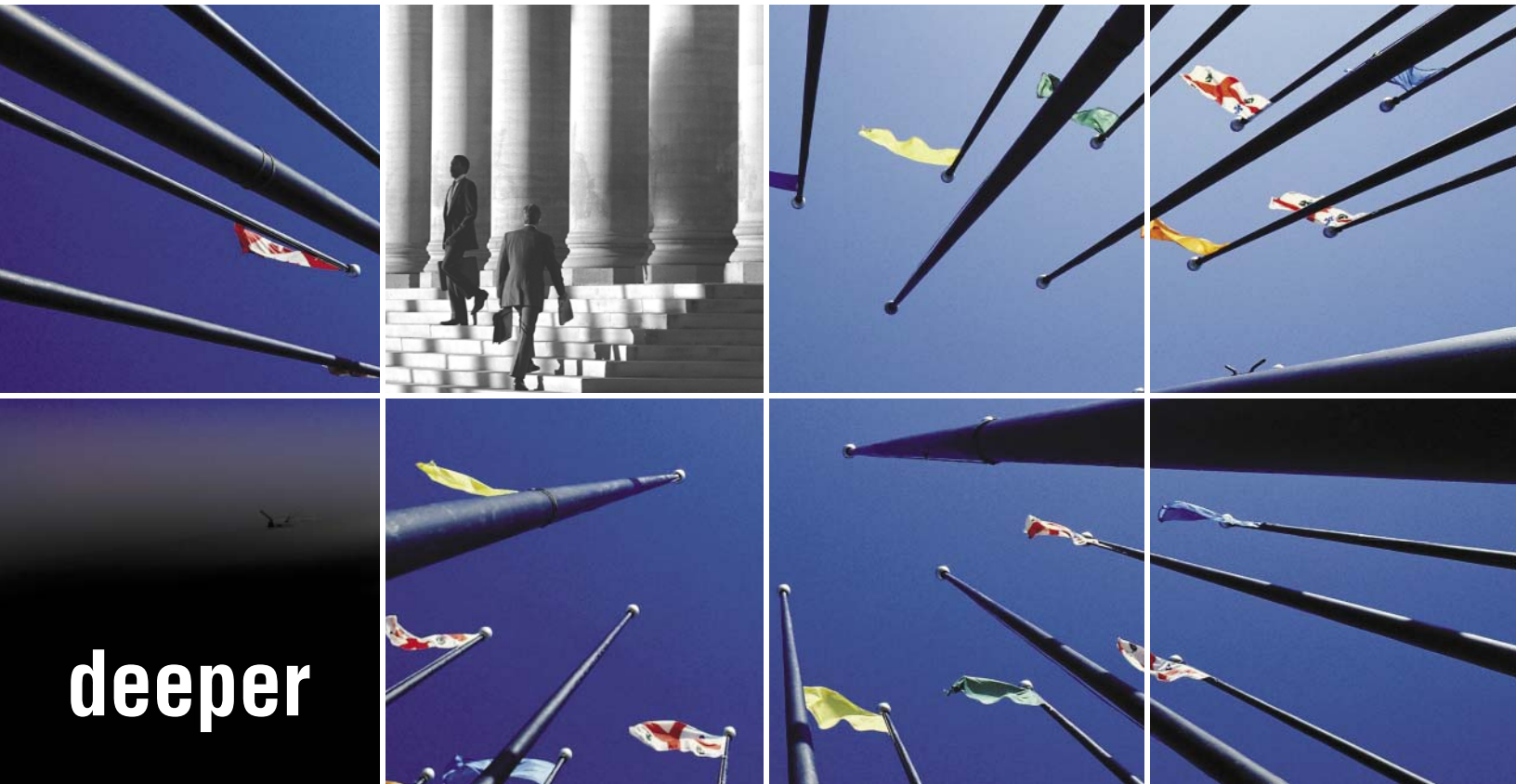


Operational efficiency and organizational effectiveness: How do state and local government initiatives measure up?



deeper

*An IBM Institute for Business Value executive brief
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Introduction: Linking government initiatives to operational efficiency and organizational effectiveness

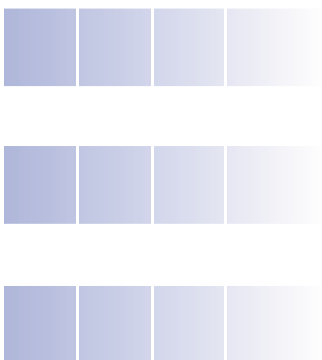
Difficult economic times have led to significant government budget overruns. State and local governments throughout the United States have had substantial budget shortfalls in the past few years and the trend is expected to continue. For fiscal year (FY) 2004, budget shortfalls for all U.S. states may extend to as much as US\$80 billion.¹ The National Association of State Budget Officers noted, "As states fight to balance their budgets, the solutions available to them are increasingly dire, and some of the most difficult fiscal decisions have yet to be made."²

