New York State IT Strategic Plan
2014-2017
Andrew M Cuomo
Governor
Brian Digman
NYS Chief Information Officer
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“...The office shall have the following functions, powers and duties:...To establish a multi-year statewide strategy plan covering a time period of not less than three years to promote and coordinate interagency technology efforts and initiatives that conform to the state's overarching programmatic policy under which state agencies shall develop their information resource management plans. Such plan shall be submitted to the governor, the temporary president of the senate and the speaker of the assembly upon completion on or before October first, two thousand. Such plan shall be updated as needed, but not less than once every three years...”

New York State Technology Law, section 103.13
Message from the NYS Chief Information Officer

I am pleased to present the first Strategic Plan for the new Office of Information Technology Services. For the first time, this plan articulates New York State’s information technology goals and strategies from an enterprise perspective. It is an aggressive plan, with abbreviated timeframes. Meeting our goals and addressing our challenges will help us serve the needs of our customer agencies, support citizen and business constituents, and strengthen the ITS workforce and I am absolutely certain we are on the right track, going in the right direction. We need to keep pushing forward.

The Office of Information Technology Services is promoting a strong innovation culture to stimulate a new level of civic engagement through publically available data and the creative use of technology. We want to engage innovators, designers, solvers, technologists, and civic-minded individuals to share their expertise, collaborate on solutions, and deliver new and improved services to our citizens. Our four IT consolidation projects (i.e., Data Center Consolidation, Email Consolidation and Cloud-based Collaboration Tools, Telecommunications Modernization, and Enterprise Identity and Access Management) are investments in the future, aimed at streamlining and securing the government’s IT infrastructure and saving taxpayers’ money.

After reading the 2014-2017 plan, you will understand how these and other efforts support the goals of the NYS Office of Information Technology Services and the future of New York State government. You will see how the foundational programs we are strengthening, like enterprise security and formalized IT governance, provide the base for much of our other work.

Together New York State’s information technology workforce has accomplished much since November 2012 when we consolidated some 4,500 employees from nearly 50 agencies into one agency. We are one of the first states in the nation to embark on such a journey. Although I am gratified by the amount of change we have been able to accomplish during this short time frame, we have a long way to go before this “transformation” is complete. We will not settle for good enough.

Sincerely,

Brian Digman
Chief Information Officer
New York State
Introduction

In one of his first official acts after taking office, Governor Andrew M. Cuomo appointed a commission, the Spending and Government Efficiency (SAGE) Commission, charged with comprehensively reviewing every agency of state government, recommending structural and operational changes, and making state government more modern, accountable, and efficient. In his view, the proliferation of state agencies and other state governmental bodies that had grown up over the years had become an obstacle to efficient, effective, and accountable government and the SAGE Commission was convened to specifically address those concerns.

The SAGE Commission identified several initiatives that represented a comprehensive reorganization of state government including:

- Consolidations and Rightsizing of Facilities
- Consolidations of Functions
- Consolidations of Agencies and Authorities
- Coordination of Interagency Activities

Early on, the SAGE Commission recommended transforming the delivery of information technology (IT) services to state entities by reorganizing the way the State manages the IT function, modernizing the State’s IT infrastructure, and accelerating IT projects expected to provide a high return on investment and high impact on performance.

The “transformation” envisioned a single organization managing IT from an enterprise perspective, expanding partnerships among all levels of government, creating a world-class IT workforce and placing greater emphasis on communication and collaboration across all levels of government. It would also enable state agencies to focus on their core missions, the central business of state government, rather than distracting them with IT concerns. This, then, was the beginning of the IT Transformation and the New York State Office of Information Technology Services (ITS).

This document presents the first New York State Enterprise Information Technology Strategic Plan. New York’s citizens and businesses expect and deserve efficient, responsive, and secure delivery of state and local government services. The strategies included in this plan seek to leverage the power of IT to enhance government operations and service delivery consistent with the Governor’s vision for building a “New” New York.

IT Transformation

To build this new IT organization, the Governor centralized what had historically been dozens of separate and overlapping IT delivery organizations into one and appointed a new State Chief Information Officer and executive leadership team to lead the new organization through this transformation. To get a sense of the scope of this endeavor, it’s important to understand what had previously existed.
In 2011, New York State had 70 agencies and major authorities through which it carried out the programs and policies of the State. Almost without exception, each one had its own information technology unit ranging in size from one individual to over 600 persons. With few statewide IT standards in place, one can imagine the range of technology practices and tools in use. The same kinds of inefficiencies, redundancies, and disparities noted in the SAGE Commission report with regard to state agencies also proliferated within the State’s IT community. Each agency had invested in different kinds of hardware and software. For example, there were 26 instances of agency-operated email: 15 instances of Microsoft Exchange, six instances of Lotus Notes, and five instances of Novel GroupWise. The “embedded base” was extremely varied and the State was unable to benefit from “volume discount” purchasing.

