporation (IDC) Insights Research Document*. Framingham, MA: IDC (Available by subscription).

The Wizard of Odds (2013). Roulette. Retrieved February 23, 2014, from <http://wizardofodds.com/games/roulette/>.

Wyld, D. C. (2013, Nov 6). Try It Before You Buy It: North Carolina Seeks a Better Way Forward for IT Procurement, *Public Spend Forum*. Retrieved on February 9, 2014, from <http://publicspendforum.org/2013/11/06/try-buy-north-carolina-seeks-better-way-forward-procurement/>.

Zhen, J. (2005, February 7). Why IT Projects Fail. *Computerworld*, 39(6), 31.

About the Authors

Raj Sharma is the CEO of Censeo Consulting Group and Co-Founder of the Center for Innovation and Public Value. Raj Sharma is known for bringing innovative thinking and solutions to the consulting industry, as well as to the field of supply chain management. As an entrepreneur, he has been acknowledged for establishing Censeo as a nationally respected brand known for delivering results and exceptional value. Under Raj's leadership, Censeo has been recognized by the *Wall Street Journal*, *Consulting* magazine, and *Vault* for its focus on people, ethics, and clients. He is also known as a thought leader in supply chain management and procurement, especially within the defense and federal government environment. Raj founded the FAIR Institute, a nonprofit focused on driving efficiencies into the federal and defense supply chains. He previously served as a visiting fellow at the Center for American Progress, where he focused on procurement reform as part of a government efficiency project. Raj has been published in numerous national publications and often presents at conferences.

David Wyld, C.E. Laborde Professor of Management at Southeastern Louisiana University in Hammond, Louisiana. David Wyld is the director of the College of Business' Strategic e-Commerce/e-Government Initiative, the founding editor of the *International Journal of Managing Information Technology*, and a frequent contributor to both academic journals and trade publications. He has established himself as one of the leading academic experts on emerging applications of technology in both the public and private sector. David has authored numerous cutting-edge studies on federal technology for the IBM Center for the Business of Government. He has been an active consultant, a qualified expert witness, and an invited speaker on the strategic management of technology to both trade and academic audiences, as well as an invited panelist on technology issues on The Discovery Channel, Federal News Radio, and other media outlets. David currently serves as the executive director of the Reverse Auction Research Center, a hub for research into the use of competitive bidding in both the public and private sectors around the world.

Acknowledgements

The authors are extremely grateful to those who provided valuable input for this report, as noted in the sources section. We would also like to thank all those from Censeo Consulting Group, Public Spend Forum, and Spend Matters as well as others who assisted in the preparation of this important report.

Public Spend Forum.org

The global destination for public procurement | @PSpendForum

Billions in the Balance



Removing Barriers to Competition & Driving Innovation
in the Public-Sector IT Market

A Public Spend Forum Study on Public Sector IT Programs - May 2014

Sponsored by



censeo
CONSULTING GROUP