Office of the Washington State Auditor
Pat McCarthy

Performance Audit

Ensuring transparent pricing and customer-focused IT services at WaTech

September 25, 2017

To help state agencies maximize the value of their information technology investments, in 2015, the Legislature consolidated two other state functions into the agency Consolidated Technology Services (CTS). CTS branded itself as Washington Technology Solutions (WaTech), and serves as the state's central provider and procurer of technology products and services.

Although WaTech has been making efforts to improve the services it provides to its customers, more work needs to be done. Most of the agencies interviewed for this performance audit said WaTech's services do not meet their needs. WaTech has methods to gather service requirements, but these agencies said it does not incorporate customer input into the services. Agencies also took issue with WaTech's pricing, saying its rates were not transparent or competitive. Adding to concerns of WaTech's pricing is the fact that 11 out of WaTech's 20 business centers are not recovering costs, including several with million dollar deficits. However, WaTech projected it will balance its budget agency-wide for fiscal year 2017.

Prior to the audit, WaTech conducted a customer satisfaction survey, revealing similar issues found in the audit, and has been making improvements to address agency concerns. For example, WaTech has been meeting with customers to ensure they get the necessary billing information from WaTech systems. WaTech also included agency representatives in its latest vendor evaluations to ensure agency needs were met.

We recommend WaTech continue to work with customers to ensure their feedback is considered and that they have the pricing information needed to make informed decisions. We also recommend WaTech consider sustainability, cost and agency needs when reviewing services to determine whether to maintain them.

Report Number: 1019874

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Executive Summary

Governments increasingly rely on information technology (IT) to operate efficiently and effectively. However, technology does not automatically improve government operations; governments still need to use technology wisely to ensure they receive the best value for their constituents. To help state agencies maximize the value of their IT investments, in 2015 the Washington Legislature consolidated three entities into one: Consolidated Technology Services, commonly known as Washington Technology Solutions (WaTech). The agency serves as the state's central provider and procurer of technology products and services. Governor Inslee stated that the consolidation would unify Washington's IT vision and allow quicker adoption of leading IT practices, as well as provide more value and fast service for less cost, including lower administrative costs.

Both state law and WaTech's own policies require it to offer high-quality services that meet agency needs, be self-sustaining, and be competitive with the private sector. State law and policy only require agencies use some of WaTech's services. Many other services are optional, so it is important that WaTech offer good customer service and pricing to attract and retain customers.

However, a number of customer agencies have reported concerns to the Legislature, Governor's Office and the Office of the State Auditor about WaTech's services, including issues with customer service, the cost and quality of services, and pricing transparency. In addition, many of WaTech's services have been operating at significant deficits. The agency's budgetary problems have been compounded by the state's purchase in 2009 of a $300 million office building, which increased overhead, and data center, which increased operational costs.

Because of these concerns, our Office chose to conduct a performance audit of WaTech. The audit focused on WaTech's service offerings and its processes for gathering and incorporating customer input, making prices transparent, and monitoring service costs. Audit methodology involved interviews and data collection from 13 of about 100 customer state agencies. Purchases from these 13 agencies represent almost 71 percent of WaTech's monthly revenue.

WaTech has methods to solicit feedback, but some agencies say WaTech does not act on their feedback

WaTech has established several venues where customers can provide feedback, including monthly forums and quarterly meetings open to any customer. WaTech's advisory council and executive board also include agency representatives. In addition, WaTech began an annual survey in March 2016 where customers can provide feedback. WaTech also employs customer account managers to serve as the primary contacts for agencies.

However, customers said they do not believe WaTech consistently uses these venues to gather input. While agencies interviewed understood they could discuss problems with account managers, most did not think their concerns were addressed. Agencies also said WaTech imparts information at the meetings and forums, but does not gather feedback. This contributed to WaTech offering services that do not meet agency needs.

For example, several agencies said WaTech implemented a new security service without seeking any customer input on their service needs. The service did not meet customer needs, and WaTech was compelled to search for another product shortly after implementation. WaTech is making improvements to ensure customer feedback is incorporated into the new service, such as involving customer agency representatives in the procurement process. However, due to lack of funding, WaTech said it may cease efforts to find a replacement and stop offering the security service.

WaTech is working to provide greater price transparency, but more changes are needed

State agencies need sufficient information about their WaTech IT expenditures to be able to make informed management decisions about maintaining or purchasing new services and to confirm service charges. Several customer agencies described the cost and rate information provided by WaTech as insufficient to make informed decisions about IT purchases. Agencies also want easier access to detailed billing information. One agency said it was necessary to use both electronic and hard-copy invoices to adequately track and allocate charges across divisions. Another agency said it had to develop its own systems and databases to match invoices from WaTech with specific divisions of the agency, resulting in additional staff hours at the agency dedicated to managing WaTech billing.

