Ohio House of Representatives

Legislative Study Committee

Technology in State Government

Chairman's Report

April 19, 2012

State Representative

Craig Newbold, Chair

The Legislative Study Committee on Technology in State Government

Members

Representative Craig Newbold, Chair

Representative Ted Celeste

Representative Margaret Conditt

Representative Mike Dovilla

Representative Mike Henne

Representative Debbie Phillips

Representative Mike Stinziano

Comments from the Chairman

The chairman would like to extend his thanks to the members of the committee for their willingness to serve. Your time and patience have led to the issuance of this Chairman's Report.

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The Committee Charge

As the Ohio House continues to work to bring jobs and prosperity back to the state of Ohio, we need to examine areas in which our basic government functions can improve. Government is notoriously "behind the curve" when it comes to the application of information technology in its business model. This committee serves as a method to lay the groundwork for future legislation that could help Ohio's tiers of government move ahead of the curve regarding the use of information technology (IT).

Forms of technology including telecommunications and productivity technology such as iPads, etc. were not addressed by this committee.

This ad hoc committee has been commissioned to determine areas in which the State of Ohio can employ better uses of technology for the following purposes:

- To provide better services and improve responsiveness to Ohio taxpayers
- To become more efficient in daily operations
- To reduce overhead and red tape
- To collaborate with other state agencies and levels of government

If our state adopts IT practices that accomplish these objectives, the end goal of saving taxpayers' dollars can be realized.

In order to gain a better perspective of Ohio's use of technology in government, the committee intends to invite representatives of government agencies and private industries to testify before the committee to describe current uses of technology, future plans, recommendations for increased efficiency, effectiveness and potential vendor products to aide in accomplishing these objectives.

**Copies of the committee report were distributed to the members on November 18, 2011. A copy of the report, along with all testimony provided, has been made available in the House Clerk's Office.

The Legislative Study Committee on Technology in State Government

August 31st, 2011, Columbus, Ohio

The Ohio House of Representatives Technology in State Government Study Committee held its first meeting on August 31st in Columbus. The first witness was the chief information officer and assistant director for the Ohio Department of Administrative Services (ODAS), Stuart Davis.

Mr. Davis discussed the role of the Office of Information Technology (OIT) within ODAS and how efforts to apply technological tools to internal and external projects is what allows state government to be more productive, lean, efficient and effective. Mr. Davis indicated that OIT delivers statewide information technology and telecommunication services to state government agencies, boards and commissions, as well as policy and standards development, lifecycle investment planning, and privacy and security management.

According to the most recent data, the State of Ohio currently employs nearly 2,700 IT-related personnel. These employees provide service to Ohio's 110 autonomous agencies, boards and commissions. Mr. Davis noted that many of these agencies, boards and commissions house their own IT departments, which translate into system diversity, complexity and duplication across the state. The state conducts business with the use of 19 e-mail systems, 32 data centers, 26 help desks and 37 web portals.

Furthermore, the intricacies of these systems provide confusion to Ohioans. To make matters worse, many of these complex and diverse systems are aging. Approximately 20 percent of the systems are more than 20 years old, and 56 percent of them are at least 5 years old. Aging systems are historically more expensive to manage and maintain. Supporting older technology also inhibits the development of modern application systems given that extensive, experienced resources are committed to the older application systems.

Mr. Davis indicated that this approach has increased infrastructure spending across the state. Over the past decade, the state has been allocating 70 percent of IT-related dollars to infrastructure and only 30 percent toward end user software programs. The cost to operate these

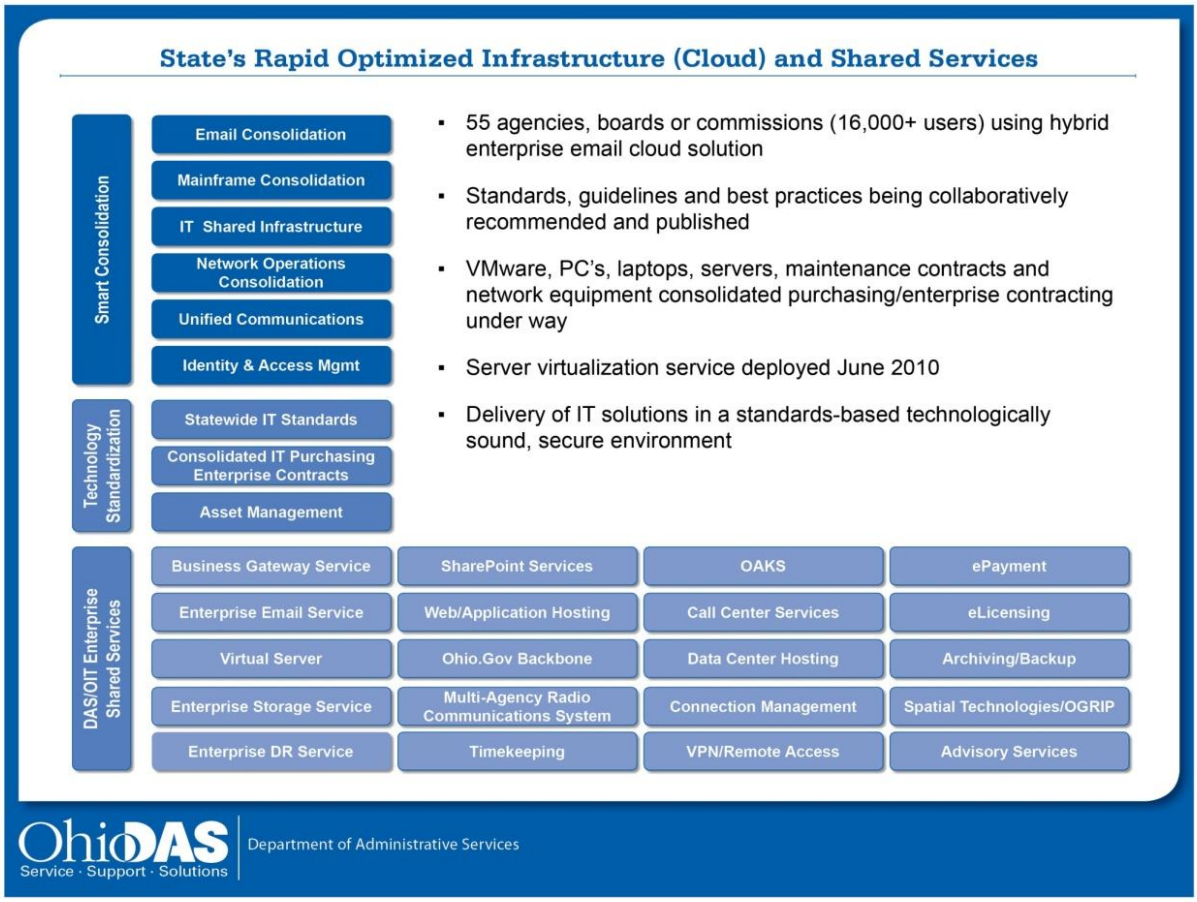
systems is $64 per Ohioan. While overall IT spending has been trending downward over the previous two biennia, it merely reflects budget realities and consolidation efforts. The chart below reflects state spending pertaining to IT services.

FY08	FY09	FY10	FY11
$862,734,000	$793,679,000	$705,520,000	$643,975,000

As the agency considered a more streamlined approach to managing IT systems, OIT categorized functions in three ways. First the agency identified core services, which they defined as facilities, data centers, operation of servers and networks. Core services are utilized by all agencies and OIT identified that a consolidation of the state's data centers into one location can save about $10 million a year. OIT also defined common services, such as e-mail. A consolidation of e-mail services can result in more than $2 million a year, said Mr. Davis. The final categorization OIT outlined was unique services, which includes services that are specific to a given agency. These services are more difficult to consolidate because they pertain to a direct agency and often require skill-specific IT personnel resources and managers. The chart below illustrates the approach OIT intends to take while consolidating select IT services.

Mr. Davis concluded by saying Ohio needs to be smarter in the future in regard to IT spending and that the state needs to strategically approach consolidation. He argued that a future model needs to include shared services that still allow agencies to meet their mission. The shared infrastructure OIT supports will support and encourage shared services and will provide a consistent and understandable mechanism for the state to interact with the citizens and businesses of Ohio.

In response to questions, Mr. Davis indicated that OIT had limited control over statewide technology decisions. Each agency maintains its own independent IT functions, including personnel. While all agencies meet jointly with OIT, OIT is only in a position to recommend actions.



The chart above illustrates DAS/OIT Optimized Infrastructure Plan

The Legislative Study Committee on Technology in State Government

September 14th, 2011, Columbus, Ohio

The Ohio House of Representatives' Technology in State Government Study Committee held its second meeting on September 14th in Columbus. The first witness to testify was the Director of Legislative Information Systems ("LIS"), Kurt McDowell. Mr. McDowell provided a background of his IT firm, citing the General Assembly's necessity for a central computer network service office. According to Mr. McDowell, his department strives to provide the highest quality of IT services through robust, reliable, cost effective systems that meet the needs of the legislative branch of government.

Mr. McDowell outlined the different types of services the department provides the legislature. These services include network services, telephone services, development of new or improved software, and education. Notably, Mr. McDowell highlighted efforts between LIS and the House of Representatives to utilize LIS' IT support. This support entails consolidation of servers and software. Currently, LIS is working to consolidate duplicative services, while maintaining the excellent services the Ohio House of Representatives is accustomed to.

Mr. Jon Cook also participated in the hearing. Mr. Cook serves as Chief Information Officer for the Ohio House of Representatives. He outlined four principles the House requires while researching and implementing where and how technology can be used.

1.) Make government more efficient
2.) Reduce costs that save taxpayers' money
3.) Allow greater access to a more transparent government
4.) Reduce paperwork in order to preserve the environment

Mr. Cook noted that keeping this guideline in mind will allow the House of Representatives to apply technology that will be beneficial to everyone. He also noted the recent consolidation of the legislature's eighteen servers into LIS' server was a success and will save resources.

Mr. Cook also highlighted the House's efforts in implementing Microsoft's SharePoint software. This type of software, according to Mr. Cook, will allow the House to become virtually paperless. It will allow information to flow from user to user and could also be utilized by constituents interested in legislative matters. It will also enable remote access to important information which will provide staff and members with better access to important documents and files while they are out of their office. Mr. Cook concluded by stating that these efforts to consolidate servers and implement new software are just the beginning of revolutionizing the way the House does business.

John Conomy, Chief Information Officer for the Ohio Department of Public Safety ("ODPS") was the final participant to testify. Mr. Conomy outlined the various duties the department's IT office was charged with. These operations range from software design to infrastructure support to security operations. Mr. Conomy also highlighted the major IT initiatives the department is currently undertaking. ODPS has recently completed a major effort to consolidate email services with the ODAS. Mr. Conomy boasted that the department was one of the first large agencies to participate in this statewide consolidation effort. This particular effort will save the agency more than one million dollars, according to the CIO.

Mr. Conomy also discussed what is known as the "Exodus" project. Currently, all Bureau of Motor Vehicles ("BMV") related transactions are processed over a mainframe. This mainframe generates billions of dollars annually for the department; however, this system is aging and is becoming more susceptible to failures. Furthermore, as the technology ages, fewer and fewer experienced personnel are available to service such old technology. The department has begun moving toward a new platform based on modern hardware and software that will enable the department to continue these vital transactions while avoiding the costs associated with servicing an aging number of devices. Mr. Conomy also discussed the necessity for any consolidation efforts to maintain core business functions within each department the prevent jeopardizing the mission each department is responsible for carrying out to Ohioans.

The Legislative Study Committee on Technology in State Government

September 20th, 2011, Columbus, Ohio

The Ohio House of Representatives' Technology in State Government Study Committee held its third meeting on September 20th in Columbus. The first witness was the Chief Information Officer and Information Deputy Director for the Ohio Department of Transportation ("ODOT"), Mr. Spencer Wood.

Mr. Wood discussed the role of the Division of Information Technology within ODOT and how its efforts to apply technological tools to internal and external projects is what allows the organization to be more productive, lean, efficient and effective. Mr. Wood pointed out that his department is aware of and focused on the fact that "every million dollars" saved by implementing the right technology "allows us to repave approximately 5 miles of rural two-lane roadway." Mr. Turner also mentioned that one of the major challenges for ODOT in regards to technological advances is the age of ODOT's mainframe system.

Former Data Management Director and current Chief Information Officer for the Bureau of Worker's Compensation ("BWC"), Thomas E. Croyle, also presented testimony on technology in state government. Mr. Croyle explained the BWC generally as an insurance carrier with most of its core systems involved in management of claims due to injury on the job and payments for medical bills. The BWC currently has 220 IT staff members supporting these systems; however, 92 of these employees are eligible to retire within five years. In anticipation of this upcoming attrition, the BWC, as Mr. Croyle explained is "taking a serious look at updating and simplifying the technical architecture at BWC in preparation." Mr. Croyle brought to light that 50%-70% of the states IT budget is consumed by infrastructure. This will result in resources being dedicated to maintaining a redundant infrastructure instead of providing an accessible, streamlined government. The amount of duplicative technologies, such as agency specific email services, by separate state agencies has become a waste of tax payer dollars and does not serve the public efficiently.

One of the Ohio Environmental Protection Agency's ("EPA") slogans, "Reduce, Reuse, Recycle" was reiterated by its Chief Information Officer, Mary Beth Parisi in her presentation before the committee. Ms. Parisi says that the EPA interprets that slogan in its IT department as well as a way to think about using technology to utilize its organization's resources more conservatively. Her testimony focused a lot of attention on the consolidation and centralization of IT services as a way to pool resources and better manage Ohio's investments. As many of the other witnesses mentioned, Ms. Parisi sees technology as a way of eliminating duplicative processes in state agencies. The Ohio EPA began creating a single information technology office in August 2011. Its sole focus is managing technology investments agency-wide, thereby laying the foundation for an efficient strategy in regards to future shifts in resources.

Current Executive Director of the Ohio State Board of Cosmetology, Jim Trakas presented a report before the committee that stressed how technology has provided the Board of Cosmetology with the necessary tools to ensure that the Board is able to operate on minimal regulation while also accomplishing more work at a faster pace and a lower cost. Mr. Trakas focused his attention on how the Board was able to perform inspection duties with 11 staff members in contrast to the 15 needed just a few years back. Violations was a focal point for Mr. Trakas, as he went on to discuss how the current format of a camera and fingerprint biometrics has enabled the Board to expose both duplicate and fraudulent database entries allowing for arrests and the elimination of fraudulently obtained licenses. Finally, Mr. Trakas revisits the point of cost effectiveness, stating how when faced with a 5% budget reduction in FY 2012-2013, the Board was able to embrace technology in the form of "in-sourcing" and avoid laying off employees due to a continued high level of service and maintaining a substantial amount of money for the state.

Michele Meyer presented testimony on behalf of CSCI Consulting, which is a female-owned small business that functions to provide Information Technology solutions to both the federal and state governments. Ms. Meyer focused her presentation on the main challenge that arises when attempting to implement a new technology. These challenges include comprising funding across multiple agencies, data sharing across multiple agencies, and finally the acceptance of process changes by the end users, with this last point as the main focus. She goes

on to discuss how the Defense Procurement Payment System was intended to become the standard payment system used to calculate contract and vendor payments; however, the initial cost was $152 million over 10 years and quickly turned into $274 million over 14 years. Ms. Meyer stresses the importance of sharing IT's goals amongst the agencies in order to avoid such things as previously mentioned. Business executives and IT governance must adhere to the common goal and objectives in order to secure a planned development process, which will avoid improper blame for reasons why the technology planned failed.

Jim Benedict, an employee of the Ohio Department of Job and Family Services provided public testimony in regards to benefits and fallacies of IT consolidation. Mr. Benedict states how he worked in partnership with IT management from across several state agencies in an attempt to standardize IT classifications that better identify competencies and expectations of IT employees. Mr. Benedict goes on to point out fallacies of consolidation, such as how agency/department consolidation staffing levels in IT could be reduced, even though as he states, most IT shops are already cut to the core and crying out for more employees. His main focus came with discussion of the idea of contractors being less expensive than full time employees, in which he cited contractors who have been on site at his place of employment for over 10 years receiving hourly wages that well exceed $100. Mr. Benedict compares this yearly figure of $192,000 for a contractor to the $92,000 of a full time employee to stress the importance of not cutting state staff and filling them with contractors.

The current Director of Strategy at Quick Solutions, Inc, Aladin Gohar presented testimony before committee that dealt with three topics affecting technology in state government. Mr. Gohar discusses how the State can benefit from the idea of pooling IT resources across lines of businesses, thus enabling the expertise to be focused elsewhere once a resource is no longer needed. Expanding and contracting are viewed by Mr. Gohar as benefits based on the needs of projects and initiatives that employ a pooling of resources. He continues to provide warnings in the event of shared services, saying that not all private sector practices are transferrable to the public sector. Mr. Gohar concluded his presentation with the discussion of Cloud Computing and how, despite its popularity and potential cost savings, one should be hesitant to adopt it because applications must be optimized to work on the Cloud and it is still in its developmental stages.

Matt A. Mayer, President of The Buckeye Institute for Public Policy Solutions offered testimony before committee that focused on ways the State can ensure a more sound and effective IT policy. He suggested that the General Assembly continue to monitor the progress made by ODAS in its efforts at IT consolidation in the hopes of saving the state $150 million a year in IT expenses. Mr. Mayer went on to commend the efforts of outsourcing and to the continual push for more outsourcing opportunities. There is no reason why the State needs to increase its personnel or other costs when there are less expensive private sector resources out there. Mr. Mayer concluded his testimony by stressing the implementation of state agency usage audits that will provide feedback regarding how much time is spent by IT resources on work that is not job-related. This will improve the taxpayer funded work productivity.

David Landsbergen, an associate professor in the John Glenn School of Public Affairs, offered testimony on public sector information and IT management and how local governments have been working together. Mr. Landsbergen recommended contracting for shared services that would ensure that the public records are within the control of local governments. He went on to stress the point of quality information being utilized with a focus on making sure that only quality information is passed through the system of IT "pipes and sinks." Mr. Landsbergen stressed the point of needing to know what the actual costs are, so that we are able to examine correctly what is working best and improve upon those that appear to be lagging behind the rest of the field. He states the only way of truly analyzing it is by having quality information. Without quality information, the State would spend unnecessary money on obtaining the actual information that is needed.

The Legislative Study Committee on Technology in State Government

October 5thth, 2011, Columbus, Ohio

The Ohio House of Representatives' Technology in State Government Study Committee held its fourth meeting on October 5th in Columbus. The first witness was the Chief Information Officer for the Ohio Department of Job and Family Services (ODJFS), Kumar Rachuri.

