

Big Data for Government

Drive Better Decisions for Better Policy and Program Outcomes

“In the same way that past Federal investments in information-technology R&D led to dramatic advances in super computing, the initiative we are launching promises to transform our ability to use Big Data for scientific discovery, environmental and biomedical research, education, and national security.”

– Dr. John P. Holdren,
Assistant to the President
and Director of the White
House Office of Science and
Technology Policy

The federal government has spent years collecting and storing huge data sets ranging from census records to satellite images. As in the private sector, the government is now experiencing explosive data growth. U.S. federal agencies alone currently store an average of 1.61 petabytes of data, a figure projected to rise to 2.63 petabytes by 2015. Meanwhile, organizations are under pressure to use that data for greater responsiveness and efficiency on every front, whether that means spotting fraud, improving regulatory oversight, optimizing business travel, or providing more effective direct services.

Challenges to Successfully Leveraging Big Data

Big data can help government agencies improve overall efficiency, boost the speed and accuracy of forecasting and decision making, identify more opportunities for savings, and better understand their own operations as well as constituents' needs. At the moment, however, these agencies face several looming challenges in achieving those goals:

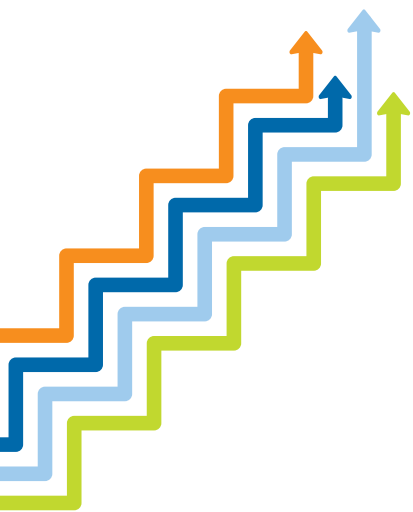
- The U.S. PATRIOT Act, HIPAA, the Federal Data Center Consolidation Initiative, the Affordable Care Act, and many other regulations and initiatives require compliance with complex, stringent rules about data collection, storage, management, and security.
- An average of 31 percent of government data is unstructured, complicating analysis and action as well as hindering interagency cooperation.
- Only 6 percent of civilian agencies and 3 percent of defense agencies say they have the infrastructure and processes in place to successfully leverage big data.
- IT spending across all major federal agencies has decreased by 2.4 percent annually from 2009 to 2013.

In short, the government is expected to do much more with its data using increasingly limited and overcommitted resources. No wonder just 60 percent of federal government IT professionals say their agency is analyzing collected data, and only 40 percent say their agency is using its data to make strategic decisions.

Unlocking Big Data's True Potential

The advent of cloud computing, dramatic reductions in data storage costs, and advances in data integration tools collectively give the government a new opportunity to make better policy decisions based on historical performance and analysis while still controlling spending.

Unleashing the power of big data in the government calls for a new approach to information, one that eliminates data silos and improves cross-organizational intelligence sharing while maintaining the highest standards of data governance, data quality, and data security. This approach will let government agencies analyze, augment, aggregate, correlate, and consolidate growing volumes of data in new ways that lead to deeper insight and greater efficiency.



Creating Better Long-Term Outcomes with Big Data

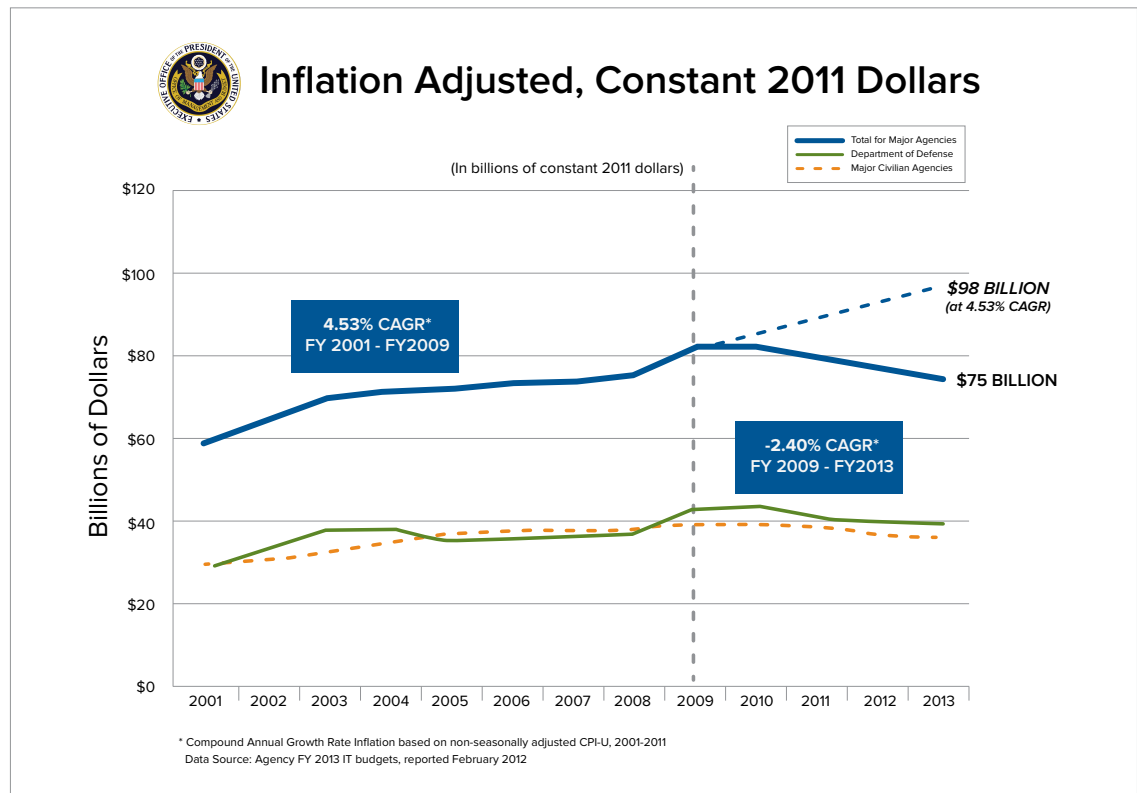
Improving financial and operational outcomes demands that government agencies minimize the cost of processing and managing data while maximizing its value. To do this, they must integrate new data sources both within and across agencies. They must migrate from and retire legacy systems. They must glean insight from unstructured data. They also must comply with regulations on data retention, sensitivity, and privacy. Finally, they must uncover valuable untapped relationships within this data.

