

Commonwealth of Pennsylvania

Enterprise Information Technology Strategic Plan 2016-2019



March 2016

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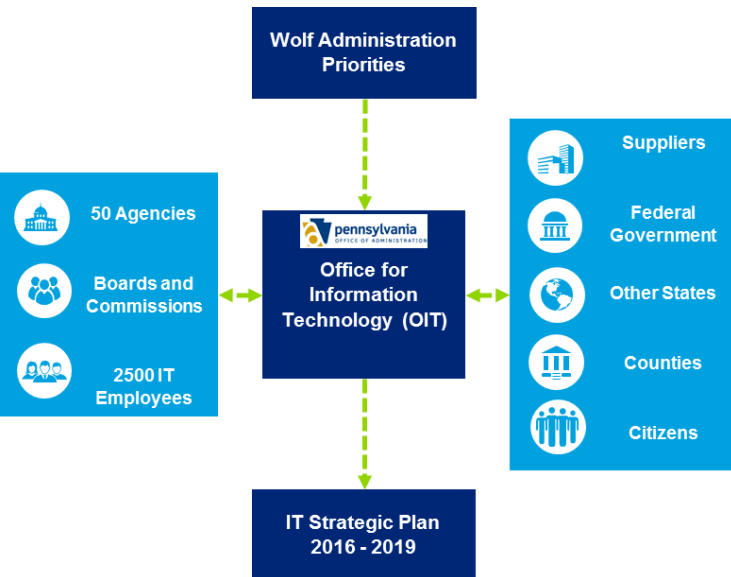


Overview: Scope of the Plan

The Commonwealth of Pennsylvania has developed this plan to outline specific actions to help accomplish its technology mission and vision and achieve its desired future state of a customer-driven information technology (IT) services model.

Overview

This Enterprise IT Strategic Plan is a key document for nearly 50 state agencies, boards and commissions and approximately 2,500 state IT employees. The Enterprise IT Strategic Plan is also used by suppliers, other states, counties and the federal government to review and understand the commonwealth’s technology direction. The plan is administered by the Office of Administration, Office for Information Technology (OIT), which oversees investments in, and performance of, IT systems across the commonwealth. OIT establishes and implements policies, standards and guidelines regarding planning, acquisition, management and security of IT assets for agencies under the Governor’s jurisdiction.



The Context

The Enterprise IT Strategic Plan provides the framework for the commonwealth’s IT services for fiscal year (FY) 2016-17 through 2018-19. It includes an updated vision and mission for IT and provides four overarching goals that are broken into actionable strategies and initiatives to reach the future state vision. The plan was developed by agency and OIT leadership and takes into account:

- Governor Wolf’s priorities
- National Association of State Chief Information Officers (NASCIO) State CIO’s Top 10 Priorities for 2016
- Strategic plans from a sampling of other states*

Note: * Strategic plans for a sample of states that were available publicly, retrieved December 2015. Sample states can be viewed in the appendix.



Internal and External Contributing Factors

Internal and external factors impact the commonwealth Enterprise IT Strategic Plan. While the commonwealth's business priorities drive its technology strategy, the plan also considers a broader view of external forces impacting the IT landscape across other state governments.

Commonwealth Priorities

Governor Wolf has established three priorities to guide agencies in carrying out their responsibilities. IT-related initiatives primarily align under **Government that Works**.

Schools that Teach

Data Analysis & Program Management highlights data usage as a key asset for and input into policymaking and strategic planning

Interactive Access outlines the need for citizens to interact with government agencies via social media

Jobs that Pay

Online Services outlines the need to improve usability and flexibility so citizens can better access government services online

Government that Works

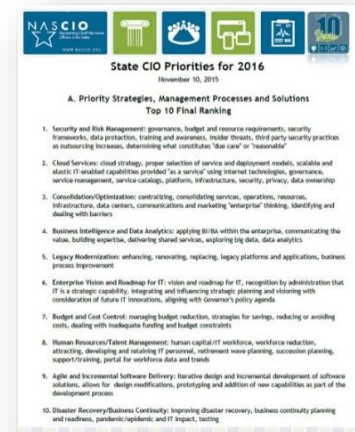
Open Data discusses making data more available to the public to improve services and research and to increase transparency

Efficiency – Efficiency is the goal of the Governor's Office of Transformation, Innovation, Management and Efficiency (GO-TIME) which aims to improve coordination between agencies, modernize government operations and build external partnerships to support transformation.

