Optimization of information to improve decision making in government: The information value chain way

Government leaders face a wide spectrum of strategic pressures. A balance must exist between long-term economic and social development, while filling near-term community and citizen needs. Seamless, personalized government services are demanded along with supporting information privacy and enhanced security features. Operational pressures to maintain public assets and infrastructure efficiently must coexist with the loss of skilled human resources and heightened demands for convenient and quick services. Information lies at the nexus of these decisions. More specifically, having the right information at the right time to make the right decision is essential.

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Introduction

For the past decade, citizens have gotten a taste of "information at their fingertips" – and they like it. In this increasingly global environment, corporations – to stay competitive – have had to adopt more efficient operational systems to maintain and grow their customer bases. Customers are the winners in this newly competitive environment, because corporations now provide improved services that are more efficient and less expensive. Private-sector services are becoming more customized because it works. A focus on optimizing information has driven these changes. Now, citizens around the globe are looking to government for similar benefits – and asking, "Government… why not you, too?"

Recent events highlight the need for optimizing information. The tragedies of the September 11th terrorist attacks highlighted the importance of capturing, updating, analyzing and sharing information quickly to allocate resources effectively. Significant budget constraints heighten the need to eliminate non-value-adding practices. Pervasive revenue pressures require departments to coordinate activities to attract and develop businesses. The potential loss of government employees requires developing integrated processes to capture, develop and retain institutional knowledge. And customer expectations to receive services when, where and how they want require having the information to support a "no-wrong door" approach and deliver value during interactions.

"It's hard to get people to understand that in 1999 and beyond it's a new world … managers don't understand that it's not business as usual anymore."
—Jim Yearby, Director, Career Service Authority, Denver.

Improvements have been made. The flood of e-mails and ubiquitous links to Web sites make it clear that gaining access to information is less of a problem. In many places, sophisticated data centers are replacing filing cabinets. Instead of directing questions to the few "key" people in an office, intent-based searches and Web portals direct information queries. Documents and presentations are sent with a quick click of a button – the mail and tube era has ended. Sophisticated algorithms are updated with market and customer data. Online applications allow customers to complete transactions conveniently – without waiting in line.

These initiatives provide a start. But to truly realize business benefits, governments have more to do. Activities begin by recognizing the interrelationship among these initiatives—a connection based on achieving three common goals, right information, right time and right decision. The linchpin to achieve these goals, as well as to link tactical initiatives, is the information value chain (IVC). The IVC is an integrated framework that bridges the processes, organizations and technologies necessary to manage, analyze and use information. This report shows how the IVC can help governments prioritize initiatives by linking these three goals. A look into the future shows the value of decisions based on an IVC approach.

Government-to-government … Security

Frank is pulled over by a city police officer for a traffic violation. Before leaving his vehicle, the police officer has received detailed information through his handheld device about the owner of the vehicle, Donna, who—as indicated through cross-reference—is Frank's ex-wife. Frank, driving without a license, receives a facial scan by the officer through his handheld device, for identity confirmation. Information comes back: Frank has a warrant outstanding for his arrest in another state. Given the nature of these warrants, an electronic scan is made of the vehicle without the police officer's manual effort. Illegal firearms are found under the front seat and the trunk. Frank is arrested on the spot. Arrest information is sent to the state indicating that the suspect in question has been apprehended.

By completing a few sections of information appearing on the screen of his handheld device, the police officer fills out his report. The officer taps into state and federal databases to pull relevant information from those databases about Frank, such as the nature of the warrants and his current violation. Notification is promptly sent to Donna informing her that her car—earlier reported stolen—has been found.

Frank is handed over to the county sheriff where he is detained. The police officer's approved information is updated in the databases. An electronic arrest record is created with new arrest information and noted for immediate arraignment. The district attorney's office accesses the approved information through the intranet-based database to support the development of the People's case.

At the video arraignment, the State Judge makes a well-informed decision based on up-to-date criminal information in Frank's electronic criminal history file that has been updated by police, sheriff and three other states.