The state budget crisis trickles down to impact local governments as well. When the National League of Cities (NLC) surveyed 145 cities in April 2003, 75 percent reported they were less able to meet their financial needs than in 2002 – sharply up from the 55 percent response to that question in NLC's 2002 survey. In the 2003 survey, 74 percent of respondents anticipated being even less able to meet their cities' financial needs in 2004, when 54 percent expected even weaker local economies.³

Improving operational efficiency and organizational effectiveness represent primary goals for many governments trying to resolve these financial pressures. However, many investment options exist – so many, that choosing among them can be an onerous task. Choosing the right option depends on knowing which initiative best meets key stakeholder needs, accurately predicting the benefits and – perhaps most importantly – how to manage implementation to attain the desired ROI.

To better understand the relationship between government initiatives and operational efficiency and organizational effectiveness benefits, IBM, in cooperation with the Robert H. Smith School of Business, University of Maryland, conducted a study in October and November 2002.⁴ A total of 412 U.S. government professionals (primarily state and local government representatives) participated in a Web-based survey and rated various initiatives on operational efficiency and organizational effectiveness. Additionally, interviews of decision-makers – representing business and technology leaders from a cross section of government departments, such as tax, social, public safety and "e-government" – supplemented the survey results. This research specifically evaluated:

- The goals for 11 common government initiatives
- Overall operational efficiency and organizational effectiveness benefits from the 11 initiatives
- Improvements achieved for eight key performance indicators for operational efficiency and organizational effectiveness
- Barriers and success factors from implementing the initiatives.



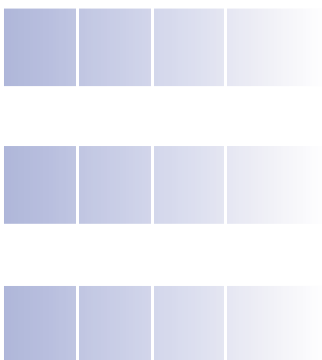
It is anticipated that the findings from this study will help governments: (1) better understand the current performance of initiatives, (2) identify strategies to enhance operational efficiency and organizational effectiveness, and (3) create return on investment calculations for initiatives.

Executive summary

The IBM/Robert H. Smith School of Business, University of Maryland study highlights seven key findings regarding the relationship of government initiatives to operational efficiency and organizational effectiveness:

- Government entities tended to look internally for transformation opportunities. Sixty-two percent of the goals for initiatives were internally focused. Only 22 percent of goals were to improve customer service
- Overall, initiatives provided moderate operational efficiency and organizational effectiveness benefits – average score = 3.3 (Scale: 1 = low, 5 = high)
- Highest benefits ensued from investments in IT infrastructure/enterprise architecture and “e-Workplace”/Intranets. So far, enterprise resource planning (ERP) and customer relationship management (CRM) have provided less benefits
- State and local governments made similar investments with similar results
- The primary benefits across all initiatives were improved information distribution and more effective/efficient customer service, even when these were not the primary goals of the initiatives
- Investments have not significantly helped to reduce operational and service delivery costs or enhance employee development
- The primary barriers to higher benefits were a lack of organization and process transformation required to support initiatives.

In short, state and local governments are making significant investments, but their results are not fulfilling expectations often enough. With no end in sight to financial constraints, there is an ongoing need to optimize the ROI of every initiative. The full potential of government initiatives won't be realized until business process and cultural changes are enacted along with technology implementations. Planning for a comprehensive transformation that removes organizational, process and technology barriers may be the way to achieve more significant payoffs.

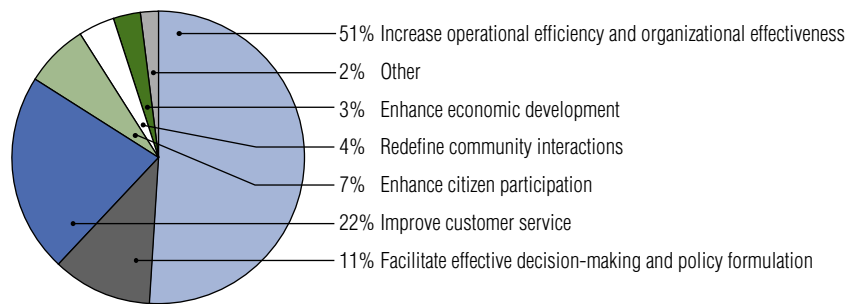


Summary of findings: Seeking operational efficiency and organizational effectiveness

Looking for change in all the right places

The study shows that state and local survey respondents understand that managing the ongoing financial crises and improving customer services requires eliminating internal process inefficiencies. Specifically, when asked to identify their top goals for each government initiative (see Figure 1), 51 percent of survey respondents noted that initiatives were intended to *improve operational efficiency and organizational effectiveness*. Another 11 percent identified *facilitate effective decision-making and policy formulation*, for a total of 62 percent focused on internal objectives.

