



Commonwealth of Kentucky

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Kentucky IT Consolidation

Commonwealth Office of Technology

The Commonwealth of Kentucky is nearing completion of the most ambitious IT consolidation project in the state's history. The bold initiative, mandated by Governor Fletcher in 2005, is being led by the Commonwealth Office of Technology (COT). Since Kentucky's mainframes, networks, and e-mail systems had been merged in the past, this consolidation effort addressed all remaining categories of IT infrastructure, including enterprise desktop management, data centers, servers, storage and telecommunications. The consolidation initiative also included the establishment of a consolidated Enterprise IT Service Desk, providing a single point of contact for agency IT users. As a result of Kentucky's IT consolidation initiative, the Commonwealth has saved millions of dollars, and is expecting to save almost \$320 million over the next decade.

Executive Summary

The Commonwealth of Kentucky is nearing completion of the most ambitious IT consolidation project in the state's history. The bold initiative, which began in 2005 as a part of Governor Ernie Fletcher's *Prescription For Innovation*, is being led by the Commonwealth Office of Technology (COT), the agency responsible for overall IT coordination across state government.

Kentucky's IT consolidation was initiated due to a number of serious issues which confronted the state. The commonwealth was facing a significant budget shortfall of \$303 million, with projections of an even larger \$710 million shortfall for the following year. In addition, IT spending was increasing at a rapid pace, IT security problems were a regular occurrence, and much of the state's IT workforce was nearing retirement.

Since the state's mainframes, networks and e-mail systems had already been merged in the past, this consolidation effort addressed a broader and more challenging segment of the state's IT infrastructure. Enterprise desktop management, data centers, servers, storage and telecommunications were all included in the scope of Kentucky's IT consolidation initiative. The effort to streamline the state's IT infrastructure also included the establishment of a consolidated Enterprise IT Service Desk, to provide a single point of contact for agency IT customers.

In addition to the Enterprise Service Desk, Kentucky's IT consolidation project included the reengineering of all IT support processes to conform to ITIL best practices. It also included redesigned processes for IT procurement and financing, new IT purchasing contracts and significantly improved volume discount pricing. In addition, rates for IT shared services were greatly simplified and restructured, and COT's website was completely designed to highlight the changes.

Under COT's management, approximately 6,000 desktop/laptop PCs were consolidated in the first phase of the project. Asset review, surplus and replacement activities have reduced PC inventories in consolidated agencies by nearly 25%, saving \$1.4 million. Duplicate Wintel and UNIX servers were consolidated, resulting in a reduction of approximately 11% in the number of servers, with server virtualization expected to produce even greater savings in the future.

Financial results from the first phase of Kentucky's extensive consolidation initiative have been remarkable. Thus far, COT findings have documented a cost savings of \$7.6 million in the cabinets of Transportation, Commerce, Finance, and the Governor's Office of Local Development, alone. In addition, \$3.5 million in additional savings are expected this fiscal year when the final results are in from activities currently underway, for a total estimated savings of \$11.1 million for the current fiscal year.

Although the current savings are impressive, an independent study by Gartner projects that Kentucky's future savings will be many times greater. Gartner estimates the yearly recurring savings will be \$18.7 million in direct savings, with an additional \$13.2 million in indirect benefits and cost avoidance. Together, these amount to almost \$32 million in projected annual savings each year, or almost \$320 million over the next decade.

As a result of Kentucky's bold and comprehensive IT consolidation initiative, millions of dollars in savings have already been realized, but hundreds of millions more will be saved in the future.

Project Description

Kentucky's IT consolidation was initiated by Governor Ernie Fletcher in 2005 due to a number of serious issues which confronted the state. The commonwealth was facing a significant budget shortfall of \$303 million, with projections of an even larger \$710 million shortfall for the following year. In addition, IT spending was increasing at a rapid pace, IT security problems were a regular occurrence, and much of the state's IT workforce was nearing retirement.

Based on Executive Orders from Governor Fletcher in 2005 and 2006, the Secretary of the Finance and Administration Cabinet was directed to review each executive branch agency's IT infrastructure and, when found to be in the best interests of the Commonwealth, to consolidate operational control under the Commonwealth Office of Technology (COT). COT is the state's central IT agency and carries out the functions necessary for the efficient, effective and economical administration of IT resources within the executive branch.

The objectives of Kentucky's IT consolidation initiative included:

- Improve efficiency by streamlining shared IT infrastructure resources and services
- Save money by leveraging economies of scale, standardization, and improved work processes
- Maximize the benefits derived from Kentucky's IT investments

As a result of Governor Fletcher's directive, the Commonwealth of Kentucky is nearing completion of the most ambitious IT consolidation project in the state's history. Since Kentucky's mainframes, networks, and e-mail systems had been merged in the past, the latest consolidation effort spanned all remaining categories of IT infrastructure, including enterprise desktop management, data centers, servers, storage and telecommunications. The consolidation initiative also included the establishment of a consolidated Enterprise IT Service Desk, providing a single point of contact for agency IT users.

