

ONE TRILLION REASONS

How Commercial Best Practices to Maximize Productivity Can Save Taxpayer Money and Enhance Government Services

EXECUTIVE SUMMARY

America's growing national debt is undermining our global competitiveness. How we choose to confront and address this challenge will determine our future environment for growth and innovation. By adopting commercially proven best practices to maximize operational productivity, government can save over \$1 trillion by 2020, while enhancing the services it provides citizens and laying a foundation for future innovation and growth.

This paper offers seven specific initiatives where technology-enabled productivity solutions can make a material difference. We hope these ideas contribute to the important work being undertaken by the National Commission on Fiscal Responsibility and Reform, the President's Management Advisory Board, the Chief Information Officer and other efficiency initiatives. We look forward to contributing to any and all efforts.

BACKGROUND

The U.S. Federal Government faces an estimated annual structural budget deficit of \$500-\$700 billion. Deficits of this magnitude represent a major threat to the economic health of our nation, and efforts to reduce or even eliminate this deficit are urgently needed. At the same time, the American economy faces a continuing recession, with high unemployment stretching ahead for years, according to most projections. Four million more Americans fell into poverty last year.

If a deficit-reduction plan is to be credible, the Federal Government must adopt an aggressive spending reduction program that includes reforming entitlement programs, eliminating low priority programs and adopting best practices in government operations. But at the same time, we must return to fiscal soundness in ways that do not hamper our country's economic recovery.

Recent discussion of the fiscal crisis appears to be trapped inside this conundrum. We hear about draconian, across-the-board spending reductions—or equally sweeping tax hikes. Based on our experience in the technology industry, we believe there is a better way.

Our government has an opportunity to dramatically reduce spending and cut the deficit, while also improving its level of service to citizens. By harnessing major technological shifts and adopting best business practices, we can not only make our government far more productive, but also foster greater innovation in

areas ranging from healthcare to education and energy – innovation that will generate economic growth and job creation.

We have seen this repeatedly over the past several decades in our own industry, and in the impact of new technology models across our economy and society. Again and again, new capabilities have simultaneously reduced costs and sparked innovation.

While businesses and governments are inherently different in many ways – different responsibilities, different objectives, different mandates both employ millions of professionals to provide goods and services to hundreds of millions of customers and constituents. Not all private sector solutions are applicable or advisable in a government setting. But for both public and private, the more productive and efficient the operations, the more can be delivered at the lowest cost. Given the current fiscal outlook for governments at all levels, maximizing government productivity will be essential to maintaining the services citizens want at prices taxpayers can afford.

We understand this, as leaders employing 700,000 professionals and generating \$250-\$300 billion in annual revenue. We are familiar with managing large enterprises within budgets that are inherently unpredictable. We make hard choices every day, and we have ideas, suggestions and experience at getting the most out of every dollar we invest.

As executives competing in more than 170 countries, we also see the direct impact of policy decisions on investment, innovation and economic growth. So helping governments in any way we can is very much in our industry's enlightened self-interest. Our own future as thriving enterprises depends on creating a better environment for America's business community to grow jobs, and directing that environment toward preparing for the future—rather than just repairing the past.

This experience has taught us several key lessons about driving productivity that are highly relevant to today's debates over deficit reduction:

- All spending is not equal. Too often policy makers propose across-the-board spending cuts, often to avoid difficult decisions. But innovation leaders like Intel Corporation have consistently maintained and increased R&D and capital expenditures throughout economic downturns, better positioning them for future competitive environments. National investments in STEM education, cutting-edge infrastructure and government research yield outsized benefits and lay a critical foundation for future growth.
- All taxation is not equal. Government policy makers heavily impact entrepreneurship, national investment and job creation through their public

policy choices. Cities, states and countries that promote free enterprise get more of it. Few public policies have more of an impact on business decisions than taxation levels. In fact, a 2008 OECD study examining the relationship between tax structure and economic growth for 21 OECD member countries over 30 years found that “[c]orporate income taxes appear to have the most negative effect on GDP per capita” of all taxes examined.

- Spending smarter does not mean getting less. Our own experiences in transforming multi-billion dollar enterprises through technology have taught us that gains in productivity do not result in lower quality products or less effective services. To the contrary, these operational improvements both reduce costs and increase openness and collaboration, while enabling greater investment in the things that generate comparative advantage: people, ideas, markets and innovation. Government likewise serves citizens best – both now and over the long term – when it operates most productively.

We believe our nation can save one trillion dollars over the next ten years by applying proven and realistic business strategies to cut costs. We are not alone in this belief. In 2009 McKinsey & Company published “The Case for Government Reform” which suggested that a 5-15% improvement in the efficiency of Federal government operations could generate \$450B-\$1.3T in savings over the next ten years.

