



Achieving Operational Excellence in Government

Taking the public sector enterprise to the next level

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Operational excellence is a term usually associated with private-sector enterprises that are focusing on business processes and technologies that drive improvements in the ways in which they deliver products and services to customers. Operational excellence, however, takes more than technological know-how. It must be founded on a commitment to continuous improvement and a fundamental strategy focused on how processes and operations affect users throughout the enterprise.

While the benefits of operational excellence have been well established in the business world, the time has come for the public sector to take greater advantage of this approach of process-centric improvement. As Peter Berkel, Director of Public Sector Marketing for EMC Corporation, observes, “Now we can easily substitute the word ‘government’ or ‘agency’ for the word ‘corporation’ when discussing operational excellence as all the same principles and advantages apply.”

The cornerstone principles that make programs of operational excellence successful are that they must be customer-focused and that they are implemented in a culture that recognizes the value of being committed to continuous improvement. Most public sector IT organizations today, at the federal, state and local levels, clearly understand their responsibility to their internal and external customers and are searching for improvements, especially those that can speed processes and cut costs.

The search for improvements has a number of major drivers, including legislative and regulatory compliance, homeland security, tight budgets, an aging worker population, and the need to better integrate older silo'd functions and systems. It is an increasingly difficult environment in which all government organizations are being urged to optimize their use of information and IT assets in strengthening the delivery of citizen-based services. Richard Varn, Senior Fellow at the Center for Digital Government, encourages the pursuit of improvements, pointing out that “when it comes to modeling complex systems, in comparison to genomes and weather patterns, government processes are easy.” He explains, “Government agencies have a limited, reasonably sized universe of laws, rules, interactions, data and processes that can be mastered by machine intelligence and managed by caring people.”

Five drivers that impel operational excellence

There are five major drivers that directly encourage the pursuit of operational excellence by “caring people” in any organization:

- **Cost Management**—which includes total cost of ownership (TCO), return on assets (ROA), outsourcing, and use of commercial off-the-shelf (COTS) systems/solutions.
- **Data Security**—such as information access and protection from unauthorized personnel. Organizations need to develop a balanced approach, and any security deployment will likely require a trade-off between security of information and the need to access it.
- **Communications and Network Convergence**—which in the public sector involves interoperability requirements that are driving cross-government networks, especially around social services, health, and homeland security.
- **Solutions Focus**—which for many government decision makers means focusing on acquiring total solutions as a way to improve mission performance, with hardware and software being integrated within service contracts.
- **Information Sharing**—which at all levels of government means cross-government integration and cross-agency/department initiatives and requirements.

These drivers show up in everyday agency operations, like sharing information across organizations, protecting social services or housing information from unauthorized access, coordinating with police and public safety agencies, or planning for disaster recovery and business continuity. Any government organization faced with these IT imperatives and also facing challenges around budgets and cost containment, should consider leveraging their IT investment by targeting four key areas where significant levels of operational excellence can be achieved.

- **Consolidation**—A recent survey showed that consolidation of networks and data centers is currently the top priority for 51 percent of state CIOs. Consolidation of business processes was their number three priority.
- **Integration**—The federal government is funding initiatives across lines of government, academia, industry, and non-profits as a way to promote greater integration and communication. Opportunities exist for innovation in data collection and reporting, particularly as more services are integrated across diverse groups and organizations.
- **Continuity of Operations**—Whether it's a natural disaster or a human-driven event, being able to continue key government operations and services has moved to the top of just about every agency's priority list and CIOs at all levels of government are keenly focused on developing effective plans.
- **Shared Services**—Shared services can include collaborative and/or reciprocal use of another organization's capabilities (such as a data center, possibly even in another state). Or it can mean cross-agency alignment to buy a single, shared services solution for use by multiple government organizations (such as for legal services, HR, etc.).

Consolidation, at the very heart of operational excellence, has always been a significant factor in lowering TCO, simplifying complex IT environments, improving storage utilization, and boosting productivity. Today's consolidation requirements must also address the rapid growth in the amount of information being created, combined with the pressure to maintain service levels necessary to support government business requirements. State and local governments, in particular, have new choices for consolidation, which include key solutions and services to consolidate the physical infrastructure, IT operations, and government information and content.

State and local governments now have comprehensive choices

In seeking to consolidate infrastructure, operations, and information, state and local governments should consider these facts:

- **Virtualization and Infrastructure Consolidation**—allows you to consolidate servers, storage platforms, and file systems into a single infrastructure to increase utilization and lower costs, as well as meet a wide range of service-level requirements. While most government IT organizations have deployed SAN or NAS, new choices for technology consolidation can drive lower costs and improved efficiencies. Key areas of interest include tiered storage, SAN and NAS consolidation, iSCSI for low-cost IP-based SANs, gateways, and server virtualization.
- **Operational Consolidation**—helps you simplify complexity and provide automation and standardization across the storage infrastructure. Consolidating operational processes such as storage management and backup and recovery, and implementing best practices, lowers costs, and improves service levels to support business requirements. Key areas of opportunity include management consolidation and backup consolidation.
- **Information Consolidation**—helps you effectively manage information and fixed content with lower costs. It can also help address compliance and regulatory requirements.

