



State of Washington
2016 NASCIO Award Nomination

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I. EXECUTIVE SUMMARY

Washington state government spends nearly \$1 billion annually on technology staff, infrastructure, applications, maintenance, and operations, but state leaders often see technology as a mystery black box where money goes in, but nobody can explain what you get for it. This makes technology investments vulnerable to budget cuts, which continues a vicious cycle of underinvestment and the state's technology falling behind.

Given the often difficult choices state leaders must make regarding government services, it is vital that technology leaders can demonstrate efficient and effective spending. This means having the ability to provide state leaders and elected officials with solid data to help them understand the business of technology so they can make better decisions.

In 2012, the state completed a mandated Total Cost of Ownership technology assessment that provided a snapshot view of technology spending inside and across 39 Washington state agencies. That one-time study provided important information, but didn't give the state the ability to line up technology spending with the business services that those investments supported.

At the same time, technology, legislative, and policy executives were expressing concern over the state's lack of sufficient and credible insight into agency-level and enterprise-wide technology investments, and the governor was asking agencies to prepare for major budget cuts.

In response, the state's Chief Information Officer began the initial phase of developing the Technology Business Management program in June 2012, and contracted with Apptio to develop a tool to support the program. The goal was to improve the state's accountability, insight, and transparency in the area of technology spending.

The program established a common language associated with IT cost, and state agencies now embrace the reporting functionality made available through Apptio. The program has resulted in improved governance, optimization, and cost control (per the State CIOs' 2015 Top Ten Priorities), including better statewide IT management policies; guidelines related to technology spending; and more consistent, defined, and consolidated IT cost standards.

Agency CIOs now have the ability to benchmark against their peer agencies and have found ways to achieve savings by using the monthly reporting and monitoring features in Apptio. As the program matures, the state will continue to augment tools that: 1) help answer questions related to technology and IT spend, 2) respond to legislative oversight and directives, and 3) clearly articulate the value/cost of IT to agency business services.

II. CONCEPT

With over \$1 billion spent annually on information technology staff, infrastructure, applications, maintenance, and operations—spread across dozens of agencies and institutions—the state of Washington struggled with accountability in the area of technology investments. On multiple occasions, the state CIO was unable to answer questions about aggregate IT spend or technology installations across the state. Finding answers often required multiple survey requests to state agencies.

This lack of information, accountability, and oversight led to:

- Increased legislative oversight and directives
- Request for multiple studies related to state technology and IT spend
- Inability of the central technology agency to articulate the value or cost of IT to agency business
- Continued budget reductions
- Deficient spend visibility into failed IT projects

To address this issue, the state worked with Gartner Consulting beginning in 2011 to develop the state's first-ever Total Cost of Ownership technology assessment which included a 2012 recommendation to provide comparison snapshots of like expenditures information among peer organizations. This assessment provided valuable data that enabled the state CIO, as well as agency-level technology and fiscal staff, to target areas for improvement. It was also an opportunity to share existing best practices across state government.

Using this assessment as a baseline, in 2012 the state CIO established the Technology Business Management program. Legislation required agencies with technology expenditures exceeding \$10 million annually to be included in the program, however the state CIO also developed statewide policy that expanded program participation to include agencies with an annual spend of \$250,000 or more. This resulted in 44 agencies currently included in the IT spend criteria within the program.

The Technology Business Management program business drivers include institute governance, policies, standards, practices, processes, and tools needed to report and monitor IT investments on an ongoing basis.

Desired outcomes for the program include:

- **Transparency:** Building trust, promoting accountability, and revealing opportunities
- **Cost Optimization:** Maximizing IT asset utilization and return on investment
- **Communication:** Creating a common language to bridge IT and business to enable better conversations about value versus cost.

- **Business Value:** Augment investment decision-making process

Recognizing the need for a robust reporting solution, the state CIO performed an informal Request for Information to identify vendors with experience in Technology Business Management and IT Financial Management. At the time, there was a limited number of vendors that met the reporting requirements. Apptio was the top contender. The state CIO negotiated a contract in 2012 to implement Apptio (Saas - Software as a Service) to model and report statewide technology spending and utilization data.

Washington state government was Apptio's first public sector client and their most decentralized, so adapting the technology to fit the state's business needs provided opportunities for change. To meet the state's requirement, Apptio had to:

- Establish a new technical "backend" design to support a federated organization.
- Coordinate software configuration and training across multiple Technology Business Management experts responsible for their federated instance in Apptio.
- Institute a new help desk strategy to handle and streamline support for multiple Apptio experts in a single instance.
- Expand their product to accommodate and report on more than two years' worth of information for multi-biennium trending.
- Make critical product changes related to security.

III. SIGNIFICANCE

For Washington State, the data in Apptio needed to serve multiple audiences. The reports produced would need to be leveraged by the Legislature, state CIO, state agency leaders, and their respective agency CIOs.

Finance and labor information is foundational for Technology Business Management. Given the size of the statewide finance and labor data files loaded into Apptio, the state and vendor implemented an automated data load process with the expectation this automation solution could be used by all 44 agencies to load their monthly data files.

The state CIO recognized that resources were needed to help institute a statewide framework and foundation that enabled comparison of like technology expenditures. The Technology Business Management program leveraged Apptio's experience and artifacts to support development of statewide standards, policy, and guidelines.

