2018 Strategic Plan

The Commonwealth Office of Technology

Introduction

The 2018 Strategic Plan for the Commonwealth's Office of Technology (COT) marks a milestone in the continuing evolution of information technology (IT) service delivery and management in the Commonwealth of Kentucky.

In 2012, all Executive Branch information technology (IT) infrastructure responsibilities were consolidated in the COT. This moved agency servers to the Commonwealth Data Center and all infrastructure staff to the COT. Consolidation established true enterprise infrastructure services for the Commonwealth. Authority for IT expenditures and priorities remained in the agencies. In December 2017, the Commonwealth established the Chief Information Officer (CIO) as the Commonwealth's senior IT executive. Executive Branch agency IT leads continue to support the needs of their agencies but have co-reporting responsibility to the CIO and are responsible to the CIO for compliance with the enterprise architecture and the funding model. These structural changes support the development of consistent processes for reporting and approving IT spending, at the enterprise level, in the Executive Branch. These changes also facilitate the integration of knowledge concerning agency needs and current capabilities and redundancies.

The CIO's 2018 Strategic Plan begins the process of reflecting the expanded mission of the office. The plan was developed by aligning the plans and activities of COT with its core mission and the Governor's priorities. It is expected that the strategic planning process will continue to evolve in future planning cycles and provide ever-increasing visibility and transparency in Commonwealth IT decision-making, spending, and management.

Background

Governor Bevin has highlighted six priorities for his administration:

- o Strengthening Kentucky's Financial Foundation
- o Growing Kentucky's Economy
- o Creating a Healthier Kentucky
- o Protecting and Strengthening Our Communities
- o Investing in Education and Workforce
- o Serving Those Who Serve Us

In the **2018 State of the Commonwealth and State Budget Address**, the Governor provided amplifying details that linked his budget requests to his priorities. Unlike many other States, the Governor has not over-simplified the financial challenges Kentucky is facing.

> *"There is not enough money, and it's easy to throw stones without coming up with solutions. But, now, is the time where we need people who are experienced, people who are capable of coming up with solutions to do exactly that, to not just give lip services to working across the aisle but to truly work together to find what is best for Kentucky."* — *Governor Matt Bevin*

While there are critical investments that are needed now - to fight the opioid crisis, to fund the State's pension plan, to invest in our citizens, their safety and education - fiscal responsibility is the lynch pinch upon which the success of those investments depend. The Governor has called for an overall reduction of 6.25% in State spending. More importantly, the reduction, must be done responsibly.

Recognizing that IT is a key contributor for the delivery of Commonwealth of Kentucky services as well as a key consumer of resources, the Governor has paid particular attention to how IT supports the Commonwealth's strategic goals. The Commonwealth of Kentucky spends approximately $1 Billion on IT related goods and services. About 1/5 of that has been spent by the Commonwealth's Office of Technology (COT). COT operates as a shared service-providing core IT infrastructure to Kentucky Executive Agencies. Historically, 4/5 of the Commonwealth's IT spend (application spend) has been managed by the Cabinets themselves.

Recognizing that the delivery of IT services had to be "fundamentally restructured" within the Commonwealth's Executive Branch to achieve the simultaneous expansion of customer services and disciplined fiscal management, Executive Order 2017-0889 was issued by Governor Bevin that was then codified in House Bill 244 in December of 2017.

Some of the key changes made to COT's responsibilities for IT service delivery within the Commonwealth of Kentucky include:

- The CIO is charged with the responsibility for digital technologies including business applications across all Executive Branch cabinets. Cabinet "CIOs" that were previously autonomous, are assigned dual reporting responsibilities to coordinate agency initiatives and IT spend through the Commonwealth's CIO.

- All digital technologies (hardware, software, XaaS, vendor-hosted, etc.) are reviewed and approved through governance processes that extend from business requirement definition through procurement and ultimately project execution, IV&V, and operations.

- Enterprise services and infrastructure are provided through a shared service model with an enterprise application portfolio being established in parallel with the Cabinets' application portfolios.

- An Office of Project Management has been established and Program / Project reporting is being reported across all agencies using common attributes and executive dashboards.

- Two new positions, the Chief Data Officer and the Chief Compliance Officer were created in recognition of shared data and governance responsibilities across the Commonwealth.

Changes in the roles and responsibilities of the CIO, agency technology leaders, and the COT provided a new context for the 2018 strategic planning process.

Strategic Planning Process

The Commonwealth Office of Technology established a new iterative process for COT that was predicated on establishing tangible links between the Commonwealth's goals and objectives and actionable plans.

