



Office of
Information Technology

Information Technology Transformation Plan

December 2012

Revision History

Version	Date	Description	Revised By
1.0	11/7/12	<ul style="list-style-type: none"> • Clarified Application types: Enterprise, Infrastructure, and Proprietary. • In Communications section, stressed employee opportunities. • Reduced emphasis on Hackett Study. • Clarified on-going role of the MAC. • Clarified relationship between Service Desk, Field Support, NOC, and Applications Service Desk. • Clarified the role of Transformation Office and Advisory Board within the Executive Governance Committee. 	K. Schafer
1.1	11/30/12	<ul style="list-style-type: none"> • Revised name of Central Planning subcommittee. 	V. Craig
1.2	12/11/12	<ul style="list-style-type: none"> • Added Workforce Transformation subcommittee. • Moved supporting documentation to Appendix. • Revised section order. 	K. Schafer/V. Craig

Contents

- 1 Executive Overview1
- 2 Introduction.....2
 - 2.1 Background and Current Capabilities.....2
 - 2.2 Scope4
 - 2.3 Strategic Objectives6
 - 2.4 Legislative Responsibilities8
- 3 IT Transformation 10
 - 3.1 Transformation Leadership 12
 - 3.1.1 Executive Governance Committee Principles..... 12
 - 3.1.2 Executive Governance Committee Purpose 13
 - 3.1.3 IT Transformation Subcommittees 14
 - 3.1.4 Role of the LMC and the MAC 16
 - 3.2 Transformation Approach 16
 - 3.2.1 Optimization Framework..... 16
 - 3.2.2 Approach Rationale 17
 - 3.3 Preparatory Phase 18
 - 3.3.1 Preparatory Phase Initiation..... 18
 - 3.3.2 Preparatory Phase Deliverables 19
 - 3.4 IT Transformation Proposed Savings Targets 20
- 4 IT Transformation Subcommittee Specifics..... 22
 - 4.1 Transformation Office 22
 - 4.2 Advisory Board 23
 - 4.3 Subcommittee Roles and Responsibilities..... 24
 - 4.3.1 Network Operations 24
 - 4.3.2 Data Center Operations (Server and Storage)..... 25
 - 4.3.3 Financial Management and Cost Recovery 27
 - 4.3.4 Unified Communication and Infrastructure Applications 28
 - 4.3.5 Enterprise Applications..... 30
 - 4.3.6 Security 31
 - 4.3.7 Business Relationship Management 32

4.3.8	Enterprise Planning—Sourcing and Vendor Management	33
4.3.9	Workforce Transformation.....	35
5	Governance	37
5.1	Enterprise IT Investment Board.....	38
5.1.1	Role of the Value Management Office (VMO)	39
5.2	Enterprise IT Steering Committee	39
5.3	Enterprise IT Working Groups	39
5.4	Enterprise Architecture Review Committee.....	40
5.5	Enterprise IT Governance Charter	40
6	Transformation Considerations.....	42
6.1	Baselines.....	42
6.1.1	Financial.....	42
6.1.2	Staffing.....	44
6.1.3	Customer Satisfaction.....	45
6.2	Federal Considerations.....	46
6.2.1	OMB Circular A-87	46
6.2.2	Business Associate Requirements	46
6.2.3	IRS Publication 1075: Tax Information Security Guidelines	47
6.3	Functions to Consider In-scope for Optimization.....	47
7	Risk and Risk Mitigation	50
8	Transforming the Organization	53
8.1	Proposed Organizational Structure	53
8.1.1	Project Management Office (PMO).....	54
8.1.2	Enterprise Applications Delivery	56
8.1.3	Security and Privacy.....	57
8.1.4	Finance and Administration	58
8.1.5	Infrastructure Delivery	58
8.1.6	Relationship Management	58
8.1.7	IT Investment and Governance	59
8.2	Workforce Considerations.....	60
8.2.1	Resistance to Change.....	60

8.2.2	Departmental Personnel and Related Spend	61
8.2.3	Retirements	63
8.3	Other Concerns.....	64
9	Communications.....	66
10	Additional Information	66
Appendix A: Organizational Observations.....		67
Enterprise Architecture (EA).....		67
Project Management.....		69
Network Readiness.....		70
Service Delivery		71
Appendix B: Virginia’s Information Technology Association (VITA) Federal Issues and Results.....		73
Appendix C: Financial Baselines		78
Appendix D: Transformation Case Studies.....		81
Appendix E: IT Job-Related Class Codes		82
Appendix F: IT Service Management.....		83
Service Delivery Model.....		83
Service Catalog		84
Service Level Management (SLM)		84
Client Support Model		85
Managed Client Environment.....		87
ITIL Framework.....		88
Incident and Problem Management.....		88
Service Level Management (SLM)		89
Service Level Metrics		89
Conclusion		89

1 Executive Overview

This page serves as a placeholder for the Executive Summary, which is being drafted.

2 Introduction

Ohio is primed and poised to initiate a full-scale IT transformation. This transformation will result in numerous benefits for the state including decreased costs and increased efficiencies.

This section outlines the scope of Ohio's IT Transformation Plan and the guiding principles and strategic objectives of the plan and team. In addition, this section captures a current and historic view of the Office of Information Technology (OIT) in Ohio.

2.1 Background and Current Capabilities

Decades of decentralized IT management and spending have created an imbalanced IT asset portfolio. Each year more and more resources are dedicated to supporting highly distributed, non-standard infrastructures with fewer resources directed toward systems to support the agencies' business missions and the citizens they serve. State agencies are heavily invested in maintaining and supporting their own agency infrastructures. With continually increasing state investments, the current federated, decentralized IT environment is not sustainable. The costs and resource commitments associated with maintaining multiple IT infrastructures and organizations are simply too great. Ohio must be innovative in its approach to delivering IT services and implement what makes the most sense for the state and its taxpayers.

The majority of Ohio's 26 cabinet agencies and over 70 boards and commissions are managing their own IT infrastructures. Tactical plans have been developed to begin addressing these concerns based on the capabilities of the current organization. These tactical plans are defined in the OIT "Information Technology Initiatives" document. While these initiatives are moving IT in Ohio forward, fully addressing Ohio's long-term IT needs demands a much broader focus—a complete transformation in the delivery of technology goods and solutions throughout the state. A transformation that enables technology personnel within a particular agency to concentrate on providing proprietary business application needs and enables the central IT organization to concentrate on providing core IT infrastructure services and enterprise application solutions to all Executive Branch agencies.

Several studies have been conducted by various organizations concerning Ohio's delivery of IT services. Many of these studies arrive at the same conclusion—the highly distributed, autonomous, non-standards based approach to delivering IT services within the State of Ohio, comes with significant cost and lost opportunities. To address this issue, Ohio must look to transform the delivery of IT services to a more consolidated, centralized, and standards-based approach.

Due to the size and scope of services provided by the State of Ohio, transforming the delivery of technology services to state agencies will be complex. The following provides perspective:

- Ohio's Executive Branch annual IT-related spend continues to increase, with total IT related spend for fiscal year 2012 exceeding \$830 million.
- Ohio employs over 2,500 full-time IT professionals. According to the 2008 Hackett Benchmark Study, Ohio has more IT infrastructure headcount and spends more on labor compared to industry benchmarks.
- Over 1,600 applications exist in the state's inventory with more than 20% being greater than 10 years old, and 54% being greater than 5 years old. Systems in the 10- to 20-year vintage are nearly two times as expensive to operate.
- According to the 2008 Accenture study, more than 46% of state IT spend is dedicated to IT infrastructure operations which is out of proportion with more optimized organizations.
- Significant duplication exists in IT infrastructure and IT service delivery which drives costs. Most agencies perform common IT infrastructure functions in-house.
- A variety of voice, data, and PBX network services are implemented statewide with few common elements. This lack of standardization and duplication increases costs.
- The state has over 30 data centers or server concentrations.
- Most agencies manage their own statewide networks:
 - Multiple email systems operate on different technologies and with different naming conventions (first.lastname@agency.state.oh.us or first.lastname@agency.ohio.gov) on different platforms (such as, Exchange, Lotus Notes, or Novell). Over 200 different email domains exist within the Executive Branch.
 - Eleven agencies operate 17 help desks.
 - 5,000+ servers drive management, integration, and operational complexity.
 - A tremendous amount of duplication of IT services exists between OIT and agency in-house staff.
 - Security practices for data and systems are not consistently applied across agencies.
 - According to the 2008 Accenture study, the use of shared solutions provided by a central IT organization is much less than peer state government comparisons.
 - While most agencies reported having a Disaster Recovery plan, they do not have a dedicated live Disaster Recovery site for the agency.

Although this will be a challenge, in order to sustain a viable technical infrastructure in the future, IT service delivery transformation is necessary. Autonomy and lack of standards drive IT costs, promote interagency technical incompatibilities, stifle the innovative roll-out of new technologies, result in citizenry confusion, and leave the state vulnerable to outside security threats.

The State of Ohio currently has approximately 54,000 end users. According to Gartner's 2011 Government State and Local vertical survey, the average IT spend per end user is \$7,773. According to the 2008 Hackett Benchmark Study, the average IT spend per end-user in Ohio is \$9,364. By putting plans in place allowing Ohio to lower IT cost to the state and local vertical average, the state would save in excess of \$86 million each year.

2.2 Scope

Gartner research indicates that shared services and centralization, both for IT and for non-IT functions, can help reduce operating costs through the colocation of people and assets, elimination of duplicate contracts, services, and personnel, leveraging of bargaining power vis-à-vis the suppliers, and the long-term improvement of service management.

Through this IT Transformation initiative, Ohio will be moving to a shared solutions model for the delivery, support, maintenance, and modernization of Ohio's IT infrastructure, enterprise and infrastructure applications, and enterprise IT governance across all Executive Branch agencies.

Proprietary business applications, those used solely within a department or agency, will remain the responsibility of that particular entity, but the IT infrastructure on which these applications reside will be provided by the transformed central IT organization. Leveraging shared services of "common" applications, such as email, across organizations will allow agencies to redirect management attention and resources towards business mission activities.

Applications are defined in three broad categories:

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.

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 Tax Collection and Voter Registration. It is expected that Proprietary Business Applications will be managed in a decentralized fashion by the agency receiving value from that application.

Agency CIOs will be directly responsible for the full lifecycle support of Proprietary Business Applications which includes:

- **Application rationalization**—Consolidating, migrating, and retiring agency applications in order to improve the business value delivered by the application portfolio and reduce the cost.
- **Application modernization**—Transitioning the agency application portfolio to more modern languages, architectures, and runtime environments.
- **Application simplification**—Meeting agency expectations by understanding the context of their requirements and eliminating superfluous features that make applications difficult to use.
- **Application standardization**—Standardizing business processes and performance measures across the organization, incorporating the best ideas from across the enterprise, and driving change in performance.

Agency CIOs will be responsible for managing the portfolio of proprietary business application projects that specifically impact their agencies. This portfolio management role will include continuously identifying unmet needs to be addressed by new projects, terminating or turning around poorly performing projects, and retiring IT investments which no longer meet the needs of the organization. In addition to portfolio management and working in conjunction with the central IT organization, agency CIOs will have responsibilities for these areas: exploring new and emerging technologies that can add business value to their agency, lowering IT operational costs, terminating and turning around troubled projects, delivering meaningful functionality at a faster rate, ensuring IT business applications are in compliance with federal and state regulations, and enhancing the security of information systems.

The state’s technical infrastructure, enterprise and infrastructure applications, and IT governance will be centralized into an IT shared solutions model as part of this transformation initiative. This includes, but is not limited to, the following:

Technical Infrastructure	Enterprise and Infrastructure Applications	Governance
Data Center Operations	VOIP	IT Standards
Network Operations	Email	IT Policy
Server and Storage	Document Management	IT Investment Management
Cyber Security	Portal Delivery	IT Strategic Planning

Technical Infrastructure	Enterprise and Infrastructure Applications	Governance
Disaster Recovery	Eligibility	IT Architecture
Telephony and Telecom	OAKS	IT Portfolio Management

Table 2.2

The list above is not comprehensive; however, it suggests the scope and magnitude of this transformation effort.

In order to measure the overall success of this initiative and progress towards that success, numerous baseline metrics will be gathered both centrally and at an agency level. Financial baselines will be based on actual IT related expenditures in fiscal years 2010, 2011, and 2012. After the IT Transformation is complete, the State of Ohio should fully expect to realize the following benefits:

- Optimized workforce and reduced labor cost.
- Improved skill utilization and greater career opportunities for IT infrastructure workforce.
- Reduced costs for IT hardware purchases and maintenance.
- Increased levels of customer satisfaction.
- Improved privacy and security over Ohio’s information and technology assets.
- Avoided real estate costs.
- Enhanced disaster recovery and business continuity.
- Reduced costs in facilities maintenance and utilities.
- Improved performance and higher levels of service due to standardization.
- Increased buying power due to scale and standardization.
- Decreased carbon footprint due to reduction in power and equipment consumption.

The transformation initiative can proceed in many ways. Regardless of the approach, it is intended that the transformed central IT organization will be staffed through the transfer, loan, and/or hiring of IT professionals currently distributed within various agencies.

2.3 Strategic Objectives

The primary strategic business objectives for IT Transformation are as follows:

- **Achieve resource savings through economies of scale and the elimination of duplicative activities.** When moving to an environment where all agencies are using standard IT infrastructure solutions under centralized management and following the same procurement processes, duplicative and redundant systems are consolidated and the state’s buying power can be leveraged to the maximum extent possible, economies of

scale are created that can be tracked and maintained in a much more efficient manner. Human and financial resource savings are an inevitable byproduct.

- **Improve the IT business decision-making process.** Common policies, standard business processes, and greater access to information can provide improved decision making. In the case of integrated data systems, the increased availability of cross-agency information can result in more effective decision making, investment management, and prioritization of IT initiatives across the enterprise.
- **Free-up agencies to focus on their primary mission and core competencies.** Today, Ohio agencies are responsible for delivering specific services to their constituents, in addition to supporting the IT infrastructure required to deliver those services. Through IT Transformation, agencies will be able to fully concentrate on the critical services they provide to the citizens of the state, while using the central IT organization to provide secure, reliable, cost-effective IT infrastructure and enterprise application solutions to the agency.
- **Leverage savings to innovate, modernize, and continually upgrade through the reinvestment of funds.** Optimization and shared solutions are not just about saving money; they are also about freeing up resources to reinvest. Currently, the State of Ohio supports many obsolete technologies. Over 1,600 applications exist in the state's inventory with more than 20% being greater than 10 years old, and 54% being greater than 5 years old. Systems in the 10- to 20-year vintage are nearly two times as expensive to operate. Through reinvestment, the central IT organization will be able to put major systems on a continuing upgrade path. The transformed central IT organization must advocate for the need to reinvest realized savings. If the enterprise can reallocate assets and reinvest savings, the state will be able to establish technology refresh programs keeping technology current while maintaining low service rates.
- **Provide enhanced solutions delivery to both internal customers and the citizenry of the state.** The current trend toward "one-stop shops," coupled with constituent expectations of a seamless experience when dealing with government, is driving the need to optimize our applications delivery process. This is especially true of those that are directly citizen facing and must ensure that customers can be served from central data repositories, portals, and email. A citizen applying for several state issued licenses, or dealing with several service agencies in one session should be able to access them all from a single portal and only be required to enter his/her personal information one time.
- **Improve security of the state's mission critical systems and constituent information.** Security will increase through consolidation since there will be fewer

endpoints for attack. The central IT organization will be better able to target and prioritize capital investments needed in critical security infrastructure. Additional security concerns from having concentrated assets that can be compromised will be mitigated through continuous monitoring, routine patching, disaster recovery, and business continuity planning.

- **Standardize technology use, procurement, and contracting.** In order to optimize IT spend within the State of Ohio, it is necessary to both standardize technology and the processes used to acquire technology. This does not mean that a single vendor needs to be selected in each solution space. A reduced number of vendors will allow the state to take advantage of greater volume discounts by using more aggressive negotiating postures, will require less differentiated skills to support, and will reduce the overall cost to procure and support IT.
- **Effective use of IT professionals.** Today more than 2,500 IT professionals are scattered across more than 40 different agencies. Over 32% of these employees will be eligible to retire within the next 5 years. At this time, there is extreme diversity in the skills needed to support many different technologies from one agency to the next. By reducing the number of technologies, Ohio will now be able to develop deeper skills across fewer technologies, and in the long term become more self-sufficient with less dependence on outside technical expertise. Today, Ohio spends over \$126 million each year for IT contract and consulting resources.
- **Align enterprise applications with business goals.** Maximize application functionality by mapping business processes into the application workflow. Eliminate duplicative applications that serve the same business function. Develop common business processes around the analysis of business needs and objectives, define the business user's needs, determine functional requirements, and document and map critical business processes. Additionally, protect electronic business data through the development of policies, practices, and procedures to ensure recovery point objectives (RPOs), recovery time objectives (RTOs), and information classification requirements are fully met.

2.4 Legislative Responsibilities

The CIO for the State of Ohio has both the mandate and authority to transform the delivery of IT services within the Executive Branch. Under 125.18 of Ohio Revised Code, the State CIO shall lead, oversee, and direct state agency activities related to information technology development and use. In that regard, the State CIO shall do all of the following:

- Coordinate and superintend statewide efforts to promote common use and development of technology by state agencies. OIT shall establish policies and standards that govern and direct state agency participation in statewide programs and initiatives.
- Establish policies and standards for the acquisition and use of common information technology by state agencies, including, but not limited to, hardware, software, network, technology services, and security, and the extension of the service life of information technology systems, with which state agencies shall comply.
- Establish criteria and review processes to identify state agency IT projects or purchases that require alignment or oversight. As appropriate, the Department of Administrative Services shall provide the Governor and the Director of Budget and Management with notice and advice regarding the appropriate allocation of resources for those projects. The State CIO may require state agencies to provide, and may prescribe the form and manner by which they must provide, information to fulfill the State CIO's alignment and oversight role.
- Establish policies and procedures for the security of personal information that is maintained and destroyed by state agencies.

3 IT Transformation

Too often IT transformation is directly correlated with consolidation, but true IT transformation goes far beyond consolidation. There are compelling technical and financial reasons in favor of IT transformation associated with a move to a shared services delivery model consisting of the consolidation, centralization, and standardization of people, processes, and technologies (hardware and software). It is important to remember that unless the state undertakes a strategic approach to transformation early on, it is likely to end up worse-off post-transformation than pre-transformation. As noted by Cisco in their evaluation, this transformation is much more than a series of technical projects. It is more of a multi-phased, optimization, standardization, and integration program of people, processes, and technologies, where certain aspects are vital to the long-term success of the state's transformation to a new environment: committed strategy, governance, customer relationship management, employee development, and financial sustainability through effective chargeback planning.

Migration to an IT shared solutions organization requires initial upfront investment and a formal governance structure, which includes active stakeholder participation. The entire organization may be on board regarding the effort but their motivations are not usually the same. Each stakeholder has different incentives. The finance office may be focused on Return on Investment (ROI), the CIO on overall IT cost reduction, business leaders on operational efficiency, and the operational manager on reclaiming data center space. Then, there will be others downstream who will feel discomfort due to impending change and/or loss of control, so these individuals will likely resist change and fight to retain control of what they have today.

The objective of this section is to present an approach to developing an IT shared solutions transformation plan. This transformation plan, at minimum, should articulate the objectives, scope, planned schedule, future service levels, assumptions, risks, proposed organizational structure, and quantifiable and intangible benefits. The plan will be the foundation of the governance body decision-making process and should be structured to yield optimization value in as little as 12 months. The plan will not only help establish consensus and convey strategic intent but also enable effective organizational communications of the impending change.

Knowing the current state of the enterprise, including agreed upon baseline spending, is imperative to the development of the business case and for measuring progress moving forward. An accurate inventory of legacy assets including hardware, software, applications, and resources will help ensure objectives are realized. Identification of all hardware and software components must be known to accurately determine ROI and develop migration plans with low risk. These facts help the following:

- Map dependencies
- Facilitate potential leveraging of existing assets
- Avoid duplicate purchases
- Assist in the planning of critical upgrades
- Ensure a successful transition to the end-state with measureable outcomes

Like most IT transformation efforts, Ohio’s approach is essentially a “backward consolidation”—an attempt to undo the IT sprawl generated over the years. The planning phase of this initiative should be used to set the vision for the future by discussing “forward consolidations” that will prevent future sprawl. While future requirements are difficult to accurately predict, forward consolidation plans with elements like a well-structured architecture and standardization, contribute to realizing consistently high value to the enterprise.

Most states today are faced with conflicting goals and challenges. They have geographically distributed workforces, with offices, data centers, and mobile workers scattered widely. Everyone needs to access email, file shares, and mission critical applications, and the speed of access directly ties to employee productivity. Over the years, computing resources have been widely deployed in many locations to give the local workers the best possible service delivery. However, this approach is now seen as wasteful and expensive with extra hardware and software to buy and maintain for many locations, and often few local IT staff to support the systems. As budgets get tighter, states are looking for solutions to handle this burden. IT consolidation, centralization, and standardization is the number one approach today, taking infrastructure out of remote offices and into the main data center as a way to cut costs and boost IT staff productivity. The trick is how to consolidate without negatively impacting the performance of end users.