In addition to the Enterprise Service Desk, Kentucky's IT consolidation project included the reengineering of all IT support processes to conform to ITIL best practices. It also included redesigned processes for IT procurement and financing, new IT purchasing contracts and significantly improved volume discount pricing. In addition, rates for IT shared services were greatly simplified and restructured, and COT's website was completely redesigned to highlight the changes.

The state agencies involved in the consolidation effort include the Commerce Cabinet, Finance and Administration Cabinet, Revenue Department, Transportation Cabinet and the Governor's Office for Local Development (GOLD).

Full time IT staff positions in each agency were either absorbed back into non-IT positions or were transferred to COT. In situations where staff were retained in their original agency, COT had to find skilled contractors to backfill the needed positions. This staff migration resulted in a net reduction of 31% of IT staff in consolidated agencies while COT's staffing for support personnel increased by only 16%. Application

development staff were not affected by the consolidation effort and those not already in COT were allowed to remain in the business units.

Kentucky's IT consolidation efforts also included the establishment of reengineered IT procurement and financial processes, new IT purchasing contracts and significantly improved volume discount pricing. In addition, rates for IT services were greatly simplified and restructured.

Significance to the improvement of the operation of government

Under COT's management, approximately 6,000 desktop/laptop PCs were consolidated. Asset review, surplus and replacement activities have reduced PC inventory in consolidated agencies by nearly 25%, saving \$1.4 million. Duplicate Wintel and UNIX servers were consolidated, resulting in fewer servers and retirement of the older ones. COT has achieved a reduction of approximately 11% in the number of servers, for a savings of \$575,000. This initial savings only includes reductions in physical servers, but server virtualization is expected to produce even greater savings in the future.

COT is also implementing an enterprise Voice-over-IP (VoIP) solution for the Commonwealth, replacing outdated and costly voice systems that have been in service for years. Savings are modest so far, amounting to \$168,000 during the current fiscal year, but \$1.1 million additional savings are expected over the next few years as additional systems are replaced.

IT staffing levels were streamlined significantly as a result of the consolidation effort. The following table shows that the consolidation initiative reduced net IT staffing in agencies involved in the consolidation effort by 15 percent. The annual savings produced by the 15 percent staff reduction is approximately \$5,460,000 and is already being realized.

	Commerce	GOLD	KyTC	Finance	Revenue	COT	Total
Beginning IT Staff Total	22	4	102	31	48	372	579
Ending IT Staff Total	11	2	52	0	0	430	495
Net Change	-11	-2	-50	-31	-48	+58	-84
Staff Reduction Percentage	-50%	-50%	-49%	-100%	-100%	+16%	-15%

To ensure that all parties are aware of the objectives and that there is senior management buy-in to the consolidation effort, a Memorandum of Agreement (MOA) is created and formally signed by the Cabinet Secretary of each cabinet whose IT infrastructure is consolidated. This helps to make sure that IT objectives are aligned with agency business objectives.

New Service Level Agreements (SLAs) have been created for all consolidated agencies that identify each IT service and the service delivery targets that are to be met. Previously, SLAs that defined IT service and performance measures either didn't exist or

were incomplete. Critical applications are also identified so escalation can occur for any systems that are deemed to be critical to the agency.

Inventories of IT vendor contracts in use were created and the responsibility for those contracts was transferred to the Finance Cabinet. COT is now able to consolidate services and lower costs by renegotiating contracts with greater volumes to obtain better pricing.

In addition to the efficiency and staffing improvements identified, there are additional improvements to the operation of government associated with the consolidation initiative. These additional improvements are more qualitative in nature and are a byproduct of the consolidation effort:

- Increases usage and leverage of shared infrastructure
- Improves service levels and accountability
- Standardizes practices, processes, software tools and skills
- Benefits all agencies through greater economies of scale
- Provides flexibility of skills and resources to meet changing needs
- Amortizes migration and consolidation costs over time

Benefits realized by service recipients, taxpayers, agency or state

Kentucky has realized significant benefits from its IT consolidation initiative. Those benefits generally fall into one of the following categories:

- Improved IT efficiency
- Improved IT effectiveness
- Reduced costs and lower total cost of IT ownership

In addition to the general benefits cited above, other benefits realized by IT consolidation include:

- Improved Service Levels - increased service levels between end users and customers as centralized environments facilitate better IT processes
- Improving Agility and Ability to Change - centrally managed systems and processes improve the Commonwealth's agility and ability to make rapid changes in business processes
- Achieving Higher Availability - increased system availability and reduced downtime as all systems are consolidated
- Improving Disaster Recovery Capabilities - faster recovery as the environment becomes more centralized
- Improving Security - centrally managed environments can maintain a higher level of security than decentralized environments
- Meeting Regulatory and Privacy Requirements - a consolidated environment can meet regulatory requirements faster

Many of the benefits listed above are directly due to COT's adoption of the best practices defined by the IT Infrastructure Library (ITIL). ITIL-based processes and procedures are used for Change Management, Configuration Management, Release Management, Incident Management, Problem Management and Service Level Management throughout

COT. These reengineered processes, overseen by experienced Service Level Managers aligned with the Enterprise Service Desk, have brought standardization, consistency and discipline to the support of IT infrastructure, resulting in significantly better service and improved customer satisfaction.