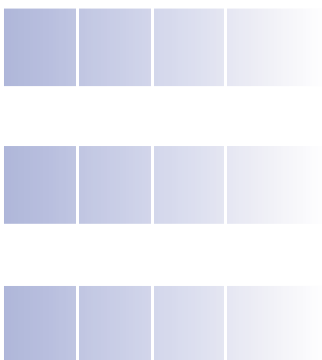
Figure 1. Operational efficiency and organizational effectiveness are top goals of implementing government initiatives.



Source: IBM/Robert H. Smith School of Business, University of Maryland study, November 2002.

Although more than half of respondents had internally focused goals, this does not imply that state and local governments are not customer-centric. In fact, the root causes for many service problems are internal administration, process and technology inefficiencies. So a focus on internal efficiencies is an attempt to eliminate the burdensome, paper-intensive and manual activities that cause service problems. Additionally, many respondents face intense budget pressures and are looking for these initiatives to cut unnecessary costs without reducing service levels.

To a lesser extent, governments focus on external goals, such as *improve customer service*, *enhance citizen participation*, *redefine community interactions* and *enhance economic development* (together comprising 36 percent of the overall total). A lesser focus on external goals, combined with a preponderance of tactical customer service improvements (for example, providing services via the Internet), further suggests that governments are concentrating more on day-to-day service problems than long-term service improvement strategies, such as implementing new business models or reconstructing routes to constituents.



Benefits are beginning to occur

This study evaluated the performance of 11 initiatives⁵ for the most sought-after government goal: improving operational efficiency and organizational effectiveness. Overall, the ratings of survey respondents reflect their views that the initiatives provided moderate benefits – average score = 3.3 (Scale: 1 = low, 5 = high). Cluster analysis of the benefit scores across eight key performance indicators⁶ (KPIs) led to three groupings of initiatives (see Figure 2):⁷

- 1) Strong benefits: Moderate to high scores across all eight indicators
- 2) Moderate benefits: Moderate scores across a modest set of indicators (often four or more)
- 3) Some improvement: Moderate benefits across less than four indicators.

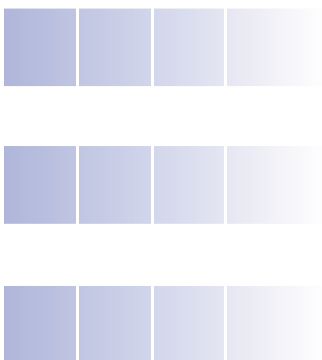
Figure 2. Overall, government initiatives have provided moderate benefits for operational efficiency and organizational effectiveness.

	Rank	Benefit score	Initiatives
Strong benefits	1	3.56	IT infrastructure/enterprise architecture
	2	3.43	e-Workplace/Intranets
	3	3.37	Strategic planning
	4	3.35	Strategic outsourcing
Moderate benefits	5	3.27	Business case analysis
	6	3.23	Case management
	7	3.19	Portal
	8	3.15	Business process/organization change (without technology)
Some improvement	9	2.98	Enterprise resource planning (ERP)
	10	2.96	Customer relationship management (CRM)
	11	2.79	e-Learning

Benefit Score: 1 = Limited, 5 = Significant

Source: IBM/Robert H. Smith School of Business, University of Maryland study, November 2002.

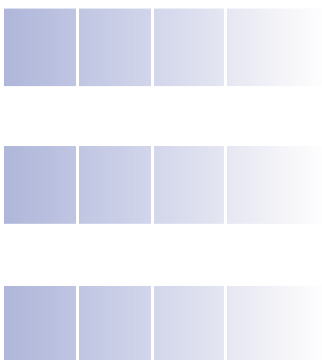
Among the strong benefits, changes to information technology (IT) infrastructure/enterprise architecture ranked highest. This initiative focuses on enhancing data management processes and systems and significantly improved information distribution, as well as the efficiency and effectiveness of customer service and service delivery. Higher benefits were also indicated for internal e-Workplace/Intranet initiatives, which improved employee access and use of information. Repositioning



initiatives – such as strategic planning and strategic outsourcing – provided strong benefits by promoting cross-functional collaboration and resolving organizational factors that can impede transformation. As a local level revenue department manager noted, “Strategic outsourcing allows us to do work we could not otherwise do with limited staff which does not have adequate experience for the outsourced tasks.”⁸ In fact, much of the success of these strong benefit initiatives stems from collaboration among departments and the elimination of process, organization and technology change barriers during planning and implementation.

By contrast, some of the lower-performing initiatives were often treated as “IT initiatives,” without incorporating business transformation to accompany the implementation efforts. Without performing key tasks such as business process redesign, ongoing training (beyond “the basics”), communication planning or knowledge transfer, governments cannot realize the full benefits from initiatives. The moderate benefits score for business process and organization change initiatives reflects benefits from business process reengineering or organizational restructuring efforts that were undertaken without technology and suggests that higher benefits could stem from jointly undertaking business transformation and technology implementations.