Mr. Rachuri provided the overview of the services that ODJFS provides and its IT functions. Between all of the services ODJFS provides to millions of Ohioans, utilizing Information Technology (IT) is mission critical. ODJFS uses major business systems that are built on outdated technology that needs modernized (CRIS-E and SETS) and has new challenges that must be addressed for the Health Information Exchange and Health Insurance Exchange. He provided an attachment describing ODJFS' major business systems and the services that each business system provides to constituents. The future of ODJFS will be focusing on areas of IT that have the highest return on investment for the services they deliver. This includes data, business systems/applications, and infrastructure. The majority of business systems/applications are unique between the agencies and needs to remain in the core focus of each agency. Infrastructure is now a commodity, meaning that it can be shared and optimized across the state. This offers the greatest potential for the state to lower its IT operating costs and increase its capabilities, capacity and agility. Rachuri cautioned that these changes do not come without challenges. ODJFS' IT staffing levels have decreased by 20% over the past three fiscal years and one-third of the staff will potentially become eligible for retirement within the next two years. This is helpful for lowering staffing costs, but it will have an impact on technical knowledge base. Another challenge is that the majority of ODJFS's capital budget (CAPEX) is funded

through various federal sources and traditionally is earmarked for specific projects that have two implications: 1) funding for resources is only available for the life of the project itself and not ongoing support; and 2) any infrastructure purchased for the project can be only used for that system. This limits the ability to share the resource across the infrastructure foundation.

Scott Schweitzer, Director of Technology for Ohio's Tomorrow ("TOT") discussed how utilizing technology can help the Ohio Legislature be more efficient and effective and answer to the Ohio taxpayer. The mission of TOT is to inspire and encourage innovation in technology, while informing and educating consumers about legislative and regulatory issues that impact their lives. The legislature can make government more user-friendly through social media and mobile applications. TOT's efforts have focused on making sure Ohio is getting broadband technology and embracing all the benefits that come with it. In a Connect Ohio Technology Assessment survey, 34% of Ohio homes that subscribe to broadband interact with government or elected officials online. Therefore, utilizing social media is very important. It allows constituents access to information in real time which will also allow them to communicate more easily with the legislators as a whole. Mobile applications are just as important to making government more user-friendly. A recent Morgan Stanley report titled "Internet Trends" says that mobile internet use will surpass desktop internet use by 2014, so there is a need for state government to provide mobile applications in order to be closer to the consumer and make government more accessible.

Boardman Township Administrator Jason Loree described the Mahoning/Youngstown Regional Information System ("MYRIS") Initiative. The purpose of the project is to reduce local government expenditures and increase economic competitiveness for six regional/local

governments by collaborating in shared information technology services. The project provides three primary services:

1. Access to critical information assisting law enforcement agencies
2. General IT Services/Shared Services
3. Disaster Recovery Services

To do this requires sharing common services among governments. Using high speed connectivity and appropriately managing shared services, the duplicated services can be eliminated, thus increasing the quantity and quality of services across all collaborating governments. The following government units are participating in the MYRIS: Austintown, Boardman, Youngstown, City of Canfield, Canfield Township and Mahoning County. Between all participating government units the anticipated annual recurring cost savings is $270,000. Loree outlined some of the anticipated outcomes and benefits to local governments and constituents, which include:

- More efficient technology for effective dispatching of police, fire and emergency services resulting from the interconnecting of the associated 911 centers and their data and voice communications.
- Increased police efficiency and effectiveness resulting from access to jail population and booking information services
- Increasing IT support to unserved and underserved local governments.

He cautioned that there were some obstacles to implementing the project, including creating the physical infrastructure of interconnectivity between participating government entities and overcoming local control objections. The solution to the first obstacle is to use grant awards,

matching funds and available stimulus funds to provide local government interconnectivity to the available multi-county broadband networks. The current economic situation lessened the impact of the second obstacle because the project had full support from all six participating entities. Loree closed by explaining how this project can be replicated beyond county or even state boundaries because the greater the group sharing is, the lower the cost per participant, which creates greater ability to achieve economies of scale.

The Legislative Study Committee on Technology in State Government

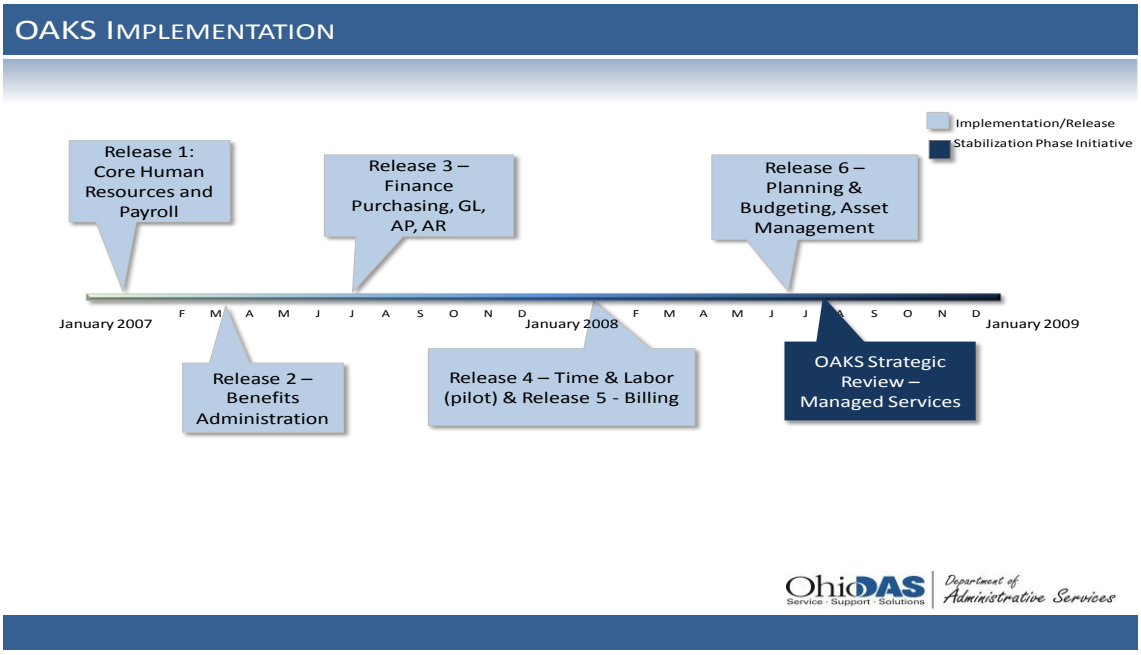
October 25thth, 2011, Columbus, Ohio

The Ohio House of Representatives Technology in State Government Study Committee held its fifth meeting on October 25th in Columbus. The first witness was the Chief of P-20 Educational Technology for the Ohio Board of Regents, John Conley. Prior to this position he was working in the technology private sector, which over the last several years has been heavily involved with Educational Longitudinal Warehousing efforts.

Mr. Conley discussed several successful initiatives the Board of Regents has recently accomplished. The Board of Regents recently implemented a plan to merge Ohio Academic Resources Network ("OARnet"), Ohio Supercomputer Center ("OSC"), Ohio Learning Network ("OLN") and shift all IT personnel from Ohiolink into a single consortium called the Ohio Technology consortium ("OH-TECH").OLN is hereby dissolved and is being succeeded by the division of eStudent Services within OH-TECH. The Board of Regents led the effort along with the State of Ohio OIT, ODE (K-12) and MCOECN (ITC) to renegotiate a renewed contract with VMware.Through this agreement, the State of Ohio saved $22 million and over $100 million in soft costs (power, rental, personnel) by utilizing the virtualization software from VMWare over the last three years. The Board of Regents has standardized to a single web language format—Drupal—and each department will be responsible for their own content. This Streamlines the process for content and increases the vibrancy and timeliness of information to our institutions and students. OH-TECH partnered with Ohio University and Wright State University on purchasing aggregation with Juniper Networks to get favorable pricing resulting in savings of $6 million.

The Executive Program Manager for the Ohio Department of Administrative Services ("ODAS"), Darlene Wells, provided us with an overview of Ohio Administrative Knowledge Systems ("OAKS") – what OAKS is, where it was and where it is going. Her role as Executive Program Manager is to oversee the strategic planning and operational components of OAKS. The core OAKS service capabilities include: financial accounting, planning and budgeting, procurement of goods, travel and expense, business intelligence and reporting, human capital management, enterprise learning management, customer relationship management, and myOhio portal. Wells described the progress and future of OAKS by explaining how ODAS and the Office of Budget and Management jointly decided that an Enterprise Resource Planning ("ERP") system implementation would be the best alternative to replace legacy applications. Agencies loaned staff to the OAKS Project Management Office ("PMO") to aid with the project implementation.

The timeline of events for the original project implementation is shown in the following chart:



There were challenges finding resources in Central Ohio so in February of 2009 the state entered into a five-year managed service contract to perform daily application and infrastructure operations. The following initiatives are already underway:

- **Administrative Business Process Improvement** – Priorities have been set to standardize processes associated with: Procure to Payment
- Inter-agency Funding Transfers
- Personnel Action Requests
- Benefits Administration
- Performance Management

Business Intelligence Phase 3: Current capabilities include: General Ledger, Workforce Profile, Accounts Payable and Procurement. Phase 3 continues to build the analytics and reporting functions with:

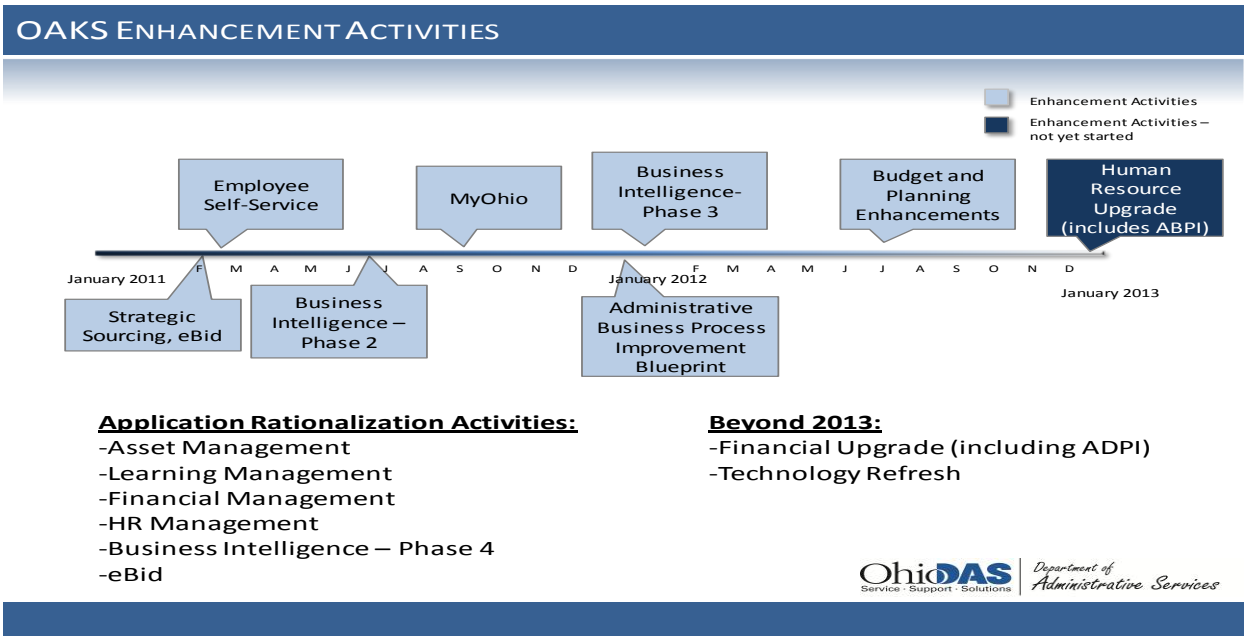
- Asset Management
- Accounts Receivable

Budget & Planning: Enhancing the current capability for the next biennium budget cycle.

Application Rationalization: For the OAKS service capabilities available today, identifying opportunities to analyze the 200+ agency applications where OAKS may have the opportunity to provide the service, thereby reducing the cost of application support across agencies.

Human Resource Upgrade: Keeping our technology current and planning to incorporate standardization opportunities for the Administrative Business Process Improvement initiative.

Beyond 2013 the OAKS plan is to construct a financial upgrade and to continue to utilize the governance process for new initiatives where we can create efficiencies and reduce the cost of state government utilizing the OAKS platform.



Greg Henderson, Government Practice Principal for Fraud and Financial Global Practice at SAS outlined and provided examples as to how utilizing analytics can solve problems facing governments and save taxpayers money. Analytics helps address what actions are needed to obtain an optimal outcome. It can be used for forecasting revenues and expenditures. For example, North Carolina uses SAS analytics in their budgeting process to forecast Medicaid eligibility and expenditures at the individual service item level, allowing them to model socio-economic assumptions and policy changes and see instantly what impact that will have on overall expenditures. Henderson also explained how analytics is helpful in detecting and preventing fraud because it helps model "normal" behavior patterns and the detection of abnormal behaviors is more evident. The State of Washington uses SAS analytics to detect fraud in their Worker's Compensation program to identify non-compliant employers. After implementing an analytic approach to determine audit candidates, the state was able to increase their audit hit rate – the number of audits that result in a positive finding of non-compliance – from 50% to 80%. In addition, they were able to increase the average collections per positive

audit by 33% by using analytics to focus limited auditor resources on those cases that were of the highest potential value to pursue. As a result, the state recovered almost $150 million last year in unpaid worker's compensation premiums. Henderson's suggestion to the committee is to make data more accessible between agencies and governments because better, more detailed data makes analytics more valuable.

Bruce Langos, Chief Operating Officer of Teradata expanded on the use of analytics and described some of the successful outcomes as a result of analytics. Terradata is one of the world's largest companies focused solely on data warehousing and data analytics headquartered in Dayton.

Witnesses

- Stu Davis - *Chief Information Officer / Assistant Director* – Ohio Department of Administrative Services
- Kurt McDowell- *Director* – Legislative Information Systems
- Jon Cook – *Chief Information Officer* – Ohio House of Representatives
- John Conomy – *Chief Information Officer* – Ohio Department of Public Safety
- Spencer Wood – *Chief Information Officer and Information Deputy Director* – Ohio Department of Transportation
- Thomas E. Croyle – *Chief Information Officer* – Ohio Bureau of Worker Compensation
- Mary Beth Parisi – *Chief Information Officer* – Ohio Environmental Protection Agency
- Jim Trakas – *Executive Director* – Ohio Board of Cosmetology
- Michele Meyer – *President and Founder* – CSCI Consultants
- Jim Benedict – *Ohio Department of Job and Family Services employee representing the Ohio Civil Service Employees Association*
- Aladin Gohar – *Director of Strategy* – Quick Solutions, Inc.
- Matt A. Mayer – *President* – Buckeye Institute for Public Policy Solutions
- David Landsbergen – *Associate Professor* - John Glenn School of Public Affairs at the Ohio State University.
- Kumar Rachuri – *Chief Information Officer* – Ohio Department of Job and Family Services
- Scott Schweitzer – *Director* – Technology for Ohio's Tomorrow

- Jason Loree – *Township Administrator* – Boardman Township
- John Conley – *Chief of P-20 Educational Technology* – Ohio Board of Regents
- Darlene Wells – *Ohio Administrative Knowledge System (OAKS) Executive Program Manager* – Ohio Department of Administrative Services
- Greg Henderson – *Government Practice for Fraud and Financial Global Practice* – SAS
- Bruce Langos – *Chief Operating Officer* -Teradata

Chairman's Recommendations

Five meetings to cover such a broad and complex topic only allow a very general assessment and conclusions to be drawn. Additional legislative review of this issue should include testimony from private companies regarding their best practices and experiences with the state. One general observation should be noted. While our stated objective was to identify opportunities for collaboration among agencies, it appeared that many of those who testified may have been concerned an unstated committee objective was to identify agencies or agency functions that could be consolidated. This likely tempered testimony to some degree, given a tendency to protect one's job.

The following recommendations are in no specific sequence. There is no doubt that many other benefits could be identified with further study. Savings were difficult to quantify but based on experience, the committee believes savings would be substantial, in the millions of dollars range. Savings would not only be financial but enhanced efficiencies in job performance and customer service would also be realized.

Recommendations:

1) While the Ohio Department of Administrative Services (ODAS) Office of Information Technology (OIT) is defined as the focal point for coordinating all statewide information technology (IT), it appears to be that in name only. The State CIO has no formal organizational authority over IT functions in other agencies. There should be one person who has ultimate authority and responsibility to coordinate all state IT functions, which logically would reside at OIT. Prepare an "IT legislation" that aligns all state IT functionality under the State CIO.

2) Agency IT directors should report directly to the State CIO with dotted line reporting to the agency they support. Include this provision in the legislation noted above. Enable reporting relationship of agency CIO / IT directors to State CIO.

3) The committee is aware of no strategic IT plan for the state, nor do we believe there are any within the agencies. A strategic statewide plan needs to be developed, followed by tactical plans at each agency that supports and coordinates with the strategic plan. These should be updated on a scheduled basis. Include this provision in the legislation noted above.

4) Currently, application technology platform decisions can be made independently. Substantial savings could be realized with volume purchases vs. independent decisions by agencies. A recent decision to collapse 19 email systems within the state to one email system will save money and eventually allow individuals to communicate more

effectively between agencies. The State CIO, in collaboration with other involved agency/departments, should have final approval on all these decisions. Include this provision in the legislation noted above.

5) Application languages, tools, etc. should be standardized, and exceptions must pass a rigorous justification process. For example, if SharePoint is the collaborative software chosen, then that should communicated quickly and rigorously enforced. The State CIO, in collaboration with other involved agency/departments, should have final approval on all these decisions. Include this provision in the legislation noted above.

6) Ohio has more than 30 raised floor data centers. OIT already plans to consolidate these over a six year period. If a cost benefit analysis has not been done it should be to determine if accelerating the consolidations would generate additional savings. Even though this recommendation is underway it should still be included in the legislation noted above to prevent a future reversal of this action unless the legislature approves it.

7) Developing and implementing new application software is historically difficult industry-wide. These failures typically can be traced to factors such as **a**) no active executive-level sponsor, **b**) poor project planning, which typically is attributed to an ineffective project plan and/or project manager, **c**) projects are not planned at a manageable level (for example no task is greater than 40 hours) to facilitate oversight **d**) poor communications contributing to poorly designed software, cost overruns and schedule delays. Implementing a project manager certification and apprenticeship process, as well as adopting a single statewide project methodology, should be adopted. The State CIO, in collaboration with other involved agency/departments, should have final approval on all these decisions. Include this provision in the legislation noted above.

8) Establish Enterprise Project Management Office (EEPMO). Require agencies to assign a project manager for all projects regardless of size, require consistent project management approach across agencies, require projects with estimated cost of $5 million or more or that have high risk/visibility to be reviewed by the EPMO for determination if project management will be handled by the agency or the EPMO.

9) Proposed projects must include a justification of its need signed by the agency/department head. The justification must include a return on investment (ROI) analysis. Include this provision in the legislation noted above.

