



Industry Advisory Council
Transition Study Group

**Using federal information
technology as a strategic weapon
to strengthen the economy and
Drive Change for America**

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Industry Advisory Council

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The Industry Advisory Council in cooperation with ACT is a unique, public-private partnership dedicated to helping government use technology to serve the public. The purposes of the organization are to communicate, educate, inform and collaborate. ACT-IAC also works to promote the profession of public IT management. ACT and IAC offer a wide range of programs to accomplish these purposes.

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Executive Summary: Using federal information technology as a Strategic weapon to strengthen the economy and drive change for America

The United States is the global leader in information technology, but that leadership has been slipping. While it is up to the private sector to invest and innovate, the federal government has a major role to play in spurring the development of cutting-edge technologies through its annual \$100 billion investment on information technology products and services.

The U.S. government is the world's single largest user of IT, but it has no comprehensive strategy to guide its investments. Federal IT spending is fragmented and relies on risk-averse decision-making and acquisition policies that discourage private-sector innovation. Instead of using its financial clout to foster new thinking, unleash new products and better deliver services to the public, the government policies and practices have discouraged innovation and promoted trailing-edge technologies.

As the administration of Barack Obama takes office, it must overhaul the government's policies and practices, and better leverage the annual \$100 billion federal IT investment. A strategic view must be taken of IT spending across all federal agencies and departments. Policies must be implemented that foster innovative IT solutions to benefit government, the IT sector and spur economic growth. Old thinking must be jettisoned and some new risk-taking must be encouraged instead of being punished.

The new administration must recognize and acknowledge the impact that the government's IT investment has on the U.S. economy, and work to build consensus for a national strategy that could be directed by a senior IT leader within the Executive Office of the President who will have strong decision-making authority.

The new administration must identify high reward investment areas, focusing initially on a small number of items where the federal government's spending can have a significant job retention and economic growth impact. There also must be a consolidation and better coordination of many parts of the federal IT infrastructure to achieve economies of scale including data centers, networks, administrative applications, desktop systems, and help desks.

A new relationship must be fostered with industry that maintains the goal of fair competition for taxpayer dollars while encouraging companies to submit innovative and potentially high reward cutting-edge solutions. In addition, the new administration must enhance the skills of the government's IT and management workforce, ensuring that top people are placed in key positions to manage and direct the new strategy.

The Obama administration is coming into office promising change, and that must include IT policy. As the new president looks for ways to deal with the current economic meltdown and lays the groundwork for long term economic growth, there is a golden opportunity to strengthen

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U.S. competitiveness and bolster an important job-creating IT industry. This will mean harnessing the power of the federal government's IT spending as a strategic national asset. Implementing this approach will have positive consequences for the economy and for restoring faith in the government's ability to solve problems and serve the public good.

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Using federal information technology as a strategic weapon to strengthen the economy and drive change for America

THE ISSUE

The federal government spends over \$100 billion annually on information technology products and services to support its missions and programs. This represents approximately 10 percent of the entire U.S. information technology (IT) market, translates into employment for one million technology workers, and accounts for a significant portion of GDP. Future U.S. economic health is, in part, reliant on the continued growth of the IT industry. As the world's single largest user of IT, the federal government is in a unique position to influence the direction and economic vibrancy of the U.S. IT industry, and the broader economy. Like never before, the United States must marshal its assets strategically. IT is an asset crucial to global economic health.

Currently, the federal government does not have a comprehensive strategy to guide its IT investments for benefit to the U.S. economy. With the changes recommended in this paper, and its companion, "Returning Innovation to the Federal Government with Information Technology," current levels of investment can drive the Administration's policy priorities and lay the groundwork for improved performance overall. History has shown that government can be such a stimulus for innovation and growth.

To use its \$100 billion IT spending as a strategic asset to strengthen global competitiveness and drive policy priorities, the federal government must change its approach to planning, managing, and acquiring IT. A strategic view of IT spending across government can drive positive impact in government and industry innovation, as well as spur economic growth. A central strategy must be developed which guides improvement in management, consolidation, and innovation across the federal enterprise. The federal government can "drive policy through inclusion" by actively encouraging innovation from its IT supplier base and our citizens, stimulating growth in the IT industry, ensuring investments support policy priorities, and improving creativity and transparency.. More funding is not the issue; rather better use of current investments is the key. This will require innovation in leadership and engagement to drive change.

