Governments of the world are facing both national and global demands for greater levels of transparency that allow not only citizens but other nations to hold them accountable for their actions. These internal and external pressures and government responses have been fueled in part by innovations in information and communication technologies (ICTs) and the expanding capabilities of governments to use technology effectively.

Recent advances in ICTs have enabled governments to make tremendous amounts of data in digital form available to the public through Web-enabled platforms and applications. Making such data available to the public is seen as an important first step in achieving greater government accountability through improved transparency. One specific example of these global government accountability efforts is in the area of spending transparency. Government responses to the demand for spending transparency often take the form of national level legislation, international agreements, or Web-enabled access to
information. Examples of each include the spending reporting requirements mandated in the 2009 American Recovery and Reinvestment Act (Recovery Act), the US and Brazil led Open Government Partnership initiative, and USA Spending.gov.

Making government spending data available to the public through new collection, integration, and sharing strategies requires new organizational as well as technological capabilities. More specifically, governments need innovative information management and cross-boundary governance strategies. Information management innovations include effective use of enabling information technologies and a culture of information stewardship that acknowledges the public value of government data. Cross-boundary governance innovations include new policies and processes that enable disparate groups of agencies that own or maintain spending data to make decisions across traditional organizational boundaries. Combined, such capabilities allow groups of diverse organizations to effectively create, collect, integrate, and share public information in ways that support both organizational purposes and shared transparency goals.

The experiences gained by New York State in overcoming the challenges it faced in implementing the Recovery Act spending reporting requirements provides valuable insights into the types of transformative information management and governance practices that worked for these agencies. Such practices can be of use to other governments at all levels and internationally who seek success in delivering a level of spending transparency that relies on multi-level, multi-jurisdictional reporting and provides sufficient, timely, and accurate data for citizens to hold their government accountable.

**THE RECOVERY ACT**

The Recovery Act reporting was a first of its kind effort to collect relatively real-time spending data on all tiers of awards and sub-awards issued by the US federal government. In addition, recipients were required for the first time to report on, not just expenditure data, but accountability and outcome measures such as job creation.

CTG conducted a series of forums with NYS agencies to identify and document some of the important implementation insights and lessons learned from Recovery Act reporting experiences. As little or no federal assistance for new infrastructure or processes was given to the states to meet this requirement, New York, like most states, had to rely on a mix of existing and newly developed resources, relationships, and processes to track and report on

**RECENT DEVELOPMENTS IN UNITED STATES’ SPENDING TRANSPARENCY**

In 2006, bi-partisan support enacted the Federal Funding Accountability and Transparency Act, (FFATA) which established the website USA Spending.gov. This single searchable website for all federal spending summarizes major categories of federal spending, provides an IT dashboard for major technology projects, identifies the top government contractors and assistance recipients, and links to procurement information and related resources.

In 2009, the Recovery Act enabled the creation of both a back-end, and front-end, system for reporting spending data. FederalReporting.gov was the back-end, central, government-wide data collection system for federal agencies and recipients of stimulus funds. Recovery.gov was the front-end, web-based system created with the expressed purpose of allowing “taxpayers to see precisely what entities receive Recovery money in addition to how and where the money is spent.”

Requiring multi-tier reporting as we saw in the Recovery Act requirements was an important departure from the 2006 FFATA model of relying solely on state agency reporting. This departure has spurred the introduction of a 2011 bill to replace FFATA, the Digital Accountability and Transparency Act (DATA Act). The OMB Watch, a nonprofit research and advocacy organization that tracks developments in federal spending transparency, compared the current FFATA legislation with the DATA Act. They argued that while the DATA Act looks to further institutionalize multi-tier federal spending transparency and create common data elements and yet another website to display spending data, it differs in that it includes a sunset provision, contains vague definitions of who recipients are, and is missing important data elements and processes for data checks.
expenditures and results. These efforts affected IT systems, business processes, and relationships across government levels and private recipients.

For state recipients with a large number of Recovery Act awards, the reporting requirements generated transformative information management and governance practices that have become institutionalized beyond the Recovery Act period. However, others with relatively few awards used unsustainable workarounds to respond to what they treated as a one-time federal mandate. Examining what happened during the Recovery Act reporting periods is necessary to ensure that efforts going forward will build on the innovations and capabilities created in the process of creating a new level of spending transparency.

A WARRANT FOR INNOVATIVE INFORMATION MANAGEMENT AND CROSS-BOUNDARY GOVERNANCE STRATEGIES

The level of reporting mandated by the Recovery Act was not unprecedented; in fact, the federal government has been requesting this type of information from state agencies who receive federal money for decades. The novel aspects of the Recovery Act reporting included:

- the collection of information from a variety of different programmatic areas
- creation of a single, central spending data repository between states and the federal government,
- data collected directly from sub-recipients,
- the quick turn-around of data on a quarterly basis, and
- a mandate to make information more accessible and transparent.

While agencies with a small number of grants could mainly focus on minor business process changes and use excel spreadsheets to meet the novel aspects of the reporting requirements, for those receiving hundreds of grants with hundreds of subrecipients it was clear that new investments in IT and other capabilities had to be made to meet the challenges.

The NYS Department of Transportation (NYS DOT) recognized that a brute force strategy of manually reviewing hundreds of spreadsheets to collect, verify, and report data was not a workable reporting strategy. As one NYS DOT official noted, “Spreadsheets would have killed us; we would have been buried in that approach.” Alternatively, NYS DOT brought together a number of business units to make decisions around data and to establish new data governance capability to better understand the information they were collecting. NYS DOT turned to their IT department to build the necessary Web interfaces to gather the data into a data warehouse, allowing the agency to pull reliable data from existing systems (see side box).