NASCIO State CIO Priorities for 2016

Elements of the plan align with priorities identified as part of the 2016 National Association of State Chief Information Officers (NASCIO) survey of 50 State CIOs

- **Security and Risk Management:** governance, budget and resource needs
- **Cloud Services:** cloud strategy, proper selection of service and deployment models
- **Consolidation/Optimization:** centralizing, consolidating services, operations, resources
- **Business Intelligence and Data Analytics:** building expertise, delivering shared services
- **Legacy Modernization:** enhancing, replacing, legacy systems, business process improvement
- **Enterprise Vision and Roadmap for IT:** vision and roadmap for IT
- **Budget and Cost Control:** managing budget reduction, strategies for savings, reducing or avoiding costs, dealing with inadequate funding and budget constraints
- **Human Resources/Talent Management:** attracting, developing and retaining IT personnel
- **Agile and Incremental Software Delivery:** iterative design and incremental development
- **Disaster Recovery/Business Continuity:** improving disaster recovery, business continuity planning and readiness

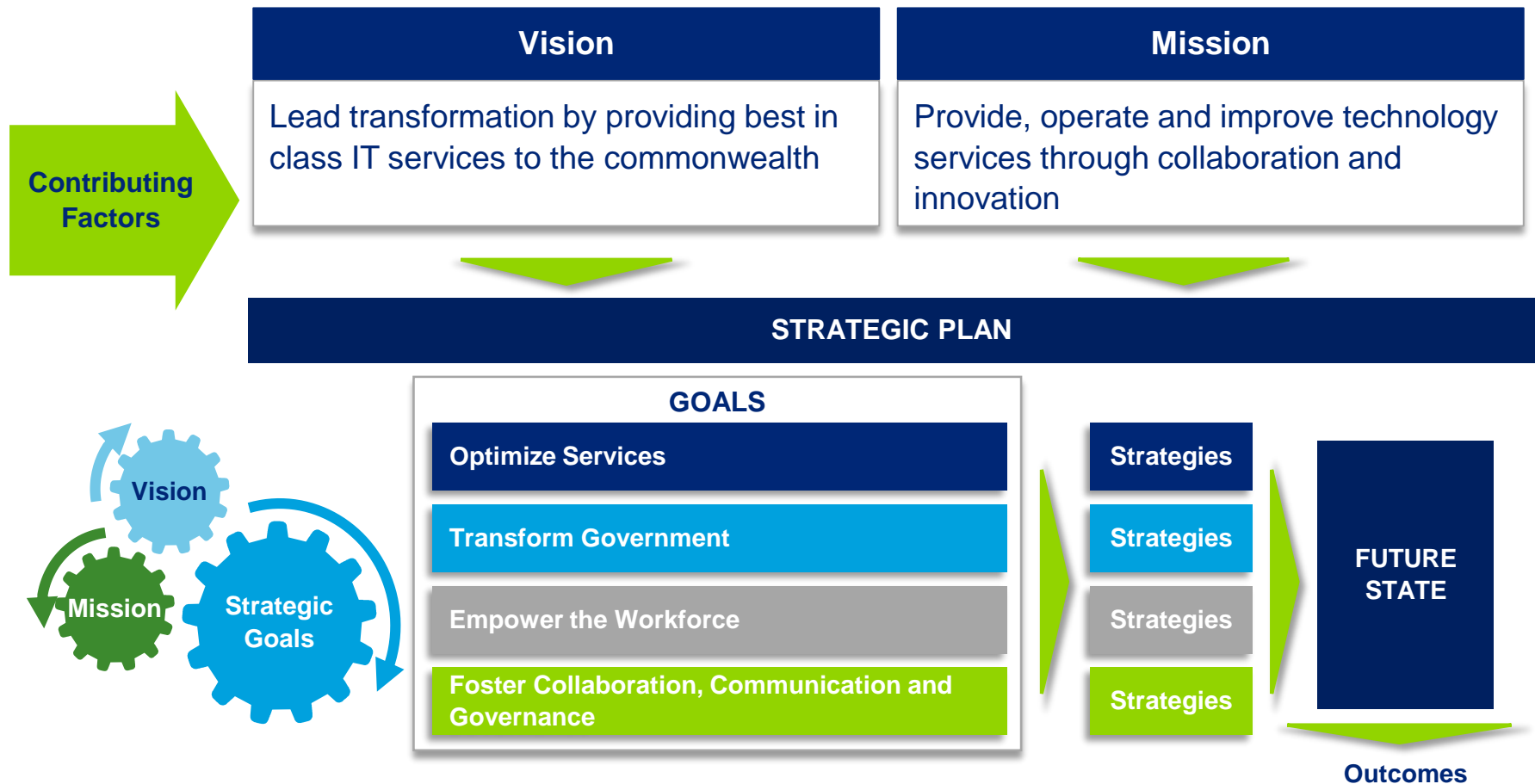


Source: <http://www.nascio.org/topten>



Vision, Mission, Goals

The vision and mission guide the goals of the Enterprise IT Strategic Plan and provide employees, agencies and citizens with a comprehensive view of the commonwealth's future plans for improving business outcomes related to technology services.



Goals and Strategies



The commonwealth has identified four overarching goals that are aligned to the Governor’s IT-related priorities and the mission and vision. The strategies are further broken down into actionable initiatives in subsequent slides.

Optimize Services



- Implement services transformation
- Enhance security services
- Modernize telecommunications
- Improve service management



Empower the Workforce



- Improve knowledge management
- Foster a mobile workforce
- Align IT human resources processes
- Enrich training



Transform Government



- Modernize legacy systems
- Implement a digital government strategy
- Evolve functional centers of excellence
- Modernize enterprise administrative systems



Foster Collaboration, Communication and Governance



