The IBM Information Agenda guide for government

Gain insight and optimize results
Introduction
The days of managing by instinct and guesswork in the public sector are quickly vanishing. Analytics-driven agencies are connecting people with trusted information to make real-time decisions that help them fulfill their missions and even exceed the expectations of citizens and lawmakers.

But for many, these breakaway results remain out of reach. Despite the wealth of data and content available today, decision makers are often starved for true insight. In a 2010 study of hundreds of senior and C-level leaders around the world conducted by the MIT Sloan Management Review and IBM, 60 percent of respondents said that their organization had more data than it could use effectively.¹

Information is key
Analytics are a valuable tool to optimize an organization’s efforts. In the MIT/IBM survey, 50 percent of the respondents called improvement of information and analytics a top priority in their organizations. And more than one in five said they were under intense or significant pressure to adopt advanced information and analytics approaches.²

What’s keeping government departments from turning abundant information into insight that changes the way they operate? Lack of confidence and knowledge, and lack of an analytics strategy. Decision makers don’t have confidence in the information that they are currently getting, and they don’t know where or how to start to make improvements.

With confidence in their information, government leaders can trust that the insights they gain through comprehensive analytics capabilities will ensure they make the right decisions at the right time. The result: a smarter organization that can respond more effectively to a range of business issues, from serving everyday citizen requests to major strategic initiatives.
Developing that confidence requires a plan to formulate a deep understanding of the organization and what is necessary to improve outcomes. By creating an information agenda and roadmap for business analytics and optimization, government leaders can build their strategy. They can develop an actionable, customized path to analytics that optimizes every transaction, process and decision at the point of greatest impact. They can evolve to a state where everyone in the organization has access to the information and insight needed to enhance their critical decisions. And they can have confidence that their technology investments are aligned with their strategic objectives, and will grow and change with their business.

This white paper will examine how government agencies are using advances in business analytics and optimization to turn information into actionable insight, and how an information agenda approach can be used to explore the fundamental strategies that lead to better business outcomes.

**The value of business analytics and optimization**

Creating value through business analytics and optimization starts with understanding the specifics of an industry and business. Nowhere is this more crucial than in the public sector, where dramatic changes are taking place.

Globalization is transforming organizations of all kinds, and government agencies are no exception. As national economies become increasingly interdependent and population demographics grow older, it is more critical than ever that federal/central, state/provincial and local governments operate efficiently and use their limited resources to connect people to services based on individual needs. At the same time, tax compliance and collections backlogs may prevent governments from receiving the revenue they need to fund key programs.

Adding additional pressure, citizens are looking to government agencies to improve service offerings, ensure a sustainable environment and strengthen national security and public safety—all while managing resources effectively.

Today's quickly changing demands require new initiatives that go beyond efficiency improvements to focus on smarter delivery of programs and services, improving tax compliance and enhancing public safety and security. As a result, government agencies are investing in capabilities designed to support citizen-centric case management, automate and streamline audit processes, identify crime patterns and coordinate public safety and security initiatives across agency lines—and these initiatives all depend on business analytics and optimization.

With business analytics and optimization, government agencies can optimize their three primary sources of capital—information, people and finances—to do things they haven’t done before, in innovative ways.
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Getting started with an IBM Information Agenda

Many public-sector agencies want to get started or continue on the path to business optimization, but are uncertain how to proceed. Building an information agenda is the ideal first step.

An IBM® Information Agenda® is a proven, business-oriented approach to creating an enterprise-wide strategy to align information and analytics investments with strategic objectives. An information agenda helps organizations achieve several key objectives:

- Identify data and content that are vital to the organization
- Identify how, when and where information and analytics should be made available
- Determine data management processes and governance practices
- Identify and prioritize the information and analytics projects that deliver the most return
- Align information and analytics to support the organization’s strategy
- Create and deploy an information infrastructure that is agile enough to meet both immediate and future needs

The IBM Information Agenda for government

IBM employs a consultative approach that blends extensive industry experience with significant intellectual property to guide organizations through developing an information agenda. In a matter of weeks, IBM can help government agencies capture their vision and strategy in a roadmap that sequences and rationalizes business analytics and optimization investments over time.

