


NASCIO 2019 State IT Recognition Awards –
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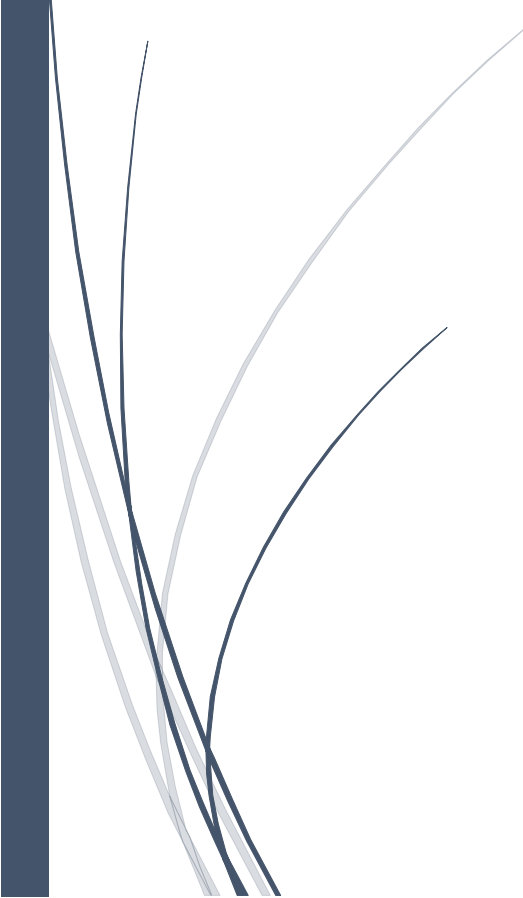


Commonwealth of Kentucky
Commonwealth Office of Technology
CIO Transformation of IT Service Delivery

Project Initiation: January, 2018

Project Completion: Phase 1 – January 2019

Dr. Charles Grindle, Chief Information Officer,
Commonwealth of Kentucky



Executive Summary

In January of 2018, the newly appointed Chief Information Officer of the Commonwealth of Kentucky began a program to transform IT Service Delivery across the Executive Branch of Government.

The Commonwealth of Kentucky's Executive Branch is a federation of 13 Cabinets led by the Governor. Prior to 2018, the Commonwealth's Office of Technology provided shared infrastructure services to the Executive. The Commonwealth Office of Technology had been charged with consolidating IT infrastructure and after several years, that consolidation was almost complete. The consolidation did not include the optimization of resources and by the start of 2018 almost 80% of IT spend was managed in a fragmented, uncoordinated fashion and fell outside the recognized authority of the CIO. In January of 2018, the Commonwealth embarked on an effort that continues to improve and transform Kentucky IT services.

Exemplar

The CIO and the Commonwealth Office of Technology has led the transformation of IT through organizational change, adoption and standardization of best practice, and team building. The scope of the required transformation required simultaneously addressing traditional technical issues while resolving political and organizational barriers (within the IT Community, business users, the legislature and citizens). This has taken the form of legislation, policy directives, organizational change, technology investment, and the adoption of new practice.

Concept

This has been a multi-faceted project focusing on aligning strategy, process, operations and investments across the Commonwealth of Kentucky's Executive Agencies. Central to this project has been:

- A new IT Strategic planning process that ensures that all IT activity is directly to the Governor's objectives, Kentucky Revised Statutes, and Budget .
- Re-organization of IT that established: dual reporting for Cabinet IT Directors and CIO approval authority for IT spending and staff hiring.
- New financial governance processes for IT were developed to increase the visibility into spending and contracting on a state-wide level.
- Significant new investment in enterprise capabilities to modernize state-wide IT service delivery.

Significance

This effort aligns Kentucky IT with the priorities of the Governor and the legislature. The Governor personally reviewed and approved the strategic planning approach.

Every Executive Cabinet in the Commonwealth is affected by this effort. The approach provides a Project Management Office, Chief Data Office, and Chief Compliance Office, increases visibility into major programs, creates new data capabilities from master data sharing agreements and new partnerships.

Impact

A central tenet in Kentucky's IT Transformation Initiative was fiscal responsibility, fully embracing one of the Governors most important objectives. Two measurements are indicative of that success:

- Multiple significant upgrades in IT infrastructure, services, and strategic readiness with no corresponding increase to IT budgets or changes in rated services.
- The outstanding obligations associated with IT debt have been reduced from approximately \$21 Million to less than \$4 Million since the CIO's inauguration.

