



Dave Yost • Auditor of State

The Auditor of State of Ohio

Ohio Department of
Education
Performance Audit

July 1, 2013

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Dave Yost • Auditor of State

To the Governor's Office, General Assembly, State Board of Education, Superintendent and Staff of the Ohio Department of Education, Ohio Taxpayers and Interested Citizens:

It is my pleasure to present to you this performance audit of the Ohio Department of Education (ODE or the Department). This service to ODE and to the taxpayers of the State of Ohio is being provided pursuant to Ohio Revised Code § 117.46 and is outlined in the letter of engagement signed Sept. 26, 2011 and the addendum signed Feb. 4, 2013.

This audit includes an objective review and assessment of selected program areas within ODE in relation to peer states, industry standards, and recommended or leading practices. The Ohio Performance Team (OPT) of the Auditor of State's (AOS) office managed the project and conducted the work in accordance with Generally Accepted Government Auditing Standards.

The objectives of this engagement were completed with an eye toward analyzing the Department, its programs and service delivery processes for efficiency, cost effectiveness, and customer responsiveness. The scope of the engagement was identified in conjunction with ODE as IT Governance and Investment Practices, Core Responsibilities, Organizational Structure, Grants Management, and Contract Processing.

This report has been provided to the Department and its contents have been discussed with the program administrators and other appropriate personnel. ODE is reminded about the Department's responsibilities for public comment, implementation, and reporting as a result of this performance audit per the requirements outlined under ORC § 117.461 and § 117.462. The Department is also encouraged to use the results of the performance audit as a resource for improving overall operations and delivery of services.

Sincerely,

A handwritten signature in black ink that reads "Dave Yost".

Dave Yost
Auditor of State

July 1, 2013

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I. AUDIT OVERVIEW, SCOPE, AND OBJECTIVES

Ohio Revised Code (ORC) § 117.46 provides that the Auditor of State shall conduct performance audits of at least four state agencies each budget biennium. In consultation with the Governor and the Speaker and Minority Leader of the House of Representatives and the President and Minority Leader of the Senate, the Auditor of State selected the Ohio Department of Education for audit during the state fiscal year (FY) 2011-12 and FY 2012-13 biennium.

Prior to the formal start of the audit, AOS and ODE engaged in a collaborative planning process which included initial meetings, discussion, and assessments. Based on these planning activities AOS and ODE signed a letter of engagement, marking the official start of the performance audit, effective September 26, 2011.

The letter of engagement established that the objective of the audit was to review and analyze selected areas within ODE to identify opportunities for improvements. The areas specifically selected for review included IT Governance and Investment Practices, Grants Management, Core Responsibilities, Organizational Structure, and Contract Management. These areas comprise the scope of the audit as reflected in this report.

Based on the established scope, AOS engaged in supplemental planning activities to develop detailed audit objectives for comprehensive analysis. See **Section VI: Audit Objectives Overview** for an overview of scope areas and audit objectives.

This report reflects the results of the detailed analysis performed to meet these objectives in the following areas:

- **IT Governance and Investment Practices** – IT Governance, Shared Services, Disaster Recovery, Statewide Student Identifier System (SSID)
- **Core Responsibilities** – General Education Development, Office for Exceptional Children, Office of Early Learning and School Readiness, Records Retention, Budget and Financial Management
- **Organizational Structure** – Span of Control, Licensure and Professional Conduct, Test Operations & Communications and Technical Assessment
- **Grants Management** – Process Improvement (addressed in R1.2 – Shared Services)
- **Contract Processing** – Process Improvement

Where supported, the performance audit identified recommendations for improvement. In addition to the written recommendations included in this report, AOS also issued verbal recommendations to ODE to improve the processing of grants. Though these verbal recommendations were not included as part of the final audit report they have been formally communicated to ODE management for in-kind consideration and implementation.

II. METHODOLOGY

Performance audits are defined as engagements that provide assurance or conclusions based on evaluations of sufficient, appropriate evidence against stated criteria, such as specific requirements, measures, or defined business practices. Performance audits provide objective analysis so that management and those charged with governance and oversight can use the information to improve program performance and operations, reduce costs, facilitate decision-making by appropriate stakeholders able to take corrective action, and contribute to public accountability.

OPT conducted this performance audit of ODE in accordance with generally accepted government auditing standards (GAGAS). These standards require that AOS plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for findings and conclusions based on audit objectives. AOS believes that the evidence obtained provides a reasonable basis for the findings and conclusions presented in this report based on the audit objectives.

Audit work was conducted between September 2011 and May 2013. To complete this report, AOS staff worked closely with ODE staff to gather data and conduct interviews to establish current operating conditions. This data and information was reviewed with staff at multiple levels within ODE to ensure accuracy and reliability. Where identified, weaknesses in the data obtained are noted within the report.

To complete the assessments, as defined by the audit scope and objectives, AOS identified sources of criteria against which current operating conditions were compared. Though each source of criteria is unique to each individual assessment there were common sources of criteria included across the audit as a whole. These common sources of criteria include statutory requirements such as contained in ORC or Ohio Administrative Code (OAC), ODE internal policies and procedures, other state agency policies and procedures, industry standards, government and private sector leading practices, and peer or similar state comparisons. AOS staff reviewed all sources of criteria to ensure that their use would result in reasonable, appropriate assessments. AOS performed thorough data reliability assessments on data and information obtained from ODE.

The performance audit process involved information-sharing with ODE staff, including preliminary drafts of findings and proposed recommendations related to the identified audit scope and objectives. Input from the Department was solicited and considered when assessing the selected areas and framing recommendations. The Department provided verbal and written comments in response to various recommendations, which were taken into consideration during the reporting process. Where warranted, the report was modified based on Department comments.

During the course of the audit, AOS released an interim report, the Statewide Student Identifier System, on October 8, 2012, the contents of which are included in this final report along with heretofore unreleased content. This interim report was intended to provide ODE with the necessary information to begin implementing the report recommendations or to begin developing

an implementation strategy for more complex recommendations requiring a high degree of management skill and coordination.

This audit report contains recommendations that are intended to provide the Department with options to enhance its operational economy, efficiency, and effectiveness. The reader is encouraged to review the recommendations in their entirety.

III. ODE OVERVIEW

ODE is the government agency which oversees and supports primary and secondary education for Ohio's approximately 1.9 million public school students. ODE works with the State Board of Education, Governor, and Ohio General Assembly to shape educational policy and law and provide support to Ohio schools.

The Department's vision is higher achievement for all students, regardless of race, ethnicity, income level, language background, disability status, or gender. The Department seeks to ensure all students graduate well-prepared for success. To achieve this vision the State Board of Education has identified the following three objectives: teach 21st century knowledge and skills for real-world success, effectively deliver support for a high quality education, and provide sufficient resources that are effectively managed. The Department oversees an education system comprised of 612 public school districts, 49 joint vocational school districts, 56 educational service centers, and over 300 community schools. Each public school district is governed by a locally elected school board that exercises taxing authority subject to voter approval. The Department also oversees the chartering of nonpublic schools.

The Department is governed by a 19-member State Board of Education. Eleven of the board members are elected by the citizens, one from each of 11 districts composed of three contiguous Ohio Senate districts. Eight board members are appointed by the Governor. Day-to-day administration of the Department is the responsibility of the Superintendent of Public Instruction, who is hired by the State Board of Education. The Department has a full-time staff of approximately 600.

ODE's organizational structure is comprised of the following Offices, Centers, and Divisions:

Office of the Superintendent of Public Instruction

- Office of Deputy Superintendent
- Office of Chief of Staff
- Office of Chief Operating Officer

Division of Learning - Office Administration

- Center for Curriculum & Assessment
- Center for Teaching Profession

Division of Accountability & Quality Schools - Office Administration

- Center for Accountability & Continuous Improvement
- Center for Student Support & Education Options

Departmental Priorities

- Provide the basic education funding necessary to support student success and achievement.
- Offer early learning programs to promote school readiness.
- Support student intervention programs that provide students who are performing below expectations a chance to succeed.
- Initiate school improvement programs that improve the school learning environment and engage parents in the learning process.
- Assist districts to effectively and efficiently manage resources and improve financial practices.
- Provide focused, high quality professional development for educators.
- Implement academic standards that set the expectation for what all students should know and be able to do.
- Align student assessments through development of achievement tests with the academic content standards to determine whether a student is meeting the expectations embodied in the standards. Hold educators and students accountable for performance, and provide data that are used to inform educational decisions.

Funding Summary¹

- General Revenue Fund (GRF): Funding for FY 2012 was \$7.5 billion (or a 2.5% decrease from FY 2011 actual expenditures). Funding for FY 2013 was \$7.6 billion (or a 1.2% increase from FY 2012).
- All funds: Funding for FY 2012 was \$11.4 billion (or a 4.2% decrease from FY 2011 actual expenditures). Funding for FY 2013 was \$10.9 billion (or a 4.4% decrease from FY 2012).

¹ **Source:** the Ohio Legislative Services Commission's August 2011 Department of Education Greenbook - <http://www.lsc.state.oh.us/fiscal/greenbooks129/edu.pdf>

IV. SUMMARY OF RECOMMENDATIONS

The recommendations and issues for further study identified in the report are summarized in this section. Detailed analysis of each recommendation is included in the relevant section.

Summary of Recommendations with Financial Impact

The following table lists the objective areas yielding recommendations with quantifiable financial impact. Potential savings are annual unless otherwise noted.

Financial Impact Summary Table

| Recommendations by Assessment Area | Financial Impact |
|---|-------------------------|
| <i>1.0 IT Governance and Investment Practices</i> | |
| • IT Governance (R1.1) | \$874,993 |
| • Statewide Student Identifier System (R1.4) | \$432,000 |
| <i>2.0 Core Responsibilities</i> | |
| • General Education Development (R2.1) | \$347,425 |
| • Office for Exceptional Children (R2.2) | \$161,597 |
| • Office of Early Learning and School Readiness (R2.3) | \$75,095 |
| • Records Retention (R2.4 & R2.5) | \$42,649 |
| <i>3.0 Organizational Structure</i> | |
| • Span of Control (R3.1) | \$2,410,548 |
| • Licensure and Professional Conduct (R3.2) | \$997,941 |
| • Test Operations & Communication and Technical Assessment (R3.3) | \$363,667 |
| <i>4.0 Contract Processing</i> | |
| • Process Improvement (R4.1) | \$83,000 |
| Total Cost Savings from Performance Audit Recommendations: | \$5,788,915 |

Summary of Recommendations with Management Implications

The audit also identified management recommendations that do not have easily quantifiable financial implications. These additional recommendations are likely to provide improvement to overall operations and otherwise serve management purposes, including the potential identification of subsequent cost savings and improvements in efficiency and effectiveness. These areas include:

- Shared Services (R1.2)
- Disaster Recovery (R1.3)
- Records Retention (R2.6)
- Budget and Financial Management (R2.7)

Noteworthy Accomplishments

- **Shared Services:** Recognition of ODE/ITO's efforts, prior to and during the course of the audit, to take part in various state shared services initiatives. (see **1.0 IT Governance and Investment Practices – Shared Services**)
- **Records Retention:** Recognition of the initiative taken by the Department to partner with their records storage vendor in an effort to purge obsolete records. (see **2.0 Core Responsibilities – Records Retention**)
- **Budget and Financial Management:** Recognition of the Department's concerted effort to reduce the subsidy encumbrance amount from \$103.8 million at the close of FY 2012 to \$4 million as of May 20, 2013. (see **2.0 Core Responsibilities – Budget and Financial Management**)
- **Span of Control:** Recognition of the proactive diligence aimed at increasing the average supervisor-to-staff ratio within the Department. (see **3.0 Organizational Structure – Span of Control**)
- **Contract Processing:** Recognition of ODE's implementation of recommendations and subsequent realization of time savings. The process continues to be monitored for improvements. (see **4.0 Contract Processing – Process Improvement**)

Summary of Issues for Further Study (IFFS)

Auditing standards require the disclosure of significant issues identified during an audit that were not reviewed in depth. These issues may not be directly related to the audit objectives or may have required time and resources in excess of what is merited by the audit scope. Areas where such issues were noted include:

- Data Analysts (**R1.1e IFFS-1**)
- Help Desk (**R1.1e IFFS-2**)
- OAKS Enterprise Applications (**R1.2 IFFS**)

V. AUDIT RESULTS

The performance audit yielded recommendations in the areas of IT Governance and Investment Practices, Core Responsibilities, Organizational Structure, Grants Management, and Contract Processing as set forth in the following analysis.

1.0 IT GOVERNANCE AND INVESTMENT PRACTICES – IT GOVERNANCE

Savings 1.1: \$874,993²

Finding 1.1: ODE needs an effective IT Governance Structure or operating model to direct ODE/ITO and ensure that performance is aligned with organizational objectives.

Recommendation 1.1: Institute a formal IT Governance Structure, process improvements, and operational discipline to facilitate consistent evaluation, selection, tracking, and operational oversight of all projects/initiatives.

Financial Impact 1.1: By implementing a comprehensive IT Governance Structure, operations discipline, and process improvements, ODE will achieve greater operational efficiency in the selection and execution of projects and initiatives. This will result in more effective use of ODE/ITO resources with the potential savings of **\$874,993** per year.

² Savings are inclusive of all Operational IT Governance Recommendations (**R1.1a, R1.1b, R1.1c, R1.1d, R1.1e, R1.1f**). It may take several years following publication of this report to fully implement these recommendations and fully realize the cost savings.

Background

The goal of ODE's Information Technology Office (ITO) is to provide operational support for the Department, as well as, access to educational tools, services, and data for educational stakeholders. Stakeholders include the citizens of the State of Ohio, the Federal Government, the Ohio General Assembly, Local Education Agencies, and various non-profit groups. These sub-goals support ODE's ultimate goal of "High Achievement for All Students."³ ODE/ITO has a responsibility to the citizens of Ohio to manage the Department's IT environment in the most cost-effective and efficient manner possible.

The Information Technology Office maintains and updates the Department's technology tools, including computer hardware, software, and applications. The IT organization is structured to support Department application development, data administration, and other IT related activities. The organization has implemented efficiency improvements such as virtualization of servers over the last couple of years. They have also made improvements to processes and systems in order to deliver cost-effective IT services to the constituents they support.

ODE/ITO is headed by a Chief Information Officer (CIO) and includes 73 full-time positions with IT job classifications and 36 IT contractors. Seventy of the full-time positions are currently filled. The management and staff are divided into the following areas:

- Chief Information Officer
- Technical Services – Service Desk/Desktop, Telecom, and Information Security
- Data Quality and Governance – School Foundation Program, EMIS, ED Facts Reporting and Data Management
- Project Management Office – Outsourced application development projects
- Enterprise Applications – Application Development and Support, Database Administration and Infrastructure/Network Support

The CIO meets weekly with direct reports to maintain communication channels to ensure the ITO is working towards common strategic goals. These goals are articulated in the Information Technology Investment Plan mandated by the Ohio Department of Administrative Services' (DAS) Office of Information Technology (OIT). The plan is created to ensure that personnel, hardware, software, and IT project needs are planned and budgeted.

Overview, Scope and Objectives

The audit conducted by the Ohio Performance Team (OPT) consisted of an overview of the delivery processes, operational efficiencies, applications support and maintenance, infrastructure support and maintenance, system development and delivery planning, project management and vendor management. The objective of the audit was to identify actionable recommendations for improved performance that will result in operational efficiencies and cost savings.

³ ODE Website: www.education.ohio.gov

The Performance Audit of ODE/ITO was measured against industry standards, best practices and benchmarks, as well as how the organization compares to other public sector IT organizations of similar size. OPT conducted interviews and reviewed artifacts from ODE and other states. As a result, several recommendations have been identified that will provide ODE/ITO with cost savings upon the implementation of these recommendations.

The following areas of the ODE/ITO and its delivery processes were reviewed and assessed for their effectiveness:

Organization:

- Organization structure - IT and associated business areas
- Staff and Contractor function - roles/responsibilities
- Use of DAS/OIT shared services opportunities and initiatives
- Disaster recovery and business continuity planning, policies, and procedures
- Budget analysis and evaluation
- Asset tracking and management

Project Management Office (PMO) – Structure and Governance:

- PMO structure and current practices (application development processes and methodologies)
- Project Management practices
- Governance structure and current practices

Applications:

- Identify all applications:
 - Programming language
 - Business area and users supported
 - Infrastructure environment they run on
 - Resources expended to support applications
- Review, critique and recommend improvement in the development methodology and discipline in practice.
- Review production support processes including configuration management and change control.

Infrastructure/Hardware:

- Review current network and hardware infrastructure and evaluation of efficiency.
- Determine alignment opportunities with DAS/OIT shared services initiatives pertaining to network, infrastructure, and hardware.

Methodology and Analysis

The approach used to conduct the IT Performance Audit is based on an assessment methodology established by the Software Engineering Institute (SEI). This approach is used to baseline an organization's process status by identifying gaps, process improvement opportunities, and recommendations based on industry best practices.

The SEI methodology used for this audit is called the IDEAL (Initiating, Diagnosing, Establishing, Acting, and Learning) Assessment Methodology. The IDEAL model is an organizational improvement model that serves as a roadmap for initiating, planning, and implementing improvement actions.

Following the IDEAL methodology, a set of templates and spreadsheet tools were used to assimilate the information provided during the interviews and artifact reviews. These tools have been used on many assessments. They are an effective way to map findings against industry best practices.

Prior to conducting the ODE/ITO audit, an executive overview of the process was presented to ODE and other key personnel who participated in the audit. The overview provided a common foundation for all participants, which was extremely beneficial to ensure that everyone was aware of the information gathering process.

The project team conducted 31 interviews with ODE/ITO Staff across various roles and responsibilities. The team reviewed and analyzed ODE internal documentation and IT plans and budgets. The project team measured its findings against industry best practices including the Software Engineering Institute's Capability Maturity Model (CMM) and the Project Management Institute's Project Management Body of Knowledge (PMI PMBOK). Interviews were also conducted and data was collected from other leading states to identify the manner in which other state education departments structure and manage their IT operations.

The analysis of other leading states clearly identified a public sector trend toward optimizing cost and gaining efficiencies by leveraging a shared services model of IT infrastructure and services. Minnesota, Michigan, and Massachusetts have all undertaken significant shared services initiatives involving centralized infrastructure, purchasing, and staffing. These were selected from states representing a cross section of attributes including similar state governmental structures, number of students, number of districts, deployment of the Race to the Top initiative, and student performance.

IT staff from the Minnesota Department of Education (MDE) are now assigned to a centralized organization – MN.IT – which services the broader spectrum of Minnesota State Government as a whole. Within this model, MDE's strategy is to continue leveraging shared services, as they become available, from the centralized IT organization.

The Massachusetts Department of Elementary and Secondary Education (MDESE) consolidated all of their infrastructure support, data centers, and some enterprise applications - such as email - in 2009. They will maintain the applications that are specific to their business, but have

developed a roadmap to continue the strategic migration of enterprise applications to their central organization.

The Michigan Department of Education has adopted a state consolidated IT operating model which provides a sharing of resources across all state entities.

ODE is actively engaged with statewide IT consolidation and efficiency initiatives as part of the ongoing DAS/OIT optimization initiatives. Among the DAS/OIT shared services applications utilized by ODE, at present, are email and voice over internet protocol (VOIP), and the proactive steps taken in transitioning the hosting of its virtualized server environment to DAS/OIT. Additionally, the Department intends to utilize the Information Security Services of OIT through the collaborative hiring of a Chief Information Security Officer to support ODE.

Currently, the State of Ohio's shared services model offers various services for state agencies to leverage. To move the state closer to centralization of shared services, DAS/OIT has launched an IT transformation initiative that focuses on simplifying the infrastructure which will reduce costs and provide a foundation for common enterprise applications and solutions.

The project team conducted interviews with several of the DAS/OIT, IT Transformation Office Executive Committee members including the State of Ohio CIO who is the Executive Sponsor of this transformation initiative. The team reviewed Ohio's IT Strategy, IT Transformation Plan, and the IT Optimization and Transformation Plan. These plans are based on Gartner research which indicates that shared services and centralization of IT can help reduce operating costs through the co-location of people and assets, elimination of duplicate contracts, services, and personnel, as well as leveraging the bargaining power of the state.

This audit report contains recommendations that are intended to provide ODE with options to enhance its IT operations to gain more efficiency and effectiveness. It is also intended to provide recommendations that will result in cost savings for ODE and the State of Ohio.

Conclusion

The recommendations in this report will move ODE/ITO towards a more efficient and effective support organization. Execution of these recommendations and realization of potential cost savings may encompass an implementation period spanning several years. Through process improvements around Governance, Project Management and Software Development, ODE/ITO will be able to plan, manage and execute on projects more efficiently, thereby reducing the costs of application development and maintenance.

Additionally, with the migration towards the use of the state's shared services delivery model, ODE can expect to reduce IT costs over the next several years. By leveraging a shared infrastructure and moving common enterprise applications to DAS/OIT, ODE should expect improved service delivery, reduced complexity, and a realization of savings.

Although the median 34 percent savings achieved by the organizations included in the SEI CMMI study⁴ represent a goal for ODE/OIT, there may be key differences in organization, mission, and operating environment which would constrain ODE from fully attaining savings that could be realized in a private-sector operating environment. Furthermore, implementation of recommendations may need to be phased in over a number of years to allow for proper development of partnerships and relationships with shared services providers, as well as, the growth and development of core competencies within ODE/ITO. Finally, realized savings may need to be reinvested so that ODE/ITO can achieve further efficiency gains and truly invest in organizational improvements characteristic of best-in-class IT organizations. Given the need to phase implementation and the need to account for operating environment differences it is conservatively estimated that ODE/ITO could realistically achieve at least **\$874,993** annually or 25 percent implementation of the SEI CMMI study organization experience.⁵

Implementation of these recommendations will yield the following benefits for ODE/ITO:

- A dedicated function to manage and streamline project prioritization, ensuring demand is managed properly and the value of investments is maximized.
- Increased visibility into the project portfolio to ensure the investments align with business objectives and that investments are prioritized, improving the ability to execute.
- Consistency in forecasting demand, estimating work effort, and planning resource availability.
- Reduced costs of IT hardware purchases and maintenance.
- Reduced spending on IT consultants through strategic vendor sourcing.
- Enhanced disaster recovery and business continuity.
- Increased buying power due to scale and standardization.

⁴ See **R1.1a** for detailed explanation.

⁵ The current ODE/ITO budget that is directly related to, and impacted by, recommended improvements to IT Governance is \$10,294,035. Applying the SEI CMMI study's median savings experience of 34 percent equates to a potential target savings of approximately \$3.5 million. However, allowing for a conservative implementation estimate of 25 percent still allows for a reasonable expectation of an efficiency gain of at least \$875,000 annually.

1.0 IT GOVERNANCE AND INVESTMENT PRACTICES – IT GOVERNANCE

Savings 1.1a: n/a⁶

Finding 1.1a: There is not an effective Steering Committee or Governance Structure in place to direct ODE/ITO and ensure that performance is aligned with organizational objectives.

Recommendation 1.1a: Institute a formal Governance process to facilitate consistent evaluation, selection, tracking and operational oversight of all projects/initiatives.

Financial Impact 1.1a: By implementing a joint Governance Structure that includes stakeholders from throughout the organization and ODE/ITO leadership, ODE will achieve greater operational efficiency in the selection and execution of projects and initiatives. This will result in more effective use of ODE/ITO resources.

⁶ Savings are reflected in **R1.1**

IT GOVERNANCE

Background

Governance is defined as a joint effort between ODE senior executives, departmental management, and ITO leadership for the strategic oversight and decision-making activities of the Department. Currently, there is not an effective Governance Structure or Steering Committee in place to direct ODE/ITO to ensure the performance of IT meets the following objectives:

- IT is aligned with the objectives of the organization.
- IT enables the organization and maximizes benefits.
- IT makes the organization more effective and efficient.
- IT resources are used responsibly.
- IT related risks are managed appropriately.
- Ensure offices within the organization are not developing duplicate systems rather than leveraging existing IT systems or capabilities.

Governance falls under two categories: Executive Steering Committee and Management Operational Oversight. Overall engagement governance consists of a combination of individuals filling executive and management roles and functions. These roles focus on providing direction and oversight, which guide the achievement of the needed outcome from the execution of the program. Data and feedback are provided to measure the ongoing contribution of ODE/ITO to the accomplishment of the overall organizational mission.

Executive Steering Committee Objectives: Periodic governance meetings should be established to support the governance model and provide high-level oversight of ODE/ITO operations. The governance members are responsible for the following functions:

- Strategic Decision Making – Key decisions affecting the broader success of an overall project will need to be addressed at the governance level. This includes discussion of decisions that impact strategic direction of ongoing projects and discussion of items on the horizon that may have an impact on the projects.
- Escalation and Resolution – While ODE/ITO will be responsible for managing day-to-day Issues and Risks, the Executive Steering Committee structure provides for timely escalation of Issues and Risks. The Executive Steering Committee will be utilized to escalate critical Issues, Risks, and other topics of escalation that are unresolved at an Operational Oversight Level.

- Service Level Definition and Management – Governance members are responsible for final approval of Service Level Agreements/Objectives (SLAs/SLOs) definition. Once defined, ODE/ITO will be responsible for working to obtain the appropriate data to support the SLAs/SLOs and will institute tools and other tracking and reporting deliverables. Once SLAs/SLOs are formally agreed upon by ODE/ITO and the organizational stakeholders, the Executive Steering Committee will be responsible for overall monitoring and management of the SLAs/SLOs.
- Summary Status and Measurement Reporting – ODE/ITO will provide monthly summary status reporting of the various ODE/ITO projects. Status in the Executive Steering Committee meetings are high-level and focus on providing summary status highlights of critical milestones and high-level budgetary oversight.
- Approval of Changes to Governance Charter – Once this charter is agreed upon and approved, all changes will need to be jointly agreed upon and approved by ODE/ITO leadership and organizational stakeholders under the Governance model.

Quarterly high-level reviews should be conducted with Executive Level Business Leadership on a periodic basis to review overall direction for the relationship across all initiatives, explore future opportunities, and set objectives for added organizational value.

Methodology and Analysis

The project team conducted interviews with ODE/ITO staff across various roles and responsibilities. The team reviewed and analyzed ODE internal documentation and IT plans and budgets. The project team measured its findings against industry best practices including the Software Engineering Institute's Capability Maturity Model and the Project Management Institute's Project Management Body of Knowledge (PMI PMBOK). The SEI is a U.S. Department of Defense federally-funded research and development center operated, on a contractual basis, by Carnegie Mellon University. The SEI CMM provides guidance for efficient, effective improvement across multiple process disciplines in an organization and benefits the organization by providing a common, integrated vision of improvement. The ultimate benefit is improved performance as evidenced by decreased costs, improved on-time delivery, improved productivity, improved quality, and improved customer satisfaction.⁷

Based on the analysis, ODE/ITO is required to make many business decisions for ODE regarding priorities and requirements since there is not always a business subject matter expert or governing body. In addition, business cases are not used to determine the overall benefit and value of proposed enhancements or new services.

The establishment of a formal Governance Structure will serve to:

- Drive IT alignment with the objectives of the organization.

⁷ <http://www.sei.cmu.edu/about/?location=secondary-nav&source=1358>

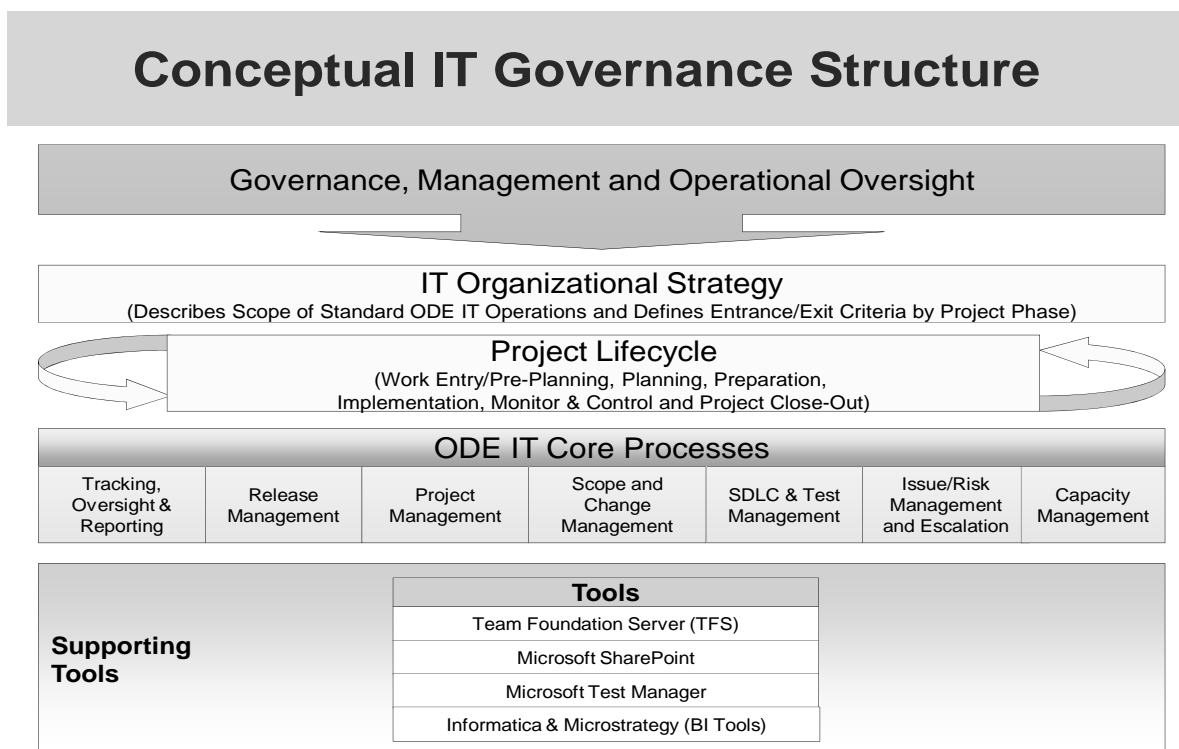
- Direct IT management to deliver measurable value.
- Manage IT risk.
- Measure IT performance.
- Direct IT strategy by addressing the level and allocation of investments.
- Make decisions about where IT resources should be focused.
- Ensure that IT resources are able to support current and expected requirements.
- Prioritize project requests based on business cases/benefits/strategy.
- Communicate priorities to stakeholders in the organization and ODE/ITO.