At trial, the U.S. district attorney (DA) has Frank's entire electronic criminal record. The DA also has access to files from other states, the FBI and other federal agencies. Both prosecution and defense make discovery of digital documents, photos and audio.

"The inability, or limited ability, to gather relevant data/information, to draw conclusions and act on those conclusions, and to expand the… narrow, analytical perspective is leading to a less-than-satisfactory deliverable."[1]

Creating value from information—the IVC approach

The previous scenario illustrates the power of coordinated strategies to help ensure that stakeholders have the right information at the right time to make the right decision. Biometric technology enabled precise data capture. Wireless devices enabled quick information distribution. Linked processes and data centers organized common data elements and allowed targeted queries. And sophisticated data models produced rapid analysis and justification for action.

However, creating value in decision-making processes requires more than attaching a piece of software to a system. Department silos must not inhibit information flows. Efforts must be made to verify that accurate information exists—the first time it is captured. Plans must exist to proactively seek out people who can use the information. Investments are needed in analytical tools and education for employees. Having the right information at the right time to make the right decisions means a new culture—it means viewing information as a part of an IVC. Figure 1 describes this value chain. It shows that effective decision making begins by identifying needs and capturing, updating and storing information effectively. Strategies can then be developed to verify that information is passed to the right people at the right time. Access at the right time will enable analysis, action and learning that will help promote the right decision.

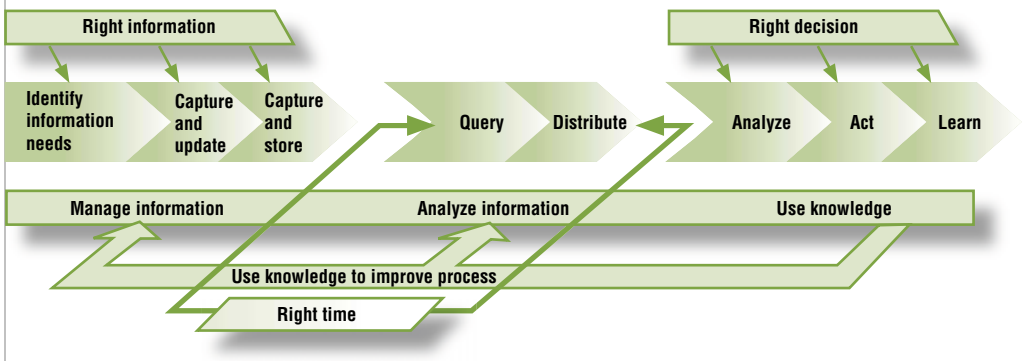

Figure 1. IVC supports a seamless flow of information needed to get the right information at the right time to make the right decisions.

Source: IBM analysis.

Government departments face different challenges across the IVC. However, before we present a roadmap for determining how to achieve right information, right time and right decision, we will examine each area separately.

Having the right information

For many governments, the manner in which information is identified, captured and stored is haphazard, siloed, contradictory and unreliable. Overcoming these challenges is the foundation for success. Inaccurate, out-of-date or incomplete data sets provide a shaky foundation on which to base decisions. However, there are examples where governments are getting it right. For example, the U.K. government is working to develop a process for identifying the diverse needs of its entire constituency. It holds "consultations" on various public policy issues. Citizens, governmental agencies and interest groups also submit comments electronically. These groups can be placed on an e-mail alert list to be kept informed of new consultations.[2]

Right information challenges

- Data privacy – won't or can't share
- Information viewed and managed from a silo perspective
- Lack of data standards
- Outdated and redundant data
- Incomplete data
- Manual data entry
- Information equals power.

The U.S. Internal Revenue Service Federal/State "e-file" application allows taxpayers in 37 states and the District of Columbia to file federal and state claims electronically in one application. By linking tax systems, citizen information is automatically captured and replicated between government levels. This reduces manual data entry and increases accurate information, facilitates electronic funds transfer and leads to faster processing of tax returns.[3]

Electronic data storage improvements have enabled Singapore to implement TradeNet, the world's first nationwide electronic system for trade documentation. The trading community is given the means of submitting permit applications electronically to government bodies for processing. If the permit application is approved, a permit message will be returned electronically to the sender. The TradeNet system uses the mailbox concept. It functions like a "postman" who stores, sorts and directs mail into the correct mailbox.[4]

Given its importance, many government initiatives focus on the "right information" goal. Research from the IBM Institute for Business Value has identified key strategies that governments can adopt for having the right information (see Figure 2).