Virtually every state has attempted some form of IT transformation or targeted consolidation effort in order to more effectively use taxpayer resources and to improve government services. A number of approaches to IT transformation have been undertaken within state governments. Due to the degree of complexity associated with the transformation of IT applications and services, the most common approach to transformation is IT infrastructure consolidation and standardization followed by applications. This is largely because of the complexity in trying to identify the normalized business processes required to consolidate applications. Furthermore, having a robust and well managed infrastructure available to house the consolidated applications eliminates one potential source of performance and availability problems for the consolidated applications. After the infrastructure consolidation has been successfully undertaken, it is then possible to focus on enterprise applications. This is not to say that infrastructure applications (such as email, Voice over Internet Protocol (VoIP), and Instant Messaging (IM)) should not be

moved to a centrally managed organization, but that the true optimization of these applications will likely have dependencies on network, server, and storage infrastructures being consolidated first.

It is critical to remember that moving forward with transformation or optimization without a defined governance model (policies, practices, procedures, baseline performance metrics, Service Level Agreements (SLAs)) can introduce significant risks to the newly consolidated organization. This plan articulates the framework to address these risks.

3.1 Transformation Leadership

A transformation initiative of this size and complexity must have dedicated senior leadership participation and championing to ensure its successful execution and to streamline its adoption.

The Executive Governance Committee leading this transformation initiative should be comprised of the State CIO and other strong state leaders, representing various agencies, with subject matter expertise in one or more of the following areas:

- Enterprise Security
- Networks Operations
- Data Center Operations (Server and Storage)
- IT Financial Management and Cost Recovery
- Unified Communication and Infrastructure Applications (email, VoIP, IM, and so on)
- Enterprise Applications
- IT Governance
- Business Relationship and Stakeholder Management
- Enterprise Planning—Sourcing and Vendor Management
- Communications and Project Coordination
- Workforce Transformation

These team members will be selected by the State CIO and will comprise the Executive Governance Committee. The State CIO will chair the Executive Governance Committee.

3.1.1 Executive Governance Committee Principles

The Executive Governance Committee will be committed to the following principles:

- Finding solutions that will lower the total cost of technology across the state.

- Working with agencies to define customer expectations and to define service level agreements and measure progress in order to meet these expectations and to achieve even higher service levels in the future.
- Pursuing the highest quality solution at the lowest possible cost without regard to personal bias or self-preservation.
- Pursuing change and continuous improvement with a sense of urgency, and continually looking for opportunities to consolidate, centralize, and standardize technology when the outcome will provide better security, increased reliability, and/or lower costs.
- Realizing that the state is a trusted custodian of highly confidential and sensitive information and the team's recommendations must ensure that the citizen and business information entrusted to the state is protected. Nothing will be done to jeopardize security or the public trust associated with this critical asset.
- Focusing on solutions that meet the needs of the state, not necessarily those that satisfy the wants or desires of a specific agency.
- Working as a team and respecting co-workers and peers.
- Treating all employees fairly and with respect as the transformed central IT organization is staffed.
- Ensuring that progress on the transformation initiative is communicated to all stakeholders and impacted agencies.

3.1.2 Executive Governance Committee Purpose

The primary function of the Executive Governance Committee is to participate in the planning and oversight of the IT transformation and operational initiatives. All members of the Executive Governance Committee are responsible for ensuring that the business of IT is efficient and effective and that state business needs are being met. They will ensure sound operational and development principles are established and followed and that the overall investment in IT continues to deliver the maximum value to the state.

Working with various subcommittees, the Executive Governance Committee will ensure the following deliverables are produced:

- Enterprise Policies and Procedures, covering the following:
 - Account Management
 - Problem Management
 - Change Management
 - Configuration Management
 - Asset Management

- Project Management
- Chargeback/Funding Models
- Consolidated Enterprise Service Catalog
- Performance Management Program, both internally and through the Value Management Office
- Strategic Plan Development
- Service Disruption and Escalation Procedures
- IT Communications Plan

It is anticipated that several Executive Governance Committee members will chair subcommittees dealing with a specific service delivery area of IT.

The specific roles of the Executive Governance Committee are as follows:

- Set the direction and vision for the IT Transformation initiative.
- Agree on the scope and objectives for this initiative, any change in scope must be approved by the Executive Governance Committee.
- Monitor progress, including results and outcomes identified by the Value Management Office and facilitate acquiring appropriate resources.
- Provide insight on long-term strategies in support of IT Transformation.
- Provide formal review of initiative deliverables and approve IT Transformation initiative communications.
- Lead functional subcommittees, as appropriate.

3.1.3 IT Transformation Subcommittees

Executive Governance Committee members that chair subcommittees should not only be strong leaders, but also subject matter experts in one or more IT Service Delivery areas. As a leader of a functional subcommittee, it is also important that Executive Governance Committee members have a broad understanding of project management concepts and can apply those concepts.

The following are the subcommittee deliverables:

- Inventory and analyze current state assets supporting the subcommittee's function, this includes hardware, software, contractors, employees, and so on.
- Inventory and analyze existing contracts for hardware and software support and maintenance.
- Establish financial and service delivery baselines.

- Collect concerns and service requirements from key stakeholders.
- Define the tactical state; what can be done in the short-term to ensure current initiatives, such as VOIP and Identity Management can continue, but still fit into the longer-term vision without significant redesign.
- Define the end state—what do we want this service delivery function to look like three to five years down the road.
- Perform a gap analysis.
- Develop the optimization recommendation for each functional area; this recommendation should include “quick wins” that can show progress within the next 12 months.

The following illustrates the proposed subcommittees. All subcommittees will have an assigned project manager. Boxes marked with a “*” should have a Solutions Architect assigned to the team.

NOTE: Solutions Architects are further discussed in Appendix A: Organizational Observations.

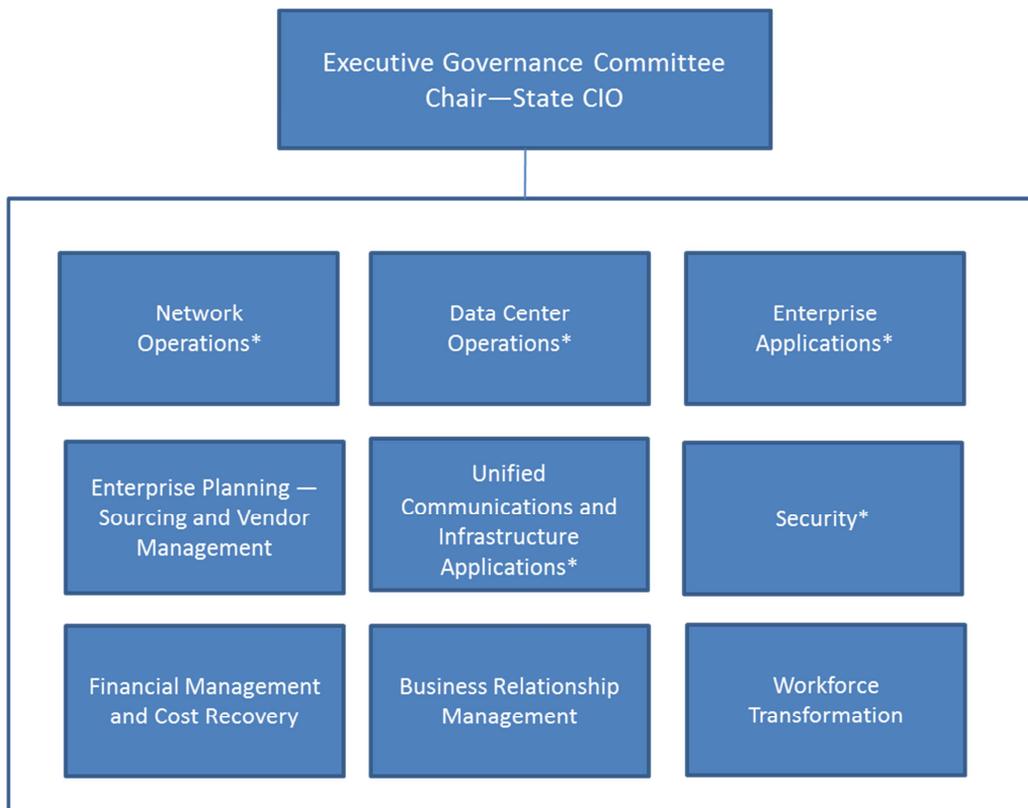


Figure 3.1

3.1.4 Role of the LMC and the MAC

It is expected that the IT Transformation initiative will result in the shifting of many IT related activities and will redefine the roles and responsibilities of many IT leaders across the Executive Branch. It is also expected, and recommended, that several members of the LMC and/or MAC will be asked to serve on the Executive Governance Committee or an associated subcommittee. It is recognized that many of the activities of the Executive Governance Committee will overlap with activities currently defined within the LMC charter. As such, it is recommended that the LMC be temporarily disbanded until the IT Transformation team redefines and communicates the role of this entity. It is also recommended that the MAC continue to function as defined within its existing charter with a significant focus on vetting IT Transformation team recommendations and to be a communications channel to their respective organizations on IT Transformation related initiatives. This should not be considered a substitute for the development of a formal communications plan; rather the MAC will be integrated into the formal IT Transformation communications plan to ensure uniform messaging across the enterprise.

3.2 Transformation Approach

Given the progress on current OIT initiatives and the strategic approach as defined in the OIT “Information Technology Strategy”, it is recommended that Ohio pursue a transformation approach based on a functional optimization strategy, specifically targeting IT infrastructure, shared applications, and enterprise planning as the initial optimization targets.

This transformation approach will allow the State of Ohio to move forward with IT Transformation in a very methodical and controlled fashion. It is recommended that the Executive Governance Committee specifically define IT functions that will be consolidated into the newly transformed central organization and move aggressively to an interim state, where these functions are managed by the central IT organization. Table 6.3 illustrates an initial proposal for the distribution of responsibilities by IT function.

3.2.1 Optimization Framework

In order to pursue transformation, an optimization framework is recommended which will guide transformation activities. The framework is broken down into multiple phases—a Preparatory phase and a series of phases for each functional area. The Preparatory phase is designed to ready the organization to support centralized IT services and the subsequent phases are designed to address actual transformation activities. This document focuses on the initial Preparatory phase of the transformation initiative. Various subcommittees will be formed to develop subsequent phases directly associated with actual transformation activities.

During the Preparatory phase, it is recommended that the initiatives defined within the “Information Technology Initiatives” document continue—but with caution. Although it is possible to proceed with these initiatives, it may not be practical to pursue full-service optimization until many of the infrastructure consolidation activities are complete, specifically those consolidation and standardization activities dealing with network, server, and storage optimization efforts. From the initial review of several of these projects, the focus is on consolidation, with limited focus on the governance associated with the consolidated service moving forward, such as architecture, policies, practices, and procedures needed to support and maintain the newly consolidated services. As functional subcommittees mature, some of these initiatives will likely transition in ownership to one of the defined functional subcommittees where governance issues should be addressed.

The Preparatory phase should concentrate on data gathering and verification activities such as developing or reviewing an inventory of existing assets, facilities, contracts, IT personnel, and other operational and financial information that can be used to establish current baselines. After the Preparatory phase, subcommittees will then concentrate on developing plans to optimize within each functional area (such as server virtualization, combining of network links, and standardizing platforms). In addition, these subcommittees will focus on establishing common platform architectures and technology standards guiding technology procurement going forward so the amount of investment in legacy platforms is minimized. Although Ohio should expect to see positive financial results within the first 12 months of the start of this transformation initiative, all should recognize the transformation to an enterprise shared solutions environment will be a multi-phase, multi-year initiative.

3.2.2 Approach Rationale

Having studied other state’s experiences, the choice to focus on infrastructure optimization before IT application or service optimization is prudent. As a recap, the specifics of focusing on infrastructure first are driven by the following factors:

- The initial cost to consolidate infrastructure will be less than IT applications or services.
- The optimization of infrastructure is less complex than business function or service consolidation.
- Since applications and program services rely on the network, server, and storage infrastructure, it makes sense to ensure that infrastructure and infrastructure services are robustly implemented before starting to address service or business function optimization, but in many cases it will not be practical or prudent to hold application and program service initiatives until after underlying infrastructure initiatives are complete. In instances where applications and program services are initiated prior to the completion of underlying infrastructure initiatives, the state needs to recognize that moving forward

with applications and program services does pose some degree of risk and that further work may be required to fully integrate these services once underlying infrastructure initiatives are complete.

- Infrastructure optimization value will be easiest to define and capture.

To successfully achieve infrastructure optimization, the following disciplines are expected to be transformed in a phased manner:

- Enterprise architecture
- Physical and logical security of networks and systems
- Network design, administration, operation, and management (including support of remote network access points and devices)
- Systems (mainframe, servers, and storage) and storage design, implementation, administration, operation, and management
- Enterprise disaster recovery
- Enterprise asset management
- Procurement and contracting
- Portfolio and investment management

The following disciplines are expected to continue to be located in the agencies and reporting to the agencies:

- Business Application development and support processes (QA and business analysis)
- Business Application specific help desk support
- Business Applications administration (but not server administration)
- Customer liaison

3.3 Preparatory Phase

The Preparatory phase of transformation is designed around defining business requirements for service, defining existing State of Ohio IT resources, determining the type of organization required to support those requirements, and then determining how the organization must be upgraded to support enterprise-wide management.

3.3.1 Preparatory Phase Initiation

This section outlines the high-level activities which must be undertaken to initiate the Preparatory phase. Much data has already been collected and various analysis activities have been performed. Subcommittees will need to thoroughly review all information collected and the associated analysis and confirm the accuracy of both. After this review is complete,

formal recommendations will be presented to the Executive Governance Committee to begin actual transformation activities.

Critical high-level activities that must be completed before proceeding are as follows:

- Form Executive Governance Committee
- Agree on scope and objectives of IT transformation
- Agree on functional subcommittees and who will lead each
- Agree on cost savings targets

After these activities are complete, consideration needs to be given as to who will actually be selected to participate on each subcommittee. Subcommittees will be charged with producing transformation project deliverables, so it is expected that a large portion of a subcommittee member's workday will be committed to this initiative. A considerable amount of information has already been collected, so after teams are formed, they should be able to start conducting their analysis immediately.

3.3.2 Preparatory Phase Deliverables

Although not an exhaustive list, Preparatory phase deliverables should, at minimum, include the following:

- Complete an inventory of IT personnel, contractors, contracted services, assets, networks, and services currently in place within the State of Ohio agencies. In addition, identify the IT services required by each state agency. The goal of this activity is to define assets the State of Ohio currently has in place, determine how these assets are managed, and what effort is required to support them.
- Collect the business requirements for various types of services needed to support business operations and the service levels required for each of those services. This is a critical step as it sets forth the business requirements for the services needed and the service levels for delivering those services. These requirements should include the service level expectations for all application types: Enterprise, Infrastructure, and Proprietary Business Applications.
- Collect any existing customer satisfaction surveys, current IT performance reports, or any existing IT audits. These documents can help give a customer or outside party perspective of the delivery quality of IT services and can give the central IT organization an understanding of any audit findings they may be assuming responsibility for after consolidation.

- Identify the type of organization required to support the assets and services defined, both in the short-term and long-term. The identification of such an organization would include the number of individuals, skills requirements, location requirements, and so on. This step would result in a staffing plan for a transformed central IT services organization.
- Perform a gap analysis of what steps would be required to upgrade the transformed central IT services organization to meet the defined business requirements, service levels, and to support the defined assets and services.
- Define a detailed transformation plan to support the centralization, consolidation, and standardization of all in-scope targeted functions. The transformation will address the order in which functions will be consolidated.
- Define the necessary organizational change plan to enable the transition from the existing organization to the transformed central organization. This would include transition of departmental personnel as required, any required training, and other activities.
- Specifically define which IT functions will be managed within the newly transformed central organization and which ones will remain the responsibility of the agency.

Other activities are not directly within the critical path, but will need to be addressed. These represent organizational preparation activities and include such items as setting up the appropriate governance, defining funding strategies, defining technology standards, aligning procurement with those standards, and defining various processes. These are not direct optimization planning activities but are critical aspects of organizational change required to manage information technology from an enterprise perspective.

3.4 IT Transformation Proposed Savings Targets

Based on the evaluation of the various studies conducted in Ohio and a thorough review of the OAKS financial information, the following top five categories are reasonable target areas for cost reduction through IT Transformation.

Target Area	Annual Cost	Conservative Savings Estimate		Optimistic Savings Estimate	
		%	Amount	%	Amount
Consulting and Contract Services	\$178,700,000	20%	\$35,740,000	30%	\$53,610,000
Hardware and Software Maintenance	\$70,500,000	15%	\$10,575,000	25%	\$17,625,000
Telecommunications	\$46,100,000	20%	\$9,220,000	30%	\$13,830,000
Labor	\$277,800,000	15%	\$41,670,000	25%	\$69,450,000
Hardware and Software Cost Avoidance	\$42,100,000	15%	\$6,315,000	25%	\$10,525,000
Total	\$615,200,000		\$103,520,000		\$165,040,000

Table 3.4

These five categories represent 74% of the total IT spend. This is not to say that the remaining categories representing approximately \$214 million in annual spend should not be closely scrutinized, but that thorough analysis of these top five categories will most likely result in the most significant potential cost saving targets.

The total potential savings targets fall in line with numbers presented in the 2008 Hackett study and current Gartner metrics. Hackett calculated the average cost per end-user in Ohio to be \$9,364. In 2011, Gartner published the state and local government average cost per end-user to be \$7,773. Through the proposed transformation initiative, if Ohio could reduce per end-user cost to the state and local government average, annual savings based on an end-user population of 54,000 would be in excess of \$86 million.

The Hackett Benchmark Study also suggested that Ohio's staffing associated with infrastructure support was 40% above peer states, but it also noted that applications delivery was approximately 20% below peer states. Instead of calculating potential labor savings of up to 40%, assumptions were made that there would be some shifting of labor funds toward applications delivery.

Cost savings targets are based on a thorough, but preliminary analysis of IT related cost. These numbers should be used as initial savings targets, but with expectations that these numbers will change as subcommittees drill into each functional area.

4 IT Transformation Subcommittee Specifics

This section will detail the structure of the Executive Governance Committee and the specific roles and responsibilities of each subcommittee. The graph below depicts the Executive Governance Committee structure:

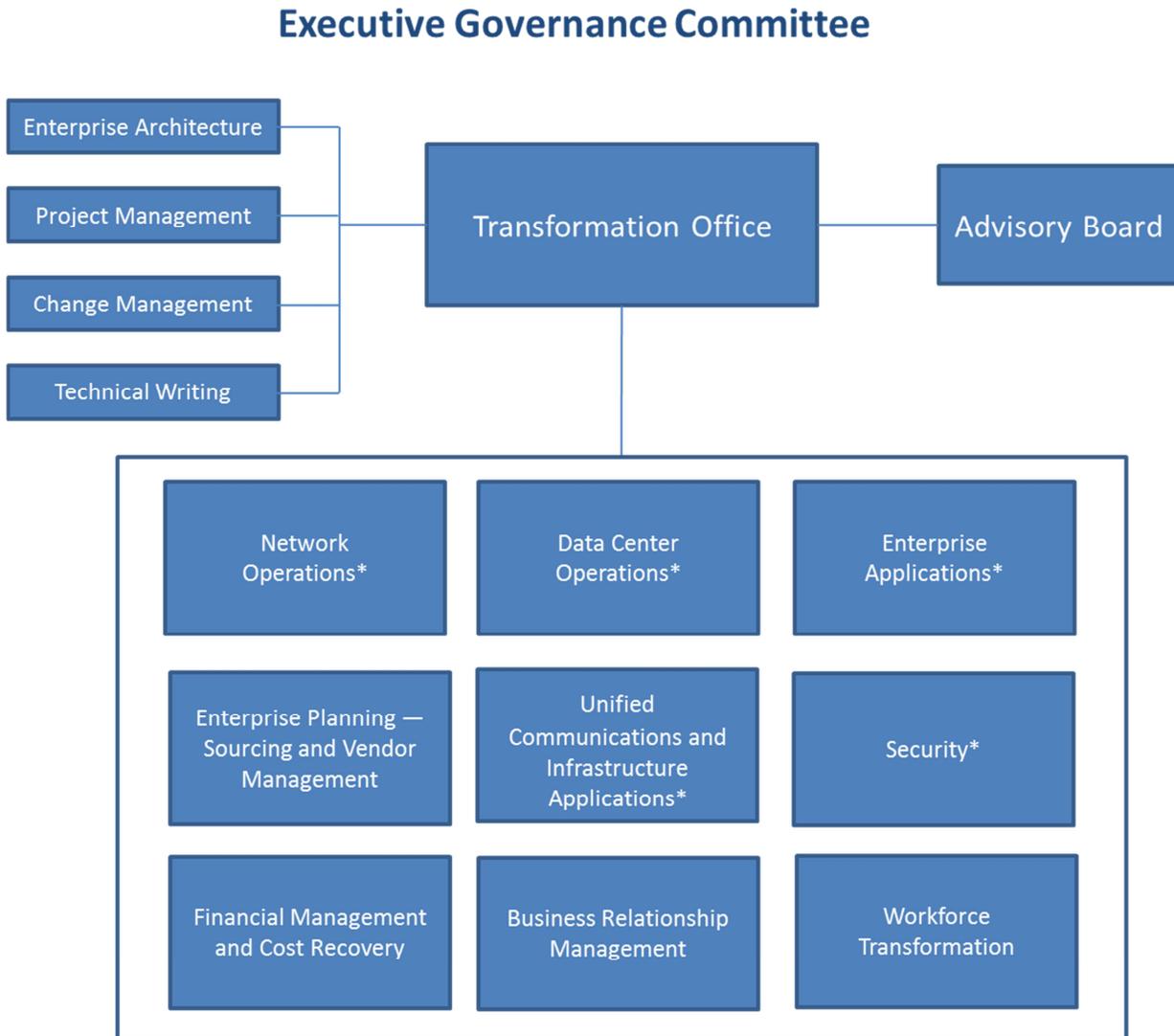


Figure 4.1

NOTE: Boxes marked with a “*” should have a Solutions Architect assigned to the team. Solutions Architects are further discussed in Appendix A: Organizational Observations.