It is imperative to establish a Steering Committee that serves as the governing body to make key decisions and to provide a way for groups to feel as if they have a way to express concerns and get direction. Without a Steering Committee, ITO is operating in a reactive mode on a daily basis and does not have the authority to manage around resource constraints with respect to new requests, resulting in work priority churn, which impacts productivity and throughput.

Based on industry best practices, there is substantial evidence that savings can be achieved through the implementation of effective Governance and process improvements identified in **R1.1** and supporting recommendations **R1.1a** through **R1.1e**. During the analysis, there was no evidence of any metrics that were being tracked regarding scope, estimates or costs of projects. There was no baseline to compare or measure against industry standards. These IT Governance and process improvement recommendations will assist ODE/ITO with establishing a baseline by which progress can be measured.

Additionally, ODE/ITO has effective development tools in their environment that will help them track and manage to these recommendations. As an example, the ITO has Team Foundation Server (TFS) for tracking development activities and promoting code. They have SharePoint for project status and deliverable tracking. These tools will be valuable, when used properly, in assisting ODE with tracking, measuring, and improving their IT processes.

The following graphic representation is an example of a potential Governance structure:



Confidential

As noted in SEI's Capability Maturity Model Integration (CMMI) study⁸ of 35 organizations that implemented these process improvements, the median improvement for cost, as referenced in **Table 1**, was 34%. These performance results are the basis for the potential cost savings identified in the IT Governance and Operations recommendations. These results are expressed either as a percentage change from an earlier baseline prior to the process improvement or as ratios of return on investment (ROI). The results are summarized by six performance categories: cost, schedule, productivity, quality, customer satisfaction and return on investment. Most of the organizations have provided multiple results, sometimes several in the same performance category.

⁸ Based on a 2006 study conducted by SEI and documented in: *Performance Results of CMMI – Based Process Improvement* (<http://www.sei.cmu.edu/library/abstracts/reports/06tr004.cfm>)

Table 1: Performance Results Summary

| Performance Category | Median Improvement | Number of Data Points | | Lowest Improvement | Highest Improvement |
|-----------------------|--------------------|-----------------------|--|--------------------|---------------------|
| Cost | 34% | 29 | | 3% | 87% |
| Schedule | 50% | 22 | | 2% | 95% |
| Productivity | 61% | 20 | | 11% | 329% |
| Quality | 48% | 34 | | 2% | 132% |
| Customer Satisfaction | 14% | 7 | | -4% | 55% |
| Return on Investment | 4.0 : 1 | 22 | | 1.7 : 1 | 27.7 : 1 |

Source: 2006 SEI Study

The summary results in **Table 1** provide substantial evidence about the performance results that are possible by adherence to these processes. The median results in every category of the table are noted as are both the high and low ends of the distributions.

Further studies continue to confirm the enhanced performance results of organizations that have utilized these process improvement methods. The following information is from the SEI's website and details in **Table 2** the Maturity Level achieved by several categories of organizations.

There are nearly 5,000 organizations that use CMMI models from over 70 countries worldwide. An organization's maturity level (ML) refers to their process improvement achievement across multiple process areas. These ratings range from an 'initial' (ML1) profile to a highly mature 'optimizing' (ML5) organization. This highlights CMMI's usefulness across all levels of organizational maturity.

Table 2: Organizational Maturity Profile

| | Commercial In-House | Contractor for Military/Government | Military/Government Agency |
|-------------------------------------|---------------------|------------------------------------|----------------------------|
| No Rating Given | 5.3% | 8.0% | 22.3% |
| Initial (ML1) | 0.6% | 1.4% | 1.0% |
| Managed (ML2) | 25.8% | 31.5% | 45.6% |
| Defined (ML3) | 58.1% | 49.3% | 26.7% |
| Quantitatively Managed (ML4) | 2.9% | 1.0% | 1.5% |
| Optimizing (ML5) | 7.2% | 8.9% | 2.9% |
| | (3779 orgs) | (874 orgs) | (206 orgs) |

Source: SEI Process Maturity Profile, September 2010⁹

⁹ <http://cmminstitute.com/assets/presentations/2010SepCMMI.pdf>

Additionally, DAS/OIT has recognized the value of CMMI as evidenced by the following language in their Procurement Services Request for Proposal documentation:

*The Contractor must define a software design approach and methodology to be followed when designing the new System that is based on service-oriented architecture (SOA) principles. The methodology must reflect and incorporate appropriate government and industry best practices, and must enable and support **Capability Maturity Model Integration (CMMI)** practices.*

Table 3 represents potential annual cost savings that can be realized upon full implementation of the recommendations found in this audit. Discussing organizational progression along the spectrum of maturity levels, the National Defense Industrial Association's (NDIA) report¹⁰ on the economics of CMMI comments:

Organizations contemplating CMMI often ask how long it will take to achieve a desired maturity level. Data collected on this topic exhibits great variation. A number of factors influence the rate of process change, or improvement velocity, that an organization can absorb. Those factors include:

- Understanding the relationship of process improvement and performance improvement
- The effectiveness of change leadership
- The current process state of the organization
- The capability for rapid organizational learning
- The improvement method or strategy
- The underlying "systemic" domain knowledge that currently exists
- Project profile: size, complexity, duration, etc.

As exhibited by the NDIA report, there are many factors that can affect the rate at which organizations develop within the context of CMMI. This creates a situation where definitive establishment of a timeline, on which an organization shall progress to the various levels of maturity, is impossible. Consequently, the implementation of these recommendations and full complement of potential cost savings may not be realized for a period of several years.

¹⁰http://www.ndia.org/Divisions/Divisions/SystemsEngineering/Documents/Committees/CMMI%20Working%20Group/The_Economics_of_CMMI.pdf

Table 3: Financial Impact Cost Basis

| Target Areas | Financial Impact Cost Basis |
|---|------------------------------|
| Consulting and Contract Services | \$5,030,110 |
| Labor - ODE/ITO FTE | \$5,263,925 |
| Total Impacted Labor Cost ¹ | \$10,294,035 |
| SEI CMMI Median Savings Experience of 34% | \$3,499,972 |
| ODE Savings From a Conservative Implementation Estimate of 25% | \$874,993² |

Source: ODE/ITO Payroll

¹ This adjustment is made to reflect the salary cost of those employees whose work will be significantly impacted by these improvements.

² Savings estimate is a cumulative number for recommendation 1.1 including 1.1a-1.1e.

The consulting and contract services category cost includes time and material contractors and the onsite development efforts of fixed price contractors. The labor category cost is the labor costs of ODE/ITO full-time employees.

Conclusion

By implementing a joint Governance Structure that includes ODE senior executives, departmental management, and ODE/ITO leadership, the Department will achieve greater operational efficiency in the selection and execution of projects and initiatives. This will result in more effective use of ODE/ITO resources. A formal Governance process has the following organizational benefits:

- Provides a dedicated group to manage the alignment of organizational priorities.
- Enables stakeholders to collaborate on the following when effectively managed:
 - Linking strategies
 - Effectively managing projects and initiatives
 - Operating efficiently and maintaining effective operations
 - Bringing innovation
- Provides an element of centralized control in terms of standards and costs along with the ability to make decisions to accommodate agility.
- Increases standardization across the functional areas of the organization.
- Improves visibility into the overall organization.

1.0 IT GOVERNANCE AND INVESTMENT PRACTICES – PMO FUNCTION

Savings 1.1b: n/a¹¹

Finding 1.1b: While PMO Guidelines have been documented and established and a PMO structure exists, the function does not have authority or control over project success.

Recommendation 1.1b: Develop a Project Management Office (PMO) function that is empowered to effectively manage and deliver projects/initiatives based on the approved scope, particularly in terms of effort, schedule, cost, and quality.

Financial Impact 1.1b: By centralizing all project management responsibility in the PMO, ODE/ITO will achieve increased efficiency in the delivery of projects. An empowered PMO will facilitate a consistent approach to planning, execution, monitoring, and controlling of various project tasks, across all functional areas and will result in more efficient delivery of projects. This will require an assessment of current structure and capacity of the existing PMO so that the proper structure and staffing levels can be determined.

¹¹ Savings are reflected in **R1.1**

PMO FUNCTION

Background

The activities performed by ODE/ITO Project Managers, or their vendors, should be in accordance with the policies and guidelines defined in the ODE PMO Project Management Guide. Despite having a well-documented guide, which is based on the PMBOK industry standards, the ODE/ITO PMO is challenged to enforce good project management practices within the organization. The two primary challenges facing the PMO in its current state are as follows:

- The PMO is not empowered to enforce project management policies and guidelines.
- The PMO is not structured, organizationally, to provide a consistent level of support for ODE/ITO supported projects (internal or external).

Methodology and Analysis

The project team conducted interviews with ODE/ITO Project Managers within the existing PMO. The team reviewed and analyzed the current PMO Guidelines. The project team measured its findings against industry best practices including the Software Engineering Institutes Capability Maturity Model (SEI CMM) and the Project Management Institute's Project Management Body of Knowledge (PMI PMBOK). Interviews were also conducted and data was collected from other leading states to identify how other state education departments structure and manage their IT divisions.

While PMO Guidelines have been documented and established and a PMO structure exists, the function does not have authority or control over project success. For internal projects, the Project Managers appear to manage external vendors using the PMO Guidelines and Policies. They are, however, not viewed as having a lot of authority or empowerment. Instead, they are viewed more as Project Coordinators than Project Managers, and often have difficulty getting internal teams to commit, and adhere, to approved schedules.

Efficient deployment of human capital is an important aspect of effective project management. To this end, the Minnesota Department of Education's ITO has implemented use of a resource matrix on over 150 projects over the last few years. This has augmented their ability to delineate needs for greater manpower and identify where over-commitments of resources have occurred, resulting in more economical delivery of projects. Conversely, the State of Massachusetts' Office of Education ITO has leaned more heavily on the function of Business Analysts within their operations. This has increased their ability to scrutinize their IT needs and fluctuate staffing levels through the use of contractors on an as-need basis.

The consistent application of project management principles, guidelines, and best practices defined in the existing guide will foster effective management and delivery of services and solutions within the approved scope, particularly in terms of the effort, cost, and quality that may be required.

The ODE Project Management Guide is based on five primary project management processes, each of which has its own objectives, activities, and decision points as defined in the ODE PMO Project Management Methodology. These processes are as follows:

- **Opportunity Assessment Process** – The Opportunity Assessment Process is used to identify, prioritize, and select project ideas.
- **Initiating Process** – The purpose of the Initiating Process is to formally recognize that a new project exists and authorize the project to proceed.
- **Planning Process** – The Planning Process is used to further define the project and identify the activities and tasks that need to be completed. A detailed project plan, schedule, and budget are developed.
- **Executing/Controlling Process** – The Executing/Controlling Process is used to manage the work performed and measure and report project performance. Final client sign-off is the primary exit criteria of this process.
- **Closing Process** – The Closing Process is used to close project records, document lessons learned, and out-process project staff.

ODE/ITO should update the PMO Guidelines to reflect their use of the Agile software development methodology and the current processes being performed. In addition, there should be updates to the PMO Guidelines to include specific information on how to manage projects with vendor/contractor personnel to ensure a consistent level of oversight is performed when vendor project managers are assigned.

A well-defined and functioning PMO is an essential element of effective Governance for an organization. The PMO's ability to manage day-to-day operations utilizing industry best practices and standard procedures helps maintain alignment with business and organizational objectives. In order to accomplish this, the PMO's scope of responsibility should be comprehensive and include management for internal projects as well as ensuring effective controls are in place to support vendor-managed projects.

Conclusion

By centralizing all project management responsibility in the PMO, ODE/ITO can improve efficiency in the delivery of projects. An empowered PMO will facilitate a consistent approach to planning, execution, monitoring, and controlling project tasks across all functional areas and will improve efficient delivery of projects. This requires assessments of current structure and capacity of the existing PMO so that the proper structure and staffing levels can be determined.

In summary, an empowered PMO process has the following organizational benefits:

- A dedicated function to manage and streamline project / initiative prioritization to ensure demand is managed properly and the value of investments is maximized.
- Helps gain visibility into project / initiative portfolio, aligns investments with organizational objectives, makes the right choice on prioritizing investments, and develops the ability to execute.

- Consistently forecast demand, estimate work effort, and resource availability.
- Improves demand and resource management to optimize the use of resources.

1.0 IT GOVERNANCE AND INVESTMENT PRACTICES – RELEASE MANAGEMENT

Savings 1.1c: n/a¹²

Finding 1.1c: Internal work is not planned or managed consistently using releases. Enhancements are delivered individually as they are completed. There is not a consolidated plan or calendar for the work that needs to be done on a monthly basis that defines milestone dates, scope of release, issues, risks, etc. that can be used to track progress.

Recommendation 1.1c: Develop a Release Management process and implement a formal Release Calendar managed by the PMO. A formal Release Calendar should be shared with organizational stakeholders to make them aware of critical milestones leading up to each release date.

Financial Impact 1.1c: By introducing a formal Release Management process, ODE/ITO will eliminate the practice of ‘single-threaded’ development and result in more efficient use of development resources as they will be able to aggregate multiple development activities to be deployed on a common release schedule. A formal Release Management process represents significant performance improvement opportunities as it defines standard release milestones that allow management to more effectively plan resources, identify issues and risks, and set stakeholder expectations.

¹² Savings are reflected in **R1.1**

RELEASE MANAGEMENT

Background

The ODE/ITO environment utilizes both waterfall and Agile development methodologies. As a result, the Release Management activities should reflect more of a hybrid approach where the Agile activities are focused on Sprints¹³ where major functionality is delivered incrementally and iteratively. Those projects following a waterfall approach will continue to focus on the critical milestones associated with a standard Release schedule.

ODE/ITO does not utilize a formal Release and Sprint Management Process that takes a holistic view of any changes or enhancements to an IT Service and ensures that all aspects of a Release, both technical and non-technical, are considered together and managed accordingly throughout the release cycle. As a result, it becomes increasingly difficult to identify dependencies between projects or identify instances where redundant activities can be consolidated for more efficient use of resources.

Methodology and Analysis

The project team conducted interviews with ODE/ITO Staff across various roles and responsibilities. The team reviewed ODE internal IT processes and procedures. The project team measured its findings against industry best practices including the Software Engineering Institutes Capability Maturity Model (SEI CMM) and the Project Management Institute's Project Management Body of Knowledge (PMI PMBOK). Interviews were also conducted and data was collected from other leading states to identify how other state education departments structure and manage their IT divisions.

The Michigan Department of Education's ITO manages Sprints within TFS, using daily stand-ups to quickly track the progression of projects. Currently, Michigan Department of Education's ITO deploys a hybrid approach, similar to ODE's ITO, utilizing both Agile and waterfall development methodologies. However, as of June 30, 2013 they plan on migrating to Agile as their sole development methodology.

ODE/ITO's internal work is not planned or managed consistently using standard Release and Sprint schedules that coordinate development activities across multiple projects and Sprints across the organization. Enhancements are delivered individually as they are completed and there is no comprehensive Release Backlog or consolidated plan/schedule maintained to ensure that future projects and/or Sprints, and the teams assigned to support them, remain aligned as changes in priorities occur.

Key objectives of the Release and Sprint Management Process, as it pertains to ODE/ITO, are as follows:

¹³ In the context of software development, a 'Sprint' is a get-together of people involved in a project to give a focused development on the project. Sprints are typically two to seven days long.

- Plan and oversee the successful deployment of ODE/ITO's new features and system enhancements.
- Develop and implement efficient procedures for the coordination, communication, and delivery of changes to the ODE/ITO environment.
- Gain concurrence on the exact content and deployment plan for the Release and Sprint backlogs through a Change Management liaison.
- Develop a consolidated calendar that defines milestones, scope, issues, risks, and critical dependencies.
- Manage the expectations of the various stakeholders/project sponsors throughout the entire Release schedule.
- Ensure that software being changed is accurately recorded & communicated throughout the release cycle to minimize change-related defects in the Production environment.

The formal process should be used to advise ODE stakeholders of content to be deployed at a major Release or incremental Sprint milestone based on collaboration with the PMO:

- Establish formal resource planning guidelines and procedures across ODE/ITO to accurately estimate resource work-effort and system utilization.
- Develop an estimation requirement for all new project requests, as well as, any that are revised during the project lifecycle, as more detailed requirements become available that incorporates estimating size, complexity, and hours.

Capture estimates and actual numbers to use for future resource and estimate planning:

- Develop a formal Release and Sprint backlog that reflects total capacity, available capacity, and current schedules on a per-project basis, which should be referenced to advise stakeholders of resource capacity as new project requests are evaluated.
- Develop a Communication Plan with a Responsible Accountable Consulted and Informed (RACI) Chart that includes tasks and dependencies.
- Ensure requirements for annual and biennium changes are provided earlier in the process.

The ODE/ITO environment utilizes both Waterfall and Agile development methodologies. As a result, the Release Management activities should reflect more of a hybrid approach where the Agile activities are focused on Sprints with major functionality delivered incrementally and iteratively. Those projects following a waterfall approach will continue to focus on the critical milestones associated with a standard Release schedule.

Conclusion

By introducing formal Release and Sprint Management processes and producing a Release Backlog, ODE/ITO can eliminate the practice of 'single-threaded' development which will result in more efficient use of development resources as they will be able to deploy multiple projects according to a common release schedule. The introduction of formal Release and Sprint Management processes represent a significant performance improvement opportunity as it

establishes a common Release Backlog and critical release milestones that allow management to more effectively plan resources, identify issues and risks, and set stakeholder expectations.

A formal Release and Sprint Management process will have the following benefits:

- Encourages the entire organization to acknowledge and plan projects/initiatives according to a standard Release Schedule.
- Provides ODE/ITO leadership with a mechanism to better manage and plan resources.
- Facilitates more efficient use of resources and improves productivity as it helps identify opportunities for synergy when evaluating multiple projects across the organization during a single release.
- Promotes consistency and continuous improvement as the entire organization embraces common Release & Sprint Management practices.

1.0 IT GOVERNANCE AND INVESTMENT PRACTICES – QA LIFECYCLE & TESTING

Savings 1.1d: n/a¹⁴

Finding 1.1d: The Quality Assurance (QA) Testing Approach and associated QA Testing Plans are not consistent. It is not clear when formal QA Testing, Test Cases, Performance/Load Testing, and Integration Testing with vendor products are required.

Recommendation 1.1d: Introduce a formal Test Management Plan that enhances existing QA processes by standardizing the QA lifecycle, establishing formal test procedures and guidelines, and identifying standard tools for automation and test management.

Financial Impact 1.1d: Formal Test Management improves project delivery by ensuring essential planning is performed early and throughout the lifecycle of a project. By introducing more structure around the test planning activities, ODE/ITO should realize an increase in test case coverage of business requirements and a decrease in production defects. A defect in production can be three to five times more costly to fix than a defect found in the development phase.

¹⁴Savings are reflected in **R1.1**

QA LIFECYCLE & TESTING

Background

The QA Testing Approach and associated QA Testing Plans are not consistent. It is not clear when formal QA Testing, Test Cases, Performance/Load Testing, and Integration Testing with vendor products are required. The extent and scope of testing performed by ODE/ITO varies based on project scope. Ensuring that these activities validate the correctness of the new feature/enhancement at the appropriate degree of thoroughness and with minimal delays may require a significant amount of up-front planning, coordination, and progress tracking – more so for larger and more complex projects.

The objective of Test Management and the Testing Lifecycle is to ensure that new services, features, or enhancements are validated adequately to minimize the number of defects introduced into the production environment and delivered on time. Testing can be a complex activity to coordinate and execute. It is often performed not by one, but by a number of groups at different points during the development lifecycle, and at different levels (e.g., unit, system, integration).

Methodology and Analysis

The project team conducted interviews with ODE/ITO Staff across various roles and responsibilities. The team reviewed and analyzed ODE internal documentation and IT plans and budgets. The project team measured its findings against industry best practices for Quality Assurance and Software Testing.

The QA Testing Approach and associated Test Management Plans are not formally documented, and therefore, it is not clear whether formal QA is performed on a consistent basis, whether defined test cases properly validate the requested scope, which test types are necessary to minimize production impact, or whether vendor inter-operability is adequately tested for vendor-developed applications. It is important that all Test Management activity is submitted and tracked through some standard project Intake Mechanism.

One of the most critical phases of the Testing Lifecycle is the test planning phase. As a result, the Test Management Plan should be defined with a Test Lifecycle geared toward facilitating a more consistent and structured approach to planning activities. Good test planning for a product consists of a logical sequence of activities, starting with the development of high-level test scenarios and ending with the development of requirements traceability to actual test cases. It is also important to identify any known impacts and risks as early as possible to ensure the appropriate mitigation strategies are initiated as early as possible. That information is then used to complete the following:

- Select which features/enhancement aspects to test according to risk-based selection criteria.
- Define the expected quality level of the resulting product.
- Construct formal requirements for specific test sets.
- Define concrete entry and exit criteria that determine when the product has been sufficiently tested.

- Create a Test Plan that combines development, integration, and testing activities along with their dependencies and milestones.

Test Management during the Testing Lifecycle complements the Development Lifecycle by adding more detail on key test-related activities performed during the early planning stages through Test Execution.

The key to effective Test Management for ODE/ITO is directly linked to their ability to standardize the Test Lifecycle and enforce a structured and consistent approach to delivering test-related services. Test Lifecycle Standardization requires disciplined testing practices by the ODE/ITO and adoption by the entire organization. To accomplish this goal, ODE must develop well-documented objectives, terminology, quality gates, and processes that will encourage adoption by all stakeholders, both internal and external to ODE/ITO.

Like many organizations, ODE/ITO supports projects that vary in scope and complexity, therefore the Test Management process should be designed to accommodate all project scenarios.

The key to achieving consistent and predictable testing results is to ensure that all stakeholders are following a common process. To accomplish this goal, the standard Test Lifecycle, as defined within the Test Management process, should be broken down into stages to accommodate the following areas:

- **High-Level Planning** – The primary objective of High-Level Test Planning is to obtain an overall understanding of the feature/enhancement capabilities from a user-perspective, and develop a comprehensive test approach to achieve those capabilities.
- **Detailed Planning** – As more detailed technical requirements become available, project scope elements that were identified during High-Level Test Planning are refined into specific application/system features to be tested (or not tested). Subsequently, a requirements traceability matrix is created that maps each feature under test to a more detailed set of test scenarios that adequately tests the requirement.
- **Preparation** – As the detailed technical requirements are refined, the Test Plan is refined to specify the final set of test cases. In addition, the requirements traceability matrix is updated to map each feature under test to specific test cases. The cycle plan and the overall schedule is defined. Additional tasks during this stage include the following:
 - Refinements to the entry and exit criteria.
 - Creation of risk and assumption list associated with the Test Plan.
 - Performing an environmental readiness check to validate that test environments are available and properly configured.
 - Ensuring that the necessary tools have been loaded to support the Test Plan (i.e., MS Test Plan).
 - Verifying the availability of resources required to execute the Test Plan.

- **Execution** – During test execution, the various groups responsible for testing are tasked with executing all test cases for the various test types specified in the test plan (e.g., Unit, System, Vendor Inter-operability, Performance/Load, etc.).
- **Close-out** – The primary objective of the Close-out activity is to highlight the effectiveness of the testing against the ‘committed’ testing scope specified in the Test.

It is important that ODE/ITO capture and track key metrics associated with the above activities to ensure the organization identifies opportunities for continuous improvement.

Conclusion

Formal Test Management improves project delivery by ensuring essential planning is performed early and throughout the lifecycle of a project. By introducing more consistency and structure around the test planning activities, ODE/ITO should realize an increase in test case coverage of business requirements, a decrease in production defects, and an overall improvement in the quality of features and services delivered.

A formal Test Management process will have the following benefits:

- Establish a consistent test methodology that is tightly integrated with development activities.
- Improve the on-time delivery of new features/enhancements due to formally documented and approved test plans.
- Improve efficiency by using well-documented tasks and deliverables that begin during the early stages of the development and continue through each subsequent milestone during the project lifecycle.
- Reduce defects in the production environment by ensuring comprehensive and thorough testing.

1.0 IT GOVERNANCE AND INVESTMENT PRACTICES – CAPACITY PLANNING

Savings 1.1e: n/a¹⁵

Finding 1.1e: There does not appear to be a Capacity Planning process to determine the appropriate capacity of resources that will be needed to support ongoing maintenance and enhancements for existing and new systems.

Recommendation 1.1e: Establish a Capacity Planning process to ensure future requirements are quantified, designed, planned, and implemented in a timely fashion.

Financial Impact 1.1e: By introducing a formal Capacity Planning process, the organization will be able to effectively establish and communicate available capacity for each release. The Capacity Plan would be a critical input to the Release Planning activities and would ensure the resources are not over-committed or allow for projects to be re-prioritized. A clear understanding of available capacity will facilitate more constructive negotiations with stakeholders and greatly contribute to improved planning activities.

Issues for Further Study:

IFFS-1 Data Analysts: As part of the Capacity Planning process, ODE should further examine the type, quantity, and source of requests received and subsequently fulfilled by data analysts within the Department.

IFFS-2 Help Desk: This audit revealed ODE's Help Desk is not staffed at an efficient ratio of staff-to-help-desk-users compared to other state departments of education. ODE should scrutinize the extent to which their Help Desk supports Department personnel and devices to further their effective Capacity Planning initiative.

¹⁵ Savings are reflected in **R1.1**

CAPACITY PLANNING

Background

There does not appear to be a Capacity Planning process to determine the capacity of resources that will be needed to support ongoing maintenance and enhancements for existing and new systems. The Capacity Management process focuses on enabling ODE/ITO to use existing capacity economically and effectively and provides the essential release planning information as it relates to decisions regarding the acquisition of resources.

Methodology and Analysis

The project team conducted interviews with ODE/ITO Staff across various roles and responsibilities. The team reviewed and analyzed ODE internal documentation and IT plans and budgets. The project team measured its findings against industry best practices including the Software Engineering Institute's Capability Maturity Model (SEI CMM) and the Project Management Institute's Project Management Body of Knowledge (PMI PMBOK). Interviews were also conducted and data was collected from other leading states to identify how other state education departments structure and manage their IT divisions.

The organization does not utilize a formal Capacity Management process to assist with the planning and coordination of IT resources assigned to projects. ODE/ITO currently lacks a Capacity Management process and has limited support from ODE executive staff to assign project priority. This has resulted in ODE/ITO maintaining higher than average contractor levels as compared to other leading states.

Effective Capacity Management will provide ODE/ITO with the information necessary to estimate resource requirements across multiple projects in a given Release Cycle. The estimates are based on current backlog, new project scope (size and complexity) and resource and/or project team performance levels (project velocity).

In order to ensure that the right capacity levels are delivered, Capacity Management activity looks at the following elements:

- Performance (velocity) Data to monitor and tune the existing Capacity Management methodologies.
- Workload to identify and understand the applications.
- Application or new feature/enhancement sizing to forecast the required resources (e.g. hardware, network, human resources) for new projects.
- Resources to support the various project planning activities such as tool prep, the allocation and control of file storage, the assessment of new hardware technology, cross-functional IT planning for resilience, and recovering from disaster or service disruption that could affect IT services.
- Release and Sprint Management to forecast and regulate the workload and resource distribution.

Conclusion

By introducing a formal Capacity Management process, the organization will be able to effectively assess and communicate available capacity to project stakeholders. Capacity Management is a critical component of the Release and Sprint planning activities as it helps minimize project issues, risks, and cost overruns that arise due to the over-commitment of key resources. A clear understanding of resource allocation and available capacity will facilitate more constructive negotiations with business owners and greatly contribute to improved planning activities.

A formal Capacity Management process will have the following benefits:

- Improved efficiency in the evaluation of new requirements and their impact on ODE/ITO resources.
- Improved interaction with Stakeholders/Project Sponsors due to more consistent and structured communication of ‘available’ ODE/ITO capacity.
- Improved Release and Strategic Planning.
- More efficient use of internal and external resources.

ISSUES FOR FURTHER STUDY

IFFS-1: Data Analysts

ODE receives requests for data from various sources such as members of the public, school personnel, media, etc. There does not appear to be any tracking of how many requests are received and the types of requests. These requests are often fulfilled by IT staff after digging through data to get the information. It is recommended that further examination into the requests these analysts support be conducted. Some of these requests may be offset by providing access to more “self-service” types of applications and reports. As an example, if the requests were tracked, there could be an analysis done to determine if there is duplicative effort between ODE and the Information Technology Centers (ITC).

IFFS-2: Help Desk

As a result of the analysis conducted on other leading states, it was discovered that each Help Desk resource supported an average of 250 users. ODE/ITO has one Help Desk resource per 100 users. Further examination is recommended into the types of requests supported by the Help Desk to determine if there is a way to streamline these requests in order to reduce the number of Help Desk staff required to support the number of users.

1.0 IT GOVERNANCE AND INVESTMENT PRACTICES – SOFTWARE DEVELOPMENT LIFECYCLE

Savings 1.1f: n/a¹⁶

Finding 1.1f: ODE/ITO does not utilize a formal Application Lifecycle Management approach that applies formal Governance to the standard Software Development Life Cycle (SDLC) and operational activities. The lack of Governance oversight and coordination contributes to missed or overlooked requirements and impacts ODE/ITO’s ability to retire legacy systems in a timely fashion.

Recommendation 1.1f: Enforce a consistent SDLC process across the organization that includes a formal Requirements Management process that leverages existing tools to support requirements traceability and to actively manage requirements as a key agenda item during the Governance reviews.

Financial Impact 1.1f: By applying effective Governance that involves representation from all the major stakeholders, the organization ensures that critical activities and decisions remain aligned with organizational objectives and results in greater value to the stakeholders/project sponsors.

¹⁶ Savings are reflected in **R1.1**

Background

Currently, ODE/ITO is utilizing development methodologies that span from the standard waterfall model to the more iterative Agile development methodology, with some projects using a combination of the two. This practice is not uncommon in the industry; however, there is still a need to manage the activities to ensure the proper Governance is performed. The challenge currently faced by ODE/ITO is the lack of a formal lifecycle management approach with related controls to support the various development activities in the organization. In addition, there seems to be inconsistency in the application of the development methodologies that have been implemented in the organization.

Methodology and Analysis

The project team conducted interviews with ODE/ITO Staff across various roles and responsibilities. The team reviewed and analyzed ODE internal documentation and IT plans and budgets. The project team measured its findings against industry best practices including the Software Engineering Institutes Capability Maturity Model (SEI CMM) and the Project Management Institute's Project Management Body of Knowledge (PMI PMBOK).