An enterprise technology perspective is effective only if it is responsive to the individual needs of enterprise members and a level of transparency exists across the enterprise. To ensure that enterprise-level technology strategies and services are tightly aligned with agency needs, and offer the best service and experience to citizens, ITS would include nine technology “clusters” to serve groups of agencies with similar missions and/or constituencies, loosely based upon the same categories of services delivered by the newly consolidated state government. These clusters would work directly with their agencies to provide IT business solutions that meet the programmatic needs. Core operations standard to the enterprise (e.g., email, data center, unified communications, etc.) would be centralized into one organization, enabling those functions to achieve great savings and enhance productivity by standardizing and modernizing. Siloed and separately stored and processed information would no longer exist. Finally, ITS would launch a “Core Transformation” to advance the new organization and provide foundational support to the clusters and operations.
Mission, Vision, Values

Creating a single high-performance organization out of many separate smaller organizations is more complex than simply bringing those entities together under one leadership team and weeding out the overlap. This consolidation of over 4,500 professionals to handle the delivery of the full range of information technology services to our partner agencies is the largest IT consolidation in state government.

Each of the smaller IT organizations in New York State government had grown up separately, using different skill sets, tools, infrastructure, business practices, budgeting practices, and support models. To begin to realize the Governor’s IT vision, the new Office of Information Technology Services (ITS) had to establish a singleness of purpose, defined by a clear mission and aspiring to a shared vision. The new leadership team believed it was equally important the new agency possess a values-driven culture, one that guides staff behavior and ensures we provide a consistent and high-quality experience for our customers.

ITS leadership solicited input from across the new organization to articulate a shared vision and mission around which all members could rally. Initially published in August 2013, the ITS vision and mission have been expanded based on staff input. They also now include our guiding principles, indicating how we demonstrate our core values in our everyday work. These statements below reflect the effort of the many ITS staff committed to developing a shared vision for every member of the ITS community.

Our Mission

Create—Partner—Connect—Deliver

Create a technology-enabled government to better serve New Yorkers.

Partner with our customers to implement the best technology solutions.

Connect technology professionals to foster innovation, build skills, and promote development.

Deliver world-class technology services that meet our customers’ needs.
Our Vision

To lead the nation in serving citizens, businesses, and visitors through technology.

Our Values

Leadership and Excellence — We help inspire a shared vision and motivate staff to meet the challenges of our partner agencies through open communication, leading by example, and fair decision making. We make informed decisions always, and tough decisions when necessary. We are all leaders in our areas of responsibility. We strive for excellence in all we do. We demonstrate our commitment to this value by:

- Leading by example
- Striving for the best solutions
- Serving as champions

Empowerment and Partnership — We believe our employees are ITS’ most important asset. We work as one connected community of technology professionals with opportunities for our employees to build new skills, achieve a higher degree of mastery, and take on bigger challenges. We value the strengths and experience our employees have to offer. We encourage our staff to challenge themselves professionally and we support their success by providing opportunities. We realize that success happens when we partner with our customers and work closely with our customers to help them realize their missions. We demonstrate our commitment to this value by:

- Valuing strengths and diversity
- Investing in our workforce
- Working as one

Innovation and Creativity — We look for innovative solutions that anticipate our partners’ needs, extending into the “foreseeable future” the technologies we provide today. We maintain a working environment that empowers our employees to think and act creatively in the best interest of our organization and our customers. We demonstrate our commitment to this value by:

- Embracing new ideas
- Cultivating a learning environment
- Seeking state-of-the-art opportunities

Accountability, Integrity, and Ownership — We approach each task with honesty knowing that our credibility as individuals impacts our credibility as an organization. We build trust by keeping our commitments and being transparent and accountable. We show pride, enthusiasm, and dedication in every task. We hold ourselves and each other accountable for our actions and our inactions. We treat the resources entrusted to the organization as if they were our own and we invest wisely, considering the total cost of ownership when recommending solutions to our customers. We
demonstrate our commitment to this value by:

- Being true to our word
- Demonstrating pride in ownership
- Modeling commitment to service

**Teamwork and Collaboration** — We understand the power of working together and know that a diversity of people and ideas, a spirit of inclusiveness, a customer perspective, and a sense of community are essential to achieving world-class results. We demonstrate our commitment to this value by:

- Sharing ideas and knowledge
- Facilitating multi-directional communication
- Developing and supporting each other toward meeting strategic goals with a vested interest in success