Typically, business transformation activities were not evident for “e-Learning” initiatives, which subsequently had the lowest impact on improving operational efficiency and organizational effectiveness. Additionally, widely publicized initiatives such as enterprise resource planning (ERP) and customer relationship management (CRM) solutions provided only some improvement. However, positive signs are evident. Many ERP and CRM initiatives are still in the process of implementation and benefits are beginning to accrue. One IT director at the federal level noted that their ERP implementation provides, “better and quicker financial and HR information [and] ... makes *fact-based decisions* more common.”⁹ Some significant improvements were also identified for CRM systems. As a local administration manager stated, “We have implemented a CRM solution...that allows us to track and manage all citizen complaints from inception to resolution. This has been a very successful tool for ensuring efficient resolution of citizen issues.”¹⁰



“Business transformation has put people who are best qualified to understand the technologies in those areas and [they] oversee the implementation of the technology and make recommendations on where the organization should go in the future.”

Local government
IT manager¹²

The findings suggest that governments are experiencing improvements, but may not have yet fully leveraged the complete functionality of some initiatives. Examining the overall benefit scores suggests the results shown in Figure 2 may stem from various factors:

- 1) Most investment areas require significant business cultural change to achieve the desired ROI. Successful initiatives combined technology investments with business and organization transformation. Many studied initiatives did not include major changes to existing processes, organizational structure, roles or business models – thereby limiting benefits primarily to improved information access and faster customer service.
- 2) Collaboration is key. Government initiatives must focus on improving collaboration among departments and with customers – for example, by establishing consolidated databases and leveraging integrated processes and data.
- 3) Benefit scores in this survey may be lower than in reality because: (a) departments are often conservative in their estimations, and (b) they may not have detailed performance data.
- 4) Complex initiatives, such as ERP and CRM, often result in simultaneous usage of multiple systems. This can add near-term burdens for employees, who may not recognize benefits while still in transition.
- 5) Operational efficiency and organizational effectiveness benefits stem from process and cultural change which often represent long-term efforts, so it is possible that full benefits may not yet be apparent.¹¹

Major similarities exist between state and local government¹³

Thirty-five percent of survey respondents represented the state government community, 58 percent were local government participants and the remaining seven percent represented federal and international governments. Responses from state and local governments revealed that they undertook quite similar initiatives, resulting in comparable impact on KPIs (see Figure 3).

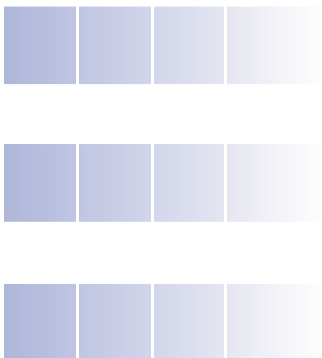
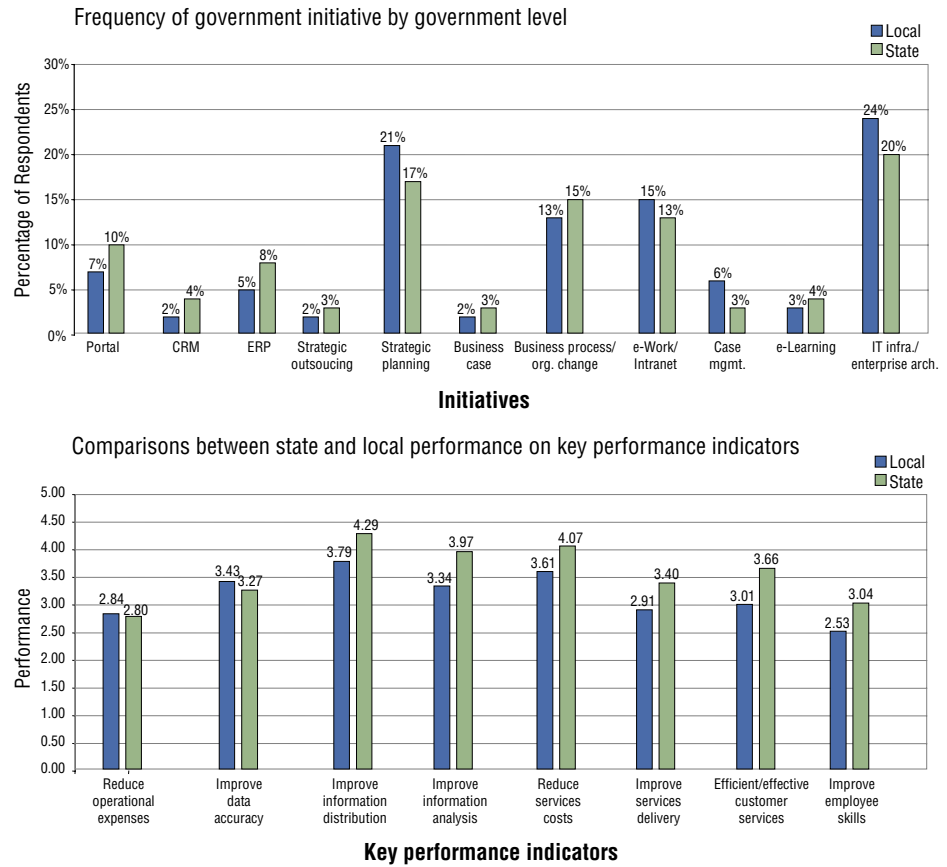
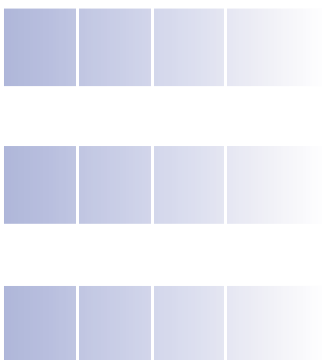