CURRENT PICTURE

Information technology is a powerful force in the American economy. According to the U.S. Bureau of Economic Analysis, the information-communication-technology industry "accounts for almost 15% of real GDP growth." Today, the list of globally successful American businesses is dominated by companies offering products and services that didn't exist two decades ago – Microsoft (1975), Cisco (1984), Amazon (1994), Yahoo (1994), eBay (1995), Google (1998), and Facebook (2004). The innovative IT products and services developed by these companies have transformed the operations of companies and delivery of products and services throughout

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the economy. By harnessing information technology, innovative companies have changed the makeup of the American economic engine and established the United States as the leader of the global information technology market.

Yet how long will this IT leadership position last? American technological prowess and competitive drive have also encouraged new threats to the American economy. Global communication has opened up global markets and enabled global competition. In a services marketplace where brick and mortar are not required, competitors no longer need a physical presence domestically. Capital can originate anywhere in the world, and work can be performed wherever the mix of skill and cost is optimized. In order to remain competitive in this evolving global marketplace, the United States must have a vibrant and growing information technology industry.

The federal government is a major force in the growth of the IT industry. Government research and development (R&D) investments and innovations, driven by the need to find solutions to its massive information processing problems, have made significant contributions to the leadership role the IT industry currently enjoys. For example: the Hollerith punch card was invented by the U.S. Census Bureau to help automate the count of the population; ENIAC was developed by the University of Pennsylvania for the Army for use in computing firing tables; the online information industry was created to meet the needs of the National Library of Medicine and later NASA; and the Internet was developed through the activities of the Department of Defense and National Science Foundation.

Unless there is active intervention, the current economic climate will thwart a significant part of the economic engine- the government investment in technology. Today, government is reducing its investment in R&D programs. The government has a large inventory of legacy systems – systems using outdated technologies with high maintenance costs. Some of this inventory is in systems where agencies have not had the funds or incentive to upgrade. Others are the result of new acquisitions that use “backward looking” designs reflecting the existing environments.

The federal government’s massive inventory of legacy systems has two important implications for the nation. First, the government is unable to take full advantage of new technologies to improve government operations in critical areas such as homeland security and defense, and to enhance the delivery of services to the citizens. The impact of constrained innovation *inside* the government is discussed in a partner paper to this one, “Returning Innovation to the Federal Government with Information Technology”.

The second major implication is that investment in out-of-date technology constrains the economic contribution of the IT industry. History has shown that federal IT spending can be a powerful source of innovation and stimulus for economic growth...if managed to drive policy priorities.

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The federal government is also a repository of valuable information and data that is often cloistered and restricted. While the need for such restrictions is unquestionable in many cases, there may be opportunities missed for creativity and transparency by over-constraint.

Acquisition is an integral process in meeting IT investment goals. Reforms have dramatically reduced many government-unique specifications and have made “Commercial Off-the-Shelf” the common standard, particularly for hardware and system software. However, acquisition regulations designed to ensure fair competition for taxpayer dollars often have had the unintended consequence of limiting collaborations to introduce innovation or viable risk to meet urgent mission goals. We can and must do better by driving results through cooperation and inclusion.

Today’s urgent needs require the best from us all, including freer collaboration across sector boundaries. In this day of global competition, we can no longer afford inefficiencies in the operation of our own markets and industries. The new Administration has an opportunity to strengthen U.S. competitiveness in the global marketplace by harnessing the power of the federal government’s IT spending as a strategic national asset. Federal IT spending can motivate, not only government and private sector innovation, but also tap interested communities, as well as help attract further global IT investment to the U.S. Innovations created to solve the challenges of government can once again be used by the U.S. to gain a competitive edge in the global IT market.

ROADMAP FOR REFORM

Federal IT spending can strengthen the American economy by a targeted strategy that leverages the force of federal government spending, engages industry, encourages innovation, and produces early victories that sustain political capital and momentum. This Administration can develop a strategy for managing the government’s IT investments in a manner that promotes and strengthens the competitiveness of the U.S. IT industry. This strategy should include the following elements:

Harness the impact of the government’s IT investment on the U.S. economy

View the government as an enterprise whose IT investment portfolio can drive policy priorities as a National Strategy. The Strategy can define and capture desired results.

Provide Leadership to Build Consensus for a National Strategy

Through a collaborative process that includes the key constituencies - Congress, Executive Branch senior leaders, and the private sector IT industry- a new senior IT leader should be responsible for creating and executing a national investment strategy to spur private sector competitiveness and innovation. Visible presidential support will be critical to focus attention and to bring together key stakeholders. Presidential commitment is best demonstrated by assigning the responsibility to a senior IT leader within the Executive Office of the President,

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with access to the President. A “seat at the table” of the White House Policy Councils will also assure a crisp focus on desired priorities.