10) Senior management within agencies/departments often decides to utilize outside vendors due to resource shortages and/or a lack of specific knowledge regarding a functional area. Often, major accounting firms or hardware/software vendors are chosen. Too often this is because they are the "safe choice," and if these vendors fail, state management can

escape responsibility as "if the experts couldn't do it then certainly I couldn't be expected to succeed." These failures typically involve a major loss of money and demoralized internal staffs. The Medicaid Information Technology System (MITS) project reportedly cost more than $400 million, and it appears no one has definitive numbers on how much Ohio spent on neither Ohio Administrative Knowledge System nor what a ROI on this project would be. Even if successful, the vendor leaves with all the intellectual capital regarding the hows and whys behind the application. This can create a nice annuity stream for the vendor. Vendor utilization needs are reduced and managed better. Implementing recommendation 6 will improve this as well as recommendation 8. The State CIO, in collaboration with other involved agency/departments, should have final approval on all these decisions. Also enable State CIO authority to make decisions on agency capital and operating budgets, procurement, spending, resource allocation and rates.

11) Enable State CIO with hire/fire/evaluation authority for all IT staff. Enable transferability of IT personnel and assets. Enable approval authority for contracted IT personnel. Provide capability to pool IT staffing resources from agencies to the central service agency out of collective bargaining requirements. Enable approval authority for common classifications, recruitment, advancement, and workforce development.

12) Establish IT Development Fund, which would capture funding related to agency procurement of personnel requests that are inconsistent with state direction.

13) Organize technical staff as follows: **a**) Subject matter analysts should be imbedded within each major agency to become experts on that functionality, as well as focal points for communication on projects between the user and IT development staffs. **b**) Project manager(s) would reside in a new Project Management Office (PMO) and float between agencies **c**) developers, testers, and documentation specialists should be in a pool utilized by all agencies and rotated in and out of projects as needed. The State CIO, in collaboration with other involved agency/departments, should develop this concept into an operating procedure. Include this provision in the legislation noted above.

14) A Quality Assurance (QA) group should be created that reports outside of OIT. The QA responsibility is to randomly access/audit projects at various stages during their life cycle to identify problems or issues that can be resolved easily and early in a project. Additionally, the QA team and project management should complete a post-mortem after every project to identify and communicate lessons learned. This function should reside outside the administrative branch so they are not subject to indirect influence. The legislative branch appears to be the logical location. Legislative leadership needs to be responsible for implementing and managing a QA group. The State CIO should to have

input to this decision but should not be involved in the final decision. Include this provision in the legislation noted above.

15) A level of legislative oversight should be established. Millions upon millions of dollars are being committed and spent. A QA group will provide an internal oversight function focused primarily on project success first and dollars second. Legislative oversight could focus on dollars first and the system second. This could be a full-time committee given the number of projects being done at any point in time. Members of this committee should be selected carefully to ensure they have they background to understand IT and application development. This committee and the one described in number 11 are the same individuals. Include this provision in the legislation noted above.

16) Give qualified Ohio firms preference in competitive bidding. This keeps intellectual knowledge, revenue and income taxes in Ohio. The State CIO, in collaboration with other involved agency/departments, should have final approval on defining this process.

17) Encourage IT development and testing organizations to locate in distressed rural communities. This will reduce development costs to the state for work performed; encourage private industry system integrators to locate in the same locations; enable qualified individuals to enter the IT profession who otherwise would never have the opportunity and spur economic revitalization in those communities. A small pilot project has already demonstrated the viability of this concept. The State CIO, in collaboration with Ohio Department of Development (ODOD) and other involved agency/departments, should have final approval on all these decisions. The State CIO should review the pilot project currently underway. Include this provision in the legislation noted above.

18) The state IT workforce is aging. Retirements are already beginning, which will create knowledge gaps both from a technical proficiency perspective as well as functional intellectual capital for the agencies/systems they support. This issue adds urgency to making and implementing the decisions being addressed here. This issue should be addressed in the strategic plan and implemented upon the strategic plan approval. Include this provision in the legislation noted above.

19) Many of the older application systems often referred to as legacy systems exceed a typical application lifespan. This would result in the legacy code being "patched" when changes were required. Under any circumstances patched software is harder to maintain, and usually the experienced staff are most effective given their longer exposure to the legacy software. As staff retirements accelerate, maintaining legacy systems will become even more difficult and costly to maintain. The mitigation of this issue is replacing the software with a contemporary version or rehiring retired IT personnel, which often

requires paying them a premium. This issue needs to be addressed in the strategic plan and likely will require priority in allocating staff. Include this provision in the legislation noted above or prepare separate legislation if that will provide faster legislative approval.

20) PK-12 education will be dramatically changed through the use of technology. Ideally, the State CIO, in conjunction with the Department of Education and other related agencies, will be an integral part of the decision process relative to the technology base required. The State CIO will be responsible for implementation, support and upkeep. Presuming equal quality, the technology base for the education software should be consistent with existing state IT software. Include this provision in the legislation noted above.

21) There is an opportunity to utilize state IT functions as a catalyst to spur rural economic development, cut state IT costs by 40-60% per project, create a model that could draw private industry to establish IT functions in rural areas and provide careers for hundreds (potentially thousands) of state residents. These residents would largely be comprised of young people looking for a future based on the experience to date. Other demographic groups that could be added as well are veterans, the physically disabled, displaced workers looking for new careers and other people in difficult life situations. The State CIO, in collaboration with other involved agency/departments, should have final approval on all these decisions. Include this provision in the legislation noted above.

22) Pilot programs by non-traditional educators have demonstrated the ability of building and conducting IT training programs focused on rural residents who typically do not attend post-high school training. These programs have been built by IT practitioners with the guidance of professional trainers. IT practitioner-built training can be more effective as it is based on real IT experience that the trainees can put to immediate use.

23) Life skill training should also be built into a pilot program's curriculum. Many people today are coming out of difficult life experiences. If these issues aren't addressed, a high percentage of individuals who pass the vocational training will fail because of an inability to face new life issues and fit in to a professional environment.

24) Articulation agreements covering the IT training should be established with colleges to encourage individuals to continue formal training.

25) Once one pilot location reaches critical mass, begin a geographic expansion program to similar locations as the original pilot location

26) Initiate a pilot project. This project would be a smaller project under $50,000 in size.

The Chairman wishes to thank everyone involved for their help in developing this report. The Chairman also is available to answer any questions.

Respectfully,

Craig Newbold

Appendix

Testimony of Stuart R. Davis

State Chief Information Officer/Assistant Director

Department of Administrative Services

August 31, 2011

Good morning Chairman Newbold and members of the Committee. My name is Stu Davis and I am the State Chief Information Officer and Assistant Director of the Department of Administrative Services (DAS). I was appointed in January of this year to oversee the DAS Office of Information Technology (OIT) which delivers statewide information technology and telecommunication services to state government agencies, boards and commissions as well as policy and standards development, lifecycle investment planning and privacy and security management.

Thank you for the opportunity to address this Committee. I would like to begin by providing a brief overview of technology in state government – where we have been and where we are going.

There is a tremendous complexity and diversity within the state IT environment.

- 110 autonomous agencies, boards and commissions
- 57,000+ employees (approx 2,700 IT)
- Silo solution stack for each agency translates into system diversity, complexity and duplication across the State

While many state agencies share similar technologies – ultimately there are 110 different ways of solving the same problem. Said differently, we have agencies with common interests that have been going in uncommon directions.

The majority of our IT expenditures are invested in IT infrastructure – networks, servers, storage, email systems and data centers

- 19 email systems
- 10 collaboration platform solutions
- 32+ data centers or server concentrations
- 26+ help desks
- 37+ public facing web portals platforms

Historically, we have been trending upward on the infrastructure spend across State Government. The state's investment in infrastructure operations and maintenance versus application

maintenance over the last 10 years demonstrates the tipping point of collectively investing more in the infrastructure than what we invest in applications. We have been spending 70% of our IT budgets on IT infrastructure and operations and 30% on software applications. What citizens care about is education, the economy, health care and other services that impact their quality of life, not what kind of servers, storage, personal computers or email system we have.

As a state we need to change the way we deliver IT services and invest more in applications and services that improve the efficiency and effectiveness of government, and deliver on-line services to citizens and businesses instead of making them stand in-line.

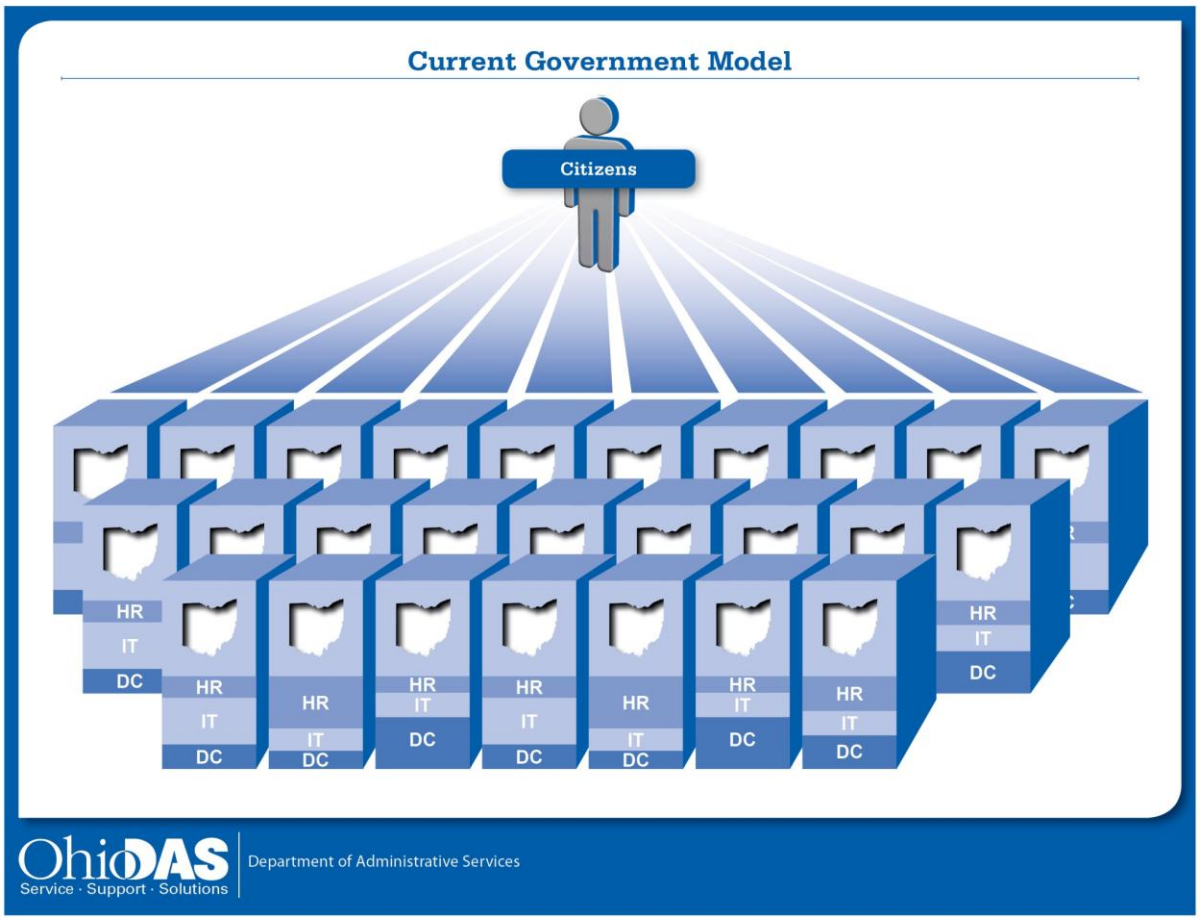
The past four years reflect initial spending controls to manage IT expenditures.

Total State Agency IT Spend

FY08	FY09	FY10	FY11
$862,734,000	$793,679,000	$705,520,000	$643,975,000

The overall spend has decreased since FY08 due to these efforts as well as funding availability and budget realities. Our cost reduction efforts to date have focused on standardization, enterprise agreements and targeted consolidation but there is more we can do.

The previous approach is clearly not working and has continued to create redundancy and inefficiencies in IT expenditures. Our siloed or independent agency approach has created IT spending diversity and brings challenges of its own.

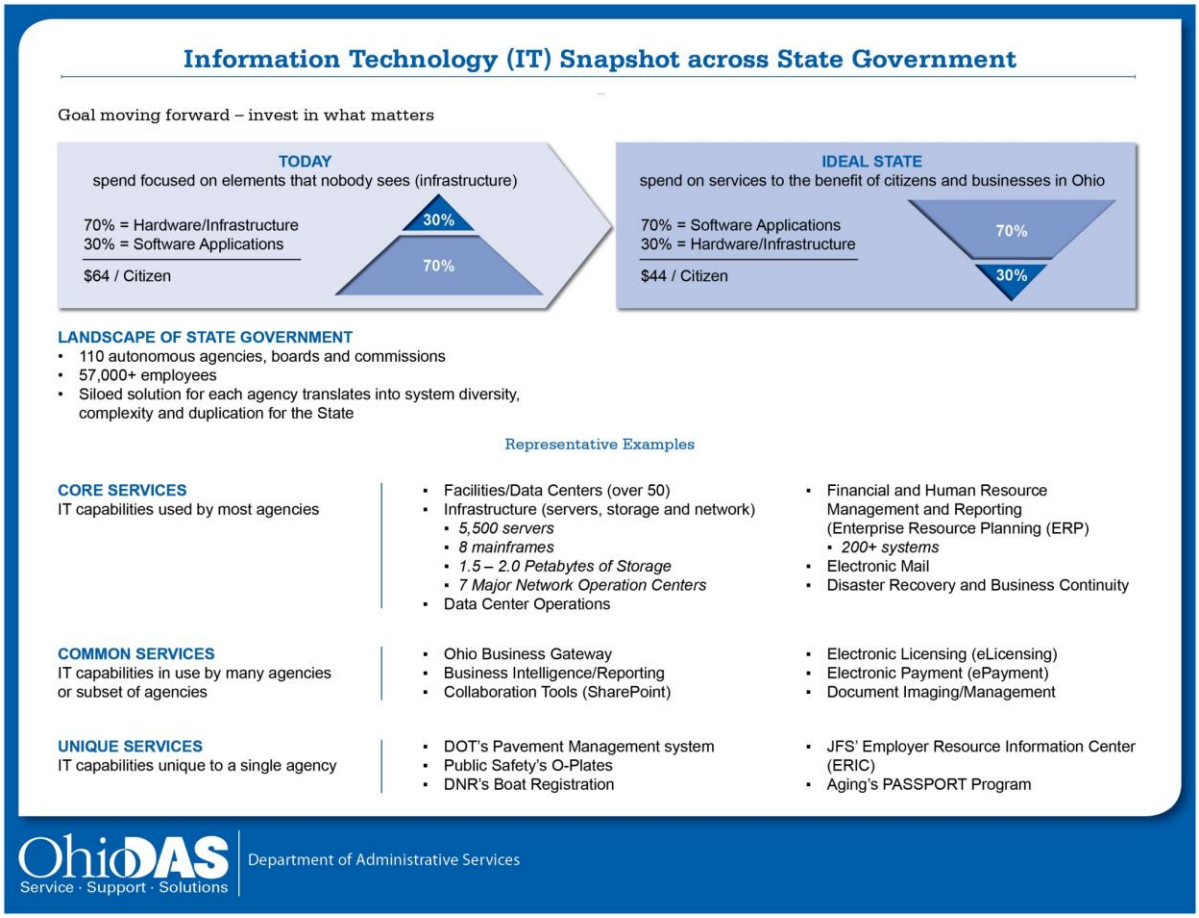


For example, we currently have 37 public facing web portal platforms. This can get very confusing for citizens and businesses to navigate the various layers of state government.

Security practices on our IT platforms are not consistently applied. Disaster Recovery – the ability to bring a failed system up in a timely fashion – is not consistent in all agencies or across all applications and programs.

Our IT systems and applications are aging. As a matter of fact, over 20% of these systems are 20 years old or more. 56% of these systems are older than 5 years. This is important to note because it costs us as a state 3-times as much to maintain these aging applications.

Additionally, of the 2700 IT resources in the state workforce – over 30% will be eligible to retire by 2016. The necessary skill sets to work on these aging systems and the retirement of IT expertise, diffused in the agency IT departments, is a challenge facing all agencies.



We know that we have 19 e-mail systems, over 50 data centers, 8 mainframes, 5,500 servers, and 7 major network operations centers. The list goes on and this is just focusing on the IT infrastructure to support applications. All of this requires IT resources doing the same or similar functions. It all requires IT infrastructure – servers, storage, software licenses, network connectivity, management and monitoring tools that we pay for numerous times at each agency.

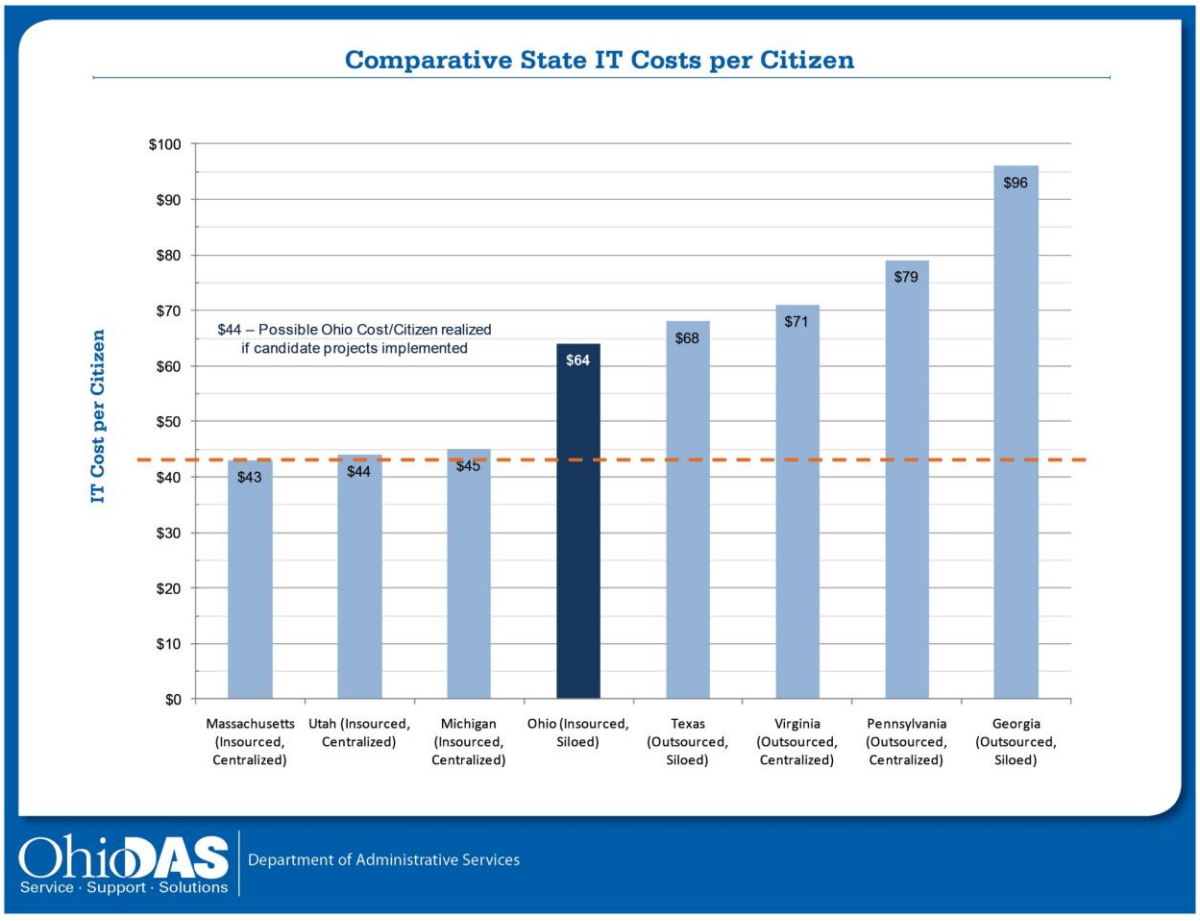
The Ohio Administrative Knowledge System or OAKS – addresses Human Resources and Financial applications from an enterprise perspective… did you know that there are over 250 OAKS addressable applications that still go on in the agencies? We need to adopt enterprise solutions and drive our costs downward for delivery of these services.