Figure 3: Comparison of state and local government responses by initiative and KPIs.



Source: IBM/Robert H. Smith School of Business, University of Maryland study, November 2002.

For both state and local government representatives, *IT infrastructure/enterprise architecture* represented the most frequently cited initiative (20 percent and 24 percent, respectively). Additionally, *distributing information* had the highest performance score for state and local governments. However, one significant difference rests in the perceived improvements in customer service. Specifically, state government respondents indicated that their initiatives provided slightly better results on the efficiency and effectiveness of customer service (M=3.66), than local governments (M=3.01).¹⁴ The difference may be explained by organizational change factors. Many local government respondents indicated that high resistance to change, insufficient training, low acceptance of technology and weak communication were limiting factors in achieving benefits from their government initiatives.



Making the mark in information management and the administration of services

To determine the underlying benefits for operational efficiency and organizational effectiveness, the 11 initiatives were evaluated against eight KPIs (see Figure 4). To aid this evaluation, the eight KPIs were segmented into four performance categories.

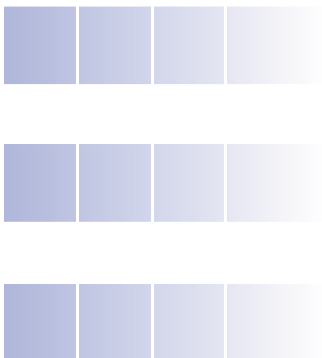
- 1) *Information management*: Promotes more effective and efficient data capture, storage, analysis and use to improve services and manage operations
- 2) *Administer and deliver services*: Reduces service delays and errors by improving the efficiency and effectiveness of internal administration and customer service processes
- 3) *Employee development*: Improves the efficiency and effectiveness of processes by helping employees to develop the necessary skills and knowledge to effectively administer and deliver services
- 4) *Financial improvement*: Reduces operating and service delivery costs to meet economic and budget pressures concerning data, processes and people management.

Figure 4: Ranking of operational efficiency and organizational effectiveness KPIs.

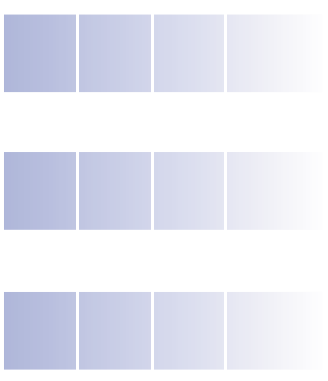
Rank	Mean	Operational efficiency and organizational effectiveness key performance indicators	Category
1	3.76	Improve distribution of information and communication	Information management
2	3.61	Provide more efficient/effective customer service	Administer and deliver services
3	3.54	Improve services delivery/cycle time	Administer and deliver services
4	3.41	Analyze information to improve decision-making	Information management
5	3.33	Improve data accuracy	Information management
6	3.00	Improve employee cross-functional skills	Employee development
7	2.91	Reduce costs of providing services	Financial improvement
8	2.80	Reduce operational expenses	Financial improvement

Benefit Score: 1 = Limited, 5 = Significant

Source: IBM/Robert H. Smith School of Business, University of Maryland study, November 2002.



“Increased sharing of resources across departments has helped to increase productivity and [reduce] cycle time. We have only just begun this process, and so far, we have been pleased with the short-term results.”
 Local administrative manager



Cluster analysis of each initiative across the four categories revealed:

- Most benefits were in information management areas
- The administer and deliver services category provided moderate benefits, primarily in the area of faster service delivery time
- Initiatives had relatively little impact on employee development and financial improvement.