4.1 Transformation Office

The Transformation Office will provide facilitation and central services, such as Project Management, Technical Writing, and Enterprise Architectural expertise, to all the various

subcommittees. Additionally, it is expected that issues, barriers, and concerns that cannot be resolved within a particular subcommittees will be escalated to the Transformation Office for resolution.

The Enterprise Architect assigned to the Transformation Office will be responsible for developing relevant guiding principles, maintaining the current-state business process documentation, and developing the target future-state model. This person will lead a cross functional team comprised of the Solution Architects assigned to specific functional subcommittees, specifically: Unified Communication and Infrastructure Applications, Network Operations, Data Center Operations (Server and Storage), Enterprise Applications, and Security.

Gartner defines:

- An Enterprise Architect as a visionary that is responsible for developing the cohesive “future state” view and defining a roadmap to get there based on the collective analysis, study, and feedback from various Solution Architects.
- A Solutions Architect as an architect with expertise more focused on a specific functional area such as business application architecture, networking or security architecture. Solution Architects will focus on developing architectural solutions within a functional area, but then work with the Enterprise Architect and their peer Solution Architects to ensure that all solutions collectively provide a consistent, interoperable framework.

The role of this small, cross functional team of architects will be to ensure that the strategies and directions being proposed by each of the functional subcommittees, will roll-up into an integrated enterprise architecture. Before any “future state” recommendations are presented to the Executive Governance Committee, those recommendations should be vetted through this team of architects to ensure that these recommendations will complement and integrate into the future vision. This team of architects will be charged with ensuring that all the various “puzzle pieces” crafted within each subcommittee, fit cohesively into the “big picture” enterprise view of the future state. See Appendix A: Organizational Observations for additional information.

4.2 Advisory Board

The Advisory Board will be comprised of Senior Level IT executives within the State of Ohio that are recognized as Ohio’s IT thought leaders. This team will be selected by the State CIO and will act as advisors to the State CIO, the Transformation Office, and to specific subcommittees.

4.3 Subcommittee Roles and Responsibilities

It is expected that each subcommittee will define the following:

- Support Structure (short-term and long-term)
- Technical Standards
- Three-year Functional Roadmap and Optimization and Integration Plan
- Cost Recovery Plan
- Service Level and Operational Level Agreements
- Performance Management and Monitoring Plan
- Recovery and Data Retention Management
- Security and Privacy Plan

Many of the processes and procedures that will be developed by these various subcommittees are inherent parts of the ITIL methodology, so fully embracing ITIL could greatly simplify and speed up the work of the IT Transformation Subcommittees.

4.3.1 Network Operations

The role of the Network Operations Subcommittee is to design and articulate a vision for the future of Ohio's consolidated enterprise network. The team is expected to thoroughly review Ohio's current network infrastructure including Wide Area Network (WAN), Metropolitan Area Network (MAN), Local Area Network (LAN), and wireless environments, conduct a gap analysis, and then develop a roadmap and implementation plan to address the identified gaps. Deliverables should at minimum include:

- Develop an assessment of the current network inventory, which includes hardware, software, contracts, employees, and contractors supporting the existing fragmented network. This should also include network performance metrics or Service Level Agreements (SLAs) currently in place at various agencies and any outstanding network audit findings that may not have been addressed at this point.
- Create a vision for the future consisting of proposed high-level network architecture and an organizational model to support and operate the network. This should also include a proposed IP address scheme for the enterprise.
- Identify the potential barriers to success.
- Develop a "quick hit" list; those things that can be done within the next 12 months that can resolve compatibility issues with other ongoing initiatives such as server virtualization. The "quick hit" list should also identify any activities that can be implemented in the short term that could result in immediate cost savings.

- After the vision for the future is agreed upon by the Executive Governance Committee, develop a detailed implementation plan to achieve an enterprise network shared service solution. It is expected that the initial phase of the implementation plan will concentrate on network architecture and governance. Specifically, it is important that the initial focus of the implementation plan be placed on the development of:
 - Detailed network architecture (includes WAN, MAN, LAN, wireless for voice, data, and video)
 - Policies and procedures to support the networks operations, maintenance, and use
 - Enterprise standards

It is expected that the Network Operations Subcommittee will consist of five to seven people. The best representatives would be those employees that have a detailed understanding of the topology of Ohio's largest networks. These individuals should have an understanding of the manpower required today to support these networks and any current standards, policies, and procedures governing these disparate networks.

It is also recommended that this subcommittee include a Network Solutions Architect that will work with other subcommittees to ensure the direction of this team complements the activities and directions of the other subcommittees. Specifically, it is imperative that the activities of this subcommittee are in sync with the Data Center Operations (Server and Storage) Subcommittee, the Unified Communication and Infrastructure Applications Subcommittee, the Security Subcommittee, and the Enterprise Applications Subcommittee.

Nearly every aspect of IT transformation and consolidation depends on a strong network infrastructure foundation. This team should concentrate on developing the network roadmap and enterprise standards within the first three months and then all other subcommittee recommendations should build on this foundation.

4.3.2 Data Center Operations (Server and Storage)

The role of the Data Center Operations (Server and Storage) Subcommittee is to design and articulate a vision for the future of Ohio's consolidated enterprise computing environment. The team is expected to thoroughly review Ohio's current computing environment across the enterprise including servers (mainframe, mid-range and Intel), storage, and the software and services currently deployed to support the environment. The subcommittee will be responsible for designing the future "to-be" state and then conducting a gap analysis and a roadmap to implement the required enhancements to address the identified gaps.

Deliverables should at minimum include:

- Develop an assessment of the server and storage inventory, which includes hardware, software, contracts, employees, and contractors supporting the existing assets. This should also include server and storage performance metrics or SLAs currently in place at various agencies and any outstanding audit findings that may not have been addressed at this point. This inventory should also identify all hardware and software environments (including operating systems) that are technologically obsolete and where security patches can no longer be applied. In a consolidated environment, the existence of technologically obsolete environments could expose the rest of the data center to outside threats and vulnerabilities.
- Create a vision for the future consisting of proposed high-level server and storage architecture and an organizational model to support and operate the new consolidated environment.
- Perform a high-level security assessment of the environment that should at minimum include privileged accounts, service accounts, patch and change management procedures, and user account management.
- Assess the Disaster Recovery (DR) and Business Continuity (BC) Plans for current data center environments and develop a DR vision for the future.
- Identify potential barriers to success.
- Develop a “quick hit” list; those things that can be done within the next 12 months that will result in either cost savings or improved services to the agencies. The “quick hit” list should also identify any activities that can be implemented in the short-term that could result in immediate cost savings.
- After the vision for the future is agreed upon by the Executive Governance Committee, develop a detailed implementation plan to achieve the enterprise vision. It is expected that the initial phase of the implementation plan will concentrate on Server and Storage Architecture and Governance. Specifically, it is important that the initial focus of the implementation plan be placed on the development of:
 - Detailed server and storage architectural plans (includes hardware, software, and services needed to support the future state)
 - Policies and procedures to support the data center operations, maintenance, and use
 - Enterprise standards

It is expected that the Data Center Operations (Server and Storage) Subcommittee will consist of five to seven people. The best representatives would be those employees that have a detailed understanding of Ohio’s largest data center environments. These individuals should have an understanding of the manpower required today to support these data center

environments and any current standards, policies, and procedures governing these disparate, nonstandard environments.

It is also recommended that this team employ a Server and Storage Solutions Architect that will work with other subcommittees to ensure the direction of this team complements the activities and directions of the other subcommittees. Specifically, it is imperative that the activities of this subcommittee are in sync with the Network Operations Subcommittee, the Unified Communication and Infrastructure Applications Subcommittee, the Security Subcommittee, and the Enterprise Applications Subcommittee.

Since many of the deliverables of this subcommittee overlap tasks identified within the SOCC remediation project, it is recommended that this subcommittee coordinate very closely with the SOCC remediation project team.

4.3.3 Financial Management and Cost Recovery

The role of the Financial Management and Cost Recovery Subcommittee is to design and articulate a cost recovery model for the newly consolidated central IT organization that is in compliance with SWICAP Cost Allocation Guidelines (OMB Circular A-87). It is also the responsibility of this team to devise a method for developing baseline technology expenditures and developing performance tracking routines to ensure savings targets are being achieved. The Value Management Office is available to help coordinate these activities.

Deliverables should at minimum include:

- Develop an agreed on baseline for IT expenditures across the Executive Branch, work with the Executive Governance committee to establish anticipated savings targets and then report progress toward achieving those goals on a monthly basis.
- Redefine rates to complement the transformed organization and the central IT services being offered.
- In conjunction with the other subcommittees, provide input to a Service Catalog of all central services provided by the central IT organization and the new rates associated with those services. This team should work with the other subcommittees to determine service and performance levels customers should expect based on the published rate.
- Develop a proposal that supports the reinvestment of some percentage of overall savings that can be used for capital improvements or future expansion/enhancement of existing services.
- Develop an asset management plan in order to accurately account for and track enterprise technology assets. This should include depreciation cycle and current value of

deployed assets. This should also include policies and procedures for the transfer, redeployment, resale, and retirement of assets to and from the central IT organization.

It is expected that the Financial Management and Cost Recovery Subcommittee will consist of two to four people. The best representatives would be those employees that have a detailed understanding of OIT current cost allocation procedures, the current service catalog, and a thorough understanding of OMB Circular A-87.

The activities of this subcommittee should coincide with activities of the Network Operations Subcommittee, the Unified Communication and Infrastructure Applications Subcommittee, the Security Subcommittee, the Data Center Operations Subcommittee, and the Enterprise Applications Subcommittee to ensure that services being promoted are actually the services being provided.

4.3.4 Unified Communication and Infrastructure Applications

The role of the Unified Communication and Infrastructure Applications Subcommittee is to design and articulate a vision for the future for Ohio's unified communications environment and those other infrastructure applications provided as a service to better manage and support Ohio's end-user community. Specifically, this includes, but is not limited to:

- Identity Management and Directory Services
- Email
- Instant Messaging (IM) and Presence Awareness
- E-conferencing (Voice, Web, and Video)
- VOIP
- End-user Collaboration Suites (such as, SharePoint)
- End-user Connectivity Solutions (such as, Airwatch)

The team is expected to thoroughly review Ohio's current unified communications, messaging and end-user directory environments, develop a vision as to how these services should be delivered in the future, conduct a gap analysis, and then develop a roadmap and implementation plan to address the identified gaps.

Deliverables should at minimum include:

- Develop an assessment of the current inventory of unified communications, messaging, enterprise directory and end-user connectivity technologies, which includes hardware, software, contracts, employees, and contractors supporting the existing fragmented environments. This should also include performance metrics or SLAs currently in place at various agencies.

- Create a vision for the future consisting of proposed standard products in each of the identified areas. If standards cannot be defined, requirements should be developed and standards defined through the competitive bid process.
- Identify the potential barriers to success.
- Develop a “quick hit” list; those activities or actions that can be implemented in the short term (next 12 months) that will result in immediate cost savings.
- After the vision for the future is agreed upon by the Executive Governance Committee, the Unified Communication and Infrastructure Applications Subcommittee will be charged with developing a detailed implementation plan to achieve the enterprise vision.

It is expected that the initial phase of the implementation plan will concentrate on standards, application architecture, and governance. Specifically, it is important that the initial focus of the implementation plan be placed on the development of:

- Applications architecture for unified communications, email, and directory services.
- Policies and procedures to support the environment.
- Enterprise standards in each of the identified areas.
- Enterprise support model to ensure helpdesk professionals and desk side support personnel can assist in the use, training, and support of these applications in order to fully meet the expectations of our customers.

It is expected that the Unified Communication and Infrastructure Applications Subcommittee will consist of five to seven people. The best representatives would be those employees that have a detailed understanding of our customer’s business requirements as it relates to these specific technologies.

It is also recommended that this team employ an Applications Solutions Architect that will work with other subcommittees to ensure the direction of this team complements the activities and directions of the other subcommittees. Specifically, it is imperative that the activities of this subcommittee are in sync with the Data Center Operations (Server and Storage) Subcommittee, the Security Subcommittee, and the Network Operations Subcommittee.

Applications of this nature will need to traverse every network and potentially reach every employee within the state. As a result, it is critical to ensure end-user to end-user connectivity is in place, regardless of the agency in which they are employed.

4.3.5 Enterprise Applications

The role of the Enterprise Applications Subcommittee is to design and articulate a vision for enterprise application delivery. The team is expected to thoroughly review Ohio's enterprise business application portfolio and develop a strategy around application rationalization. Although proprietary business application development and support will not be consolidated, the lack of standards, policies, and procedures in this area drives costs and stifles effective Disaster Recovery and Business Continuity planning. According to the Hackett Benchmark Study, the number of programming languages used within Ohio is two times greater than in peer states and three times greater than private industry. Additionally, the number of database platforms used within Ohio is four times greater than in peer states and private industry.

Deliverables of this subcommittee should at minimum include:

- Develop an application rationalization plan. Consolidation, migration, and retirement of agency applications in order to improve the business value delivered by the application portfolio.
- Develop an application modernization roadmap. Transitioning the agency application portfolio to more modern languages, architectures, and runtime environments.
- Create application development and database standards. Standardizing on a list of application development and database products.
- Develop a skill and technology gap analysis. Skill gaps are where the state has critical skill requirements but inadequate staff with those specific skills. Technology gaps are where technologies are still required to run the business applications or database but those technologies are obsolete and no longer supported by the vendor.
- Establish baseline recovery point objectives and recovery time objectives for various categories of applications.
- Develop an Enterprise Portal delivery strategy to position Ohio's citizenry to conduct business with the State of Ohio, online and through mobile technologies, in a consistent and effective manner.

It is expected that the Enterprise Applications Subcommittee will consist of five to seven people. The best representatives would be those employees that have a detailed understanding of the applications and database support environments within the state's largest application development and support organizations, as well as an understanding of the business needs within those agencies. It is also recommended that this team employ an Applications and Data Warehousing/Business Intelligence (BI) Solutions Architect that will

work with other subcommittees to ensure the direction of this team complements the activities and directions of the other subcommittees.

The activities of this subcommittee should coincide with activities of other subcommittees as appropriate.

4.3.6 Security

The role of the Security Subcommittee is to design and articulate a vision for security to protect Ohio's critical networks, servers, and applications from both internal and external security and privacy threats. The team is expected to thoroughly review Ohio's security policies, practices, and procedures currently in place to protect our technology and information assets from outside harm, compare our current environment with the expected future state, conduct a gap analysis to achieve the future vision, and then develop a roadmap and implementation plan to address the identified gaps. Deliverables should at minimum include:

- Develop an assessment of the current security practices, which includes, at minimum, a review of policies and procedures pertaining to password reset, dormant accounts, end-user acceptable use and privileged accounts for both full-time and contract employees. From this review, develop enterprise security and privacy policies that will apply across the Executive Branch.
- Review current tools in place to control and monitor security. This should include, but not be limited to, tools and services associated with web filtering, email filtering, intrusion detection, encryption and security monitoring. From this review, develop recommendations on tools needed to monitor and manage security across the enterprise.
- Assess current configuration and patch management policies and procedures to ensure critical patches are applied to networks, servers, and clients in a timely fashion.
- Review end-user and security awareness training programs and ensure that these training programs complement federal requirements such as HIPAA and federal tax programs.
- Identify potential barriers to success.
- Develop a "quick hit" list; those things that can be done within the next 12 months that can resolve security issues with other ongoing initiatives such as server virtualization.
- After the vision for the future is agreed on by the Executive Governance Committee, the Security Subcommittee will be charged with developing a detailed implementation plan to achieve the enterprise security vision.

It is expected that the initial phase of the implementation plan will concentrate on security, architecture, and governance. Specifically, it is important that the initial focus of the implementation plan be placed on the development of:

- A security plan that supports the adoption of enterprise solutions without jeopardizing security. Specifically, this will require a detailed review of the existing deployment of firewalls that may be stifling the deployment of enterprise solutions.
- Policies and procedures to support the security of Ohio's critical technology infrastructure and proprietary information.
- Enterprise standards for security related products and services.
- Framework for perimeter security.

It is expected that the Security Subcommittee will consist of three to five people. The best representatives would be those employees that have a detailed understanding of the topology of Ohio's largest networks and an understanding of their security requirements. An understanding of IRS publication 1075 (Tax Information Security Guidelines) in addition to federal regulations concerning HIPAA would be beneficial.

It is also recommended that this team employ a Security Solutions Architect that will work with other subcommittees to ensure the direction of this team complements the activities and directions of the other subcommittees. Specifically, it is imperative that the activities of this subcommittee are in sync with the Data Center Operations (Server and Storage) Subcommittee, the Unified Communication and Infrastructure Applications Subcommittee, the Business Relationship Management Subcommittee, the Network Operations Subcommittee, and the Enterprise Applications Subcommittee.

As mentioned earlier in this document, the state is a trusted custodian of highly confidential and sensitive information. As transformation efforts continue, it is imperative that every effort be made to ensure that the citizen and business information entrusted to the state is protected and that nothing is done to jeopardize security or the public trust associated with this privileged and confidential information housed by the state.

4.3.7 Business Relationship Management

In order to achieve long-term acceptance and sustainability, it is imperative that the central IT organization evolve from a traditional cost center to a value center in the eyes of the line-of-business leaders within the various departments and agencies. Business relationship management can facilitate that evolution. The role of the Business Relationship Management Subcommittee is to establish policies, practices, and procedures to ensure customer services level expectations are being met, that clear channels are in place to submit and track requests and that clear and effective escalation procedures are in place if customer expectations fall

below service level obligations. It is also this team's responsibility to define and document the role of the Business Relationship Manager.

Deliverables of this subcommittee should at minimum include:

- Develop job specification for the role of Business Relationship Manager and selection criteria for this role.
- Define customer escalation procedures.
- Define a customer service request and tracking process.
- Define on-going communication process between the central IT organization and key stakeholders and customers.
- Conduct a Business Relationship Management maturity assessment via an Enterprise Personality Profile.
- Based on feedback from each of the other subcommittees, develop a comprehensive service level agreement template and baseline business level performance expectations. This should also include how performance measures will be tracked, who is responsible for developing performance reporting and the frequency of such reporting.

It is expected that the Business Relationship Management Subcommittee will consist of three to five people. The best representatives would be those employees that have business analyst (BA) experience and have played the role of a business or customer relation manager in the past.

The activities of this subcommittee should coincide with activities of other subcommittees as appropriate.

4.3.8 Enterprise Planning—Sourcing and Vendor Management

The role of the Enterprise Planning—Sourcing and Vendor Management Subcommittee is to review IT related contracts across the Executive Branch and, where possible, consolidate and centralize the state's buying power to achieve economies of scale. It is also this team's responsibility to review the policies, practices, and procedures associated with the enterprise planning and procurement processes and to make recommendations to optimize and streamline this workflow. Additionally, it is this team's responsibility to work with each of the various subcommittees, once standards are defined, to develop enterprise agreements to acquire hardware, software, and services associated with newly developed standards.

Deliverables should at minimum include:

- Enterprise Planning

- Provide a sound repeatable planning process that ensures that the IT strategy is aligned with the governor's priorities and individual agency business plans.
- Define a priority process including business case development that allows for the introduction of new technology or services.
- Categorize three types of spending: Run the Business, Grow the Business, Transform the Business.
- Define the value management process for measuring benefits versus cost in terms of cost savings, cost avoidance, and value creation.
- Define the enterprise IT service catalog including standards associated with each service.
- Create a roadmap of service introduction through service retirement.
- Improve agency satisfaction in the planning process.
- Create a prediction of future technology opportunities to leverage the strategic procurement function.
- Define the organizational plan to support this function.
- IT Procurement
 - Create set, strategic objectives that are regularly aligned with IT, sourcing, and organizational objectives.
 - Ensure the objectives will achieve cost efficiencies, risk reduction, and value adds.
 - Create a plan to improve people, process, and technologies including policy frameworks, contracting templates, negotiation strategies, and vendor management capabilities.
 - Identify strategic versus tactical procurement opportunities and needs.
 - Identify cost reduction opportunities by taking advantage of economies of scale.
 - Develop a catalog of standard products and services along with the purchasing plan to acquire these standard products and services at the lowest possible price in the least amount of time.
 - Develop an inventory of all IT related contracts across the Executive Branch, conduct an analysis of the inventory and make recommendations to reduce costs or improve services.
 - Consolidate contracts to the maximum extent possible and renegotiate prices to reflect the collective buying power of the state.
 - Conduct a spend analysis. Determine what products and services represent the largest IT expense and with whom those dollars are being spent. Develop a

strategy to reduce costs in those targeted areas and with the vendors associated with the highest expense.

- Develop a preferred vendor list and strategy to reduce the number of suppliers. According to the 2008 Hackett Benchmark Study, Ohio deals with 10 times more suppliers for IT related services than other peer states. This results in inconsistent delivery of service and higher support cost.
- Thoroughly review the existing release and permit process, improve tracking and reporting and make recommendations to optimize and streamline the existing workflow.
- Develop a “quick hit” list; those things that can be done within the next 12 months that will result in either cost savings or improved services to the agencies. The “quick hit” list should also identify any activities that can be implemented in the short-term that could result in immediate cost savings.
- Optimize and streamline the existing workflow.

