A Manager's Guide to Cloud Computing

A Five-Step Process to Evaluate, Design and Implement A Robust Cloud Solution

The Essential Desk Reference and Guide for Managers

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Table of Contents

Table of Figures

Introduction

IT and the Federal Government

Information technology should enable government to better serve the American people. But despite spending more than $600 billion on information technology over the past decade, the Federal Government has achieved little of the productivity improvements that private industry has realized from IT. Too often, Federal IT projects run over budget, behind schedule, or fail to deliver promised functionality. Many projects use "grand design" approaches that aim to deliver functionality every few years, rather than breaking projects into more manageable chunks and demanding new functionality every few quarters. In addition, the Federal Government too often relies on large, custom, proprietary systems when "light technologies" or shared services exist.

Government officials have been trying to adopt best practices for years – from the Raines Rules of the 1990s through the Clinger Cohen Act and the acquisition regulations that followed. But obstacles have always gotten in the way. This plan attempts to clear these obstacles, allowing agencies to leverage information technology to create a more efficient and effective government.

Over the last 18 months, we have engaged the Federal IT, acquisition, and program management communities; industry experts; and academics. We have conducted listening sessions with Congress, Agency CIOs, and Senior Procurement Executives. We have received detailed input and recommendations from many industry groups such as TechAmerica. This engagement process has led to recommendations for IT reform in the areas of operational efficiency and large-scale IT program management.

A 25 point action plan is designed to deliver more value to the American taxpayer. These actions have been planned over the next 18 months and place ownership with OMB and agency operational centers, as appropriate. While the 25 points may not solve all Federal IT challenges, they will address many of the most pressing, persistent challenges. This plan requires a focus on execution and is designed to establish some early wins to garner momentum for our continued efforts. Active involvement from agency leadership is critical to the success of these reforms. As such, the Federal CIO will work with the President's Management Council to successfully implement this plan.

Some highlights of the implementation plan include:

- Turnaround or terminate at least one-third of underperforming projects in IT portfolio within the next 18 months
- Shift to "Cloud First" policy. Each agency will identify three "must move" services within three months, and move one of those services to the cloud within 12 month and the remaining two within 18 months.
- Reduce number of Federal data centers by at least 800 by 2015
- Only approve funding of major IT programs that:
  - Have a dedicated program manager and a fully staffed integrated program team
  - Use a modular approach with usable functionality delivered every six months
  - Use specialized IT acquisition professionals
- Work with Congress to:
  - Consolidate commodity IT funding under the Agency CIOs and
  - Develop flexible budget models that align with modular development

- Launch an interactive platform for pre-RFP agency-industry collaboration

Vivek Kundra
U.S. Chief Information Officer
The White House

A full transcript of the action plan is attached as Appendix 4.

US Government IT Today

The United States Government is the world's largest consumer of information technology, spending over $76 billion annually on more than 10,000 different systems. Fragmentation of systems, poor project execution, and the drag of legacy technology in the Federal Government have presented barriers to achieving the productivity and performance gains found when technology is deployed effectively in the private sectors.

"The Obama Administration is changing the way business is done in Washington and bringing a new sense of responsibility to how we manage taxpayer dollars. We are working to bring the spirit of American innovation and the power of technology to improve performance and lower the cost of government operations", said Federal Chief Information Officer Vivek Kundra.

In September 2009, the Federal Government announced its Cloud Computing Initiative. Cloud computing has the potential to greatly reduce waste, increase data center efficiency and utilization rates, and lower operating costs. The initiative included details on deployment models, service models, and common characteristics of cloud computing.

"As we move to the cloud, we must be vigilant in our efforts to ensure that the standards are in place for a cloud computing environment that provides for security of government information, protects the privacy of our citizens, and safeguards our national security interests," Kundra said.

Times are Changing

For the first time in memory we have three ingredients in place that are essential for a step function improvement in federal performance, Jeffrey Zients, Federal Chief Performance Officer told the Center for American Progress, in Washington D.C. in February 2010.

"First, we have a president who is committed to opening government, to right answers wherever they come from. I can tell you from my private sector experience that this type of openness leads to innovation and improvement. Second, the president has refrained from wholesale government bashing. While it can be appealing in its simplicity, it's counterproductive. To get real results we need to engage conscientious, hard-working people in the effort. And the president's tone paves the way.

"Finally, we have the urgency of the moment. Mounting deficits and debt are placing enormous pressure on government to cut spending and make every dollar count. Every corner of government needs to do its part to spend with great care. With these ingredients in place, we have an unparalleled

opening to improve the performance of the federal government. And the opportunity for improvement is significant," he added.

A productivity boom has transformed private-sector performance over the past two decades. As McKinsey and others have pointed out, the federal government has almost entirely missed out on this transformation. For example, the Department of Veteran Affairs still largely processes disability claims by hand, passing manila folders six to 12 inches thick from metal desktop to metal desktop. Veterans can wait up to 160 days to receive their benefits.

The VA is not alone. The Patent Office, the institution right at the center of protecting and promoting innovation, now receives more than 80 percent of patent applications electronically. That's good. However, these applications are then manually printed out, rescanned and entered into an outdated case management system. The average processing time for a patent is about 3 years. These types of antiquated processes are too common across government. They contribute to the continuing perception that government wastes taxpayer dollars.

Of course, the public sector does face unique challenges including compliance obligations that become real hurdles and objectives beyond the simple bottom-line motivation of the private sector. But many state and local governments and some federal agencies have been able to work around these constraints and have improved efficiency and raised service quality. The whole federal government has to get on track in order to make that kind of progress but it can - and must - be done.

Kundra has outlined six performance strategies: eliminate waste, drive top priorities, leverage purchasing scale, close the IT performance gap, open government to get results and finally, attract and motivate top talent. These are the six strategies that represent the biggest opportunity to boost performance and get government working for the American people, he said.

Starting with strategy one, eliminate waste. The most sustainable way to save is not to trim around the margins but to cut what doesn't work, what is duplicative and what is outdated. Through the line by line review of the 2010 budget, 121 programs were identified for termination or reduction with savings totaling $17 billion. None other than the Washington Times congratulated the president for the administration's success in discretionary budget cuts in 2010, noting that it was higher than any reductions under the prior administration.

For the 2011 budget, the president proposed 126 additional program cuts totaling $23 billion. Going forward to make good choices about where to invest and where to cut, we need a systemic way to evaluate what works and what doesn't. To this end, the president placed a major emphasis on increased funding for rigorous program evaluations in his 2011 budget. These evaluations will help agencies find out whether they're getting the most bang for their buck.

If we have 40 different job training programs going across seven different agencies, where are we getting the greatest impact? Programs that are effective should continue and those that aren't should either be fixed or terminated. But wasteful spending isn't just about ineffective programs. In 2009, the federal government reported improper payments of $100 billion. These were payments to the wrong person or to the wrong entity or for the wrong amount. $100 billion of waste is not just a waste of money, it also erodes citizen trust. It's unacceptable.