The Ohio Business Gateway is a good example of common applications. This Government to Business gateway started out with 4 applications from 3 agencies in 2002. That first year we collected $8 million in tax liabilities through the Gateway. This past year we collected just under $6 Billion dollars of tax liabilities through 14 functional applications.

As we considered appropriate approaches we began to categorize IT services and functions as Core, Common and Unique.

- Core Services – facilities and data centers, the management and operations of servers, storage, networking are good examples of what can be considered core functions. All agencies use them. Operating over 50 data centers cost the state approximately $108 million a year. By collapsing data centers into one, depending on the adoption rate – a range of $4 - $12 million or more a year in savings can be achieved.
- Common Services or applications such as E-mail make sense to consolidate. 19 systems to 1 results in over 2 million dollars in savings a year.
- Unique Services are services and applications specific to business of the agency.

We began looking at what other states have done and are in the process of doing. We found that currently, more than 90% of all state governments either have completed or are in the process of planning or executing on enterprise-level IT consolidation initiatives. These efforts include in-sourced and outsourced implementations, as well as centralized and federated approaches all with varying degrees of success.



A more balanced approach which includes in-sourcing with agency internal staffing and outsourcing or privatization where it makes sense will successfully reduce costs and increase

efficiencies. We have very good IT resources across the agencies – don't throw the baby out with the bathwater. Leverage them for the benefit of the enterprise.

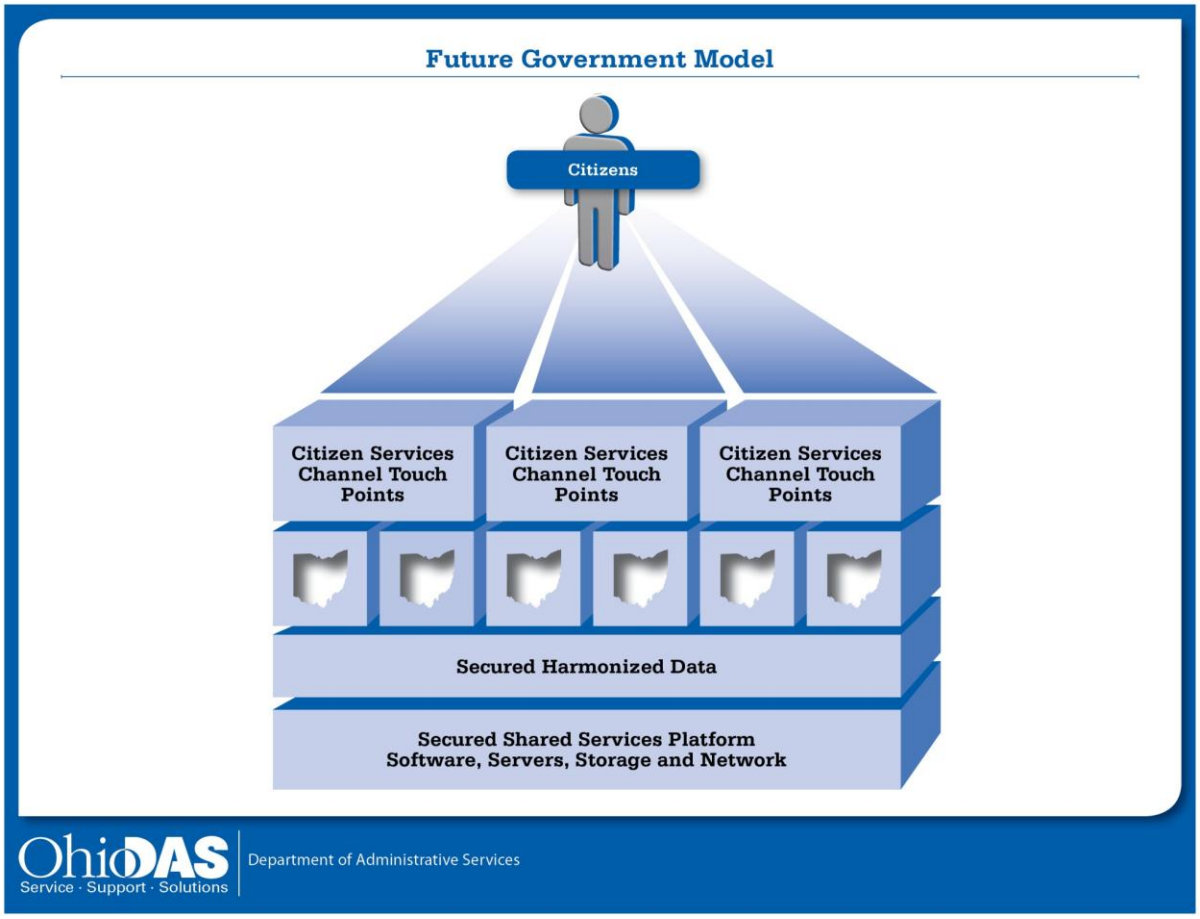
We continue to make progress… but we have to work with an enterprise perspective.

Agency CIOs have been working through the Multi-Agency CIO Council (MAC) and the Leadership Management Committee (LMC) of the MAC to address these issues. The MAC consists of over 30 CIO's from state agencies and elected offices. The MAC works in a collaborative manner to ensure more efficient and effective delivery of IT services to our customers and looks for ways to:

- Reduce state IT spending,
- Increase the quality of the services provided and
- Ensure a workable IT framework and model for the future.

The efforts of the MAC have significantly improvement inter-agency IT communication, cooperation, collaboration and enterprise IT problem solving. This has led to significant progress in generating efficiencies through enterprise information technology standards and other cost-saving strategies for business intelligence and reporting, server and storage virtualization, and e-mail consolidation.

Ohio's approach must be strategic, targeted and phased to ensure the best chance for successful implementation. The future government model we need to transition to is a shared service model that enables the mission and business of the agencies to be met through a standardized, secured, shared and stable IT environment. This shared infrastructure will support shared services and provide a consistent and understandable mechanism for the State to interact with the citizen and businesses in Ohio.



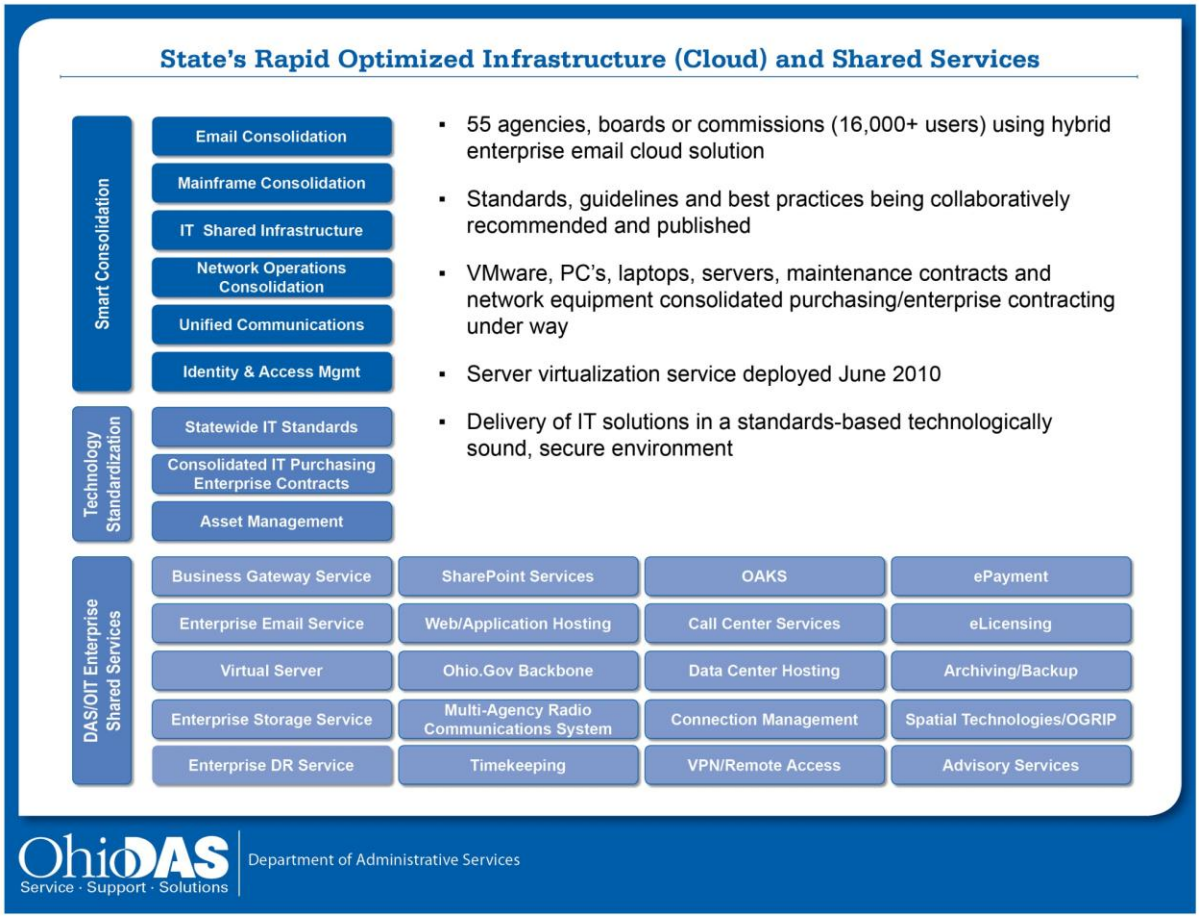
It is important to note, that what we have been working toward is a State Enterprise IT Transformation effort. It will take the support of all agencies to get there. By addressing the core infrastructure needs first, we can branch out to include additional infrastructure services and common agency applications.

I am sure you have all heard of the "cloud." There is a lot of talk about "cloud" or "going to the cloud" right now. The National Institute of Standards and Technology (NIST) definition of "cloud services" is a model to enable on-demand network access to a shared pool of configurable computing resources that can be rapidly provisioned and released with minimal management effort or service provider interaction.

To a degree, we have been operating within a secured private cloud providing shared hosted services for years. DAS has offered optimized infrastructure and shared services through a private cloud for some time. That includes Infrastructure as a Service, Platform as a Service and Software as a Service.

We are expanding our services to allow agencies to access cloud services through a centralized process. This will ensure that these solutions are delivered in a secure manner and adhere to State

standards and requirements. It also allows us to leverage the buying power of the enterprise to ensure cost effective offerings/solutions.



Deceases in the cost of services are through economies of scale. That is what makes State services so cost competitive. It is our buying power as a collective whole that provides this economy of scale. Solutions have to be adopted to support this from an enterprise perspective – not independently implemented – agency by agency.

Our collaborative efforts to date are based upon the willingness of agencies to be early adopters. There are numerous agency CIOs that understand the challenges we are facing as a State. They are working for their agency but with an enterprise perspective and providing sound counsel as we move through this sea of change.

The status initial efforts associated with consolidation are identified below.

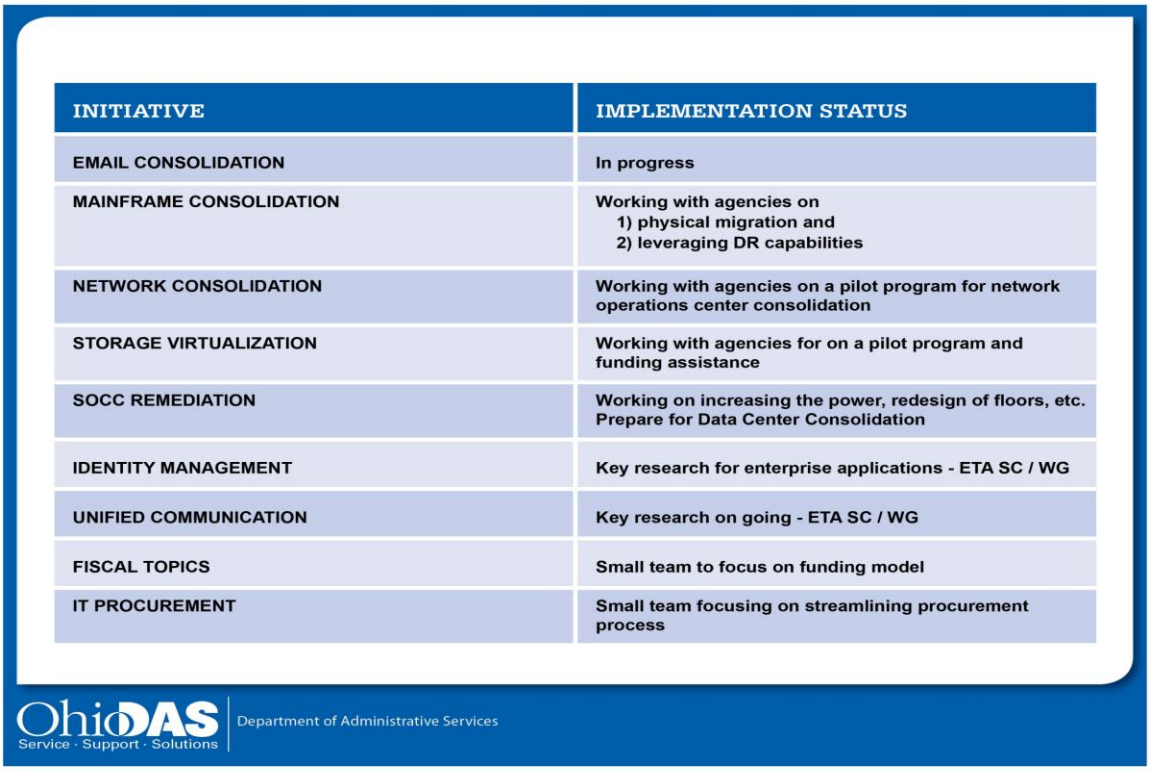
E-mail – 55 of the 80 or so boards/commissions and agencies have been migrated to Exchange 2010. We are working with DOT as we continue their migration from Lotus Notes to Exchange 2010. Commerce and Agriculture are next on the schedule for migrations.

Our efforts with EPA's e-mail migration is a shining example of what needs to happen with these enterprise initiatives. Nathan Norris for EPA was embedded in the migration team and was a big reason this migration was successful. We leveraged EPA's expertise and skills to support Public Safety's recent GroupWise to Exchange migration. We need to continue to build a state enterprise e-mail team to support the other agencies with GroupWise – like Mental Health and JFS – to ensure a smooth transition and address user concerns and training.

We are working collaboratively with BWC to migrate their mainframe applications to DAS' mainframe. We are working with Public Safety on network operation center consolidation. We are working with JFS and BWC to discuss storage virtualization that can support the enterprise.

We are actively working through solutions to increase the effectiveness and usage of the State of Ohio Computer Center (SOCC). We need to increase the power and modernize the SOCC to position the State for data center consolidation.

Another key effort is focused on funding solutions. We have to be creative and strategize on the best and most cost effective approaches to funding these enterprise initiatives.



INITIATIVE	IMPLEMENTATION STATUS
EMAIL CONSOLIDATION	In progress
MAINFRAME CONSOLIDATION	Working with agencies on 1) physical migration and 2) leveraging DR capabilities
NETWORK CONSOLIDATION	Working with agencies on a pilot program for network operations center consolidation
STORAGE VIRTUALIZATION	Working with agencies for on a pilot program and funding assistance
SOCC REMEDIATION	Working on increasing the power, redesign of floors, etc. Prepare for Data Center Consolidation
IDENTITY MANAGEMENT	Key research for enterprise applications - ETA SC / WG
UNIFIED COMMUNICATION	Key research on going - ETA SC / WG
FISCAL TOPICS	Small team to focus on funding model
IT PROCUREMENT	Small team focusing on streamlining procurement process

Clearly the Status Quo must go! We have conservatively estimated that the State, acting as an enterprise could save $150 million a year in IT expenditures through smart IT consolidation efforts.

We need an enterprise perspective and the best and brightest IT folks to coalesce into a State IT team. Using loaned staff has been done before. The State did it to build out OAKS several years ago so it isn't new. It can and will be done.

Change is hard, but two things are clear, 1) we have to implement IT consolidation as an enterprise and 2) it is the right thing to do for Ohio's taxpayers.

Thank you for your time and attention.

Testimony from John Conomy, CIO

Ohio Department of Public Safety

September 14, 2011

Good afternoon Mr. Chairman and members of the committee, and thank you for giving me the opportunity to speak with you today. My name is John Conomy, and I am the Chief Information Officer (CIO) for the Ohio Department of Public Safety (DPS).

I would like to take this opportunity to familiarize you with the functions of the Information Technology Office (ITO) within DPS, our major efforts, and what our future holds.

As you may already know, DPS is comprised of eight separate divisions:

- Administration - of which ITO is a part
- the Ohio Bureau of Motor Vehicles (BMV)
- the Ohio Emergency Management Agency (EMA)
- Emergency Medical Services (EMS)
- Office of Criminal Justice Services (OCJS)
- Ohio Homeland Security (OHS)
- Ohio Investigative Unit (OIU)
- Ohio State Highway Patrol (OSHP)

ITO is charged with managing the information infrastructure and services supporting these divisions. To do so, we have several functional areas within ITO including:

- .Net Applications (software) – creates software using modern standards and techniques;
- Infrastructure and Operations - engineers, builds and supports our physical environment;
- Mainframe – handles all aspects of our mainframe environment including hardware and software;
- Databases and Special Applications – which maintains our databases and supports applications not on the mainframe or in .Net environments;
- Security Operations – maintains and continuously improves the security surrounding all of our systems and networks;
- Project Management – provides expertise in the processes and methodology to ensure IT initiatives are delivered on time, within budget, and that they provide the required features.

In addition to the groups within ITO, we work closely with the OSHP Network group, which builds and maintains the network for the entire agency, as well as administering the Law Enforcement Automated Data System (LEADS). We also work with the IT department of EMA, which is a separate entity supporting the technology infrastructure for EMA.

The separation of the network and EMA technology groups from the rest of ITO is something of an anomaly in the IT world, yet we have managed to work together, and over the last year have greatly

improved our relationships. This unusual arrangement, while not optimal, is an artifact of the evolution of DPS between 1933 when the first agencies now under the DPS umbrella were created, and 1992 when DPS reached its current form.