- Strengthen strategic planning
- Enhance communications
- Align governance processes
- Provide agencies additional procurement offerings
- Increase business risk awareness



Goals Aligned with Governor’s Priorities are indicated, as follows:



Data Analysis & Program Management



Interactive Access



Online Services



Open Data



Efficiency

Goals and Strategies (cont'd)



Goal: Optimize Services



The commonwealth's objective for business and technology services is to enable "Better Services – Better Results." The OIT Service Catalog will offer defined individual and/or bundled services delivered using industry standard service-management processes via modern telecommunications, infrastructure, data, security and applications environments.

1 Implement Services Transformation

The commonwealth will transform technology service delivery by offering clearly defined services through a catalog. This strategy will allow customers to purchase bundled or unbundled technology services. The strategy will be supported by:

- An enterprise architecture and shared services roadmap that includes plans for product, project, service and platform offerings. This strategy will provide service definitions, engagement rules, metrics and roles and responsibilities.
- A services transformation framework that supports a business-driven, scalable computing environment. The services will include telecommunications, data, infrastructure, IT continuity, security and application services. These services may be offered by OIT or approved providers such as other states, higher education institutions, commonwealth agencies, counties, centers of excellence and commercial providers.
- The framework will include new service delivery models which provide enhanced features at a reduced cost.
- The service strategy will be supported by an integrated alert notification and monitoring function for the commonwealth.
- The commonwealth will continue to mature project management adoption across agencies to improve and transform IT services. This includes deployment of a central project and portfolio management tool to track key metrics that objectively monitor project health and will interface with SAP to track project actuals. This initiative will further exposure to, and adoption of, agile techniques to speed time to market for IT solutions.