Identify information needs	Capture information	Store information
• Inventory information across departments – what do we have and what do we need? • Segment needs by customer segments • Develop a business architecture that links processes and information needs across the value chain • Cross-reference information needs across departments • Catalog information sources across functional areas to know information that is available • Prioritize the information gaps.	• Standardize data sources using enterprise data policies and procedures • Assign resources to refresh old data with new customer and market data or link systems to update data electronically, or both • Standardize data definitions • Link multiple capture channels across departments • Design capture systems to verify that nonproprietary data can be shared across agencies • Eliminate redundant data by using sophisticated filters and matching algorithms.	• Integrate systems to allow all agencies to access the same data • Establish storage rules and provide electronic tools that automatically "flag" storage problems • Implement the necessary security features and control measures to store data across entities • Establish storage requirements based on user needs • Evaluate options to redesign enterprise architecture • Train staff to handle mission-critical exceptions and standard operations • Assess, script, and exercise test plans for storage and recovery of information from an alternate site.

Figure 2. Strategies for having the right information include the identification of needs, and the capture and storage of data.

Source: IBM Institute for Business Value research.

Right information provides the foundation for effective decisions. This needs to be the first goal. Resolving the gaps in identifying, capturing and storing information will increase data accuracy and decision-making confidence. Costs for storage and capturing data will decline. Redundancies will be eliminated and processes streamlined. Most significantly, right information will help facilitate confidence in the data and faster decision-making without the worry of second-guessing the actions.

At the right time

The second link in the decision-making chain requires the right people to have access to the information they need at the right time. This requires effective access and sharing capabilities. Clogged wireless channels or delays in physical transportation cannot be excuses. Options must exist to help ensure information is obtained when, where and how a stakeholder needs it. The IVC addresses some of the key "right time" challenges by highlighting the importance of effective querying tools and distribution methods.

Having information at the right time requires the ability to see the data in flexible, easy-to-read, easy-to-update formats. Drill-down capabilities should exist from virtually any perspective. Information distribution techniques are needed to support the easy flow of information from one authorized user to the next. For example, all Estonian government business is conducted electronically. Cabinet ministers read proposed laws, make comments and suggestions, and carry out votes entirely online. Constituents can query for audio broadcasts and full-text transcripts of Parliament sessions. Everything—with the exception of certain classified agenda items—is accessible by ordinary citizens. Estonia boasts 214 Internet connections per 10000 inhabitants—ahead of Germany, and just slightly behind the U.K.[5]

Right time challenges

- Multiple steps, rules or levels of bureaucracy to make decisions
- Paper-based environment
- Current culture requires detailed data analysis, not "gut feel"
- Don't know where to get the information.

The power of effective distribution among government departments is evident in how the state of Arizona sought to improve its voter registration and change-of-address services. Applying lessons from its successful online service to renew driver's licenses, Arizona established acceptable standards and rules for sharing information. Collaboration could have been difficult because the voter registration service uses electronic signatures already on file with the Department of Motor Vehicles (DMV). The DMV could have protected its information, making this new service essentially null and void. However, because departments shared data, more than 2200 voters have registered using the system since August, 2002.[6] Many have raved about the new system in an online feedback survey, including one who said, "Great system. Now let me vote in my underwear from home, and I'll be a happy Arizonan."[7]

These examples demonstrate how governments may support information access at the right time. Figure 3 provides strategies that governments can use to support information query and distribution when and how it is needed.[8]

Query information	Distribute information
• Prioritize queries and verify that queries are focused on delivering valuable information	• Understand when, where and how stakeholders want to receive information
• Verify that processes and tools exist for resources to conduct research	• Effectively target end users—do not send information indiscriminately
• Eliminate manual approval procedures to access information	• Establish privacy and security standards and firewalls
• Provide dynamic report creation to generate new reports and queries instantly	• Evaluate policies that prevent information sharing among departments
• Verify that security features and privacy exist for customers to perform their own inquiries	• Establish intranets and shared information repositories
• Provide Web-based reports to make access much easier and less costly	• Establish communities of practice for key issues across functional areas
• Adopt data analysis tools that provide fast and efficient reports	• Promote by-request "information push" processes that regularly feed necessary information to target audiences.