What follows are specific recommendations based on real-world experiences, within our own companies, customers and partners. Some of these ideas were considered (or even tried) in previous “reinventing government” initiatives. Others leverage newer innovations in business process management enabled by advances in technology, such as the broadband Internet. Many are part of ambitious new efforts by OMB Deputy Director Jeffrey Zeints and Federal CIO Vivek Kundra, which we support and encourage.

As in the past, the best initiatives will combine private sector experience with the perspectives and knowledge of career civil servants throughout the government. And best of all, these improvements do not require new legislation. We could start today.

The key is leadership – and it must come from all sectors of society. If we can come together around these pragmatic, non-ideological, forward-looking actions, we will be drawing on the fundamental drivers of America’s growth and greatness. Our country still possesses the world’s greatest innovation engine – American society itself. Both business and government can and must be vital partners in making that engine fire on all cylinders.

RECOMMENDATIONS

Initiative 1: Consolidate Information Technology Infrastructure

The government's costs of operating information technology systems are higher than they need to be – in some cases by more than a factor of two. Significant savings can be realized if departments and agencies employ proven methods to reduce overall costs of IT ownership.

The Federal government currently spends approximately \$76B to support its widely-dispersed IT assets. We estimate that at least 20-30% of that spending could be eliminated by reducing IT overhead, consolidating data centers, eliminating redundant networks, and standardizing applications.

By way of example, IBM has dramatically reduced its data center operations and saved up to 40% in operating expenses. IBM cut its overall IT expenses in half over the past five years through consolidation and standardization. Likewise EMC Corporation's data center consolidation and adoption of cloud computing internally cut costs and energy use. To date, EMC has achieved a virtualization rate of over 70%, with consolidation ratios as high as 40:1, saving \$104.5 million over five years including an estimated \$80 million in capital equipment cost avoidance and \$19 million of operating cost reduction due to increased data center power, cooling, and space efficiency.

One often-cited opportunity for cost savings through emerging technology comes from cloud computing. Government agencies that have moved to cloud computing have generally achieved between 25 and 50 percent in savings associated with information technology operations, according to a Brookings Institution report called "Saving Money through the Cloud." In announcing its own initiative, the United Kingdom government predicts that it could cut £3.2 billion (approximately \$4.8 billion) from a £16 billion (approximately \$23.9 billion) annual IT budget, a 20 percent savings, through cloud computing. If the Obama administration achieves similar savings, it will save \$16 billion a year.

Such savings are obtainable by government entities big and small. By consolidating applications and infrastructure for the government data center in Washtenaw County, Michigan, for example, the city saved taxpayers approximately \$2.5 million and solved the space, power and reliability challenges.

The Indiana Office of Technology standardized the state's PCs and estimates its new, standardized fleet will reduce IT costs by more than \$345,000 annually, saving another \$307,000 in power costs per year. Kane County, Illinois, saved more than \$1 million over three years by consolidating legacy, highly proprietary IT equipment and networks, reducing time spent on service calls by 75%.

Right now the average government CPU utilization is 25%, which compares well to the average industry rate of 7-15%, but falls short of OMB's Federal Data Center Consolidation Initiative goal of 60-70%. This can also improve the utilization of storage. According to the results of the 2009 BDR inventory, average government-wide storage utilization was 58% with a total government-wide storage capacity of 4.9 million terabytes.

CATEGORY	TYPE OF REDUCTION	REDUCTION RANGE
Virtualization	Operational Costs	70%
Virtualization	Total Cost of Ownership	25-70%
Cooling Technology	Operational Costs	45%
Data Center Consolidation	Energy Costs	60-80%
Data Center Consolidation	Operational Costs	10-70%
Data Center Consolidation	Floor Space Sq Footage	80-85%

Source: INPUT 9/9/2010 Assessment based on Intel & IBM Customer Examples

Gartner Group reports that these types of efforts generally deliver 20-30% reduction in costs. If the Federal government could achieve similar improvements in its performance, it could save **\$150-200 billion** over the next ten years.

Initiative 2: Streamline Government Supply Chains

The Federal government buys approximately \$550B worth of goods and services each year. These goods and services are procured largely within agencies and departments with independent procurement processes. In 2005, OMB announced the Federal Strategic Sourcing Initiative, with the intent of reducing procurement costs through the application of strategic sourcing initiatives. But the anticipated benefits have not been realized –primarily because budget and procurement processes have not been reformed. The effort also focused too intensively on commodity purchasing and not enough on supplier management.