Since COT's strategic plan is the foundation for investment, development, research, and operations, it is a living document. The plan looks forward two biennium (at a minimum). COT formally reviews its strategic plan every quarter to ensure that progress (and unforeseen developments) are

accommodated, allowing adjustments to be made as necessary. In the second quarter of every year, COT updates its strategic plan including a review of the fundamental assumptions (Vision, Mission, Objectives) to ensure alignment with the Commonwealth's requirements.

COT, first, reviewed the mission and the vision of the Office and established new definitions as cornerstones for the rest of the strategic planning process. Based on the mission and vision, COT developed an operational approach based on a set of core values.

Commonwealth Office of Technology Mission

To support agency partners in the fulfillment of their core mission by providing technology leadership, services, and solutions in a secure, transparent, and fiscally responsible manner.

Commonwealth Office of Technology Vision

The Commonwealth Office of Technology enables a proficient digital government supportive of a 21st century economy by being a trusted and valued business partner with unyielding commitment to cost-effective service delivery.

Commonwealth Office of Technology Core Values

One IT Team in the Commonwealth – building a cohesive IT team embracing and driving change, enhancing communication, collaborating, and developing partnerships.

Customer Service – empowering individuals and organizations to provide quality service in a fair and timely manner

Being Constituent-focused – aligning information technology services to meet agencies' business needs

Professionalism – treating others with honesty, respect, integrity and fostering openness and trust

Being Forward Thinking – embracing continuous improvement and adaptability

Commonwealth Office of Technology Operational Approach

The basis of the strategic planning process is to identify the current state, envision the desired state, and determine the method by which the desired state is achieved. COT's strategic planning process overlapped the effort to re-define the roles and responsibilities of the Office and the CIO. As a result, the "current" environment was "primarily defined" by the delivery of infrastructure services to the Executive Branch, as described above. It was recognized, however, that the newly defined roles and responsibilities would require an emphasis on those enterprise services and a new emphasis on an enterprise, cross-agency approach to the management of IT contracts and the development and maintenance of a cadre of IT professionals.

Lines of effort

Four lines of effort have been identified to prescribe the steps that COT must proceed along to move the Office along the path to achieving its goals. Each approach starts with a desired end state and describes the approach that is to be followed to achieve that end state.

COT also identified specific operational objectives that spanned the identified lines of effort. That is, these objectives support achieving the end-state desired in multiple lines of effort or contribute to the lines of efforts success. These identified objectives were:

Supported Objectives
1   Securing the Network
2   Shared Data Environment
3   Data Denter Restructuring
4   Single Sign On/Identity Management
5   Enterprise Standards and Services
6   Oversight of IT Acquisitions and Projects

These objectives were mapped to the lines of effort and ultimately associated with individual action plans. As a rule, each of these objectives contribute to multiple lines of efforts and contribute to achieving multiple end states.

These lines of effort are:

Security

Security is a central pillar in all IT activities. Given the continuing challenges in managing the data of our citizens while providing high levels of service, the over-riding directive for COT is not to allow our systems, or the data of our citizens, to be put at risk and to develop contingency plans for mitigating damage in the event of compromise.

Desired Condition: *A monitored and secured computing environment capable of risk detection, response, and mitigation.*

The approach:

- To protect the confidentiality, integrity, and availability of state data and networks against an ever-growing number of cybersecurity threats. The Commonwealth adopted the National Institute of Standards and Technology (NIST) 800-53 Security and Risk Management Framework in 2015. That framework and the twenty-three control families provide the Commonwealth the means of meeting the regulatory compliance requirements governing the data leveraged within the Commonwealth.
- The Chief Information Security Officer's Office spearheads the implementation of the NIST control families across the executive branch, and in doing so, works closely with cabinet IT leads developing integrated approaches that appropriately balance security-related IT investments and risks.

- Every IT organization within the executive branch agencies, including state employees and contractors, will be cognizant of and share responsibility for protection of the Commonwealth's data and network resources. For that reason, every COT objective and project has critical security-related elements.

Enterprise Services

Enterprise services are COT's legacy business and a foundational element of the IT services that are envisioned in our end state. Historically, COT's services have been delivered through assets that are concentrated at the Commonwealth Data Center (CDC) and the Alternate Data Center (ADC). During the strategic planning process, it was understood that as IT service delivery business models change, COT needed to explicitly emphasize the oversight and management of solutions that are sourced, as well as those that were delivered directly.