Figure 3. Right time strategies include the query and distribution of information.

Source: IBM Institute for Business Value research.

Right time strategies can dramatically improve the efficiency of government. Successful implementation of query and distribution strategies enables governments to act as a single enterprise. Information flows seamlessly across departments and jurisdictions. Highly bureaucratic structures are flattened as decision making is pushed to the point of customer interaction. Manual, paper-intensive processes are replaced with electronic sharing and communication systems. Targeted information distribution increases as stakeholders leverage the availability of the right information to speed up service delivery and decision making.

Make the right decisions

Sound decision making requires that governments analyze information proactively and act effectively, based upon detailed assessments and spend time learning from the results.

Right decision challenges

- Not aware of the wealth and value of information available
- Limited time and resources to analyze information
- Inadequate tools to support decision making
- Lessons learned not considered in making new decisions
- Decisions made based on the way it has always been done.

Skilled resources need the tools and time to analyze information. Acting on the analysis requires integrated policies and procedures to mitigate risks, clear roles and responsibilities to support efficient services, and a decentralized decision-making structure to promote a customer focus. Finally, an organizational commitment to evaluate existing processes, use leading practices and establish performance objectives is necessary to create a learning culture.

The State of California Franchise Tax Board (FTB) portal demonstrates right decision improvements. This access channel will help the State in conducting analysis to find and collect tax revenue from individuals who fail to file in any given year. When fully implemented, the FTB system will help officials identify up to 100 000 nonfilers annually, and will identify and track individuals who previously had avoided detection. The FTB expects to tailor all its correspondence and notices to reflect specific facts of a case and the system will allow the agency to provide online reference material and tutorials for users.[9]

Miami-Dade County Portal provides a number of services for residents, employees, businesses and visitors. The portal offers links to "e-government" services, news, county government sites, county information, and traffic and weather information. There are a number of services provided by the county, including requests for services, parking tickets and occupational licensing.[10]

The U.K. Government Knowledge Network allows senior levels of government to discuss and learn from policy issues and briefing information that can then be used to address Ministers' questions. This portal has led to improved communications channels and collaborative responses to high-profile issues.[11]

The effectiveness of these strategies depends on people. Right decision strategies seek to leverage the investments that governments have made in technology and process improvements by creating an organizational culture that can efficiently and effectively reach the right decision. Research from the IBM Institute for Business Value has identified key strategies that governments can adopt for making the right decision. Figure 4 describes these strategies.

Analyze information	Act	Learn
• Verify that resources have the skills, technology and incentives to analyze information • Establish governance model that promotes analysis • Regularly update algorithms with current market and customer data • Incorporate next-generation technology to perform regular performance analysis.	• Examine rules that prevent customer facing resources from acting • Provide incentives for resources to act in the best interest of the customer – not to ensure administrative ease • Develop a sound business case framework that outlines strategic fit, benefits, costs and risks of decisions • Provide "e-government" services, based on customer needs and market trends.	• Develop processes to regularly incorporate lessons learned • Establish career counseling and employment paths • Establish performance objectives, based on customer and market demands • Establish processes and a management system to measure outcomes and predict future performance.

Figure 4. Making the right decisions requires the ability to analyze information, act on it and learn from it.

Source: IBM Institute for Business Value research.

Right decision strategies focus significantly more on cultural and organizational transformation activities. The efficiencies gained in right information and right time—from automating manual processes, implementing systems to effectively share and store information, and reducing data collection costs—will provide employees with more time to analyze and learn from information. Right decision strategies provide concrete, purposeful analysis as the basis for decisions, by enabling skilled individuals to use tools to pool the right information together in an efficient, timely fashion. If government regularly integrates lessons learned into the process, improved decision making can result.