**Customer Service and Satisfaction** — A commitment to customer satisfaction is critical to sustaining a trusted partnership with the agencies we serve. Building long-term relationships and developing in-depth understanding of partner agency mission enhances our role in helping agencies realize strategic goals and day-to-day objectives. Our focus on customer service enables partner agencies to meet the needs of New York’s citizens, business, and visitors. We demonstrate our commitment to this value by:

- Nurturing relationships
- Understanding and anticipating customer needs
- Delivering quality service and exceeding customer expectations

![Sample Key Performance Indicator (KPI) Dashboard (Illustrative Data)](chart)
Challenges and Opportunities

The largest IT consolidation in state government does not come without challenges. Below are some of the challenges we face and the strategies we have identified:

- **Financial constraints and increasing demands**
  - Identify collaboration opportunities
  - Reallocate resources
  - Improve project management addressing risks throughout projects
  - Reprioritize discretionary projects

- **Outdated and unsupported technologies**
  - Modernize legacy systems and couple with business process redesign
  - Consolidate to ensure consistency across platforms and make supporting systems easier

- **Aggressive timelines for priority and mandated projects**
  - Improve governance process and project management methodology
  - Establish clear priorities and reallocate resources

- **Inconsistent understanding of risk and approach to information security across agencies**
  - Conduct a baseline risk assessment across agencies
  - Define security requirements
  - Identify current risk exposure
  - Create a mitigation strategy

- **Loss of institutional knowledge through attrition or transfer**
  - Establish processes that support knowledge sharing
  - Develop formal succession planning
  - Enhance recruitment and retention strategies
  - Train to develop skill sets
  - Automate manual processes where applicable

- **Lack of project managers and consistency in approach to project management governance**
  - Establish a consistent approach to project management and a portfolio governance process
  - Develop best practices by providing a unified understanding of IT projects across the state

- **Conflict in funding existing and proposed Enterprise IT projects**
  - Implement financial processes to support the expanded ITS organization including:
    - A procurement process including the issuance of ITS Procurement cards
    - ITS budget development and execution processes
    - Transfer IT contracts and assets from customer agencies to ITS
    - Rates based on the ITS Service Catalog
Our Goals

ITS used the Governor’s vision for New York State and the technology industry’s innovations and direction to establish our path for the next three years. ITS then looked to the ITS Vision and Mission and the very real challenges we face as an agency to refine that path and articulate four overarching strategic goals. These goals, which are described below, address the needs of our customer agencies, support citizen and business constituents, and strengthen the ITS workforce. We then defined strategies for achieving those goals, and identified specific projects and initiatives within each strategy that advance our work. Our goals and strategies are further strengthened by our new governance and security processes, which ensure New York continues to invest in projects and initiatives that support these goals and strategies, and that we partner with our customer agencies in defining requirements and managing risks.

Goal 1: Improving Customer Services for Citizens and Businesses

1.1 Improve citizen and customer experience through the use of technology

Web Presence Transformation

The Web Presence Transformation Project will transform NYS agency websites using responsive web design and a new shared toolkit so people can get critical information from any device at any time. This project will make NYS websites a first-stop destination for residents, businesses, government, and visitors to quickly find information and services relevant to their needs through a multi-faceted search, robust navigation, and seamless connections between agency sites.

Mobility

Mobility is now an essential technology to deliver information and services to citizens. It is all about delivering information and services through an improved user experience – anywhere, anytime, any device. The State’s mobile strategy will focus on the build-out of mobile platforms and services needed to meet the enterprise’s mobile objectives: superior user experience, lower costs, improved service delivery, greater efficiency. The strategy will establish a common vision, standards, and policies to ensure a unified enterprise approach to mobile application development.

1.2 Enable agencies to successfully achieve their 2014-2017 strategic goals and federal mandates

(See Appendix B for additional Cluster Strategies.)

Integrated Eligibility System (IES)

IES is the project to complete critical improvements to human service information technology systems that support the operation of programs such as Medicaid and Public Assistance. Existing technology systems are obsolete and must be updated. The objectives of IES are to:

- Provide a foundation for integrated service delivery to increase programmatic outcomes and efficiency
- Improve operational efficiency and customer service
- Remove process silos and eliminate redundancies while promoting integrated service delivery
- Identify a single process owner and established performance targets for each process
- Streamline systems so customers have a single entry point to perform business transactions from first point of contact to case closure
- Support each business process by using a standardized technology solution
- Leverage shared services offerings to gain economies of scale
- Enhance program integrity capabilities

**E-Licensing**
The e-Licensing System provides a unified presence for businesses and individuals to apply for and ultimately manage their business, professional, recreational, and occupational licenses. The new system modernizes processes by reducing license management and enforcement cycle times and eliminating inefficiencies between legacy systems.