ODE/ITO does not utilize a formal, defined Lifecycle Management approach for software development that supports standard Governance practices and therefore ensures that development activities are geared toward achieving maximum value for the organization. The lack of Governance oversight and coordination contribute to deployed projects that replicate functionality of existing systems or poorly planned projects that lack key functionality to deliver the anticipated value.

The introduction of a formal application development lifecycle should not negate the benefits of ODE/ITO's current Agile development activities. The lifecycle should be developed such that it introduces enough structure to allow for the proper governance of Agile development efforts without being overly cumbersome.

In order to accomplish this objective, the lifecycle management approach should involve the development of a hybrid model that relies on the basic fundamentals of SDLC which include:

- Concept/Feasibility Analysis
- Requirements Definition & Management
- System Design & Development
- Quality Assurance & Testing
- Ongoing Maintenance

This approach will allow for effective Governance throughout the lifecycle, ensuring that issues and risks that arise during the development lifecycle are handled in a manner that is in the best interest of the organization.

The primary difference in the implementation of the Lifecycle Management approach for 'waterfall' developed projects versus Agile developed projects should be in the application of

the model. For example, frequency of milestone reviews for Agile projects is determined during planning of the Release backlog but is limited to the delivery of key features or deliverables. This will allow the iterative nature of Agile development to proceed unimpeded by reviews following each Sprint while allowing Governance oversight at critical stages in the lifecycle.

During interviews with the States of Minnesota, Michigan, and Massachusetts, the importance of software development lifecycle management was acknowledged. Michigan has designed a formal software development lifecycle process for all projects to be fully implemented June 30, 2013. The remaining two leading states commented that formulation of such a process is something that they are currently working toward.

Equally important to ODE/ITO is mandatory and consistent use of the tools to track and support the lifecycle management of development-related activities. This should include formal Requirements Management which defines which requirements are needed at different stages in the lifecycle. By demanding requirements be traceable (e.g., test cases, defects, change requests, etc...) and consistently reviewing development-related metrics, improvement opportunities will become more visible at each stage of the lifecycle.

Another important element of effective Lifecycle Management is a well-defined and documented account of the roles and responsibilities for supporting the activities. In the current environment, ODE/ITO utilizes a combination of roles to support requirements development with sometimes limited participation by the project sponsor. The benefit of dedicated/designated resources performing these tasks according to a consistent approach ensures a more thorough analysis of the requirements earlier in the lifecycle. This is critical as poor requirements are a primary contributor to unsuccessful projects. The impacts range from the omission of key functionality to projects simply not delivering the value expected by the stakeholder/project sponsor. Therefore, it is critical to identify all the roles and associated responsibilities required to support the Lifecycle Management approach.

Conclusion

By establishing a formal application development lifecycle to complement the guidelines and practices detailed in the ODE/ITO Development Guide and Database Standards documents, ODE/ITO will introduce a framework that will allow them to be more proactive regarding schedule-related issues and risks. A Lifecycle Management approach for development that is applied consistently across the organization will not only promote shared accountability for stakeholders/project sponsors and ODE/ITO, but will also provide the framework for effective Governance to ensure priorities are aligned with organizational objectives.

A formal Lifecycle Management approach for development will have the following benefits:

- Effective management of requirements throughout the lifecycle.
- Facilitate greater accountability, both internal and external to ODE/ITO, by utilizing a standard lifecycle for development activities.

- More efficient use of resources, as critical skills may be better leveraged across multiple projects.
- Improved metrics resulting from consistent use of tools as an integral part of the overall lifecycle management approach.
- Achieve greater value from deployed projects as a result of better collaboration between ODE/ITO and project sponsors.

1.0 IT GOVERNANCE AND INVESTMENT PRACTICES – SHARED SERVICES

Noteworthy Accomplishment: Prior to, and during the course of this performance audit, ODE/ITO had already implemented, or had begun to implement, multiple shared services initiatives in conjunction with DAS/OIT. The Office should be commended for these proactive steps to streamline operations and realize efficiencies in the areas of server virtualization, email consolidation, and VOIP telephone system implementation. Additionally, the Department intends to utilize the Information Security Services of OIT through the collaborative hiring of a Chief Information Security Officer to support ODE. Finally, ODE/ITO has been, and will continue to be, actively engaged with statewide IT consolidation and efficiency as a part of the DAS/OIT Optimization Initiatives.

Savings 1.2: n/a

Finding 1.2: By leveraging shared services ODE may benefit from reduced costs of infrastructure and maintenance.

Recommendation 1.2: ODE/ITO should continue to engage with DAS/OIT in order to be strategically placed to leverage additional shared services opportunities as they become available. Although opportunities appear to exist in shared strategic sourcing, IT infrastructure support and maintenance, and enterprise and infrastructure application support, these opportunities need to be assessed using a cost/benefit evaluative model that takes into account not only the cost of service delivery models but also the quality of services delivered. Based on the results of these analyses, ODE/ITO should move forward with the operating model that provides for the most efficient and effective delivery of key services.

Financial Impact 1.2: n/a

Issue for Further Study:

IFFS OAKS Enterprise Applications: Several ODE financial applications were identified as potential candidates for further review and evaluation to be migrated onto the state's shared services platform.

SHARED SERVICES

Background

ODE has an opportunity to move more of its infrastructure and enterprise applications to the State of Ohio's shared services model. Over the last several decades, the State of Ohio has become decentralized in its IT management and spending. State Agencies have built their own infrastructures. According to a State report¹⁷, this model is no longer sustainable for Ohio. The report points out that the costs and the resource commitments required to maintain multiple infrastructures across multiple agencies are too great.

In an effort to centralize the state's IT assets, the State of Ohio has launched an IT Optimization and IT Transformation initiative with the goals of increasing efficiency, improving service, and reducing complexity while supporting the ultimate goal of realizing savings. The IT Strategy for this initiative identifies strategic actions to move the State forward by strengthening governance of IT planning and procurement, simplifying the infrastructure, focusing on shared solutions/applications, and leveraging enterprise business analytics.

The State is implementing these initiatives in a four-part IT strategy. The four components are broken up into the following categories: Central Planning, Enterprise Analytics, Shared Applications/Solutions, and Simplified Infrastructure. Within these strategic components, DAS/OIT identified several enterprise IT initiatives. These IT initiatives were compared to ODE/ITO's operation to identify opportunities to leverage DAS/OIT's capability and capacity.

Methodology and Analysis

The project team conducted interviews with ODE/ITO Staff across various roles and responsibilities. The team reviewed and analyzed ODE internal documentation and IT plans and budgets. Interviews were also conducted and data was collected from other leading practice states to identify how other state education departments structure and manage their IT divisions.

The project team conducted interviews with several of the members of the IT Transformation Office including the State of Ohio CIO who is the Executive Sponsor of this transformation initiative. The team reviewed Ohio's IT Strategy, IT Transformation Plan, and the IT Optimization and Transformation plan. These plans are based on Gartner research which indicates that shared services and centralization of IT can help reduce operating costs by co-locating people and assets; elimination of duplicate contracts, services, and personnel; and leveraging the bargaining power of the state.

An analysis of ODE's use of Ohio's shared services was conducted. ODE has taken some steps toward leveraging shared services offered by DAS/OIT. Primarily, their participation has been in the consolidation of email, VOIP telephone system, and server virtualization in preparation of migrating to servers at the State of Ohio Computer Center (SOCC).

¹⁷ IT Optimization and the IT Transformation Plan: March 2013

During the interviews conducted with the States of Minnesota, Michigan, and Massachusetts' ITOs, they indicated that their move towards a shared services model has resulted in reduced costs and improved efficiencies for their Departments of Education. This type of transition requires planning, commitment and Executive Sponsorship. In the case of these other leading states, as well as the State of Ohio, shared services initiatives are being supported and expected by the Governor, State CIOs, and Department of Education CIOs.

The State of Ohio has created an IT Transformation Office and an Executive Governance Committee to lead this transformation initiative. These groups are comprised of the State CIO and strong agency IT leaders leveraging agency subject matter expertise.

These committees have identified several key initiatives that will transform the state's IT from the current decentralized model to a more centralized model. One of their findings is that agencies spend a disproportionate share of their IT dollars on generic infrastructure rather than agency-specific applications. Through consolidation of resources and economies of scale, it will be possible for state agencies such as ODE to begin seeing cost savings within their ITO departments.

It is recommended that ODE/ITO continue to participate in these initiatives¹⁸ in order to take full advantage of these shared services as they become available. The following table identifies ODE's use, or intended use, of these enterprise initiatives along with the team's recommendation pertaining to that initiative.

Table 1: Shared Services Inventory

| Use of Shared Services | The purpose of shared services is to provide consistency across multiple locations, reducing costs for 'like' functions. | |
|--|--|--|
| Shared Services Initiative | ODE Participation | Recommendation |
| Email Consolidation | Migration is 95% complete. | ODE will be migrating to OIT's email archive solution. This will complete the migration. |
| Storage as a Service | None of the ODE storage requirements qualified for Tier 1 storage offered by OIT. Additionally, the current storage pricing from OIT is more expensive than the storage rates currently being paid by ODE. | OIT is negotiating storage pricing. ODE will reconsider Storage as a Service once the OIT pricing has been updated. |
| Unified Communications: Voice Over Internet Protocol (VoIP) and Conferencing | Migration from OARnet network to Ohio.gov is complete | Migration is complete. |
| Unified Communications: Collaboration (SharePoint) | ODE intends to leverage the internal SharePoint site services of OIT. | ODE should leverage OIT to the degree it can for internal SharePoint services. ODE will continue to manage the external SharePoint due to special site collection needs. |

¹⁸ IT Optimization Initiative: April 2013

| Use of Shared Services | The purpose of shared services is to provide consistency across multiple locations, reducing costs for 'like' functions. | |
|---------------------------------------|---|--|
| Shared Services Initiative | ODE Participation | Recommendation |
| Server Virtualization | ODE is preparing to move virtualized servers to OIT when OIT is ready for them. 85% of the servers at ODE are virtualized. | Continue with virtualization efforts. Virtualization will reduce the hardware footprint and will make it easier when transferring the servers to OIT. |
| Business Intelligence (BI) | There is no intent to leverage OIT's Business Intelligence solution. ODE has been standardized on MicroStrategy since 1998. The State standard for BI is Cognos. | ODE has significant investment in MicroStrategy and should continue to formulate business-case analyses weighing the cost of MicroStrategy against migrating to Cognos; an OIT/Shared Services BI solution. |
| Disaster Recovery | ODE intends to use OIT DR when it is ready. | ODE should leverage the Disaster Recovery option from OIT when it is available. ODE should participate in any planning or testing required to ensure their requirements are met. |
| Network Aggregation and Consolidation | Higher Education and Board of Regents are in discussion regarding network consolidation of the OARNet network. ODE is currently on the Ohio.gov network. | ODE should formulate a business-case analysis which weighs the cost of the current state against migrating to OIT's network. |
| Cloud Services | ODE is currently leveraging some cloud services but not OIT cloud services. They are planning to continue to use more cloud services to save money when possible. | ODE should continue to move towards cloud based solutions. Consider using the OIT private cloud when available. |
| eLicensing | ODE currently manages a licensing system for educator licensure called CORE. | OIT has selected an enterprise licensing solution. This software has the capability to support educator licensure. It is currently implemented in several states supporting their educator licensure requirements. ODE should consider migrating to this solution for some or all of the functionality that is in the CORE system. |
| OAKS Enterprise Applications | ODE currently has its own financial systems that interface to OAKS. | ODE should formulate a business-case analysis determining potential for financial systems they currently maintain to be moved to the centralized accounting system, OAKS. |
| Grants Management | ODE has a custom built grants management system called CCIP that they maintain and support. | OIT has begun to identify project requirements and construct a business case for potentially implementing an enterprise grants management system. ODE's participation should ensure their requirements for grants management are met by the enterprise application. |

Source: ODE/ITO and DAS/OIT

Significant cost savings can be achieved through leveraging these IT Transformation initiatives. Specific savings can be realized by leveraging shared services of “common” applications that will allow ODE to redirect management attention and resources towards agency-specific mission activities.

Applications are defined in three broad categories:¹⁹

- Enterprise Applications – Applications that are used to assist the organization in solving enterprise problems. These applications are typically used across multiple agencies to address a specific business need, such as Financial Management and Human Resources. OAKS is a prime example of an Enterprise Application in the State of Ohio. It is expected that Enterprise Applications will be managed by the newly transformed central IT organization. Other enterprise applications that ODE can leverage include the Enterprise Licensing application and the new Grants Management application, currently in the requirements definition phase.
- Infrastructure Applications – Applications that are used as common/standard productivity, collaboration, and operational tools across multiple agencies. This would include applications such as email, SharePoint, Lync, and the Microsoft Productivity Suite. It is expected that Infrastructure Applications will be managed by the newly transformed central IT organization.
- Proprietary Business Applications – Applications that are used solely within a particular agency. This would include applications such as EMIS (Education Management Information System). It is expected that Proprietary Business Applications will be managed in a decentralized fashion by the agency receiving value from that application.

From an Enterprise Application perspective, ODE should consider migrating some or all of the CORE (Connected Ohio Records for Educators Systems) licensing application, used by the Center for Teaching Profession to track educator licensing, into the DAS/OIT shared service for eLicensing. The product selected by DAS/OIT is used in several other States to license and regulate all types of educators and related professions.

Additionally, ODE should consider migrating some, or all, of the CCIP (Comprehensive Continuous Improvement Plan) System to the DAS/OIT Enterprise Application shared service should DAS/OIT move forward with selecting an enterprise-wide Grants Management System. Currently, CCIP is the application that tracks competitive and non-competitive federal grants and some state grants. There are a number of state grants that are currently processed outside of the CCIP system. The CCIP system also provides the opportunity to develop grant plans and funding in a holistic manner. It is recommended that ODE participate in providing a comprehensive list of all requirements to DAS/OIT during the requirements definition and business case development phase of the Enterprise Grants Management System Project. A consolidated grants management system will improve process efficiency and provide the Department visibility and enhanced oversight of all grants.

¹⁹ Definitions provided in: IT Optimization and the IT Transformation Plan: March 2013

Conclusion

Although ODE/ITO has already engaged in a portion of the available statewide shared services initiatives, there are still opportunities for further involvement with the potential for efficiency gains. Similar to shared services initiatives in other leading practice states ODE/ITO could realize significant efficiency gains through the elimination of redundant infrastructures, implementation of procurement and contracting standardization, and leveraging of common enterprise applications. However, prior to engaging in additional shared services ODE/ITO should evaluate the cost/benefit profile of each service to ensure that potential changes are not only cost effective but also comparable in service delivery.

ISSUE FOR FURTHER STUDY

IFFS: Oaks Enterprise Applications

During the audit, an overview of the application inventory was conducted. Several financial applications were identified. These applications have the potential to be moved to the state's shared service model for Enterprise Applications. Through Application Rationalization, which is defined as consolidating, migrating, and retiring applications in order to improve the business value delivered by the application portfolio, cost savings can be achieved. The State of Ohio has an enterprise application known as the Ohio Administrative Knowledge System (OAKS) that supports several financial functions. ODE should review their existing financial transaction processing and reporting systems to determine if they have the potential to be addressed by OAKS. If so, ODE should consider decommissioning these applications and migrating the functionality to OAKS.

1.0 IT GOVERNANCE AND INVESTMENT PRACTICES – DISASTER RECOVERY

Savings 1.3: n/a

Finding 1.3: The Disaster Recovery Business Continuity Plan (DRBCP) includes a general overview of ODE/ITO server and database recovery, but detailed procedures are not included.

Recommendation 1.3: Design and implement a Disaster Recovery Strategy for ODE to ensure business continuity in the event of a disaster.

Financial Impact 1.3: By designing and implementing a detailed, tested, and proven Disaster Recovery Plan, ODE can increase its operational readiness, reduce its risk of data loss in a state of emergency or other disruption, and reduce its legal liability while complying with statutory and regulatory requirements. The liability of a catastrophic disaster could result in millions of dollars lost, possibly impacting 1.9 million students in Ohio.

DISASTER RECOVERY

Background

ODE/ITO does not have a complete DRBCP. A disaster recovery and business continuity strategy involves planning and testing (and implementing when necessary) a process that ensures the recovery and return to production of IT Services after a serious incident has occurred. It is about proactive measures to reduce the risk of a disaster, as well as reactive measures in the event of one.

A disaster can be any event that prevents a business from accessing the data and systems it needs to operate. It could encompass anything from regional power outages, to virus outbreaks, to employee sabotage, to external data fraud, to states of emergency from weather or terrorist events.

DRBC planning involves the following basic steps:

- Prioritize the services to be recovered by conducting a risk assessment.
- For each IT Service, identify the assets, threats, vulnerabilities and countermeasures.
- Evaluate the options for recovery and develop the plan.
- Test, review, and revise the plan on a regular basis.

Methodology and Analysis

The project team conducted interviews with ODE/ITO Staff across various roles and responsibilities. The team reviewed and analyzed ODE internal documentation and IT plans and budgets. The project team measured its findings against industry best practices, other leading states and other State of Ohio agencies.

The ITO section of the 2012 “ODE Disaster Recovery and Business Continuity Plan”²⁰ lacks detailed recovery, restoration, and retention procedures, though a general outline is included. To correct this, several areas can be addressed more specifically or expanded upon to provide a more precise and comprehensive plan.

In addition, some key disaster recovery and server/data backup information is provided in the “ODE FY12 IT Operations”²¹ document, sections 5.5.0-5.5.3, but much of the detail provided was not included fully in the ITO section of the 2012 “ODE Disaster Recovery and Business Continuity Plan.” Also, it was noted that little, if any, testing of the backup data through regular, scheduled restore exercises is taking place. Discussion on the location of a DR site in this document was informative, but incomplete.

In the ITO section of the 2012 “ODE Disaster Recovery and Business Continuity Plan,” server and database backup procedures need to include clear, concise procedures, schedules,

²⁰ Data collected from: ODE Disaster Recovery and Business Continuity Plan

²¹ Data collected from: ODE FY12 IT Operations

timeframes, and retention plans, taking into account any impacts on the business day. Procedures for recovery and restoration of ODE servers and data should be delineated in Section II of the ODE DRBC Plan with specifics about the prioritization and restoration of the most critical applications, the availability of disaster recovery equipment and resources, and the placement of these restorations in the event of relocation. In addition, realistic timeframes for restorations must be established to aid in the DR decision-making process, and real resources and sites for carrying out these activities need to be documented and verified.

The ODE Server Table section of the ODE DRBC Plan should be reworked by placing the most critical services and servers first with complete descriptions and by adding service level agreements (SLAs) for those critical components. Costs relating to SLAs will be identified and included when finalization of a DR plan occurs. A section detailing an ongoing testing strategy for server and data backup, recovery, and restoration needs to be added to the ITO section of the ODE DRBC Plan. The testing strategy needs to be carried out, the results monitored and logged, the problems corrected, and the retesting done according to a regular schedule to ensure the backups, procedures, equipment, and sites are adequate to restore critical services to production within SLA requirements and according to prioritized organizational needs.

In the “ODE FY12 IT Operations” document, section 5.5.0, there is a table which begins to prioritize applications and servers. This can be used as a starting point for reworking the ODE Server Table in the ODE DRBC Plan, though the detail does need to be more precise. Sections 5.5.1 and 5.5.2 provide more information on backups of these critical applications and servers but at least one document needs to be comprehensive and detailed in regard to backup and recovery plans for critical services and data first, and then for less critical services and data. The thorough and complete document can be referenced where needed in other documents that touch on these issues.

The general backup schedule and retention plan discussed in Section 5.5.2 of the “ODE FY12 IT Operations” document is a good start and needs to include detailed information on what is occurring to backup all of the critical services and data via the Symantec Net backup routines. This information needs to be made clear for key staff beyond one or two people that are responsible for day to day review. As mentioned previously, a detailed testing strategy and documentation process must also be clearly available for key staff and carried out as planned.

Regarding the discussion of DR Site Options in Section 5.5.3 of the “ODE FY12 IT Operations” document, it appears that a clear Interim Plan for utilizing a DR Site is on hold until a more permanent DAS/OIT solution is finalized. Though this may seem like a reasonable approach to the topic while details are in flux, a concrete Interim Plan is still desirable and critical if a true DRBC Plan will serve ODE in a disaster situation. Therefore, a decision and documentation of a concise Interim Plan for a DR Site is recommended.

Conclusion

In summary, a well-developed and tested ODE DRBC Plan for ITO can provide the following benefits:

- Prioritization of business IT services leading to less down time for critical applications.
- Less risk of data loss and reduced legal liability.
- Meeting or exceeding statutory, regulatory, and best practice requirements.
- More efficient support and maintenance processes with less dependence on support personnel.
- Higher availability and reliability of network and application services overall.

By designing and implementing a detailed, tested, and proven Disaster Recovery Plan, ODE can increase its operational readiness, reduce its risk of data loss in a state of emergency or other disruption, and reduce its legal liability while complying with statutory and regulatory requirements. Implementing a standard and controlled framework for testing failover and recovery strategies can improve support and maintenance processes while reducing dependency on infrastructure support personnel. This can also lead to higher availability and reliability of network and application services.

1.0 IT GOVERNANCE AND INVESTMENT PRACTICES – STATEWIDE STUDENT IDENTIFIER SYSTEM

Note: This recommendation was issued as an interim release on October 8, 2012. No changes have been made to this section since the release date.

Savings 1.4: \$432,000

Finding 1.4: Due to constraints imposed under ORC § 3301.0714, ODE is obligated to operate its SSID system in a less than optimal manner. This constraint imposes significant costs on both ODE and users of the SSID system without providing additional privacy protections beyond those required by federal law. Ohio is one of only two states that operate under such restriction.

Recommendation 1.4: The General Assembly should change existing law to allow ODE access to names, and other personal information, of students while still providing necessary privacy protections consistent with federal law.

Financial Impact 1.4: Current law prohibits ODE from knowing students' names. To accommodate this law, ODE maintains one database where students are represented only by numbers, called SSID, and contracts with a private company to run a second data warehouse that is identical, but for the inclusion of the names and identifying information of the students.

Repeal of this statute would allow ODE to have a single system, hosted and managed internally, yielding annual savings of approximately **\$432,000**, or \$4.3 million over ten years, with a payback of 17 months.

STATEWIDE STUDENT IDENTIFIER SYSTEM

Background

In support of its extensive mission, ODE leverages multiple internal and external databases throughout its operations. Among these databases is SSID, which is used for multiple management purposes and is the method by which ODE complies with state law limiting ODE access to certain student data. SSID ensures that each K-12 student in Ohio is assigned a unique identifier to comply with federal legislation, as well as monitor academic performance and student mobility.

Ohio law restricts ODE access to certain personally identifiable student information. ORC § 3301.0714 states, “the guidelines shall prohibit the reporting under this section of a student’s name, address, and social security number to the state board of education or the department of education.” Only one other state, New Hampshire, has adopted a similar constraint on access to such data.

In response, ODE contracts with a third-party vendor (IBM) to house and manage offsite student identifying information. The inefficiency of this arrangement raises Department costs as ODE must pay IBM to process some of its information management reports externally, and then convert the reports to an SSID format with the names of the students removed.

Other examples include duplicative processes at ITCs and ODE to compile Secure Data Center reports, sending SSID numbers to the vendor, matching databases (e.g., with student names), compiling data, removing student names, and acquiring data from the vendor for analysis.

Federal law does not require this arrangement and does not prohibit the Department from accessing personally identifiable student information. The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) protects the privacy of student education records while still allowing states the flexibility to share data to evaluate educational programs. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education.

FERPA gives parents (and eligible students) certain rights and privacy exceptions with respect to a student’s education records. Pursuant to 34 CFR § 99.31, exceptions are made to allow access to student education records as follows:

- School officials with legitimate educational interest
- Other schools to which a student is transferring
- Specified officials for audit or evaluation purposes
- Appropriate parties in connection with financial aid for a student
- To comply with a state law, judicial order, or lawfully issued subpoena
- Accrediting organizations
- Appropriate officials in cases of health and safety emergencies

Allowing ODE access to student data is consistent with the strong protections represented by FERPA and other Ohio policies. Within the state, analogous privacy protections are established to safeguard other similarly sensitive data. Examples include police officer information maintained by county auditors and children's personal identification information maintained by the Ohio Department of Job and Family Services (ODJFS).

Methodology and Analysis

OPT worked with ODE/ITO's management team to analyze the current-state and possible future-state of the SSID system. This analysis included a breakdown of the current costs and service deliverables associated with the outsourced system. In a normal year, the current contract has an annual cost of approximately \$752,000, not including a number of regular enhancement costs and identified one-time charges. To date, such enhancements and one-time charges have resulted in additional expenses to ODE in the amount of \$680,000 since 2004. Given a continuation of the current-state, ODE/ITO anticipates more of these additional costs to accumulate.

The Ohio Performance Team, with input from ODE/ITO, created an estimate for development and ongoing operational costs associated with an internal SSID System. The estimate included all internal and external (vendor-based) hardware, software, and human capital needed to develop, test, and deploy an internal system. Total costs (development through deployment) were projected at approximately \$638,000, with an ongoing operational cost projection of approximately \$320,000 annually.

Table 1 shows the breakdown of annual operating costs using a third-party vendor and comparable costs if ODE utilizes in-house IT staff.

Table 1: Annual Operating Cost Comparison

| Cost Category | Vendor | ODE | Net Savings |
|---|------------------|------------------|------------------|
| Hardware Cost | | | |
| • Hosting | \$155,000 | \$33,000 | \$121,000 |
| Human Resources Cost | | | |
| • Customer Service | \$333,000 | \$249,000 | \$84,000 |
| • Hosting ¹ | \$146,000 | \$0 | \$146,000 |
| • Application Maintenance | \$53,000 | \$38,000 | \$15,000 |
| Additional Cost | | | |
| • Process Related Expenses ² | \$65,000 | \$0 | \$65,000 |
| | | | |
| Total | \$752,000 | \$320,000 | \$432,000 |

Source: ODE/ITO

¹ ODE's Human Resources Hosting Cost is included in the \$33,000 Hardware Hosting cost

² Process involves matching vendor-housed student names with SSID to compile/analyze data for National Student Clearing House.

As **Table 1** shows, current total annual normal costs under contract with the third-party vendor are \$752,000. Compared to estimated in-house operating costs of \$320,000 annually, the result would be potential annual savings in the amount of **\$432,000**.

In addition, ODE has incurred occasional “one-time” costs for various modifications to the existing system. Since 2004, approximately \$680,000 has been spent on numerous one-time adjustments and enhancements executed by outside contractors, significantly increasing the total cost of ownership for ODE systems. One time charges include adding the Ohio Board of Regents as an SSID user (\$78,000), enhancing unique identifiers (\$141,000), and updating the SSID system (\$462,000). Assuming the trend of these “one-time” costs continue, ODE would realize significant savings on top of annual operating costs by bringing the third-party system in-house.

In addition to annual operating costs, moving to an in-house SSID system will cause ODE to incur one-time development costs, as shown in **Table 2**. Development time is projected by ODE/ITO at 26 weeks. Not all contract positions were utilized for the full 26 weeks.

Table 2: One-time Costs to Develop In-House SSID System

| | Hourly Rate | Line Item Total |
|--------------------------------|-------------|------------------|
| Contractor Cost | | |
| .net Programmer #1 | \$85 | \$88,400 |
| .net Programmer #2 | \$85 | \$88,400 |
| Senior .Net Programmer | \$100 | \$104,000 |
| PM Contractor | \$100 | \$104,000 |
| Data Modeler (1st half) | \$85 | \$44,200 |
| Business Analyst | \$85 | \$44,200 |
| Contractor Subtotal | | \$473,200 |
| ODE Employee Cost | | |
| CIO | | \$8,225 |
| IT Director | | \$8,258 |
| PM Director | | \$6,667 |
| EMIS | | \$6,750 |
| ODE PM | | \$6,079 |
| Apps Mgr | | \$14,864 |
| App Architect | | \$11,177 |
| App Tester | | \$31,139 |
| DBA Mgr | | \$18,659 |
| DBA | | \$9,344 |
| InfoSec | | \$6,667 |
| Windows Server | | \$3,025 |
| Network | | \$678 |
| Storage | | \$646 |
| ODE Subtotal | | \$132,178 |
| Infrastructure | | |
| Servers | | \$10,500 |
| Network | | \$0 |
| Software Licensing | | \$5,000 |
| Storage | | \$16,974 |
| Infrastructure Subtotal | | \$32,474 |
| TOTAL | | \$637,852 |

Source: ODE/ITO

Conclusions

Removing the ORC statutory restriction on ODE access to student personally identifiable information would allow the Department to realize cost savings as well as process improvements. Internalizing the SSID system could result in potential annual savings of **\$432,000** with an initial investment of \$638,000. This represents a payback of approximately 17 months and a savings of nearly \$4.3 million over a ten-year period.

Additional opportunities for savings and operational efficiencies may include the following:

- **Federal Reporting Requirements:** In order to meet federal requirements, ODE reports data to US Department of Education pertaining to high school graduates attending institutions of higher education. The Department may leverage the National Student Clearinghouse as a valuable data source but, in order to do so, student names are necessary. Similar processes are followed with regards to the American College Test (ACT), the Scholastic Assessment Test (SAT), and the Advanced Placement Test (APT).
- **Comprehensive Database Review:** A comprehensive review of the numerous database systems should be considered, because many data systems used within ODE are impacted directly or indirectly by the need for student name data. These impacts could result in additional cost savings and efficiency gains.
- **Operational Efficiency:** Allowing ODE to have access to student names would likely improve audit capabilities both at the state level and at the individual school district level. Without the required steps involved in utilizing ITCs and IBM to match up student names with an SSID, ODE would likely be more efficient when performing data analysis or compiling information. It is also likely that such a change would mitigate the number of processing errors. Based upon interviews with ODE staff, process improvements also could be realized at the district level with regard to student attendance accuracy, report generation and analysis, and decision-making.
- **Shared Services:** Due to the potential cross-agency benefits, a shared services model could be established. Immediate stakeholders that would benefit from a shared services model would be the Department of Job and Family Services, Department of Developmental Disabilities, Department of Mental Health, and Department of Health. Under the current construct, approximately \$320,000 in additional costs would be incurred by adding these agencies as SSID users.²²

²² ODJFS and ODH are slated for addition as authorized SSID users 7/15/2013 and DODD and ODMH are slated for 8/31/2013.