Motorola integrated its disparate supply chains at the end of 2004, bringing the entities that support \$40 billion in annual sales under one leadership team. By consolidating sites (from 25 to 17), reducing headcount, leveraging its aggregate procurement scale, increasing supplier accountability, and reducing poor quality, Motorola saved an estimated \$1.2 billion annually.

Streamlining supply chains has worked in public sector settings. For example the United Kingdom's largest central and civil government department, the Department for Work and Pensions (DWP), delivers services directly to more than 25 million citizens and pays out more than \$180 billion in benefits every year. DWP needed to revamp its entire document supply chain to make information clearer and more easily accessible to UK citizens. Using Lean Six Sigma

processes and tools, DWP transformed a fragmented supply chain for all of its core print and related requirements, making all business print and marketing materials, stationery and reprographics available to DWP staff through a single point of contact via the Government e-procurement exchange. The modernization will result in substantial savings for DWP, in line with the UK Government's Efficiency Review targets.

Similarly, the USPS cut its supply chain costs by 20% (\$2.5B) through a supply chain transformation effort. The Department of Defense is applying Lean Six Sigma to extract costs from its supply chain as well. In our companies' experiences, process improvements alone can improve efficiencies by 10-20%. If the Federal government could achieve similar improvements in supply chain performance, it could save **more than \$500 billion** over the next ten years.

Initiative 3: Reduce Energy Use

In November 2009 the President issued Executive Order 13514, which mandated that Federal agencies cut their greenhouse gas emissions and energy / water use. One of the most effective means for reducing energy use is through facilities rationalization. Our experience in call center consolidation suggests that organizations can reduce IT-related energy costs by 25%.

For example, using server virtualization, Applied Materials delivered the same computing power with 75% less energy. The company also reduced electrical consumption by 34% by consolidating 27 server rooms in California into one super energy-efficient data center.

EMC helped the State of Michigan save \$1 million in annual maintenance costs through storage consolidation, with \$340,000 more in annual energy savings predicted.

The federal government operated more than 1,100 data centers as of Fall 2009 (up from 432 in 1998), covering more than 7.9 million square feet and consuming more than 10 billion kilowatt-hours of energy each year. More broadly, the federal government uses 3.1 billion square feet of total office space. The implementation of new building management technologies can reduce its energy consumption. Advanced fleet management systems can reduce the size of the PC fleet and also reduce federal energy consumption by 10-20%. The aggressive adoption of voice, video, document sharing and collaboration tools can reduce travel-related expenses by 10-20%. Overall, the combination of these initiatives could generate **\$20 billion** in savings over 10 years.

Initiative 4: Move to Shared Services for Mission-Support Activities.

Every dollar spent on support activities and overhead within Federal agencies is a dollar that could be spent on programming or returned to the

taxpayer. Why should every agency have its own IT, finance, legal, human resources or procurement operations?

When the Federal government consolidated 26 payroll systems to four, the Environmental Protection Agency reduced payroll costs from \$270 to \$90 per employee, saving \$3.2 million a year, and the Department of Health and Human Services reduced costs from \$259 to \$90 per employee, saving \$11 million a year. Likewise, when the government consolidated travel systems, the Department of Labor reduced its costs from \$60 to \$20 per travel voucher and reduced processing time from about 7 to about 3 days.

Four government cases studies from the UK suggest that 20-30% savings are achievable by moving to a shared services platform. If that savings rate were applied to the Federal government's support services spending, **\$50 billion** in savings could be generated over 10 years.

Initiative 5: Apply Advanced Business Analytics to Reduce Improper Payments.

The Administration already recognizes the magnitude of this issue. In Executive Order on Improper Payments (Nov 2009), the President states that "my Administration is expanding the use of 'Payment Recapture Audits,' which have proven to be effective mechanisms for detecting and recapturing payment errors. . . One approach that has worked effectively is using professional and specialized auditors on a contingency basis, with their compensation tied to the identification of misspent funds."

The Federal government issues nearly \$3 trillion annually in payments in one form or another (e.g., Federal grants, food stamps, Medicare payments, tax refunds). GAO estimates that \$72B was lost to improper payments in fiscal year 2008 alone. OMB estimates the number was \$98B in 2009 (\$54B in Medicaid and Medicare).

OMB issued guidance this spring to departments asking that they develop plans to reduce these improper payments by \$20 billion. Industry regularly conducts recovery audits of large-scale transactions; this could be fraud or mistakes, or an unanticipated shift in demand. New analytical techniques can increase the identification rate to 40%, which would double the current anticipated savings rate and generate an incremental **\$200 billion** over 10 years.