Desired Conditions: *1) State-of-the-Market services provided to agencies either directly or through sourced solutions. 2) Accurate knowledge and approval of aggregate IT spending in the Executive Branch. 3) A collaborative IT environment to promote shared enterprise solutions wherever practicable, drive down costs, and spur process and service modernization. 4) Integration of knowledge concerning agency needs, current capabilities and redundancies.*

The approach:

- In keeping with the 2012 Governor's Executive Order, which consolidated all executive branch IT infrastructure responsibilities to the Commonwealth Office of Technology, moving the bulk of agency servers to the Commonwealth Data Center and all infrastructure staff to COT, a primary objective of COT is to deliver true infrastructure service to the Executive Branch.
- Accordingly, Executive Order No. 2017-0889 issued on December 13, 2017, established a single CIO for the Commonwealth and co-reporting responsibilities to agency IT leads in each Cabinet. Agency IT leads continue to support the needs of their agencies but are also responsible to the CIO for compliance with the enterprise architecture and the funding model.

Contract Administration

Desired Condition: *A task-deliverable contracting approach with monitoring, follow- up, and a clearly defined end-state*

Kentucky state government is facing the largest financial challenge since the 2008 recession. Critical to the Commonwealth's fiscal responsibility, is the proper management of all IT projects and expenditures to maximize return on investment and improve service delivery.

COT will implement a process modeled by the Federal Government, contained within the Federal Acquisition Regulation (FAR), establishing a Quality Assurance Surveillance Plan (QASP) for monitoring and managing vendor performance and ensuring such performance complies with contractual requirements. COT will establish a task-based contracting approach, ensuring each contract has a deliverable component. These guiding principles provide an acquisition system allowing COT to conduct business with integrity, fairness, and transparency.

Training/Education

Desired Condition: *Planned workforce training and education for completion of daily tasks and investments in our future IT staff*

The Commonwealth faces challenges recruiting and retaining skilled IT staff. COT will emphasize workforce planning to provide staff the skills needed to elevate performance and improve morale. COT, in cooperation with agency IT staff, will assess and coordinate end-user education and training needs. As enterprise services evolve, targeted education and training, with measured and delivered outcomes, will be the focus.

To close the loop, the CIO's first strategic exercise was for his direct reports to develop action plans that tied back to COT objectives and ultimately the Governor's objectives. These action plans are tracked on a bi-weekly basis. Three reporting mechanisms – the report of action plans, the executive dashboard of program/project lifecycles, and the financial (burn-rate) reports of IT spend provide a level of visibility, transparency, and accountability, that has never been achieved before at the Commonwealth.

Commonwealth Office of Technology Action Plans

Subsequent to identifying the tasks associated with the four lines of effort, the Commonwealth Office of Technology developed specific action plans designed to translate the plan. The initial action plans adopted by COT are identified in the table below.

Each COT Office develops an approach for implementing the identified action plan. These action plans are tracked, at an Executive level, against the milestones and success criteria established for each action plan.

COT Office	Action Plan	Supported Objectives
Office of Service Delivery	Upgrade Windows 7 devices to Windows 10	1 - Securing the network;#3 - Data Center restructuring;#5 - Enterprise standards and services
Office of Service Delivery	Removal of inappropriate local administrative rights - Workstations	1 - Securing the network
Office of Service Delivery	FLEXWARE roll-out	3 - Data Center restructuring;#5 - Enterprise standards and services
Office of Service Delivery	Implement GAO-14 switch replacement project	1 - Securing the network
Office of Service Delivery	Implement Network Access Control (NAC)	1 - Securing the network
Office of Service Delivery	VPN – IPSEC and SSL transitions (ES)	1 - Securing the network;#3 - Data Center restructuring;#5 - Enterprise standards and services

COT Office	Action Plan	Supported Objectives
Office of Service Delivery	Implement Radware	1 - Securing the network
Office of Service Delivery	Replace MAN 8400s with MAN 8600s [check that with Rick]	1 - Securing the network;#3 - Data Center restructuring
Office of Service Delivery	Implement training on new Dell/EMC VNX converged technology toolset	3 - Data Center restructuring;#5 - Enterprise standards and services
Office of Service Delivery	Converged technology implementation	3 - Data Center restructuring;#5 - Enterprise standards and services
Office of Service Delivery	Mainframe as a Service (MaaS)	3 - Data Center restructuring;#5 - Enterprise standards and services
Office of Service Delivery	Clean up older Windows server versions (2000, 2003)	1 - Securing the network
Office of Service Delivery	SQL Server 2000 and 2005 Upgrade	1 - Securing the network;#2 - Shared data environment;#5 - Enterprise standards and services
Office of Service Delivery	Oracle Migration from 11.2 to 12c	5 - Enterprise standards and services
Office of Service Delivery	Safeguard POC to replace TPAM	1 - Securing the network
Office of Service Delivery	PKI replacement with Microsoft certificates	1 - Securing the network
Office of Service Delivery	Removal of inappropriate local administrative rights - Servers	1 - Securing the network
Office of Service Delivery	Removal of inappropriate local administrative rights - Databases	1 - Securing the network
Office of Service Delivery	Automate server builds (VMWare) – vRO and vRA – integrate with HEAT	3 - Data Center restructuring;#5 - Enterprise standards and services
Office of Service Delivery	Consolidation/integration of DOCJT	1 - Securing the network;#2 - Shared data environment;#3 - Data Center restructuring;#4 - Single Sign On/Identity Management;#5 - Enterprise standards and services;#6 - Oversight of IT acquisitions and projects
Office of Service Delivery	Consolidation/integration of DJJ	1 - Securing the network;#2 - Shared data environment;#3 - Data Center restructuring;#4 - Single Sign On/Identity Management;#5 - Enterprise