2.0 CORE RESPONSIBILITIES – GENERAL EDUCATION DEVELOPMENT

Savings 2.1: \$347,425

Finding 2.1: Effective 2014, ODE will transfer many of its current responsibilities for General Education Development (GED) testing to the GED Testing Service. ODE will continue to carry out some GED duties, particularly the issuance of transcripts and diplomas. For each position within ODE associated with the GED process, ODE bears the cost of salary and benefits. Outside contractors are available for the transcript and diploma function.

Recommendation 2.1: ODE should utilize a vendor to administer the GED testing program, including the issuance of transcripts and diplomas.

Financial Impact 2.1: ODE would save approximately **\$347,425** annually by fully utilizing an outside vendor for all GED testing, diploma, and transcript services.

GENERAL EDUCATION DEVELOPMENT TEST

Background

The GED test is a nationwide certification of high school academic skills for people who did not graduate from high school. The test is offered primarily to adults, although in Ohio people under the age of 19 may apply for a waiver of the age requirement.²³

The test is developed by the GED Testing Service²⁴ and administered in cooperation with each state. Generally, GED Testing Service develops the test and test content and shares other duties of test administration in varying degrees with each state, as set forth by formal contract.²⁵

Beyond developing test content and the test instrument, other functions necessary to the GED Test include the application and preparation process (including payment of fees), the administration and scoring of the test, and the issuance of transcripts and diplomas.

In Ohio, the State Board of Education issues a high school equivalency diploma upon successful completion of the GED.²⁶ To pass the test, applicants must meet a specified overall average and obtain a minimum score for each of five sections.²⁷ The passing benchmark is set by the state based upon the performance of a sample group of high school seniors to whom the test is administered.

The state-administered GED functions currently include processing GED applications, interfacing with prep-centers and test sites throughout the state, receiving payment for fees, and issuing transcripts and diplomas. These GED functions are performed by the Office of Curriculum and Assessment of the Ohio Department of Education:

Applications: The GED application fee is \$40, covering both the test and issuance of the diploma or certificate.²⁸ The test is paper-based.

²³ Applicants under the age of 19 years old must obtain the signature from the superintendent of the last school district attended, and applicants under the age of 18 must also obtain a parent's consent. The minimum age is 16 years old.

²⁴ GED Testing Service is a joint venture of the American Council on Education (ACE) and educational publisher Pearson Vue. Generally, Pearson Vue conducts all test activities not administered by individual state departments of education.

²⁵ The agreement between Ohio and GED Testing Services is changing January 1, 2014.

²⁶ Ohio Administrative Code (OAC) § 3301-41-01 identifies the American Council on Education (ACE) and the State Board of Education as authoritative bodies regarding the GED test. OAC § 3301-41-01 (C) states: The state board of education shall issue an "Ohio High School Equivalence Diploma" to residents of Ohio who have not received a high school diploma provided the minimum standard score set by the "American Council on Education" or a higher score set by the state board of education on each test and an average standard score set by the "American Council on Education" or a higher score set by the state board of education on all five tests of the GED are attained.

²⁷ Reading, writing, social studies, science and mathematics.

²⁸ Applicants may elect to take fewer than all five sections of the test if some sections were previously passed, in which case the fee varies.

There are several changes taking effect in the agreement between Ohio and GED Testing Services and in the administration of the test. On January 1, 2014, the application fee will increase to \$120 and the test will be administered solely electronically (i.e., it will no longer be available in paper form).²⁹ At that time, GED Testing Service will assume from ODE the function of processing applications, and will receive revenues from fees associated with the application process.³⁰

Test Preparation and Administration: The GED office works with approximately 130 prep centers and more than 60 test centers across Ohio. These centers are responsible for preparing test takers and administering the test. Prep centers include Adult Basic and Literacy Education (ABLE) offices, correctional institutions, and independent providers such as churches and shelters. The prep centers, which must follow national guidelines and comply with certification and training standards such as yearly GED training, are funded by school districts and Educational Service Centers (ESC). Testing centers are funded by ODE.

Notwithstanding the transfer of the application process to GED Testing Service in 2014, ODE will continue to process all requests for waivers to allow students under the age of 19 to take the test. ODE will also collect and review all requests for special testing accommodation, e.g., assistance for visually impaired students and students with reading deficiencies.

Transcripts and Diplomas: Transcripts and diplomas are processed and issued by the GED office. A transcript request requires a \$10 processing fee for standard processing time of 30 days and a \$15 priority fee for accelerated 24 hour processing.³¹ During FY 2011, the GED office generated total application revenue of \$796,511 (24,823 applications), total transcript request revenue of \$250,266 (19,986 transcript requests) and total diploma request revenue of \$27,740 (1,118 diploma requests).

Methodology and Analysis

To carry out its duties, the GED office employs one assistant director, one administrative assistant, three customer service assistants, one educational consultant, one intermittent educational consultant, and one management analyst. The total salary and benefits cost for the GED office for 2011 was approximately \$423,000.

²⁹ Applicants who have started the test process in the paper format must complete all sections before 2014, when the test becomes fully electronic.

³⁰ Memorandum of Understanding effective Oct 1, 2012. Executed August 30 and September 10, 2012 by the GED office and GED Testing Services, respectively.

³¹ Effective 2014, when GED Testing Services assumes responsibility for applications, ODE will receive only those revenues associated with diplomas and transcripts.

Duties within the office are assigned as follows:

- The assistant director is responsible for overall supervision of the GED office, providing on-site monitoring of state GED testing centers, and compiling monthly and annual reports related to the GED Office.
- The administrative assistant is responsible for responding to inquiries, generating correspondence, and performing general clerical work.
- The customer service assistants and the educational consultant are responsible for handling inquiries, processing mail and payments, processing application and transcript requests, updating test scores, and assisting with test scoring.
- The management analyst ensures contracts with testing centers are current, handles inquiries, and performs daily accounting functions, such as, verifying accounts receivable/payable and generating quarterly payments to testing centers.

Peer states offering a high school equivalency diploma (through GED Testing Service) include Arizona, Indiana, Iowa, Minnesota, and North Carolina.³²

- Arizona employs two full-time and three part-time employees for a total of 3.5 FTE.
- Indiana employs one full-time and one part-time employee for a total of 1.5 FTE.
- Iowa does not employ any full-time employees for GED but does employ two part-time employees for a total of 1 FTE.
- Minnesota employs two full-time employees only within the GED department.
- North Carolina employs only three FTE.

Compared to the peer state average of 2.2 FTE within the comparable GED office, Ohio's GED office employs 7.0 FTE, a difference of 4.8 FTE.

Of the five peer states reviewed, only Iowa and Minnesota use their departments of education to issue GED diplomas, and only three states (Arizona, Iowa, and Minnesota) issue transcripts. Outside vendors are utilized by Indiana (both diploma and transcript) and North Carolina (transcripts).

Two of the peer states, Indiana and Oklahoma are notable for efficiency in the issuance of GED diplomas and transcripts. Indiana's GED office contracts with an outside third party agency to process and issue transcript and diploma requests. Through the third party agency, users can access and view their diploma/certificate, letter of certification, letter of verification, and transcript. They can also order duplicates online, which are delivered via US Mail, UPS, fax or e-

³² Information was solicited from Florida and Michigan, but they did not respond.

mail. Delivery may be made electronically to employers and colleges. Delivery is accomplished within minutes of order.³³ The charge per transcript varies depending on the type of service contracted for by each state. The minimum fee is \$7 per transaction, but most states have chosen to add services at increased cost. The third party vendor is responsible for all operating costs (data storage, copying and postage, employee salaries, etc). Payment is accepted using money orders, certified checks, and credit or debit cards.³⁴

The State of Oklahoma “data leases” GED information to a third party vendor, charging the vendor a \$2 fee for each transaction. The vendor passes this cost along to the user, charging \$17 per transaction. The arrangement constitutes an additional funding source to the Oklahoma Department of Education. In addition to web-based services, the third party vendor maintains a call center (not all GED clientele have access to internet), including a charge of \$6 per call. For data tracking purposes, the call center enters phone orders into the online system. Customers may check the status of orders online. Customer service staff provides email and phone support.

Conclusion

Contracting with outside vendors to process applications, administer and score the test, and issue transcripts and diplomas would allow ODE to reduce headcount associated with the GED office and to eliminate most, if not all, incoming calls pertaining to GED (the GED office receives approximately 28 percent of the total call volume routed through the general call center). All functions currently performed by the GED Office staff would be handled by an outside vendor, including management of the prep testing centers.

Table 1: GED Cost Savings

| Current Department TO as of 2-14-2012 | Savings From Re-Org Recommendations | |
|--|--|---------------------|
| Current Postions | Less Positions Needed | Cost Savings |
| Assistant Director | | |
| EdEmCon3B | EdEmCon3B | \$79,998 |
| MgmtAnyst | MgmtAnyst | \$69,871 |
| CsSvcAst2B | CsSvcAst2B | \$53,323 |
| CsSvcAst1B | CsSvcAst1B | \$54,143 |
| CsSvcAst1B | CsSvcAst1B | \$15,620 |
| AdProf 1-B | AdProf 1-B | \$54,370 |
| EdEmCon1B | EdEmCon1B | \$20,100 |
| Total Office Savings | | \$347,425 |

Source: ODE Payroll and Human Resources

The recommendation contemplates that the GED function could be filled by the existing assistant director position. This position is necessary to manage the contracts and service delivery by the GED Testing Services and the outside vendor selected to provide transcripts and diplomas. Although it is not part of this cost analysis, an additional GED position may be necessary during the implementation and change over period (ODE should exercise management discretion in

³³ The requested document must be post-1985 and in electronic format.

³⁴ Money orders must be received by the third party vendor before release of documents.

assigning any additional employee to the GED function). This change within the GED function would optimally save ODE approximately **\$347,425** annually in salary and benefits.

2.0 CORE RESPONSIBILITIES – OFFICE FOR EXCEPTIONAL CHILDREN

Savings 2.2: \$161,597**Finding 2.2:**

Comprehensive monitoring consultants³⁵ conduct onsite monitoring of school districts' special education programs throughout the state during each school year. All personnel are full-time ODE employees based out of Columbus.

Recommendation 2.2: ODE should hire contractors to serve as comprehensive monitoring consultants for the Office for Exceptional Children. They should be regionally located to reduce personnel overhead and travel costs.

Financial Impact 2.2: For each position within the Division of Learning located in Columbus, ODE incurs the cost for salary, benefits, and travel. ODE would save **\$161,597** annually by requiring comprehensive monitoring contractors to be regionally located.

³⁵ The word 'consultant' in this context is not meant to denote a 'contracted employee.' It is the title of this position within the organization that fulfills these monitoring duties – 'Education Employee Consultant.' In the broader sense, this position can be filled by an ODE staff member or a contracted employee.

OFFICE FOR EXCEPTIONAL CHILDREN

Background

The Office for Exceptional Children conducts comprehensive monitoring of special education services in Ohio school districts in compliance with federal and state law and polices set by the State Board of Education and ODE.

Federal law mandates education assistance for all children with disabilities and monitoring of compliance with Individuals with Disabilities Education Improvement Act of 2004 (IDEA). To ensure this legislation is properly implemented, funding has been set aside and directly addressed within IDEA Part B § 611(B)(i) by stating:

Required activities – Funds reserved under subparagraph (A) shall be used to carry out the following activities: (i) For monitoring, enforcement, and complaint investigation.

State law also requires the State Board of Education and ODE to monitor district implementation of IDEA in special education. ORC § 3323.06(D) states:

In the exercise of its general supervisory responsibility, the state board shall monitor the implementation of Part B of the ‘Individuals with Disabilities Education Act of 2004’ by school district. Monitoring activities shall include, but are not limited to, focused monitoring, investigations of complaints, and technical assistance. The primary focus of the state board’s monitoring activities shall be improving educational results and functional outcomes for all children with disabilities and ensuring that the state board meets the program requirements under Part B, with a particular emphasis on those requirements that are most closely related to improving educational results for children with disabilities.

Monitoring activities by the Office for Exceptional Children include:

- Compliance indicator reviews based on the State Performance Plan³⁶
- Selective reviews based upon specific complaints or other indicators of noncompliance or program failure
- IDEA onsite monitoring

Compliance indicator reviews: use the 20 indicators established through the State Performance Plan to rate districts and community schools on the overall effectiveness of their special education departments. Four consultants conduct approximately 1,000 compliance indicator reviews of public and community schools. Two additional employees provide assistance during

³⁶ The State Performance Plan (SPP) describes and evaluates state efforts to implement the requirements of IDEA Part B. The SPP includes annual targets for 20 indicators identified by the Office of Special Education Programs (OSEP) at the U.S. Department of Education.

peak times. Two procedural safeguard consultants, whose primary duties are special education investigations, also assist when needed. The compliance indicator review process does not require travel and all reviewing consultants work in Columbus.

Selective reviews: conducted as part of the overall process of determining compliance and performed by the same employees. The 'selective' nature of these specific assessments is based on the volume of complaints and/or concerns relating to a specific school district and the special education services provided.

IDEA onsite monitoring involves compliance reviews of the various facets within special education programs - fiscal (special education funding), gifted, early childhood, and IDEA-specific. The IDEA-specific review involves a random sample of the district's compliance with the Individual Education Plan (IEP) of special education students. Excluding the ones servicing Ohio's eight large, urban areas, districts are selected randomly for onsite monitoring review each year by the Office of Special Education Programs.

IDEA onsite monitoring is done by five, five-member consultant teams that ensure compliance with federal special education guidelines. Each team is comprised of a team coordinator, a regular team member from the monitoring staff, one procedural safeguards consultant, one fiscal consultant, one gifted consultant, and one early childhood consultant (an early childhood consultant is only needed when the school under review includes a pre-kindergarten program). During FY 2012, 45 reviews were conducted. The population to be reviewed is divided into three annual cycles so that each district is reviewed once every three years. The timing of the review involves consideration for a school's testing periods, breaks, and the overall period which the school is in session. As the name indicates, all consulting teams travel from Columbus to the district in order to perform the onsite monitoring engagement. Monitoring visits usually require three to five days for completion. Typically, two schools will undergo monitoring during the course of a given month.

Methodology and Analysis

Peer states reviewed for IDEA monitoring, particularly for staffing levels and geographic location, include Arizona, Florida, Iowa, Michigan, Minnesota, and North Carolina (information was solicited from Indiana, but a response was never received).

- Arizona IDEA monitors conduct 40 onsite reviews and utilize regionally located traditional Department of Education employees housed in one of three Department of Education buildings across the state.
- Florida IDEA monitors are responsible for eight onsite reviews and work out of the central office of the Department of Education and travel to the monitoring sites.
- Iowa performs IDEA monitoring on 68 sites annually, fulfilling two separate classifications of monitoring: procedural reviews and comprehensive school improvement monitoring. Procedural reviews are regionally facilitated through nine Area

Education Agencies or AEAs. Comprehensive school improvement monitoring reviews are conducted by contractors.

- Michigan IDEA monitors, responsible for 90 onsite reviews, are broken into two categories: fiscal monitors and program monitors. Fiscal monitors travel to school sites from their central location within the Department of Education. Program monitors are contracted employees who are located regionally, working out of their homes, and travel to the district to perform their assessments.
- All Minnesota IDEA monitors are centrally located and conduct 54-86 reviews annually.
- Most North Carolina IDEA monitors are centrally located at the Department of Education; however, the office does utilize a few regionally based monitors. North Carolina conducts 42 onsite reviews.

Table 1 summarizes the peer state comparison.

Table 1: Peer State IDEA Monitoring Comparison

| State | Location of Monitoring Employees | Number of Reviews |
|----------------|----------------------------------|-------------------|
| Ohio | Centrally | 45 |
| Arizona | Regionally | 40 |
| Florida | Centrally | 8 |
| Iowa | Both ¹ | 68 |
| Michigan | Both ² | 90 |
| Minnesota | Centrally | 54-86 |
| North Carolina | Centrally | 42 |

¹ Iowa DOE procedural reviews are conducted by regionally located Area Education Agencies (AEAs) and comprehensive school improvement monitoring is conducted by contractors and sometimes DOE employees.

² Michigan DOE IDEA fiscal monitors are centrally located traditional employees and program monitors are regionally located contract employees.

The function of special education monitoring, housed within the Office for Exceptional Children, is carried out by an assistant director, one administrative assistant and 14 education consultants (three education consultants supporting the monitoring office are employed by regional State Support Teams). Procedural safeguards, fiscal operations, and early learning teams also assist with special education monitoring as needed. Salary and benefits for the office during FY 2011 was approximately \$1,499,905. See **Exhibit A.2** in **Appendix A** for office organizational chart.

Of the 14 education consultants working out of Columbus, 10 spend approximately nine months of the year onsite, away from their centralized location. During FY 2012, each of the 10 consultants working at onsite locations accrued an estimated \$1,827 annually in travel reimbursements – mileage, hotel, and meals. See **Table 2**.

Table 2: Total Travel Cost Comparison Per Consultant

| Expense | Amount |
|---------------------------------|----------------|
| Mileage ¹ | \$596 |
| Hotel ² | \$697 |
| Meal Reimbursement ³ | \$534 |
| Total Travel Cost | \$1,827 |

Source: ODE Finance Department

¹Based on round trip miles per site visit conducted during FY 2011

²Based on hotel reimbursement for each site visit conducted during FY 2011

³Based on meal reimbursement for each site visit conducted during FY 2011

Patterned after a leading practice within the Michigan Department of Education (MDE), ODE should consider regionalization of monitoring consultants, employing six of the ten monitors as contract employees (see **Exhibit A.1** in **Appendix A** for state map divided into four quadrants used to locate resources). The remaining four consultants should be utilized as monitoring team leads, located and deployed at ODE's discretion. The agreements of contract employees can be negotiated and administered by ODE or through an ESC (pass-through cost to ODE). The contractor can be either home-based or work through a regional ESC (a small ESC administrative fee would probably be included in the agreement)³⁷. When negotiating the contracts, the prevailing market should drive the competitive salary range for the contractors' services in order to maximize savings. The contractors would use their own computers to process IDEA monitoring forms and would not receive either cell phone or travel reimbursement. See **Table 3** for financial implications.

³⁴ An employee's primary work location is commonly referred to as the employee's headquarters. Employees (or contractors) who work primarily from home are considered to have home-based headquarters.

Table 3: Financial Implications

| Ohio Department of Education, Center for Curriculum & Assessment - Office for Exceptional Children | | |
|---|--|-----------------------------------|
| Department | Job Title | Annual Salary |
| Education | (1) Assistant Director | \$ 81,770 |
| Education | (1) Administrative Professional 2-B | \$ 44,746 |
| Education | (14) Education Employee Consult 3-B | \$ 976,355 |
| | | \$ 1,102,871 Office Salary |
| | Benefits | \$ 397,034 |
| | | \$ 1,499,905 Office Total |
| <u>Financial Cost Walk</u> | | |
| \$ 976,355 | Salary, 14 Consultants, Education Employee Consult 3-B | |
| | divide by 14 | |
| \$ 69,740 | Average per consultant for salary w/o benefits, ov'hd and rent burden ¹ | |
| \$ 976,355 | Salary, 14 Consultants, Education Employee Consult 3-B | |
| | x 36% Benefits @ 36% | |
| \$ 1,327,843 | | |
| | divide by 14 | |
| \$ 94,846 | Average per consultant for salary w/benefits | |
| \$ (69,740) | Average per contractor (assuming same salary range) ¹ | |
| \$ 25,106 | Average savings per contractor | |
| | x 6 Six contractors regionally located and under a Purchase Service Contract (PSC) | |
| \$ 150,635 | Savings through a PSC | |
| \$ 10,962 | T&E Savings (Travel and expense savings of \$1827 per consultant X 6) | |
| \$ 161,597 | Total Savings | |

Source: DAS Employee Salary Data

¹This salary amount reflects the rate that could also be tendered to contractors for their services and as such, should be viewed only for comparative analysis; the prevailing market should drive the competitive salary range for each contractor employed.

Conclusion

ODE should hire contractors to serve as comprehensive monitoring consultants for the Office for Exceptional Children. By regionally locating the contractors into the four quadrants (see **Exhibit A.1** in **Appendix A**) ODE would save **\$161,597** annually. ODE should implement these recommendations within the parameters of all state and federal regulations which may apply, as a function of the Departmental interpretation of permissiveness therein.

R2.2 Appendix A

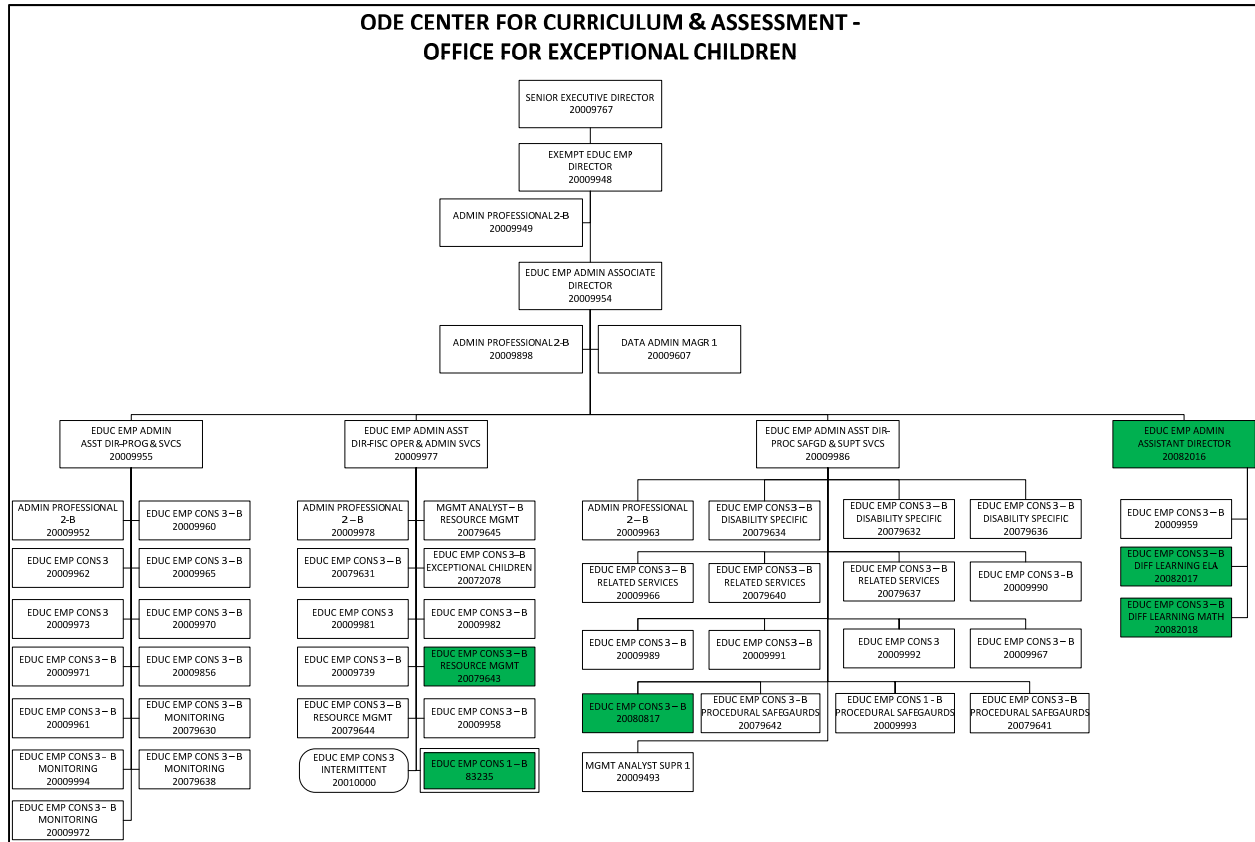
Exhibit A.1

This **Quadrant Map**, developed and currently used by the special education monitoring office, divides the State of Ohio into four quadrants to facilitate the deployment of consultant resources throughout the state.



Source: ODE Special Education Monitoring Office

Exhibit A.2



Source: ODE Table of Organization Chart November of 2012

2.0 CORE RESPONSIBILITIES – OFFICE OF EARLY LEARNING AND SCHOOL READINESS

Savings 2.3: \$75,095

Finding 2.3: During FY 2012, seven ODE personnel and 10 contractors conducted 1,752 onsite licensing inspections of child care facilities for preschool and school age children.

Recommendation 2.3: ODE should use contract employees geographically located throughout the state to conduct on-site inspections of preschool and school age child care sites. Implementation of this recommendation would reduce personnel and travel costs.

Financial Impact 2.3: For each ODE position, the Department incurs the cost of salary and benefits. ODE would save **\$75,095** annually by utilizing contractors to conduct all licensing inspections.

OFFICE OF EARLY LEARNING AND SCHOOL READINESS

Background

The mission of the Office of Early Learning and School Readiness is to ensure that all children enrolled in programs under the jurisdiction of ODE are provided a quality program in a safe environment and to ensure that the children experience successful entrance into kindergarten. Covered child care programs are required to follow Ohio's Early Learning Program Guidelines and use the Ohio Pre-kindergarten Content Standards. The program guidelines encompass the desired outcomes and goals considered essential for children's learning and healthy development. The guidelines were developed to better meet the educational needs of children.

ODE carries out its responsibilities by both licensing of program providers and by conducting onsite inspections.

The Office of Early Learning and School Readiness is responsible for licensing preschool and School-Age Child Care (SACC) programs operated by public schools, Educational Service Centers, Boards of Developmental Disabilities, chartered nonpublic schools with multiple grades above kindergarten, and Community Schools (preschool only). Licensing³⁸ and Inspection³⁹ requirements are set forth in ORC.

The primary programs that make up the work of the office include:

- Early Childhood Education Entitlement Program
- Preschool Special Education
- Preschool Licensing
- PK-2 Standards and Assessment
- Head Start State Collaboration Grant
- Race to the Top Early Learning Challenge

³⁸ ORC § 3301.57(C) mandates the inspection of preschool programs or licensed school child programs: "The department of education, at least once during every twelve-month period of operation of a preschool program or a licensed school child program, shall inspect the program and provide a written inspection report to the superintendent of the school district, county DD board, or eligible nonpublic school. The department may inspect any program more than once, as considered necessary by the department, during any twelve-month period of operation. All inspections may be unannounced. No person shall interfere with any inspection conducted pursuant to this division or to the rules adopted pursuant to sections 3301.52 to 3301.59 of the Revised Code."

³⁹ ORC § 3301.58 states: "(C) Upon the filing of an application for a license, the department of education shall investigate and inspect the preschool program or school child program to determine the license capacity for each age category of children of the program.... (D) The department of education shall investigate and inspect a preschool program or school child program that has been issued a provisional license at least once during operation under the provisional license. If, after the investigation and inspection, the department of education determines that the requirements of sections 3301.52 to 3301.59 of the Revised Code and any rules adopted under those sections are met by the provisional license, the department of education shall issue a license that is effective for two years from the date of the issuance of the provisional license."

The office manages a personnel budget of approximately \$2.5 million and is comprised of 35 employees; 25 full-time ODE employees and 10 part-time contract employees who are strategically located throughout the state. **Exhibit B.1 in Appendix B.**

Seven of the 25 ODE full-time employees and all ten of the contractors, representing a total of 17, are directly responsible for conducting an annual average of approximately 1,800 onsite license inspections of pre-school and school age child care sites. The seven ODE employees expend approximately 3,969 hours annually conducting the onsite licensing inspections outside of their other responsibilities at a cost of \$46.37 per hour. **Exhibit B.2 in Appendix B.**

Methodology and Analysis

To analyze the Office of Early Learning and School Readiness, OPT conducted extensive interviews with departmental personnel to understand office processes, procedures, and workload and extensively reviewed state and federal laws and requirements. In addition, FY 2011 site visit and travel expense data provided by ODE was analyzed and a labor-cost comparison was completed. ODE conducted 1,752 onsite inspections of preschool and SACC programs and facilities during FY 2012 which are detailed in **Table 1.**

Table 1: Breakdown of Inspection Costs for ODE Employees and Contractors

| Employee Type | Number of Inspections | Hours Per Inspection ¹ | Total Inspection Hours | Cost Per Hour | Total Inspection Cost |
|--------------------------|-----------------------|-----------------------------------|------------------------|-----------------------------|-----------------------|
| Contractor | 177 | 4.5 | 797 | \$ 30.00 | \$ 23,910 |
| Contractor | 61 | 3.6 | 220 | \$ 30.00 | \$ 6,600 |
| Contractor | 93 | 4.7 | 437 | \$ 30.00 | \$ 13,110 |
| Contractor | 114 | 5.6 | 638 | \$ 30.00 | \$ 19,140 |
| Contractor | 77 | 4.5 | 347 | \$ 30.00 | \$ 10,410 |
| Contractor | 92 | 5.9 | 543 | \$ 30.00 | \$ 16,290 |
| Contractor | 143 | 5.4 | 772 | \$ 30.00 | \$ 23,160 |
| Contractor | 89 | 5.6 | 498 | \$ 30.00 | \$ 14,940 |
| Contractor | 110 | 6.1 | 671 | \$ 30.00 | \$ 20,130 |
| Contractor | 61 | 5.5 | 336 | \$ 30.00 | \$ 10,080 |
| Total | 1017 | | 5259 | \$ 30.00² | \$ 157,770 |
| Education Consultant 3-B | 119 | 5.4 | 643 | \$ 46.37 | \$ 29,815 |
| Education Consultant 3-B | 98 | 5.4 | 529 | \$ 46.37 | \$ 24,529 |
| Education Consultant 3-B | 145 | 5.4 | 783 | \$ 46.37 | \$ 36,308 |
| Education Consultant 3-B | 76 | 5.4 | 410 | \$ 46.37 | \$ 19,012 |
| Education Consultant 3-B | 49 | 5.4 | 265 | \$ 46.37 | \$ 12,288 |
| Grants coordinator 2-B | 113 | 5.4 | 610 | \$ 46.37 | \$ 28,286 |
| Education Consultant 3-B | 135 | 5.4 | 729 | \$ 46.37 | \$ 33,804 |
| Total | 735 | | 3969 | \$ 46.37 | \$ 184,042 |

Source: ODE Office of Early Learning and School Readiness

¹ Hours per inspection for Contractors averaged 5.4 hours

² Contract specifies \$30 per hour

The onsite inspections were conducted by seven ODE consultants inspecting 735 locations of the 1,752 total inspections and ten contracted consultants inspecting 1,017 locations. There was no data or metrics available to identify the actual time required to conduct onsite license inspections

by ODE employees. The average contractor time of 5.4 hours was obtained by OPT through analysis of contractor timesheets documenting their number of inspections and time spent executing this function. These timesheets were endorsed by ODE management and, subsequently used as the benchmark for ODE employee visits.