It is expected that the Enterprise Planning—Sourcing and Vendor Management Subcommittee will consist of three to five people. The best representatives would be those employees that have a detailed understanding of enterprise planning, central procurement, and/or contract management within Ohio’s largest IT environments. These individuals should have an understanding of the current contracts in place and the vendors supporting those contracts.

The activities of this subcommittee should coincide with activities of other subcommittees as appropriate.

4.3.9 Workforce Transformation

As with any organization, the state’s most valuable resource is its employees. Any organization will go only as far as the people who are driving it. As the State of Ohio transforms the way information technology services are delivered, it is imperative that the state’s most valuable resource, its employees, also transform. Addressing staffing needs and the needs of staff are among the most critical components of an effective migration to an enterprise shared solutions model. Under a shared solutions model, delivering poor service will no longer affect just one agency, but the entire enterprise. Staff turnover, poor morale, poorly skilled employees and other similar staffing issues will all impact the newly transformed central IT organization’s ability to meet customer service level commitments.

Deliverables of this subcommittee should at minimum include:

- Work with each of the subcommittees to develop a five year staffing plan for the newly transformed organization. This should include a thorough review of the impact of retirements over the five year period.
- Identify skill set deficiencies within the newly transformed organization and map the types of skills and number of people required for various lines of service included in the service catalog. This may require the development of a skills assessment survey.
- Devise a training plan to address critical skill gaps by using vested state employees.
- Inventory all IT contract employees. Thoroughly assess those contractors that have been in positions for more than one year to determine if potentially underutilized state employees can assume those duties. If not, assess the possibility of reducing cost by rolling these contractors into a single managed service contract or potentially hiring them into existing vacant positions.
- Design an internal recruitment process to transfer staff into the newly transformed central support organization. This will enable people to be transferred from other executive agencies if their skill sets match the required needs of the newly transformed organization. This activity should be coordinated with Ohio Civil Service Employees Association (OCSEA).
- Define an internship and apprenticeship program to expose young recruits to state government as an employer and to expose them to benefits such as work/life balance and the self-gratification of public service.
- Recommend and gain approval on non-traditional financial incentives, such as pay-for-performance, premium-pay for hot skills, retention incentives and bonus programs. This activity should be coordinated with OCSEA.
- Explore and make recommendations concerning the implementation of competency centers around pockets of demonstrated proficiency in one or more disciplines.
- Recommend and gain approval on non-traditional organizational structures, specifically around matrix based alternatives.
- Work with the Transformation Office to ensure change management activities associated with this initiative are clear, concise, and effective.
- Identify barriers and issues associated with the successful implementation of the staffing plan and present them to the Transformation Office for resolution.

It is expected that the Workforce Transformation Subcommittee will consist of three to five people. The best representatives will be those employees that have human resource and/or labor relationship experience within the State of Ohio.

The activities of this subcommittee should coincide with activities of other subcommittees as appropriate.

5 Governance

As part of technology management in any organization, governance models enable the organization to make decisions in the best interest of the enterprise as well as provide prescriptive methods to initiate and manage work throughout the organization. The purpose of IT governance as a whole is to oversee the following activities:

- Alignment between business units and technology.
- Evaluation and validation of information technology investments across the enterprise.
- Management of risk in both project execution and decision-making thereby preserving financial resources and ensuring value propositions are realized.
- Resource management to ensure that resources are allocated to the highest priority activities.
- Definition and measurement of organizational performance; this includes the initiation of activities and introduction of change as required to address organizational performance deficiencies.

Figure 5.0 depicts a recommended structure for Ohio’s governance model.

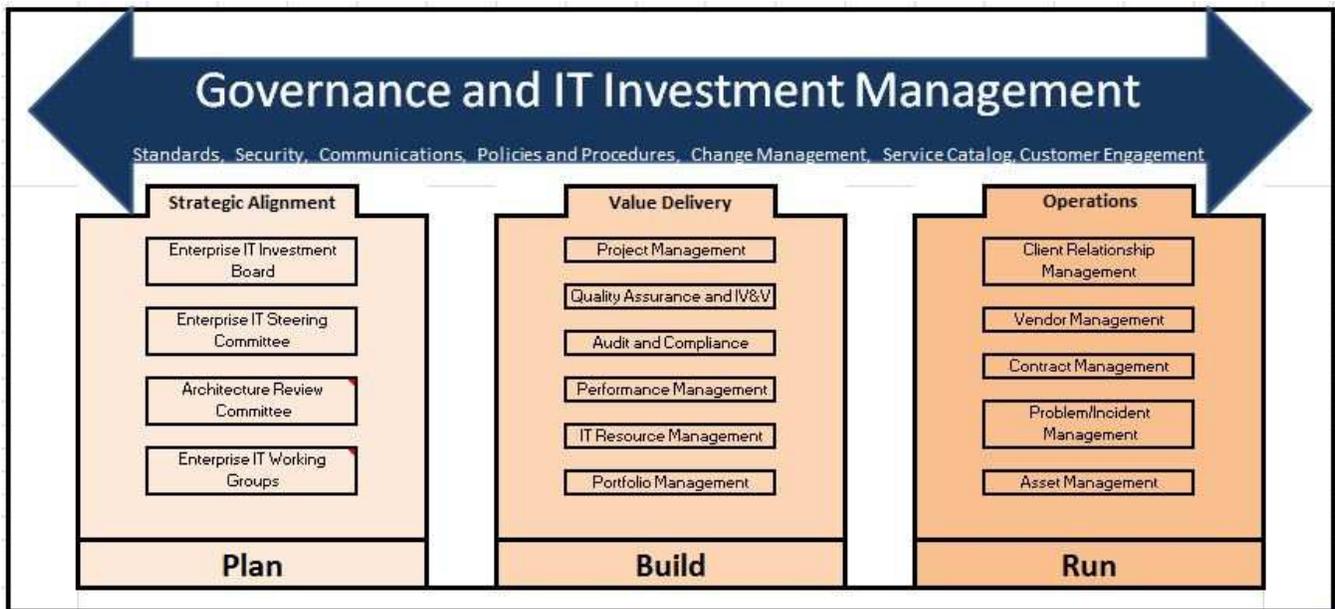


Figure 5.0

The Strategic Alignment component of the Governance Model sets the foundation for the IT Transformation. Therefore, it is important that this component of the governance process be in place early in the process. The Strategic Alignment component is explained in more detail in the following sections.

5.1 Enterprise IT Investment Board

An Enterprise IT Investment Board should be established to provide business funding prioritization for IT initiatives and to control and evaluate the results of all major IT investments across the Executive Branch. This board would have the following roles and responsibilities:

- Provide business and investment oversight.
- Review and approve strategic roadmaps and prioritize lists of proposed investments.
- Serve as the approval body for ‘large’ projects.
- Provide final recourse for issue and risk management escalation as well as vendor escalations.
- Provide post mortem follow-up on all major IT initiatives to ensure promised benefits have been achieved.

In essence, this board would serve as the Board of Directors for the newly transformed central IT organization and would serve as the IT investment authority for all major IT related initiatives across the Executive Branch. Meeting quarterly, the board would provide final funding approval as well as approval for strategic roadmap and reinvestment requests. The board would also be responsible for approving the central IT billing rates.

The proposed leadership for the Enterprise IT Investment Board is the Director of OBM serving as chairperson, the Director of DAS and a representative from the Governor’s Office serving as board members. The State CIO will serve as the facilitator and advisor to the board. The State CIO would be a non-voting board participant.

The standing agenda for the Enterprise IT Investment Board meetings will be organized around these components:

- **Strategic Alignment**—Strategic direction of IT and the alignment of the enterprise and the business with respect to services and projects.
- **Value Delivery**—Confirm that the IT/business organization is designed to drive maximum business value from IT investments. Oversee the delivery of value by Enterprise IT to the business and assess ROI.

- **Risk Management**—Ascertain that processes are in place to ensure that risks have been adequately managed, include assessment of the risk aspects of IT investments.
- **Resource Management**—Provide high-level direction for sourcing and use of enterprise IT resources. Oversee the aggregate funding of optimization at the enterprise level. Ensure there is an adequate technology capability and infrastructure to support current and expected future business requirements.
- **Performance Measurement**—Verify strategic compliance, such as achievement of strategic IT enterprise objectives. Review the measurement of enterprise performance and the contribution of IT to the business, such as delivery of promised business value.

5.1.1 Role of the Value Management Office (VMO)

In order to ensure enterprise programs achieve expected benefits, the state has formed a Value Management Office (VMO) within the Office of Budget and Management. The VMO will be actively involved with the Transformation initiative. In addition, the VMO will be actively engaged with the Enterprise IT Investment Board as an on-going advisor.

The VMO will be integrated into the project lifecycle from project conception through post implementation assessment. The VMO will assist in the development of measureable performance goals and will collect and report progress toward the achievement of those goals. Specifically, they will assess whether process improvements and cost savings goals have occurred as projected.

5.2 Enterprise IT Steering Committee

Working in conjunction with the Enterprise IT Investment Board is an Enterprise IT Steering Committee. While this committee has the same purpose, roles, and responsibilities as the Investment Board, this committee would convene monthly and would devise the strategic roadmap and the proposed list of investment funding requests for the Investment Board's approval.

The proposed structure for this committee is the State CIO serving as chairperson and individuals selected by the state CIO. It is proposed that the Executive Governance Committee outlined in Section 3.1 of this document transition into this standing committee after the IT Transformation initiative is complete. It is also proposed that the Enterprise IT Steering Committee replace the existing LMC.

5.3 Enterprise IT Working Groups

At times, research will need to be completed prior to the Enterprise IT Steering Committee presenting recommendations to the Enterprise IT Investment Board. This could include

research associated with the development of new policies, practices or procedures; the selection of hardware and software products; or any other IT related initiative. The Enterprise IT Steering Committee has the authority to commission working groups to complete such research. Working groups will likely consist of individuals from various state agencies, and in some cases may include contractor personnel with subject matter expertise within a particular discipline. It is also proposed that the Enterprise IT Working Group structure complement the existing Working Group structure defined within the MAC.

5.4 Enterprise Architecture Review Committee

Ohio should establish an Enterprise Architecture Review Committee that would consist of Enterprise Architects and Solutions Architects within each of the specific disciplines defined in Appendix A: Organizational Observations. The role of this committee would be to provide oversight and leadership to both the Enterprise IT Investment Board and the IT Steering Committee. As such, the Enterprise Architecture Review Committee would be the final reviewer of all IT standards and policies prior to submission to the Enterprise IT Steering Committee for approval. The Enterprise Architecture Review Committee would also conduct a review of new IT projects and initiatives to ensure compliance with existing standards. This committee would serve as the final arbiter in resolving enterprise versus departmental issues that may arise. Finally, this committee would weigh-in on specific information technology investments; evaluating applicability and vetting alternative solutions that may already exist within the enterprise.

5.5 Enterprise IT Governance Charter

The following charter should be adopted to help guide the overall governance and operations of enterprise IT in support of the state's mission.

Vision: To be seen by our business partners as a high performing solutions provider that provides superior customer service in leading the state's enterprise IT Shared Solutions.

Mission: To improve the effectiveness, efficiency, and integration of state government business functions through a consolidated Enterprise IT delivery system while supporting business initiatives and requirements.

Critical Success Factors:

- Strong governance that represents the entire enterprise
- Active participation by key user constituencies and stakeholders
- Willingness and discipline to standardize across the enterprise
- Meet operational service level agreements
- Drive high levels of customer satisfaction

- Resource commitment that meets strategic intents and operational service agreements— people, processes, technology, and investment profile
- Customer involvement in strategic, operational, and tactical decision making and direction setting
- Ongoing and proactive communications
- Protecting the privacy of state data through the implementation of strong data protection and security policies

6 Transformation Considerations

Although it is impossible to predict all likely scenarios for this transformation project as it progresses, the direction this initiative takes could be influenced or changed by both internal and external considerations. Based on the experiences of other states, we can anticipate debates on the following topics:

- Baseline performance measures
- The impact of federal regulations
- IT functions to be included within scope of this initiative

Recommendations on each topic are presented in the following sections.

6.1 Baselines

Prior to actually starting transformation efforts, it is highly recommended that baseline metrics be defined in order to show definitive progress. It is important that these metrics be more than a financial indicator, but an indicator of overall performance that the newly consolidated central IT organization can be measured against. The fact is, anyone can cut costs, but if those reductions come at the sacrifice of customer satisfaction, employee satisfaction, IT security, or system and/or network reliability, the transformation will not be sustainable.

As IT functions are consolidated, agencies will actively monitor the overall financial impact of consolidation on their specific agency and provide quarterly reporting to the Value Management Office. It is imperative that measures be put in place to easily and accurately confirm that cost savings targets are being met and that these measures are tailored to be appropriate for each agency.

Initial baseline performance metrics should be developed by the appropriate subcommittee in each of the following areas:

- Financial
- Staffing
- Customer Satisfaction

Each of these areas of baselining is discussed in this section.

6.1.1 Financial

The financial baseline measures are the ones that usually receive the most attention at an executive level. Ohio will use Fiscal Years 2010, 2011, and 2012 as the financial baseline periods to measure transformational success. In order to clearly measure financial

performance, it is imperative that a process be developed and agreed on so that future comparisons to the baseline are consistent. IT related expenditures over the baseline period are depicted in Table 6.1.1a below.

IT Related Expenditures for the State of Ohio											
Fiscal Year	Direct IT Spend	IT Labor	Enterprise Service Charge	Acquisition R&P Service Charge	OIT Services	OAKS	DAS Telecom Charge	MARCS	Ohio Business Gateway	Other Misc. R&P Expense	Total
2010	\$324,146,610.07	\$249,674,964.83	\$6,284,407.56	\$2,560,430.94	\$36,042,478.02	\$15,933,127.12	\$13,141,063.27	\$11,758,082.83	\$1,672,525.58	\$99,694,619.91	\$760,908,310.13
2011	\$341,844,355.29	\$242,181,525.16	\$6,973,446.07	\$2,958,756.13	\$37,619,801.41	\$18,434,471.29	\$9,988,169.13	\$11,644,450.00	\$1,647,639.39	\$78,117,387.60	\$751,410,001.47
2012	\$421,225,282.05	\$251,999,609.60	\$7,784,253.77	\$4,503,388.14	\$49,913,012.53	\$18,343,885.16	\$5,926,487.32	\$11,310,126.93	\$3,005,989.63	\$64,589,718.22	\$838,601,753.35

Table 6.1.1a

The goal now is to further break down Total IT related costs at an agency-by-agency level and to be able to clearly show the impact of IT Transformation on those costs moving forward. For example, in Table 6.1.1b, columns B and C indicate the IT related expenses directly paid by the agency to vendors for IT-related products and services (column B) and fully loaded labor costs (column C) associated with the IT professionals each specific agency employs. Columns D, E, F, G, H, I, and J indicate IT related expenses paid to OIT for IT related services. Column K reflects IT related expenses that were processed and assigned a Release and Permit number and that have been confirmed to be legitimate IT related expenses, but were charged to an account code not typically used to record IT related expenses. Under a shared solutions model, as IT transformation progresses, the state should see agency direct IT-related costs (columns B and C) decline while expenses paid to the central IT organization increase as the central support organization addresses additional specific IT related functions. As agency direct expenses decline and central IT-related charges increase, the state should fully expect to see the “Grand Total” it pays for all IT-related expense to decrease, in other words, the cost increases billed from the central shared solution organization should be more than offset by decreases in the agencies direct IT related expense across the enterprise.

2012 IT Related Expenditures for the State of Ohio											
Department	Direct IT Spend	IT Labor	Enterprise Service Charge	Acquisition R&P Service Charge	OIT Service Charge	OAKS Service Charge	DAS Telecom Service Charge	MARCS Service Charge	Ohio Business Gateway	Misc. Direct R&P Expense	Total Department IT Related Cost
Accountancy Board of Ohio	\$6,692.02		\$1,408.78		\$7,383.73	\$2,921.98	\$5,598.13	\$0.00			\$24,004.64
Adjutant General	\$929,349.40	\$604,036.56	\$39,486.73			\$106,636.68	(\$129.25)	\$53,820.00		\$13,979.03	\$1,747,179.15
Air Quality Development Authority			\$528.66		\$10,443.10	\$903.97	\$5,730.57				\$17,606.30
Alcohol & Drug Addiction Services	\$434,938.80	\$1,381,462.73	\$15,596.35	\$3,065.08	\$51,714.29	\$29,008.82	\$35,683.71			\$130,887.60	\$2,082,357.38
Architects & Landscape Examiners Board	\$3,610.51		\$662.73		\$4,869.87	\$1,287.06	\$1,570.85				\$12,001.02
Attorney General	\$12,533,317.47	\$4,403,551.38	\$238,458.54		\$33,651.35	\$520,411.95	\$419,555.24	\$20,940.00		\$86,901.68	\$18,256,787.61
Auditor of State	\$2,290,454.37	\$3,740,263.27	\$118,551.24		\$43,916.45	\$200,960.78	\$126,901.19				\$6,521,047.30
Board of Career Colleges and Schools	\$6,251.86		\$713.15		\$4,934.20	\$1,481.57	\$5,244.85				\$18,625.63
Board of Embalmers and Funeral Directors	\$2,864.49		\$798.36		\$5,292.19	\$1,780.91	\$1,970.83				\$12,706.78
Board of Nursing	\$72,940.90	\$237,601.33	\$10,154.10	\$43.88	\$3,081.74	\$17,950.72	\$30,187.56	\$0.00		\$686.50	\$372,646.73
Board of Regents	\$605,944.97		\$19,927.86	\$3,959.43	\$570,178.15	\$53,977.42	\$42,702.22	\$480.00		\$385,860.50	\$1,683,030.55
Board of Speech-Language Pathology and A	\$6,521.30		\$616.57		\$4,980.60	\$1,527.79	\$3,800.69				\$17,446.95
Bureau of Worker's Compensation	\$34,721,407.47	\$18,630,393.60	\$323,223.47	\$288,466.68	\$37,350.70	\$661,288.10	\$669,753.74	\$15,540.00	\$7,691.60	\$33,671.00	\$55,388,786.36
Capital Square Review and Advisory Board	\$47,557.24		\$6,506.22			\$16,015.06	\$1,228.95				\$71,307.47
Casino Control Commission	\$90,883.99		\$3,754.82		\$11,506.26	\$4,276.91	\$8,486.50				\$118,908.42
Commission on Service and Volunteerism	\$18,420.29		\$963.87		\$2,971.55		\$2,221.48				\$24,577.19
Counselor and Social Worker Board	\$18,453.33		\$1,644.74		\$5,800.58	\$3,279.01	\$6,017.59	\$0.00			\$35,195.25
Court of Claims	\$162,609.99		\$5,807.93		\$24,615.00	\$10,013.93	\$16,416.99				\$219,463.84
Department of Administrative Services	\$15,051,182.23	\$5,718,707.18	\$141,051.89	\$1,296,278.95	\$7,274,001.51	\$519,120.89	\$401,576.77	\$11,460.00	\$2,220,826.87	\$765,241.86	\$33,399,448.15

Table 6.1.1b

For more information on financial baselines, refer to Appendix C: Financial Baselines.

6.1.2 Staffing

Transformation will primarily involve the standardization, centralization, and optimization of IT related products and services across the Executive Branch. As transformation progresses, duplicative activities currently performed across various agencies will be identified and plans will be put in place to eliminate these activities. As a result, current staffing levels to support a highly decentralized, non-standard IT infrastructure will likely require adjustments.

According to the 2008 Hackett Benchmark Study, the number of IT professionals supporting Ohio's technology infrastructure was approximately 35% higher than peer states. Hypothetically, if Ohio sets staffing targets to align with peer state averages, the state would need to reduce infrastructure support personnel from approximately 1,100 today to fewer than 800, or reduce infrastructure support staff by more than 300 full-time equivalents (FTEs). A 2012 survey conducted by the National Association of State Personnel Executives (NASPE) seems to confirm that Ohio's IT professional staff may be out of balance. NASPE calculates the average IT professional to Total State Employee ratio to be 1 IT professional for every 26 state employees. Currently, Ohio's ratio is 1 IT professional for every 20 state employees. For comparative staffing analysis with other states, see Appendix D: Transformation Case Studies.

Now is a perfect time for Ohio to consider this IT Transformation initiative. According to the "Information Technology Strategy" published earlier this year, 32% of Ohio's IT workforce is currently, or will be, eligible to retire within the next five years. As a result, as duplicative activities are identified, excess labor can be addressed through natural attrition.

Refer to Appendix E: IT Job-Related Class Codes for a listing of the IT job-related class codes evaluated as part of this initiative.

It should be noted, there are several IT management and administrative related duties performed by agency personnel that have job titles not specifically associated with IT related job classifications. These individual roles will need to be addressed on a case-by-case basis.

6.1.3 Customer Satisfaction

Maintaining customer satisfaction levels will be critical to the success of this transformation initiative. Unfortunately, neither uniform customer service expectations nor customer satisfaction metrics have been consistently applied from agency to agency. Prior to consolidation beginning, it is recommended that Service Level Agreements (SLAs) be developed and service level expectations be defined and agreed to. The SLA, at minimum, should establish a link to all centralized services, the costs associated with those services and the performance expectations customers should have concerning the delivery of those services. Specific performance metrics should be established in the following areas: network, systems, project delivery, and service desk.