IBM offers a collaborative workshop process that exposes the many issues that may impact business analytics and optimization initiatives. An IBM Information Agenda Functional Assessment provides a deep analysis of a specific business initiative being faced by an agency, such as enhancing efficiency and accountability, promoting collaboration and improving service delivery and responsiveness to citizen needs. In the Functional Assessment, IBM experts run structured workshops and interviews designed to bring relevant departments together with the organization’s IT team.

As illustrated in Figure 1, the four parts of an information agenda are:

- **Information strategy**: The vision that guides decisions and helps the organization determine how best to support its goals
- **Information infrastructure**: The technology components and capabilities needed to establish a common information framework
- **Information governance**: The policies and practices that facilitate the management, usage, improvement and protection of information across lines of business
- **Roadmap**: A phased execution plan for transforming the organization
Information strategy: Recognizing the big picture

The IBM Information Agenda for government draws from industry best practices to identify the primary information-centric imperatives that drive most decisions. Based on its extensive experience with customers in the public sector, IBM has developed Information Agenda Business Outcome Maps that articulate business issues commonly acknowledged in the industry, including:

- Improving delivery of social programs
- Improving tax compliance and simplifying revenue management
- Strengthening law enforcement and national defense and security efforts
- Building intelligent transportation systems

As illustrated in Figures 2–7, the outermost ring of the Information Agenda Business Outcome Map reflects the industry initiatives that government agencies must address to optimize their operations.

The next ring details the specific business objectives associated with the imperatives. These objectives are the basis for key performance indicators that help an agency manage and optimize its operations. For example:

- Single view of the citizen
- Enterprise case management
- Reduction of improper payments
- Information-based decision making for improved performance
- Analytics for proactive planning and decision making

At the center of the information agenda are critical competencies supporting agencies as they strive for innovation and competitive advantage.
**Business analytics and optimization: Transforming government organizations**

Many government agencies are investing in business analytics and optimization to support key initiatives. The following imperatives offer examples of how increased access to and intelligent use of information can deliver a wide range of benefits to various government and public-sector organizations.

**Improve delivery of social programs**

Providing social programs is one of the most important functions of government. Citizens expect the same convenient, responsive and effective service they might receive from businesses in the private sector. However, inflexible legacy applications and unclear or duplicate client records can create delays and bureaucratic confusion. In addition, without accurate and timely information about the citizens who should be receiving services, government agencies expose themselves to fraud and errors that increase the overall cost of providing services.

To target services effectively, governments must find ways to reach out to underserved citizens, while also eliminating the delivery of services to unqualified recipients. IBM solutions help governments to:

- Gain a holistic view of clients and families, which helps to improve service delivery through streamlined case management
- Reduce fraud, abuse and errors by accurately and securely evaluating, tracking, analyzing and sharing collected information

*Figure 2: The Information Agenda Business Outcome Map for social program optimization.*
• Measure, monitor and analyze program performance and client outcomes
• Move away from a transaction-oriented system and focus on building ongoing client relationships and achieving sustainable client outcomes

**Improve tax compliance and simplify revenue management**

In an era of widespread budget shortfalls and increasing demand for services, it is exceptionally critical that governments collect all the tax revenues they are owed. However, tax compliance authorities often lack a clear picture of taxpayer identities and cannot accurately perform taxpayer segmentation analytics—so they cannot always target audits most effectively to collect backlogged revenues.

IBM business analytics and optimization solutions are designed to help agencies better identify and segment taxpayers to find the audit candidates with maximum collection potential. With IBM solutions, government agencies can:

• Streamline tax collection and audit management by correctly identifying taxpayers and linking taxpayer identities
• Improve targeting of audit and collection cases by identifying and segmenting non-filers, under-reporters and short payments
• Analyze tax compliance and outcomes across broad populations

*Figure 3: The Information Agenda Business Outcome Map for tax and revenue optimization.*
Strengthen law enforcement and prevent crime
As criminal threats become increasingly sophisticated, law enforcement agencies are broadening their crime-fighting tactics to focus on preventing crimes before they occur. To do this, government officials need a holistic view of the people, objects, locations and events they are tracking—a view that can help them identify trends and relationships that would otherwise go unnoticed. They must aggregate data sources from across several agencies to help identify individuals, analyze crime patterns and measure program performance. When incidents occur, they must be able to redeploy resources in a flexible, coordinated manner.