Current major IT initiatives – some examples:

- Email – We have just completed a major effort to leave behind an antiquated email system that over time has become costly and difficult to support.
    - Our email services are now hosted by the Department of Administrative Services (DAS), and we are among the first large agencies to participate in this statewide consolidation effort. By taking advantage of shared state services, we saved the agency approximately $1 million in procurement of hardware and services that would have been necessary to replace our in-house email system with a more modern one.
    - This is the sort of service that, while important to our business functions, is not a part of our core business expertise and is exactly the right kind of candidate for consolidation via shared services.

- Mainframe Migration – This is also known as our "Exodus" project and is currently underway.
    - The mainframe is the heart of the system that generates revenue for DPS, and Ohio. Billions of dollars are generated annually by driver's license and vehicle registration transactions.
    - For decades and up to this time, the processing that goes on behind the scenes necessary to issue Ohio driver's licenses and vehicle registrations has occurred on a mainframe computer. Mainframes are able to process transactions very quickly, but represent a fading technology that is becoming increasingly difficult to support and maintain. People with expertise in the mainframe world are becoming fewer and fewer.
    - We are moving to a new platform based on modern hardware and software which will enable us to continue these vital functions into the foreseeable future and avoid the increasing costs of maintaining a mainframe.
    - This transition is a tremendous effort consisting of thousands of hours of development time for both software and physical environments. It is being completed by DPS personnel, using very few outside resources.

- Automatic Title Processing System – Working with Ohio vendors, we are working on a major upgrade of the state's vehicle titling system.
    - The new architecture will provide increased security, better performance, and a reduction in support costs.

- Real ID/Safe ID – is the project underway now to make driver's licenses and state identification cards compliant with new federal requirements.

- Wide Area Network (WAN) upgrade – will improve the network outside the walls of DPS.
    - As new, upgraded systems are implemented, the increasing need for fast, reliable, and secure transfer of data to remote sites and outside customers requires improvements to our networks.
    - ITO, OSHP network staff, and DAS have collaborated well and are working to implement new network technologies that are both scalable and more "future proof" than technologies currently in place.

- HB 648 compliance and other security efforts– DPS is a leader among state agencies in implementing technologies to further protect confidential personal information (CPI) and other sensitive data.
    - We take seriously our responsibility as custodians of the personal information of all Ohioans. Such information is extremely valuable, and deserves the utmost care.
    - Securing this data requires constant vigilance and investment to keep apace of threats emerging daily.

The above are only some examples of the dozens of projects both underway and planned for the future at DPS.

ITO Cooperates with other agencies:

In addition to our own business interests, DPS supports the needs of many other entities. Implementing appropriate security measures and agreements, we provide key data to federal, state, and local authorities for licensing, titling, legal, and law enforcement purposes. This ongoing exchange of data requires that our infrastructure supports these needs, and that our staff members work diligently to keep information flowing in a secure manner.

Despite uniqueness within agencies, there are common services we consume that are in support of, but not central to, our core business. This has created opportunities within the state for consolidation of some services which you have already heard about from State CIO Stu Davis.

Email is one example where we participated in the consolidation of common services. We recently completed a plan with the state CIO and other agencies to look for ways of improving the technology staff augmentation process, with the dual goals of increasing efficiency and saving taxpayer dollars. We are also involved at the state level in other areas and we have members serving on technical committees in the realms of Identity Management, Unified Communications, and Enterprise Technical Architecture.

Consolidation and centralization requires careful analysis:

Within DPS, each division has its own mission and areas of expertise, creating unique demands for ITO. DPS can almost be thought of as a holding company which owns several somewhat related, yet very unique businesses. This structure requires ITO to have knowledge and expertise unique within state government, and not easily replicated outside of DPS. Similarly, other state agencies have unique demands and skills within their own IT departments. Areas requiring specialized

knowledge, and specialized systems, are not always the best candidates for consolidation or centralization.

It is important that as we continue efforts at the state level to improve efficiencies and lower costs, we identify the vital core businesses and areas of expertise for individual agencies. These unique core business functions may not be the best candidates for consolidation, unlike "commodity" functions such as email. To risk these core competencies in the name of consolidation may in the long run reduce our ability to properly provide the unique services that each agency is charged with providing to Ohio's citizens.

Cost cutting is necessary and desirable in our economy:

We must take the necessary time to identify efficiencies and become more informed before making sweeping changes that can affect our citizens. Often there is an assumption made that agencies are overstaffed, and overpaid. Within ITO we currently employ approximately 150 full time staff. They represent more than 80 thousand hours of development time annually. A 2004 study of the DPS ITO by Gartner, an industry leader in research within the information technology industry, stated that ITO, with a staff of 150 at that time, was 50 percent understaffed compared to similar technology organizations. Even with the increased demands on DPS, ITO staffing has not changed in the intervening years. I am very proud of and impressed by the efforts of my staff on a daily basis. Heroics are a daily occurrence within ITO. Ohioans expect good service and responsiveness, and my staff reminds themselves – and me - of this always. It is important for us all to discover the truth of where the opportunities for efficiency really lie lest we make incorrect assumptions and hurt our ability to provide needed services to Ohioans now and in the future.

I would like to conclude by again thanking you, Chairman Newbold, and the rest of the committee for inviting me before you today. I and my staff are ready to assist you with your goals, and look forward to helping in any way we can.

House Legislative Study Committee on Technology

Matt A. Mayer, President

The Buckeye Institute for Public Policy Solutions

September 20, 2011

Thank you Chairman Newbold and members of the House Legislative Study Committee on Technology for allowing the Buckeye Institute this opportunity to discuss how technology can better help the state serve its constituents.

The Buckeye Institute for Public Policy Solutions is a non-profit, free market think tank. To that end, we believe that the key to prosperity is to maintain a low tax, limited regulation environment that is inviting to those wanting to start businesses.

With the advent of many new technologies, in particular the now ubiquitous use of the Internet, social media, and the use of varying "smart" and "cloud" technologies, this is a time of great opportunity for the state.

First and foremost, successful adoption of new technology can save taxpayers money. Few things harm the creation of new jobs more than being a high tax state, something Ohio has historically been. Each and every method that can be employed to reduce the tax burden is going to pay dividends.

While saving taxpayer dollars is a paramount goal, the adoption and successful leveraging of new technology is about more than just saving money. It also is about being able to offer services in a way that is more convenient and easily accessible by those that need to engage with the state.

Most Ohioans have limited interactions with the state. For those times where they must interact with the state, they want to do it in a way that saves them time and headaches. From drivers' license renewals to paying tax liabilities to filing various necessary forms, doing so from a computer, laptop, or smart phone rather than in an archaic brick and mortar location is clearly the way to go.

This interaction can only be done efficiently though if the state is able to employ a rational process and limit the multitude of platforms it is currently using to perform services. A strategic direction to overall state information technology policy is sorely needed.

To that end, the Buckeye Institute is extremely pleased with testimony provided to this committee by the Chief Information Officer at the Ohio Department of Administrative Services (DAS). There is nothing expressly stated in that testimony with which the Buckeye Institute could disagree.

It is unsurprising that as the increasing use of technology was becoming more integrated into government operations in the past couple of decades that there would be a certain amount of

fractiousness across agencies. Each agency adopted new technologies as the needs arose and the technology became available to help with their specific functions.

Avoiding this outcome would have required a strategic vision that transcended individual agencies. Unfortunately, that did not occur. By contrast, as DAS indicated, many IT systems were initially implemented in a "silo"-like fashion. According to DAS, the state is still utilizing 19 email systems, over 37 public web portals, 26 help desks, and 32 data centers. That is recipe for inefficiency and wasted tax dollars that should be going to core state services.

If, as DAS asserts, the state can save $150 million a year in IT expenses through various consolidations, this can and must be a priority.

Removing the silos as much as possible, adopting common security practices, and viewing technology in a holistic fashion is wise and strategic policy. Only those services that are specific to the function of individual agencies should be separated. Continuing to retain a silo mentality will only perpetuate diseconomies of scale, the opposite of what is needed to continue driving down the cost of IT services. Further, it also will perpetuate the need for maintaining too many public portals where individual Ohioans may get lost, thus, not fully embracing the whole point of state IT usage.

While consolidating these resources, the state should examine any and all prospects for outsourcing. There is simply no reason that the state should increase its personnel, hardware, or software costs when less expensive private sector resources are available.

One of the last vestiges of the American workplace lacking in measurable productivity gains is government. Although computers have improved workplace productivity, computers also can lead to a decrease in productivity. With the widespread adoption of computers with Internet access and spotty blocking policies across state agencies, a more thorough auditing of IT usage on behalf of state employees is warranted.

We all know that at some level or another, workers are going to occasionally visit Facebook, ESPN.com, or other non-work related websites. Unlike private sector workplaces, however, the state has a responsibility to the taxpayers to ensure that tax dollars are being used as efficiently and effectively as possible.

A year-long, random IT usage audit of state employees will help gather the necessary data to determining appropriate policies for state workers while on the clock.

For example, each month, 500 state workers' computers should be audited to determine usage. Critically, the audits should not be used for disciplinary measures; rather, the audits should be anonymous and used strictly to inform policymakers on how best to implement IT policies on Internet usage and which non-government related websites should be blocked, as is common in the private sector.

A secondary benefit of such an audit is that it would provide data on the productivity of state workers. With a sample size of 6,000 workers, an average loss of 20 percent of the workday on non-government related websites would help determine appropriate staffing levels.

The Auditor of State already performs many similar functions for individual state agencies and other governmental bodies could easily perform this function in order to maintain, or possibly improve, taxpayer funded worker productivity.

As the Deputy Director of the Colorado Department of Regulatory Agencies under Governor Bill Owens, we conducted a limited, two-week audit of state employees and discovered that a majority of audited workers were spending more than 20 percent of their day—some as high as 60 percent of their day—on non-government related websites. This audit occurred in 2003—well before the mass use of Facebook, YouTube, and other popular websites.

The Buckeye Institute respectfully suggests the General Assembly do several things to assure sound state IT policy:

1) Continue monitoring the progress made by DAS in its efforts at IT consolidation;
2) Maintain a focus on the outsourcing of IT goods and services to ensure that all reasonable opportunities for the state to leverage private sector skills are used; and
3) Consider the implementation of state agency IT usage audits to provide more thorough productivity data on how state employees use their time during work hours.

We welcome the opportunity to discuss these or other proposals with you and your staff.

Thank you.

Testimony of Thomas E. Croyle
Agency Chief Information Officer
Bureau of Workers' Compensation
September 20, 2011

Good Afternoon Chairman Newbold and members of the Committee. My name is Tom Croyle and I am the Chief Information Officer for the Bureau of Workers' Compensation (BWC). Prior to obtaining this position in 2008, I spent twelve years as BWC's Data Management Director and prior to that, I obtained eighteen years of IT experience in the insurance and banking industries in the private sector.

I appreciate the opportunity to testify to this committee on technology in state government. I would like to take this time to provide the committee background on the technology utilized at BWC, an update on what BWC is currently working on as well as future work that needs to be done and finally share my perspective on the current condition of technology in Ohio state government.
As an insurance carrier, BWC's core systems involve the management of injury claims, insurance policies and the payment of medical bills and lost wages due to workplace injuries. These systems are developed and maintained internally and the infrastructure for these systems at BWC is also mostly internal. In the Columbus office, residing in the William Green Building, we have our own data center which contains a mainframe, several mid-tier UNIX servers and hundreds of Windows servers.

The IT staff at BWC to support these systems numbers at about 220 employees and roughly 30 consultants. One of the dilemmas that BWC is facing is that 92 IT employees, more than one third of the division, are eligible to retire in the next five years or less. Many of these are long term employees supporting aging technologies and will be difficult and expensive to replace. As such, we are taking a serious look at updating and simplifying the technical architecture at BWC in preparation for this attrition. An updated architecture could be supported by skills being taught in our colleges today. A simpler architecture would reduce the need to replace all of the retiring employees.

The IT budget at BWC peaked in the FY08 budget at over $90 million. We've worked to steadily reduce that expense to the current fiscal year's budget of just under $60 million. Much of this work was in response to the economic downturn and IT organizational changes. However, it was also a result of a focus on BWC IT division's Tier 1 projects approved by our Program Governance Board, which meets monthly to review project requests.

Recent changes in BWC's technologies include a redesign and refresh of the underlying architecture of our web site at OhioBWC.com. We also closed down our print shop and consolidated our print function with State Printing. We are making good progress becoming 90% virtualized in our server farm by 2012. This move has allowed substantial reduction in server acquisition costs and greater flexibility in the use of these servers. Additionally, we've increased our focus on strategy and governance to improve consistency and collaboration across other IT departments. We've also completed a comprehensive IT Staff Skills assessment and planning program in collaboration with OCSEA. This program made it possible to reduce our dependence on external consultants saving money while improving career growth opportunities for our employees—an important fact in attracting and retaining talent.

As far as changes that are underway, BWC is currently examining the possibility of replacing its insurance application suite. We've recently received bids from commercial-off-the-shelf software vendors that are being evaluated. While I believe it is time to update and simplify BWC's applications, the more important objective is to streamline BWC processes using an integrated systems solution. In my opinion, BWC's current, outdated and stove-piped systems are a hindrance to good customer service.

Another challenge at BWC is the degree of time and expense that is involved in supporting the infrastructure for these outdated systems. One problem is that this infrastructure has become very complicated over the years. As I mentioned, BWC has a mainframe, several UNIX servers and hundreds of Windows servers. Besides the expense of all of this hardware, we also have the expense of the operating software, monitoring software, utilities and application development tools for each of these platforms. Furthermore, we have to have trained staff and/or consultants for all of this software, on all of these platforms. It's a problem that has accumulated over decades of relatively tactical decisions to expedite the implementation of solutions. At one point, we estimated that 80% of IT time and budget was dedicated to infrastructure. For a single-line-of-business insurance operation, it is just too much and it distracts our IT Division from being responsive to the services that matter to our customers. To me, the remedy is three-fold: simplify the platform, farm out what we can, and refocus IT on customer services.

Speaking of farming out what we can, this leads me to a discussion on technology at the statewide level. As BWC's CIO, I also serve as a member of the IT Leadership Management Committee (LMC). We have been working on a Statement of Direction to address the problem across state government much like the one I just stated for BWC. Currently, the state of Ohio enjoys a high degree of autonomy in its technology implementations, like BWC's. Each agency largely has its own IT staff and many even have their own data centers. Currently there are 19 email systems, several agencies with their own statewide networks, and 8 mainframes and thousands of servers.

It is my belief this autonomy has both benefits and detractions. On the upside, agencies enjoy a degree of flexibility when it comes to managing these assets. Furthermore, agencies can operate independently when it comes to the necessary upgrades and refreshes that are inherent in supporting these platforms. Moreover, scheduling system maintenance can be done internally without much regard to what other agencies are doing. Finally, agency customers enjoy access to onsite IT staff entirely dedicated to their technology needs.

However, this degree of flexibility comes at a cost. While the capital costs in supporting so many different and disparate platforms may be intuitive, what may not be as obvious are the lost opportunity costs. The amount of server hardware, software costs and technical staff needed to support the numerous email systems in the state adds up to an unwarranted expense. What is more disturbing, in my opinion, is the loss of IT focus on what matters to the average Ohio citizen. Currently, 50% - 70% of the state's IT budget is dedicated to infrastructure and comparatively an equal number of IT employees' hours are also dedicated to infrastructure. What does this all mean?

It is my belief that instead of providing an accessible, streamlined government, our technology resources are consumed in maintaining a redundant infrastructure.

It is important to note, though, the state has made progress. An email consolidation is underway and mainframe and storage consolidations are getting started. Furthermore, we've had several inter-agency work groups commissioned to examine technology in State Government for improvement through industry best practices. For instance, server virtualization is yielding significant cost savings for the agencies with large server farms. This capability not only reduces an agency's costs in server deployments, but also improves our ability to share these resources across agencies.

It is my understanding, you've already heard a lot about the smart consolidation strategy professing in the IT Statement of Direction, so I won't spend any more of your time on it. That is, other than to say that I believe there is a lot to be gained making a serious commitment to the strategy. It will be hard work, though and many of us may be tempted to revert back to an autonomous model. Although, the flexibility that comes with it is certainly attractive to many, the costs are too high. I believe we need to refocus technology on what matters to the citizen. In my opinion, the average citizen wants a nimble, efficient government focused on them, not a heavy, redundant architecture that distracts us from them.

Thank you for the opportunity to speak with you today and I would be happy to answer any questions from the committee.

Ohio House Technology Study Committee Testimony

Ohio Department of Transportation
September 20, 2011

Good afternoon Chairman Newbold and members of the Committee. My name is Spencer Wood and I am the Chief Information Officer and Information Technology Deputy Director for the Ohio Department of Transportation and my division is charged with delivering information technology and telecommunication solutions to ODOT.

Thank you for the opportunity to address this committee. I would like to continue Assistant Director Cope's comments about ODOT, and how technology plays an important part in our mission.

At ODOT, our primary mission is to provide easy movement of people and goods from place to place. While ODOT is focused on providing a safe, effective and reliable transportation system by building, maintaining, and upgrading the state's physical infrastructure, it is my mission and primary responsibility to provide and maintain the technological tools necessary to carry out the department's daily and ongoing functions.

In order to deliver the technological tools necessary to carry out the department's mission, we leverage multiple platforms and technologies to provide for 117 systems used in the department. These systems vary from legacy mainframe systems to modern systems delivered on the internet. Sometimes our systems will cross between technology platforms. For example, to maintain our state's bridges, it is necessary to involve 3 software applications across 2 different hardware platforms.

In the Division of Information Technology we focus on providing tools which allow ODOT to become a productive, lean, efficient and effective organization. With that focus, it is important to realize that we need to be responsible stewards of the taxpayers' money, and we need to focus on delivering the most cost effective solution to our customers. Our customers include our own ODOT employees as well as our outside contracting partners and private citizens.

Every dollar that ODOT saves is used to the benefit of our transportation system. For example, our department of Information Technology is aware of the fact that for every million dollars we save by consolidating and implementing the right technology will allow us to repave approximately 5 miles of rural two-lane roadway. Savings realized through operational efficiency are directly translated into benefits for the traveling public.

One of the challenges we are facing at ODOT is the age of the mainframe custom developed systems that we currently have and our ability to support and operate those systems. The skillsets necessary to operate these older systems are just no longer being taught in our schools. And unfortunately, younger technology professionals are less interested in pursuing technology careers based on our older systems. The challenge for ODOT's department of Information Technology is how we will **Technology Study Committee**
Testimony

transition from the older systems to newer systems. This is something that we have to balance with a focus on operating a lean and efficient organization.

ODOT continues to operate a number of older mainframe based systems. This is primarily due to the fact that a good number of these systems, until recently, have continued to work for our customers. As Director Wray continues to transform the department, we are quickly evolving past the capability of our older systems, and we are looking at replacing them. But first, we are evaluating our current business processes, to determine which processes need to be changed, and then applying technology to help solve the problem.

When ODOT is looking at investing in a new technology solution, we first try to purchase a commercially available product from the private sector. If none are available, ODOT then looks to leverage some of the work being performed at other State DOTs around the nation. Since the Department of Transportation provides a very unique service to the citizens of Ohio, it sometimes is a challenge to procure a pre-developed technology solution.