Information management

Initiatives improved information management for two primary reasons. First, it received the most focus. Second, improvements were made primarily within the silo – not across departments – limiting the need for process and organizational transformation. These factors, in particular, led to improved information distribution, communication and accuracy scores. However, the lack of transformation efforts to consolidate data and facilitate cross-agency collaboration is evident by lower scores for improved information sharing, data analysis and better decision-making. Further, intimidation by new technology, particularly at the local government level, often served as a barrier to achieving higher benefits.

Administer and deliver services

Administration and service delivery benefits were evident with high benefit scores for faster service delivery and responses from better data access and distribution. However, limited value added services, such as consolidating data and services across departments or interpreting the information, were identified. Initiatives that incorporated a plan for tackling organizational issues – such as IT infrastructure/ enterprise architecture and case management – had the greatest impact on improving services and delivery time. However, governments recognize that their current initiatives have the potential to improve service with an increased focus on transforming business processes.

Employee development

Study results suggest that employee development programs are not a priority for many governments and therefore had a very limited impact on operational efficiency and organizational effectiveness improvements. Cross-functional skill development stems, in part, from coordinated efforts to assess and track employee skills while promoting an environment of pervasive information sharing. IT systems can assist in this process, but overall improvement requires embedding technology in enterprisewide business processes that are redesigned to attract, develop and retain

people and knowledge. When employee development was identified, it often failed to integrate key elements such as competency development, performance management, knowledge networks, career planning and skills assessment. This represents an opportunity for focus because successful business transformation activities require skilled, knowledgeable workers.

Financial improvement

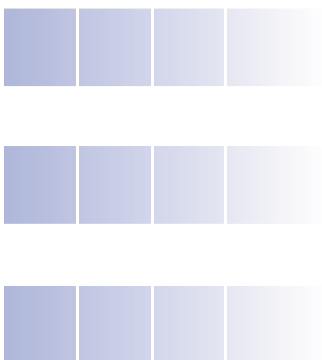
Overall, the initiatives had the weakest impact on easing financial burdens. Financial improvement did not serve as the top benefit for any of the 11 initiatives. Failure to focus on the root causes for high cost processes, adherence to traditional funding models and limited business transformation activities led to only some reduction of service costs and operational expenses. Financial improvement does not automatically occur with technology investments. For example, creating business cases and engaging in process redesign activities can identify and eliminate costly or time consuming activities that do not add value. As one state IT lead noted, “The discipline of business case analysis is very helpful in assessing the value of investments and strategies and choosing from among alternatives.”¹⁵ Additionally, setting financial performance objectives and removing process and organizational barriers are critical to achieving financial benefits. Underpinning these steps is the commitment of leaders to focus on financial performance. In fact, without making financial improvement a top priority, governments cannot become substantially more efficient or effective for the long-term.

Strategies for improving operational efficiency and organizational effectiveness

As governments think about ways to improve operational efficiency and organizational effectiveness, they may choose to develop strategies that focus on one or more of these four performance areas. By sorting key issues into these four areas, governments can identify the most applicable operational efficiency and organizational effectiveness approaches for their organization. Then, the appropriate key actions can be incorporated into their strategies.

To promote better information management:

- Adopt mechanisms to effectively and regularly capture and refresh customer wants and needs
- Connect processes and tools to effectively distribute information
- Integrate redundant information systems – and promote technology that enables information sharing
- Implement intelligent search and query tools
- Invest in tools to better analyze and learn from consolidated data.



To reduce service delays and errors from inefficient and ineffective program administration:

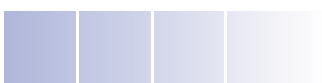
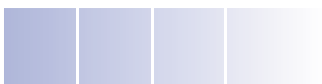
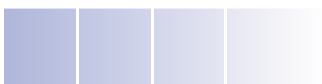
- Identify the root causes for inefficient processes and services
- Identify new and value-added services
- Integrate service delivery across the enterprise
- Evaluate potential service delivery partners (such as private sector companies or other departments)
- Integrate internal governance processes.

To verify that employees have the skills and knowledge to effectively administer and deliver services:

- Demonstrate the business benefits from investments in employee development
- Establish cross-department information-sharing mechanisms
- Integrate Web learning with traditional education curriculums
- Integrate processes to attract, develop and retain people and knowledge
- Support technology investments with *ongoing* education

To reduce operating and service delivery costs to meet economic and budget pressures:

- Develop business cases that establish detailed performance objectives for each service
- Evaluate innovative funding or private financing options
- Determine fixed and variable costs for each service
- Determine core and non-core services – evaluate partnership options for non-core areas
- Investigate usage-based service contracts.



Overcoming barriers to effectiveness and efficiency

Heightened budget pressures are driving state and local governments to improve operational efficiency and organizational effectiveness. Study results suggest that governments have made improvements by addressing some of the root causes of operational efficiency and organizational effectiveness (such as *information management* and *administer and deliver services*). Therefore, it is not necessary for governments to abandon their initiatives – instead, they should adapt their implementation approaches to resolve some of the key barriers that exist across each of the initiatives. The findings from the IBM/Robert H. Smith School of Business, University of Maryland study identified three categories of change barriers facing state and local government leaders (see Figure 5).