Initiative 6: Reduce Field Operations Footprint and Move to Electronic Self-Service.

Most departments have citizen-facing operations that rely on manual, paper-based business processes. By moving as many touch points as possible to electronic platforms and at the same time rationalizing the government's field

operations footprint, the government can reduce costs and improve the citizen's experience.

Australia's CentreLink initiative provides online benefit determination and payments to individuals on behalf of 27 different government agencies. The estimated annual savings total \$765M. The Service Canada initiative provides 70 services on behalf of 13 federal agencies through online, phone, and in-person service delivery channels. The estimated annual savings total \$292M.

In the U.S., there are more than 10,000 federal government forms in 173 different agencies that could be automated to allow citizens and businesses to conduct their business with government online. Reducing the citizen-related field operations of the Federal government and automating the government's form processing can generate **\$50 billion** in savings over ten years.

To further reduce the cost of field operations we must mobilize the Government Workforce. OPM director John Berry reported that the Federal government saved \$30 million a day by teleworking during the February 2010 snow storms. More than 1,200 Defense Information Security Agency employees were able to continue to support the mission through the time the Federal government was declared "closed." The Telework Exchange estimates that, economy-wide, \$441 billion in potential U.S. employer teleworker savings can be realized from reduced absenteeism, recruiting costs, and increased productivity. Federal, state and local governments can likewise advance their mission and reduce their costs through more robust adoption of telework.

Initiative 7: Monetize the government's assets

The government has a large inventory of assets that could generate revenue. "Mining" the balance sheet through concessions agreements and other opportunities may generate significant revenues. This could include selling surplus facilities and selling and leasing back others. OMB has found 14,000 excess buildings and 55,000 underutilized buildings in the Federal inventory. The Federal government has other assets – such as rights-of-way for energy transmission – that could be auctioned off.

The Federal government also has an array of fee-generating programs that do not recover their costs. Oftentimes fee structures and levels are dictated by issues other than cost recovery. We suggest that the Federal government identify agencies that can be statutorily dependent on the fee income they generate (i.e., no longer subject to the appropriation of general revenues). By mining the balance sheet aggressively and corporatizing certain Federal operations, the Federal government could save **\$150 billion** over 10 years.

Better Project Management & Real-Time Course Correction

Information technology enables meaningful change when coupled with improvements in business processes. It's not the equipment, it's the new systems and new approaches they allow. Several management best practices could deliver significant additional cost reduction opportunities if implemented across the Federal government landscape in conjunction with those mentioned earlier. These include:

- **Business Process Management**: to provide governance, methodology and tools with which to provide continuous improvement in the agility and performance of an organization's process environment. Based on private sector experience, such improvements can be expected to yield savings of up to 5% of sales (or costs).
- **Organizational Change Management**: to provide a framework for managing the effect of new business processes, changes in organizational structure or cultural changes within an enterprise on its employees. While there are not industry standard metrics on the ROI associated with this methodology, it has become widely recognized as a critical success factor in the successful implementation of major transformational programs.
- **Leadership from the Top**: to demand accountability and drive real change. We are seeing this at the federal level. States and local governments demand similar leadership. Today, it is difficult for some states to consolidate their IT infrastructure and applications because they are managed by each individual agency with their own budget and IT staff. Each agency wants to retain their budget because that gives them more "power". A few states have bills in process, legislation or executive orders to complete consolidation efforts, and there is no substitute for such leadership from the top.

CONCLUSION & NEXT STEPS

All told, the aforementioned initiatives could generate **\$920-1,170 billion** in savings over 10 years. These are incremental to the approximately **\$240 billion** in savings that we estimate the Department of Defense will generate over ten years as a consequence of the operational improvement effort recently launched by Secretary Gates.

The imbalances in the Federal budget must be addressed. While reasonable people may disagree concerning the speed with which that imbalance is eliminated, we all agree that there is an urgent need to adopt a credible plan for doing so. The business and economic risk associated with inaction is no longer tolerable.

We know that it is possible to achieve the level of savings we have outlined here. We also know that these savings can be realized while at the same time improving service. We've seen it in industry after industry, and we've seen it in our own companies' transformations. Most importantly, we know that the operational and process improvements we are proposing do not just cut costs, they also foster collaboration, idea sharing and a culture of innovation.

The Federal Government has an opportunity to adopt a long-term spending strategy that is structurally sustainable and that fosters and enables investment in our country's future. Through a combination of innovative, technology-fueled efficiency and commercial best practices, we can make our government smarter, more agile and better able to drive America's future growth and greatness.