The analysis revealed that the hourly contractor rate is \$30.00 per hour with the average inspection requiring 5.4 hours. Contractors are not compensated for travel expenses, which are minimized due to their strategic geographic location. Contractors are assigned their onsite locations based on regional proximity to their home.

The average hourly ODE employee rate to conduct onsite inspections was \$46.37 including base pay and benefits. Expenses accounted for an additional \$10,123 and included personal vehicle reimbursement, meals, and lodging. An average of 5.4 hours was used as the standard for preparation, onsite time, and follow-up activities associated with inspections.

Table 2: Comparing Inspection Costs for ODE Employees and Contractors

| Cost Category | ODE | Contract | Variance |
|---|-------------------|-------------------|------------------|
| Manpower cost per hour (includes base and benefits) | \$ 46.37 | \$ 30.00 | \$ 15.45 |
| Total Inspection Hours (735 site visits @ 5.4 hours per visit) | 3,969 | 3,969 | 0.00 |
| Total Manpower Cost | \$184,042 | \$119,070 | \$61,321 |
| Travel Expenses (personal vehicle, food, lodging) | \$10,123 | 0.00 | 10,123 |
| Total Cost | \$ 194,165 | \$ 119,070 | \$ 75,095 |

Source: Provided by ODE

Table 2 illustrates that contractors could perform the 735 onsite inspections for a cost of \$119,070 compared to the ODE cost of \$194,165.

Conclusion

The analysis in **Table 3** illustrates that ODE and contractors require 3,969 man hours to conduct license inspections. Utilizing contractors for all onsite inspections would enable ODE to adjust their ODE staff manpower requirements by 3,969 which equates to approximately two full time employees based on a 2,080 hour work year. The adjustment to the ODE inspection workforce and the use of contractors would provide an annual labor and travel expense savings of **\$75,095** or the ODE labor could be allocated to meet other state and federal program requirements.

Table 3: Financial Analysis

| | ODE | Contractor |
|-----------------------|------------|--|
| Annual Hours | 3969 | 3969 |
| Cost per Hour | \$46.37 | \$30.00 |
| Travel Expense | \$10,123 | \$0 |
| Total Cost | \$194,165 | \$119,070 |
| Annual Savings | | (\$194,165- \$119,070) = \$75,095 |

R2.3 Appendix B

Exhibit B.1

| EMPLOYEES AND OVERHEAD | | | | |
|-------------------------------|--------------------|--------------|--------------|--------------|
| Job Description | Function | Base Pay | Benefits 36% | Total Cost |
| ODE EMPLOYEES | | | | |
| Administrative Assistant 1-B | Inspect-Office | \$ 39,978 | \$ 14,392 | \$ 54,370 |
| Administrative 2-B | RttT | \$ 69,957 | \$ 25,185 | \$ 95,142 |
| Administrative Professional 4 | Other | \$ 53,019 | \$ 19,087 | \$ 72,106 |
| Assistant Director | Other | \$ 81,328 | \$ 29,278 | \$ 110,606 |
| Assistant Director | RttT | \$ 71,427 | \$ 25,714 | \$ 97,141 |
| Assistant Director | Headstart | \$ 81,328 | \$ 29,278 | \$ 110,606 |
| Data Administration Manager | Other | \$ 78,436 | \$ 28,237 | \$ 106,673 |
| Director | Management | \$ 95,014 | \$ 34,205 | \$ 129,219 |
| Education Consultant 1-B | Inspect-Office | \$ 29,411 | \$ 10,588 | \$ 39,999 |
| Education Consultant 3 | RttT | \$ 59,987 | \$ 21,595 | \$ 81,582 |
| Education Consultant 3 | RttT | \$ 59,987 | \$ 21,595 | \$ 81,582 |
| Education Consultant 3 | RttT | \$ 59,987 | \$ 21,595 | \$ 81,582 |
| Education Consultant 3-B | Other | \$ 77,677 | \$ 27,964 | \$ 105,641 |
| Education Consultant 3-B | Inspect-Field | \$ 71,508 | \$ 25,743 | \$ 97,251 |
| Education Consultant 3-B | Other | \$ 76,225 | \$ 27,441 | \$ 103,666 |
| Education Consultant 3-B | Inspect-Field | \$ 66,560 | \$ 23,962 | \$ 90,522 |
| Education Consultant 3-B | Inspect-Office | \$ 31,616 | \$ 11,382 | \$ 42,998 |
| Education Consultant 3-B | Other | \$ 75,026 | \$ 27,009 | \$ 102,035 |
| Education Consultant 3-B | Inspect-Field | \$ 76,794 | \$ 27,646 | \$ 104,440 |
| Education Consultant 3-B | Inspect-Field | \$ 77,563 | \$ 27,923 | \$ 105,486 |
| Education Consultant 3-B | Inspect-Field | \$ 76,544 | \$ 27,556 | \$ 104,100 |
| Education Consultant 3-B | Inspect-Field | \$ 73,986 | \$ 26,635 | \$ 100,621 |
| Grants Coordinator 2-B | Inspect-Field | \$ 53,477 | \$ 19,252 | \$ 72,729 |
| Office Assistant 2-B | Other | \$ 37,939 | \$ 13,658 | \$ 51,597 |
| Project Manager 2 | RttT | \$ 72,821 | \$ 26,216 | \$ 99,037 |
| | TOTAL | \$ 1,647,595 | \$ 593,134 | \$ 2,240,729 |
| CONTRACTED EMPLOYEES | | | | |
| Contractor | Inspect-Field | \$ 16,350 | NA | \$ 16,350 |
| Contractor | Inspect-Field | \$ 10,448 | NA | \$ 10,448 |
| Contractor | Inspect-Field | \$ 12,990 | NA | \$ 12,990 |
| Contractor | Inspect-Field | \$ 24,000 | NA | \$ 24,000 |
| Contractor | Inspect-Field | \$ 6,615 | NA | \$ 6,615 |
| Contractor | Inspect-Field | \$ 9,990 | NA | \$ 9,990 |
| Contractor | Inspect-Field | \$ 19,210 | NA | \$ 19,210 |
| Contractor | Inspect-Field | \$ 23,190 | NA | \$ 23,190 |
| Contractor | Inspect-Field | \$ 14,998 | NA | \$ 14,998 |
| Contractor | Inspect-Field | \$ 19,988 | NA | \$ 19,988 |
| Total | TOTAL | \$ 157,779 | | \$ 157,779 |
| | GRAND TOTAL | \$ 1,805,374 | | \$ 2,398,508 |

Source: ODE Payroll and Human Resources

Note: Totals may vary due to rounding

Exhibit B.2

| ODE EMPLOYEE COST | | | | | |
|----------------------------|-----------------|---|-----------------------------|----------------------------|--------------------------|
| Job Description | Function | Base Pay | Benefits 36% | Total Employee Cost | Annual Hours Paid |
| Education Consultant 3-B | Inspect-Field | \$ 71,508 | \$ 25,743 | \$ 97,251 | 2080 |
| Education Consultant 3-B | Inspect-Field | \$ 66,560 | \$ 23,962 | \$ 90,522 | 2080 |
| Education Consultant 3-B | Inspect-Field | \$ 76,794 | \$ 27,646 | \$ 104,440 | 2080 |
| Education Consultant 3-B | Inspect-Field | \$ 77,563 | \$ 27,923 | \$ 105,486 | 2080 |
| Education Consultant 3-B | Inspect-Field | \$ 76,544 | \$ 27,556 | \$ 104,100 | 2080 |
| Education Consultant 3-B | Inspect-Field | \$ 73,986 | \$ 26,635 | \$ 100,621 | 2080 |
| Grants Coordinator 2-B | Inspect-Field | \$ 53,477 | \$ 19,252 | \$ 72,729 | 2080 |
| | Total | \$ 496,432 | \$ 178,716 | \$ 675,148 | 14560 |
| Total Employee Cost | | Annual \$ 675,148 | Per Hour \$ 46.37 | | |
| | | (total annual employee cost/total annual hours paid) (\$675,148/14560 hours = \$46.37) | | | |

Source: ODE Payroll and Human Resources

Note: Totals may vary due to rounding

2.0 CORE RESPONSIBILITIES – RECORDS RETENTION

Noteworthy Accomplishment: During the course of the audit ODE elected to review, and subsequently destroy, the unnecessary records held in accounts 230, 231 and 232. In addition, they are reviewing and updating current processes and procedures to ensure ORC compliance.

Savings 2.4: \$41,312

Finding 2.4: ODE management does not monitor and enforce the existing retention schedules throughout the Department.

Recommendation 2.4:

ODE management should monitor and enforce the existing retention schedules throughout the Department.

Financial Impact 2.4:

Non-compliance with existing schedules costs ODE and the State of Ohio **\$41,312** in excess storage costs and exposes the Department to potential legal liability.

Savings 2.5: \$1,337**Finding 2.5:**

The Licensure Office within ODE currently retains licensure applications in electronic and paper format.

Recommendation 2.5 – Eliminate the storage of paper licensure applications. Store all licensure applications in electronic format, as allowed by ORC § 1306.11.

Financial Impact 2.5: ODE will save an estimated **\$1,337** annually by eliminating storage of paper licensing applications.

Savings 2.6: n/a

Finding 2.6: A lack of active governance has led to control weaknesses within ODE's overall records retention procedures. This jeopardizes the Department's ability to be in compliance with ORC § 149.34.

Recommendation 2.6:

Implement an effective control structure to manage records retention which should include the following elements:

- Develop and maintain an ODE retention manual.
- Provide records retention training to ODE associates.
- Incorporate records retention activities and duties into the job descriptions and evaluations of each office's records retention coordinator.
- Consider reinstating an effective Records Retention Committee within ODE to supervise the timely purging of documents that have reached the end of the retention schedule.

Financial Impact 2.6: n/a

RECORDS RETENTION

Background

ODE is charged with the licensing, funding distribution, and other value added services for Ohio's primary and secondary schools. In performing such administrative and oversight functions, ODE's communications with their various stakeholders include general correspondence, reports, and other data. These communications, which take multiple forms, are considered public record under ORC § 149.011 (G) and must be retained and produced upon request and in accordance with records retention requirements.

Our objective in this engagement is to determine if ODE is meeting the statutory requirements for records retention in an efficient and effective manner.

ODE currently stores and manages records in paper and electronic form at their Columbus headquarters. Additionally, the Department utilizes offsite paper storage with an outside vendor, provided under state contract. Onsite work area storage is provided in adjacent file cabinets and typically represents current year work that is in-progress.

Offsite storage is provided for work product, correspondence, and other records which are legally required to be retained under statute or regulation. Storage of records will take the form of either a box of similar type documents, or for bulk storage, a pallet of boxes. Records pertaining to administrative and oversight functions are retained under guidelines published under the Ohio Department of Administrative Services' (DAS) Records Information Management System (RIMS). Individual state agencies are responsible for the organization and execution of records retention in compliance with the RIMS schedule. Part of ODE's responsibility is determining the need for an 'agency-specific' retention schedule which would provide guidance for records not covered under the DAS 'general schedule.'

Currently, bulk storage items at ODE do not receive a review or retention date and consist primarily of informational printed material retained by ODE for historical purposes. According to ODE, bulk storage items in the current inventory are not covered under the DAS schedule and therefore are not required to be retained. However, these materials document the functions of various offices within ODE. Under ORC § 149.011, "'records' include any document, device, or items regardless of physical form or characteristic, including an electronic record as defined in section 1306.01 of the Revised Code, created or received by or coming under the jurisdiction of any public office of the state or its political subdivisions, which serves to document the organization, functions, policies, decision, procedures, operations or other activities of the office." The policy of AOS is that the series of records which make up the bulk storage items, are in fact, considered to be a record and therefore do require a review date on the retention schedule.

The outside vendor handling offsite storage currently provides an inventory listing which documents the review date and the ODE office responsible for each stored record. When records are sent to the vendor, ODE staff should indicate the contents of the individual box and define a review date within a database platform provided by the vendor. The review date entered by the

staff member is based on the official retention period as listed in the retention schedule(s) on the DAS RIMS database. Once a record reaches ‘review’ status, ODE personnel will either initiate the destruction process or decide to hold the record and establish a new review date. All ODE offices may independently decide to hold a record past the date of review based on an outstanding record request, pending litigation, or general office need.

Each ODE office has identified at least one individual who is accountable for that office’s comprehensive record management. However, a survey of these individuals revealed a lack of knowledge pertaining to a comprehensive process to fulfill records management duties. These duties may include labeling, inventorying, reviewing, and serving as a point of contact with the vendor for record dispensation and retrieval. Additionally, 78% of records coordinators have job descriptions that do not reflect any duties pertaining to records management.

In the past, records management oversight at the Department rested with a Records Manager – a position which is currently vacant. This position reported through the facility management office. ODE is currently in the process of filling a position titled Assistant Legal Counsel – Records Manager reporting to ODE Chief Legal Counsel. Per ODE, records management duties performed by the previous Records Manager position in the facility management office will now fall within the responsibilities of the newly created Records Manager position.

Under Ohio law, the maximum penalty for state agencies that are not able to produce records as outlined by the RIMS retention schedule is \$1,000⁴⁰. If records are not disposed of per the RIMS retention schedule, such records must be produced if requested.⁴¹ Unnecessarily destroying records with potential future legal value⁴² or retaining records beyond the legally required retention period⁴³ may leave the Department exposed to legal liability.

Methodology and Analysis

OPT reviewed the processes for both onsite and offsite storage of ODE records. This review included reviewing job descriptions, surveying records coordinators, interviewing various ODE personnel, obtaining records inventories from the Department and vendor, and analyzing costs associated with offsite storage. Records inventories were reviewed to determine their level of compliance with retention schedules on file in the RIMS database. Costs associated with retrieval were weighed against industry alternatives such as “image on demand,” a service offered by the vendor whereby a document is “retrieved” through scanning it at the offsite location and emailing it to the Department.

⁴⁰ ORC § 149.43 indicates \$100 per day statutory damages up to a maximum of \$1,000 plus attorney and court fees for failure to produce requested records.

⁴¹ Page 57 Ohio Attorney General Mike DeWine • Auditor of State Dave Yost • Ohio Sunshine Laws 2012: An Open Government Resource Manual

⁴² *Carlucci v. Piper Aircraft Corporation* (102 FDR 472 [1984]). In this case, a wrongful death suit, a summary judgment in the amount of \$10,000,000 was made primarily because the court found that Piper had wrongly and deliberately destroyed records (“spoliation”), records which Piper would reasonably know that they would likely be required to produce during the discovery phase of litigation.

⁴³ *United States of America v. Arthur Andersen LLP, Defendant*. U.S. District Court, Southern District of Texas, Indictment CR 02-121

OPT's analysis revealed that ODE maintains three separate storage accounts (230, 231, and 232) with an outside vendor. Account 230 is used primarily for material which chronicles administrative and oversight functions. Accounts 231 and 232 are used for bulk storage items including testing materials, library guidelines, gifted assessments and handbooks.

The review of vendor inventories revealed that account 230 encompasses 8,251 boxes of records. OPT requested the inventories from the ODE offices which are responsible for the management of these boxes in order to review for compliance with the ODE retention schedule. Ten offices holding 2,815 boxes of records did not respond to the request. However, the offices responsible for the remaining 5,436 boxes did respond and the recommendations for account 230 were based solely on these boxes. Of the 5,436 boxes, 2,151 of these boxes are past the review date set forth within the RIMS database. Further analysis of ODE information determined that 2,873 boxes in account 230 do not have a review date. As a result, 5,024 boxes remain in storage which can be purged. The remaining 2,815 boxes being held by the vendor require the attention of ODE to determine compliance of their contents with the Department's records retention schedule.

OPT reviewed bulk storage accounts 231 and 232, shown in **Table 1** below, which contain records stored on pallets at the same offsite, vendor location. During the course of the audit ODE followed the appropriate administrative steps and subsequently requested the vendor purge excess bulk items in each record series based on the Department's review. The inventories of these accounts revealed that the contents are mostly printed general information (pamphlets, brochures, catalogs, etc.) and testing material from the period 2006 through 2010. In this context, 'excess items' would encompass the retention of any duplicate articles within that specific series. According to ODE, 136 of the original 13,741 boxes in accounts 231 and 232 will remain in bulk storage after completion of this review. This translates to an estimated storage cost reduction of \$34,680 annually within those two accounts.

Table 1 identifies the volume, annual cost, and annual cost savings associated with ODE's three storage accounts. The annual total storage cost for all three accounts identified at the beginning of the analysis was \$48,000. Cost savings associated with OPT's recommendation of enforcing existing retentions schedules totals **\$41,312**.

Table 1: Summary of Storage Accounts

| Storage Account | # of Boxes Held in Storage | Annual Storage Costs | # of Boxes Which Can be Purged | Cost Savings of Purged Boxes |
|-----------------|----------------------------|----------------------|--------------------------------|------------------------------|
| 230 | 8,251 | \$11,184 | 5,024 | \$6,632 |
| 231 | 12,689 | \$28,608 | 12,617 | \$27,720 |
| 232 | 1,052 | \$8,208 | 988 | \$6,960 |
| Total | 21,992 | \$48,000 | 18,629 | \$41,312 |

Source: ODE Inventory records (Table as of March 1, 2013)

ODE officials familiar with the retention process indicated that files with varying retention dates may be present in the same box. This leads to inefficient storage and increased costs and primarily affects the licensure office of ODE. The licensure office currently has 917 boxes of records related to licensing requirements in account 230, the single largest user of offsite storage. Upon further inquiry, OPT discovered that the licensure office scans all license applications and associated documents upon receipt and maintains them in electronic form. The paper application is then filed by date processed and stored offsite for one year beyond the expiration of the license. The process of scanning and electronic storage has been in place since 2004. According to ORC § 1306.11, retaining only the existing electronic record is sufficient in order to be compliant. Should ODE choose to purge the paper versions of their license applications, as permitted by ORC, they would save an estimated **\$1,337** in storage costs.

Invoices identifying the cost associated with retrieving records for the time period May 2012 through March 2013 were reviewed. The Department made 89 retrieval requests per month for specific records in storage at a cost of \$2.39 per request. The vendor currently charges \$5.00 per request to provide their “image-on-demand” service. Given the unit price of Departmental record retrievals, our analysis indicates that the retrieval process remains more cost efficient.

OPT surveyed the 23 associates who were identified as records coordinators to determine their understanding of records policies and procedures. Ten associates returned the survey with the following results:

- 70% of respondents indicated that ODE does not have office specific guidelines for retention.
- 50% of respondents indicated that no process currently exists for the review of retained records or that reviews are not done on a regular basis.
- 40% of responses indicated a non-existent formal process to initiate record destruction.

The overall results of this survey indicate that the existing ODE records retention process does not appear to be fully compliant with ORC § 149.011 (G) requirements.

Peer State Analysis: we compared the retention policies of ODE to the Education Departments of peer states Indiana, Minnesota and Michigan. Based upon comparison of similar functions and tasks, the retention practices of ODE, in general, are similar to that of the peer states. Retention schedule comparisons to peer states indicate that ODE’s retention periods are comparable.

Conclusion

ODE should take steps to ensure that they are in total compliance with ORC requirements and existing retention schedules. In addition, they should formalize internal Governance processes and procedures to facilitate execution and the efficient and cost-effective management of records. Implementing a comprehensive records management program with documented policies and procedures will ensure that retention storage costs and risk will be minimized.

2.0 CORE RESPONSIBILITIES – BUDGET AND FINANCIAL MANAGEMENT

Noteworthy Accomplishment: During the course of this performance audit, the Department reduced the encumbrance amount from \$103.8 million at the close of FY 2012 to \$4 million as of May 20, 2013.

Savings 2.7: n/a

Finding 2.7: ODE maintains large subsidy encumbrance balances for multiple fiscal years.

Recommendation 2.7: ODE should work with subsidy recipients to closely monitor program/grant budgets. Subsidy encumbrances should, to the extent possible, be subject to the same or similar requirements and practices as operating encumbrances and either should be closed out before the subsequent fiscal year close, or ODE should provide an adequate explanation and justification for why the encumbrance should remain open.

Financial Impact 2.7: ODE’s review of all subsidy encumbrances that have been open for a period in excess of one year and, where appropriate, closure of such encumbrances would release funds and allow them to be expended for other purposes, providing access to approximately \$32.1M. As this close out releases the liability associated with the funds, there are no ‘savings’ associated with this recommendation - rather the financial impact is realized in the more effective management of appropriated funds.

BUDGET AND FINANCIAL MANAGEMENT

Background

State agency budgets in Ohio are submitted biennially to the Office of Budget and Management (OBM) and then to the Governor. The state budget includes estimated revenues and expenditures for each state fund and agency. For each proposed direct appropriation, each state agency is required to include estimates of the following:

- The operating budget
- The subsidy appropriations necessary, delineated by a distinct subsidy program
- Any special purposes, delineated by a distinct special purpose program
- The amount of appropriations necessary from each fund, in sufficient detail to allow for adequate planning and oversight of programs and activities.

To develop the ODE budget in preparation for submission to OBM, ODE uses a bottom-up approach that starts with the persons responsible for each program or department. For both federal and state funded programs, each departmental manager at ODE submits funding requests to the budget director. The funding requests contain detail about grant recipients, the program's purpose, historical information, and resources needed.

The budget director relies on departmental managers to be the subject matter experts for the respective programs or grants. Programs or grants contain statutory requirements, and in some cases, maintenance of effort requirements, that may serve to coordinate the expenditure of state dollars relative to federal dollars (e.g., some programs may require that state funds must be expended in order for the program to receive federal dollars). In addition to the maintenance of effort requirements, primary drivers of budget management also include prior year appropriation and expenditure amounts.

Education expenditures constitute a large portion of all state expenditures. For the biennium encompassing FY 2010-2011 and FY 2011-2012, the total state GRF is approximately \$27 billion. Of this total GRF amount, \$7.4 billion is allocated to ODE for primary, secondary, and other education.⁴⁴ The amount allocated to ODE includes approximately \$200 million for department operations, leaving \$7.2 billion of pass-through funding to local school districts.

Standard accounting practice calls for identifying funds required to meet anticipated future obligations that have not yet resulted in an expenditure or liability. Such funds are "encumbered" and thereby reserved for the anticipated use. Ordinary practice calls for such encumbrances to be closed within a reasonable time. However, particularly with regard to pass-through funding and funding subject to other legal authority (e.g., federal funds), it is sometimes necessary to keep encumbrances open for longer periods than standard practice would suggest.

⁴⁴ Does not include higher education, which is approximately \$2.6 billion annually.

Methodology and Analysis

OPT worked with fiscal services, budgetary planning, and each departmental manager to collect detail for programs administered, administration overhead, and any performance metrics utilized to make management decisions.

Table 1 highlights all General Revenue Fund appropriations, expenditures, and encumbrances for fiscal years 2008 through 2012. At the close of each fiscal year, ODE maintains large encumbrance balances which include operating encumbrances and subsidy encumbrances⁴⁵. According to OBM, all state agencies are required to close out operating encumbrances by November 30 of the most recent completed fiscal year. However, subsidy encumbrances, which consist of pass-through funds for any local educational agencies, have no clear deadline or standard for close-out.

Table 1: Yearly General Revenue Fund FY Close Snapshots 2008 – 2012

| Fiscal Year | 2008 | 2009 | 2010 | 2011 | 2012 |
|--------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Appropriation | \$7,796,117,157 | \$8,187,113,625 | \$7,793,671,128 | \$7,769,517,317 | \$7,539,595,467 |
| Expenditures | \$7,528,291,762 | \$7,748,255,320 | \$7,664,699,848 | \$7,662,292,082 | \$7,431,341,898 |
| Encumbrances | \$152,768,351 | \$109,113,645 | \$101,177,980 | \$102,844,853 | \$95,991,432 |
| Unencumbered, unspent balance | \$115,057,044 | \$329,744,660 | \$27,793,300 | \$4,380,382 | \$12,262,137 |

Source: ODE Finance Department

In part, due to the pass-through nature of subsidy funds at ODE, past subsidy encumbrances have remained open for extended periods of time. **Table 2** shows the subsidy encumbrance balances that remained open at the close of FY 2012, totaling approximately \$103.8M.⁴⁶

⁴⁵ Encumbrances represent funds that are obligated or intended for a purpose but that have not yet been expended (and do not constitute a liability).

⁴⁶ During the course of this performance audit, ODE closed out open subsidy encumbrances for all fiscal years prior to and including FY 2011. As of May 20, 2013 there existed a remaining encumbered balance of \$4M.

Table 2: Annual Subsidy Encumbrance at FY Close of Each Year

| Fiscal Year | 2008 | 2009 | 2010 | 2011 | 2012 |
|--------------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|
| 2008 Amount ¹ | \$ 105,472,468 | \$ 987,820 | \$ 898,989 | \$ 898,989 | \$ 892,821 |
| 2009 Amount | n/a | \$ 73,723,978 | \$ 16,758,699 | \$ 8,708,793 | \$ 7,873,261 |
| 2010 Amount | n/a | n/a | \$ 71,590,785 | \$ 8,388,750 | \$ 8,330,524 |
| 2011 Amount | n/a | n/a | n/a | \$ 79,680,790 | \$ 15,310,199 |
| 2012 Amount | n/a | n/a | n/a | n/a | \$ 71,388,106 |
| Total | \$ 105,472,468 | \$ 74,711,798 | \$ 89,248,473 | \$ 97,677,322 | \$103,794,911 |

Source: ODE Finance Department (table as of June 30, 2012)

¹ 2008 Amount includes multiple fiscal year encumbrances

Although **Table 2** shows that ODE does close the majority of open encumbrances before the close of the following fiscal year, a significant encumbrance balance carries over to subsequent years (e.g., the balance of FY 2009 encumbrances carried over to FY 2012 is \$7,873,261).⁴⁷

Table 3 shows that the proportion of open encumbrances six months after the close of the fiscal year to the balance at the close of the fiscal year has grown each year since 2008. The analysis of encumbrance balances as of January after the respective fiscal year close shows an increase from 8 percent of the total encumbrance balance at year end in 2008 to 48 percent in 2011.

Table 3: Encumbrance balance status by fiscal year

| Year | Encumbrance Balance – Close of FY | Encumbrance Balance – Following January | % of FY Close Balance Remaining in January |
|------|--------------------------------------|--|---|
| 2008 | \$ 144,504,080 | \$ 11,906,735 | 8% |
| 2009 | \$ 107,552,667 | \$ 26,092,790 | 24% |
| 2010 | \$ 100,945,369 | \$ 36,385,201 | 36% |
| 2011 | \$ 102,790,184 | \$ 49,838,090 | 48% |

Source: ODE Finance Department

Management indicated the presence of federal stimulus money introduced a need to keep subsidy encumbrances open longer than usual.⁴⁸ In addition, ODE management indicated that another factor in open encumbrances is that they have been lenient with local education agencies with regard to submitting expenditures against encumbrances.

⁴⁷ A closer inspection of ODE's treatment of encumbrances shows a significant amount of activity just before FY close of each year. This is the result of ODE accounting practice relating to foundation payments wherein they must make several reconciliation entries, e.g., secondary education adjustments, open enrollment or community school adjustments, CCIP system program expenditures (e.g., Early Learning Program), and encumbering funds not yet claimed by the districts.

⁴⁸ In 2009, Ohio received State Fiscal Stabilization Funds (SFSF) from the U.S. Department of Education intended to support state shortfalls for the primary funding formulae funded through the Ohio Department of Education (ODE) and the Ohio Board of Regents (OBR). In order to receive these funds, the state of Ohio had to comply with two requirements. First, the state had to maintain its level of support for K-12 and higher education to at least the 2006 level of support. Second, the state was required to use the federal SFSF funds along with state GRF funding to provide payments, through the state's primary funding formula, to local educational agencies (LEAs) and institutions of higher education (IHEs) to ensure state payments were equal to the payments in fiscal year 2009.

Despite these reasons for keeping encumbrances open, ODE management agreed during the course of the audit that financial controls and management oversight could include the need for specific explanations for fund use after the fiscal year close.

Conclusion

As ODE manages the distribution of subsidy funds, tightening encumbrance practices will improve the financial management process. Fiscal department representatives stated that subsidy encumbrance practice should be guided by rules similar to those for operating encumbrances. The analysis supports the conclusion that it is feasible to allow only subsidy encumbrances to remain open until, at the latest, the close of the next fiscal year, or such earlier time as the encumbrance can be closed. Such practice would ordinarily allow sufficient time for local education agencies to submit specific program expenditures for approval and make such accounting entries as necessary for foundation funding clean-up and adjustments. In some cases, where it may not be possible to close out the subsidy encumbrance, ODE should document, with sufficient specificity, the reason the encumbrance remains open.

Implementing this recommendation would either reduce the encumbrance balances at the end of each fiscal year or render those balances more readily identifiable with respect to actual local education agency or program purpose. This would enhance the ability of management to make judgments about program expenditures. Fiscal management would also be improved because additional information would be available to assess whether particular education agencies need help meeting financial reporting deadlines. For example, improved detail would allow the fiscal management office to create reports at any point in time for each department within ODE.

3.0 ORGANIZATIONAL STRUCTURE – SPAN OF CONTROL

Noteworthy Accomplishment: During the course of the audit ODE made substantial changes to its organizational structure. These structural changes were made in response to opportunities for organizational realignment to improve consistency with the overall mission of the Department, as well as, to achieve necessary efficiencies. As a result, ODE now has a total of 104 supervisors, only 8 more supervisors than the Department would require operating at the recommended span-of-control of one supervisor to seven supervised employees. ODE should be commended for its proactive approach to implementing this recommendation. The Department's actions, to date, are estimated to have saved as much as approximately \$1.50M, 62% of the original cost savings, as identified in Finding 3.1.

Savings 3.1: \$2.41M

Finding 3.1: The ODE span of control supervisor-to-staff ratio is 1:5.71 which is lower than the levels of peer states and leading practices.

Recommendation 3.1: The Department should increase its span of control to a supervisor-to-staff ratio of 1:7 and reduce layers of management by eliminating 21 supervisory positions within a year.

Financial Impact 3.1: The reduction of 21 supervisory positions through attrition, reassignment or reduction in force can lead to a savings of **\$2.41M** in annual payroll costs.