**Open Data**
In March 2013, New York State launched Open.ny.gov, an online open data website for the collection and public distribution of publishable state data. The goals of the site are to spark innovation, promote research and economic opportunities, engage public participation in government, increase transparency, and inform decision-making. Open.ny.gov begins the process of standardizing the state’s data, which will make it easier for both government workers and the public to discover and use the data. ITS is looking to expand this platform to feature new functionality and make data more accessible to even more people.

**Goal 2: Strengthening Our Service to Agencies**

2.1 Build out capabilities to deliver large IT projects on time and on schedule

**Enterprise Program Management Office (EPMO)**
One of the compelling objectives of the ITS Transformation is the realization of the significant and industry proven advantages of formal project management. The EPMO will update the NYS Project Management Guidebook and other supporting activities required to advance the utilization of formal project management practices that incorporate security policies, standards, and considerations into the project management lifecycle for IT initiatives throughout ITS.

2.2 Modernize, consolidate, and secure the State’s IT infrastructure

**Data Center Consolidation**
The Data Center Consolidation Project will merge dozens of data centers currently serving New York State government into one statewide data center. The single data center will be a Tier 3 configuration that brings an expectation of 99.982% availability. In addition to high availability, the project will provide enhanced security, monitoring and incident detection, business continuity, and disaster recovery capabilities to the agencies served.

Delivering higher quality service at a lower cost are hallmarks of data center consolidations. The Data Center Consolidation Project will reduce hardware, licensing, lease and utility costs while creating operational efficiencies and providing higher quality service.

**UniteNY**
The uniteNY Project will consolidate dozens of diverged networks, replace legacy voice and data networks with low cost internet-based solutions, and use shared services to deliver data, voice, and video services. In addition, structured and secure exchange of data will be available to agencies served. uniteNY encompasses many sub-projects, each with specific goals and objectives, that fall under the umbrella of the original Unified Communications/Network Convergence strategies. Unified Communications delivers integrated data, voice, and video to facilitate collaboration and communication. Delivering new services and
higher quality services at a lower cost is the overall objective of uniteNY and agencies served will be presented with multiple communication offerings.

**Office 365 (O365)**

The O365 Project will deploy a single email solution for New York State employees using cloud technology. The move to Office 365 will eliminate existing barriers to collaboration, provide for comprehensive and ubiquitous communication, and provide standard archiving and data backup practices. The O365 Project will enhance email and collaboration services while reducing the cost of current ownership and the future cost of maintaining the current platforms.

**Enterprise Identity and Access Management (EIAM)**

The Enterprise Identity and Access Management (EIAM) Project will provide a shared service solution to improve and secure identity and access management for citizens, government business partners, and state employees when conducting online business with New York State. Additionally, the goal is to provide all customers with single sign-on capability, advanced authentication services, and easy access to applications and services. The EIAM service consolidates and leverages existing identity and access management investments while establishing a new shared services solution.

Security controls and access management will adhere to national and New York standards. By streamlining the authentication and authorization required to securely conduct business online, the EIAM Project will provide enhanced service and reduce the costs of identity management.

**Cloud Solutions**

Cloud technologies are most relevant when they save money or provide better services aligned with business strategy and business value. “Something-as-a-Service” (software, storage, platform, etc.) is the core of cloud technology and is based on elastic demand and consumption pricing – pay only for what you use – will often reduce total cost. Beyond cost containment benefits, cloud can significantly enhance time-to-market and business agility. The State has begun to use cloud technology on a limited, but strategic basis. ITS is investigating cloud technologies to match agency business needs to appropriate cloud deployment models. It is essential New York State invest in cloud technologies to avoid over investing in cumbersome on-premise technologies that require long-term operational and maintenance costs.

2.3 Standardize, harmonize, and secure the State’s application and data landscape

**Enterprise Architecture Management**

Enterprise Architecture aligns processes, information, applications, and infrastructure to guide ITS in its mission to deliver a technology-enabled government that better serves New Yorkers. Enterprise Architecture is about doing technology right; but more importantly ensuring the right things get done by providing a framework for better decision making. There is an ever-increasing need for the State to better leverage its IT assets. By using Enterprise Architecture principles, ITS will build shared technology platforms that can be used to solve business problems spanning across agencies and deliver secure solutions that manage risk and provide better services to citizens.