"I think the ability to act, analyze and learn requires an intellectual process... But, to do this, agencies must first address the strategies of the agencies and the priorities of the agencies."[12]

Enabling actions that facilitate getting the right information at the right time to make the right decisions

Creating right information, right time and right decision strategies can disrupt operations, introduce new cultures and lead to many unsettling moments. To mitigate uncertainties during this transformation, we have identified five key enabling action areas that organizations need to address; leadership and sponsorship, funding, cross-agency collaboration, management of change and open, flexible, enterprise architecture.

Leadership and sponsorship

One of the top challenges associated with government decision-making is leadership.[13] Leadership refers to those individuals who facilitate change by creating and maintaining a positive climate and culture for change. A clear vision needs to be at the center of their public communications. They must also possess the power and garner the organizational commitment to legitimize change to the target audience. However, they also need to meet privately with key stakeholders and discuss the consequences if plans are not met. Strong leadership was exemplified by the state of Michigan during its Michigan.gov initiative. The State recognizes that "centralized leadership creates the greatest impetuous for change."[14] The Governor is in the forefront of the initiative, communicating the State's vision of "e-government." "Use of Michigan.gov is growing because the number of services is growing," said Governor John Engler. "More than 100 services are up and running—on your time, not ours."[15] Additionally, Michigan conducts leadership and stakeholder assessments to ensure continued alignment of its interests with the "e-government" initiative, and establishes change-leadership plans as required for each "e-government" project. The results are clear: Daily views now average 525 000.[16]

Funding

Transformation initiatives require funds. In this era of significant budget constraints, a methodical approach to funding based on sound business cases helps resolve tight IT budgets. Constant reevaluation of the funding strategy, the business case, changing customer needs and government strategies need to feed into funding decisions. The funding strategy for the state of Arizona's Arizona @ Your Service portal initiative takes a methodical approach by assessing funding and customer needs continuously. Arizona adopted a hybrid-funding model that blended private-sector investments with transaction, convenience and subscription fees. And it continues to examine other funding options to increase the flexibility and sustainability of the model.[17] Further, Arizona uses its legislation as a foundation for determining its approach to funding.[18]

Cross-agency collaboration

Collaboration begins by understanding the customer from a holistic view. The IVC mitigates turf battles and siloed government decisions by linking information across departments—based on customer needs. Supported by a management charter that clarifies roles and responsibilities among departments and defines an organization structure, an IVC can help facilitate collaboration. In addition, to create new relationships among organizations, policies and rules must change. Restrictive policies that hinder data exchange need examination. Government must evaluate whether data collection, storage, distribution and analysis rules that prevent seamless interactions remain valid.

Management of change

Improving decision making will require change management. There are a number of techniques that governments can use to manage the change process successfully:[19]

- Establish a sense of urgency. Expose the fact that there is a need to address the issue at hand. Governments must be prepared to address the drivers and communicate and demonstrate their services.
- Mobilize commitment to change through joint diagnosis of business problems. Create task forces to diagnose business issues and concerns. Such teams can produce a shared understanding of what can and must be improved, and mobilize commitment to implement the change. This task force should include members of these teams, as well as other agencies and ministries.
- Use a governance group as a guiding coalition. No leader can accomplish any significant change alone. This group can serve as a coalition of influential people within governments and outside governments who implement change.
- Communicate the vision. Use multiple forums, repetition and leading-by-example to foster support for the new vision.
- Generate short-term wins. Maintain employees' motivation to stay involved in the change by ensuring that they have short-term goals to achieve and that they receive positive feedback when goals are reached.
- Consolidate gains and produce more change. As momentum builds and changes are made, the leadership has to guard against complacency. To do this, the leadership can use the increased credibility that comes from short-term wins to change systems, structures and policies that do not fit well with the vision.
- Monitor progress and adjust the vision as required. Use regular surveys to monitor customer and employee attitudes, and develop and implement plans that address those issues.