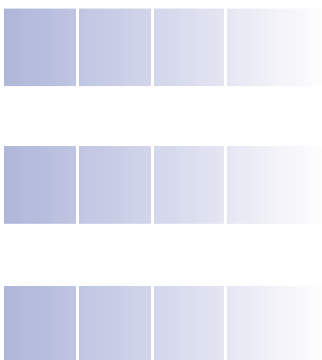
Figure 5. Key barriers encountered by government leaders.

Organizational	Process	Technology
<ul style="list-style-type: none"> • Resistance to change • Lack of leadership support • Lack of employee skills • Limited knowledge transfer 	<ul style="list-style-type: none"> • Limited cross-agency collaboration • Lack of redefined business processes • Internal politics 	<ul style="list-style-type: none"> • Lack of technology interoperability • Prevalence of proprietary systems

Source: IBM/Robert H. Smith School of Business, University of Maryland study, November 2002.

The respondents also identified common actions they took to overcome these change barriers and improve operational efficiency and organizational effectiveness. Some of these actions included:

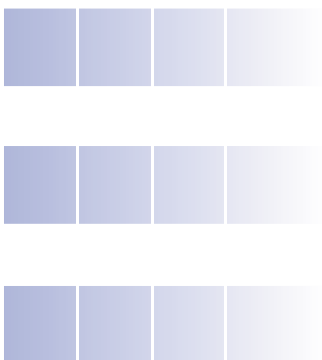
- Establishing streamlined processes and management systems that demonstrate the linkage between investments in internal initiatives and external benefits for customers, communities and stakeholders
- Increasing the focus on financial performance by developing detailed financial objectives and targeting implementations on high-cost activities
- Increasing the focus on employee skill development through proactive efforts to transfer knowledge before, during and after implementation
- Gaining commitment from leaders to developing a new business culture – one that focuses on process and organization transformation and rewards performance management, knowledge development and cost reduction
- Shifting decision-making from a silo, entitlement and administration focus to a collaborative, outcome- and value-driven approach.



Progressing toward desired outcomes

State and local governments recognize that fiscal constraints will continue. This mandates wringing the most value from every investment to increase operational efficiency and organizational effectiveness. Increasing the value from initiatives occurs when implementation plans: (1) address organization, process and technology barriers from the start, and (2) increase the focus on employee development and financial improvement strategies.

Operational efficiency and organizational effectiveness strategies serve as foundation-building elements. When internal process, organizational and technology operate well, there is an opportunity to focus resources on external goals of customer service, economic development and community interactions. Governments have started down the path with key initiatives; an increased focus on business transformation can deliver the value they expect.



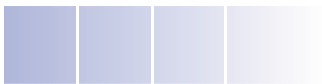
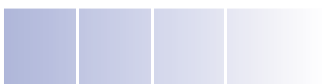
About the authors

Maria T. Gresham, Ph.D. is a management consultant within the IBM Institute for Business Value. She helps governments develop and implement strategies for successfully managing enterprisewide business transformations. You may contact Maria at gresham1@us.ibm.com.

Jeremy Andrulis is a management consultant with the IBM Institute for Business Value. He helps governments at all levels identify innovative strategies for successfully managing change. Contact Jeremy at andrulis@us.ibm.com.

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Appendix A: Methodology

This study evaluates the relationship between key initiative areas and their associated impacts on operational efficiency and organizational effectiveness by applying eight key performance indicators (KPIs). Secondary analyses and a series of focus groups with government subject matter experts defined the government initiatives and KPIs that were tested. The KPIs provide specific measurable factors for broad outcome areas (in this case, improve operational efficiency and organizational effectiveness).



Further, the KPIs represent:

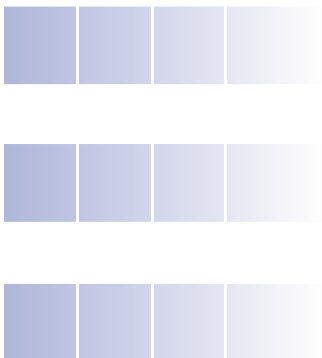
- Objectives for the goal to improve operational efficiency and organizational effectiveness
- Common benefits for the 11 government initiatives tested
- A balanced scorecard approach to measuring performance (see Figure A-1).

Figure A-1: Key performance indicators grouped by performance category.