**Enterprise Information Security**

ITS values information and the systems in which it resides or travels as assets that must be adequately safeguarded. Security of those assets provides foundational support to all IT objectives. Centralizing this support enables New York State to assess its overall risk to
these assets and take action to address cyber-security risk based on priorities identified in that risk assessment. Approaching security with an enterprise perspective allows us to build security by design across all of our services and activities. It also allows us to engage and partner with state agencies in protecting the State’s cyber assets. 

(See Appendix D for additional information on Enterprise Information Security.)

Next Generation Geographic Information Systems (GIS)

ITS is developing a bold new strategy to build on existing Geographic Information Systems (GIS) capabilities within the NYS GIS Clearinghouse (gis.ny.gov) to create a centralized, state-of-the-art suite of shared resources that can be used by all agencies and members of the public. The enterprise strategy for GIS will create a new tier of technology to harness the network of currently isolated GIS resources using web services that can be widely shared and reused by a whole host of stakeholders.

Goal 3: Building a Healthier ITS Organization

3.1 Improve IT performance through measuring performance and rewarding excellence

Performance Management

The Measure-IT Project has been launched to provide a rigorous approach to developing and delivering our formal performance management program. Measure-IT will provide a Key Performance Indicator (KPI) Dashboard and an Agency Performance Dashboard as required by the Governor’s NYPerforms initiative. Measure-IT goals include enhancing transparency and accountability, delivering information self-service, and helping to foster a performance culture throughout ITS. By implementing a comprehensive performance management program, ITS will have a powerful management and communication tool to help realize our agency mission of world-class IT service delivery.

3.2 Make ITS an employer of choice that values and develops employees and their capabilities

Organizational Health Initiative

The Organizational Health Initiative (OHI) team has been evaluating the health of ITS through pulse surveys. The results of the surveys are being used to focus on key initiative that can be implemented to help staff understand the organization and become more engaged in the ITS mission. The initiatives will address how ITS recognizes employees and shares information.

Goal 4: Operating as a Unified IT Organization

4.1 Fully integrate and empower staff in all enterprise functions and within the nine clusters

Cluster Effectiveness

Cluster Effectiveness is a comprehensive effort to deeply understand and redesign the way clusters operate. Coming out of the diagnostic phase in early fall 2013, six root causes undermining cluster effectiveness were identified. Nine initiatives have developed to help drive gains in capacity, quality, timeliness of delivery, and cost. Cluster effectiveness has been piloted in two clusters and will be implemented enterprise-wide during 2014.

Enterprise Functions

Over the next few years, we will continue to build and mature the capabilities and functions required to realize the benefits of centralized information technology service delivery. This
effort includes creating a detailed operational design for ITS Enterprise Operations, including ITS clusters, to maximize collaboration, gain operational efficiency, and manage the delivery of enterprise IT services under a shared services model.

4.2 Focus ITS’s resources on the State’s top priorities by rolling out standard governance practices

IT Governance
IT Governance is how New York State determines its IT priorities. ITS will use a formal process, shaped by our Strategic Goals, to select IT investments. The Governance process includes approving, monitoring, and prioritizing projects identified by the Governor, the New York State Legislature, federal agencies, our customer agencies, and from within ITS.

(See Appendix C for additional information on IT Governance.)

4.3 Standardize and improve ITS’s service delivery process across the organization

IT Service Management (ITSM) and Service Catalog
Standardizing service management processes and tools, and providing a service catalog across the organization will help improve the quality and efficiency of service delivery. It will improve productivity, provide a higher quality of service, control costs, and foster a broader adoption of enterprise IT services. ITS will implement one common process for key ITSM processes (incident, problem, change, etc.) and migrate to a single service catalog.

4.4 Consolidate and improve the State’s IT procurement, IT budgeting, and IT contracting

IT Procurement Improvement
A consolidated and formal approach to procurement, budgeting, and contracting is essential to efficient management. ITS will ensure the transition of financial processes related to information technology from agency operations and will present ITS as one customer to the vendor community to enable New York State to efficiently procure the services needed to support information technology statewide.

The goal is to implement financial processes to support the expanded ITS organization, including a procurement process, ITS budget development and execution processes, transferring IT contracts and assets from customer agencies to ITS, and rate setting based on the ITS Service Catalog. Security considerations will be integrated into the procurement lifecycle.
Conclusion

ITS must continue strengthening partnerships with state agencies and developing employees so together ITS and its partners can offer innovative solutions that meet the needs of New York’s citizens, business, and visitors. Much of the work during ITS’s first year has been foundational. As ITS completes that foundational work, New York State should begin to realize many of the benefits associated with a smaller infrastructure footprint: significantly fewer disparate products and technologies, and streamlined processes.