Informatica's end-to-end solution addresses the challenges of big data and its 3Vs: volume, variety, velocity. Informatica's best-of-breed products scale cost-effectively as data volumes grow, provide near-universal access to a wide variety of legacy and new datatypes, and can deliver data at any velocity, both real-time and batch. The Informatica solution has been proven in local, regional, and national government deployments, both in the United States and internationally.

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“Before Air Force Knowledge Services, there wasn't visibility on a timely basis. It might have taken weeks or months to extract that information manually out of all the stovepiped transaction systems.”

– Mike Riley, Program Manager
US Air Force



Federal IT spending, adjusted for inflation, has decreased annually since 2009. (Source: Federal Information Technology FY 2013 Budget Priorities, Executive Office of the President of the United States)

Handling Large Volumes of Heterogeneous Data

Government agencies—especially law enforcement, intelligence, and Homeland Security—need technology that can automatically transform, parse, and integrate vast amounts of data, including XML. The technology must be capable of integrating data from multiple sources at whatever speed and scale an agency demands, from batch processing to near-real time.

The Informatica Platform provides near-universal access to multiple data sources, and it replicates and integrates data at any volume and latency. It can help to almost double the capacity of your existing data management infrastructure by identifying and archiving inactive data to low-cost storage and offloading ETL/ELT processing to low-cost commodity hardware for better application and data warehouse performance.

Leveraging a Broad Variety of Data

Government agencies must be able to transform and parse data from multiple sources, in formats as varied as tax records, audio recordings, and geospatial coordinates. They also need to give users easy, consistent access to all types of transactional and interactional data.

Informatica technology supplies a 360-degree view of constituents, programs, and partners. It gives users access to any and all types of data at any latency. Enterprise data integration and data quality continuously enrich this complete view with trusted and valuable insights.

Managing Data Quality and Data Security

The government needs to optimize data processing across platforms, integrating big data with legacy systems both on premise and in the cloud. At the same time, agencies must prove that they are identifying, masking, and managing sensitive data for regulatory compliance, in both production and test environments.

Informatica optimizes the entire data processing pipeline, including data privacy and data quality, with “design once and deploy anywhere” provisioning and processing in a heterogeneous IT environment for big data analytics that includes Hadoop.

Turning Data Assets into Smarter, Faster Action

Every government agency has its own specific analytic goals: detecting fraud, determining service eligibility, streamlining supply chains, leveraging location and proximity data, or tracking the real-time status of equipment from weather satellites to fighter jets. What agencies share is the need to achieve greater insight in less time to improve predictive accuracy and create timely, responsive policies.

Informatica helps aggregate and correlate valuable data both internally and between agencies as well as with the private sector, creating innovative opportunities to serve constituencies and stretch public funds farther.



“Using Informatica’s identity resolution technology, we’re generating an additional \$70 million per year for the state.”

*– Lisa McCormack, Audit Division Area Manager
Texas Comptroller of Public Accounts*

Transform the Public Sector for the 21st Century

Technology now offers an unparalleled opportunity to transform the vast amounts of data that state and federal governments already collect into a deeper understanding of citizens' needs—and into forward-thinking yet cost-effective ways to meet those needs. Investing in data enrichment, integration, and management in the short term will allow governments to unlock more insights and relationships concealed within their data over the long term.

Informatica's core capabilities for integrating, moving, and managing data include six best-in-class technologies:

- Enterprise data integration coordinates all the data managed within the enterprise, including unstructured data.
- Cloud data integration helps you retain control over off-premise data managed in the cloud.
- B2B data exchange enables you to share and manage data with vendors, subcontractors, and other partners.
- Ultra messaging capabilities support situations where extremely low-latency, high-throughput delivery and dissemination of data are critical.
- Data masking enables the secure management of complex, sensitive governmental data for privacy and regulatory compliance.
- And to address all the growing volumes of data, we provide Information Lifecycle Management to handle that data cost-effectively and securely.

We also deliver three best-in-class technologies to unlock greater value in all this data:

- Data Quality to cleanse the data and ensure that it's trustworthy.
- Master Data Management to govern the most strategic information assets and ensure that you can use them for optimal effectiveness.
- And Complex Event Processing to sense events as they occur and act upon all the data coming in.

The Informatica Platform provides all the capabilities government agencies need to ensure that they can integrate and manage ever-growing volumes of data while using that data to improve services and inform public policy.

ABOUT INFORMATICA

Informatica Corporation (NASDAQ: INFA) is the world's number one independent provider of data integration software. Organizations around the world rely on Informatica for maximizing return on data to drive their top business imperatives. Worldwide, over 4,630 enterprises depend on Informatica to fully leverage their information assets residing on-premise, in the Cloud and across social networks.



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