CIO Transformation of IT Service Delivery

Exemplar

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The CIO, Charles Grindle, PhD, was recruited by the Governor of the Commonwealth of Kentucky to lead a transformation of the State's IT service delivery. A dated organizational structure and associated processes inhibited the development of state-wide culture of teamwork, shared responsibility and accountability. Best practices were inconsistently employed with and efforts were frequently unfocused, lacking transparency with questionable measurable results.

Because the CIO and the Office of Technology had minimal insight into Agency decisions regarding the development and procurement of IT products and services that were not explicitly identified as "infrastructure" the Commonwealth did not have an executive view into application development and deployment. As a result, the Commonwealth could not optimize investments nor maintain a consistent IT environment. Equally important, the Commonwealth could not leverage assets (such as data) to provide required services to its citizens.

The scope of the transformation required (and still requires) simultaneously addressing traditional technical issues (hardware, software, and integration) while resolving political and organizational barriers (within the IT Community and across the business owners/customers). It has required developing and demonstrating, through actionable projects, a collaborative, disciplined and results-driven practice.

Concept

This has been a multi-faceted project focusing on aligning strategy, process, operations and investments across the Commonwealth of Kentucky's Executive Agencies. This effort required major change in three arenas: the political, the cross-departmental, and the technical. Central to this project has been:

- Re-organization of IT that established: dual reporting for Cabinet IT Directors and CIO approval authority for IT spending and staff hiring.
- A new IT Strategic planning process that ensures that all IT activity is directly to the Governor's objectives, Kentucky Revised Statutes, and Budget .
- New financial governance processes for IT were developed to increase the visibility into spending and contracting on a state-wide level.
- Significant new investment in enterprise capabilities to modernize state-wide IT service delivery.

The first step in this major effort was a transformative process that required fundamental shifts in how IT was fully integrated into the strategy and business of the Commonwealth. The CIO led the restructuring of Kentucky's IT organization. This restructuring required partnership between the Governor, the legislature, and Kentucky's Executive Cabinets to craft HB244 which codified a new working relationship with the Governor, the CIO and other Executive Branch leaders. Because planning and governance was strengthened by making the CIO the final authority for all IT, cross-departmental collaboration was a primary focus with Agency leadership in business technology fully integrated in the CIO's new IT decision-making and reporting processes. Finally, the core IT service organization was restructured and re-purposed to support the new relationships and new responsibilities.

The CIO adopted and modified US military strategic planning principles from his teaching experience at the US Army's War College. He recognized that the US military service structure (independent services united for joint operations) shared similarities with the federated structure of the government of the Commonwealth of Kentucky. Based on that insight, he determined that Joint Publication 3.0, Joint Operations and Joint Publication 5.0 Joint Planning could be extended to support Kentucky IT operations. He led a fast paced strategic planning process that established a roadmap toward aligning day-to-day operations with high-level objectives. The new planning process changed the cadence and breadth of IT strategic planning within the Commonwealth. It required that IT executives adopt a new methodology for integrating Commonwealth and customer business requirements into every level of planning and management.

The new IT Strategic planning process formally aligns strategy to the Governor's objectives, Kentucky Revised Statutes, and Budget and ensures that all IT activity is directly traceable to business requirements. The cadence changed from a biennial activity to an annual process. IT leaders are tasked with developing action plans that provide a prescriptive path to achieving the Governor's goals and associated legislated requirements. IT leadership was tasked with reviewing IT projects and work scope to ensure that all activity was traceable to IT Strategy and Action Plans. Finally, measurement and reporting criteria were established to ensure that projects and activities remained focused on their contributions to overall strategy.

In tandem with the planning process, financial governance processes for IT were developed to increase the visibility into spending and contracting on a state-wide level. Recognizing that there were efficiencies in leveraging resources (financial as well as human) it was necessary to provide cross-departmental visibility into spend, staffing, and contracting. Because the Commonwealth has a legacy of decentralized IT operations, it has been necessary to reconcile contract management, project reporting, and staffing processes. The challenge has been to provide visibility for management without disrupting vital business services or creating financial hardships on legacy programs. Besides providing direct contract management governance, the CIO assisted Executive Agencies by 1) training agency IT Directors in a standardized IT budget report that supports rolling up all IT budgets into a Commonwealth-wide view and 2) providing an Enterprise management solution to support routine, consistent and transparent reporting of high-value projects across Kentucky.