While most government IT operations view “consolidation” as a way to reduce hardware costs, information consolidation also provides new choices to effectively and efficiently manage information growth. Key areas to consider include fixed-content consolidation and consolidation of Microsoft Exchange.

- **Integration**—enables you to combine multiple access channels, integrate front-end and back-end operations, achieve vertical integration, such as linking towns and municipalities to counties and states, and adopt horizontal integration to address related functions. Over the next few years states will likely spend over \$1 billion to bring integrated eligibility services to the Web for use by state and county workers as well as citizen customers.

An example of the benefits of consolidation: Common to all file servers is the fact that utilization is never 100 percent (utilization is usually between 40 and 60 percent) and the majority of data stored in the file server might actually be static. Removing static or fixed content frees up significant space. Then you can combine the remaining data to achieve optimal utilization, remove servers no longer required, and consolidate a variety of servers to a single solution.

An example of the benefits of integration: State integrated eligibility projects are intended to capture new efficiencies by tying together multiple healthcare and social services programs, such as Medicaid, food stamps, Temporary Assistance to Needy Families (TANF), and the state children’s health insurance programs (SCHIP), into a single, Web-enabled interface. This would create savings by eliminating duplication and reducing labor-intensive processes.

Understanding your business continuity (BC) challenges

How well does your existing recovery environment meet service-level objectives for your key government systems?

- What kinds of demands for better availability are you facing from your citizens, other agencies, or even regulatory authorities?
- How hard is it to consistently balance cost and protection tradeoffs for critical applications?
- What kinds of public-sector applications require better protection in your environment?
- What kinds of results were generated by the last audit of your continuity and government preparedness program?

In a recent survey, senior IT managers from various state agencies were asked, “Do you have a business continuity plan for your IT infrastructure?” It is worrying that 69 percent said, “No.” Their explanations ranged from, “Current operations absorb time and most of the budget,” to “We have bits and pieces, but not an overall BC plan.” This reveals a frightening amount of exposure in the event of a disaster or disruption for “operational inefficiency” rather than operational excellence. More than a third of the respondents said that their processes and systems in place for BC “do not” provide for a coordinated “enterprise-level” response capability.

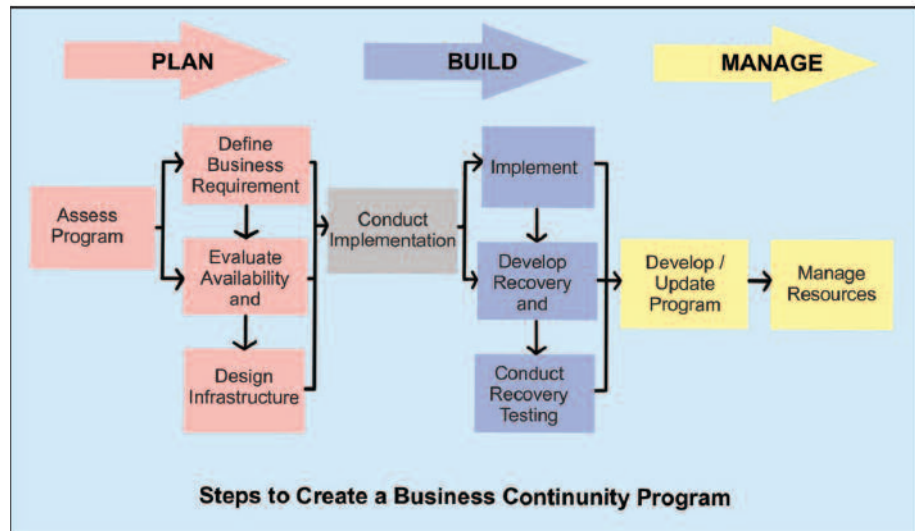
So what can public sector organizations do about the lack of BC preparedness? Peter Berkel of EMC urges that, “As a first step, they should assess their organization’s needs and quantify the challenges they face in establishing the right business continuity capability.”

In addition to the previous questions, some additional questions Berkel suggests are:

- Do you know your peak workloads and application dependencies?

- Have you determined how the interactions between applications and data affect recovery objectives?
- Do you understand your BC challenges and how different processes should work? (This is a baseline requirement before you can move forward.)

A 10-step framework for business continuity



The 10-step business continuity solutions framework graphic illustrates how government organizations can plan, build, and manage, using the best practices that have been developed and observed in leading customer environments. This successful framework has been utilized by organizations in multiple vertical markets. In each case, a consistent methodology focuses on deliverables, key activities, and structured output.

The foundation of this framework is a shared-services approach, as opposed to a typical “stove-pipe” organization or back-office organization. Shared services deliver two major objectives that can get an organization closer to operational excellence:

First, it reduces costs of administrative processes.