2 Enhance Security Services

The commonwealth will enhance security services by developing and implementing a security strategy in concert with agency chief information security officers (CISOs) and CIOs. The strategy will include identity and access management, enhanced system security capabilities and threat prevention, detection and monitoring. The security services aim to enable the right individuals to access the right resources at the right times for the right reasons.

3 Modernize Telecommunications

This strategy will establish modernized telecommunications services through unified, interconnected offerings. It includes developing additional service options across the regions of the commonwealth. This strategy will review options to converge capabilities across fiber, wireless, radio and other offerings. The outcome is to increase availability of bandwidth and wireless access at cost effective prices.

4 Improve Service Management

The commonwealth will employ industry standard information technology service processes to support the service transformation framework. It will ensure that services listed in the service catalog meet utility and service level expectations. A flexible implementation plan will be developed with agency input to meet timelines, capabilities, metrics and requirements.

Alignment with NASCIO State CIO Priorities for 2016

- ✓ Security and Risk Management
- ✓ Cloud Services
- ✓ Consolidation/Optimization
- Business Intelligence and Data Analytics
- Legacy Modernization
- ✓ Enterprise Vision and Roadmap for IT
- ✓ Budget and Cost Control
- Human Resources/Talent Management
- Agile and Incremental Software Delivery
- ✓ Disaster Recovery/Business Continuity

Goals and Strategies (cont'd)



Goal: Transform Government

The commonwealth has aging systems and infrastructure that cannot accommodate the optimization of services. This increases maintenance costs. IT staff with knowledge of these systems are becoming scarce. This poses increased business risk as critical services become difficult to maintain. Modernizing these systems will help advance the commonwealth's goal to improve citizen access to services and information.

1 Modernize Legacy Systems

Many information systems that support critical government functions are built on older technology and are aging. Without modernization, it is challenging to provide expected services to citizens. The commonwealth will work to modernize applications to improve citizen services. It will leverage the on-demand infrastructure where the business case supports the investment.

2 Implement a Digital Government Strategy

The commonwealth will implement a digital government strategy to encourage citizen engagement and provide a more seamless face of government. It will include data governance, increased access to open data and increased transparency. The strategy will continue to build upon the commonwealth's existing web presence. This initiative will securely expand interaction with citizens and establish more secure document management and signature processes.

3 Evolve Functional Centers of Excellence

Centers of Excellence (CoE) provide expertise, solutions or best practices on a particular government function. The commonwealth will leverage functional CoEs to enhance collaboration in specific business areas. Areas being considered include performance management, video management and grants management.

4 Modernize Enterprise Administrative Systems

The commonwealth will begin implementation of a strategy to modernize its human resources, procurement, payroll, finance and budget functionality. This initiative leverages existing investments while launching mobile capabilities. The goal is to improve efficiency and support a mobile workforce.

Alignment with NASCIO State CIO Priorities for 2016

- ✓ Security and Risk Management
- Cloud Services
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- ✓ Business Intelligence and Data Analytics
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- ✓ Enterprise Vision and Roadmap for IT
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- Human Resources/Talent Management
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Goals and Strategies (cont'd)



Goal: Empower the Workforce



The commonwealth's workforce is becoming more mobile as staff such as inspectors, human services workers, law enforcement and transportation workers perform much of their work in the field. Integrated policies, processes and solutions will help mobile workers perform their jobs more efficiently. In addition, skilled technology staff will be critical to executing the commonwealth's IT strategy. The commonwealth will need to align human resource positions, processes and training with the services modernization strategy.

1 Improve Knowledge Management

A knowledge management approach is critical to reducing business risk. The initiative aims to improve knowledge management capabilities to gather, analyze, store and share information within and between agencies. The knowledge management approach will support workforce mobility, human resource processes and training. The initiative will modernize internal content sharing tools and networks. It will also seek to automate records management policies.

2 Foster a Mobile Workforce

A large number of the commonwealth employees perform their work outside of a regular office. An integrated set of policies and solutions will better support the needs of these remote workers. This strategy will seek to leverage secure, cost effective wireless broadband and access to commonwealth information. It will also include a mobile platform that leverages cloud offerings, remote access, online services, security and other enabling solutions.