Open, flexible enterprise architecture

Governments must create integration methodologies that help to delineate business issues clearly, develop integration plans, and rapidly implement the tools and processes to support integrated back-end systems. Adaptive enterprise architectures support the business of government effectively, enable information sharing across traditional barriers, enhance government's ability to deliver effective and timely services and support agencies in their efforts to improve service. Committing to an ongoing, renewable architecture process fosters a technology-adaptive enterprise. Architecture is the enterprise road map, guiding all future technology investments, while identifying and aiding in addressing gaps in the entity's IT infrastructure. Architecture provides technology commonality that reduces security risks by providing standards for implementing security features. It also promotes staff retention by simplifying training and support requirements. It reduces the total cost of ownership (TCO) factor by producing savings in technology through component commonality, joint purchases and technology reuse. However, implementing an architecture requires a significant capital investment.[20]

"We are really at the beginning stages of this work. We have to get people to see that they have to determine what they need before they move forward." —Personnel Manager, State of Kentucky. IBM Institute for Business Value, Information value chain research, 2002.

Getting started

Although governments may face gaps in right information, right time and right decision capabilities, it is important to develop strategies that prioritize initiatives that provide the greatest value. The IVC optimizes the interdependencies and connections of information by structuring strategic and tactical decision-making across various issues, processes and government entities. Essentially, IVC answers the question: What "right" strategy provides the most value?

Governments are able to realize benefits from their decisions by taking a four-step approach where they define the (see figure 5):

1. Drivers
2. Process
3. Scope
4. Strategically "right" approach.

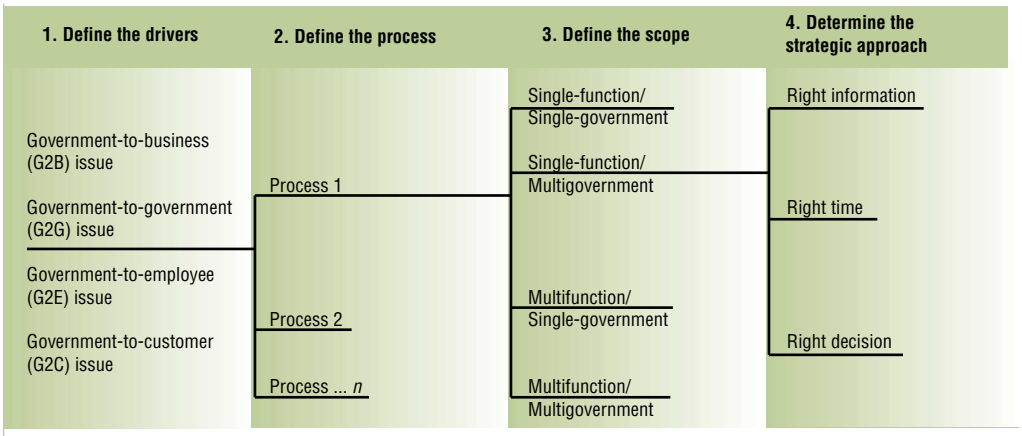

Figure 5. The decision-making structure for the IVC helps define the drivers, issues, scope, strategic approach and implementation strategies.

Source: IBM Institute for Business Value research.

The IVC approach is applicable to any segment strategy (government-to-government, government-to-business, government-to-citizen and government-to-employee) because it integrates processes at the enterprise level—across each subprocess and functional area. This mitigates standardization changes, operational inefficiencies and service redundancies. Attending to key questions at each step of the decision-making structure helps determine strategies on right information, right time and right decision.

Defining the need for better decision-making: What are the drivers?

Government entities can best prioritize actions by answering several questions about their business and customer expectations:

- What core services do customers expect?
- Do we have processes in place to provide those services?
- What are our risks and vulnerabilities?
- How can we gain operational efficiencies?
- What common customer expectations do we have across departments? How well are we addressing those expectations?
- Are we leveraging our human capital effectively to support cross-agency collaboration in times of crises? During standard operations?