- It helps harness the economies of scale,
- Standardizes processes and IT systems,
- And centralizes bargaining power.

Second, it increases quality of output

- Which improves utilization of valuable people and competencies,
- Provides more standardized output,
- And improves overall governance.

Operational excellence is within reach

The transformation of government is well under way on a global basis, and the goal of improving the delivery of government services is led by four primary drivers:

1. Changes in operating business models
2. New strategic developments
3. Replication of best practices
4. Deployment of proven information and communications technology-enabled programs

At every major level—from improving quality of services, to optimizing common processes to enhancing governance of the basic IT infrastructure—there are definite, addressable areas where federal, state, and local government enterprises can gain advantages by taking steps to achieve operational excellence. Some have been touched on here, and it is hoped this will inspire those responsible for public sector IT excellence to discover even more that are suited to their specific needs.

As Richard Varn of the Center for Digital Government tells public sector CIOs who want to achieve operational excellence, “The technical challenges are mostly gone. Now, if you have the money, the will, and the need, you can do it.”

“It used to take us about one hour to manually back up a 300 gigabyte file to a tape library. With our backup-to-disk solution, it takes only seven minutes for disk-based restoration, we’ve clocked speed increases of 15 times over tape libraries. These improvements translate into higher IT productivity, lower operational costs, and more up to-date backup copies.”

Rick Hoffman,
MDIT Storage Manager

Case Study: Michigan Department of Information Technology

The Michigan Department of Information Technology (MDIT) needed to implement a comprehensive redesign and upgrade of its statewide IT infrastructure to address data loss, risk exposure, and manual-based backup processes.

- **Need:** To ensure integrity and around-the-clock availability of all critical data.
 - State’s desire to replace manual business continuity and disaster recovery strategy
- **Solution:** Partnered with EMC to develop an information lifecycle management (ILM) strategy that provided tiered protection across mainframes, servers, and a 200+ terabyte storage infrastructure.
 - EMC had already designed their storage area network (SAN) infrastructure.
 - Took the storage infrastructure to the next level through consolidation.
 - Automated backup-to-tape and introduced backup-to-disk.
 - Shift to more automated business continuity with synchronous remote replication software and dense-wave division multiplexing.
 - Tiered information protection applied across the many applications.
- **Operational Excellence Benefits**
 - Better cost efficiency.
 - Improved recovery time.
 - Increased backup speeds.
 - Recovery-point objective (RPO) improved dramatically.
 - Projected to further consolidate all servers, storage, and backup from more than 700 data centers and server rooms around the state.

“Each day’s recorded documents are digitized and saved on CD and we sell those images to subscribing title plants. They get high-quality images, further enhancing service to citizens and creating yet another new revenue source as a result of our investment.”

Gregory Smith,
San Diego County Clerk

Case Study: County of San Diego Assessors, Recorder, and Clerk’s Office

Like most agencies, the County of San Diego Assessors, Recorder, and Clerk’s Office was facing a pressing need to manage an ever-increasing amount of information. In particular, they needed ready access to information such as survey record images for county staff and also for private developers.

- **Need:** To facilitate access to maps, drawings, and other records for staff as well as large and small commercial businesses.
 - Manage an ever-growing paper content volume.
- **Solution:** Worked with EMC to implement a unified content management strategy.
 - EMC replaced traditional image processing with a new system based on the Documentum platform.
 - All content types captured electronically and unified into a repository up front, prior to processing.
 - Content processed online and archived appropriately based on policy or events.
- **Operational Excellence Benefits**
 - Faster information access.
 - Improved research process—used to take hours, now takes minutes to locate information.
 - Images accessible from over 400 desktops across several county departments.
 - Reduced costs for operations such as copying, filing, fax, etc.

“Our case management system, based on EMC Documentum ApplicationXtender, has improved our efficiency many times over, saving us both time and money. It has so many invaluable functions that we virtually run our court on it.”

Virginia Smith,
Information Systems,
Oklahoma Department of
Human Services

Case Study: Oklahoma Department of Human Services

The Oklahoma Department of Human Services had a manual-based system that lacked speed and was expensive. The cost wasn’t just labor; it also included costs for physically transferring files between multiple department locations, which involved significant costs for outside shipping services.

- **Need:** To automate a slow and costly manual systems
 - Improve information access
- **Solution:** Chose the EMC Documentum family of solutions to manage all types of content across multiple departments within a single repository.
 - Brought together people, processes, and content across the entire enterprise for collaboration and information sharing.
 - Project teams were enabled to easily capture content and contextual information as part of heir unified applications.
 - All information assets brought into a corporate repository where they could be easily used, managed, reviewed, approved, delivered, archived, or disposed
- **Operational Excellence Benefits**
 - Online case management system implemented.
 - Faster information access and delivery.
 - Information now available to all users at all locations.
 - Reduced operational costs



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