SPAN OF CONTROL

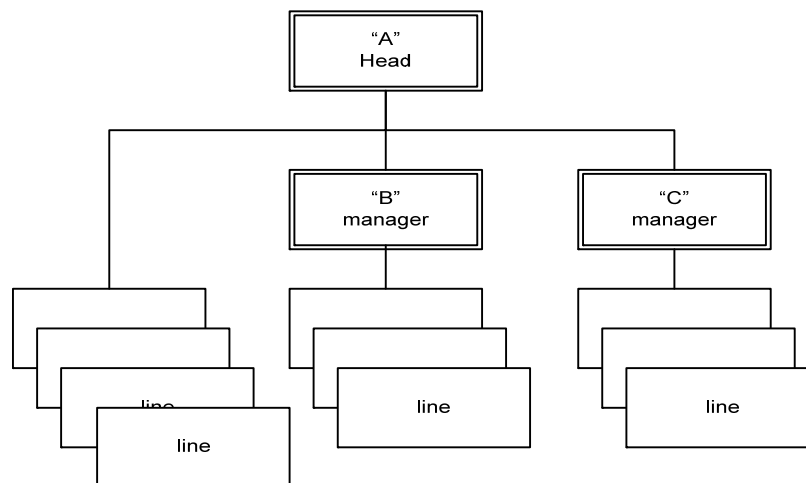
Understanding Span of Control

Span of Control: Span of control refers to the average number of employees or subordinates that report directly to each supervisor or manager in the organization. This figure generally is rendered as a ratio. Both management and non-management personnel under the supervisor will be included.

Layers of Management: A management layer consists of one or more supervisors at the same level or rank in a hierarchy. Layers of management are identified as the highest number of managers the non-supervisory or line staff would have to report through to reach the topmost manager.

As shown in **Figure 1**, an office with one supervisor “A” and four non-management subordinates (with no more layers under these four persons) and two management subordinates (these two persons “B” and “C” also have three subordinates reporting to each of them), then the span of control ratio is 1:6 for A and 1:3 for both B and C. The average span of control for this office is 1: $(6+3+3)/3$, or 1:4. **Figure 1** is an example of an organization with two layers of management and an average span of control of 1:4.

Figure 1: Organization Chart Example



Supervisory Position: Throughout this report, directors, managers and supervisors are counted as supervisory positions. For example, for any position with subordinates, this position is counted as a supervisory position and the person in the position is counted as a supervisor.

Synthesis of the Research

Span of control analysis has been the topic of research in federal, state, and local governments since the 1990s. A review of the empirical studies conducted within the public and private sectors is helpful to determine whether the span of control in ODE is in the appropriate range.

Literature Review: Generally, research reveals that tall structures with too many management layers increase the number of approvals needed for action and restrict the ability of front-line workers to exercise control on their jobs. Ultimately, a tall structure prevents organizations from improving customer service. These studies further find that a narrow span of control with too many middle-level supervisory positions can cause duplication among supervisors in the same layer and between supervisors and subordinates.⁴⁹

While research emphasizes a broader span of control (1:8 to 1:40) and prefers fewer over more layers with no more than seven layers,⁵⁰ the correct number depends on the complexity of position responsibilities. These studies conclude that a wider span of control will improve communication and organizational flexibility and reduce personnel costs internally; fewer layers and wider span of control will empower frontline employees and improve the quality of service to clients.

State-to-State Peer Review: The State of Texas determined it had a span of control ratio of 1:9 in 1997. The Texas Performance Review Division of the State Comptroller recommended a minimum ratio of 1:11 to the legislature based on the average from a survey of private companies. By 2010, the State of Texas statewide ratio was 1:14.6, higher than the minimum standard set by the legislature.⁵¹

California conducted a state government organization evaluation in 1997 and found the average span of control was 1:6.1 across departments. It then set a goal to flatten the organizational structure and increase the ratio to 1:9 in 2000 and 1:11 in 2002.⁵² The California baseline was based on previous public and private sector studies.

In 2010, the State of Iowa mandated that most state agencies reach a 1:15 span of control by 2012.⁵³ At about the same time, the Board of Regents reported a span of control ratio of 1:10 for its colleges and established a goal to achieve 1:14 by 2011 and 1:15 by 2012. In 2012, the actual average span of control within the Iowa higher education system was reported to be approximately 1:11.⁵⁴

⁴⁹ Talya Bauer and Berrin Erdogan, *Organizational Behavior*, Chapter XIV, Organizational Structure and Change, (chapter purchased via internet) Feb 2009; and <http://govinfo.library.unt.edu/npr/library/reports/tosex.html>

⁵⁰ "Global Organizational Efficiency Survey (GOES)", Nexgen Advisors, October 19, 2009, <http://www.nexgenadvisors.com/>

⁵¹ (Texas) State Auditor Office Report, Nov 11-701, November 2010

⁵² Alicia Bugarin, *Flattening Organization: Practices and Standards*, California Research Bureau, California State Library CRB-97-004, September 1997. (Whether or not the goal was reached was not ascertained.)

⁵³ (Iowa) Legislative Services Agency, Fiscal Note, HF 498 – Span of Control (LSB 2163HV)

⁵⁴ Board of Regents, State of Iowa, "Annual Report on Span of Control" Agenda Item 4d, March 21, 2012

Table 1 summarizes the peer state government span of control.

Table 1: Summary of State Government Span of Control Studies

| | Year of Study | Span of Control | | |
|------------|---------------|------------------|------------------------------|--|
| | | Initial Findings | Goal | Rationale for the Goal |
| California | 1997 | 1:6 | 1:9 by 2000 and 1:11 by 2002 | Based on previous study in public sector |
| Iowa | 2010 | 1:10 | 1:14 in 2011 1:15 in 2012 | Increase by 1 every year until reaching 1:20 |
| Texas | 2003 | 1:9 | 1:11 | Based on private sector average |

Source: California, “Flattening Organization: Practices and Standards”; *op.cit.*

A 2009 benchmark survey of 31 *Fortune 1000* companies⁵⁵ maintains that no company should have more than seven layers, regardless of headcount. Furthermore the study provides Best-in-Class Span of Control ranges for each management layer as shown in **Table 2**.

Table 2: Best-in-Class Span of Control ranges for Management Layers

| Layer Description | Layer Number | Best-in-Class Span of Control Range |
|--|--------------|-------------------------------------|
| CEO & Senior Management | 1 | 1:14-15 |
| | 2 | 1:5-13 |
| | 3 | 1:8-15 |
| Mid-Level Managers | 4 | 1:15-24 |
| | 5 | 1:27-37 |
| Shared Services, Call Centers, Front line staffs | 6 | 1:30-40 |
| | 7 | 1:30-40 |

Source: GOES⁵⁶

Table 2 also represents the variation in span of control ratios according to work conducted. Typically, higher level managers, as represented by the Chief Executive Officer (CEO) and Senior Management category, have fewer subordinates than a manager involved in a more standardized field such as a call center. Call center operations can operate with a span of control of 1:30-1:40; whereas, at the CEO level of an organization, the best-in-class span of control is narrower, ranging from 1:5 to 1:15.

⁵⁵ Global Organizational Efficiency Survey (GOES)”, Nexgen Advisors, October 19, 2009, <http://www.nexgenadvisors.com/>

⁵⁶ *Ibid.*

RECOMMENDATION 3.1: ODE should increase its span of control to a 1:7 supervisor-to-staff ratio and reduce layers of management by eliminating 21 supervisory positions.

Financial Impact 3.1: The reduction of 21 supervisory positions through attrition, reassignment, or reduction in force can lead to a savings of **\$2.41M** annually in payroll costs.

Background

ODE oversees an education system comprised of public school districts, joint vocational school districts, educational service centers, community schools and also oversees the chartering of nonpublic schools. The Department's organizational structure has a complement of 668 total positions with 117 identified as having supervisory responsibilities.

Methodology and Analysis

In reviewing ODE's organizational structure, OPT analyzed the Department's span of control. Tables of Organization (TO) from November 2, 2012, were received from ODE and reviewed to determine overall department span of control, as well as, the span of control for each office. During the course of this analysis, supervisor is defined as anyone directly supervising an employee and a subordinate is defined as anyone reporting to a manager.⁵⁷ Individual office supervisor-to-staff ratios were derived from the number of subordinates to each supervisor. Only positions directly supervising employees are included as supervisors. Employees classified as supervisors but not directly managing other employees are not included as supervisors; however, non-supervising managers are included in total subordinates. Total positions were calculated and the total supervisory reduction was determined based on the difference of a ratio of one supervisor for every seven subordinates and the Department's current supervisor-to-subordinate ratio.

A state agency in Ohio that recognized the benefits of achieving a supervisor-to-subordinate ratio of 1:7 is the Ohio Department of Job and Family Services (ODJFS). Given the task of managing over 4,100 employees with approximately 614 supervisors, ODJFS is currently working towards that goal by analyzing their internal organizational structure and developing a path to successfully meet this requirement.

As shown in **Table 3**, all office positions within ODE were reviewed and the calculated average subordinates per supervisor shown.⁵⁸

⁵⁷ Subordinates include all employees that report to a manager; including those that also supervise other employees. Total number of subordinates and supervisors is not equivalent to total positions.

⁵⁸ Total positions include vacancies.

Table 3: Current ODE Staffing by Office

| Office | Average Span-of-Control | Total Supervisor Positions | Total Supervised Positions |
|---|-------------------------|----------------------------|----------------------------|
| Office of The Chief of Staff | 3.58 | 12 | 43 |
| Office of The Chief Operating Officer | 5.07 | 28 | 142 |
| Office of The Deputy Superintendent | 7.33 | 3 | 22 |
| Division of Accountability & Quality Schools | 5.90 | 42 | 248 |
| (A) Center for Accountability & Continuous Improvement | 7.22 | 9 | 65 |
| (B) Student Support & Education Options | 5.63 | 32 | 180 |
| Division of Learning | 6.66 | 32 | 213 |
| (A) Curriculum & Assessment | 6.91 | 22 | 152 |
| (B) Teaching Profession | 6.44 | 9 | 58 |
| | | | |
| ODE Average Span-of-Control¹ | 5.71 | 117 | 668 |

Source: Compiled from ODE November, 2012 Tables of Organization

Note 1: Calculations exclude the Office of the Superintendent of Public Instruction.

Note 2: Calculations include intermittent and intern staff.

Note 3: Employees with management titles but no supervised positions were excluded from this calculation as supervisors.

¹ Average span-of-control reflects the weighted average across all supervisors in ODE rather than the average of the average span-of-control of each individual office within ODE.

As shown in **Table 3**, all office positions within ODE were reviewed and the calculated average subordinates per supervisor shown.⁵⁹

Conclusion

The ODE span of control ratio is currently 1:5.71. For ODE to operate at a span of control ratio of 1:7, the Department needs 96 total managers to supervise the 668 subordinates. Currently, ODE has 117 supervisory positions.

ODE should increase its span of control and meet the same goal of 1:7 set at ODJFS by reducing its supervisory positions by 21 FTE's. (See **Table 4**)

⁵⁹Total positions include vacancies.

Table 4 outlines the financial impact of the reduction of 21 supervisory positions.

Table 4: ODE Span-of-Control Summary Reduction

| | |
|---|--------------------|
| Total Supervising Positions | 117 |
| Total Supervised Positions | 668 |
| Average Supervised Positions per Supervisor Position | 5.71 |
| Target Supervised Positions per Supervisor Position | 7.00 |
| Difference Average Ratio to Target Ratio | (1.29) |
| Target Total Supervisor Positions | 95.4 |
| Resulting Supervisor Position Reductions | 21.6 |
| Resulting Supervised Positions per Supervisor Position | 7.00 |
| Average Supervisor Salary | \$84,403 |
| Average Supervisor Benefits | \$30,385 |
| Average Supervisor Total Compensation | \$114,788 |
| Recommended Supervisor Position Reduction | 21 |
| Cost Savings From Recommended Supervisor Reduction | \$2,410,548 |

Source: DAS Employee Salary Data and ODE Tables of Organization

Note 1: Calculations exclude the Office of the Superintendent of Public Instruction.

Note 2: Calculations include intermittent and intern staff.

Note 3: Employees with management titles but no supervised positions were excluded from this calculation as supervisors.

As shown in **Table 4**, ODE would save approximately **\$2.41M** by eliminating 21 FTE supervisory positions to reach the recommended span of control goal of 1:7. The Department is currently structured with 117 supervisory positions or 21 more supervisors than needed to meet the 1:7 desired span of control ratio.

The positions that should be eliminated or combined should be determined by ODE top management based on the working nature of specific offices. Due to the variation of work performed across each of the three noted organizations, ODE should implement the recommendations outlined in this report to accommodate the nature of the work performed to maximize efficiency.

Several options exist to carry out the recommendations in this report including a reevaluation of management positions that are currently vacant, a review of workload overlap among currently filled manager positions, or the reduction of positions through attrition. Combining positions or reassigning supervisory employees into non-supervisory roles, however, will reduce the financial impact associated with this recommendation.

3.0 ORGANIZATIONAL STRUCTURE – OFFICES OF LICENSURE AND PROFESSIONAL CONDUCT

Savings 3.2: \$997,941

Finding 3.2: Interaction between the Offices of Licensure and Professional Conduct is significant, resulting in a duplication of effort.

Finding 3.2a: Although a transition to a fully online application process is underway, the current licensure application process still uses a paper-based model which is time-consuming and labor intensive.

Finding 3.2b: The Office of Educator Licensure administers 28 types of licensure applications. Although licenses are issued for varying periods (e.g., five years), all licenses expire on June 30th in the last year of the license, regardless of license type.

Finding 3.2c: The Office of Professional Conduct has seven investigators to respond to allegations of professional misconduct which, when substantiated, are referred to staff attorneys.

Recommendation 3.2: ODE should merge the Office of Licensure and the Office of Professional Conduct to reduce management overhead.

Recommendation 3.2a: ODE should accelerate and complete the transition from paper applications to online applications for licensure (i.e., ODE should no longer support paper-based applications).

Recommendation 3.2b: ODE, at their discretion and where possible, should stagger license dates to distribute workload more evenly throughout the year in lieu of the current single expiration date.

Recommendation 3.2c: ODE's Office of Professional Conduct should transition from its current investigative model to a process under which attorneys and paralegals would perform the licensure investigative procedures.

Financial Impact 3.2: ODE would save approximately **\$997,941** annually by merging the Office of Educator Licensure and the Office of Professional Conduct. All professional license applicants should be required to apply online, and transition to an investigative process under which attorneys and paralegals perform all investigative procedures.

LICENSURE AND PROFESSIONAL CONDUCT

Background

Background, as well as Methodology and Analysis, are presented in two parts – Part 1 for the Office of Educator Licensure and Part 2 for the Office of Professional Conduct.

Background, Part 1 - Office of Educator Licensure

The primary responsibilities of the Office of Educator Licensure within ODE are to process and issue educator licenses and respond to incoming telephone calls pertaining to educator licenses. The office administers 28 license categories. Revenue generated from licensing serves to fund both the Office of Educator License and the Office of Professional Conduct.

Currently the office is in the process of migrating from a paper application process to an electronic application format.⁶⁰ The office processes daily mail and payments, then sorts paper applications in two phases, primary and secondary indexing. Primary indexing requires hand-keying information (including name, address, date of birth, and social security number) into an electronic format corresponding to the license being sought. Secondary indexing requires transferring information from the remainder of the application to the appropriate electronic document, including educational background, superintendent and/or Local Professional Development Committee (LPDC) information, and a criminal background check.⁶¹

As part of the application process, education consultants⁶² review the application as a whole (including transcripts) to ensure receipt of payment and determine whether the applicant meets requirements. Applications are forwarded for further processing as follows:

- Applications fulfilling all requirements are marked as approved, pending a clean background check.
- Applications that require additional information are placed on hold, and a letter is sent to the applicant detailing the additional information needed.

Methodology and Analysis, Part 1 - Office of Educator Licensure

During 2011, the Licensure Office processed 120,539 applications.⁶³ As shown in **Table 1**, the highest application volume occurred during June (approximately 16 percent of total application volume), while the lowest volume occurred in December (3 percent of the total application volume). Similar trends were observed during 2008, 2009 and 2010.

⁶⁰ When this analysis began applications could be completed online, but not submitted online. The applicant would print and mail the required paperwork. Currently some applications can be completed and submitted on line.

⁶¹ The FBI conducts checks for applicants who are not continual Ohio residents during the previous five years, while the Ohio Bureau of Criminal Investigation conducts checks for Ohio residents.

⁶² Education consultant is a formal job title for full-time ODE employees assigned to this position.

⁶³ Most applications are renewals (62 percent), with the balance being new licenses. Unless otherwise noted, references in this analysis are to total applications (including both renewals and new applications).

Table 1: Total Applications Processed Per Year

| | 2011 | 2010 | 2009 |
|----------------------------------|----------------|----------------|----------------|
| January | 5,862 | 7,213 | 6,288 |
| February | 6,954 | 8,938 | 9,184 |
| March | 9,551 | 12,514 | 11,237 |
| April | 9,618 | 9,664 | 12,238 |
| May | 14,234 | 17,312 | 15,699 |
| June | 19,273 | 21,802 | 17,868 |
| July | 14,056 | 13,587 | 17,356 |
| August | 13,190 | 15,071 | 13,764 |
| September | 11,650 | 8,793 | 11,665 |
| October | 6,933 | 5,357 | 6,235 |
| November | 5,293 | 4,586 | 4,940 |
| December | 3,925 | 3,558 | 4,336 |
| <i>Total Applications</i> | 120,539 | 128,395 | 130,810 |

Source: ODE Office of Educator Licensure

As shown in **Table 2**, the Licensure Office handled 80,843 incoming calls pertaining to educator licensing in 2011.

Table 2: Total Calls Handled During 2011

| | Total Calls | Average Calls per Workday | % of Total Calls |
|--------------|--------------------|----------------------------------|-------------------------|
| January | 6,672 | 333.6 | 8.25% |
| February | 5,700 | 300 | 7.05% |
| March | 6,961 | 302.65 | 8.61% |
| April | 6,557 | 312.24 | 8.11% |
| May | 7,754 | 369.24 | 9.59% |
| June | 9,834 | 447 | 12.16% |
| July | 7,762 | 388.1 | 9.60% |
| August | 9,435 | 410.22 | 11.67% |
| September | 6,359 | 302.81 | 7.87% |
| October | 5,296 | 264.8 | 6.55% |
| November | 4,725 | 236.25 | 5.84% |
| December | 3,788 | 180.38 | 4.69% |
| Total | 80,843 | 320.61 | 100.00% |

Source: ODE Office of Educator Licensure

Calls relating to educator licensing come from educators, school districts, and the general public. Approximately 12 percent of the total 2011 call volume was received in June, while less than five percent of the total call volume came in December.

All licenses expire on June 30th in the last year of the license (e.g., a five-year professional license expires June 30th of the fifth year). Assigning all license expiration dates to a single day creates the uneven workload distribution observed in the office throughout the year. This distorts overall staffing levels and interferes with management's ability to adequately manage the total annual workload.

During the summer months, the Licensure Office offers overtime to employees to handle the application volume. Employees within the office not specifically designated to process applications are temporarily reassigned to assist with the application processing. Administrative assistants, clerks, the assistant director, and the director assist with primary and secondary indexing during peak periods.

As shown in **Table 3**, in 2011 the Licensure Office accrued 1,265.5 hours of overtime at a total overtime cost of approximately \$47,753. Peak overtime usage occurred during June, July, August, and September, correlating with peak application and call volume associated with the June 30 expiration date. In contrast, during December, the office encourages employees to use vacation time to compensate for low workload.

Table 3: Total Workload During 2011

| | Application | Call Volume | Overtime | Overtime |
|---------------|-------------|-------------|----------|----------|
| January | 5,862 | 6,672 | 0 | \$0 |
| February | 6,954 | 5,700 | 0 | \$0 |
| March | 9,551 | 6,961 | 4 | \$136 |
| April | 9,618 | 6,557 | 2 | \$70 |
| May | 14,234 | 7,754 | 3 | \$105 |
| June | 19,273 | 9,834 | 357.8 | \$13,319 |
| July | 14,056 | 7,762 | 461.7 | \$17,538 |
| August | 13,190 | 9,435 | 237 | \$8,817 |
| September | 11,650 | 6,359 | 200 | \$7,769 |
| October | 6,933 | 5,296 | 0 | \$0 |
| November | 5,293 | 4,725 | 0 | \$0 |
| December | 3,925 | 3,788 | 0 | \$0 |
| Totals | 120,539 | 80,843 | 1,265.5 | \$47,753 |

Source: ODE Office of Educator Licensure

Peer states were reviewed to determine use of variable license expiration dates and the use of online license applications. Peer data was collected from Arizona, Indiana, Iowa, and Michigan. See **Table 4**.⁶⁴

⁶⁴ Information was also solicited from Florida, Minnesota, and North Carolina, but they did not respond.

Educator licenses expire on the applicant's birthday in Arizona and the last day of the applicant's birth month in Iowa. Indiana institutes an expiration date based on the application payment date. Michigan has a standard expiration date of June 30th. Arizona is in the process of implementing an online educator license application. Indiana, Iowa, and Michigan all have an online application process for educator licenses.

Table 4: Summary of Peer State Licensure Information

| State | Department | # of Licenses Processed Annually | Licensure FTE Employees | Staggered Expiration Dates? | Online Application? |
|--------------|---|----------------------------------|-------------------------|--|---|
| Ohio | Office of Educator Licensure | 120,539 | 15 | No - all licenses expire June 30 th | No, but in the process of implementing online system; full implementation before Jan. 2014 |
| Arizona | Arizona Department of Education Certification | 66,000 | 13 | Yes - standard licenses expire on applicant's birthday | No, but in the process of implementing online system (will still allow paper applications) |
| Indiana | Office of Educator Licensing and Development | 45,000 | 10 | Yes - issue and expiration dates reflect date payment is received | Yes - all parts of application process are online; paper applications not accepted |
| Iowa | Iowa Board of Educational Examiners | 20,000 | 16 | Yes - licenses expire on the last day of applicant's birth month | Yes - applicants can submit their application online; every 4th or 5th application is audited; only those audited must mail in transcripts; paper applications still accepted |
| Michigan | Office of Professional Preparation Services | 39,337 | 14 | No - all licenses expire June 30 th (except 1 yr temporary teacher and 2 yr extended provisional) | Yes - all parts of application process are online; paper applications not accepted |
| Peer Average | | 42,584 | 13 | | |

The Bureau of Motor Vehicles (BMV) was also reviewed for its practices regarding expiration dates. The ORC specifically identifies expiration dates on a staggered basis for driver's licenses. ORC § 4507.091 mandates all Ohio driver's licenses expire four years after the issue date.

Background, Part 2 - Office of Professional Conduct

The Office of Professional Conduct investigates applicants who fail criminal background checks and license holders who are the subject of allegations of professional misconduct and/or criminal charges. Investigations are initiated by failed background checks during the application process and by referrals from the public or other offices within ODE. The office reviews allegations, conducts interviews and reports the results of the investigation. Where appropriate, the office review panel generates an action plan which is then executed by staff attorneys.

Education consultants conduct an initial review of all referrals. If no investigation is indicated, the education consultant mails a notification to the subject applicant or license holder. If further investigation is indicated, cases are filed and assigned to an investigator, who collects data, conducts interviews, and generates a report. The case is then reviewed by a panel of managers within the Office of Professional Conduct, which issues one of five determinations: no action, warning letter or inactive, letter of admonishment, review by the State Board of Education (SBOE), or a consent agreement. Three of the outcomes (no action, warning letter/inactive and admonishment) result in a letter to the educator investigated and the relevant school district. Some cases may come to a mutually negotiated resolution between the Office of Professional Conduct and the subject investigated, in which case, the matter is resolved by consent agreement⁶⁵ and does not require an administrative hearing. Cases that are found to have merit and are not resolved by consent agreement are referred to the SBOE to proceed to hearing.

⁶⁵ The State Superintendent signs all consent agreements.

During 2011, the Office of Professional Conduct received 8,554 total professional conduct referrals and investigated 983 (11.5 percent).

Table 5: Summary of 2005 – 2011 Professional Conduct Referrals by type

| Referral Type | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Applications | 4,068 | 5,036 | 5,353 | 6,956 | 6,900 | 6,851 | 6,867 | 42,031 |
| Children Services | 367 | 635 | 504 | 506 | 522 | 528 | 571 | 3,633 |
| School Districts | 103 | 102 | 156 | 333 | 298 | 279 | 298 | 1,569 |
| Media | 105 | 57 | 53 | 36 | 48 | 27 | 25 | 351 |
| Citizen Complaint | 95 | 52 | 81 | 131 | 127 | 162 | 224 | 872 |
| Prosecutor Report | 4 | 9 | 12 | 12 | 13 | 9 | 6 | 65 |
| Internal Referral | 11 | 5 | 34 | 23 | 50 | 51 | 22 | 196 |
| Background checks | n/a | n/a | n/a | 230 | 9 | 0 | 0 | 239 |
| Rap Back Reports | n/a | n/a | n/a | n/a | 104 | 333 | 504 | 941 |
| Other | 17 | 0 | 8 | 19 | 18 | 12 | 37 | 111 |
| Total Referrals | 4,770 | 5,896 | 6,201 | 8,246 | 8,089 | 8,252 | 8,554 | 50,008 |

Source: ODE Office of Professional Conduct

Table 6 shows the caseload for the Office of Professional Conduct according to disciplinary and non-disciplinary outcomes, the organization (ODE or SBOE) responsible for implementing the outcome, and total attorney review time to familiarize themselves with the investigator's case. During 2011, approximately 29 percent of total attorney time for two attorneys, or 1,236 hours total caseload for the office, was spent reviewing cases before they were finalized.

Table 6: Professional Conduct Caseload for 2011

| | Non-Disciplinary Outcomes¹ | Disciplinary Outcomes² |
|---|--|--|
| Ohio Department of Education | 621 | 277 |
| State Board of Education | 1 | 93 |
| Total³ | 622 | 370 |
| Attorney Review Time Per Case (hrs)⁴ | | |
| | 0.5 | 2.5 |
| Total Review (hrs) | | |
| | 311 | 925 |
| Total Hours Reviewing | | 1,236 |
| Annual Percentage of Time Reviewing Per Attorney | | 29.71% |

Source: ODE Office of Professional Conduct

¹ Non-Disciplinary Action requires no reprimand on the part of the educator.

² Disciplinary cases result in either Letter of Admonishment, Consent Agreement, suspension, revocation, permanent revocation, denial of license, or permanent denial of license.

³ Total non-disciplinary and disciplinary cases is 992; however, the total cases investigated during 2011 were 983.

⁴ Each non-disciplinary outcome requires approximately 30 minutes of review time by an attorney to become familiar with the case at the end of the investigation process. Each disciplinary outcome requires approximately 2-3 hours of review time by an attorney to become familiar with the case at the end of the investigation process.

Peer state review of professional conduct included Arizona, Florida, and Indiana, as shown in **Table 7**.

- Florida and Indiana currently operate the licensure office and the professional conduct office as one section of their Departments of Education (DOE) and neither office uses investigator positions. All cases are handled by attorneys.
- Arizona's DOE does not employ attorneys to conduct the professional conduct investigations. Arizona has one Chief Investigator and three investigators to handle the caseload. The Assistant Attorney General's office helps with the caseload when needed. The caseload volume for the Arizona office was 269 cases closed and 121 cases opened, less than 40 percent of the volume investigated by ODE.

Table 7: Summary of Peer State Professional Conduct Information

| State | Department | # of Inquiries Received Annually ¹ | # of Cases Investigated Annually | Professional conduct FTE Employees | Attorneys or Investigators? |
|--------------|--|---|----------------------------------|------------------------------------|-----------------------------|
| Ohio | Office of Professional Conduct | 8,554 | 983 | 15.5 | 2 Attorneys 7 Investigators |
| Arizona | The Investigative Unit of the Arizona Department of Education (under Arizona Board of Education direction) | Unknown | 269 closed, 121 opened | 5 | 4 Investigators |
| Florida | The Office of Professional Services | 3,256 | 1,955 | 14 | 1 Attorney |
| Indiana | The Office of Educator Licensure and Professional Development | 50 | 15 - 20 | 2 | 1 Attorney |
| Peer Average | | 1,653 | 747 | 7 | |

¹ Inquiries include all incoming referrals, including allegations not investigated (e.g., lack of necessary data, lack of merit or jurisdiction).

Methodology and Analysis, Part 2 - Office of Professional Conduct

The Office of Educator Licensure and Professional Conduct have combined salaries and benefits of \$2,286,734.

The work of the offices of licensure and professional conduct is relational and complementary. Dividing the workload between them is costly. Combining the two offices would allow ODE to reduce levels of management while still allowing for all necessary office functions to be performed. For example, the review panel within the newly aligned office could consist of one director, an assistant director (in charge of managing the attorneys and paralegals), and a third reviewer with detailed knowledge of the license process who would manage the consultants. Remaining consultants could be responsible for ruling on license applications, handling incoming calls pertaining to licensure and professional conduct, and entering all professional conduct referrals into the database.

The Professional Conduct Office has 11 employees directly involved in the professional conduct investigations; 20 percent of all investigations conducted by the investigators require additional work before the report can be sent to the attorneys. This increases the workload volume by

approximately 196 cases, resulting in total case handling of almost 1,180 cases. The current caseload for the investigators is approximately 60 cases each at any one time, while attorneys handle approximately 74 cases each at any one time. According to management within the Professional Conduct Office, the target caseload for attorneys and paralegals working jointly on the cases from beginning to end is approximately 80 cases each at one time. By eliminating the investigator positions and adding two additional attorneys and two additional paralegals, the 29 percent review time would be reallocated to conducting the investigations. Having more qualified employees conduct the investigations would allow ODE to increase the caseload from 60 cases per employee to 80 cases⁶⁶ while still allowing the same two to four months needed to conduct the investigations.

Conclusion

A LEAN/Six Sigma process mapping event was held in June of 2012 to capture the current process of the Licensure Office and the Office of Professional Conduct. The process mapping team consisted of cross functional members of ODE and OPT. From these two current state process maps the team produced two proposed office maps that eliminated and/or combined multiple process steps. The team also recommended combining the two offices into one comprehensive office to handle the Department's needs.

By requiring all educator licensure applications to be processed online, the office would save approximately **\$47,753** annually in overtime costs by more evenly dispersing the workload associated with the application process. This recommendation would also result in substantial process improvements and increased efficiency. Moreover, the process now requires as many as four different employees to process a single application; this would be reduced to at most two employees. **Exhibit C.1** and **Exhibit C.2** in **Appendix C** illustrate current and projected process maps for the Office of Educator Licensure.

ODE should implement staggered expiration dates for educator licenses to more effectively manage the workload each year. One option would be to require newly issued licenses to expire on the next birth date of the license holder.