Defining the process

Leaders need to prioritize the processes that will yield the greatest benefits—they need to build the business case. The following key questions facilitate this decision:

- Do we know the sources of inefficiency—root causes?
- What are the current costs of the process?
- What are the benefits of improvement? Are they linked to strategic areas of concern? Can we estimate the benefits—through real data or modeling techniques?
- Do we have integrated action plans to address this process across departments?
- Who is the target audience for this process? How do we include this audience in this decision?
- How can we work with the private sector?
- What are the risks if this process is not improved? (Risks of not doing.)
- What are the risks of improving this process? (Risks of doing.)
- Do we have the power to act on all aspects of this process?
- How will we know if and when we are successful?

Determining the scope

Leaders need to decide on the extent that their chosen process will extend beyond functional and departmental boundaries. Consideration must be given to thinking of the process as a customer sees the issue—without organizational boundaries.[21] Decisions on the proper strategic scope begin with addressing the degree of cross-functionality and cross-entity consideration, which can be addressed through several questions:

- What are the risks associated with each strategy?
- How will we fund this initiative? What innovative funding models are available?
- Are there policies and programs that exist that prohibit certain collaborative approaches?
- Do we possess the right skills, personnel, time and understanding to undertake a strategy of this scope?
- What cultural issues must be managed to facilitate collaboration?
- Do we have the management strength and system to facilitate adopting the desired scope?
- What kinds of cross-functional skills do our employees have (or need) to support our desired scope?
- Do we have effective communication and awareness programs that can incorporate the communication needs of our desired scope?
- Is our staff ready to tackle this issue within the confines of a new strategy of this magnitude?
- Do we have open technology systems that can support the level of information sharing required by our scope?

Defining the strategic approach and enabling actions

With decisions about issue, process and scope, leaders can determine effectively where the major pain points exist and develop strategies for addressing those areas. Figure 6 represents a checklist of critical activities that help resolve common pain points.

Right information	Right time	Right decision
• Conduct strategic analysis to determine mission, vision, customer needs, competency requirements, risks and benefits • Redesign processes around customer wants and needs • Help ensure that trusted data sources exist by enabling filters that capture and update data and provide multiple access channels • Eliminate redundant and outdated data by identifying common data elements across entities • Implement the necessary security features and control measures to collect and store data across entities • Integrate back-end systems or middleware, or both, to allow data integration across entities.	• Prioritize and conduct research to identify reports and query capabilities needed • Adopt data analysis tools that provide fast and efficient reports • Provide a way for customers to receive information in a private and safeguarded manner – when, where and how they need it • Promote cross-departmental communication and knowledge sharing • Encourage pervasive computing – wireless, kiosks, Web, and so on • Evaluate policies that support and encourage information sharing.	• Verify that resources have the right knowledge, skills, abilities, tools, and incentives to analyze information and execute strategic initiatives • Establish a holistic approach to measure outcomes and predict future performance • Adopt an enterprisewide management system • Adopt collaboration strategies and centers of competency • Outline strategic fit, benefits, costs and risks, and the business case • Establish communities of practice • Establish a communications and leadership program.

Figure 6. A checklist of critical activities helps define the challenges and strategic approach.

Source: IBM Institute for Business Value research.

Conclusion

"We have to do a better job of sharing and communicating our successes—to provide better access to information as well as best practices."—Senator G. Voinovich, NAPA speech, June 21, 2002

More than ever, government decisions have long-lasting impact on privacy, security, safety, efficiency, effectiveness and, of course, customer satisfaction. Customers—having experienced customer centricity in the private sector—can no longer accept bureaucratic, nonresponsive services from government, especially because they increasingly have options to receive some government services from the private sector. In short, national and global events have raised the bar on expectations from government. Government entities must make decisions based on what is good for its customers, as opposed to how it fits within its administrative process. This transformation begins with an integrated information value chain. Governments need to do more then just manage information. They need to actively create value from information.

The IVC approach helps prioritize the key pain points, the processes involved in the strategic scope and the strategic alternatives to managing information. Whether coordinating emergency services, helping with a business start-up or providing family services, making good decisions requires effective information management. An IVC approach provides the method to help ensure value is created during decision making.

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