Although all performance metrics are important, since the service desk will be the initial face to the customer and the initial point of contact for most inquiries, being able to establish performance metrics that help indicate service delivery issues early in the transformation process is very important. Service desk metrics will be key indicators of the customers' overall satisfaction with the central organization, but additionally can be used to ensure issues are being resolved at the appropriate level and that staff is distributed across the organization in order to produce the maximum result. The following diagram from Gartner helps illustrate cost exposures to the organization based on which level within the IT service organization resolves an issue.

Efforts should be taken to staff the service desk with skilled employees, provide them the right tools to address customer needs, and implement the appropriate procedures to ensure that 60% to 70% of all customer issues are handled at either Level 0 or Level 1. Resolving issues at either Level 0 or Level 1 will result in both increased customer satisfaction levels and reduced support costs.

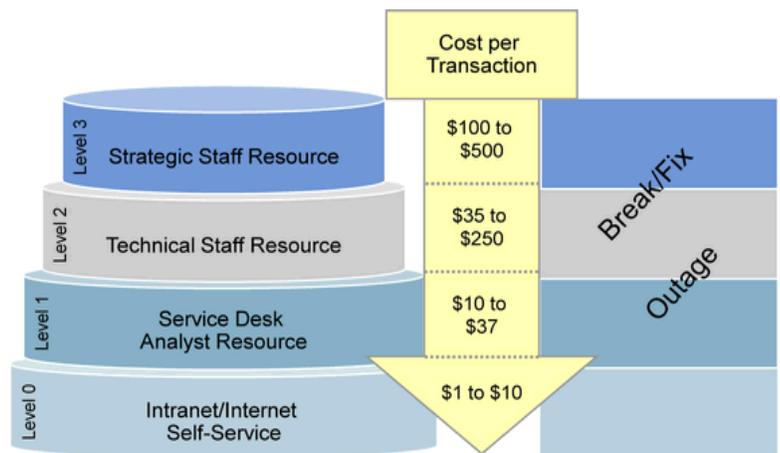


Figure 6.1.3

Gartner has developed industry average performance measures in nearly every IT service category. Using Gartner as a basis to establish performance baselines would be recommended.

6.2 Federal Considerations

As states look at moving to a shared solutions model, many federally funded agencies will have concerns that this move will negatively impact their federal reimbursements or compliance to federal regulations. Although these concerns can be exaggerated, they are not totally unfounded. OIT is intimately familiar with the following federal rules and regulations, which must be considered prior to consolidating federally funded or federally regulated state entities.

6.2.1 OMB Circular A-87

It is imperative that the central IT recovery and chargeback model consider federal OMB Circular A-87 recovery constraints. It is advisable that the final recovery and chargeback plan be discussed with Ohio's Federal OMB representatives before actual implementation. Virginia was one of the first states to implement a shared solutions model, so we may be able to learn from their analysis of OMB Circular A-87 as it relates to the transformation and consolidation efforts here in Ohio.

Like VITA, the State of Ohio will have to work with each agency to ensure that federal cost allocation concerns are addressed appropriately. Additional information regarding VITA and issues they faced can be found in Appendix B: Virginia's Information Technology Association (VITA) Federal Issues and Results.

6.2.2 Business Associate Requirements

The central IT organization will likely be asked to sign business associate agreements prior to consolidating with agencies governed by Health Insurance Portability and Accountability Act (HIPAA). By law, the HIPAA Privacy Rule applies only to covered agencies housing Personal Health Information (PHI), such as health plans, health care information, and so on. However, once the central IT organization has security access to servers and networks containing PHI, the HIPAA Privacy Rule will apply to the shared solutions organization. The Privacy Rule allows covered agencies to disclose or make access available to protected health information to central service providers such as IT, referred to by the HIPAA Privacy Rule as "business associates", if the agency obtains satisfactory assurances that the business associate will use the information only for the purposes for which it was engaged by the agency, will safeguard the information from misuse, and will help the covered agency comply with some of the covered entity's duties under the Privacy Rule. Covered agencies may disclose protected health information to an entity in its role as a business associate only to help the covered agency carry out its functions—not for the business associate's

independent use or purposes, except as needed for the proper management and administration of the business associate.

Agencies may require central IT employees to complete security and/or privacy training prior to engaging in a business associate agreement.

6.2.3 IRS Publication 1075: Tax Information Security Guidelines

Prior to consolidating the infrastructure that supports tax, unemployment insurance and workers compensation, the central IT organization should make a special effort to become familiar with IRS Publication 1075. In a consolidated/shared solutions environment, it is the responsibility of the central organization to build effective security controls into the state's IT infrastructures to ensure that Federal Tax Information (FTI) is protected at all points where FTI is received, processed, stored, and/or maintained. IRS publication 1075 details specific security controls that must be in place, notification procedures for unauthorized inspection or disclosure of FTI, and specifically prohibits the use of more progressive technology concepts and practices such as Bring Your Own Device or remote VPN access.

6.3 Functions to Consider In-scope for Optimization

With the state's transformation initiative, many IT functions that have been highly distributed across the Executive Branch agencies will now be consolidated into the central IT organization. After transformation efforts are complete, technology personnel within a particular agency will concentrate on providing proprietary business application needs and the central IT organization will concentrate on providing core IT infrastructure services and enterprise and infrastructure application solutions to all Executive Branch agencies.

Table 6.3 depicts an initial proposal as to who should support and how specific IT functions should be distributed within the shared solutions model. To clarify:

- **Centralized Management/Centralized Execution** means that the newly transformed shared solutions organization will be responsible for the function and that the personnel used to support that function will be at a centralized location.
- **Centralized Management/Decentralized Execution** means that the newly transformed shared solutions organization will be responsible for the function but the personnel used to support that function will continue to be distributed throughout various agencies.
- **Decentralized Management/Centralized Execution** means that the current agency will retain responsibility for the function and that the personnel used by that agency should be centralized to support that function at a centralized location within that agency.

- **Decentralized Management/Decentralized Execution** means that the current agency will retain responsibility for the function and that the personnel used by that agency should be decentralized to support that function across the agency.

The letters P, F, and A indicate the following:

- P—Preferred Approach to maximizing the delivery of that specific IT function.
- F—Facilitated by, but is a collaborative process with the agencies. For example, the central shared solutions organization will be responsible for disaster recovery (DR), but agencies will be responsible for developing specific Recovery Point Objectives (RPOs) and Recovery Time Objectives (RTOs) on which the DR plan will be developed.
- A—Alternative to the preferred. This is an acceptable alternative that should be debated by the Executive Governance Committee. Different states have taken different approaches.

Function	Centralized Management Centralized Execution	Centralized Management Decentralized Execution	Decentralized Management Centralized Execution	Decentralized Management Decentralized Execution
IT Asset Management		P		
Disaster Recovery	F			
Business Continuity			P	
IT Investment Planning	F			
IT Service Desk	P			
Network Engineering	P			
Database Administration	A		P	
Database Design	A		P	
Data Center Operations	P			
Enterprise Applications Delivery	P			
Enterprise Architecture	P			
Network Operating Center	P			
LOB Application Delivery			P	
Server Management	P			
Storage Management	P			
Enterprise IT Contract Management	P			
LOB IT Contract Management			P	
Firewall Management	P			
IT Procurement	P			
Desk Side Support		P		A
Project Management	P		A	
Standards Development	P			
Quality Assurance (IV&V)	F		A	
Enterprise Security	P			
IT Training	P		A	
GIS	P		A	

Function	Centralized Management Centralized Execution	Centralized Management Decentralized Execution	Decentralized Management Centralized Execution	Decentralized Management Decentralized Execution
BI/ Data Warehousing	P		A	
Telephony		P		A
Mobile Communications		P		A
Enterprise Privacy	P			

Table 6.3

7 Risk and Risk Mitigation

As with any project of this size and scope, there are risks that could impact project success. It is impossible to anticipate every issue that could occur, but performing some level of due diligence by reviewing issues that have occurred on similar projects in other states is prudent. Below is a list of potential risks and possible mitigation approaches within a variety of subject areas. This list will be revised as the project continues and new potential risks are identified.

Area	Risk	Mitigating Tools and Techniques
Financial	<p>Initial funding levels needed to consolidate have been identified but may need to be adjusted to deliver all the initiatives planned.</p> <p>The purpose of the fund is to address and support new enterprise services. It involves technology and contracted staff to address resource capacity issues.</p>	<p>Prioritize projects based on overall impact to the organization, with weight given to projects with highest potential cost savings.</p> <p>Work with OBM and the legislature to re-invest a percentage of savings.</p>
	<p>IT consolidation and transformation will result in significant savings across the state. However, at the individual agency level, some agencies may see increases in IT-related costs, while others see significant reductions.</p>	<p>Work with OBM to shift dollars from those organizations with significant savings to those that may see increases.</p> <p>Incorporate in communications plan focus on statewide savings to foster understanding of individual agency savings variances.</p>
	<p>As services are redefined, agencies may see that federal dollars are subsidizing other services. In that case, some agencies IT-related expenses paid through General Revenue Fund (GRF) may go up, while IT-related expenses associated with federal funding may go down.</p>	<p>Work with OBM and federal partners to reallocate costs.</p> <p>Work with OBM and the legislature to incent agencies to save—maintain appropriation levels and recognize agencies who return unexpended funds to the GRF.</p>
Employees	<p>Many employees that are at or past retirement age may elect to retire and not go through the consolidation effort. While headcount reductions are anticipated, recognition should be given to the fact that many of these employees will likely be the sole support for legacy applications.</p>	<p>Review position descriptions/job responsibilities of employees eligible for retirement to determine potential skill gaps and opportunities to share resources across agencies until legacy applications are retired.</p> <p>Establish employee exit strategies and document identified gaps made by retiring employees to close process/technology gaps and ensure knowledge transfer.</p>
	<p>Employees that have been with an agency for many years may feel a sense of belonging to that unit. Pulling these employees may result in morale issues and resistance.</p>	<p>Conduct personalized sessions with individuals/teams coming into OIT. Continue/maintain multi-agency team approach (MAC, ETA SC) to ensure agency perspectives are included in decision-making process.</p>

Area	Risk	Mitigating Tools and Techniques
		<p>Incorporate in communications plan expectations of OIT management regarding role in culture change and personnel transition tools as well as have communications targeted specifically to concerns of transitioning employees.</p>
	<p>IT leadership in other agencies will likely lose some degree of control and responsibility as a result of this new direction and may undermine the initiative.</p>	<p>Incorporate in communications plan benefits that offset this lack of control. Monitor “organizational health” to gain knowledge of when this occurs and immediately address with the leadership of the agency or department.</p>
	<p>Due to uncertainty, employees may seek other employment opportunities outside the state. Unfortunately when this occurs, the best employees are the most marketable and the first to go.</p>	<p>Incorporate in communications plan the details of employee impacts, including benefits to employees and insight to proposed organizational leadership structure.</p> <p>Identify top performers and give them personal attention. If allowable, small retention bonuses for a select few individuals may show the state’s commitment to them.</p>
	<p>Employee unions will likely resist if the end state results in fewer state employees.</p>	<p>Keep open communications with union leaders, including promoting awareness of loss of employees through natural attrition and regular progress updates via the communications plan.</p>
Operations	<p>Consolidation, standardization, and centralization will require significant changes in technology. These changes, no matter how well planned and executed, will result in a degree of outages and availability issues.</p>	<p>Formalize and adhere to change management policies and procedures.</p> <p>Establish project plans associated with these initiatives and link to business impacts.</p> <p>Communicate project status and changes to the customer to ensure critical business processes will not be impacted and to provide awareness of potential downtimes and how to report issues.</p> <p>Conduct a risk assessment and architectural review prior to the implementation of any major change.</p>
	<p>System and network performance could be negatively impacted. This could be real or perceived.</p>	<p>Establish system and network baseline performance measures prior to consolidation or centralization.</p> <p>Invest in network and system analysis tools to monitor, track, and analyze network traffic.</p> <p>Establish a means to report system/network performance issues and provide reporting of resolution to customers.</p>

Area	Risk	Mitigating Tools and Techniques
Security	<p>In order to consolidate and centralize systems and applications, traditional security controls will require change. These changes could have far reaching impacts, such as back-ups not running, network exposure to outside security threats, and so on.</p>	<p>Establish zero tolerance policy with regard to risk of data loss or security exposure associated with this initiative; do not move forward until the issue has been resolved.</p> <p>Establish internal working agreement among OIT management to recognize that consolidation and centralization of technology systems and services is not an operational initiative, but a joint effort that should not proceed without consensus from both operational and security professionals.</p>
Customer	<p>Once consolidated, customer may see lower levels of service in some areas (perceived or real).</p>	<p>Agree prior to consolidation on Service Level Agreements and performance metrics to track OIT's ability to deliver on those agreements and communicate agreements to agencies.</p> <p>Establish a unit within OIT that is dedicated to the needs and advocacy of each customer.</p> <p>Train and tool the service desk so that 65% to 75% of all customer inquiries can be resolved on initial contact.</p> <p>Formalize problem, incident, and escalation processes to ensure timely response to the customer.</p>
Regulatory	<p>Non-compliance with federal rules and guidelines could jeopardize federal funds.</p>	<p>Promote awareness of OMB Circular A87, Federal Tax Guidelines 1075, and Health and Human Services (HHS) requirements concerning Health Insurance Portability and Accountability Act (HIPAA) privacy and security to OIT operational, financial, and security professionals to avoid issues of this nature.</p>
Outside Influence	<p>After products and services are standardized, some vendors may lose state business. These vendors will likely approach the Governor's office and/or the legislature concerning what they perceive to be unfair business practices.</p>	<p>Thoroughly document standards and the approach used to establish that standard.</p> <p>Publish these standards on the OIT web site and send proactive communication to vendor community.</p>

8 Transforming the Organization

When people are confronted with the need to change, especially when it is 'imposed upon them' by the organization, they will likely become emotional and resistant. Through communication and organizational change management, diffusing the emotional feelings, taking a step back, and encouraging objectivity, are important steps to enabling sensible and effective change and minimizing resistance.

The intent of this section is to discuss the organizational impact of the impending change and to make recommendations that should help facilitate a successful transition.

8.1 Proposed Organizational Structure

A new organizational structure should be put in place that will better service the agencies supported by the central IT organization and will support the increased number of employees that will be part of this newly transformed organization. The following proposed structure is presented for initial consideration based on “best practices” noted in other states.

OIT must transform from an organization that provides infrastructure to a customer centric shared solutions organization. This is not meant to minimize the importance of technology, which is the core of enterprise IT, but to equally stress the importance of a cultural shift to a shared solutions organization with a heavy focus on the high-quality customer service delivery. It is recommended that the Business Relationship Management subcommittee consider adding a unit within the transformed central IT organization to specifically concentrate on customer service delivery.

Prior to actually consolidating employees from other agencies into the central IT organization, it recommended that an organizational structure be finalized so that individuals can be transferred into their appropriate work units. It is also recommended that the Directors of each unit be named as expeditiously as possible. Having the organization defined and the leadership named will help alleviate employees' anxiety as they transition into their new teams. Having this defined early will also give employees that do not feel comfortable with the change time to seek other opportunities.

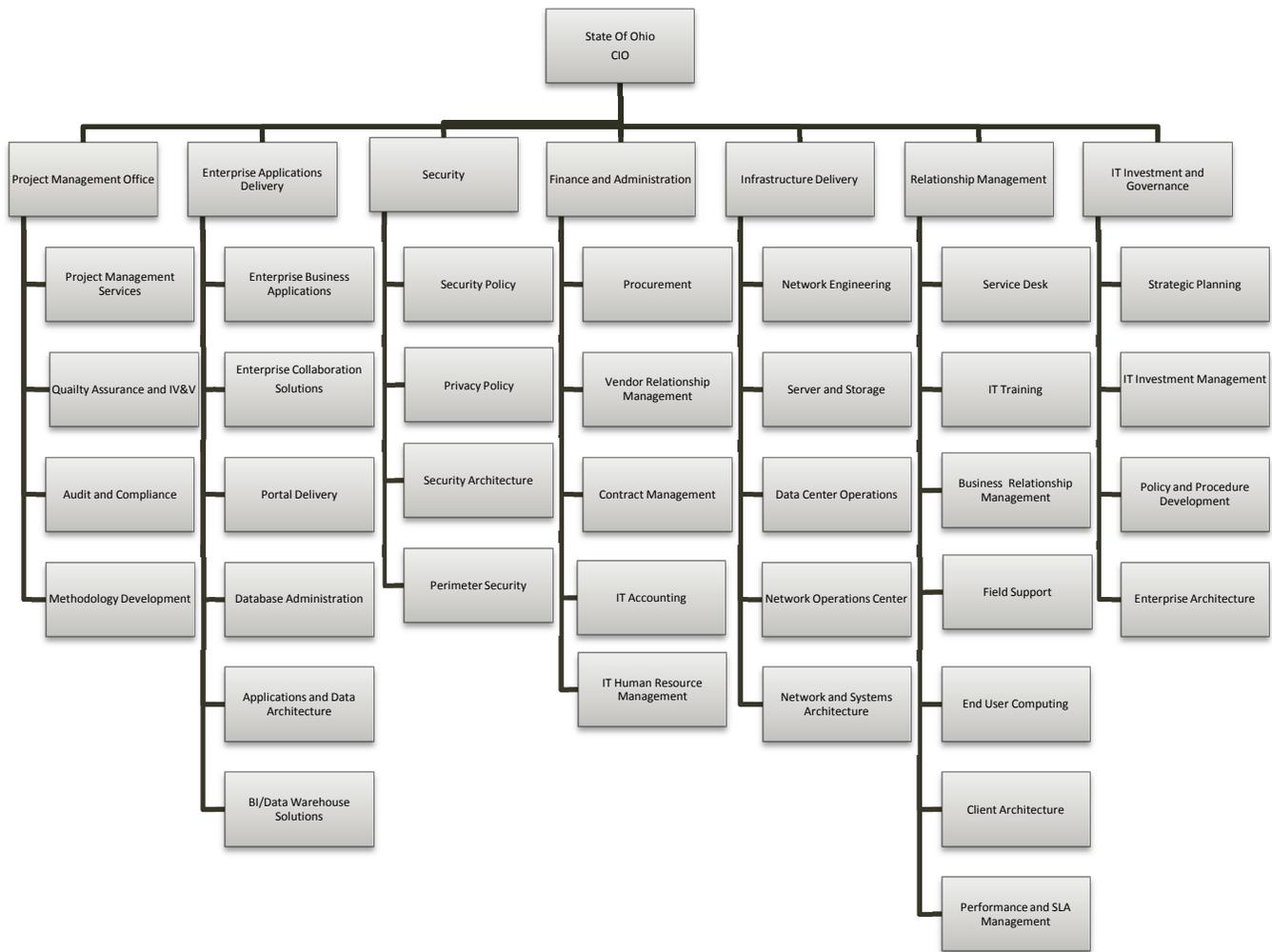


Figure 8.1

It should be noted that nearly any organizational structure can work depending on the maturity of the governance structure in place. Each of the proposed organizational units will be briefly described in the following sections.

8.1.1 Project Management Office (PMO)

The following should be core competencies of the Project Management Office:

- Processes, Standards, and Methodologies**—A primary role should be to develop and maintain the processes and methodologies needed to consistently manage projects. The PMO should serve as the central library for these standards (including templates, forms,

checklists), and be the expert on their deployment. The PMO should also incorporate lessons learned on completed projects into the project management methodology.

- **Project Managers**—The PMO should take charge of the development of professional project managers. In the centralized PMO, project managers should report to the PMO and be deployed to projects either as full-time managers or on a part-time basis. The PMO should maintain a database of project managers across the enterprise (both centralized and decentralized), documenting their skill sets and experience.
- **Training/Professional Development**—High-performing IT organizations have a well-developed project management talent strategy. Due to the high demand, quality project managers are difficult to attract and retain, especially in state government. In order to meet the internal demand for project managers, the PMO should be the center of focus for project manager and team training and development. Steps should include creating a career path to attract and reward top performers, establishing integrated, multi-disciplinary project teams with key skills before beginning major IT projects, requiring project managers to share best practices at the close of each project and encouraging mobility of project managers across state government. The PMO should consider partnering with a project management training vendor to tailor standardized courses around Ohio's project management methodology.
- **Program Management**—The PMO should be responsible for managing programs of related projects. They should develop program plans and schedules that detail the interdependencies of these related projects within the programs. They should provide status updates, resources requirements, and budgetary updates against the program.
- **IV&V and Quality Assurance**—Many of the projects in which Ohio will engage will likely be turn-key initiatives where an external contractor is responsible for full implementation and the project management associated with the implementation. To ensure that outside parties are meeting their obligation to the state, it is recommended that the PMO consider adding an Independent Verification and Validation (IV&V) practice. IV&V is a set of verification and validation activities that would be performed by the PMO to ensure vendor obligations to the state are being met throughout the project.
- **Mentoring and Coaching**—There will be times when it may not be practical for the central PMO to manage every IT project, especially those smaller in scope. In those cases, an agency may manage the project themselves or contract project management services through an outside entity. In these instances, the PMO should provide expert assistance in the form of mentoring and coaching for that agency.

- **Post Project Audit and Compliance**—The PMO should randomly audit projects at some period after project completion to ensure business case objectives have been achieved. Based on post audit reports, the project management methodology should be investigated to see if revisions to the methodology could help avoid issues in future projects that were discovered during the post audit process.

Implementing these proposed recommendations should help enhance PMO services across the enterprise and, over time, raise the overall maturity level of the organization.

It is also recommended that the PMO actively engage the Value Management Office on all new initiatives to ensure adequate performance measures are in place and that business cases clearly define value in order to verify projects achieve expected benefits post implementation.