Between 2013 and 2014, technology and fiscal representatives from various agencies participated in multiple two-hour work sessions to collaborate on common language and definitions for IT expenditures, which were eventually adopted and implemented as statewide

policy. These definitions identified as “Cost Pools” and “IT Resource Towers” are heavily leveraged throughout the industry.

Agency leaders now have reporting capabilities that enable comparison and benchmarking IT expenditures across agencies. In the past this had not been available due to agencies “interpretive” use of the state financial rules.

Washington state government now has the ability to compare and benchmark against other governments and private companies because adoption of technology and financial principles using standardized Cost Pools and IT Resource Towers has become more prevalent.

Another foundation of the Technology Business Management program is transparency. Agencies were initially hesitant to participate because the new level of transparency could potentially expose coding and data errors. The program helped agencies overcome fears by starting conversations about ways to address these errors.

As the program matured, agencies found that transparency could be used to support their technology investment requests. Other ways agencies now are leveraging Apptio reports include:

- Agency CIOs can compare their labor base against like-sized agencies and use this information to support business requests.
- Detailed reports on IT chargebacks across all agencies are now available.
- CIOs can identify technology costs in non-technology business areas.
- Coding errors are more easily identified and corrected to create a more accurate picture for investment requests.
- CIOs now have a common language for use in conversations with their respective Chief Financial Officer.

At an enterprise level, the State and Deputy CIOs meet with agency business and IT leaders, using the high-level Cost Pool breakdown as well as comparative benchmark reporting in the IT Resource Towers as conversation starters. Information reporting by Cost Pools and IT Resource Towers is anticipated to be used in the Governor’s Operating Budget to inform elected officials about agency-level technology spending.

More information about the Technology Business Management program’s policies, standards, Cost Pools, and IT Resource Towers can be found online:

<https://ocio.wa.gov/programs/technology-business-management-tbm>

IV. IMPACT

Establishing the Technology Business Management program and leveraging Apptio reporting has provided a vehicle for substantial and measurable change related to technology spending in the state of Washington.

There is now common language and definitions for IT expenditures being used by all state agencies. With over \$1 billion annual IT spend the state now has insight into what Cost Pools (Labor, Depreciation, Facilities, Hardware, Software, Outside Services, Telecom) and IT Resource Towers (data center, application development and support, computers, storage, network, security, and IT Management) make up the spend.

In 2014, cross-agency governance was established and consists of agency CIOs and CFOs who provide direction and deadlines, help create and support a strategic roadmap, and communicate with state leaders about technology expenditures.

Impact at an Enterprise Level

The state CIO now has insight into technology spending across the state and has the ability to answer questions using data captured in the program, rather than having to engage in the lengthy, inefficient process of having agencies respond to IT surveys.

Statewide technology business management impacts include:

- Agencies now capture and upload application inventory data into Apptio. This provides a vehicle to monitor and report future investment demands as agencies tackle and complete application modernization efforts while they collapse/ reduce the number of legacy systems.
- The state's Office of Cyber Security uses the program's statewide list of agency applications and count of application developers to optimize the number of security training sessions needed across all state agencies.
- Global reports allow agencies to see how they benchmark against each other across the IT Resource Towers.
- Agency CIOs have exposure to technology costs within their organization that occur outside of their program areas. This allows agency CIOs to better engage in IT cost conversations with their business peers.
- Reporting information from the Technology Business Management program and Apptio is provided to the legislature during budget development, including during the 2015-17 budget process.
- The program continues to enhance the Apptio model and use reports to inform funding requests and investment plan/major project approvals, as well as track cost savings

achieved through strategic technology initiatives, including data center consolidation and/or migration to use of cloud technologies.

Impact at an Agency Level

Agencies are using reports generated from Apptio to inform internal management team discussions. These agencies have designed and conducted internal training for various audiences within their agencies and built specialized reports to be used by these different audiences in addition to the standard reports provided within Apptio. The reports allow these agencies deeper insight into ongoing operations.

Agency-level technology business management impacts include:

- **Washington Technology Solutions (Consolidate Technology Services):** The agency Service Desk supervisors were spending 48 labor hours each month manually producing workload analysis reports from multiple data sources. Since the data was captured as a part of the Technology Business Management program, the agency leveraged Apptio to automate the monthly data load and develop a monthly analysis reports. The report is now instantly generated on a monthly basis, enables the Service Desk supervisor to make staffing decisions and provided an opportunity to redirect the 48 labor hours to other priorities.
- **Department of Corrections:** It was important for Department of Corrections to identify and report on the amount of labor IT spend within control of the CIO and labor IT spend happening in other business areas. The department's CIO used Apptio when reporting overall IT spend to agency leaders.
- **Agencies IT Spend:** As the service provider to government agencies, Washington Technology Solutions sends a monthly paper invoice to agencies billing for consumption of over 100 services. Invoice amounts were at an aggregated level and the agency continually received requests from customers to provide electronic copies of the detail information included in the billing. These requests impacted the Service Desk, Customer Account Managers, service owners and front line technicians. Since agencies were required to put infrastructure information into Apptio for use by IT Resource Towers, Washington Technology Solutions elected to leverage Apptio to provide electronic access to the service consumption information. Agencies are now able to access and download their billing detail information in electronic format for use in their agency. The state was able to eliminate and redirect 700 labor hours previously dedicated to answering questions related to the details of customer monthly invoice.

Washington state government spends nearly \$1 billion annually on technology staff, infrastructure, applications, maintenance, and operations. Now state leaders have insight into the state's technology expenditures, how technology supports agency services, and the value of technology at an enterprise level.