WaTech managers said they inherited many service rates from the consolidation in 2015 that lacked clear explanation of how the rates were developed. This has prevented the agency from fully understanding and disclosing the cost components of the rates.

In response to these issues, WaTech is updating internal processes to provide customers with greater transparency. WaTech has been meeting with agencies to help them obtain the information needed from WaTech billing systems, and has developed a document to help explain the allocation process to customers. WaTech is also training employees so they can better answer customer questions about invoices.

WaTech monitors costs and has strategies for improving service quality, but could not demonstrate it offers all services at competitive prices

State law and policies require that WaTech offer high-quality services that meet agency needs, be self-sustaining, and be competitive with the private sector. WaTech faces obstacles to meeting each of these requirements.

For fiscal year 2017, WaTech projected it will balance its budget, but it still faces challenges. Fewer than half of WaTech's business centers are recovering costs. WaTech managers made some plans to reduce costs and increase revenue, but have no immediate solutions to recover the costs of some services that are operating with the highest deficits.

Some budgetary problems will be difficult to resolve and may be out of WaTech's control. These include the office building, which has increased WaTech's overhead, the operations of the State Data Center and the state's reliance on the mainframe – an outdated piece of equipment that hosts several legacy software systems and costs millions of dollars to run. Replacing the mainframe would require an expensive phasing out of the legacy software.

WaTech has compared the cost of some services to the private market, but not all. Without these comparisons, it is difficult for WaTech to determine price competitiveness. Managers say comparisons are not always possible because they have difficulty finding comparable private IT services.

The agency has developed some strategies to improve service quality and attract more customers to help recover costs, and plans to evaluate services to determine what it can offer at an equal value to the private sector. Our recommendations can help WaTech further improve customer service practices, develop and sustain competitive and transparent pricing, and make progress toward its goal of financial sustainability.

Recommendations

We recommend WaTech:

1. Work with customer agencies to determine how best to gather comments and feedback when implementing IT services.
2. Strengthen existing processes to ensure customer comment and feedback is considered as the agency develops, purchases and provides IT services. If customer suggestions are not incorporated, communicate the reasons why.
3. Ensure the cost components that make up service rates are readily available to customers.
4. Provide clarity to customers on what is included in allocated costs and services.
5. Continue meeting with customers to ensure they can obtain necessary information from billing reports, and gather input on requirements for a new billing system.
6. Continue to develop plans to recover costs.
7. Periodically compare the cost of services to alternatives that meet customer needs.
8. Periodically review services considering sustainability, cost and agency needs to determine whether the services should be continued.

Introduction

In July 2015, the Legislature reorganized the state's Consolidated Technology Services agency by adding the enterprise application development and support functions of the Department of Enterprise Services and the Office of the Chief Information Officer to its functions and responsibilities. Following the merger, the agency, still officially known as Consolidated Technology Services, rebranded itself as Washington Technology Solutions (WaTech).

Around the same time, the Office of the Washington State Auditor learned many of WaTech's customers had issues with the agency's customer service and the cost and quality of service. WaTech's own customer satisfaction survey in March 2016 revealed similar concerns and others, including problems with price transparency. In addition, many of WaTech's services have been operating at deficits, and budgetary problems have been compounded by the state's purchase in 2009 of a $300 million office building and data center.

Because WaTech is the state's central IT service provider and procurer, with agencies required by law to use some of its services, it is imperative that WaTech is financially sustainable and offering competitively priced services to agencies that meet their needs. Failing to accomplish these goals results in unnecessary spending of public money.

This performance audit focused on WaTech's processes for gathering and incorporating customer input on its service offerings, making prices transparent, and monitoring service costs. Improving these processes could help WaTech attract and retain customers and ensure that its services are meeting customer needs. This could help WaTech improve its financial sustainability and operations while addressing customer agency concerns.

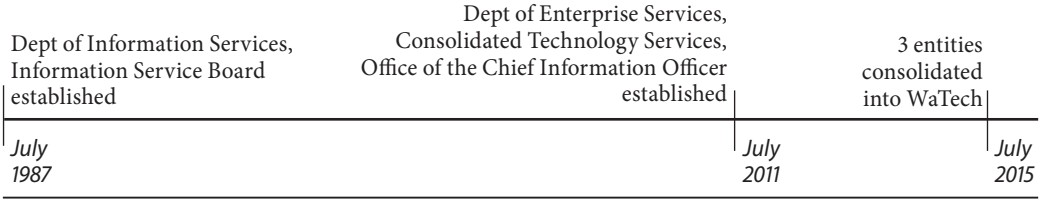
This audit was designed to answer the following questions:

1. How well does WaTech provide IT services to customers?
2. How well does WaTech serve customers in providing price transparency?
3. Is WaTech monitoring costs for IT services and identifying strategies for balancing costs with quality?