8.1.2 Enterprise Applications Delivery

This team should be responsible for the delivery of enterprise business, messaging, and collaboration software solutions across all agencies. This includes enterprise business solutions such as OAKS, in addition to messaging and collaboration software solutions such as Voice Over Internet Protocol (VOIP), Instant Messaging (IM), email, and so on. The key to building an effective application delivery framework is to understand that applications will not all fit into one delivery strategy, there is always going to be a hybrid of technologies that enable application delivery to the enterprise.

It is recommended that the Enterprise Application Delivery unit be responsible for:

- Design, implementation, and support of enterprise business solutions.
- Design, implementation, and support of enterprise messaging and collaboration solutions.
- Development of policies, practices, and procedures governing the enterprise portal.
- Design, implementation, and support of the enterprise BI/data warehousing solutions.
- Maintenance of the enterprise application portfolio.
- Leading the application and data architecture efforts.

Although many agencies will continue to implement, develop, support, and maintain proprietary line of business applications, these distributed application development groups will have an indirect responsibility to the Enterprise Applications Delivery Director to follow all established architectural policies, practices, procedures, and standards established relating to applications delivery.

8.1.3 Security and Privacy

The role of Security and Privacy should be to ensure that the state's technology assets (including stored data) be protected from both internal and external threats. The Security and Privacy unit should oversee and coordinate security efforts across the enterprise, including intrusion detection, web and email filtering, security monitoring, and physical perimeter security. This team will be responsible for setting security policies, procedures, and standards. This would include things like enterprise password reset policies, encryption policies, acceptable use policies, and so on. This could also include setting specific standards on products such as anti-virus, intrusion detection, and so on. This team will set standards on the deployment of critical security patches to operating systems, network equipment, and COTS packages.

More specifically, the Security and Privacy unit will:

- Lead operational risk management activities.
- Manage the development and implementation of an enterprise cyber security policy, standards, guidelines, and procedures in order to safeguard the state's technology and information assets, intellectual property, and computer systems.
- Maintain strong relationship with MSISac, the Department of Homeland Security, and with local, state, and federal law enforcement entities. This team should have at least one employee with federal security clearance credentials in order to participate on Homeland Security Cyber briefings.
- Manage the development and implementation of an enterprise security architecture.
- Develop employee security awareness and privacy education programs.
- Oversee incident response planning as well as the investigation of security breaches, and assist with disciplinary and legal matters associated with such breaches as necessary.
- Work with outside consultants as appropriate for independent security audits.

From a security perspective, many state's see the security team's role as more of a policy setting unit with very little operational responsibility, whereas other states have expanded the traditional role of the security unit to include operational responsibilities specific to intrusion detection, perimeter security, and filtering. This proposal places several operational responsibilities within the security unit, but valid arguments could be made for placing these operational activities within the Infrastructure Delivery unit. The rationale for recommending these operational activities within the Security and Privacy unit is two-fold: first, the team's interaction and collaboration with outside entities such as the Federal Department of Homeland Security and MSISac, and secondly the desire to have a team

dedicated to very specifically keeping track of security threats and vulnerabilities from across the enterprise with the ability to react immediately to protect the state from outside harm.

8.1.4 Finance and Administration

The role of the Finance and Administration unit is to run and administer the business of a shared solutions IT organization. This team is responsible for central IT Procurement, Vendor and IT Contract Management, central IT Human Resources, and central IT Accounting, Billing and Finance. This unit should be the single point of contact for inquiries related to IT expenditures, financial trending and base-lining across the Executive Branch.

As part of the IT accounting function, this unit will also be responsible for central IT Asset Management and Tracking. If the central IT organization transfers or takes responsibility for assets acquired with federal funds, Asset Management and Tracking is critical. Refer to Appendices B and C for more information.

8.1.5 Infrastructure Delivery

The role of the Infrastructure Delivery unit is the design, implementation, support, and maintenance of the state's technical infrastructure. This unit will consist of network engineering, systems engineering (Server and Storage), data center, network operations, and infrastructure architecture. The team will be accountable for the availability, reliability, accessibility, and performance of the technical infrastructure on which the state's critical information assets reside and where critical business applications are processed.

This unit must stay abreast of all new IT related projects and initiatives across the enterprise and ensure that the technical infrastructure is adequate to support these initiatives prior to implementation. Additionally, this team must stay abreast of the impact that current applications and services are having on the existing infrastructure through infrastructure trending and infrastructure capacity planning.

This organization will work directly with the Security and Privacy unit to ensure the state's technical infrastructure and information assets are adequately protected from both internal and external threats. See section 8.1.3 Security and Privacy for other security considerations.

This unit will be responsible for setting policies, procedures, and standards concerning the operation of the state's technical infrastructure.

8.1.6 Relationship Management

In a consolidated organization, the ability to service the client with quality IT services at an affordable cost is imperative to the success of the newly transformed organization. The intent of this section of the document is to briefly cover the primary make-up of this unit, but due to its criticality in a shared solutions organization, Appendix F: IT Service

Management of this document has been dedicated to specifics associated with this team and the delivery of quality IT services to the client.

This team will be the primary point of contact and the initial “face to the customer” on nearly all IT related matters. This unit will be comprised of the Service Desk, IT Training, Distributed IT Support, End-User Service and Support, and Client Architecture. For any issues that this team cannot resolve, they will take the responsibility to properly escalate that issue to another responsible party, either inside or outside of the central IT organization. When issues are escalated, the unit will still be responsible for tracking the progress and reporting back to the customer.

This unit will be responsible for the development of policies, practices, and procedures associated with the delivery of high quality IT services such as incident reporting, escalation procedures, customer communication plans, and so on. This unit will also work with other central IT units to develop IT performance metrics and agency SLAs.

It is also recommended that each agency be assigned a Relationship Manager from within this unit. This Relationship Manager will meet with that agency on a regular basis. The role of the Relationship Manager will be to:

- Build a strong alignment between IT and the business.
- Address service delivery concerns and issues.
- Plan a strategy that positions the central IT organization as a trusted advisor on key IT initiatives.
- Work with the agency to articulate IT solutions that meet business needs.
- Create clear and effective service delivery expectations.
- In conjunction with each agency and other central IT units, develop and track SLA performance metrics.

The Client Relationship team will be supported by Communications through the creation of customer communication plans, training materials, and other associated deliverables.

8.1.7 IT Investment and Governance

The role of the IT Investment and Governance unit is the design and implementation of a strategic plan for the central IT organization that supports the vision of the organization. This unit will consist of Strategic Planning, central IT Investment Management, central IT Policies and Procedures, and Enterprise Architecture.

The Enterprise Architect unit should be responsible for developing relevant guiding principles, maintaining the current-state business process documentation, and developing the target future-state model. The Enterprise Architecture unit will collaborate with Solution

Architects assigned within the Enterprise Applications Delivery unit, the Security unit, the Infrastructure Delivery unit, and the Client Relationship Management unit. No enterprise solution should be pursued without the collective consensus from the Enterprise Architecture unit and the various Solution Architects. For more information on the role of Enterprise and Solutions Architects, see Appendix A: Organizational Observations.

Communications will support this unit, as many of its work products will rely heavily on documentation and communication.

8.2 Workforce Considerations

This section outlines considerations relating to the IT workforce.

8.2.1 Resistance to Change

Resistance to shared solutions or centralized services uptake can be very strong and originates from five major causes:

- **Fear of losing control.** Shared solutions can result in the perception that agency heads are losing their control of money or people within their agency.
- **Fear of losing organizational status.** Consolidating assets, people, or end-to-end services, even commoditized ones, such as network management, means that agency CIOs will lose some of their agency level control.
- **Difficulty in reducing head count.** Reduction of head count is a major driver of cost cutting for government optimization programs, especially in the first 18 to 24 months. To alleviate these concerns, it should be clearly communicated that Ohio's headcount reductions will be achieved through natural attrition.
- **Concerns about quality of service.** Some potential users can be concerned that cost reduction objectives will be pursued at the expense of service levels. In some cases, that is a genuine concern; especially when the consolidation involves a large number of agencies, there is a tendency to standardize service levels on the lowest common denominator to drive down operating costs. Thus, the agencies that previously provided a very good level of service do not benefit from the consolidation. Ohio needs to stress that through transformation, cost savings will be achieved without sacrificing service levels.
- **Size.** Large government agencies and departments often argue that they already have a critical mass that enables them to harness economies of scale. Hence, they would not benefit from the cost reduction resulting from the consolidation, or the transition costs

to move to the shared or centralized model would outweigh the marginal improvements, even though benefits would result from the consolidation program as a whole.

It is imperative that a carefully designed strategy be developed to achieve targeted staffing levels without losing focus of the skills required to align with the service delivery improvement plans, and to reduce the risk of demotivating the remaining staff. This workforce transition plan should include:

- Mapping the types of skills and the number of people required for the various lines of service included in the service catalog.
- Designing a recruiting process to hire staff. This will enable people to be transferred from executive agencies only if they matched the skill requirements, and if they are motivated to do so. This also enables recruiting some staff from external organizations, including qualified IT professionals who had previously left the state.
- Training all IT employees on customer service and customer satisfaction.
- Starting a recognition and reward program. Recognition and rewards are uncommon and sometimes seen as risky in the public sector; recognized workers could be marginalized instead of becoming role models. The CIO can recognize employees who suggest innovative ideas for service improvements with spot awards.

8.2.2 Departmental Personnel and Related Spend

A large percentage of anticipated savings associated with IT transformation is attributed to reductions in agency staff as positions will not need to be filled as services are centralized. Therefore, it can be anticipated that agencies with the largest allocations of IT professionals today will likely see the greatest financial benefit from the IT Transformation initiative. Table 8.2.1 (sorted in order from largest IT labor related spend to smallest) depicts IT-related labor costs by agency trended over the past 5 years.

Department	2008	2009	2010	2011	2012
Department of Job and Family Services	\$66,760,371.51	\$68,432,394.28	\$68,846,972.14	\$67,698,851.05	\$70,511,148.80
Department of Administrative Services	\$31,755,391.20	\$30,744,422.40	\$30,032,596.84	\$30,124,276.26	\$31,562,194.83
Department of Public Safety	\$20,273,667.44	\$20,623,559.05	\$20,318,169.44	\$20,085,648.89	\$21,271,110.35
Bureau of Worker's Compensation	\$24,253,308.80	\$24,136,079.59	\$21,545,874.65	\$18,561,361.81	\$18,630,393.60
Department of Transportation	\$16,226,838.46	\$16,534,852.02	\$16,599,252.97	\$17,135,730.25	\$17,849,334.50
Department of Taxation	\$15,996,387.73	\$15,855,021.07	\$15,356,471.05	\$14,529,645.01	\$14,975,171.79
Department of Health	\$9,615,681.18	\$9,533,380.25	\$9,347,292.69	\$9,266,411.97	\$9,704,021.63
Department of Education	\$9,030,168.27	\$9,691,634.66	\$9,375,313.88	\$8,411,407.49	\$8,354,198.48

Department	2008	2009	2010	2011	2012
Department of Rehabilitation & Correction	\$7,501,543.51	\$7,225,063.10	\$7,411,148.71	\$7,671,872.42	\$8,289,231.35
Department of Mental Health	\$9,008,153.03	\$7,995,493.61	\$7,978,979.49	\$7,475,615.15	\$7,767,877.63
Department of Developmental Disabilities	\$5,438,497.65	\$5,330,482.12	\$6,053,745.56	\$6,144,036.35	\$6,754,597.59
Environmental Protection Agency	\$5,855,221.06	\$5,962,489.64	\$6,162,944.97	\$6,242,204.76	\$6,458,142.06
Office of Budget and Management	\$1,700,168.42	\$4,434,224.80	\$5,843,946.38	\$5,734,938.42	\$6,017,155.54
Department of Natural Resources	\$5,361,887.22	\$4,758,580.09	\$4,914,988.35	\$5,179,628.73	\$5,413,084.51
Rehabilitation Services Commission	\$5,403,166.91	\$5,362,137.44	\$4,941,153.83	\$4,406,697.77	\$4,456,927.75
Attorney General	\$4,553,390.05	\$4,481,619.04	\$4,297,899.79	\$4,138,243.43	\$4,403,551.38
Department of Commerce	\$4,294,106.16	\$4,248,557.50	\$4,161,122.15	\$3,742,287.46	\$4,029,904.07
Auditor of State	\$3,031,836.56	\$3,197,734.77	\$3,405,156.76	\$3,420,694.88	\$3,740,263.27
Ohio Lottery Commission	\$3,552,958.58	\$3,567,888.48	\$3,356,746.73	\$3,392,109.25	\$3,394,281.06
Industrial Commission of Ohio	\$3,408,212.68	\$3,154,286.70	\$3,185,116.15	\$3,169,551.56	\$3,324,214.00
Department of Youth Services	\$2,339,978.90	\$2,270,666.90	\$2,525,852.75	\$2,439,212.53	\$2,619,733.24
Public Utilities Commission of Ohio	\$2,757,135.52	\$2,780,937.26	\$2,644,895.34	\$2,302,872.81	\$2,394,378.68
Department of Insurance	\$1,631,175.19	\$1,743,455.13	\$2,062,925.92	\$2,014,146.11	\$2,079,357.30
Treasurer of State	\$1,482,611.82	\$1,554,267.30	\$1,489,229.22	\$1,589,617.26	\$1,749,581.88
Development Services Agency (Ohio Department of Development)	\$2,003,527.48	\$2,077,894.42	\$2,085,864.30	\$1,766,374.36	\$1,669,635.45
Alcohol & Drug Addiction Services	\$1,358,978.75	\$1,239,777.96	\$1,319,948.82	\$1,320,351.06	\$1,381,462.73
Secretary of State	\$1,344,559.12	\$1,339,619.31	\$1,405,056.39	\$1,258,549.93	\$1,293,338.04
Ohio Department of Aging	\$1,378,809.49	\$1,428,303.80	\$1,349,582.96	\$1,132,013.88	\$1,140,847.55
Department of Veterans Services	\$261,243.88	\$720,809.77	\$748,448.50	\$870,885.64	\$992,827.19
Ohio Library Board	\$916,452.18	\$934,778.53	\$921,989.59	\$888,907.33	\$952,309.26
Ohio Housing Finance Agency	\$525,622.43	\$626,756.53	\$640,858.76	\$694,267.66	\$790,338.21
Board of Regents - Agriculture	\$707,571.77	\$680,189.71	\$646,167.76	\$672,287.99	\$699,459.58
Adjutant General	\$576,774.60	\$579,069.11	\$516,341.52	\$581,922.07	\$604,036.56
Ohio School Facilities Commission	\$362,345.01	\$421,343.00	\$444,507.10	\$434,098.44	\$452,897.25
State Board of Pharmacy	\$396,176.30	\$398,871.98	\$375,190.14	\$383,420.08	\$329,302.70
Ohio Public Defender	\$224,037.76	\$262,984.36	\$250,925.73	\$285,565.06	\$325,683.63
Board of Nursing	\$217,836.82	\$222,087.20	\$224,979.10	\$224,142.78	\$237,601.33
State Medical Board of Ohio	\$209,026.59	\$212,209.23	\$216,498.09	\$213,615.96	\$224,374.98

Department	2008	2009	2010	2011	2012
Ohio School for the Deaf	\$176,501.31	\$190,353.20	\$192,368.70	\$188,570.77	\$201,504.39
eTech Ohio Commission	\$103,525.76	\$113,558.69	\$120,156.31	\$116,455.92	\$118,887.33
Ohio Expositions Commission	\$106,825.10	\$106,297.11	\$108,077.87	\$108,158.70	\$115,235.50
Ohio Ethics Commission	\$73,230.53	\$86,223.03	\$94,727.41	\$94,933.97	\$102,677.86
Tax Appeals Board	\$80,553.59	\$79,843.22	\$84,866.26	\$83,532.04	\$87,690.45
Ohio Arts Council	\$161,622.29	\$161,149.89	\$79,336.41	\$78,300.27	\$84,341.37
Ohio State School for the Blind	\$82,579.01	\$85,150.63	\$87,091.66	\$79,908.31	\$80,758.83
Ohio Civil Rights Commission	\$235,593.42	\$235,474.37	\$217,651.25	\$125,409.97	\$74,013.64
State Board of Cosmetology	\$0.00	\$13,417.26	\$108,456.91	\$68,089.63	\$73,002.06
Ohio Legal Rights Services	\$141,568.17	\$106,826.70	\$111,952.07	\$57,283.28	\$63,775.83
Ohio Veterans Home	\$449,516.27	\$0.00	\$0.00	\$0.00	\$0.00
Ohio Tuition Trust Authority	\$0.00	\$0.00	\$0.00	\$3,085.86	-\$2,759.76
Grand Total	\$273,326,335.48	\$275,942,216.21	\$274,208,839.37	\$266,607,192.58	\$277,843,097.25

Table 8.2.1

8.2.3 Retirements

In order to reach the financial targets associated with this IT Transformation plan, a decline is expected of approximately 300 to 400 IT professionals from Ohio’s Executive Branch IT workforce over the next few years. Ohio is not unique, it was noted in a recent NASCIO publication, “State of the IT Workforce – Under Pressure”, nearly two-thirds of all states responded that they anticipate IT staff reductions over the next three years.

Ohio’s desire is to achieve these reductions in IT workforce through normal attrition. Table 8.2.2 represents the number of employees’ eligible for retirement (by agency) immediately, within one year, and within five years. From this table, it can be assumed that these labor reduction targets should be achieved through normal workforce attrition, without the need for any type of involuntary forced reduction, but other considerations may influence actual staffing reductions associated with employee retirements.

- A significant number of state IT employees who are eligible for retirement or have been eligible, will postpone retirement due to the economic downturn and economic uncertainty.
- Many baby boomers likely have institutional, proprietary knowledge of legacy systems and obsolete technologies with little backup support in place. In these particular cases, these retiring employees will likely have to be back filled until legacy systems and

technologies can be replaced. Having a complete inventory of legacy systems and technologies used within the state and the associated skill sets needed to support them would help in determining the magnitude of such an issue in Ohio.

Department Name	Employees Eligible for Retirement			
	Now	Within 1 Yr	Within 5 Yrs	Total
Bureau of Worker's Compensation	28	11	39	78
Department of Administrative Services	37	14	56	107
Department of Commerce	6		6	12
Department of Developmental Disabilities	2	1	12	15
Department of Education	11	1	10	22
Department of Health	8	3	9	20
Department of Insurance		2	1	3
Department of Mental Health	10	5	14	29
Department of Natural Resources	4	4	6	14
Department of Rehabilitation & Correction	7	4	12	23
Department of Taxation	14	9	35	58
Department of Transportation	18	9	41	68
Department of Veterans Services	1	1		2
Department of Youth Services	2		4	6
Development Services Agency (Ohio Department of Development)	2		5	7
Environmental Protection Agency	13	4	8	25
Industrial Commission of Ohio	2		8	10
Office of Budget and Management		1	9	10
Department of Aging	1	1	2	4
Department of Agriculture			1	1
Department of Job and Family Services	63	21	104	188
Department of Public Safety	19	10	34	63
Ohio Housing Finance Agency			2	2
Ohio Library Board	1		3	4
Ohio Lottery Commission	7	3	8	18
Ohio Public Defender	1			1
Public Utilities Commission of Ohio	4		2	6
Rehabilitation Services Commission	3	1	7	11
State Board of Pharmacy			2	2
State Medical Board of Ohio		1	1	2
Tax Appeals Board		1		1
Grand Total	264	107	441	812

Table 8.2.2

8.3 Other Concerns

Although several organizational concerns have been mentioned in previous parts of this document, this section summarizes those areas that may need additional consideration.

- Ohio has not conducted a comprehensive skill gap analysis. Specifically, what are the skills and staffing levels needed to support the technology products and services OIT

provides? Ohio is not unique; according to the 2011 NASCIO “State IT Workforce – Under Pressure” publication, only 23.8% of all states do this type of assessment. Without this type of understanding, employees may retire who are the sole source of knowledge on legacy technology products and services.

- As the economy continues to improve, most states are starting to see higher turnover rates as employees seek higher paying positions outside of state government. Ohio will likely see similar trends. Managing spikes in turn-over rates usually does not pose significant concerns, but coupled with the previous two issues, if not managed appropriately, Ohio could experience extremely high turn-over in a relatively short period of time.
- Over the past four years, security, project management, IT architecture, and networking professionals have been in high demand across the nation. In order to attract quality individuals in these disciplines, Ohio may need to be more aggressive from a starting salary perspective.

9 Communications

Resistance from agencies to adopt shared or centralized solutions is one of the most challenging barriers to achieving benefits within the planned time frame. Major sources of resistance are fear of losing political clout, fear of losing organizational status, difficulties in reducing head count, and concerns about service quality. Comprehensive communication, organizational change management, and transformation coordination plans can greatly assist in alleviating these concerns.

Effective communications must focus on the employee. As the IT Transformation initiative begins, the number of IT people leaving state government will likely increase—this will include individuals that are eligible for retirement and not wanting to go through the transformation process and others seeking new opportunities out of fear and uncertainty. It is extremely important that Ohio effectively manage communications to avoid any type of mass exodus of IT workforce during this initial transformation phase. It is important that Ohio clearly communicate how reductions will be achieved through normal attrition. Without communication, employees will assume the worst and in many cases, out of fear, many of Ohio's best and brightest IT professionals will pursue employment opportunities outside of the state. Ohio, like many other states, has experienced difficulty recruiting new employees to fill vacant IT positions. As the economic forecast improves, this issue will magnify. Losing existing qualified staff due to poor communications must be avoided. The communications plan should also promote the fact that IT optimization will create new and exciting work related opportunities for employees within the state and in many cases will allow employees the opportunity to enhance their skills in more modern and marketable technologies.