COT Office	Action Plan	Supported Objectives
		standards and services;#6 - Oversight of IT acquisitions and projects
Office of Service Delivery	Consolidation/integration of KSP	
Office of Service Delivery	Consolidation/integration of Fair Board	
Office of Service Delivery	Provide Linux One as a service with IBM	3 - Data Center restructuring;#5 - Enterprise standards and services
Office of Service Delivery	Develop staffing strategy/solution	1 - Securing the network;#3 - Data Center restructuring;#5 - Enterprise standards and services;#6 - Oversight of IT acquisitions and projects
Office of Project Management	Lead development of enterprise technology roadmap	1 - Securing the network; 2 - Shared data environment; 3 - Data Center restructuring; 4 - Single Sign On/Identity Management; 5 - Enterprise standards and services; 6 - Oversight of IT acquisitions and projects
Office of Project Management	Migration of existing agency Single Sign On (SSO) solutions to Kentucky Online Gateway (KOG)	1 - Securing the network; 4 - Single Sign On/Identity Management
Office of Project Management	Establish cross-agency enterprise project and program portfolio management	5 - Enterprise standards and services; 6 - Oversight of IT acquisitions and projects
Office of Project Management	Develop management processes to ensure project selection derives from strategic or regulatory requirements	2 - Shared data environment; 5 - Enterprise standards and services; 6 - Oversight of IT acquisitions and projects
Office of Project Management	Develop human resource plans for building and maintaining a qualified project management team	5 - Enterprise standards and services; 6 - Oversight of IT acquisitions and projects
Office of Project Management (COR)	Complete review of all existing IT contracts	6 - Oversight of IT acquisitions and projects
Office of Project Management (COR)	Streamline review processes for IT requests	6 - Oversight of IT acquisitions and projects
Office of Project Management (COR)	Eliminate redundant IT contracts and lower associated costs	6 - Oversight of IT acquisitions and projects

COT Office	Action Plan	Supported Objectives
	through contract consolidation	
Office of IT Architecture & Governance	Modernize Integrated Tax System (ITS)	1 - Securing the network; 2 - Shared data environment; 5 - Enterprise standards and services
Office of IT Architecture & Governance	Promote Kentucky Online Gateway (KOG) to enterprise service	4 - Single Sign On/Identity Management
Office of IT Architecture & Governance	Application End of Life project support	1- Securing the network.
Office of IT Architecture & Governance	Establish SalesForce center of excellence	1 - Securing the network;#2 - Shared data environment;#3 - Data Center restructuring Enterprise standards and services
Office of IT Architecture & Governance	Implement KY Business One Stop Phase III	2 - Shared data environment;#3 - Data Center Restructuring;#4 - Single Sign On/Identity Management;#5 - Enterprise standards and services
Office of IT Architecture & Governance	Standardize code scan and integration test methodologies	5- Enterprise standards and services
Office of IT Architecture & Governance	Implementation of MDM state data hub	5- Enterprise standards and services
Office of IT Architecture & Governance	Establish enterprise release process	1- Securing the network; 5- Enterprise standards and services
Office of IT Architecture & Governance	Adhere to and enforce change management procedures	1- Securing the network; 5- Enterprise standards and services
Office of IT Architecture & Governance	Provide enterprise forms automation solution	5- Enterprise standards and services
Office of IT Architecture & Governance	Integrate precinct and parcel data into standard GIS database	5- Enterprise standards and services

Publication and Communication

The Strategic Plan is published on the COT website where it is maintained and updated as needed.
COT's progress is measured against the action plans above that are regularly tracked and managed.