This plan provides the vision and direction for this new agency. Through its governance process, ITS and its partner agencies have established a portfolio of information technology projects. This portfolio articulates how New York State is investing its information technology resources and operationalizing the strategies set forth in the strategic plan. With a field as evolving as information technology, ITS understands it will need to revisit its course frequently and will update the portfolio at least annually to ensure the agency remains current and forward thinking.
Appendix
### Appendix A: ITS Clusters

#### Administrative & General Services
- Office of General Services
- Dept. of Civil Service
- Division of Veterans’ Affairs
- Governor’s Office of Employee Relations
- Labor Management Committees
- Deferred Compensation Plan

#### Disabilities & Aging
- Office for People with Developmental Disabilities
- Office for the Aging
- Justice Center
- Developmental Disabilities Planning Council

#### Environment & Energy
- Dept. of Environmental Conservation
- Dept. of Agriculture and Markets
- Office of Parks, Recreation, and Historic Preservation
- Adirondack Park Agency
- Public Service Commission

#### Finance / Regulation / Gaming
- Division of Budget
- Dept. of Taxation and Finance
- Division of Taxpayer Accountability
- Department of Financial Services
- Gaming Commission

#### General Government
- Dept. of Motor Vehicles
- Dept. of State
- State Board of Elections
- State Liquor Authority
- Joint Commission on Public Ethics (JCOPE)
- State Inspector General
- Workers’ Compensation Board
- Authority Budget Office

#### Health
- Dept. of Health
- Office of Mental Health
- Office of the Medicaid Inspector General
- Office of Alcoholism and Substance Abuse Services

#### Human Services
- Office of Children and Family Services
- Office of Temporary and Disability Assistance
- Dept. of Labor
- Division of Human Rights
- Higher Education Services Corp.

#### Public Safety
- Division of Criminal Justice Services
- Division of State Police
- Office for the Prevention of Domestic Violence
- Office of Victim Services
- Dept. of Corrections and Community Supervision
- Division of Homeland Security and Emergency Services
- State Commission on Corrections
- Interest on Lawyer Account (IOLA)

#### Transportation / Economic Development
- Dept. of Transportation
- Empire State Development Corp. / Dept. of Economic Development
- NY Homes and Community Renewal
Appendix B: Cluster Strategies

ITS established nine technology “clusters” to serve groups of agencies with similar or related business needs and/or constituencies. Clusters work directly with their established groups of agencies to provide IT business solutions designed to meet the programmatic needs of these agencies.

Administrative and General Services

The Administrative and General Services Cluster (AGS) provides technological support and business solutions that fortify and enhance the systems that are vital to the daily operation of the State’s human capital and general business services. Major initiatives include a new PeopleSoft Center of Excellence that will focus on IT management of the existing PeopleSoft systems. This effort includes supporting the Business Services Center with the new Human Resources Information System and establishing a consistent Enterprise Content Management approach coupled with automated workflows. We are developing a plan for updating legacy systems using emerging technologies to meet our customers’ needs with efficiency and effectiveness.

Disabilities and Aging

The Disabilities and Aging Cluster (D&A) is one of three clusters, along with the Health and Human Services clusters, supporting the people of New York. The agencies within all three clusters work closely together to administer federal requirements, move from fee-for-service to managed care plans, implement a “no wrong door” philosophy that will allow citizens to find the services they need regardless of what agency provides them, and share numerous systems across agencies in all three clusters. D&A is delivering the second phase of Executive Order 38 which consolidates into one system the requirements for the 13 impacted agencies. D&A also continues to enhance support and services across all agencies in the cluster.

Environment and Energy

The Environment and Energy Cluster (EEC) is working closely with each member agency to continuously reaffirm their understanding of business drivers, fine tune IT priorities and projects, and find commonality of purpose that presents opportunity for shared solutions. The EEC plan blends previously independent agency IT strategies into a coordinated set of strategies. The EEC goals over the next three-to-five years are to: enhance access to government information and services through an accessible and mobile government which promotes eBusiness; improve government efficiency and effectiveness by leveraging technologies across the cluster and automating agency business processes; and provide information as an asset through secure open data services.

Finance / Regulation / Gaming

The Finance / Regulation / Gaming Cluster (FRG) has a successful history of teaming up with the Department of Taxation and Finance in deploying innovative technology solutions that improved operational efficiency and produced measurable business outcomes. The FRG strategy is to expand
the usage of proven solutions to benefit more agencies by making them available as a set of shared services via a standard interface. The objective is to leverage the economy of scale such that future solutions can be built faster, better, and less costly. This strategy has already demonstrated result for initiatives such as Sales Tax Modernization, Open Data, e-Licensing, Storm Relief, and Health Benefits Exchange.