Financial improvement	Information management	Administer and deliver services	Employee development
<ul style="list-style-type: none"> • Reduce operational expenses • Reduce costs of providing services 	<ul style="list-style-type: none"> • Improve data accuracy • Improve distribution of information and communication • Improve decision making 	<ul style="list-style-type: none"> • Improve services delivery/cycle time • Provide more efficient/effective customer services 	<ul style="list-style-type: none"> • Improve employee cross functional skills

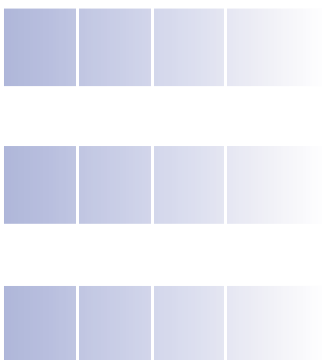
Source: IBM/Robert H. Smith School of Business, University of Maryland study, November 2002.

To determine which initiatives provide operational efficiency and organizational effectiveness benefits, IBM and the Robert H. Smith School of Business, University of Maryland surveyed 412 U.S. government leaders.¹⁶ Data were collected using a Web-based survey.



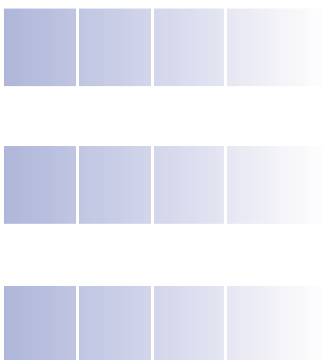
Appendix B: Initiative definitions

- *Business case analysis (BCA)* is a structured and systematic methodology for analyzing the alternatives involved in a business decision. The BCA considers such elements as process redesign, technology solutions, resources needed, funding and partnership options.
- *Business process/organization change* refers to the activities required to transform or reengineer business process. Organization change efforts help enterprises to identify barriers to changes and build capabilities and commitments to promote successful transformation.
- *Case management* includes the collaborative processes which are used to assess, plan, implement, coordinate, monitor and evaluate the options and services required to meet an individual's needs – using communication and available resources to promote quality, cost-effective outcomes.
- *Customer relationship management (CRM)* is a set of management activities and processes used to identify, select, acquire, develop, retain and better serve customers. CRM encompasses a coordinated set of activities revolving around the customer.
- *e-Learning* is the use of Internet technologies to deliver a broad array of education and training that enhance employee knowledge and performance. e-Learning represents various electronic education methods.
- *e-Workplace/Intranet* solutions are the tools and services that enable employees to access data and use services to improve their productivity.
- *Enterprise resource planning (ERP)* streamlines business processes that cut across the functional areas of the business by applying commercial off-the-shelf application suites.
- *IT infrastructure/enterprise architecture* consists of physical technology components – such as hardware, software, data and network – chosen and assembled in a manner that best suits the business strategy, as well as the overall configuration and management of those components.
- *Portal/Internet applications* – Portal is a single point of access to all of the services provided by the local, regional or national governing body, allowing online interaction with its constituents – including associated Internet applications – to improve service delivery
- *Strategic outsourcing* is the management of government applications, IT systems and/or business processes by third parties (external to government).
- *Strategic planning* sets the business and technology direction for an organization by establishing the vision, mission, goals and objectives based on key stakeholder goals and customer wants and needs.



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- ³ National League of Cities press release. National League of Cities Calls on Congress to Approve \$40 Billion to Help Kick-Start Local and State Economies. April 23, 2003. http://www.nlc.org/nlc_org/site/newsroom/nations_cities_weekly/display.cfm?id=ACAF68D2-5192-43C2-8EE004258C066E1D.
- ⁴ See Appendix A for more information on the methodology.
- ⁵ See Appendix B for definitions of the 11 initiatives.
- ⁶ Key performance indicators are the measures for program efficiency and effectiveness. Eight key performance indicators are evaluated in this study: Reduce costs of providing services, reduce operational expenses, improve the distribution of information and communication, improve services delivery/cycle time, provide more efficient/effective customer service, analyze information to improve decision-making, improve data accuracy, and improve employee cross-functional skills.
- ⁷ Clusters were based on impact across the eight key performance indicators. Each KPI had equal weighting.
- ⁸ IBM/Robert H. Smith School of Business, University of Maryland Survey, November 2002.
- ⁹ Ibid.
- ¹⁰ Ibid.
- ¹¹ Respondents were asked to focus on initiatives that they had implemented within the last two to three years. Thus, benefits from more long-term, costly investments may not have accrued at the time the survey was conducted (November, 2002).
- ¹² IBM/Robert H. Smith School of Business, University of Maryland Survey, November 2002.
- ¹³ Federal government respondents accounted for 5% of the sample. Thus, comparisons by government level were made at the state and local level only.
- ¹⁴ $t=2.08$, $p<.10$ (two-tailed). Clearly moderate results, but serves as an indication for future research in this area.
- ¹⁵ IBM/Robert H. Smith School of Business, University of Maryland Survey, November 2002.





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Route 100
Somers, NY 10589
U.S.A.

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06-03
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