Background

In response to Governor Inslee's 2015-2017 budget request, in 2015 the Washington Legislature consolidated the Office of the Chief Information Officer and the enterprise application development and support functions of the Department of Enterprise Services into the Consolidated Technology Services agency. Upon merging, the consolidated agency rebranded itself as Washington Technology Solutions (WaTech). The agency serves as the state's central provider and procurer of technology products and services. The three entities themselves were formed through a separate reorganization just four years earlier, in 2011 (illustrated in **Exhibit 1**).

Exhibit 1 – Washington's information technology agencies, 1987–2015



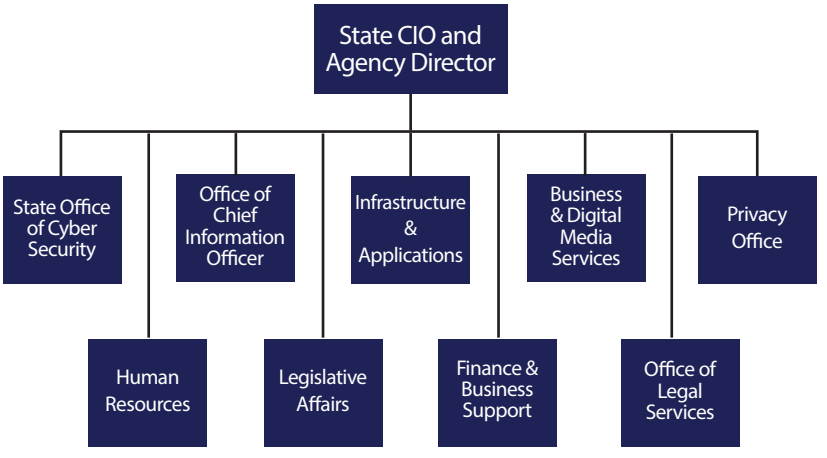
The governor's budget request noted that aligning central IT services in a single agency would optimize the state's ability to coordinate IT policy, infrastructure, services and applications. The governor said that a single streamlined, agile central IT organization would be better able to harness modern technology for the state.

Many states, from Oregon to Maine, have consolidated IT services into central service agencies. According to research by the Government Finance Officers Association, some expected benefits of consolidating IT services include reduced management complexity; ability to deliver more services more quickly; eliminating duplicate data; and smaller physical server and data storage footprints, which can also reduce power and cooling costs. However, there can be challenges: a central authority may have limited understanding of customer's business needs, and can be viewed as unresponsive if it fails to address customer complaints or concerns.

Current structure of WaTech

WaTech's director is the State Chief Information Officer, appointed by the governor to "provide state government with the cohesive structure necessary … to enhance service delivery while capturing savings." In addition to the Office of the Chief Information Officer, which sets statewide IT policy and direction, WaTech's other divisions include IT security and IT infrastructure and applications, among others (WaTech's entire organizational structure is illustrated in **Exhibit 2**). WaTech currently employs around 500 people.

Exhibit 2 – WaTech's organizational structure in 2017



Source: Auditor prepared using information from WaTech.

WaTech bills customer agencies for services primarily through two means: fee-for-service billings and allocations. WaTech uses fee-for-service to bill for services based on the customer's usage, such as email, telephones and virtual private network (VPN). For example, agencies that use WaTech's email service are charged a rate per mailbox used. WaTech works with the Office of Financial Management (OFM) to adjust fee-for-service rates, since any increases could cause customer agencies to seek additional budget resources.

WaTech uses allocations to charge agencies for services that provide general benefit to the state as a whole, regardless of actual use by customer agencies, such as enterprise security services, the state data network, and support for enterprise applications like the Agency Financial Reporting System (AFRS) and the Washington Electronic Business Solutions system (WEBS).

WaTech develops and recommends the methodologies for how to allocate these charges across state agencies, but OFM must approve them during the biennial budget process and can change them if it deems necessary. Generally, an allocation uses a measure related to an agency's benefit from the service – such as the number of full-time equivalent positions (FTEs) or total IT spending – to apportion the total costs of the service. For example, for an allocation that uses FTEs to distribute costs among agencies, an agency that had 1 percent of the state's total FTEs would pay 1 percent of the service's total costs. **Appendix B** provides specific details for four of WaTech's largest allocations.