Additional examples of the benefits of Kentucky's IT consolidation are numerous and easy to find. For example, a new contract has been awarded for the procurement of replacement PCs. This contract offers a number of advantages beyond better pricing. With this contract, the vendor loads each PC with a standard software image before it arrives on site. Thus, costs are being reduced through standardized configurations, greater purchasing power, and by reducing the size of hard drives in favor of network attached storage. The cost of acquiring a PC has been reduced by about \$260 for desktops and \$725 for laptops. As the 6,000 PCs for consolidated agencies get replaced over the next 2-3 years the commonwealth expects to save over \$2.1 million in acquisition costs alone.

Beyond desktops and laptops, a new contract was awarded for a common printer platform. This is reducing the initial acquisition cost for printers and also producing savings for the consumables that are required for maintenance. The total cost of acquiring and maintaining printers has been substantially reduced because of this. COT is also recommending that consolidated agencies utilize multi-function devices in each office to print, scan, fax and copy, when older model printers are replaced. For a fixed charge of \$60 per month, agencies get more efficient use of their printing resources by making use of network attached multi-function devices.

Public Value of the Project

COT recently engaged Gartner to quantify both the direct and potential savings resulting from Kentucky's consolidation of IT services across multiple agencies. In addition, COT asked Gartner to validate available data, collect additional information, and benchmark the costs and services associated with the IT consolidation effort.

Gartner found that the initial financial results from Kentucky's consolidation initiative have been impressive. Thus far, the Commonwealth has experienced a cost savings of approximately \$7.6 million over the spending that took place in 2005 in consolidated agencies. A significant portion of the savings comes from a 15% net reduction in IT personnel cost directly related to consolidation, which accounted for approximately \$5.5 million in savings during the last year. In addition, \$3.5 million in additional savings is expected to occur this fiscal year as actions currently underway across agencies are completed, for a total estimated reduction in spending of \$11.1 million for the current fiscal year. The following table summarizes Kentucky's IT consolidation savings thus far.

	Realized	Projected	Total
Staffing	\$5,460,000	\$0	\$5,460,000
Desktop	\$1,377,203	\$2,108,116	\$3,485,319
Telecommunications	\$167,948	\$1,068,760	\$1,190,760
Servers and Storage	\$575,670	\$180,000	\$755,670
Mainframe	\$0	\$210,000	\$210,000
Total	\$7,580,821	\$3,566,876	\$11,147,697

In addition to the direct savings, Gartner expects Kentucky to save \$13.2 million per year in indirect savings and cost avoidance in the areas of Desktop and Voice Telecommunications, alone. In the Desktop technology area, indirect cost savings are accruing in the form of greatly reduced end-user support of the desktop environment. There is always some end-user support required for desktop computers. Consolidation, with standard systems images and remote support, is reducing the end-user support requirement and moving more of the burden of PC support to the IT group, rather than having non-IT personnel disrupt their normal duties to provide IT support.

The other cost avoidance opportunity is the avoidance of a previous \$600-per-telephone investment, by upgrading the current environment to Voice over Internet Protocol (VoIP). This cost avoidance is being realized by converting to a different voice premise technology, obtaining the annual savings from voice telecommunications consolidation and avoiding the upgrades that would have been required maintain the 732 "small office" key systems that Kentucky currently relies on for its voice telecommunications.

In the future, opportunities for additional savings literally begin to "snowball" due to the efficiencies of managing a standardized environment, clearly documented processes, and common equipment types. Gartner estimates the potential annual recurring cost savings within the Commonwealth's Executive Branch IT at \$32 million (\$19M in real savings plus \$13M in opportunity, or indirect savings).

The following table summarizes Gartner's findings regarding the annual potential savings for Kentucky's IT Consolidation initiative:

	Annual Direct Potential Savings	Indirect Cost Savings and Cost Avoidance
Desktop	\$ 9.8 M	\$9.9 M
Storage	\$ 2.2 M	
Windows Servers	\$ 1.8 M	
Voice Technology	\$ 2.5 M	\$3.3 M
Service Desk	\$ 1.6 M	
LAN	\$ 0.8 M	
Total	\$18.7 M	\$13.2 M
Combined	\$31.9 M	

In summary, Kentucky's IT consolidation effort is an undisputed success. As a result of Kentucky's bold and comprehensive IT consolidation initiative, millions of dollars in savings have already been realized, but hundreds of millions more will be saved in the future.