General Government

The General Government Cluster (GGC) is developing opportunities that have been identified and rationalized to leverage and accelerate the success of GGC program commitments while developing a long-term focus on foundational opportunities. Some of these commitments include: advancing shared solutions for electronic payments, image retrieval services, and case management; addressing legacy systems to migrate end-of-life solutions to shared enterprise solutions for cost avoidance; and enhancing best-in-class service for business intelligence, virtualization, and business process management. The GGC continues to focus on the business alignment within the cluster to globally understand and advance lines of business inter-relationships from a technology perspective. Eliminating duplicative processes, leveraging areas of best-of-class experience, sharing resources, identifying common platform investments, maturing service capabilities, and cost savings/avoidance are some of the identified underlying themes.

Health

The Health Cluster chartered three sub-committees in association with the Disabilities and Aging Cluster. The purpose of the sub-committees is to identify and pursue strategic initiatives where our agencies can partner together and move forward. The sub-committees are staffed with representatives from agencies in both clusters, comprising seven agencies in total. The sub-committees are: Electronic Health Record / Electronic Medical Record; Provider Performance and Oversight; and Administration and Back Office. The Health Cluster continues to focus on the business alignment within the Health Cluster to globally understand and advance lines of business inter-relationships from a technology perspective, with the ultimate goal of improving the health of the residents of New York State.

Human Services

Over the next three-to-five years the Human Services Cluster (HSC) is working with its cluster agencies and across “sister” clusters to truly transform and optimize business processes and achieve better delivery of service across all HSC agencies. The ideal is for the State to provide a single, integrated view of each citizen in its care with a single point of entry into public services, with technology playing a critical role for the openness and accessibility of health and human services. With over 1,400 different information systems and applications, the HSC agencies’ IT capacities and capabilities have not been optimized to share information or coordinate business processes across agencies. The work to progress an Integrated Eligibility System will transform not only the IT landscape for the HSC agencies but the State’s ability to serve the citizens in its care.
Public Safety

Building on the foundational concepts originating from the Integrated Justice Advisory Board (IJAB), the Public Safety Cluster (PSC) is working with the Cluster Executive Board (CEB) to identify opportunities to enhance services and streamline costs by: eliminating redundant technologies and systems; leveraging enterprise-wide technology; and maximizing the limited resources available. The PSC is working with agency executives to promote a more pro-active planning approach and to socialize consolidated ITS paradigms through clear communication of roles, process, and expectations. The PSC supports the management of hundreds of data systems with interfaces across state, federal, and local levels. PSC services provide support on a 24x7x365 basis for over 65,000 law enforcement, corrections, probation, and criminal justice practitioners.

Transportation / Economic Development

The Transportation / Economic Development Cluster (TED) has collaborated with the three cluster agencies (Department of Transportation, Homes and Community Renewal, and Economic Development) to progress initiatives supporting their strategic goals. This has been achieved through deriving strengths, in terms of people, processes, and technologies, from the formerly separate IT organizations and extending those across the cluster. This has also been achieved in obtaining guidance, support, and resources from Enterprise ITS. The strategies that are being pursued include implementation of cluster-wide governance, automation, web-enabling and modernizing systems to support the cluster agencies in meeting their goals, directions, and planning needs; and supporting the cluster agencies in their ability to respond and adapt quickly to emergency events.
Appendix C: IT Governance in NYS

The needs of the clusters served by ITS are best met when the business leaders play a key role in deciding where and how to invest available resources. At its heart, IT governance addresses very basic management principles concerning how information technology decisions are made, who gets to make them, and who’s accountable for what. Effective governance is important as it empowers agencies to make better and faster IT-related decisions that support business needs and helps build trust by making IT-related decisions and accountabilities transparent. It aligns IT strategy with business strategy and can lead to better program delivery and allocation of scarce resources to the best advantage of ITS and its clusters overall.

The governance framework is designed with the following goals in mind:

- Promote a proactive planning approach to governance in which the clusters identify needs and plan investments in advance
- Set clear timeframes and processes to enable the comparison of multiple proposals against one another
- Promote consistent understanding of roles, processes, and tools by all stakeholders
- Establish clear and consistent priorities among investments which are in line with the ITS strategic vision and have executive buy-in
- Clearly communicate investment priorities
- Streamline the investment proposal process while facilitating greater stakeholder participation in the design, evaluation, and planning of investments
- Reinforce best practices to plan, design, build, and operate IT systems and services

### Establishing Governance

As part of the IT Transformation, a portfolio workgroup was created to coordinate the development of an IT governance framework. This framework included guidelines for establishing an IT portfolio of projects and standards for project governance with reporting that would inform executive decision making. This process included:

- Creating an initial list of projects in each cluster portfolio
- Establishing Cluster Executive Boards chaired by Deputy Secretaries to validate the current IT portfolios within each cluster
- Implementing an “IT Investment Request” for all projects to use as a standard for requesting new work not presently in the portfolio
The governance framework has two fundamental building blocks: a **structure** that gives key stakeholders explicit roles and responsibilities for setting technology direction and priorities for the agency and a **set of processes** that guides stakeholder involvement and ensures a consistent approach to project identification, selection, and priority setting.