The process mapping exercise demonstrated that involving attorneys in the entire investigation process, instead of investigators, would reduce the time required for an investigation.⁶⁷ Approximately 20 percent of cases worked by investigators require rework before the case reaches the attorneys. The intake step would be reduced from three days to one day. The assignment step would remain at one day. The investigation step would be reduced from four months to two months. And the review step would remain at two weeks. Issuing letters currently requires as long as two months; this would be reduced to a maximum of three weeks and two days. Time required for State Board review cases would remain at seven months, while the time required to complete consent agreements would be reduced by about one month, from three

⁶⁶ Increasing the caseload per employee will not cause any increase in the time necessary to conduct an investigation, and in fact, other recommendations herein suggest this time may be reduced.

⁶⁷ A one-time cost of approximately \$1,000 would be necessary to upgrade the current printer-scanner to allow for electronic documentation throughout the investigation process.

months to two. **Exhibit C.3** and **Exhibit C.4** in **Appendix C** illustrate current and projected process maps for the Office of Professional Conduct.

By combining the Office of Licensure and the Office of Professional Conduct into one office with attendant savings related to salary and benefits, implementing total online licensure applications, staggering the license expiration dates, and transitioning to an investigative model utilizing attorneys and paralegals that increases investigative throughput and efficiencies, ODE would realize annual savings of approximately **\$997,941**. See **Table 9**.

Table 9: Financial Cost Walk (As of 1/31/13)

| | | |
|---|---------------------------------------|-------------------|
| Payroll, Office of Professional Conduct | \$ | 848,058 |
| Payroll, Office of Licensure | \$ | 833,364 |
| | | <hr/> |
| Total Current Payroll | \$ | 1,681,422 |
| Total Current Payroll w/Benefits | \$ | 2,286,734 |
| Deduct | | |
| 7 Investigators | \$ | 346,027 |
| 1 Investigator Suprv | \$ | 52,702 |
| 1 Director | \$ | 92,269 |
| 1 Admin Prof 2B | \$ | 54,805 |
| 1 Clerk | \$ | 33,510 |
| 2 Cert Lic 1B | \$ | 84,353 |
| 1 Mgmt Ana Suprv | \$ | 57,244 |
| 1 Mgmt Ana | \$ | 42,347 |
| 2 Consultant 1B | \$ | 112,138 |
| | | <hr/> |
| Total positions reduced = 17 | Total \$ reduced | \$ 875,395 |
| | Benefits | \$ 315,142 |
| | Overtime reduced | \$ 47,753 |
| | | <hr/> |
| | Payroll Savings | \$ 1,238,290 |
| Add FTE (Staffing Adjustment) | | |
| 2 Attorneys | \$ | 102,810 |
| 2 Paralegals | \$ | 73,182 |
| | | <hr/> |
| | Total | \$ 175,992 |
| | Total w/Benefits | \$ 239,349 |
| Summary of Savings - Net First Year and Outyears | | |
| | Payroll Savings | \$ 1,238,290 |
| | Staffing Adjustment | \$ (239,349) |
| | | <hr/> |
| | Total Net Savings (Outyears) | \$ 998,941 |
| | Payroll Savings | \$ 1,238,290 |
| | One-Time Cost For Printer Upgrade | \$ (1,000) |
| | Staffing Adjustment | \$ (239,349) |
| | | <hr/> |
| | Total Net Savings (First Year) | \$ 997,941 |

R3.2 Appendix C

Exhibit C.1

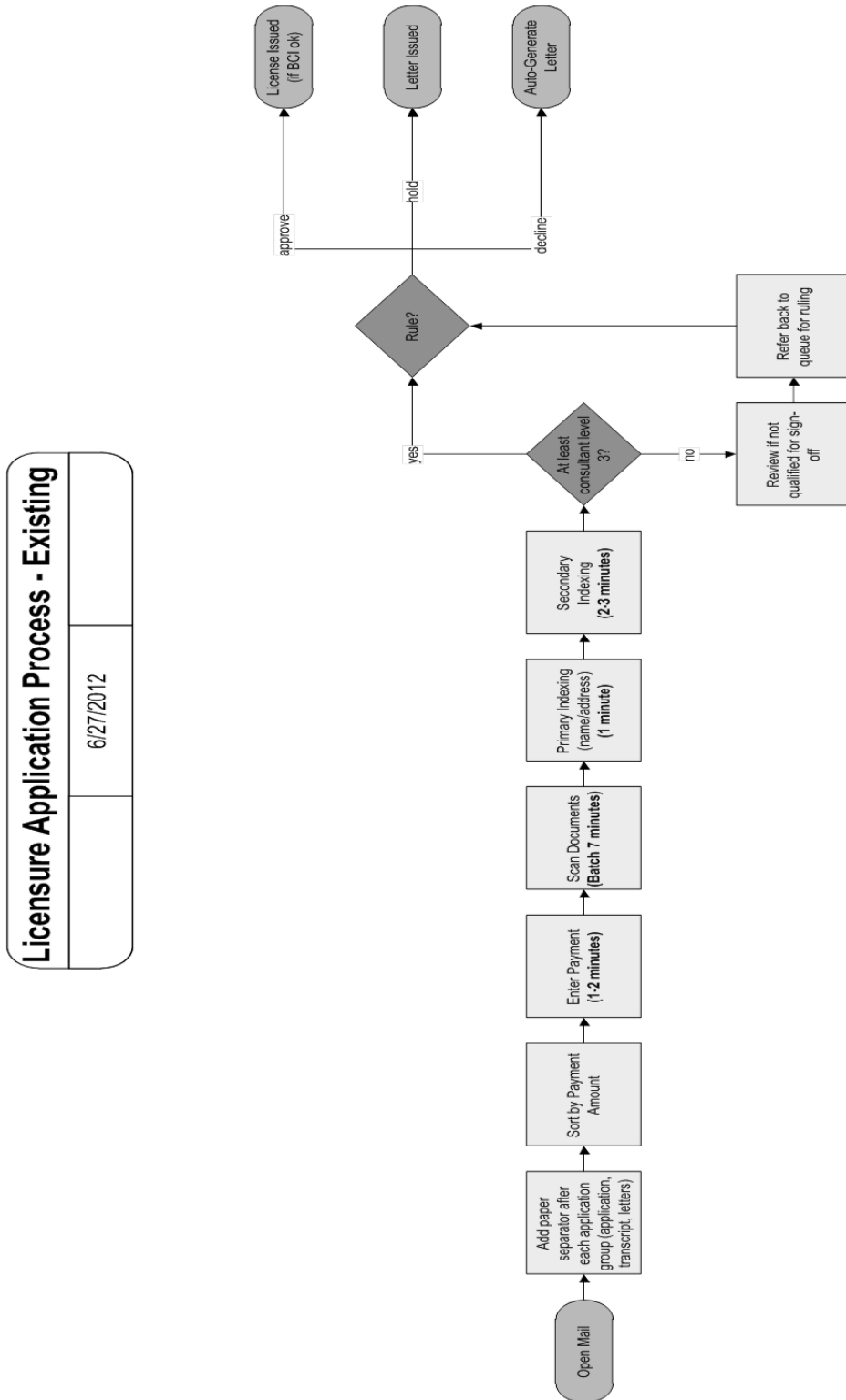


Exhibit C.2

Licensure Application Process - Proposed

| | | |
|--|----------|--|
| | 8/9/2012 | |
|--|----------|--|

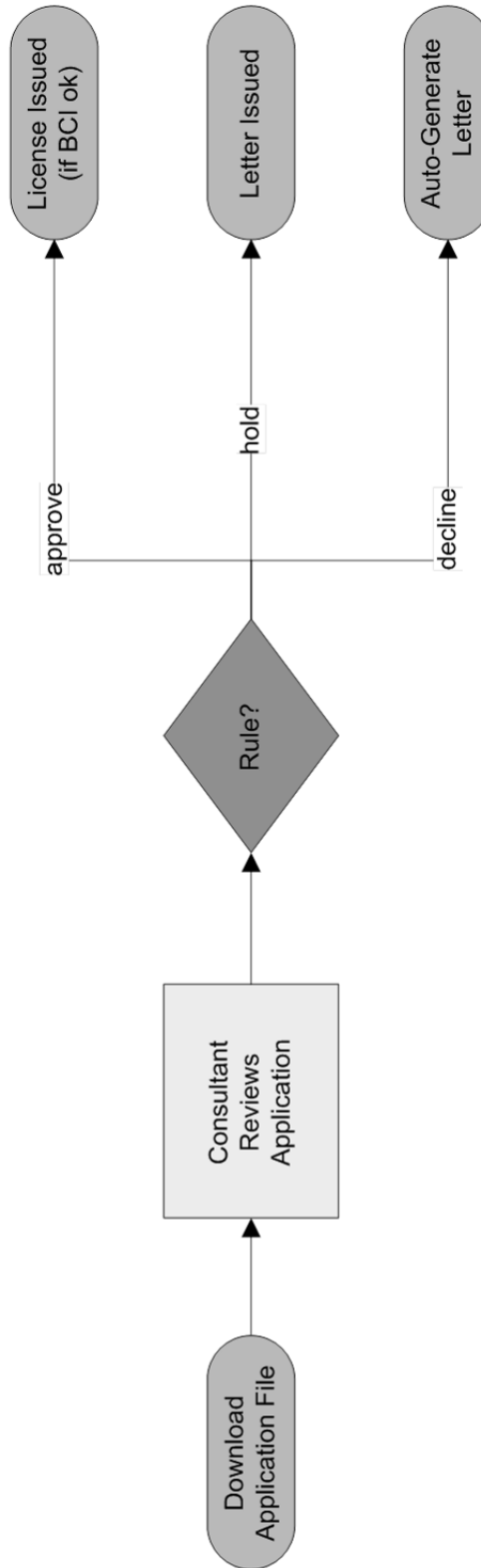


Exhibit C.3

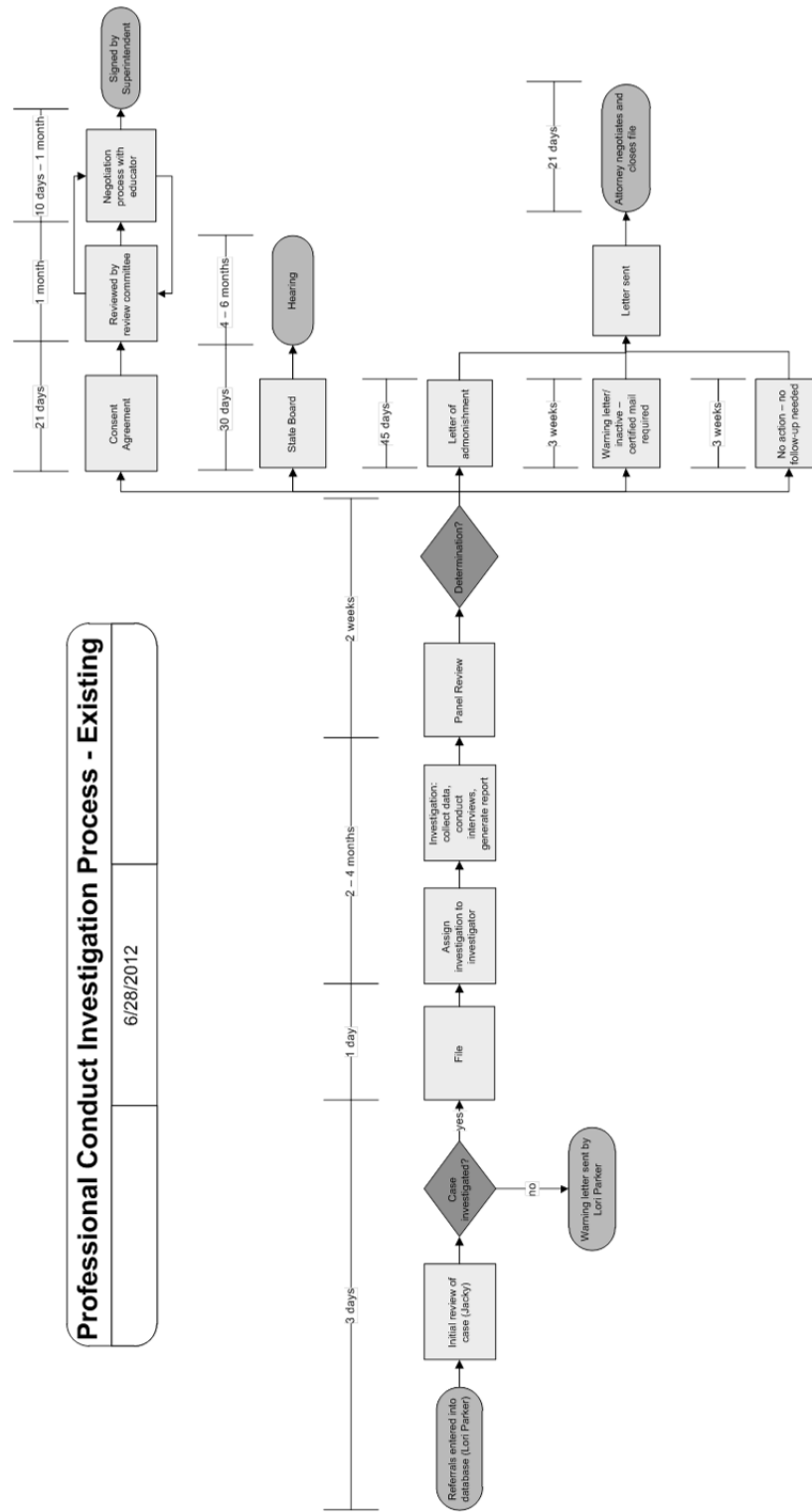


Exhibit C.4

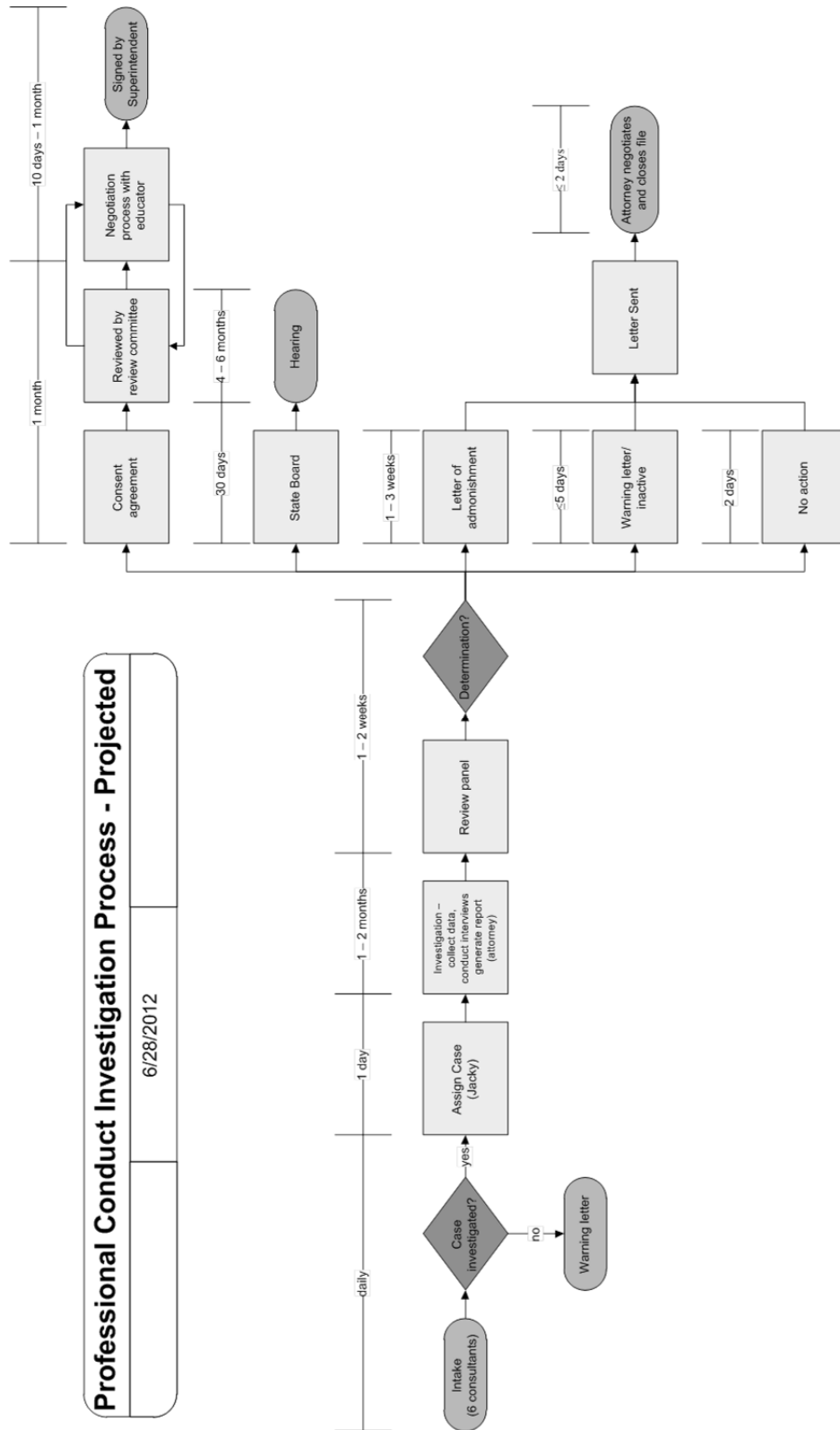
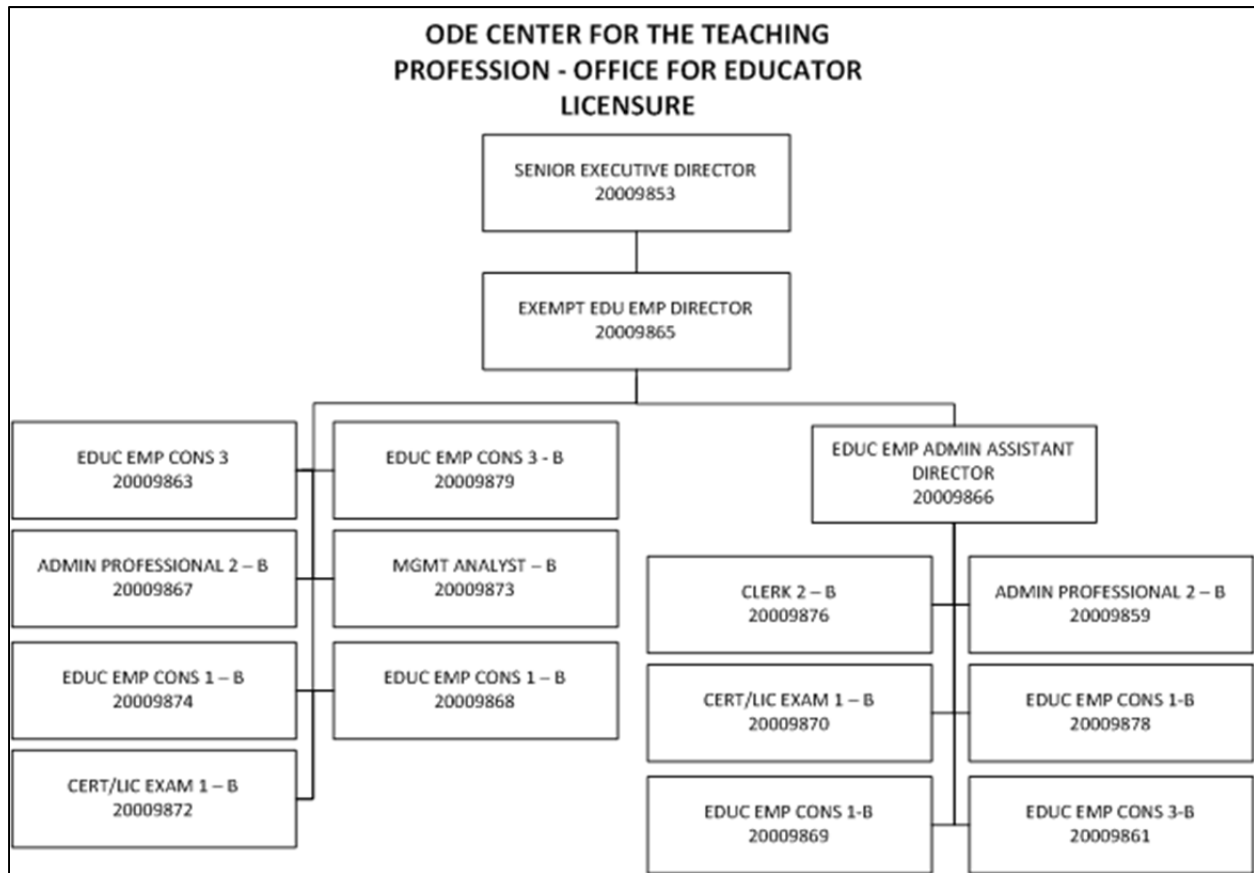
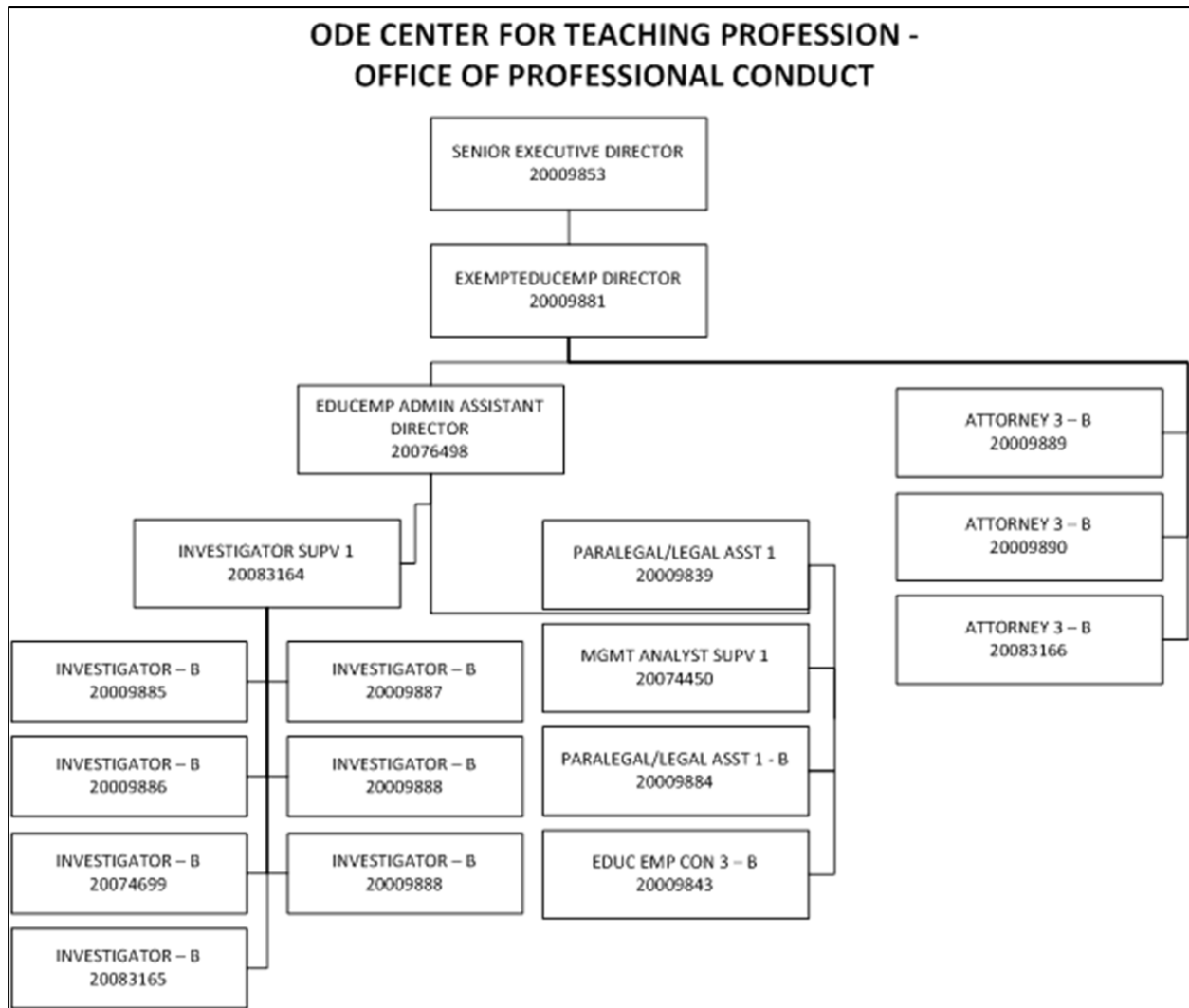


Exhibit C.5



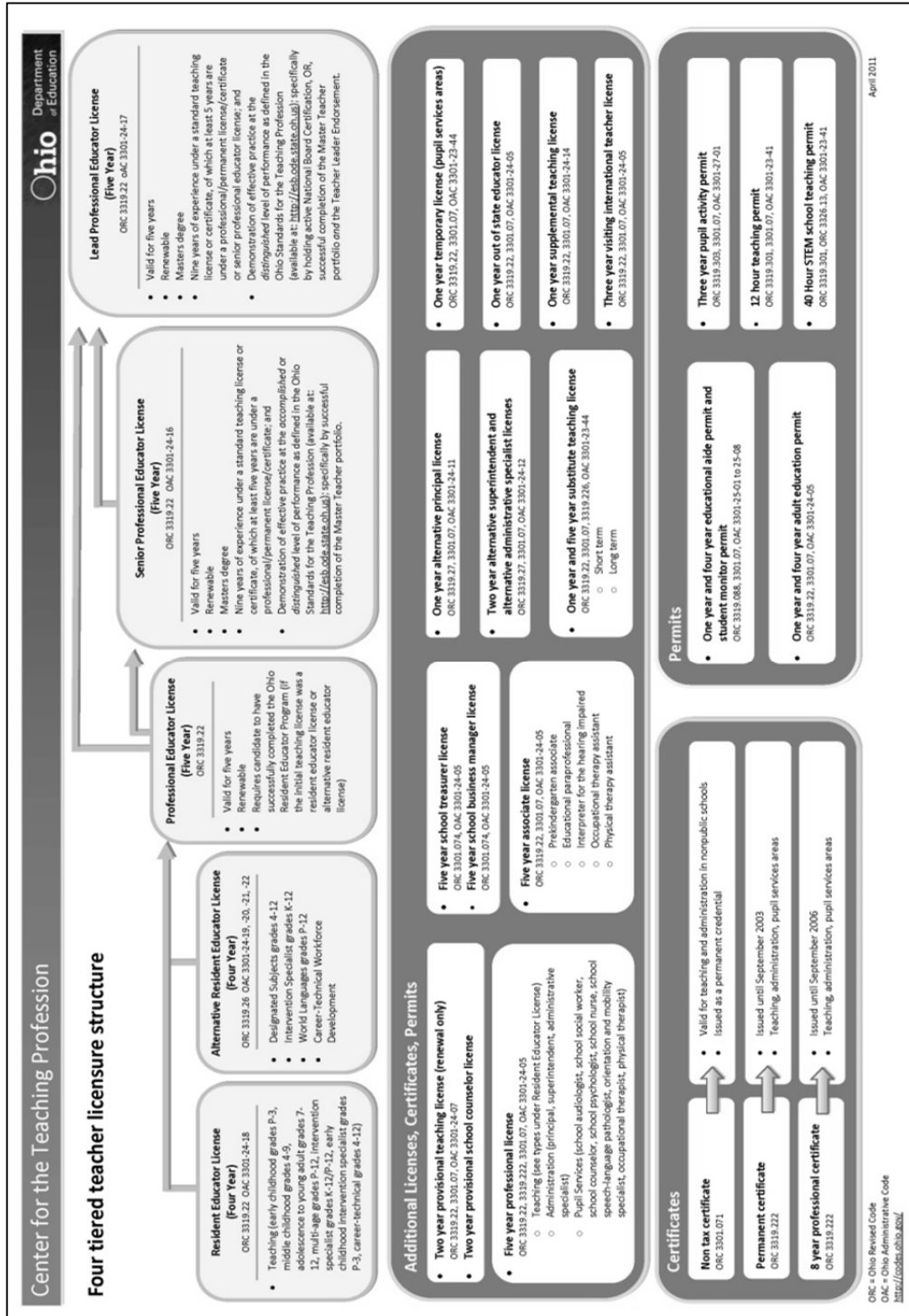
Source: ODE Table of Organization Chart November of 2012

Exhibit C.6



Source: ODE Table of Organization Chart November of 2012

Exhibit C.7



Source: <http://education.ohio.gov/GD/DocumentManagement/DocumentDownload.aspx?DocumentID>

3.0 ORGANIZATIONAL STRUCTURE – TEST OPERATIONS & COMMUNICATIONS AND TECHNICAL ASSESSMENT

Savings 3.3: \$363,667

Finding 3.3: Test Operations & Communications and Technical Assessment fulfill complementary functions within the Office of Curriculum and Assessment.

These departments work together to provide quality control, administrative and technical support, contractor oversight, and technical analysis for assessments required under Ohio and Federal law and policy. Combining these departments could result in a greater efficiency and savings for a more compact team.

Recommendation 3.3: The departments of Test Operations & Communication and Technical Assessment both positioned within the Office of Curriculum and Assessment, should be merged. Merger will reduce excessive management overhead, encourage the full utilization of contractor services, ensure that all department employees are effectively and fully utilized, and more closely align ODE practices with leading practices of peer states.

Financial Impact 3.3: Combining the two departments could save ODE **\$363,667** in direct labor and benefit costs annually.

TEST OPERATIONS/COMMUNICATIONS AND TECHNICAL ASSESSMENT

Background

ORC § 3301.0710(A)(1)⁶⁸ requires that the state Board of Education adopt rules governing the assessment of student achievement, designed to ensure, at minimum, that students who receive a high school diploma demonstrate at least high school levels of achievement in reading, writing, mathematics, science, and social studies.

To help carry out this responsibility, ODE maintains two departments within the Center for Curriculum and Assessment:⁶⁹ Test Operations & Communications (TOC) and Technical Assessment (TA). TOC employs one intermittent and six full-time employees, and TA employs four full-time employees. See **Exhibit D.1** in **Appendix D**. The core responsibility of both departments is complementary: to support the development, administration, and scoring of tests⁷⁰ required under Ohio law and department policy. A listing and explanation of assessments administered by the departments is included in **Exhibit D.2** in **Appendix D**.