For example, there are only a few states in the nation that have an integrated traffic management system, with the vast majority of them being created specifically for that particular state. With traffic management systems being such a unique product, we were not able to find any products that would meet our needs. As a result, we developed our own traffic management system, BuckeyeTraffic.

BuckeyeTraffic allows multiple data streams such as traffic speed, traffic volume, weather conditions, road construction information and more to be consolidated and processed from one central location. This information is then used by ODOT employees to monitor traffic situations and make adjustments to dynamic display highway signs or make other notifications to the traveling public. The public can also access the site and see and interact with much of the same information. With BuckeyeTraffic, we will be able to consolidate traffic management for all of the metro areas in Ohio into one platform and facility.

While we might have some very unique needs that require custom software, we are also able to significantly leverage commercially available products. One such example would be with our upcoming system that we will be using to manage our pavements. We are currently in the process of working with a vendor to install a standard asset optimization system that we are able to adapt into an application that ODOT can use.

This Pavement Management System will allow us to optimize our transportation revenue dollars by suggesting methods on how to best manage our maintenance needs. This example is continuing across multiple applications in the department from estimating for the cost of a project to design and other processes.

Another such example of a commercially available software application would be with our new Construction Management System, SiteManager. SiteManager is an application from the American

Association of State Transportation Highway Officials (AASTHO) suite of Transport products that allows us to track and manage construction activities in our infrastructure program. With highway construction management principles being very similar between the States, it was very easy for us to take the pre-existing application from AASHTO and slightly adapt and integrate it into our software environment.

With a strong investment on leveraging existing technology solutions available in the marketplace, we also feel it is very important for us to partner with other state agencies in Ohio to optimize the overall Information Technology expenditure in State Government. An example of this would be our partnership with DAS in the Enterprise Technical Architecture (ETA) workgroup. I co-lead this workgroup that is leveraging the highly skilled IT employees in State Government to work together to save money by standardizing the IT components we purchase as a state. We estimate that the ETA program has saved us $18.4 million dollars in its two years of existence. This level of savings has been achieved primarily just by purchasing the same brands and types of Information Technology equipment.
In addition to being a strong partner with DAS regarding the ETA workgroups, ODOT is also currently in the process of migrating to the state-wide email system, Microsoft Outlook, provided by DAS. We have worked diligently with DAS to ensure a highly successful migration, and we will be assisting DAS on future email migrations as they occur at other agencies.

We believe that it is our obligation to the citizens of Ohio to optimize the investments that the State makes in Information Technology. By partnering with other state agencies, leveraging commercially available software and investing in the appropriate amount of new software and hardware development in a balanced approach, I also believe that we are able to deliver considerable value to our citizens in Ohio.

Thank you for your time and attention, and I am available to answer any questions you may have.

Testimony from Jim Benedict, Ohio Department of Job and Family Services

September 20, 2011

Hello, my name is Jim Benedict and I am a nine year employee of the Ohio Department of Job and Family Services. I have been in IT for 26 years, ever since my graduation from The Ohio State University in 1985. I have been an employee at various financial institutions around Columbus and a Consultant/Contractor. I even ran my own business from 1998-2002. I have been a programmer/analyst, a systems programmer on Stratus computers and for the last nine years a configuration management analyst/system administrator at ODJFS and an OCSEA steward the last 5 years. While never reaching the stratospheric heights of a CIO I believe I have a wide range of experience and IT knowledge.

You may be surprised to know my opinion regarding IT consolidation and that I feel that in fact this could be a good thing in many respects. It should aid in standardizing networks, PCs, servers, tools and processes. When the Union negotiated the IT portion of the 2009-2012 contract we worked in partnership with IT management from across several state agencies. We worked in partnership with IT management across state agencies for the first time to standardize IT classifications that better identify competencies and expectations of IT employees. This classification consolidation is aimed at improving our ability to manage our IT resources and to reflect the necessity that our work needs to evolve as technology changes. We knew that this could be a first step in IT consolidation for the state of Ohio. It was our joint goal to reduce IT costs to help assure that the state IT workforce is competitive and better managed.

We were willing to take the risk with the knowledge that opportunities for our membership would exist also.

One of the fallacies of recent testimony is that through consolidation we could reduce staffing levels in IT throughout the state. Currently most IT shops are already cut to the bone and are crying for more bodies to accomplish all of the projects that our customers want, need and are demanding. In ODJFS where we once had over 600 people we are now less than 400 people. We have recently been hit with a rash of retirements and I can only foresee that increasing based on a bill being contemplated in the legislature

Even if we reduce the number of statewide networks to 5 then I doubt you could cut any network support as just as many sites would need support as is needed now. Also without significant training I doubt that you could take an ODJFS remote tech into the Southern Ohio Correctional Facility with the necessary safety and security precautions that the current DRC IT staff currently have. Also you would need to start staffing for the 24/7 operation that would be needed to support the various agencies at their current level with an anticipated growth in the future.

IT would also have to have the ability to say no to an agency on one of their pet projects. Currently this isn't possible even if no money is available to perform the work. Once the combined IT agency did say no there is nothing currently in place to prevent the agency from hiring the project from outside the state IT area. I've seen this happen with user in ODJFS contracting out there solution. With no expertise in IT they managed to buy a system from IBM that didn't work and wouldn't work without significantly more investment than they were willing to commit. In the end the users got nothing but an expensive lessen in IT development.

Another fallacy in staffing is that contractors are cheaper than full time employees. While this is a truism if you keep the contractor for six months or less, typically ODJFS keeps consultants much longer than that. In ODJFS the contractors are billing out at between $85.00-$225.00/hour with the average well over $100.00/hour. The only way this makes sense is if you hire, use and get rid of them quickly and yet we have had contractors on site for over 10 years. I know many of these people and they are fine individuals but I still have to question the length of time they have been on site in ODJFS. If you do the math and use $100/hour figure then they are costing $192,000/year versus the $92,000 of a stepped out Software Development Specialist 3 (SDS3) which is a high level programmer. Since most have been there 10 years or more that is $1,920,000/decade compared to the 920,000/decade an employee would cost. $1,000,000 more over a decade seems a bit excessive to me and I can only see that getting worse in the future if you cut state staff and permanently backfill with contractors.

Outsourcing is not much of an answer either. ODJFS started the Employer Resource Information Center (ERIC) in 2002 with a projected delivery of 2004. It eventually did go live in 2010 which was only six years late and I do not know how many hundreds of million dollars over budget. They quit talking about it once the tab hit $400,000,000. I think state employees could do just as well and I would venture to guess much better if given the chance. Normally once the system is delivered the prime contractor performs what is euphemistically called the dump and run. Meaning once they have been paid they pick up their people and leave, without first doing any knowledge transfer with the state staff who are left to perform maintenance on what was left behind. I can understand why the contracting firms do this as knowledge in IT is job security. If they taught the state staff how to run and maintain whatever system they are leaving then they won't be eligible for the maintenance contract after system delivery.

The most recent system in ODJFS to go live, the Medicaid Information Technology System or MITS, is only two years late being delivered. Who knows what it cost. The initial purchase was for $400,000,000 but I do not know what the change orders cost to implement. As it stands now HP, the system owner, is running the system in Florida on servers bought and paid for by ODJFS. It is projected that this system will migrate back to Ohio in the next couple of years. We still won't own the source code as that is proprietary to HP. Theoretically then state staff will never maintain a line of the HP code only interfaces to other state systems. I don't know what the maintenance cost per year is for this system but over the projected life of the system it has to be astronomical when compared to state owned and written software.

In summary then while there are many things to recommend consolidation reducing state employee IT staffing levels does not look to me to be a one of the benefits. In fact when looking at "how information technology can be utilized to meet the goals of bringing jobs and prosperity back to the state" cutting state IT jobs seems to be counterproductive and especially when picking numbers "out of the air."

Thank you for this opportunity to address the committee and I will attempt to answer any questions you may have.

HOW TECHNOLOGY REVOLUTIONIZED OUR AGENCY

A Story of Cost Savings and Efficiency Through Technology

Presented By:

Jim Trakas

Executive Director

; Before The House Ad Hoc Committee on Technology in State Government; Chairman Craig Newbold

September 20, 2011

Mr. Chairman, Mr. Vice Chairman, Mr. Ranking Member, and Members of The Committee. We are pleased to be with you today and stand in testament to the power of technology and how it positively benefits the people of Ohio in many ways. I serve as Executive Director of the 9 Member Board of Cosmetology, with 35 associates, 130,000 license holders, and 13,000 salons in this state.

By way of background, our Board licenses 130,000 Cosmetologists, Estheticians, Manicurists, and Instructors. We allow nearly 10,000 students to sit for examination, and keep records on 54,000 total students. We employ 11 Inspectors and 4 Examiners to inspect administer tests, and inspect over 200 schools, and 13,000 salons in Ohio.

Our technology vision is in line with Governor Kasich's and This General Assembly through the Common Sense Initiative. Technology allows us to interact with the public better, more efficiently, and much more cost effectively. Our state leadership demands more of agencies, we have heard the call, and set a high standard for customer and business friendliness.

This Board has embraced technology in a big way and it has and is paying off for the people of Ohio that we work for. Our technology upgrades have dramatically increased efficiency and driven down the cost of dealing with our Board. Technology has made our jobs much more efficient, and that efficiency has been passed along to our internal and external customers. Our employees are empowered with the tools to do much more work and serve more people as a consequence.

Just a few years back, our Board needed 15 Inspectors to do the job that 11 do now. Fifteen years ago, a staff of 10 people, including taking inspectors off the road, were needed to administer 3,000 tests a year manually. Today, four do the job and have tripled the amount of students that our Board serves, while Inspectors can do the job they are trained to do, not having to administer tests, unless in case of staff shortages due to sickness or vacation.

But this just isn't about replacing manual typewriters with computers. Technology has revolutionized what we do, how we do it, how swiftly we can do it, and how cost effectively it can be done.

We're not just updating our technology at The Ohio State Board of Cosmetology but also how we think about and use it. We no longer regard technology as a magic bullet but rather a piece of a larger process. This new way of thinking coupled with the already dynamic employees at The Ohio State Board of Cosmetology has led to major changes not only in our technology but also our day to day operations that have afforded us ever increasing levels of productivity and efficiency.

One of the first issues we addressed involved fraudulently obtained licenses. There was a suspicion that examinees could procure fraudulent credentials to test under a different name for the purpose of selling the license. Our first solution was to take a headshot photograph of all incoming examinees and then, using open source facial recognition software, compare the new pictures to one previously taken. This method was time consuming and had limited success.

This solution would evolve into its current form: a custom developed application that utilizes not only a camera but fingerprint biometrics. During the check-in process if a duplicate finger print is found in the database under a different name the examiner is alerted immediately. This solution has led to several arrests, and drastically reduced the amount of fraudulently obtained licenses. Without technology, we experienced fraud, with technology, we have eliminated fraud.

Next we turned our attention to the inspection process. Ten years ago our inspectors were conducting inspections with pen and paper. The technology was simple and inexpensive but it made the inspection process very time consuming. There was also a considerable amount of time, sometimes three or four weeks, that would pass between when a report is completed by the inspector and when the administrative staff would receive it for possessing. A series of changes to our inspection process and the technology involved have led us to our current solution.

Inspectors, armed with HP Netbooks embedded with Verizon hardware and HP mobile printers, interact with a web based inspection portal hosted at our office. From this portal the inspectors perform their inspection and then generate and print the report for the salon owners and our records. There are several benefits to this solution not featured in previous ones:

- It's completely web-based. We are not tethered to any cumbersome hardware platform. Inspectors could perform inspections on almost any laptop, netbook, or tablet on the market today.
- Changes to salon information on the administrative end are reflected immediately to the inspector.
- Reports generated by an inspector are available immediately to the administrative staff. This reduced the time between when a violation is issued and when the administrative staff can start the violation procedures from weeks to seconds.
- Adding and changing the features of the web portal are simple and inexpensive. Additional features planned for the future include a library of all available forms and an office chat client, to enhance customer service.

After revamping the inspection system, we focused on our examination system. Through the years the Ohio State Board of Cosmetology had moved from a paper test to an out-of-the-box computer testing solution and then eventually to an out sourced solution. Although outsourcing the theory

portion of the exam was more efficient than paper, it was also a lot more expensive at nearly $30,000 a month, and over $250,000 a year, into perpetuity.

When faced with a 5% budget reduction in FY 2012-2013, instead of laying off employees, we embraced technology, brought out testing in from an outside vendor, and empowered our Examiners with the tools to be more efficient and effective than they were just two months ago. This "in-sourcing" was possible through technology and allows us to continue a high level of service, while still saving a substantial amount of money for the state.

Furthermore, all of the solutions deployed in the past six years left the practical portion of the exams unchanged. From 2005 until last month the practical portion of the tests were graded on a "scantron" sheet, fed through a scantron scanner, and processed by a DOS based application. The scanner was expensive to maintain, prone to destroying scantron sheets, and the DOS application crashed daily.

All of these issues were address earlier this month when we went live with our current solution. After forming an internal committee to design the curriculum and taking bids from numerous developed firms in Ohio, we teamed up with the talented people over at Quick Solutions, Inc and designed an exam system from the ground up. The new exam system, much like the inspection portal, is completed web based and uses SQL and ASP. Examiners interact with system via a portal which allows them to check-in examinees, start/stop exams, print grades, and build tests.

The Examiners now grade the practical exam with Android based tablets connected wirelessly to the exam system. The new exam solution even supports audio which has completely eliminated the need for an employee to be pulled for reading to examinees with an IEP, an inconvenience and interruption to our operations, now solved by technology. The old way took employees away from their work for several hours a day, now that is no longer the case, while more effectively serving special needs examinees.

Often, small solutions can have just as much impact as a large one. For instance, the move from mail-in renewals to online renews greatly reduced the administrative cost associated with renewing by decreasing the number of people involved in the process as well as amount of mail received and incoming calls. This is also more convenient to our license holders, and less expensive for both parties. We also noticed a substantial increase productivity after the deployment of phones to our inspectors with Field Force Manager installed.

Using Field Force Manager the inspectors can be tracked in real time as they travel from location to location doing inspections. We used to have no tangible way of tracking how hard our field staff was working, and now know where they are every two minutes. Not only a knowledge upgrade, but also an upgrade that allows us to assure effective service and safety of our field staff.

With the new testing system, that The Board owns, we can share the mechanics of the system with other testing boards so that they can save money, and not have to work with expensive out of state vendors. We may even be able to share the test with other Boards of Cosmetology and make money for the State of Ohio across the nation.

By enthusiastically embracing technology, The Board of Cosmetology which has always prided itself on minimal regulation that does not intrude on our industry, but undertakes its mission fairly, can accomplish much more, at much less of a cost, and in a quicker manner than ever before. The barriers to entry in this field are even fewer because of technology, and Ohioans are able to accomplish their dreams of small business ownership and service at little cost to provide excellent service from our Board.

Technology provides for continuous improvement, it allows for progression not stagnation, and technology affords this state agency the ability to provide more money to the state budget and need less money to operate our Agency, percentage wise, than ever before. In addition to the tangible savings of hundreds of thousands of dollars a year, the intangibles are less state employees doing much more work.

Thank you for providing us with the tools to do this job and for letting us share this success story. After all, it is all of ours, not just this Board's, but the people of Ohio's success story. Our Board is honored to have been invited to share our story, and would welcome your questions.

CSCI Consulting, Michele Meyer

Study Committee on Technology in Ohio's State Government
Chairman Craig Newbold

September 20, 2011

Chairman Newbold and members of the Study Committee on Technology in Ohio's State Government, CSCI Consulting is pleased to have the opportunity to testify before you today. CSCI Consulting is a woman owned small business that provides Information Technology solutions to both federal and state governments. CSCI was founded in 2002 and is currently providing IT services for more than 30 Department of Defense financial systems and over ten State applications. Our breadth of services range from System Integration and System Sustainment to providing customized solutions on what is said to be some of the largest Oracle applications in the world.

Throughout our public sector history, we have seen the trends that tend to determine the fate of an Information Technology project. At the executive level, the high cost of maintaining old technologies can be the sole reason for initiating new IT efforts. However, other factors can also require a change to new technology: quality, efficiencies, and pressure to produce more work with less people.

Once the initiation of new IT solutions is explored, analysts tend to discover other changes that also need to occur within the processes that are used. These additional changes may involve data sharing, data interoperability, and organizational process changes which are almost always required to effectively implement a new system.

In my experience, the technical solution is not the main challenge for implanting a new technology, it is one of the following:

- Funding across multiple agencies
- Data Sharing across multiple agencies
- The acceptance of process changes by the end users

Funding for IT projects tends to be at the agency level and garnering funding support from multiple agencies can often be the single hurtle that stops an IT project before it can ever really begin.

Data sharing and interoperability can often come with numerous challenges that can stem from privacy and security concerns to data proprietorship challenges across agencies

But let me focus on the third reason: How Organizational change can adversely affect a new system implementation. Systems are often not designed to perform a job precisely the way it is being done today and most agencies fear losing a system they have relied on for the past 30 years. The outcome of these fears tends to be the creation of a system that performs interoperability across legacy systems without replacing a single one of them. This tendency allows stakeholders to often meet some of their quality and efficiency goals without infringing upon the agency's day to day

operational processes for the end users. However, it does not address the cost of maintaining old technologies nor does it consider that many of the professionals maintaining these systems are nearing retirement age and schools and universities are no longer teaching these technologies to their IT students.

Within our work with the federal government let me share some examples of where IT projects have been successful and where some ended as a failure.

The Defense Procurement Payment System (DPPS) was a customized solution intended to become the standard DoD procurement payment system used to calculate contract and vendor payments. It would consolidate numerous legacy systems, stop inefficiencies, and eliminate erroneous payments. The initial project cost was approximately $152M and was estimated to take ten years. However, within the first three years of the project inception the cost had increased to $274M and the project had a 4 year schedule slippage. These factors and the lack of executive advocacy ultimately lead to the cancellation of the program.

So What Happened? Agency executives blamed the technology for the failure. However, one could question if other familiar parables may have played into the projects demise as well. The DPPS project in many ways was a classic situation where a technologist comes up with an unsolicited solution for challenges they perceive within an agency. They fail to garner the support of the affected business executives which in turn means that the requirements process is hindered by a lack of subject matter expertise. Thus, requiring the technologist to become the subject matter experts which in turn leads to schedule slippages and overall deployment cost increases. Ultimately right before product deployment the technologist may finally have the ability to engage the true subject matter experts only to find that their software is not doing exactly what the current system does and that the end users and affected business executives are unwilling to change their operational processes thus declaring that the new technology simply does not work which in turn costs taxpayers millions of dollars.

What is the solution? Avoiding these pitfalls must begin at the executive level where IT goals must be shared amongst the agencies. Both business executives and IT governance must adhere to a common goal and detailed concise IT objectives. From an IT perspective implementing new processes such as “Agile Development” methodologies can engage executives along with the system users in all aspects of the development process. Agile software development is a group of software development methodologies based on iterative and incremental development, where requirements and solutions evolve through collaboration between self-organizing and cross-functional teams. The process promotes adaptive planning, evolutionary development and delivery; time boxed iterative approach and encourages rapid and flexible response to change. The process encourages input and buy in from the business community, who will then be more apt to embrace organizational changes.