WaTech provides IT services to about 100 state agencies, as well as more than 200 other government organizations, such as counties, cities and tribes. Managers said many small agencies depend on WaTech services because the agencies do not have the funds or expertise to implement their own IT services.

State Data Center & Office Building

One significant cost that WaTech must cover through service charges and allocations is the building that houses both the headquarters and the State Data Center in Olympia. The Legislature first authorized the Department of Information Services to build the facility that houses the data center in 2007, and gave further authorization to build the data center in 2009. The State Data Center includes four halls, two of which are currently operating as data centers. WaTech and the Department of Enterprise Services occupy the building's office space.

With the goal of reducing overall state IT costs, state law requires state agencies to move all servers off agency premises. The Office of the Chief Information Officer's (OCIO) policy is for all agencies to complete migration to the data center or use cloud-based services by June 30, 2019, although it has granted some agencies waivers to develop migration plans that will exceed the deadline. As of December 2016, 34 agencies had relocated their servers to the State Data Center, with another 16 set to migrate by June 30, 2019. Three agencies are planning to use private vendors and another 25 agencies have been granted waivers. WaTech estimates that it will spend $1.1 million from fiscal year 2018 through fiscal year 2021 to coordinate agencies' migration to the data center. However, in an April 2017 update for Governor Inslee and the Legislature, WaTech noted that even if all state agencies migrate to the data center, data center rates would need to be 26 percent higher to break even on the expense of running the facility.

One of WaTech's operational data center halls

When the building was constructed, state officials expected all four data halls would eventually be needed to accommodate future growth in data storage needs, based on a consultant's pre-design report. However, as technology has changed, WaTech has determined that even when migration to the data center is complete, the state will need only two of the halls. The other two halls remain undeveloped. Even if they were put into use, it would take significant investment to make them operational as data centers.

WaTech has considered other ways to raise revenue by exploring possible uses for the two empty halls, ranging from a lease to Amazon Web Services, to a traffic-monitoring center for the Department of Transportation, to an office furniture warehouse for the Department of Enterprise Services. However, none of these ideas proved feasible because of cost and security issues. The two halls are shell space and do not meaningfully affect the cost of operating the data center. They are not a cost drain; they merely represent lost potential revenue.

One of the unfinished data halls

WaTech services

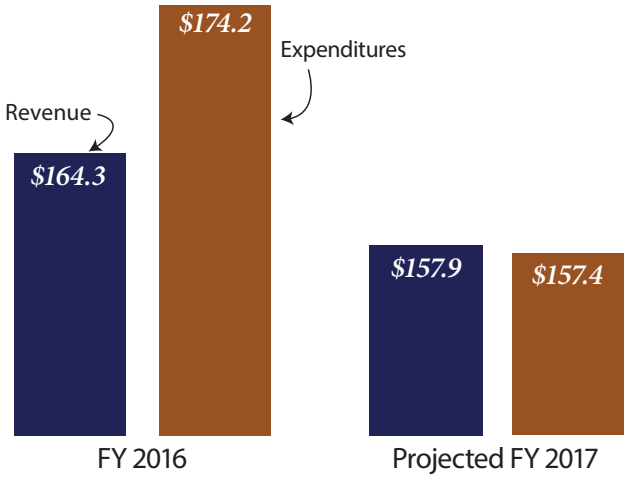
The law requires state agencies to migrate agency servers to the State Data Center or use cloud-based services. Many agencies are also required to pay allocations, such as the allocation used to finance the data center, even if the agency's servers are not housed in the facility. Many of WaTech's other services are optional. However, OCIO – a division of WaTech – can require agencies to use its services for major IT projects if doing so "would benefit the state as an enterprise." OCIO also reviews and ranks IT funding requests to the Legislature, even those requests for IT services outside of WaTech. Because low-ranked projects are unlikely to receive funding, OCIO has the ability to influence agency funding for private vendors. Because of this, some agencies feel obligated to use WaTech services. However, WaTech managers said that use of WaTech services is not part of the criteria in the ranking process.

Operating budget

With OFM's approval, WaTech operated at a cash deficit following the consolidation in 2015. As shown in **Exhibit 3**, in fiscal year 2016, WaTech had a $9.9 million deficit. However, for fiscal year 2017, WaTech projected it will balance its budget due to several spending reductions.