Significant changes to the Commonwealth Office of Technology aligned the Office with the new strategic direction and added new roles and responsibilities (Chief Compliance Officer, Chief Technology Officer, Chief Data Officer, and the Director of the Office of Project Management) to support the extended enterprise. These appointments support new initiatives in data management and exploitation (new

state-wide data management policy, creation of a Kentucky Data and Analytics committee to coordinate and leverage data as an asset, master data sharing agreement for the Executive Branch, and routine and transparent reporting of all strategic IT projects).

While the new leadership positions across the enterprise facilitated the transformation, the heavy lifting has been accomplished by IT professionals at the project/program level. Reconstituting and realigning the Commonwealth IT team empowered its members to focus on strategically important action plans.

Significance

This effort aligns Kentucky IT with the priorities of the Governor and the legislature. The Governor personally reviewed and approved the strategic planning approach and is routinely briefed on progress.

This transformation effort has effected every Agency within the Commonwealth's Executive Branch of Government and the management of over \$580 Million dollars (per year) of IT spend. The enhancement in services benefits the over 30,000 employees within the Commonwealth but the citizens as well.

This approach provides a new statewide Project Management Office, Chief Data Officer, and Chief Compliance Officer and increases visibility into major programs, the formation of new data capabilities based on master data sharing agreements and new partnerships among other key changes.

Central to the problem of aligning IT across a federated environment is developing a common understanding of the efforts, resources, and plans across the organization. Like any large organization with multiple cost-centers and semi-autonomous IT departments, the Commonwealth of Kentucky developed process silos, islands of excellence, and inward looking project and resource management.

Breaking down these historic barriers has required establishing a common language that supports a truly Enterprise view of IT objectives and progress. The CIO has established an Executive Dashboard for reporting major projects across common metrics to support visibility and governance throughout a projects lifecycle and prior to the requirement for risk management intervention. For the first time, projects can be understood from an enterprise perspective. Additionally, besides providing additional governance processes and policies in contract acquisition, the CIO has worked with IT Directors to establish a common IT baseline.

The implemented strategic planning process has had direct effects on Kentucky infrastructure as well. Expanding requirements for infrastructure (compute, storage, etc.) demanded new investments. As the CIO considered the long term challenges associated with maintaining mainframe legacy systems, the strategic planning process supported challenging existing Kentucky IT paradigms. Traditionally, investments had been made to refresh the existing data center architecture including Kentucky's mainframe. A strategic assessment indicated that, as a first mover to Mainframe as a Service and a hyper-converged VxBlock data center, Kentucky could position IT infrastructure for years to come while producing significant cost and human resource savings. This same process has led to a re-consideration of how Kentucky positions applications and services in the cloud and has led to the development of

cloud policies and increased use in multiple cloud providers as well as developing an internal center of excellence for cloud application development.

While financial metrics are important, the strategic impact of these initiatives may be more important in intangible benefits. Enterprise data sharing agreements, government-wide data management and analytics work will support citizen services for the foreseeable future as well as informing policies. New

Impact

A central tenet in Kentucky's IT Transformation Initiative was fiscal responsibility, fully embracing one of the Governors most important objectives. Two measurements are indicative of that success:

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governance and reporting of IT investments are already reaping returns by reducing duplication in investments and leveraging resources across Cabinets.

ROI metrics are more amenable to describing the success of focused IT implementations and are not well suited to describing the measurable benefits that have been achieved in the first year of the Commonwealth's IT Transformation initiative. Several of the underlying projects will drive savings in the millions of dollars beginning in 2019, the benefits this nomination focuses on have been realized in the first 15 months of the CIO's tenure – October 2017-December 2018.

- There were significant upgrades in IT infrastructure, services, and strategic readiness with **no** corresponding increase to IT budgets from 2017-2018. (All IT investments were budget neutral – a result of aligning projects to strategic objectives and disinvesting in meritless activities).
- The outstanding obligations associated with IT debt have been reduced from approximately \$21 Million to less than \$4 Million.
- Significant enhancements have been made to virtually every aspect of IT service delivery **without** increases in the cost of rated services or budget augmentation. These enhancements included, but are not limited to:
 - o A first mover (US States) in transitioning to Mainframe as a Service.
 - o Upgrade of all Commonwealth network switches.
 - o Installation of VxBlock with improved compute and storage performance, associated cost savings, reductions in footprint, improvement in maintenance efficiencies and reduction in licensing costs.
 - o Creation of dedicated network monitoring and management services with investments in associated tools and software