Enterprise Information Technology projects have the strength to often empower agencies and provide reuse for other organizations. In 2002, CSCI began working with the United States Special Operations Command. SOCOM is the only DOD agency that receives its funding from each of the

military services. Therefore, they had a very unique problem – because they received their money from different agencies that all have different accounting systems utilizing various data elements SOCOM had no way of performing accurate accounting and budgeting within their organization. SOCOM correctly understood that they could not force other services to adopt new processes or the project would certainly fail.

The SOCOM Solution created cross walks for the data from each of the military services into a central enterprise database and warehouse where the data was then converted to a standard fiscal code so the data from different sources could now be consolidated and allow for accurate accounting and budgetary reports. This solution allowed SOCOM financial visibility for the first time since their inception in 1987. SOCOM had strong and clear executive leadership to force process changes down to the user level their organization. The implementation was extremely successful and met the key demands of timely budget data as well as not disturbing the processes the other services were currently using. In addition, the SOCOM solution yielded a data warehouse that stored accounting data from each of the services. The creation of the warehouse was ultimately utilized to allow financial visibility with minimum development for other agencies and services as well as to provide first time visibility of events such as federal spending for Hurricane Katrina, Obama's American Recovery and Reinvestment Act, as well as Cost of War reporting.

In Summary, there are tremendous benefits of using new technology from a cost, reliability, security and efficiency perspective. But you must also create an environment that yields a shared vision across agencies and utilizes modern process implementation methods and management in order to effectively deploy a large scale product across multiple agencies within the timeframe and budget desired.

Once again, Chairman Newbold and members of the committee, thank you for the opportunity to testify today. I will be happy to answer any questions from members at this time.

THE OHIO STATE UNIVERSITY JOHN GLENN SCHOOL OF PUBLIC AFFAIRS

September 20, 2011

Good Afternoon.

Chairman Newbold and Members of the Ad Hoc Study Committee on Technology:

My name is David Landsbergen and I am an associate professor in the John Glenn School of Public Affairs at the Ohio State University. The John Glenn School is a comprehensive policy affairs program offering undergraduate, graduate, and doctoral degrees, high school internships, and many other programs that engage the public on today's public issues.

My particular focus is on public sector information and IT management. I hope that some of what we have learned will be of use to you. Today, I would like to bring you good news about how local governments are working together, some work that I have done that relates to the consolidation of services, and finally the importance of quality information.

1. The Good News

The good news is that Public Information Officers of twelve Central Ohio local governments are now working together to find innovative ways to use social media to provide better services to their citizens. They are sharing their knowledge and experience, but also what they do not know and still need to learn. It is refreshing and hopeful. The John Glenn School is assisting their efforts in thinking through some of the uniquely public sector concerns.

For example, social media as you know, are services that reside in the "cloud", so that a Facebook post or Tweet is not within the control of those governments. How does government discharge its statutory responsibility to respond to requests for public information?

For example, what happens the first time that there is a request for information and we cannot retrieve the information because Facebook or Twitter no longer has the information? We can blame Facebook, but realistically, the citizen should, and will, hold the government ultimately responsible. We do not want another catastrophic event destroying the public trust in IT or forcing us to create an over reactive solution.

Recommendation

My recommendation, and one idea we are working on, is to contract for shared services that would insure that those public records are within the control of local governments. Local governments would now have a copy of the information stored on Facebook.

Government must be accountable, and it must protect that information in a secure way so that the information is available to you, the legislature, and to the citizen. The good news is that local governments are working together to create innovative solutions.

2. Consolidation of Services

In research funded by the Living Cities Foundation on Ohio's legacy systems, we found that Ohio could benefit from consolidation. State agencies and county governments could save money, improve the quality of service, and contribute to improved decision-making. I have forwarded a copy of this report to the committee.

For example, Utah's eFind system automates the process of validating an application for public benefits. A large amount of labor goes into validating information like current address, citizenship, family relations, and current income. Even Wisconsin, a leader in the innovative use of technology, has found that caseworkers still spend thirteen hours a week just doing validation! For an investment of $2 million, Utah's

e-Find system had a ROI in just sixteen months. Utah is willing to share their source code and work with us. Interestingly enough, eFind is the product of an innovative public – private partnership.

We also looked at document management services – converting all of that paper into electronic documents. Again, we looked at a variety of solutions and found that shared services in adapting a home-grown service would be cheap and quick to implement. We need to look at the numbers and then make our best judgment about the bottom line.

The DAS / MAC white paper referenced by this committee makes this same point. Exhibit 1 suggests that states that do in-house provision of services, or are centralized, offer a lower IT cost per capita.

I would like to look more closely at the analysis behind this conclusion. I would want to know, for example, why these states were chosen and what services are provided in these states, to make sure that this is a fair comparison with Ohio. But at least the report suggests that we move in the direction of actually looking at the numbers and making sure that there is a business case.

While we are on costs, there is a rough rule of thumb that for every system built, 10% of the cost is hardware, 20% is software, and 70% is "orgware", which are the many intangible costs borne by citizens and staff as new systems are developed and implemented. Even the true costs of hardware and software are sometimes hard to estimate, so think about how easily it is to miss all of the intangible costs.

Perhaps the estimated 60-80% of IT system failures in the public and private sectors are due to a failure to budget for costs other than hardware and software?

Finally, in contracting out, it is important to avoid the "hollow state". As its name implies, the "hollow state" happens when too much of expertise is contracted out so that it no longer becomes possible to manage the contracts, provide realistic oversight, or to do the necessary work in analysis and planning.

Recommendation

The MAC / DAS white paper has begun to identify core, common, and unique services. Let's do an actual inventory to make sure agencies really have the professionals to provide these services but are paid at a rate comparable to what the private sector would pay.

3. Information Quality

Ohio must catch up with best practices in the field. We need to manage information as a resource just like we manage capital and people. Benefits of good information management include saving time and money. For example, as a patient, why should you fill out new forms every time you visit a new doctor or even the same doctor? Every time we will out a form again, we increase the chances of getting erroneous information. Let's not reinvent the wheel but use the best practices already tested.

Another example is that lots of money is being put into improving medical information systems, but if doctors and patients do not trust information provided by other doctors, there will be lots of wasted money. Why would a doctor in Columbus trust the information provided by a doctor he has never met in Colorado?

We can focus on the plumbing but we need to make sure that it provides good quality information. IT is about pipes and sinks. We need to keep our eyes on the prize on what we really want, not only good IT, but quality information.

The John Glenn School is now beginning to work with some of the organizations creating these medical information systems to help them determine if quality information is going through those pipes and actually being utilized.

Quality information is also important to the issues we are discussing. Our study on legacy systems had a very difficult time obtaining quality information to do tight cost analyses and understand the business case. We could quote Utah's ROI because they had the information and could do the analysis. We need to change the culture to expect that the information is there so that we can get to the bottom line. How can we say that insourcing or outsourcing is better if we don't know what the actual costs are?

Recommendation

The legislature, in its oversight role, should insist on obtaining quality information about costs and benefits in order to help it determine what projects should be funded and whether they will work.

Summary

In much of the work done on reducing the number of "islands of information", critical factors in getting these systems to work has been the existence of a "crisis" and strong executive leadership. There are also tools: funding incentives to build joint agency systems, allowing agencies to share in the savings, and legislation that explicitly allows agencies to share information.

Let's take advantage of this moment and find ways to not only think about consolidation of email but to also make strategic incremental choices that have long term benefits in improving shared services, procurement, and information sharing.

Thank you for this opportunity, and I would be happy to answer any questions.

Testimony by Mary Beth Parisi, CIO

Ohio Environmental Protection Agency

September 20, 2011

Reducing Cost and Improving Efficiency in Ohio Environmental Protection Agency's Information Technology Services Structure for 2011 and Beyond

Context: Ohio's Technology Services Environment

Chairman Newbold and members of the House Study Committee on Technology, my name is Mary Beth Parisi and I am the Chief Information Officer for the Ohio Environmental Protection Agency. Thank you for allowing me the opportunity to share Ohio EPA's perspective on challenges and possible solutions for advancing Ohio's technology services into the future.

A significant portion of the role and responsibility of State government organizations is to manage information and use it to administer programs, services and funds on behalf of the citizenry. Today, almost all of that work is done using technology tools to collect, process and manage data relevant to meeting the needs and expectations of citizens and businesses of the State of Ohio.

In Ohio, technology tools and services have been acquired and developed according to the individual needs of each independent Agency, Board and Commission. While this approach has served to help meet the short term organizational mission of each agency, little concerted effort has been made to coordinate and integrate the acquisition and management of these important State resources.

Technology systems and the processes they support have become silo-ed, creating significant redundancy, escalating costs and poor efficiency for state staff, citizens and business in Ohio. Data collection, accuracy and quality varies widely between agencies and internal agency departments creating a situation where no-one's needs are adequately met and management of data has not kept up with the needs , expectations and requirements of today's citizen.

In today's public sector budgetary environment, State government is facing tough times with rapidly changing expectations, escalating costs and new demands on operational agility; many of which impact efficiency and ultimately increase operating costs. To combat this, all levels of government have successfully focused resources on reducing costs and improving efficiency by minimizing variation through consolidation & centralization of key services, implementation & enforcement of standards, out-sourcing of non-mission related services.

Since 1995, the number of personal computers has grown from 18,800 to over 55,000. Technology is now at the core of environmental protection, public safety, social welfare, finance and revenue, education, and criminal justice agencies. With this level of investment and the exponential growth in the use of information technology, a greater emphasis must be placed on ensuring the management of resources across the enterprise. ***Consolidation and centralization of state-wide information technologies and technology services provides the opportunity to better manage Ohio's portfolio of investments.***

Ohio's revenues place it on par with Fortune 100 companies; we can leverage their example, or the examples of several other states. New York, Virginia, Florida, Wisconsin, Michigan and others who are finding they can do more with less, save money by sharing, achieve better service through better management, and gain better economies of scale by eliminating duplication and taking advantage of combined buying power.

Significant departmental organizational improvements, full implementation of shared services, elimination of operational redundancy across State Agencies through services consolidation and appropriate outsourcing of services will help make Ohio government administration significantly less costly, drastically improve efficiency, and will enable Agency resources to focus on their core mission and goals for the people of the state of Ohio. The time has come for the centralized management of state government technology resources in Ohio. An enterprise orientation toward information technology can achieve this to greatest effect.

Section 2: Reduce, Reuse, Recycle: The OEPA's Information Technology Services Strategy

" Reduce, Reuse, Recycle"

A common phrase used both inside the Ohio EPA and with the public. We most often think of this phrase in terms of consumer goods packaging and natural resources; but it applies just as easily to our other resources as well. Specifically, it applies to our management of technology investments, staff resources and our knowledge base.

Today, Ohio EPA faces similar challenges as other Ohio Agencies and the State Office of Information Technology. Principle amongst those challenges are:

- Ageing Infrastructure and escalating costs to maintain it,
- Redundant, Silo-ed application systems within the agency that provide similar functionality using disparate systems,
- Increased demand from the public and regulated communities to improve and expand services,
- Lack of agency wide, cohesive, unified management of technology resources and staff,
- The need to reduce cost and better manage our technology investment.

Currently, in addition to a central office of Information Technology Services (ITS), the Ohio EPA has independent technology systems and staff in each of the 6 Divisions and each of the 5 District offices. While some shared, enterprise services are managed by the central ITS, many of our most critical systems are managed and maintained by these independent teams, working on their own , outside of a common framework and without collaboration.

In 2011, under the leadership of Ohio EPA Director Scott Nally, the Agency began a bold strategy to examine how the organization was addressing and managing technology. His strategy, now being implemented, addressed the importance of aligning the agency divisions' business organizations and the central IT organizations and the priority of close collaboration with the state Office of Information Technology.

Director Nally recognized the benefits of such alignments as elevating the importance of information technology through integrating it into the long-term strategic management of the agency and the State.

Our Goal:

Reduce technology costs by eliminating redundancy and variability, creating a more agile environment to move forward in.

Reuse systems that are currently dedicated to one division, across the entire agency, creating consistency, leveraging staff expertise and lowering maintenance costs.

Recycle the skills and expertise of our staff to serve agency wide needs as well as continue to support division requirements.

Section 3: Strategic Sourcing of Infrastructure and key services to OIT allows the Ohio EPA to focus on our Core Mission and Reduces Costs.

Ohio EPA's current technology management strategy includes playing a leading role in the adoption of a Statewide Shared Services model for IT infrastructure and shared systems.

Today, Ohio's 65 Agencies, Boards and Commissions are organized and operate independently of each other and the centralized Department of Administrative Services (DAS). This creates significant and costly redundancies. Shared Services, when judiciously and properly applied across all agencies, provide significant savings, cost reductions and measurable improvement in services, in infrastructure, staffing and licensing.

The adoption of an IT Shared Services model is part of a logical solution to addressing many of the drivers of change facing state government today. An approach that mandates participation in Shared Services and expands the availability of functionality would make this program significantly more cost and service effective and eliminate redundant costs for the development, support and management of multiple systems currently serving multiple agencies under widely varied contracts.

States that have adopted comprehensive technology management strategies are reporting substantial savings by eliminating duplication, sharing services, standardizing platforms, and leveraging buying power. Virginia estimated that it would save $37.4 million solely through improved business processes, hardware consolidation and leveraged purchasing. Florida expected to save $30 million just through aggregated technology purchasing. Florida also reported saving 10% annually in data center personnel costs simply through consolidation in addition to a 7% reduction in the growth of the cost of those services. These are but samples of the many technology areas where savings can be realized. Wisconsin, Georgia and others report similar dramatic savings simply by having the ability to require agencies to work together for the common good.

Industry benchmarks suggest a bottom-line costs savings of 10% - 30% per annum as a result of adopting a shared services approach. Expected cost savings through hardware and software pooling both within and across state agencies have been valued at about a 22% cost savings.

Ohio EPA and OIT Collaboration

As a first step in the strategic management of Ohio EPA's systems, we became the first Agency to collaborate with OIT in migration of the previously independent "Groupwise" email system to the State Outlook email and Active Directory system, provided and supported by OIT. Ohio EPA technology and infrastructure staff and OIT staff collaborated extensively to accomplish the move of email to the new system successfully in 60 days. In addition to accomplishing the move, the two teams successfully collaborated to document the processes, create procedures and mitigation plans and leverage the expertise of both sets of resources to ensure future agency email migrations would benefit from the experience.

In June 2011, the Ohio EPA began working with OIT to explore the opportunity to reduce Agency costs in infrastructure by again sharing staff resources and consolidation of equiptment for the Agency's storage and server environments. The Ohio EPA formulated an aggressive strategy to Virtualize it's 100+ servers across 7 geographically disparate locations around the state . Additionally, we are exploring the opportunity with OIT to move Ohio EPA's physical infrastructure to OIT's State of Ohio Computer Center (SOCC) with with a targeted completion date of December 1, 2011. Agency virtualized servers , storage network and staff will become part of a new OIT Shared Services environment, leading the way for more extensive collaboration between our 2 organizations and reduceing infrastructure costs.

As technology leaders, I believe consolidation and centralization of state-wide information technologies and technology services will allow us to better manage Ohio's portfolio of investments. We have the opportunity to eliminate variations in Ohio's state government to promote innovation, foster better government, partner with business and engage citizens.

I support an approach to technology provisioning that includes Shared Services strategies that leverage a central support model to meet common technology needs, reduce costs, and improve services. As we move forward , the Ohio EPA will continue to collaborate and support OIT in it's efforts to develop a mature and functional Share Services Organization.

Section 4: Ohio EPA Agency Level Changes

Consolidate agency services, establish platform standards and leverage staff skills:

IT infrastructure and support models have changed dramatically over the past twenty years. While there are many areas in the Agency that have met ongoing business needs very well, the Agency as a whole, has not nearly kept pace with changes and efficiencies that have developed in the IT field generally. Additionally, two key factors are driving the Agency IT changes that will be occurring:

- State level consolidation directives aimed at reducing IT costs, modernizing IT infrastructure, establishing connections across Agencies, and providing consistent customer experience (i.e., business and citizen).
- The Director's goal of applying IT resources Agency-wide in an efficient, project oriented manner that meets business needs within the Agency though leveraging true IT project management, transparency, and use of a modernized IT support structure and technologies.

Currently, the Ohio EPA is working closely with its internal stakeholders to reorganize how the Agency builds, manages and maintains its technology systems. Beginning in August 2011, the Agency kicked-off a consolidation of all IT functions and services into one central IT organization. At the core of our strategy for this transition, is the recognition that we need to achieve better alignment of resources, improve service to both internal and external constituencies, and reduce costs.

The alignment of technology and business roles is a model that is currently shared by 18 other states, emphasizing the integral role technology plays in agency operations. A centralized agency authority with the goal of improving service and minimizing costs confers benefits by:

- Combining divisional, fiscal and technology experts to help facilitate a unique and holistic approach to aligning agency technology spending priorities
- Ensuring a close managing of long-term IT investments of the agency, avoiding duplicative or unnecessary purchases
- Alleviating divisions from handling technical IT resources as "fixed costs" and helps iron out some of the demand fluctuation as projects go through the project lifecycle.

- Operating more like the private industry by allowing IT to become a strategic partner rather than focusing solely on infrastructure. Bring technology to the forefront of the strategic direction of the agency impacting how Ohio EPA does business and serves its citizens.
- Lending the power of collaboration to the State OIT's efforts to consolidate infrastructure and minimize costs.
- Refocusing the knowledge, skills and experience of OEPA current technology staff into a collaborative team providing increased capabilities, reduced development and support costs, improved services delivery
- IT consolidation across divisions is facilitated by a model that does not further reinforce the building of silos between formerly disparate systems but rather, encourages sharing.
- Reducing recruiting and retention challenges and maximizing the utilization of existing resources aligning like-minded technical domain experts.

Creating a single information technology office, whose sole focus is managing the agency's technology investments, is the foundation for an effective strategy.

Thank you for the opportunity to testify. I would be happy to answer any questions you may have.

Citations:

Gartner, Inc. (NYSE: IT) is the world's leading information technology research and advisory company. We deliver the technology-related insight necessary for our clients to make the right decisions, every day. From CIOs and senior IT leaders in corporations and government agencies, to business leaders in high-tech and telecom enterprises and professional services firms, to technology investors, we are the valuable partner to 60,000 clients in 10,800 distinct organizations. Through the resources of Gartner Research, Gartner Executive Programs, Gartner Consulting and Gartner Events, we work with every client to research, analyze and interpret the business of IT within the context of their individual role. Founded in 1979, Gartner is headquartered in Stamford, Connecticut, U.S.A., and has 4,300 associates, including 1,200 research analysts and consultants, and clients in 80 countries. http://www.gartner.com/technology/home.jsp

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The Center for Digital Government is a national research and advisory institute on information technology policies and best practices in state and local government. The Center is a division of

e.Republic, Inc., the nation‘s leading publishing, research, event, and new media company focused on information technology for the state/local government and education sectors. http://www.centerdigitalgov.