The IT Optimization Communications Plan outlines the planned communications for this initiative.

10 Additional Information

Additional information regarding IT Transformation in the State of Ohio can be found on the Department of Administrative Services web site under IT Optimization.
(www.das.ohio.gov.)

Appendix A: Organizational Observations

Nearly every aspect of the way IT services are delivered today will change as transformation efforts progress in Ohio. To ensure that transformation gets started in the right direction, the following four areas need attention to ensure successful outcomes, two areas dealing with governance—Enterprise Architecture and Project Management; one dealing with Service Delivery and the other dealing with Technology—Network Readiness. It is imperative that efforts be made to increase the enterprise focus in these areas prior to beginning actual optimization activities. These areas should be given significant consideration by the Executive Governance Committee and the various subcommittees. This section provides more insight into specific concerns associated with each of these areas.

Enterprise Architecture (EA)

A solid EA practice sets the requirements, principles, standards, and guidelines that steer the implementation of technology change initiatives, describe the enterprise's future state, and enable its evolution. According to Gartner, EA is the process of translating business vision and strategy into effective enterprise change. This is not just a one-time change, but continuous, sustainable change. It is not enough just to “clean up” the technical chaos that has grown over the years; EA must help prevent the chaos from returning. It is not enough to simplify an application portfolio this year; EA must help maintain simplicity in future years. The more successful the EA process is year after year, the easier change should become.

EA is the process of translating business vision and strategy into effective enterprise change by creating, communicating, and improving the key requirements, principles, and models that describe the enterprise's future state and enable its evolution. The scope of the EA includes the people, processes, information, and technology of the enterprise, and their relationships to one another and to the external environment. Enterprise architects compose holistic solutions that address the business challenges of the enterprise and support the governance needed to implement them.

The outputs of this EA process are the requirements, principles, and models that describe the optimal future state, an analysis of the gaps between the future state and the current state, and the roadmaps that support the evolution of the enterprise to the future state by closing the gaps. EA is often accused of being an “ivory tower exercise” that is divorced from the realities of implementation. The fact is Enterprise Architects cannot divorce themselves from the current realities of the environment, but on the other hand, should not be considered the subject matter experts in every area of IT, today's large IT environments are much too complex for any one person or team to bear that responsibility. The role of Enterprise Architects should be to work directly with Solution Architects, those individuals defining the future vision in specific subject areas, such as networking, applications delivery,

BI, and so on, and develop, in conjunction with those Solution Architects the vision and roadmap for the future. Gartner defines:

- An Enterprise Architect as a visionary that is responsible for developing the cohesive “future state” view and defining a roadmap to get there based on the collective analysis, study, and feedback from various Solution Architects.
- A Solutions Architect is an architect with expertise more focused on a specific functional area such as business application architecture, networking, or security architecture. Solution Architects will focus on developing architectural solutions within a functional area, but then work with the Enterprise Architect and their peer Solution Architects to ensure that all solutions collectively provide a consistent, interoperable framework.

An EA process that delivers business value to the enterprise produces several things:

- An articulation of the strategic requirements of the enterprise.
- Models of the future state, which illustrate what the enterprise should look like across all EA viewpoints in support of the business strategy.
- A roadmap of the change initiatives required to reach that future state.
- The requirements, principles, standards, and guidelines that will steer the implementation of change initiatives.

It seems as if Ohio’s focus has been on buying specific technology solutions and the implementation of those solutions with little focus on the deficiencies of the current environment or platforms in which those solutions would reside. As a result, many of those solutions, such as Security Information and Event Management (SIEM), Site Recovery Manager (SRM), Virtual Desktop Infrastructure (VDI) and others, have proven difficult, if not impossible to implement within the existing environment, often after significant investments have already been made in the solutions. A successful EA practice could help avoid such circumstances.

In order to have a successful EA practice, Ohio IT leadership must set a strategic vision for the future. The EA team should then take that vision, work collectively with the Solution Architects, those subject matter experts within each IT discipline, and develop a roadmap for the future. This way decisions will be made in collaboration with other enterprise stakeholders as part of the EA process, rather than being made in individual functional silos. No new enterprise solution should be considered in the future without the collective consensus of the EA team and the Solution Architects.

Today, the EA practice in Ohio is relatively immature. It is recommended that Ohio consider an ongoing focus on EA by defining and staffing the roles of both Enterprise and Solutions Architects within the newly transformed structure. This can be done by forming a centralized organizational unit consisting of both Enterprise and Solutions Architects or a more federated model where Solution Architects are distributed within various areas of focus such as networking, enterprise applications, and so on, but retain a dotted line reporting relationship back to the central EA organization. This latter approach seems to be the model most states are now gravitating to.

At a minimum, Solution Architects should be defined in each of the following IT disciplines:

- Networking
- Security
- Systems and Storage
- Unified Messaging and Desktop Productivity
- BI and Data Warehousing
- Applications Delivery

Because of the way most states have evolved in a very siloed, decentralized fashion over the years, establishing effective EA has been a struggle in most states. As a result, NASCIO established an EA practice in 2004 consisting of industry experts in the EA field from both the public and private sectors.

Project Management

Effectively managing IT programs requires a corps of program and project management professionals with extensive experience and robust training. Strong program management professionals are essential to effectively steward IT programs from beginning to end, align disparate stakeholders, manage the tension between on-time delivery and additional functionality, and escalate issues for rapid resolution before they become roadblocks. The size and criticality of large state government IT programs are considerable. The people managing these programs must represent the best of the best.

After consolidation starts, many of the projects that were the responsibility of the agency will now become the responsibility of the central IT organization and the demands on the central organization to complete these projects in a timely fashion, so that agencies can develop business specific applications, will intensify. There is a concern that the current Project Success Center (PSC) does not have the staff, the full breadth of skills, or the defined policies, procedures, and methodologies to effectively manage all of the impending demand that will be driven from IT Transformation.

From an enterprise perspective, project management is an immature practice within OIT. Today, the PSC provides project management support to internal OIT projects, with very little visibility into IT projects in other agencies. Additionally, even when project managers are engaged with a project, they perform more as a task master with little or no authority over the project. Their focus has been primarily on project coordination, with very limited focus on project risk management, project audit, IV&V, project prioritization or project quality assurance. Additionally, due to the lack of a mature Enterprise Architecture team and a limited focus on Enterprise IT planning, the PSC is often tasked with developing preliminary documentation and project artifacts that in a more mature organization would have been delivered to them.

Prior to implementing a shared solutions model, it is imperative that efforts be taken to increase the maturity level of the PSC. Gartner has a very sound practice around assessing an organization's current PMO maturity level and assisting enterprises in bringing that PMO organization to its desired state. Depending on the cost, OIT may want to consider engaging Gartner on such an initiative.

Network Readiness

Implementing a private enterprise cloud computing environment represents a huge change in the way an organization functions, especially in state governments where IT solutions have typically been deployed in an extremely decentralized, siloed manner over many years. This is especially true for an organization's IT infrastructure. Nobody will be affected more by this transition than the network and security administrators tasked with "opening up" the network to allow enterprise application solutions to traverse the network while keeping the state's data and networking environment safe from both internal and external threats.

Sharing data, applications, and IT infrastructures can present significant cost and productivity benefits, but it requires consolidation of the existing siloed networks, which takes administrators outside of the comfort zone of the traditional firewall and physical network support structure. In order to leverage newer, enterprise-wide technical solutions these physical network and security issues must be addressed, but addressed in a manner that allows the sharing of applications and data without jeopardizing security.

In the past, Ohio has depended on firewalls to not only protect the state's technology assets from the outside world, but also to protect one agency from another. From a unified network view that is managed and administered centrally, internal network security will feature multiple layers of protection (including rigorous data encryption and authentication protocols) to safeguard all transmissions and connections, whereas perimeter security will depend on email and web filtering, intrusion detection tools, and enhanced firewall technologies.

Network and security administrators must work hand-in-hand to re-architect the network to support this new enterprise focus. Before a private cloud computing implementation begins, it is imperative that physical controls, policies, and procedures are in place to ensure users and data remain secure. Although there is a shared responsibility, enterprise security pros should be ultimately responsible for privacy and security, while networking pros remain responsible for network availability, reliability, and responsiveness.

Consideration should be given to the current state of the network and current security controls before enterprise cloud based concepts are planned for implementation. If not, this could result in several undesirable outcomes such as applications not working properly across the network, poor application performance, or opening up our networks and data to potential security breaches. These undesirable outcomes could have a negative impact on internal customer confidence in the central IT direction, or worse yet, in the case of a security breach, diminish the trust and confidence of our citizenry.

Prior to moving any data or applications to the private cloud, it is essential that we take stock of the current state of internal and external network security. This is an ideal time to undertake a network audit and network assessment to see how the current network defenses match up to data security, integrity, and availability expectations. It is also a good time to develop and/or assess policies, regulatory requirements, and industry best practices in order to manage the new enterprise environment in the future. Poking holes in firewalls may be a short-term option, but it cannot be considered a long-term solution. A proper network and security foundation must be developed and it is imperative that any network and/or security deficiencies be discovered early in the consolidation initiative.

Service Delivery

To drive consistency and high-level IT support, it is recommended that central IT develop an organizational structure that specifically concentrates on the quality of customer service delivery.

The primary responsibility of this organizational unit is to provide end-to-end service delivery from the central service organization to the State of Ohio agencies. This unit will be responsible for developing and maintaining service levels and reporting on services back to the agencies and other key stakeholders. This organization will be the initial point of contact for operational and tactical needs. They will maintain strong relationships with agency leadership and will advocate for the agency's technology requirements that support the agency's business requirements.

This organization should focus on the following:

- Customer Business/Partner Relationship Management

- IT Training
- Central Service Desk Operations
- Field and Desk Side Support

This organization should serve as the customer's "Single Point of Contact" and be an advocate for the customer's IT related needs. Since this organization will likely be the customer's first point of contact, it is imperative that the first experience for the customer be a positive experience. Having a robust customer centric IT service organization in place, dedicated to customer relationship management, will be critical to the overall success of this transformation initiative.

Appendix B: Virginia's Information Technology Association (VITA) Federal Issues and Results

This appendix summarizes federal issues raised by Virginia's Information Technology Association (VITA) and the results of their research of federal regulations and policies pertaining to the issues. VITA has concluded based on their research that nothing in these regulations or policies would prevent the transfer of IT assets to VITA or would prohibit Virginia's move to a shared solutions model.

The A-87 research that VITA conducted should assist in the development of Ohio's shared solution cost recovery model.

Issue 1: Administrative Fee. Is the VITA administration fee an allowable cost under federal grants?

Conclusion: OMB Circular A-87, Cost Principles for State, Local and Tribal Governments prescribes the general principles for determining allowable costs and defines allowable and unallowable costs. In addition, OMB Circular A-87 states that each government unit, in recognition of its own unique combination of staff, facilities, and experience, will have the primary responsibility of employing whatever form of organization and management techniques may be necessary to assure proper administration of federal awards.

The VITA administrative fee will be an amount set to recover the actual administrative support costs attendant to the IT services provided by the state. As long as the costs covered by the administrative fee are allowable under the provisions of Attachment B and Sections A and G of Attachment C, of OMB Circular A-87, they are allowable charges to federal grants and contracts.

VITA will include the costs and the methodology used to allocate costs to the transferred IT activities in its cost allocation plan, which it will submit as required by OMB Circular A-87 to its federal cognizant agency for approval (as its predecessor department in the past).

Issue 2: Allow Ability of Depreciation of Equipment Previously Purchased by Federal Funds. Can VITA include in its rate calculation depreciation on equipment previously charged to federal grants directly?

Conclusion: No. The cost of equipment funded entirely by the federal government and charged to grants or contracts cannot be charged subsequently to grants or contracts through depreciation. Depreciation on equipment acquired with federal funds and transferred to VITA must be excluded from VITA's cost pool used to establish billing rates. See OMB Circular A-87, Attachment B, paragraph 15.c (2)

VITA's Physical Asset Inventory System includes a field for agencies to indicate that an asset was purchased with federal funds. These assets will be excluded from the depreciation calculations provided the agency has so indicated when recording their assets.

Issue 3: Allow Ability of Direct Charges for Equipment Purchases. Can agencies have VITA purchase IT equipment for the agency's use, bill the agency for the equipment and exclude the depreciation on the equipment from VITA's billing?

Conclusion: Yes. VITA services include IT services in the form of personal services, equipment and software use charges, and buying services for state agencies. In the event VITA acquires equipment and software for a state agency and is reimbursed by the state agency with federal funds, depreciation of such equipment cannot be included in billing to federal programs. See OMB Circular A-87, Attachment B, paragraph 15.c (2)

Issue 4: Pre-approval of IT Equipment Purchases. Federal agencies require pre-approval of agency IT purchases; will this requirement extend to VITA equipment purchases, the costs of which are recovered through the depreciation component of the service billing rate base?

Conclusion: No. VITA is a central service as defined in Attachment A, paragraph B.4, and Attachment C of OMB Circular A-87. Equipment purchases of central service activities are not charged directly to federal programs, and accordingly are not subject to federal agency pre-approval requirements. Federal programs are charged for IT services, which included charges for depreciation on equipment used in the delivery of billed services.

Equipment purchases by VITA for other state agencies are subject to federal agency pre-approval requirements in accordance with grant agreements. Such purchases will not be made without agency authorization.

Issue 5: Asset Ownership. Is the equipment purchased with federal funds owned by the Commonwealth or the acquiring agency?

Conclusion: The Commonwealth is the owner. "Uniform Administrative Requirements for Grants and Cooperative Agreements to State, Local and Tribal Governments, Section 92.32 paragraph (a)", provides that title to equipment acquired under a grant or sub grant will vest upon acquisition in the grantee or sub grantee, respectively. Section 92.3 defines grantee as the Government to which the grant is awarded, that is, the entire legal entity even if a particular component of the entity is designated in the award document.

Issue 6: Changes in Equipment Utilization. Can VITA use equipment acquired by an agency with federal funds and used solely for a federal program to serve multiple agencies and/or programs.

Conclusion: Yes, unless specifically provided otherwise in the grant program regulations. “Uniform Administrative Requirements for Grants and Cooperative Agreements to State, Local and Tribal Governments, Section 92.32 paragraph (b)”, provides that a state will use, manage, and dispose of equipment acquired under a grant by the state in accordance with state laws and procedures.

Issue 7: Sale of Equipment. How will VITA handle proceeds from the sale of equipment acquired with federal funds?

Conclusion: “Uniform Administrative Requirements for Grants and Cooperative Agreements to State, Local and Tribal Governments, Section 92.32 paragraph (b)”, provides that a state will use, manage, and dispose of equipment acquired under a grant by the state in accordance with state laws and procedures.

However, it is important that VITA be mindful of the provisions of paragraph (g) of the foregoing Section. The paragraph provides that a federal agency reserve the right to transfer title of equipment acquired by federal funds. VITA will give careful consideration to the use provisions of paragraph (g) when it takes possession of equipment acquired with federal funds.

VITA will not sell equipment acquired with federal funds without coordinating such a sale with the original purchasing agency.

Issue 8: Allow Ability of Direct Charge Salaries. Time and effort reporting is a requirement for personnel charges to federal grants; during transition to a rate based system, will VITA be able to identify the grants to which its direct charge salaries relate?

Conclusion: OMB Circular A-87, Attachment B, paragraph 11(h), addresses the support requirement for salaries and wages. VITA currently has no automated way to identify the specific grants to which direct charge salaries relate. VITA and state agencies working collaboratively will identify the time worked on federal programs by employees in a manner that fully complies with this requirement.

Issue 9: Third Party Services. Are VITA services on behalf of state hospitals reimbursable under Medicaid?

Conclusion: Allowable costs of central services are allowable under all federal programs unless otherwise prohibited or limited by program legislation. We are unaware of any prohibitions against charging otherwise allowable central service costs to Medicaid.

Issue 10: Interagency Billings. Will costs associated with providing IT services to the hospitals continue to be recoverable from billings to DMAS/Medicaid?

Conclusion: Allowable costs of central services are allowable under all federal programs unless otherwise prohibited or limited by program legislation. We are unaware of any prohibitions against charging otherwise allowable central service costs to Medicaid.

Issue 11: Rate Base Cost Variances. How will VITA handle income over expenses or losses?

Conclusion: Income over expenses will be considered in the setting of future rates.

Issue 12: Allow Ability of Duplicative Services. The costs of certain agency administrative services do not change substantially by the transfer of a portion of such services to VITA. Will the cost of both agency and VITA administrative services be allowed?

Conclusion: Generally, yes. OMB Circular A-87, Attachment A, paragraph A.1 provides that “The principles are for the purpose of cost determination and are not intended to identify the circumstances or dictate the extent of federal or government unit participation in the financing of a particular program or project.” This provision provides discretion to federal agencies. However, of equal importance is the provision of the Circular that provide that “The principles are designed to provide that federal awards bear their fair share of costs recognized under these principles, except where restricted or prohibited by law.” Paragraph A.2.a (3) of the Circular A-87 states that “Each government unit, in recognition of its own unique combination of staff, facilities and experience, will have the primary responsibility for employing whatever form of organization and management techniques may be necessary to assure proper administration of federal awards.” The foregoing “Fair Share” principle considered with the “management discretion” principle makes it difficult to disallow these costs, especially in light of the overall cost reduction and operating efficiency objectives of the central services activities, such as VITA.

Issue 13: Indirect Cost Rate. Movement of equipment or personnel may impact an agency’s current indirect cost rate (approved or otherwise); what actions need to be taken to address this?

Conclusion: No action is required if the effect on cost pool underlying the rate and federal reimbursements is minimal. The effect of the charge is simply to change the character of expenses from personal services and equipment purchases to IT service costs. If the effect on the pool and the federal reimbursement is material, the agency should address the matter by contacting the grantor or cognizant cost negotiation agency for guidance.

Issue 14: Allow Ability of Increased Costs for Similar or Like Services. VITA services with the fee may be greater than the cost of current services. Will the cost increases be allowed by federal agencies?

Conclusion: The VITA administrative fee will be an amount set to recover the actual administrative support costs attendant to the IT services provided to state agencies. As long as the costs recovered by the administrative fee are allowable under the provisions of Attachment B of Circular A-87, they are allowable charges to federal grants and contracts.

Appendix C: Financial Baselines

IT is recommended that the state adopt the following approach to developing consistent and repeatable financial baselines. Any change to this model should result in recalculation of previous baselines.

A	B	C	D	E	F	G	H	I	J	K	L
2012 IT Related Expenditures for the State of Ohio											
Department	Direct IT Spend	IT Labor	Enterprise Service Charge	Acquisition R&P Service Charge	OIT Service Charge	OAKS Service Charge	DAS Telecom Service Charge	MARCS Service Charge	Ohio Business Gateway	Misc. Direct R&P Expense	Total Department IT Related Cost
Accountancy Board of Ohio	\$6,692.02		\$1,408.78		\$7,383.73	\$2,921.98	\$5,598.13	\$0.00			\$24,004.64
Adjutant General	\$929,349.40	\$604,036.56	\$39,486.73			\$106,636.68	(\$129.25)	\$53,820.00		\$13,979.03	\$1,747,179.15
Air Quality Development Authority			\$528.66		\$10,443.10	\$903.97	\$5,730.57				\$17,606.30
Alcohol & Drug Addiction Services	\$434,938.80	\$1,381,462.73	\$15,596.35	\$3,065.08	\$51,714.29	\$29,008.82	\$35,683.71			\$130,887.60	\$2,082,357.38
Architects & Landscape Examiners Board	\$3,610.51		\$662.73		\$4,869.87	\$1,287.06	\$1,570.85				\$12,001.02
Attorney General	\$12,533,317.47	\$4,403,551.38	\$238,458.54		\$33,651.35	\$520,411.95	\$419,555.24	\$20,940.00		\$86,901.68	\$18,256,787.61
Auditor of State	\$2,290,454.37	\$3,740,263.27	\$118,551.24		\$43,916.45	\$200,960.78	\$126,901.19				\$6,521,047.30
Board of Career Colleges and Schools	\$6,251.86		\$713.15		\$4,934.20	\$1,481.57	\$5,244.85				\$18,625.63
Board of Embalmers and Funeral Directors	\$2,864.49		\$798.36		\$5,292.19	\$1,780.91	\$1,970.83				\$12,706.78
Board of Nursing	\$72,940.90	\$237,601.33	\$10,154.10	\$43.88	\$3,081.74	\$17,950.72	\$30,187.56	\$0.00		\$686.50	\$372,646.73
Board of Regents	\$605,944.97		\$19,927.86	\$3,959.43	\$570,178.15	\$53,977.42	\$42,702.22	\$480.00		\$385,860.50	\$1,683,030.55
Board of Speech-Language Pathology and A	\$6,521.30		\$616.57		\$4,980.60	\$1,527.79	\$3,800.69				\$17,446.95
Bureau of Worker's Compensation	\$34,721,407.47	\$18,630,393.60	\$323,223.47	\$288,466.68	\$37,350.70	\$661,288.10	\$669,753.74	\$15,540.00	\$7,691.60	\$33,671.00	\$55,388,786.36
Capital Square Review and Advisory Board	\$47,557.24		\$6,506.22			\$16,015.06	\$1,228.95				\$71,307.47
Casino Control Commission	\$90,883.93		\$3,754.82		\$11,506.26	\$4,276.91	\$8,486.50				\$118,908.42
Commission on Service and Volunteerism	\$18,420.29		\$963.87		\$2,971.55		\$2,221.48				\$24,577.19
Counselor and Social Worker Board	\$18,453.33		\$1,644.74		\$5,800.58	\$3,279.01	\$6,017.59	\$0.00			\$35,195.25
Court of Claims	\$162,609.99		\$5,807.93		\$24,615.00	\$10,013.93	\$16,416.99				\$219,463.84
Department of Administrative Services	\$15,051,182.23	\$5,718,707.18	\$141,051.89	\$1,296,278.95	\$7,274,001.51	\$519,120.89	\$401,576.77	\$11,460.00	\$2,220,826.87	\$765,241.86	\$33,399,448.15

Table 6.1.1b

NOTE: The table above is repeated from section 6 for ease of reference.