IBM business analytics and optimization solutions help law enforcement agencies to:

- Collaborate and share data with external agencies, including citizen reporting and statistics
- Improve criminal identification and investigation through holistic identification of perpetrators, suspects and victims; visualization of criminal and location information; analysis of criminal history; and proactive distribution of alerts to field officers
- Enhance crime prediction and prevention through trusted information access across multiple agencies—enabling adaptive, effective force deployment, command performance management and criminal pattern definition

![Figure 4: The Information Agenda Business Outcome Map for public safety optimization.](image-url)
Meet today’s defense challenges
Defense organizations wrestle with tough challenges, from procurement and readiness to command and control. In the electronic era, achieving mission success often means getting a better operational picture from multiple disparate data sources, tracking the status of strategic and operational assets and obtaining the real-time information needed to make smart decisions quickly.

Defense organizations are seeking the most effective ways to tackle these escalating mission challenges. IBM solutions help those agencies to:

- Make the most of limited assets by better prioritizing the movement of materiel and consumables across supply lines and around the world
- Tighten controls for the timely, cost-effective delivery of defense systems
- Gain real-time visibility of asset readiness at the service level and for joint operations
- Integrate data across multiple systems to improve situational awareness, information sharing and decision support for command and control

Figure 5: The Information Agenda Business Outcome Map for military and defense optimization.
Strengthen national borders and security

National security is one of the most essential services that governments provide. National borders and security organizations must address nonmilitary threats to national security ranging from terrorism to smuggling to natural disasters. Countering today’s asymmetric terrorist threats and protecting the legitimate flow of goods and people requires increasingly advanced cross-organization management and interaction.

Governments must speed information analysis and tighten cross-border and cross-departmental collaboration, while ensuring that increased data sharing complies with privacy and legal concerns. IBM solutions help organizations:

- Share data and analysis with partners to make decisions and act in concert
- Enable agile and timely situational awareness and cross-jurisdictional response to unfolding events
- Integrate, reconcile and synchronize data sources for a single, accessible view of the truth
- Move toward real-time data analytics to accelerate screening, tracking and evaluation
- Use threat prediction and prevention to anticipate rather than react to threats

Figure 6: The Information Agenda Business Outcome Map for borders and security optimization.
Build intelligent transportation systems

Transportation agencies have identified three key scenarios for meeting transportation needs today and in the future: collecting real-time traffic information and using that data to reduce traffic congestion; managing service levels for efficient traffic patterns and asset utilization; and publishing real-time information, such as notifying public-transportation commuters about expected delays. Agencies must be able to measure efficient usage both in terms of the potential for generating revenue and the ability to reduce costs.

IBM intelligent transportation solutions enable organizations to better integrate and analyze the large amounts of data coming in from various systems, sensors and reports, helping them accurately estimate and predict traffic conditions. Transportation organizations can use this information to implement proactive strategies to meet traffic control, management and operation objectives without increasing the time or resources required. With IBM solutions, transportation agencies can:

- Transform multisource traffic data into a standard traffic information model from which to create scalable applications
- Gain deeper insight into use of transportation assets and infrastructure to improve internal processes and identify areas for cost savings, such as equipment maintenance schedules
- Increase the transportation network capacity through more efficient use of current infrastructure and assets
- Save money, staff effort and time by knowing the real-time location, status and availability of transportation assets
- Use techniques such as “smart lanes” to improve traffic conditions and help reduce travel delays by adjusting asset availability to meet peak capacity demands

Figure 7: The Information Agenda Business Outcome Map for building intelligent transportation.
Information infrastructure: Creating, managing and delivering trusted information to support analytics

Optimizing a government organization through analytics requires an information infrastructure that creates, captures, manages and utilizes information more effectively. The IBM Information Agenda process looks for opportunities to use existing IT assets as common components to be utilized for other, additional projects (see the social programs example in Figure 8). With the IBM Information Agenda Capability Model, IBM works with the organization’s subject-matter experts to perform a capability assessment of the information infrastructure and prioritize the opportunities for improvement. This model provides guidelines for new technology investments based on experience gathered from over a thousand client engagements, ensuring the organization can accommodate both short- and long-term objectives.