Methodology and Analysis

TOC & TA coordinate the activities of selected vendors to furnish, grade, and score all assessments as required by ORC and defined by OAC. ODE spends approximately \$65 million annually with the American Research Institute (ARI) and other select providers. ODE personnel are tasked with vendor oversight, local education agency (LEA) support, and investigation of potential irregularities in test results (as identified by ARI). In addition, TOC & TA provide technical counsel and statistical analysis support to several other areas of ODE, including the Office of Early Learning and School Readiness, and the Office for Exceptional Children concerning the selection and evaluation of appropriate test questions, items, and structure. The purpose of this support is to ensure that the assessment tests developed by ODE-selected vendors meet the specifications and technical requirements as defined by ODE. In addition, the TOC provides support and training to approximately 1,000 LEA district test coordinators through telephone, email, website, and webinar support, and answers telephone and email inquiries from Ohio citizens and LEA personnel.

OPT asked TOC & TA to provide process maps outlining the flow and distribution of work within their respective departments and available metrics or ‘dashboard’ management tools they used to manage their operations. OPT also sought any manpower loading tools the departments utilize to evaluate the need for additional manpower and/or their effective use of current manpower. In both cases TOC & TA were unable to provide the requested documentation with

⁶⁸ The State Board of Education shall adopt rules establishing a statewide program to assess student achievement. The state board shall ensure that all assessments administered under the program are aligned with the academic standards and model curricula by the state board and are created with input from Ohio parents, Ohio classroom teachers, Ohio school administrators, and other Ohio school personnel pursuant to section 3301.079 of the Revised Code. The assessment program shall be designed to ensure that students who receive a high school diploma demonstrate at least high school levels of achievement in English language arts, mathematics, science, and social studies.

⁶⁹ The Center for Curriculum and Assessment is itself located within the Division of Learning

⁷⁰ See Appendix D, Exhibit D.2 for test details.

the exception of telephone call volume, travel metrics, and a list of the functional responsibilities of the group.

Extensive interviews and observation were conducted with office staff and departmental management to identify key activities and to develop estimates of time dedicated to specific mission-critical activities. The workload measurements in **Table 1** and **Table 2** and associated manpower necessary to complete tasks were identified by observing and measuring activities where possible and by collecting input by ODE management and staff.

Test Operations & Communications: The Test Operations & Communication department, as currently structured, is designed to support seven employees including five full time employees, one part-time employee and an Assistant Director.

The primary responsibilities as identified by department management include:

- Answering incoming telephone calls from LEAs, parents, students, and concerned citizens.
- Providing input for the “Ides of ODE” monthly newsletter.
- Reviewing changes in law and their impact on assessment testing.
- Proofing vendor and internal assessment material.

Table 1 identifies key activities conducted by TOC with actual and estimated annual time required to conduct these activities. **Table 1** indicates this department can complete its core mission and associated activities utilizing 7,248 annual man hours which translates to 3.48 FTE.

Table 1: Production Activities of Test Operations and Communications

| | Description of Activity ¹ | Annual Hours ² | FTE Requirement (Annual) ³ |
|----|--|---------------------------|---------------------------------------|
| 1 | Answer Incoming Phone Calls (Parents, LEAs, students, vendors) (9,028 annual calls @ 10 minutes per call) | 1,504 | 0.72 |
| 2 | Supervisory/Leadership Activities (includes vendor interface and employee leadership) | 208 | 0.10 |
| 3 | Training/support of LEA Assessment Coordinators (includes webinars) | 208 | 0.10 |
| 4 | Ohio's Alternative Assessment for Students with Significant Cognitive Disabilities (AASCD) | 2,080 | 1.0 |
| 5 | Third Grade Reading Guarantee (ORC § 3313.608) Kindergarten Readiness Assessment (KRAL) | 2,080 | 1.0 |
| 6 | Publish Sections of Newsletter (Ideas of ODE) | 24 | 0.01 |
| 7 | Review Changes to Law | 40 | 0.02 |
| 8 | Fraud Oversight (Ohio Graduation Test) (Vendor provides analysis--Assistant Director coordinates LEA self-investigation) (45 investigations 2011-2012) | 250 | 0.14 |
| 9 | Special Version Tests (Large Print, audio CD, and bilingual) (150 per year-managed by consultant) | 364 | 0.18 |
| 10 | OGT/OAA/OTELLA/ Manuals (Contractor updates-ODE proofs) | 40 | 0.02 |
| 11 | Approve LEA Appeals to re-score a test (6,700 annual) | 18 | 0.01 |
| 12 | Vendor Visits (Assistant Director) (4 days-includes travel) | 32 | 0.02 |
| 13 | Conference Attendance (Assistant Director) (18 days-includes travel) | 144 | 0.07 |
| 14 | Committee Participation (Assistant Director) (27 days-includes travel) | 96 | 0.05 |
| 15 | LEA Field Visits (Assistant Director) (20 days-includes travel) | 160 | 0.08 |
| | TOTAL | 7,248 | 3.48 |

Source: ODE

Note: Totals may vary due to rounding

¹ Metrics available only for telephone calls, vendor visits, conferences attended, field visits, and committee participation.

² 2,080 hours used as annual full-time working hours.

³ Estimates of time spent on activities gathered through extensive interviews, observation and ODE input.

Technical Assessment Department: The Technical Assessment department, as currently structured, is designed to support four employees including three full-time employees and an Assistant Director.

The primary responsibilities and activities as identified by department management include:

- Quality control, statistical analysis, and support for assessment test development and administration
- Vendor oversight and management
- Support internal ODE functional areas

Table 2 identifies the key activities conducted by TA and the estimated time required annually to conduct these activities. As **Table 2** indicates, this group can complete its core mission and associated activities utilizing 6,936 man hours annually which translates to 3.34 FTE.

Table 2: Production Activities of Technical Assessment

| | Description of Activity | Annual Hours ¹ | FTE Requirement (Annual) ² |
|----|---|---------------------------|---------------------------------------|
| 1 | Coordinate National Assessment of Educational Progress (NAEP) activities (Federal Program) | 2,080 | 1.00 |
| 2 | Support/Advise ODE Peers/Special requests (statistical oversight) (no metrics/estimate 10% of time) | 208 | 0.10 |
| 3 | Supervisory/Leadership Activities (includes vendor interface) (no metrics/estimate 10% of time) (Assistant Director Responsibility) | 208 | 0.10 |
| 4 | Answer Incoming Phone Calls (no metrics available) (estimate projected @ 33 calls per week @ 10 minutes per call) | 520 | 0.25 |
| 5 | Quality Control for OGT and OAA Test Forms/Testing (Two consultants 50% of time) (Vendor Oversight) | 2,080 | 1.00 |
| 6 | Confirm Quantities of Test Materials and Calculators (Distributed to LEAs for OAA and OGT testing) (vendor oversight) | 760 | 0.37 |
| 7 | Fraud Overview (Ohio Academic Assessment) (Vendor provides analysis--Assistant Director coordinates LEA investigation) (4 investigations 2011-2012) | 80 | 0.04 |
| 8 | Transfer Assessment Test Results to Disc (Vendor prepares discs) (Produce summary to post on ODE website) | 8 | 0.004 |
| 9 | Vendor Visits (64 days-includes travel) | 512 | 0.25 |
| 10 | Conference Attendance (33 days-includes travel) | 264 | 0.13 |
| 11 | Committees (27 days-includes travel) | 216 | 0.10 |
| | TOTAL | 6,936 | 3.34 |

Source: ODE

Note: Totals may vary due to rounding

¹ 2,080 hours used as annual full-time working hours.

² Estimates of time spent on activities gathered through extensive interviews, observations, and ODE input.

Peer input: Data was solicited from Indiana, Michigan, Minnesota, North Carolina and Florida. North Carolina and Florida did not respond. It should be noted that Indiana and Minnesota do not have a separate group responsible for test operations and communications and technical assessment, but do conduct similar activities within their assessment development departments. A comprehensive comparison of total assessment-related manpower resources of these states, which included all of the state's assessment activities, revealed that Indiana utilizes 12 full-time employees and Minnesota utilizes 22 full-time employees, while Ohio utilizes 24 full-time employees. Indiana, Minnesota and Ohio all utilize vendor support in the development and administration of their assessment requirements. Indiana has no psychometric support on staff and relies on their vendor for statistical and psychometric support; Minnesota has two psychometricians on staff, and Ohio maintains three technical staff for psychometric support. Michigan, in an attempt to minimize use of vendor support, has pursued a different model by increasing their staff to 60 full-time employees and reducing their reliance on vendors. In 2008, Michigan projected a three year payback (the state could not verify the payback period upon OPT request). Moreover, with an expected trend toward on-line assessments and with the emergence of national consortiums which will provide assessment services, such as the Partnership for Assessment of Readiness for College and Careers (PARCC), fewer employees may be required to fulfill the assessment function.

Conclusion

Based on workload measurements and activities, TOC can complete its mission-critical activities with 3.48 FTE while TA can complete its mission-critical activities with 3.34 FTE. Due to peak times for telephone calls being received from constituent groups (February through May), minor miscellaneous activities, as well as the activities studied in this analysis, it would be advisable to staff a merged TOC and TA department with 7 FTE representing 14,560 man hours annually.

Table 3: Savings Associated with Merging the Two Departments

| Table 3 | | | |
|---|---------------------|----------------------|-----------------------------|
| Office | Number of Employees | Annual Cost/Employee | Average Cost/Employee |
| Current Organization: Two Departments | | | |
| TOC | 7 | \$593,589 | \$84,798 |
| TA | 4 | \$406,497 | \$101,624 |
| Total | 11 | \$1,000,086 | \$90,917¹ |
| Recommended Organization: One Department | | | |
| TOC+TA | 7 | \$636,419 | \$90,917 |
| Annual Savings | 4 | \$363,667 | |

¹ Weighted average with 7 TOC and 4 TA employees.

Based on the analysis of the required workload and mission-critical core responsibilities of TOC and TA and the identification of leading practices from peer states, ODE can effectively downsize and combine these departments without impacting the quality of service required and provided.

R3.3 Appendix D

Exhibit D.1

| TEST OPERATIONS | | | |
|-----------------------------|---------------------------|----------------------------------|-------------------|
| Job Description | Base Pay | Benefits 36% | Total Cost |
| Assistant Director | \$ 85,114 | \$ 30,641 | \$ 115,755 |
| Admin Professional 2-B | \$ 40,996 | \$ 14,759 | \$ 55,755 |
| Education Consultant 3 | \$ 57,241 | \$ 20,607 | \$ 77,848 |
| Education Consultant 3-B | \$ 72,571 | \$ 26,126 | \$ 98,697 |
| Education Consultant 3-B | \$ 28,970 | \$ 10,429 | \$ 39,399 |
| Education Consultant 3-B | \$ 76,544 | \$ 27,556 | \$ 104,100 |
| Education Consultant 3-B | \$ 75,026 | \$ 27,009 | \$ 102,035 |
| | | Total | \$ 593,589 |
| TECHNICAL ASSESSMENT | | | |
| Job Description | Base Pay | Benefits 36% | Total Cost |
| Assistant Director | \$ 87,609 | \$ 31,539 | \$ 119,148 |
| Social Science Res Spec | \$ 64,626 | \$ 23,265 | \$ 87,891 |
| Education Consultant 3-B | \$ 75,025 | \$ 27,009 | \$ 102,034 |
| Education Consultant 3 | \$ 71,635 | \$ 25,789 | \$ 97,424 |
| | | Total | \$ 406,497 |
| | | Grand Total | \$ 1,000,086 |
| | | Annual Average Cost per Employee | \$ 90,917 |
| Recommendation | (7 FTE x \$90,917) | | \$ 636,419 |
| Savings | (\$1,000,086 - \$636,419) | | \$ 363,667 |

Source: ODE Payroll and Human Resources

Exhibit D.2

Tests and assessments administered by ODE include the Ohio Graduation Test (OGT) ORC § 3301.0710, the Ohio Academic Assessment Test (OAA) ORC § 3301.0711, the Ohio Test of English Language Acquisition (OTELA) ORC § 3301.07, the Third Grade Reading Guarantee ORC § 3301.608, the Alternative Assessment for Students with Disabilities (AASWD) ORC § 3301-13-03, the Kindergarten Readiness Assessment-Literacy (KRA-L) and the Alternative Assessment for Students with Significant Cognitive Disabilities (AASCD) OAC § 3301-13-01, 02, 03, 05, 06, and 11, respectively).

- The Ohio Graduation Test (OGT) is the high school graduation examination given to all sophomores in Ohio. Students must pass all five sections (reading, writing, mathematics, science, and social studies) in order to graduate.
- The Ohio Academic Assessment test (OAA) is an annual test that measures how well students have learned the reading and math concepts taught in grades 3-8. The Ohio Science Assessments are annual tests provided to students in grades 5 and 8. They are designed specifically for Ohio students and are based on Ohio's Academic Content Standards.
- The Ohio Test of English Language Acquisition (OTELA) is the assessment used for testing English language proficiency for Ohio Limited English Proficient (LEP) students in Grades K-12 in the State of Ohio. State and Federal law require an annual assessment of K-12 LEP students to measure English language proficiency.
- The Third Grade Reading Guarantee, as passed with Senate Bill 316 and codified under ORC § 3313.608, will require third graders to pass the third-grade state reading test in order to advance to fourth grade.
- The Alternative Assessment for Students with Disabilities (AASWD) is designed to evaluate the performance of students with the most significant cognitive disabilities and whom regular assessments, even with accommodations, are not appropriate.
- The AASCD is aligned to Ohio's Academic Content Standards-Extended (OACS-E) and designed to allow students to demonstrate their knowledge and skills in an appropriately rigorous assessment. It is administered by grade band (3-5, 6-8, OGT). All students are assessed in English language arts and mathematics. Students in grades 5 and 8 are also assessed in science.
- The Kindergarten Readiness Assessment – Literacy (KRA-L) helps teachers identify early learning reading skills. The KRA-L is required for all children entering kindergarten in public schools for the first time. ORC states the KRA-L must be administered no sooner than four weeks prior to the start of school and no later than October 1.

Source: ORC, OAC, ODE

4.0 CONTRACT PROCESSING – PROCESS IMPROVEMENT

Noteworthy Accomplishment: ODE has implemented the recommendations and has realized the time savings. They continue to monitor the process and strive for continuous improvement.

Savings 4.1: \$83,000

Finding 4.1: To process contracts, ODE currently utilizes five distinct procedures, dependent on contract amount. The current procedures are inefficient, confusing to stakeholders, and are not applied in a consistent and efficient manner.

Recommendation 4.1: An ODE Kaizen team, facilitated by OPT, designed recommendations to increase efficiency of contract processing which include the following:

Recommendation 4.1a: Designate an ODE employee who will obtain the credential of “DAS-Certified Procurement Officer” to enable ODE further discretion in choosing a bidding method for contracts under \$50,000.

Recommendation 4.1b: Enable program offices to expedite the selection process for vendor selection and notification within ODE process guidelines.

Recommendation 4.1c: Establish procedures so that the State Superintendent designates responsible employees to provide final signatory approval on all contracts.

Recommendation 4.1d: Establish a Contract Review Team to allow for pre-approval of contracts prior to executive level review.

Recommendation 4.1e: Update the online portion of the contract workflow process to accommodate dissemination and utilization of a standard planning template and other forms as needed.

Recommendation 4.1f: Translate the optimized contract process workflow into formally approved policies and procedures and provide ongoing training and certification to employees.

Recommendation 4.1g: OPT recommends that ODE institute an internal audit function to annually review a random sample of approximately 8% of the contract population. This will ensure, with a 95% confidence level, that procedural compliance and fidelity are being maintained.

Financial Impact 4.1: The recommended process will save on average 45 days per contract, reduce cycle time 46 percent, and yield an ongoing direct labor savings of **\$83,000** annually or \$830,000 over ten years.

Background

Staff from ODE and OPT conducted an analysis of the process utilized by ODE to plan, prepare, process and award contracts. These contracts provide critical resources needed to support the Department and schools. In 2011, the ODE procurement section processed 523 contracts totaling \$97.5 million.

ODE currently utilizes five unique procedures, dependent on contract amount, to process contracts. Management indicates that the current procedures are inefficient, confusing to ODE staff, and are not applied in a consistent and efficient manner. The current process is considered by ODE personnel to be cumbersome, time consuming, and procedurally inconsistent.

Methodology and Analysis

A “Kaizen Blitz”⁷¹ event was utilized to facilitate the development of a new process that would reduce the time and labor that is required to plan, prepare, process, and award a contract at ODE. A team of ODE associates from the Fiscal, Program, IT, and Legal departments was brought together for a weeklong activity under the guidance of OPT. The team’s objective was to map the current process and then design a process that would significantly reduce cycle time and cost.

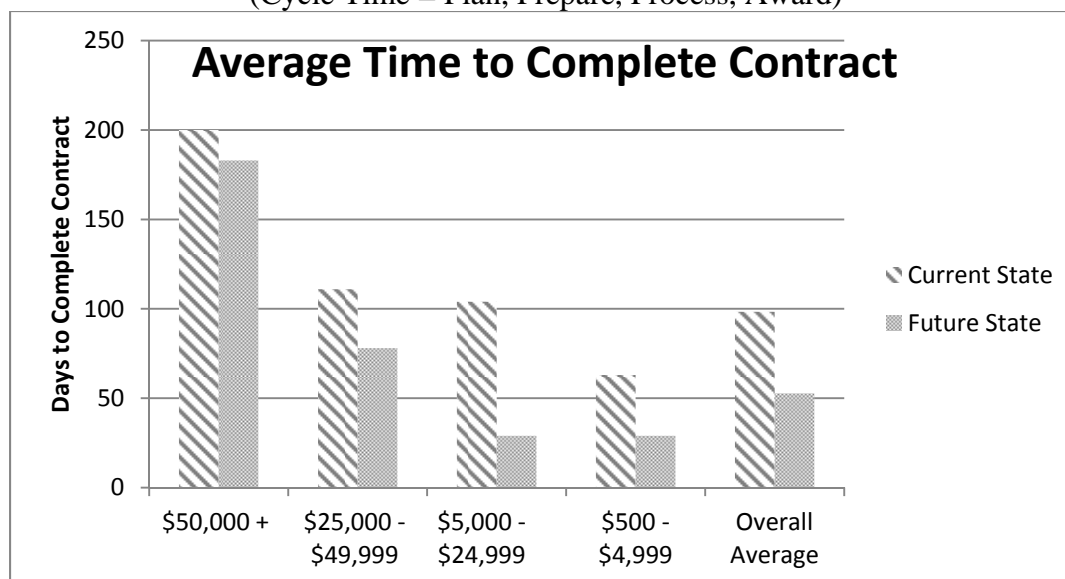
Cycle time was calculated by identifying the average time spent on each step in the current process and the estimated times that will be required in the future process. The time estimations for current and future processes were identified by the ODE process owners (representatives from the participating departments). A reduction in cycle time was achieved by: empowering program offices to determine the appropriate method for vendor selection, reducing the number of approvals required for each contract, and reducing the cycle steps.

Using data from 2011 as a baseline, an evaluation of the following data was used to estimate savings: total number of contracts processed, total number of hours required to process the contract, and the projected number of hours using a streamlined process and representative hourly wage.

⁷¹ A Kaizen Blitz is a Lean Six Sigma problem-solving exercise that brings together the key stakeholders with the mission of identifying significant improvements to the current system.

Table 1 shows the reduction in days between the current and future state, divided across personal service contract amounts and aggregated for an overall average.

Table 1: Cycle Time Reduction
(Cycle Time = Plan, Prepare, Process, Award)



Source: ODE Kaizen Blitz Team

Conclusion

ODE should implement the revised contract process. ODE should begin certifying a procurement manager according to the Department of Administrative Services (DAS) Certified Procurement Manager criteria and have ODE Kaizen team members lead the introduction of the new process across the organization and within their own offices.

ODE should implement the contract processing procedures and the following recommendations that were identified by the ODE Kaizen Blitz team:

- Designate an ODE employee who will obtain the credential of “DAS-Certified Procurement Officer”. This will enable ODE to exercise more discretion in choosing a bidding method for contracts under \$50,000. Without a certified Procurement Officer, State regulations require ODE to follow a “one-size-fits all” bidding process. At times, this process requires non-value added steps that, when eliminated, will allow ODE the necessary flexibility to reduce cycle time and save money.
- Allow program offices to expedite a larger share of contracts through enhanced flexibility of the appropriate method for vendor selection and notification within ODE process guidelines.
- Establish procedures where the State Superintendent designates responsible employees to provide final signatory approval on all contracts.

- Establish a Contract Review Team to allow for pre-approval of contracts prior to executive level review.
- Update the online portion of the contract workflow process to accommodate dissemination and utilization of a standard planning template and other forms, as needed.
- Translate the optimized contract process workflow into formally approved policies and procedures and provide ongoing training and certification to employees.
- Institute an internal audit function to annually review 8% of randomly selected contracts to ensure a 95% confidence level that procedural compliance and fidelity are being maintained.

The new process will save on average 45 days per contract, reduce cycle time 46%, and yield an ongoing direct labor savings of approximately **\$83,000** annually or \$830,000 over ten years. The time savings, as a result of the reduction in labor required, will enable ODE associates to redirect their time to non-administrative, mission critical core activities.

As ODE implements the initial recommendations they should monitor and measure the cycle time and effectiveness of the new process. The Kaizen Team should meet on a quarterly basis to review and analyze the results. Their mission will be to ensure that the process is implemented as designed and to foster a ‘continuous improvement’ approach to identify additional areas for cycle time and process improvement.

VI. AUDIT OBJECTIVES OVERVIEW

AOS and ODE signed a letter of engagement September 26, 2011. This letter of engagement included five scope items which are outlined below. Based on these initial scope areas AOS engaged in supplemental planning activities to develop detailed audit objectives for comprehensive analysis. These detailed audit objectives are listed below as references to recommendations associated with the objectives.

Scope Area A: IT Governance and Investment Practices – Evaluate IT management processes to determine the most efficient and effective service delivery. Review overall IT cost to include analysis of IT project portfolio management practice.

- **Objective 1: Governance (see R1.1a, R1.1b, R1.3, R1.4)**
 - Does ODE’s IT governance structure define the duties and scope of the Department’s mission as it pertains to ODE’s overall strategy and core responsibilities? Does it facilitate the most effective use of Department resources with regard to industry leading practices?
 - What opportunities exist for ODE to streamline its IT operations and realize operational efficiencies or cost savings?
 - Does the current project management process provide the most efficient operating model?

- **Objective 2: Hardware & Software (see R1.1f)**
 - Is ODE’s IT hardware infrastructure efficient and cost effective in today’s IT environment?
 - Is ODE’s IT software and application architecture efficient and cost-effective in today’s IT environment?
 - What opportunities exist for improved performance?

- **Objective 3: Manpower (see R1.1c, R1.1e)**
 - What opportunities exist for greater economy and efficiency within the current personnel resource allocation model?

- **Objective 4: Applications (see R1.1d, R1.2)**
 - Are ODE’s current enterprise applications the most cost-effective delivery of processing information?
 - Are there opportunities within the state shared services environment to leverage greater economies of scale?

Scope Area B: Core Responsibility Review – Analyze organizational activities and functions for optimizing service provision and alignment with core mission.

- **Objective 1: General Education Development (see R2.1)**
 - Do the processes and systems in place provide the most efficient and cost-effective delivery of services for the Department?
 - What resources can be leveraged to make this improvement?
- **Objective 2: Office for Exceptional Children (see R2.2)**
 - Are there opportunities to improve the cost effective delivery of mission critical responsibilities?
 - What opportunities does ODE have to streamline operations and realize operational efficiencies for cost savings?
- **Objective 3: Office of Early Learning and School Readiness (see R2.3)**
 - Are there opportunities to improve the cost effective delivery of mission critical responsibilities?
 - What opportunities does ODE have to streamline operations and realize operational efficiencies for cost savings?
- **Objective 4: Records Retention (see R2.4 – R2.6)**
 - How do ODE's records retention activities compare to state agency mandates and the policies and practices of similar states and industry standard?
 - What opportunities for efficiency improvements and cost reductions are available relative to the current state?
- **Objective 5: Budget and Financial Management (see R2.7)**
 - Do current accounting practices maximize the efficient use of financial resources for the Department and its stakeholders?
 - What tools of financial management can be utilized to prioritize and allocate resources most efficiently and effectively?

Scope Area C: Organizational Structure – Review the current organizational structure to maximize performance, division of duties and responsibilities, and seamless coordination with internal and external customers.

- **Objective 1: Span of Control (see R3.1)**
 - Is the span of control at ODE efficient and appropriate as compared to similar states and leading practices?
- **Objective 2: Licensure and Professional Conduct (see R3.2)**
 - Are these offices structured to efficiently and cost effectively maximize service and performance?
 - What opportunities does ODE have to gain greater operational efficiency and management effectiveness in these departments?

- **Objective 3: Test Assessment and Test Operations (see R3.3)**
 - Are these offices structured to efficiently and cost-effectively maximize service and performance?
 - What opportunities does ODE have to gain greater operational efficiency and management effectiveness in this area?

Scope Area D: Grants Management – Evaluate and optimize the overall process for the application and distribution of grant funding.

- **Objective 1: Process Improvement (see R1.2)**
 - Is ODE’s current process efficient and effective in meeting the needs of the organization?
 - What tools or opportunities are available that would improve efficiency or reduce cost?

Scope Area E: Contract Processing – Evaluate and optimize the overall process for contractual approval.

- **Objective 1: Process Improvement (see R4.1)**
 - Is ODE’s contract processing procedure efficient and effective in meeting the needs of the organization?
 - What opportunities for improvement exist in the current contract processing procedure?

VII. GLOSSARY OF ACRONYMS

AASCD – Alternative Assessment for Students with Significant Cognitive Disabilities
AASWD – Alternative Assessment for Students with Disabilities
ABLE – Adult Basic and Literacy Education
ACT – American College Test
AEA – Area Education Agencies
AOS – Auditor of State
APT – Advanced Placement Tests
BMV – Bureau of Motor Vehicles
CAB – Change Advisory Board
CCIP – Comprehensive Continuous Improvement Plan
CEO – Chief Executive Officer
CIO – Chief Information Officer
CMM – Capability Maturity Model
CMMI – Capability Maturity Model Integration
COBOL – Common Business Oriented Language
CORE - Connected Ohio Records for Educators Systems
DAS OIT – Department of Administrative Services, Office of Information Technology
DR – Disaster Recovery
DRBCP – Disaster Recovery and Business Continuity Plan
EMIS – Education Management Information System
ESC – Educational Service Centers
FERPA – Family Education Rights Privacy Act
FTE – Full-Time Equivalent
FY – Fiscal Year (state)
GAGAS – Generally Accepted Government Auditing Standards
GED – General Education Development
GOES – Global Organizational Efficiency Survey
GRF – General Revenue Fund
IDEA - Individuals with Disabilities Education Improvement Act of 2004
IDEAL – Initiating, Diagnosing, Establishing, Acting, and Learning
IEP – Individual Evaluation Plan
IFFS – Issues for Further Study
IHE – Institutions of Higher Education
IT – Information Technology
ITC – Information Technology Center
ITIL – Information Technology Information Library
ITO – Information Technology Office
KRA-L – Kindergarten Readiness Assessment-Literacy
LEA – Local Education Agency
LEP – Limited English Proficient
LPDC – Local Professional Development Committee
MDE – Minnesota Department of Education
MDESE – Massachusetts Department of Elementary and Secondary Education
MOO – Management Operations Oversight

NDIA – National Defense Industrial Association
OAAT – Ohio Academic Assessment Test
OAC – Ohio Administrative Code
OACS-E – Ohio Academic Content Standards-Extended
OAKS – Ohio Administrative Knowledge System
OBR – Ohio Board of Regents
OBM – Office of Budget and Management
ODE – Ohio Department of Education
ODJFS – Ohio Department of Jobs and Family Services
ODOT – Ohio Department of Transportation
OGT – Ohio Graduation Test
OPES – Ohio Principal Evaluation System
OPT – Ohio Performance Team
ORC – Ohio Revised Code
OSEP – Office of Special Education Programs
OTELA – Ohio Test of English Language Acquisition
OTES – Ohio Teacher Evaluation System
PARCC - Partnership for Assessment of Readiness for College and Careers
PMI PMBOK – Project Management Institute’s Project Management Body of Knowledge
PMO – Project Management Office
QA – Quality Assurance
QSCF – Quality School Choice and Funding
RACI – Responsible Accountable Consulted and Informed (Project Management tool)
RFP – Request for Proposal
RFQ – Request for Quote
RIMS – Records Information Management System
ROI – Return on Investment
RttT – Race to the Top
SACC – School-Age Child Care
SAT – Scholastic Assessment Test
SBOE – State Board of Education
SDLC – Software Development Lifecycle
SEI – Software Engineering Institute
SFSF – State Fiscal Stabilization Fund
SLA – Service Level Agreement
SLO – Service Level Objectives
SOA – Service-Oriented Architecture
SOCC – State of Ohio Computer Center
SPP – State Performance Plan
SQL – Sequel
SSID – Statewide Student Identifier System
TA – Technical Assessment
TFS – Team Foundation Server
TO – Tables of Organization
TOC – Test Operations & Communications
WOO – Weekly Operational Oversight

VIII. CLIENT RESPONSE

The letter that follows is ODE's official response to the performance audit. Throughout the audit process, staff met with Department officials to ensure substantial agreement on the factual information presented in the report. When the Department disagreed with information contained in the report and provided supporting documentation, revisions were made to the audit report.



**Department
of Education**

John R. Kasich, Governor
Dr. Richard A. Ross, Superintendent of Public Instruction

June 28, 2013

David Yost
Auditor of State
88 East Broad Street, 5th Floor
Columbus, Ohio 43215

Dear Auditor Yost:

The Ohio Department of Education would like to thank you and the Ohio Performance Team for the work you have done analyzing the operations of our agency.

We are committed to ensuring that the tax dollars entrusted to our agency are used to the maximum benefit for the boys and girls of Ohio. As noted in the audit, ODE has already begun implementing many of the improvements your office has recommended. We will carefully study all the recommendations as we strive to maximize the department's operations.

Thanks again to you and your staff for working with us on this important project.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard A. Ross". The signature is written in a cursive style with a large, looping initial "R".

Richard A. Ross
State Superintendent of Public Instruction

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Dave Yost • Auditor of State

OHIO DEPARTMENT OF EDUCATION

FRANKLIN COUNTY

CLERK'S CERTIFICATION

This is a true and correct copy of the report which is required to be filed in the Office of the Auditor of State pursuant to Section 117.26, Revised Code, and which is filed in Columbus, Ohio.

Susan Babbitt

CLERK OF THE BUREAU

CERTIFIED
JULY 1, 2013