10/5/11 Study Committee on Technology Notes

Kumar Rachuri – *Chief Information Officer* – Ohio Department of Job and Family Services

- See written testimony

Questions

Celeste

Q: What security is there internally due to the large amount of transactions?
A: Position support systems – this is also available to other agencies, especially regarding taxation analytics. Fraud is a concern. We are operating by the Thompson method. This is an enterprise support system.

Brenner

Q: What is a lifespan of a system? Are they capable of holding transactions moving forward?
A: Lifespan of applications is predetermined. CRIS E is an example and other states model after our CRIS – E. This system is far more complex and sophisticated than any system we can create today. We need to focus on mission critical needs – if it can accomplish the same needs without buying a new system or server.
Q: Sending automated messages to business rather than by mail – What are we doing there?
A: We have done this and it has a savings of $500k. It is hard to mandate this on our constituents – there is almost 75% in savings.

Newbold

Q: How many IT employees are at JFS?
A: 550
Q: What is the breakdown of operations vs. development employees?
A: All types of employees – 225 on applications
Q: Agile development concepts – future or current?
A: Invest less in infrastructure because it is a commodity and this will create savings for the applications.
Q: MITS – what was the timeline to implement it? Any lessons learned from this?
A: 5 years, there was not enough communication.
Q: How do we manage vendors?
A: make sure the contracts have benefits for the state because you need a vendor that wants to be a business partner and not just an opportunity to make money and run.
Q: How does your procurement process allow us to benefit?
A: We are working on this and DAS is helping us make this better for us

Scott Schweitzer - *Executive Director* - Technology for Ohio's Tomorrow Executive Director

- See written testimony

Questions

Brenner

Q: Are other agencies / local governments utilizing these mobile applications in Ohio?
A: I am not aware of anything in Ohio. Michigan has done this. State agencies are trying this, but nothing has been rolled out.

Newbold

Q: Arkansas – Studies on this RIO?

A: The savings is in man-hours and the ability to limit the use of paperwork.

Brenner

Q: Elaborate on the photo ID application?

A: Yes, this is comparable to the credit card application

Newbold

Q: How did the Oregon's legislative App work?

A: They were already streaming session online, but not on mobile apps so the lobbying community paid to get the initial application developed.

Jason Lee – *Chief Information Officer* - Boardman Twp

- See written testimony

Questions

Brenner

Q: Security Issues – How did you address this?

A: It was built through the police department and they are very strong on security.

Newbold

Q: How did this come about?

A: The Metro Leader Roundtable which focuses on Government efficiency gave a presentation on how to do this. So this is what sparked the idea for this concept.

Q: Do you think this would have occurred if you had more money and other options?

A: Likely, but not at this rate.

Q: When did this become effective?

A: 1 ½ years ago we received the grant and currently we are almost done implementing it. 911 is the next step.

House Technology in State Government Study Committee

Bruce Langos, Chief Operating Officer
Teradata Corporation

October 25, 2011

Honorable Chairman Newbold and members of the House Technology in State Government Study Committee, my name is Bruce Langos and I am the Chief Operating Officer of Teradata Corporation. Thank you for the invitation to offer testimony today. By way of some background information on Teradata, we are proudly headquartered in Dayton and among the world's largest companies focused solely on data warehousing and data analytics. Our technology provides businesses and governments with the ability to leverage detail-level data, enabling them to recognize emerging trends and take the appropriate corrective actions. Teradata's experience over 30 years has shown us that technology is the catalyst that can create smaller, but smarter governments, generating immensely valuable results while lowering costs. Our technology can be applied in any field that requires the effective management and use of complex data sets, like healthcare, financial management or logistics.

As an Ohio company, we have been trying to work with the State for several years on ways to incorporate our enterprise data warehouse solutions into the State's technology and decision-making infrastructure. We've seen the power that an enterprise data warehouse system can create for companies - Nationwide Insurance uses our products to create an easy-to-use single database to consolidate data from over 200 sources - and government - the State of Missouri uses an enterprise data warehouse to match data from several outside sources to the department's internal data, collecting millions in unpaid and underreported taxes from non-compliant filers. We have also worked with the Ohio Department of Taxation on a project to mine federal Internal Revenue Service data for a project similar to that in Missouri.

The State of Michigan is a prime example of the insight, power and results that can be achieved by an integrated, statewide enterprise data warehouse (EDW). The Michigan EDW draws data from 120 distinct sources and has nearly 10,000 users in five major departments, 20 agencies and more than 100 bureaus. By removing the barriers to the sharing of data across business units, Michigan has been able to leverage massive amounts of data to create innovative approaches to some of the most difficult decisions and tasks state government faces.

In addition to allowing Michigan to use its data more effectively to make better decisions, the state is realizing $1 million per business day in financial benefits. Michigan recently documented $275 million in annual financial benefits from just two of the departments using the system, the Michigan Department of Community Health (MDCH) and the Department of Human Services. These financial benefits came from several sources: program integrity benefits (including identifying fraud and abuse); cost avoidance due to improved outcomes, sanction avoidance and operational efficiencies. Some of the programs in Michigan which use the EDW include:

- Food Assistance Program Automated Find and Fix - identifies food assistance cases not receiving the correct benefit levels
- Child Support - holds a collection of data from other agencies, which allows a very sophisticated and comprehensive method to "locate" non-custodial parents for the purpose of collecting child support. For instance, records from the Secretary of State, motor and

vehicle licenses, hunting and fishing licenses, professional license and inmate incarceration data can be collated to find and hold parents responsible for their child support obligations.

- Medicaid tracking - MCDH monitors the cost and care associated with a single individual across multiple programs. MCDH has used this data to improve healthcare outcomes like helping reduce the cases of child lead poisoning and identify high-risk children for influenza vaccinations.

The EDW is an integral part of Michigan's efforts to reinvent state government so that it runs efficiently and serves its citizens as customers, placing innovation, performance and customer service at the forefront. To achieve these ends the state must have reliable data to identify the results of the state's efforts and understanding what actions and circumstances led to those results - which allows the state to make informed, value-based decisions. This allows the state not only to address yesterday's issues, but understand tomorrow's potential problems and plan accordingly. Michigan has been able to make the leap from a reactive organization to a proactive, agile organization.

Again, thank you for your time and the opportunity to testify today. In summary, it's my opinion that given the size and complexity of state government and the importance of the decisions it must make, that Ohio needs the ability to make better decisions. You have the data and expertise; you just need a better way to make sure that the right people get the right information to make better informed decisions. I welcome the opportunity to more fully discuss the points that I've outlined in brief today and to be a resource to the Committee throughout your deliberations. I would be happy to answer any of the Committee's questions.

Testimony before the Ad Hoc Committee on Technology in State Government

October 25, 2011

John Conley, Ohio Board of Regents

Chairman Newbold and members of the committee, my name is John Conley. I am the Chief of P-20 Educational Technology for the Ohio Board of Regents. I have been in my current capacity since April of 2011.I came to the BOR from the technology private sector where over the last couple years I have been heavily involved with Educational Longitudinal Warehousing efforts. Since beginning at the Ohio Board of Regents, we have been successful in several key initiatives.

Provide better services and improve responsiveness to Ohio citizens and taxpayers

At the Ohio Board of Regents, we are committed to providing better services and improving responsiveness to Ohio citizens and taxpayers. To illustrate our commitment, I would like to discuss one of our greatest wins, the establishment of OH-TECH.

Following the Governor's directive to streamline state operations, remove duplication and save money through efficiency, a careful review of all the consortia was conducted and significant areas of concern were uncovered that the shared services model lacks:

- Governance and control of software.
- Development and maintenance of systems, and;
- The absence of a comprehensive IT budget.

With the assistance of The Ohio State University—our fiscal agent—we have implemented a plan to merge Ohio Academic Resources Network (OARnet), Ohio Supercomputer Center (OSC), Ohio Learning Network (OLN) and shift all IT personnel from Ohiolink into a single consortium called the Ohio Technology consortium (OH-TECH).OLN is hereby dissolved and the division of eStudent Services within OH-TECH is established and is the successor to OLN. The merger does not affect any services to constituents, but does streamline the way services are provided.

By merging the organizations into a single consortium we can leverage existing strengths for each organization and enable those organizations to concentrate on their core mission. It is our plan to look for additional efficiencies of operation within the organization.

Become more efficient in daily operations

Additionally, we have reviewed the inner-workings of the Ohio Board of Regents and our consortia to become more efficient in daily operations. To those ends, we are reviewing eTech's use of the Central Master Control at NorthStar to determine if we have the most efficient delivery system and customer support for our eight PBS stations in Ohio. Additionally, we are working to minimize operational costs for grant-funded projects so as to support sustainability of services throughout the agency.

Reduction of overhead and red tape

In a constant effort to reduce overhead and red tape, we have made several important changes. Consolidation of our phone call center to OTTA, consolidation of 5 products to a single Customer Service Management platform, and the consolidation of four ticketing systems for desktop support into just one have clearly increased efficiency and reduced overhead.

A critical path for Chancellor Petro, our articulation and transfer network is continuing to cut red tape for students by allowing them to transfer electronically from one Ohio Institution to another. We are seeing a significant increase in Distance Learning that allows students to take a more shopping cart approach to the Higher Education. This system will also process primary-secondary electronic student transcripts for the campuses beginning next year guaranteeing Ohio high school students appropriate college credit for high school courses to facilitate earning a three-year college degree.

Enhanced collaboration with other state agencies and levels of government

Only through working together and with shared services will Ohio's state agencies be able to function at peak efficiency with the smallest burden to tax payers. With this in mind, the Board of Regents led the effort along with the State of Ohio OIT, ODE (K-12) and MCOECN (ITC) to renegotiate a renewed contract with VMware. Through this agreement, the State of Ohio saved $22 million dollars and over $100 million in soft costs (power, rental, personnel) by utilizing the virtualization software from VMWare over the last three years.

Additionally, much has been done at the Ohio Board of Regents regarding shared services. As an example, OARnet has recently been included on and VOIP RFP released by Ohio University in partnership with Shawnee State and BGSU. We are currently identifying other areas, such as Federated Identity and Virtual Computing Labs for a shared services model. Also, we are conducting research on the community colleges to see leverage points where assets or staff can be leveraged to assist each other and lower costs. For example, if Sinclair Community College has a Certified Security Expert on Staff and he has available time to assist other community or university colleges in a shared model we must leverage those abilities. Another example would be data center space. If a community college has excess floor space in the data center, why can't we leverage that space in a shared model to assist a community college without the resources?

Identification and adoption of best practices

As Auditor of State and as Ohio's Attorney General, Chancellor Petro has always been on the forefront of identification and adoption of best practices. At the Ohio Board of Regents, we have continued this method and have instituted a strong project management office for new processes of project intakes, project governance, portfolio management, and resource planning. We have developed standardized solutions methodology to distinct phases and gated reviews for Define, Discover, Design, Develop, and Deploy. All of our projects must be vetted through the PMO office before being initiated. We are also Implementing Project Management Reporting time tracking and project performance reporting tools to continually improve our processes over time.

Standardization of technology platforms utilized

We are continuously working to coordinate state agency websites and communication efforts. Establishing a relationship with Ohio Means Jobs and driving all potential internships and employers to the Ohio Means Jobs gateway creates a single presence for the State of Ohio and enables for better reporting and metrics. This also gives JobsOhio and other state agencies the ability to showcase the talent resources of Ohio. The Ohio Board of Regents has standardized to a single web language format—Drupal—and each department will be responsible for their own content. This Streamlines the process for content and increases the vibrancy and timeliness of information to our institutions and students.

OH-TECH partnered with Ohio University and Wright State University on purchasing aggregation with Juniper Networks to get favorable pricing resulting in savings of $6 million dollars.

At the Ohio Board of Regents, we realize we are always in a competitive market and are constantly looking toward increased efficiencies. We look to improve the performance and retention of Ohio students, and will continue to seek to leverage our assets within Higher Education for economic development.

Chairman Newbold and members of the committee, I thank you for the opportunity to testify and I would be happy to answer any questions at this time.

Testimony by Greg Henderson, SAS

October 25, 2011

Mr. Chairman, Members of the Committee,

Thank you for inviting us to present to your committee today. My name is Greg Henderson, and I am the Government Practice Principal for the Fraud and Financial Crimes Global Practice at SAS. I have 15 years of experience in applying advanced analytical methods to solve real world issues, most recently focused on fraud and financial crimes detection and prevention in the banking and government sector. I am an Ohio native, and a graduate of Bowling Green State University.

SAS is a 35 year old company based in Cary, North Carolina, and is the industry leader in Advanced Analytics and Statistical Software and Solutions. We are the largest privately held software company in the world with $2.4B in revenues last year. Financial Services, Government and Health & Life Science are our largest industry sectors. We employ approximately 12,000 people worldwide, about half of those in the US, and approximately 30 in Ohio. We recently launched an Advanced Analytics Lab for State & Local Government that employs over 200 researchers, all with advanced degrees, focused exclusively on applying analytics to solve the most challenging problems facing governments like Ohio. The State of Ohio is a long term client of ours, with ten agencies already doing business with us, including Office of Information Technology, Health, Mental Health, Mental Retardation, ODJFS, ODOT (transportation), Secretary of State, Auditor of State, Bureau of Worker's Compensation and Education. State Teachers Retirement System of Ohio is also a client.

In your effort to improve the effectiveness and efficiency of government in Ohio, we would like to discuss the value of analytics in addressing these challenges, and share some successes we have had in other states that might be of interest.

So what do we mean by analytics? The use of analytics provides its value in answering questions not just about the past, but also about the future. So instead of just addressing questions like, "Who, What, When, Where and How Much", analytics can help answer questions like "Why?", "What is likely to happen in the future?", "What is the impact?" and "What actions are needed to obtain the optimal outcome?"

A good example of this from popular culture is the book and recent movie "Moneyball". Have any of you seen it or read the book? It's the true story of the Oakland A's and how they were able to produce several pennant contending teams with a payroll that was at or near the bottom of the league. How did they do that? They hired a really smart statistical guru named Peter Brand who used analytics to discover that the factors most teams used to evaluate and value players were not the best predictors of overall team performance. Using analytics, he determined that the teams who won the most were the teams who scored more runs. The teams who scored more runs were the teams who got people on base. The analytics indicated that on-base percentage was the most important metric for evaluating players, not RBI's, batting average or other more traditional value metrics. Thus, the Oakland A's were able to obtain valuable players who could get on base (and help them win games), and still stay within their budget since other teams had under-valued those players. In other words, in an environment of severe resource limitations and constraints, they were able to maximize their outcomes. I submit that this challenge is a familiar one to state government today. Analytics is the answer.

In government, analytics can be used in many different ways. It can be used for forecasting revenues and expenditures or other socio-economic trends. For example, the State of North Carolina is using SAS analytics in their budgeting process to forecast Medicaid eligibility and expenditures at the individual service item level, allowing them to model socio-economic assumptions and policy changes, and see instantly what impact that will have on overall expenditures. This allows them to make difficult decisions based on facts rather than intuition. This has become an extremely valuable tool for them as they deal with the challenges all states are facing with rising Medicaid costs.

Analytics can also be used to improve program outcomes. Similar to the "Moneyball" example, analytical models can determine which activities, and in what combination or sequence, actually impact the desired outcomes. For example, San Bernardino County uses SAS analytics to help reduce homelessness by understanding what is the right mix of programs and services for each individual homeless person, based on their unique attributes, that will have the highest likelihood of getting them into a more stable living situation. Los Angeles County uses SAS analytics to help protect against child abuse within their foster care programs. Through analysis of historical abuse cases, the County was able to identify risk attributes that are now used to determine child placement and case worker protocols, for each child, based on their unique situation.

Analytics can also be applied to protect public safety. For example, by analyzing recidivism data, corrections officials can determine which incarceration or probation/parole programs actually contribute to improving rehabilitation outcomes, and what mix of these programs is right for each individual offender based on their unique demographics. Washington, DC uses SAS analytics to risk assess each offender to determine their likelihood to commit additional crimes, and then prescribe the most effective treatment to reduce the risk.

The issue that I am currently focused on is leveraging analytics to help detect and prevent fraud, improper payments and non-compliance across all government programs. This is a pervasive issue in government, resulting in billions of dollars each year in losses to the state. Analytics can be used to model "normal" behavior patterns and then detect abnormal, or suspicious activities that deviate from the norm. Analytics can also be used to study known fraud cases to identify the attributes, patterns or sequences that differentiate the fraud from the good transactions. Those models can then be applied to all incoming transactions to score them as to the propensity that they are improper. The State of Washington uses SAS analytics in their Worker's Compensation program to identify non-compliant employers. After implementing an analytic approach to determine audit candidates, the State was able to increase their audit hit rate – the number of audits that result in positive finding of non-compliance – from 50% to 80%. In addition, they were able to increase the average collections per positive audit by 33% using analytics to focus limited auditor resources on those cases that were of the highest potential value to pursue. As a result, the State was able to recover almost $150M last year in unpaid worker's compensation premiums.

Finally, analytics can be used to enhance the educational system. Right here in Ohio, SAS analytics is being used by the Department of Education. SAS' EVAAS value added reporting system applies sophisticated analytics to measure the district, school and teacher effect on student progress in math and reading in grades 4-8. In addition, the solution provides the capability to predict which students will be most successful in higher level math and science courses, approximate their scores on college entrance exams, and estimate which are likely to pass the state's graduation test. This allows schools to place each student into the appropriate curriculum to maximize their learning potential.

As you can see, the impact analytics can have on government operations and effectiveness is transcendent. It allows government to make policy and operational decisions based on facts rather than intuition. It allows government to be more transparent and accountable to the citizenry. It allows government to maximize limited resources, improve program outcomes, and better protect public safety and welfare. Ultimately resulting in improved quality of life for all citizens.

So what are the challenges or barriers to using analytics to improve government operations? The first is data. Analytics needs data. The more data the better. However, data is often housed in many different databases, systems and silos. Agencies are often reluctant to share data with each other due to cultural, regulatory or privacy concerns. Although these concerns are valid, many states are now beginning to recognize the tremendous value of data sharing and analytics, and are taking proactive steps to remove these barriers. For example, the State of Washington has integrated data from 30 different databases, across several state agencies, to better detect non-compliant employers. The State of North Carolina has integrated offender data across six state agencies, local law enforcement, county jails and the Judiciary in order to provide a holistic view of each offender and better protect the public.

The second challenge is cultural. States must embrace a culture of fact based decisions and analytics, and this must be driven from the very top of state government through to the rank-and-file. Again, the benefits are proven. The time to act is now. The economy continues to suffer, and the challenges we face are historically difficult. We must act differently. Smarter. Cooperatively. Be more effective and efficient. Analytics is the answer. Compared to other technology initiatives, it is relatively low cost and easy to implement, and can be done in small and iterative phases that provide immediate benefits within a few weeks rather than years. It does not involve replacing existing systems, but rather placing a data integration and analytics layer or top of those systems. As an example, the State of Louisiana was able to identify over $12,000,000 of recoverable Unemployment Insurance premiums within just a few weeks of implementing our analytical solution.

Mr. Chairman, I again thank you and the Committee for your time and attention today, and I would be happy to answer any questions the Committee may have.

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