**IT Governance Process**

**Cluster IT Boards** are the first level of governance within the clusters and are closest to the business needs of each agency and the day-to-day service delivery. Membership includes: Cluster CIO, Cluster Project Management Office Director, Cluster Executive Management Team (as appropriate), and Agency representatives (as appropriate) as designated by Commissioners. The Cluster IT Boards meet monthly to:

- Provide business perspective for the cluster
- Identify cross-agency/cross-cluster opportunities
- Review and validate investment requests
- Recommend IT strategy for Cluster Executive Board review
- Track progress against strategic priorities
- Review service performance

**Cluster Executive Boards** are central to IT governance in the clusters. Leadership involvement from the outset is critical to ensure that IT projects contained in the recommended portfolio align with and directly support the Governor’s and Commissioners’ vision and strategic direction. Membership includes: Deputy Secretary(s) or designee (chair), Agency Commissioners, Cluster CIO, and a Division of Budget representative. The Cluster Executive Boards meet, at a minimum, quarterly to:

- Set priorities for the cluster
- Act as the final decision maker on cluster IT investments (projects)
- Approve cluster IT strategic plan and project portfolio
- Monitor the project portfolio for expected business outcomes and return on investment
- Review IT service performance

The **IT Strategy and Planning Board** is the highest level of IT governance in NYS and looks to maximize opportunities and investments across the state. Membership includes: Deputy Secretaries or designees serving as Cluster Executive Board chairs, NYS Chief Information Officer, and Governor’s senior staff (as needed). The IT Strategy and Planning Board meets quarterly to:

- Review the aggregate Portfolio
- Approve enterprise or large cross-cluster projects
- Annually review and approve changes to the statewide IT Strategic Plan
- Review statewide IT service performance
Appendix D: NYS ITS Enterprise Information Security

Strategic Plan Summary

Protecting the state’s cyber infrastructure and important assets from attack and damage is critical to our economic well-being and way of life. It is vital that the State do everything within its power to protect against growing cyber threats and reduce the risk of breaches and incidents that impact our ability to deliver government services.

ITS is acutely aware of the fact that infrastructure and critical information technologies upon which we rely are constantly under attack by a growing number of sophisticated threats. Consequently, enterprise security is a critical priority for ITS. Given the scope of the enterprise (over 180,000 users; over 3,000 applications with more created daily; hundreds of remote sites; thousands of mobile devices), we experience a broad array of attacks and incidents consistent with what is reported by recognized industry experts.

Given the State’s business and technology objectives and the current threat environment, we face a constantly changing landscape, with agencies seeking to implement new technologies to support programs, and attackers continuously developing new and more sophisticated ways to penetrate systems. In this environment, it is difficult to keep up, and in order to move forward, we must focus attention not just on prevention and response, but also on proactive risk management, remediation, monitoring, detection, and resiliency.

To establish and sustain effective cyber security capabilities, we must engage and encourage all stakeholders to share responsibility for cyber security, thereby maximizing all available resources.

While it is not possible to guarantee 100% security, the ITS Enterprise Information Security Office has implemented a comprehensive information security management framework based on business and risk management objectives and leverages industry standards and best practices. The program uses a risk management structure to help identify and prioritize threats and works to closely align policy, business, and technology approaches to effectively manage risk.

In accordance with best practices, the information security management program seeks to apply multiple, overlapping, layered controls that focus on people, technology, and operations. This approach reduces the likelihood that failure or circumvention of any individual protection approach will leave assets unprotected.

Consistent with the approach being taken by federal government and industry leaders, as the State modernizes IT infrastructure, we will seek to supplement existing network intrusion detection and prevention technology with Continuous Diagnostics and Mitigation (CDM) tools and strategies, that afford network and security staff near real-time visibility into our networks, thereby improving the ability to identify risks and threats, and potentially, expediting the mitigation of vulnerabilities.

Increased general awareness, clear policies and procedures, partnerships to further cyber education, increased information sharing, maintaining a skilled cyber workforce, layered controls, and effective monitoring, will all serve to reduce risk and enable the effective protection of infrastructure and information assets critical to achieving the State’s cyber security objectives.