The new senior IT leader must have the authority to work proactively with industry, influence agencies’ spending, and the ability to compel agencies to coordinate for broader benefit. Existing offices with IT management responsibilities, including those within OMB, GSA, Commerce, and departmental CIOs, should report to the new senior IT leader on a “dotted line” basis, to meet the needs of the “whole.”

Ensure investments in internal IT management improvements are consistent with the national strategy

Internal management improvements underpin the ability to implement a national strategy. The companion paper, “Returning Innovation to the Federal Government with Information Technology”, elaborates on a proposal for reform.

Set expectations and establish metrics

The goal must be to ensure economic growth and stability through U.S. leadership in key aspects of the IT marketplace. The new senior IT leader should report annually to Congress and the President on objective measurements that indicate the impact of the strategy on the economy. Primary focus areas should include job creation/retention, new technologies created, new businesses created, and new investment dollars attracted to the U.S. IT industry. These measurements should include definition and assessment of appropriate levels of risk and innovation in the overall IT investment portfolio.

Identify high reward investment areas

Opportunities to tune federal IT spending to the National Strategy exist throughout the current federal IT investment portfolio. One element of the strategy should be broad-based improvement in fostering innovation. The strategy should favor IT investments that offer a significant impact on economic growth and stability. Early victories are essential to sustain political capital and momentum to drive change.

Rationalize and Redirect Investments to Achieve Greater Benefit

Significant parts of the federal IT infrastructure present tremendous opportunities to achieve economies of scale. These include standardization and consolidation of fundamental IT building blocks, such as, data centers, networks, administrative applications, desktop systems, and help desks.. As an example, the consolidation of data centers presents an opportunity to stimulate a segment of the IT industry that is rapidly moving offshore. Federal “mega centers” would concentrate more processing power in a single facility than currently exists, providing the impetus to push the state of the art. This suggests the prospect for establishment of a national center of excellence in data center management. By creating these mega centers in economically challenged areas of the country, the government could also encourage technology companies to invest in building the skilled labor base necessary to attract further investment to the area. Savings from this consolidation could be invested in other technology areas.

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Drive change through inclusion- Work more closely with Industry and communities

The private sector provides nearly 90% of the government's technology workforce. This workforce is a ripe source for improvement and innovation in government. For example, collaboration between government and industry could be focused on solutions across organizational boundaries to accelerate problem solving and reduce overall costs.

Acquisition processes designed to uphold public policy and socio-economic goals have defined the relationship with industry. As implemented, acquisition processes often discourage novel approaches and measured risk sharing. For example, the processes for defining requirements that result in Requests for Proposals impact the proposal submissions, often discouraging companies from introducing innovative ideas or taking on increased risk/reward scenarios. Injecting increased market research before specifying and acquiring a new system can serve to drive acquisition of more innovative solutions at reduced risk.

The government needs to address how it will ensure a strong IT base across a range of dimensions – such as company size, technology areas, and competencies – to ensure future innovation from and global competitiveness of the IT industry. Broader definition of the relationship with industry beyond acquisition could unleash a tremendous source of energy welcomed both in government and industry.

New models of collaboration and inclusion are driving change everywhere, and calls for a re-definition of leadership and governance. For example, the District of Columbia had an open competition for software applications to improve District services, with a substantial financial reward for the winner. As a result, DC now has 46 new, working applications, all for \$50k given to the winner. Consider the possibilities of increasing open access to non-sensitive and non-personally identifiable information and offering incentives that unleash ingenuity for the public good.

Enhance the skills of the government's IT and management workforce

The role of government's IT and management workforce to drive change calls for expert technical, management and collaboration skills. The government's IT strategy must specify the critical skills needed to successfully implement the National Strategy, and then offer the means to develop these skills with urgency. The strategy must include essential senior executive skills development necessary to oversee and nurture the technology investments at the agency and department levels.

CONCLUSION

Focused investment and open communication is needed to drive priority changes and promote the innovation needed to sustain American leadership in the global economy. Ten percent of the United States' IT economy, including one million of its high technology workers, can be a powerful resource for driving change, if harnessed. The technology leadership of the new administration must create and execute a strategy to make the significant IT spending of the

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federal government, and the technology resources it employs, a competitive weapon to support a pro-growth economic agenda. Federal IT spending must be used to as a strategic asset to grow American jobs, bring innovation to bear on complex global crises, bolster economic performance in disadvantaged areas of the country, and ensure America remains pre-eminent in the global technology economy.

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