Figure 8: An IBM Information Agenda helps government agencies address common and critical information requirements with a range of business analytics and optimization solutions, such as process optimization, master data management and workload optimized systems and services.
Information governance: Enhancing information quality, availability and integrity

Information governance, a disciplined approach to managing information across the enterprise, is an essential foundation for business analytics and optimization. By establishing information governance standards, organizations can ensure ongoing data quality, information ownership and accountability.

The IBM Data Governance Maturity Assessment is a comprehensive questionnaire that measures the current capabilities of an organization and identifies performance gaps across governance disciplines. Based on its extensive experience in the public sector, IBM can then apply best practices for creating information governance policies, systems and project offices. The IBM Data Governance Maturity Assessment leverages existing policies and procedures to help foster an environment that can more consistently and confidently manage information. This affords maximum value from information assets to support strategic imperatives.

Roadmap: Bringing it all together with a step-by-step execution plan for creating an information agenda

The IBM Information Agenda roadmap gives agencies the direction and cohesion needed to drive analytics, information management and integration efforts effectively. As an enterprise information and analytics strategy, it spells out the priority, order and time frame of IT projects necessary to achieve critical business optimization objectives. By doing this, it establishes a commonly understood view of projects—including milestones and the relationships between them—to enable effective program management. For many organizations, an IBM Information Agenda roadmap becomes a living document that is updated over time to continue guiding decisions and optimizing investments into the future.
Developing an information agenda can help governments coordinate, rationalize and justify IT projects that support a variety of initiatives. Benefits include:

- Improved social programs that are focused on better outcomes, while simultaneously improving productivity and ensuring payment accuracy
- A reduction in fraud and errors enabled by maintaining a single, comprehensive view of each client
- Increased tax revenue through management of tax audit and collections, as well as identifying and segmenting non-filers, under-reporters and underpayments
- Crime prevention through predictive analytics
- Improved accountability by measuring and monitoring program results
- Efficient prioritization of military and defense resources based on analysis of shared data and real-time readiness levels
- Increased utilization of available public transportation capacity and higher commuter satisfaction
Why IBM is the right partner
IBM Business Analytics and Optimization offers end-to-end capabilities for executing an IBM Information Agenda. Based on open standards, reflecting an investment of more than USD14 billion in acquisitions since 2005 and leveraging innovations driven by over 10,000 technical professionals, IBM Business Analytics and Optimization solutions are among the industry’s most comprehensive.

The IBM Information Agenda for government is a practical, accelerated and proven approach developed by IBM after years of experience working with government agencies around the world. IBM delivers an unparalleled combination of pure science, deep industry knowledge and technology expertise that makes it uniquely qualified to help agencies achieve better outcomes by leveraging their information as a truly strategic asset and using analytics for informed decision making.

IBM’s team of information agenda consultants consists of industry experts who help develop each information agenda, including the roadmap, the business case for funding and the plans to complete individual projects on time and with rapid return on investment (ROI). This intellectual property facilitates a fast path for companies to generate their information agenda in as little as a few weeks.

And when it is time to implement the projects, IBM Business Analytics and Optimization Services offers seasoned practitioners skilled in planning and execution. The combination of extensive industry know-how with leading software, hardware and services can readily define the information-centric projects for government agencies’ needs.

Plus, financing solutions from IBM Global Financing can enable effective cash management, protection from technology obsolescence, and improved total cost of ownership and ROI for information agenda projects. For more information on IBM Global Financing, visit: ibm.com/financing

Public-sector leaders who are ready to jump-start their organization’s information agenda efforts should consider an IBM Information Agenda Briefing to give critical stakeholders the full picture.

For more information
To learn more about the IBM Information Agenda for government and IBM Business Analytics and Optimization solutions, contact your IBM sales representative or visit:

- ibm.com/bao
- ibm.com/software/data/industry/find.html