3 Align IT Human Resources Processes

As the commonwealth modernizes services and applications, different position capabilities may be required. This strategy will seek to align IT classifications and human resource programs (such as training, recruitment and retention) with the skills needed to support the evolving IT services. This initiative will include enterprise role management to efficiently manage access rights to information as an employee changes jobs.

The commonwealth will also explore the creation of specialized staff pools for hard-to-attract, specialized skills.

4 Enrich Training

The commonwealth will seek to enhance training offerings for technology workers. This will include training on security, project management, business analysis, cost modelling and standard IT processes. Training will be aligned with service catalog offerings and any revisions to job responsibilities.

The commonwealth will seek to expand the services offered through its IT help desk. This will provide enhanced support to users on functional issues such as standard desk top software or mobile devices.

Alignment with NASCIO State CIO Priorities for 2016

- ✓ **Security and Risk Management**
- Cloud Services
- Consolidation/Optimization
- Business Intelligence and Data Analytics
- Legacy Modernization
- ✓ **Enterprise Vision and Roadmap for IT**
- ✓ **Budget and Cost Control**
- ✓ **Human Resources/Talent Management**
- Agile and Incremental Software Delivery
- Disaster Recovery/Business Continuity

Goals and Strategies (cont'd)



Goal: Foster Collaboration, Communication and Governance



Agencies, OIT and suppliers collaboratively working together will propel the commonwealth to reach the desired future state for IT. The commonwealth is aligning strategic planning processes with business risk, portfolio management processes and funding availability. Increasing awareness of business risk is critical, as is information sharing across the commonwealth regarding key initiatives.

1 Strengthen Strategic Planning

The annual technology strategic planning process will align OIT and agency technology plans, metrics and objectives. The planning process will consider business risk, federal and state mandates, funding and gaps in portfolio and service management. Periodic agency and OIT meetings will review progress against plans and seek to identify enterprise-wide approaches.

2 Enhance Communications

Communications are essential for effective service delivery. OIT will review communications practices and processes both within OIT and across the commonwealth. Communications will be connected to knowledge management for more defined communication approaches. This strategy includes a dashboard of agency projects to promote internal sharing of project status and best practices.

3 Align Governance Processes

The numerous pressures on technology resources require governance and prioritization. Governance processes for enterprise architecture, security, enterprise services and enterprise applications will be aligned with the strategic planning process. In addition, OIT and agency roles will be further defined. A standardized CIO handbook will be developed including performance metrics to establish clear and consistent management guidance. This strategy will also seek to leverage available funding across agencies or initiatives.

4 Provide Agencies Additional Procurement Offerings

Suppliers are a critical component of the commonwealth service delivery system. The commonwealth will work to provide flexibility in contracting for IT-related goods and services. The initiative will aim to expand agencies' access to OIT's procurement strategy, service level agreement and contract negotiations capabilities.

5 Increase Business Risk Awareness

Information security is a top priority for states. To minimize the potential effects of threats, the commonwealth will increase business risk and compliance awareness. This includes creating the mechanisms to share threat information when possible. In addition, this strategy will clearly articulate the governance structure and crisis communications/response plans.

Alignment with NASCIO State CIO Priorities for 2016

- ✓ **Security and Risk Management**
- Cloud Services
- Consolidation/Optimization
- Business Intelligence and Data Analytics
- Legacy Modernization
- ✓ **Enterprise Vision and Roadmap for IT**
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Future State Vision



Customer Driven IT Service Model

The future state vision for IT services in the commonwealth is driven by customer interactions and available funding. Customers include businesses, citizens and commonwealth agencies. Customers have scalable access to services through a catalog that includes individual or bundled technology services. Those services are provided through a secure IT architecture comprised of applications and data. At its core, the future state is built upon a solid foundation of people, relationships and supporting agreements that enable the services and architecture to operate effectively.