In Table 6.1.1b, “Direct IT Spend” was determined by pulling the account codes depicted in Table C1 from OAKS. In addition, any line item charged to an account not depicted in Table C1 but containing a “Release and Permit” code was also pulled and represented in column K. To avoid any duplication of costs, any line item charged to account codes 519900, 529201, and 529208 in addition to any expense related to funds 1330, 2290, 4N60, 4P30, 5C20, 5EB0, and 5JQ0 have been excluded from column B. These items are excluded because OIT Direct IT expense is accounted for in billings back to the agencies represented in columns D through J. The determination as to which Account Codes and Funds should be excluded was made by the OIT Business Office. Each year the OIT Business Office should confirm that the above mentioned Account Codes and Funds should continue to be excluded. OIT funds 3AJ0, 3AL0, 3H60, and 5X30, and OIT’s small GRF allocation are not billed back to agencies and have not been excluded. These expenses are reflected in the Department of Administration’s “Direct IT Spend” column.

Account Code	Account Description
524205	CABLE CONSTRUCTION
565101	CENTREX PYMNTS-PRINCIPLE(RPTC)
565103	CENTREX PYT-TELE-PRV CAR(RPTC)

Account Code	Account Description
534502	COMM EQ/FIXED STATION RADIO
534501	COMM EQ/PORTABLE RADIO
526603	COMM EQUIP PTS-UNREG BY PUC
570600	COMMUN DESIG & IMPLM(DAS&DHS)
526601	COMMUNICATION EQUIP REPAIR REG
526602	COMMUNICATION EQUIP SRV UNREGU
595803	COMPUTER LOANS
562501	DATA & WORD PROCESSING
562506	DATA PROC EQUIPMENT RESALE/
526702	DATA PROCESSING EQUIPMENT REPA
526701	DATA PROCESSING EQUIPMENT SERV
527101	DATA PROCESSING EQUIPMENT-RENT
565000	DATA PROCESSING SERVICE(RPTC)
521105	DATA PROCESSING SUPPLIES&EQUIP
537400	DESKTOP & NOTEBOOK HARDWARE
571106	DP TELE PERMANENT SOFTWARE
577001	DP&TELECOM PER SW LICEN(CAPIT)
571103	DP/TELECOMMUNICATIONS EQUIPMT
537100	INFO TECH PERMANENT SOFT LIC
537101	INFORMATION TECHNOLOGY EQUIP
526704	LARGE COMPUTING MAINTENANCE
577002	LARGE COMPUTING SYS (CAPITAL)
571107	LARGE COMPUTING SYSTEM
537200	LARGE COMPUTING SYSTEMS
534002	LEASE/PURCH COMM EQUIP INTST
534001	LEASE/PURCH COMM EQUIP PRIN
537002	LEASE/PURCH DATA PROC EQP INT
537001	LEASE/PURCH DATA PROC EQP PRIN
577003	MAINFRAME PROPRIET SW(CAPITAL)
526705	MAINFRAME PROPRIETARY SOFTWARE
537300	MAINFRAME PROPRIETARY SOFTWARE
571108	MAINFRAME PROPRIETARY SOFTWARE
565302	MISC PTC NEC REPLACE
565301	MISC PTC NEC SERVICE
534103	NETWORK EQUIPMENT
534104	PAGERS
537500	PERSONAL COMPUTER SOFTWARE
570701	PERSONNEL PS-CAPITAL DATA PROC
517195	PPS-TELECOMMUNICATIONS TRAVEL
412502	PU EXTX TELEPHONE & TELEGRAPH
517101	PUR PER SER-TELECOMMUNICATIONS
517001	PUR PERS SER-DATA PROC PERSON
430024	REV DATA PROCESSING SERVICES
527104	SOFTWARE LICENSE (SET-TERM)
526703	SOFTWARE MAINTENANCE
521106	SOFTWARE PACKAGES
514906	TECHNICAL SUBSCRIPTIONS
534102	TELE & CENTRAL SYS WIRELESS
534101	TELE & CENTRAL SYSTEMS WIRED
517003	TEMPORARY SERVICES-DATA PROC
527103	TERM SOFTWARE LICENSE
517095	TRAVEL-DATA PROCESSING PPS

Account Code	Account Description
570795	TRAVEL-DP-PUR PER SVC(CAPITAL)
524202	WIRED TELECOMM CONTRACTED SVCS
524203	WIRED TELECOMM NOT REGULATED
524201	WIRED TELECOMM REGULATED
524204	WIRELESS TELECOMMUNICATION
527102	WORD PROCESSING EQUIPMENT-RENT

Table C1

In Table 6.1.1b, column C “IT Labor” is determined by pulling fully loaded labor costs from OAKS. Only labor costs associated with IT related job descriptions were pulled. Table E1 contains the IT job related class codes used to determine fully loaded labor cost. To avoid any duplication of labor costs, any labor charged to funds: 1330, 2290, 4N60, 4P30, 5C20, 5EB0, and 5JQ0 have been excluded from column C. These charges are excluded because OIT Labor expense is accounted for in billings back to the agencies represented in columns D through J for these specific funding codes. Table 8.2.1 represents the trend of IT labor by agency over the past five years.

In Table 6.1.1b, columns D through J are agency charges directly billed by OIT for central IT services. These charges are determined by the OIT Business Office and are billed to the agency for payment. Columns D through J represent agency expense back to the central OIT organization for services rendered. For more information on these specific services, refer to the Department of Administration’s Office of Information Technology Service Catalog.

Appendix D: Transformation Case Studies

The State of Michigan was one of the first states to complete IT transformation and consolidation. Through this exercise, Michigan has been able to provide essentially the same level of services to State of Michigan departments with 66% of the staff and 75% of the budget it previously had when information technology was decentralized. Major components of their first year savings include:

- \$65 million reduction in technology contract savings
- \$10 million savings by converting long-term contractors to full-time Michigan employees
- \$2.3 million reduction in voice and data communications
- \$24 million reduction in IT labor costs

Due to the size of the state from a population and total number of state employee perspective, Michigan may be a good indicator of potential benefits Ohio may achieve through this transformation initiative. Michigan completed their consolidation in 2004.

The Commonwealth of Pennsylvania completed its transformation plan in 2004. As a result, the Commonwealth saw IT related expense decline by approximately \$16 million in 2005 and an additional \$29.5 million in 2006. The Commonwealth expects it will save more than \$320 million over a 10-year period.

Colorado is in the very early stages of implementing their IT transformation plan. On completion, Colorado expects to achieve a 32:1 ratio of IT professionals to state employees which would result in the reduction of nearly 280 full-time IT professionals.

The table below depicts various states and their current ratio of IT professionals to state employees and also IT professionals to constituents. Of all the states responding to the NASPE survey, Ohio has the lowest ratio of IT professionals to state employees.

State	Square Miles	Total Employees	IT		Constituents	Ratio
			Employees	Ratio		
Colorado	104185	25812	1076	24:1	4301261	3997:1
Michigan	97990	54685	2084	26:1	993844	4769:1
Missouri	69709	50340	1400	36:1	5817211	4155:1
New York	54520	154389	2562	60:1	18976457	7407:1
North Carolina	53818	67131	2222	30:1	9,656,401	4345:1
Ohio	44825	52800	2581	20:1	11,544,951	4450:1
Pennsylvania	46056	74575	1936	39:1	12,742,886	6582:1
West Virginia	24230	21155	585	36:1	1,855,364	3171:1

Table D1

NOTE: The higher the ratio of IT professionals to total employee population the lower the costs.

Appendix E: IT Job-Related Class Codes

The table below indicates which job class will likely be placed under central management as part of the transformation effort.

Class Code	Job Family Title	Centralized Mgt.
6618	Assistant EDP Auditor	N
6271	Business Analyst	N
6712	Business Continuity	N
6996	Business Process Analyst	N
6333	Business Transformation Analyst	N
6417	Computer Acquisition Analyst	Y
1237	Computer Operator	Y
6717	Data Administration Management	N
6415	Data Base Analyst	N
1235	Data Control Technician	N
1234	Data Librarian	Y
1232	Data Processor	N
1238	Data Security	Y
1231	Data Storage	Y
1239	Data Systems Coordinator	Y
6413	Data Systems Management	Y
1282	Data Systems Scheduler	N
1236	Data Technician	Y
6995	Database Administration Specialist	N
6741	Forensic Computer Specialist	N
8577	GIMS Specialist	N
8567	GIMS Technician	N
5245	Highway Patrol Communication Technician	N
6992	Information Technologist	Y
6416	Information Technology Consultant	Y
6714	Information Technology Quality Control Analyst	Y
6993	Infrastructure Specialist	Y
6642	Internal EDP Auditor	Y
6997	IT Architect / Consultant	Y
6418	Minicomputer Operations	Y
6713	Network Administration	Y
6719	Network Services	Y
6414	Programmer Specialist	N
6338	Project Manager	N
6994	Software Development Specialist	N
6412	Systems Analyst	Y
6419	Systems Programmer	Y
6469	Technology Based Trainer	N
5249	Telecommunications Analyst	Y
6651	Telecommunications Billing Analyst	N
5248	Telecommunications Network	Y
5252	Telecommunications Operations	Y
6711	Telecommunications Systems Analyst	Y
5241	Telecommunications Technician	Y

Table E1

Appendix F: IT Service Management

The long-term success of the newly transformed IT shared solutions organization will depend on two critical success factors:

- Reduction of cost associated with the delivery of IT infrastructure services
- Maintenance or improvement of overall Customer Satisfaction

The focus of this document has been on cost containment and cost reduction associated with the optimization, standardization, and centralization of Ohio's IT infrastructure. The fact is, this transformation will facilitate reduction in IT related costs, but if those reductions come at the sacrifice of customer service or customer satisfaction, the transformation will not be sustainable nor considered successful.

Although we all recognize the need to reduce costs, our focus should equally concentrate on maintaining or improving the quality and consistency of the IT support experience for all state agencies.

In section 8.1.6, it was recommended that the state build an organizational unit within the newly transformed central IT organization dedicated to relationship management; an organization that would advocate for the client agencies and focus on client service delivery. This section of the document will build upon that recommendation. Additionally, this section will focus on the transformation to a "customer oriented" shared solutions organization specifically around the adoption of:

- Service Delivery Model
- An End-User Support Model
- A Managed Client Environment

Many of the processes and procedures that are inherent to an effective service delivery model are components of the ITIL methodology, so fully embracing ITIL across the entire central IT organization could greatly simplify and help organize an effective approach to enhanced service delivery.

Service Delivery Model

Clearly defining IT services and then working with our business partners to establish performance expectations associated with each service, along with monitoring the cost to deliver that service, will be critical to the newly transformed central organization and its customers. Specially, this includes the development of a customer oriented service catalog, service and operational level agreements, service level commitments and defining an

approach to service level performance management and measurement. Each of these components will be discussed in the remainder of this section.

Service Catalog

With the introduction of the new customer service organizational model, focus should be placed on the implementation of a revised IT service catalog that is meaningful to our customers. The service catalog should clearly detail central IT services. The service catalog should be a well-defined, single-source service menu with defined service commitments established to clarify services available, costs associated with each service, and how costs are derived. Knowing how these costs are derived can help agencies better manage their central IT expense.

Service catalog goals are as follows:

- Easily used by anyone to find IT services.
- Used as a tool to manage central IT cost.
- Focused on services (not technologies).

Service Level Management (SLM)

SLM is about setting and meeting service delivery expectations. The primary goal is to agree on what services are being offered and at what level of support. For example, a customer may want the Central Service Desk to answer login questions daily from 8:00 AM to 8:00 PM. SLM is about putting agreements, staff, resources, and capability in place to ensure the Central Service Desk can accurately answer login questions 12 hours a day.

Service and Operational Level Agreements

Service Level Agreements (SLAs) are detailed agreements between the central IT organization and the various agencies concerning specific services to be provided, how these services will be prioritized, and the quality of service the customer should expect. SLAs should be detailed, spelling out triage questions and how, when, and where to escalate users incidents and requests. SLAs should be customized, by agency, in support of the unique needs of that organizational unit.

Operational Level Agreements (OLAs) are agreements between IT service providers and the central IT organization. OLAs define the service level the service provider will provide to the central IT organization. OLAs are not common in most organizations because services between parties are usually defined through contractual relationships, but it may be appropriate if the central IT organization chooses to leverage OARnet services.

Service Level Commitments

Service commitments define general enterprise expectations and are used for services like email, VoIP, network connectivity, and so on. More specifically, service commitments state what customers should expect from a service. Since service commitments are global, based on a particular service, service commitments should be detailed within the service catalog.

Customer Service Measures and Metrics

Customer service measures and metrics are critical to the continuous service delivery improvement process.

At a minimum, it is recommended that the central IT organization establish the following Service Delivery Support Metrics:

Operational Excellence (Derived Internally)	Customer Satisfaction (Derived from Feedback)
First Call Resolution	Knowledge of central IT Staff
Re-Opened Tickets	Adequate Follow-Up
Number of Active Incidents	Overall Time to Resolution
Speed to Resolution	Clear Communication
Follow-Up Rate	Number of Transfers
Queue Time	Resolved Within Desired Time Frame
Call Abandon Rate	Overall Satisfaction Level

Table F1

Operational Excellence metrics should be developed using information captured within the central trouble ticketing system and the phone system automatic call distributor.

Customer satisfaction metrics should be developed through electronic end-user customer satisfaction surveys. It is recommended that random customer satisfaction surveys be sent to a percentage of service desk customers each day.

Client Support Model

As recommended in section 8.1.6, an organizational structure should be adopted that focuses on the delivery of high-quality central IT services to the agencies. In order to be effective, this service organization must:

- Understand the business needs and expectations of the agency and incorporate feedback through clear, frequent dialogue.
- Be a trusted advocate for the agency and facilitate the delivery of IT services needed to meet their business obligations.
- Take responsibility for resolution of IT issues concerning the agency.
- Facilitate the easiest and most timely access to IT services.

- Promote central IT core services to the agency.
- Manage customer relationships.
- Ensure that the central IT organization's commitments are being kept through a defined escalation process.

The specific roles of the organization units defined in section 8.16 are defined as:

- **Business Relationship Management**—Business relationship management plays the role of liaison between the central IT organization and the agency. As an advocate for the agency, the Business Relationship Managers will help assess agency needs and work with the other central IT organizational units to ensure agency needs are met. Business Relationship Managers will develop relationship strategies and programs that produce business value and favorable customer experiences at a personalized service level. They should monitor agency satisfaction and recommend approaches that the central IT organization can implement to better service the agencies' needs.
- **IT Training**—IT Training services should provide learning opportunities on the products, services, and technology applications and tools (MS Office Products, Exchange, VOIP, and so on) that affect the work of agency employees. The goal of this group is to facilitate teaching and learning of technology in order to enhance end-user productivity and efficiency, as well as to provide professional and personal development opportunities to state employees. A well-educated workforce will improve end-user productivity and help to reduce central IT service costs back to the agency.
- **Central Service Desk Operations**—This unit should be a consolidated and centralized unit. In most cases, the Central Service Desk will be the initial point of contact for most customers, so first impressions are critical. This is intended to be a team of IT professionals responsible for resolving 60% to 70% of all customer inquiries on initial contact. Members of this team will have an especially important role; ensuring a good user experience. In addition to strong technical skills, team members must have exceptional communication skills and be able to articulate technical issues in a non-technical fashion. It is also critical that these employees be equipped with the necessary tools required to achieve high initial call resolution, such as remote control, remote software distribution capabilities, technical support knowledge databases, and an ITIL compliant incident and problem management ticketing system. For those issues that cannot be resolved on initial customer contact, this team will dispatch and escalate incidents and requests to a variety of central IT organizations as necessary to resolve the issue. Customer inquiries that cannot be resolved on initial contact will be escalated to

either the Network Operation Center (NOC), Field Support or to a Service Desk supporting a particular Enterprise or Proprietary application. It is imperative that common escalation procedures be developed to facilitate this transfer and that common tools be implemented so that issues can be effectively tracked through the process—from the initial inquiry through closure.

- **Field and Desk Side Support**—As we develop an enterprise infrastructure support organization, consideration must be given to the fact that nearly 60% of Ohio’s 52,800 state employees are located outside of Franklin County. It is imperative that a field support unit be implemented that adequately services these employees. This unit should provide desk side and IT field support to central IT customers throughout the state. Field and desk side support employees will be managed through the central IT organization but highly distributed throughout the state.

This organization should service all agencies. They should be geographically distributed in such a manner that, in the case of an emergency, on-site support can be dispatched to any location across the state within four hours. The field and desk side support unit should not be the first line of support, but should act as an extension to the Central Service desk and provide second level support. This unit will always be the on-site “eyes and ears” for other central IT units, such as networking, server support, or the central service desk.

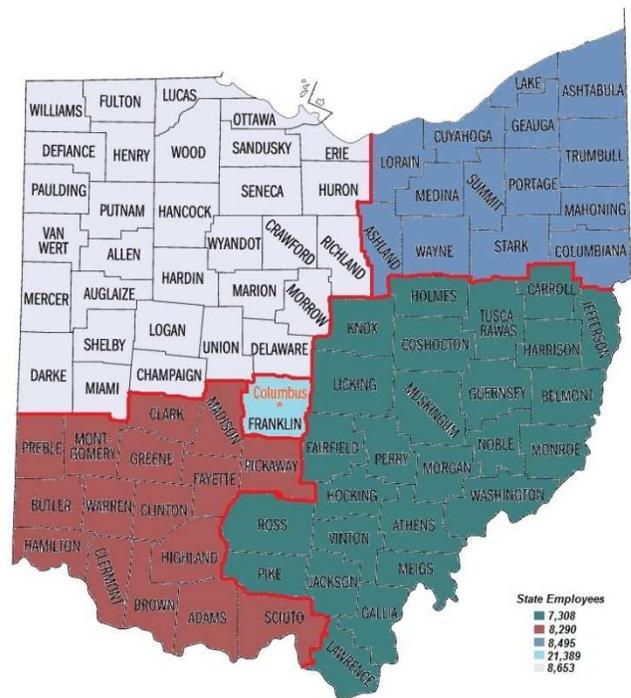


Figure F1

Managed Client Environment

The primary cost driver associated with end-user support is not the number of units supported, but the variations in hardware and software driven by the lack of technical standards. In other words, it is not the kind of numbers, but the number of kinds that drive costs and lower support levels.

As proposed in section 8.1.6, it is recommended that the central IT organization dedicate resources to the development of a standard client computing architecture and pursue a

managed client environment that will focus on the following means of enhancing end-user client support:

- Establish recommended standard platforms for desktop, laptop, thin client and mobile computing devices.
- Establish recommended standards for office productivity and client management, this includes tools such as anti-virus, productivity suites, emulation packages, readers, and so on.
- Establish guidelines for best fit desktop alternatives based on usage—desktop vs. laptop vs. thin client.
- Establish an image and package library for managed systems, this will facilitate fast, reliable deployment, and will begin to move the state toward a more predictable support environment.
- Establish a centrally administered desktop management technology suite which will include the following functionality:
 - Provisioning (imaging)
 - Patching
 - Software deployment
 - Configuration management
 - Software metering
 - Inventory and reporting

ITIL Framework

Many of the processes and procedures that are inherent to an effective service delivery model are components of the ITIL methodology.

Incident and Problem Management

It is not necessary to re-invent service delivery processes and procedures; for example, the ITIL framework provides incident and problem management processes that cover these standard steps:

1. Identification, logging, categorization, and assessment of a problem or incident.
2. Prioritization of the problem or incident based on impact and urgency.
3. Diagnosis and resolution.
4. Escalation between support groups and up the management chain.
5. Restoration, recovery, and closing.

If Ohio starts with the ITIL framework for problem management, incident management, and request management processes, and then adjusts these processes where needed to complement the IT organization's specific needs, the progress toward establishing a central IT organizational structure dedicated to service delivery can be expedited.

Within the ITIL service delivery model, service catalogs and service level management are the key components in documenting, defining, and managing customer expectations and are critical to effective customer relationship management. Each of these will be defined in more detail below.

Service Level Management (SLM)

Within the ITIL service delivery framework, SLM consists of the following components:

- Service and Operational Level Agreements
- Service Level Commitments
- Customer Service Metrics

These components are the keys to providing consistent, highly dependable, measurable services. It is recommended that central IT services not be introduced to the customer community without a service commitment or negotiated service level agreement in place.

Service Level Metrics

ITIL offers a seven-step process for continual service improvement:

1. What SHOULD be measured?
2. What CAN be measured?
3. Gather the data.
4. Process the data.
5. Analyze the data.
6. Present the data.
7. Implement corrective action.

Conclusion

It is imperative that a strong customer service organization be in place, dedicated to the delivery of high quality IT solutions to the end-user prior to consolidation. All too often, the focus of consolidation is on cost reduction and managing the technology, not the customers. The quality of the services the central IT organization delivers will determine the long-term sustainability of the newly consolidated IT organization.