Held just before the first reporting deadline, the first of three CTG Forums allowed NYS DOT and other agencies to share their stories. The pressure of quarterly deadlines prompted innovative transformations by state agencies who:

- developed new data reporting structures,
- established new communication channels,
- made business cases for enterprise technology solutions,
reinvigorated an enterprise focus on data quality and governance capabilities, and
gained a new appreciation for the value of integrated information and reporting from a business analytics perspective.

The insight of attendees provided a window into the complex relationships of IT and organizational innovation under pressure.

**INFORMATION MANAGEMENT**

Beyond its role as a trigger for renewed attention to data and transparency, the reporting requirements of the Recovery Act drove home the importance of information management through a culture of information stewardship. Information stewardship can be defined as the practice of treating government data as a resource or asset that has organizational, jurisdictional, or societal value to a wide range of different ‘consumers,’ and therefore, treating it as such when collecting, sharing, and storing it. The new emphasis on transparency resulted in new users and uses of the information. Some agencies created spending barometers and geo-coded contracts, and displayed them using maps along with additional contextual information about spending through related data links.

Many of the new uses of data depended on having the appropriate information about the context of data collection. At the forums, both program and IT professionals spoke of

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In early 2009, NYSDOT began using spreadsheet templates provided by FederalReporting.gov to track more than 440 projects being advanced for the Highway Infrastructure Investment Funds; NYSDOT soon realized that the requirement to provide one spreadsheet per award was not feasible. By May 2009, the department made a strategic move in collaboration with its federal counterparts to transition from spreadsheets and, instead, developed a data warehouse that utilized XML for reporting purposes and business intelligence tools.

The time pressure of the first reporting period and the possible risk of losing award funds made a massive redesign of business processes difficult or impossible. NYSDOT focused its efforts on identifying and aggregating the data from existing operational systems and bringing it into its data warehouse to meet its reporting needs. To do this, NYSDOT staff mapped all critical reporting data with their business processes, pulling from eight operational systems from different functional areas within the department. The communication channels between the IT staff and the program areas responsible for transportation projects were greatly streamlined. While standard project management methodologies were followed, team members from multiple program areas engaged in informal communications as needed to get the work done collaboratively. In addition, finance, internal audit, construction, planning, and IT program areas learned more about each others’ business processes; as a result, they were able to redesign how information flowed throughout the department.

The Director and the Recovery Act team, drawn from the program areas and Federal Highway Administration staff, met biweekly to discuss key issues and program status and to share information. A lead reporting manager and website manager were assigned to oversee dissemination of information to the public and to ensure an appropriate level of transparency required by the Recovery Act. Key performance indicators and metrics were established to help NYSDOT manage the Recovery Act program and to ensure successful results.

NYSDOT’s Recovery Act Program won the 2010 GTC East Best of New York Award for Project Excellence.

The benefits of collaboration, data governance, performance metrics and information management gained from the Recovery Act have been extensive. This knowledge is being applied to advance its ‘3R’ key performance indicators and toward developing an enterprise data warehouse that will streamline data management capabilities further, providing even greater savings and value.

The NYSDOT Recovery Act website is www.nysdot.gov/recovery.

NEW YORK STATE DEPARTMENT OF TRANSPORTATION CASE STUDY

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the importance of understanding data use from the user’s perspective. Taking seriously this charge, agencies began rethinking how existing and new information technologies could accommodate the requirement for real-time data consumption and spending transparency.

CROSS-BOUNDARY GOVERNANCE

Beyond the information management considerations, agencies shared with us how they had to find new ways to coordinate both internal work and new relationships with external organizations and agencies. Many responded by creating ad-hoc governance structures that allowed cross-organizational teams to share information needs and work practices among divisions that otherwise did not work in coordinated ways. Some agencies used virtual collaborative software to help organize internal efforts and facilitate the communication across functional teams. These techniques smoothed interactions among units that were all a part of the reporting, but had their own work practices, desired levels of information quality, and uses for the information, such as internal controls, auditing, and risk management process.

Agencies quickly realized the possibility of enormous data quality issues, if for no other reason than the volume of data being collected and the rapid turn around required by the reporting requirements. Governance became a critical issue once the collaborating organizations realized that concerns for data quality were no longer just an issue for the IT department, but a business issue that cut across all facets of spending reporting. The need for consistent, timely data required new real-time processes for review and approval, spurred in part by the added pressure to avoid public exposure of mistakes in the data. The federal government created some of the necessary structure by instituting reporting schedules that enabled the correction of data after reporting deadlines had passed. Several of the agencies devised new data entry processes for sub-recipients to avoid many of the data entry issues that were inherent in past reporting methods. Others created new processes that allowed sub-recipients to enter data directly into a Web-enabled form.

BEYOND THE RECOVERY ACT

The requirements outlined in the U.S. Recovery Act for tracking spending and delivering spending information to the public are just the tip of the iceberg worldwide in terms of new requirements and expectations for government spending transparency and accountability. The lessons learned through the Recovery Act reporting experience provide a leg-up to governments around the world as they begin to lay out new strategies for achieving spending transparency. The challenge ahead is for federal, state and local agencies and private contractors to learn from the experiences of those involved in Recovery Act reporting and to use that knowledge to guide the creation of the capabilities necessary to meet citizen expectations regarding spending transparency.

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