Exhibit 3 – WaTech projected it will balance its budget in fiscal year 2017

Dollars in millions

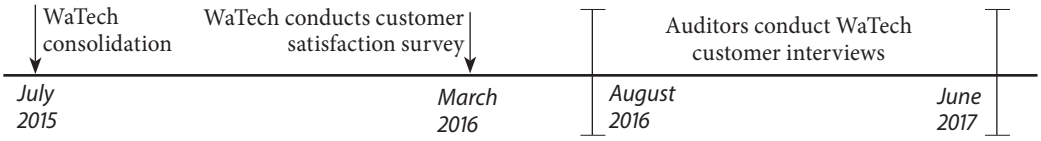


Source: Auditor prepared using data from WaTech.

Scope & Methodology

During the course of the audit, we interviewed 13 out of around 100 state agencies of varying sizes between August 2016 and June 2017 in an effort to gain an understanding of their interactions with WaTech, identify their concerns and review any price comparison studies they completed. Purchases from these 13 agencies represent almost 71 percent of WaTech's monthly revenue. Nine agencies were extensively interviewed during the audit, including some who expressed concerns to our Office in 2015 and others that were referred to us. Four additional agencies were asked about price comparison studies because they were using services outside of WaTech or had recently started using a WaTech service. The timeline for the work performed is shown in **Exhibit 4**.

Exhibit 4 – Audit data timeline, July 2015 – June 2017



Approaches to address audit questions

How well does WaTech provide IT services to customers?

To evaluate customer service, we determined the most important area to focus on was whether WaTech communicates with customers to determine service needs, and if so, whether feedback is taken into account. We reviewed how WaTech solicits and incorporates customer feedback into the IT services WaTech provides, and the processes for determining whether customers are satisfied with these services. We reviewed applicable state laws and policies requiring WaTech to incorporate customer needs into service offerings, as well as relevant leading practices from the National Association of State Chief Information Officers (NASCIO).

Agencies were interviewed to gain perspective on WaTech practices for soliciting and incorporating feedback. WaTech staff and managers were interviewed to gain an understanding of policies and procedures surrounding customer feedback, and relevant documentation was reviewed.

Five agencies familiar with one of WaTech's security services – a vulnerability scanner that assesses computers, networks and applications for weaknesses – were interviewed again. We wanted to gain a deeper understanding of agency needs for the service and whether WaTech solicited and incorporated feedback. WaTech managers in charge of that service were interviewed to gain perspective.

How well does WaTech serve customers in providing price transparency?

This audit considered applicable state laws to determine WaTech's requirements for price transparency. We also identified leading practices surrounding price transparency from the Government Finance Officers Association, NASCIO, and other states.

Agencies were interviewed to gain perspective on whether WaTech prices were transparent, and we followed up with seven agencies to determine if they believed any changes WaTech was making improved price transparency. WaTech staff and managers were interviewed to gain an understanding of how WaTech provides

customers with important billing information and invoices. A review of allocation data was completed to determine how allocated costs are distributed and charged to various state agencies.

Is WaTech monitoring costs and identifying strategies for balancing cost with quality?

We reviewed relevant state laws and policies surrounding WaTech requirements for budgeting and rate setting. The review was focused on whether WaTech was monitoring the costs of services to determine if the agency is financially sustainable and competitive with the private sector. To determine how WaTech measures quality of services, we interviewed WaTech managers and gained an understanding of WaTech processes for gauging customer satisfaction and meeting agency needs.

We interviewed WaTech staff and managers to gain an understanding of WaTech's processes for monitoring costs, and its processes for considering cost and quality when determining which services to offer or maintain. Applicable financial data was reviewed and analyzed. We also reviewed eight price comparison studies: four completed by WaTech and four completed by customer agencies.

Review of WaTech customer satisfaction survey

In March 2016, WaTech conducted a customer satisfaction survey. The survey results contained information applicable to the audit objectives, such as quality of service and transparency of rates.

Review of financial reports

To determine if WaTech's financial and billing data was reliable, we compared a selection of invoices and reports to data in the Agency Financial Reporting System (AFRS). We verified revenue and expenditure data for fiscal years 2016 and 2017. However, reliability testing for cash balances was limited to a confirmation from the Office of Financial Management of the total beginning cash balance.

Audit performed to standards

This performance audit was conducted under the authority of state law (RCW 43.09.470), approved as Initiative 900 by Washington voters in 2005, and in accordance with Generally Accepted Government Auditing standards (December 2011 revision) issued by the U.S. Government Accountability Office. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. See **Appendix A**, which addresses the I-900 areas covered in the audit.

Next steps

Performance audits of state programs and services are reviewed by the Joint Legislative Audit and Review Committee (JLARC) and/or by other legislative committees whose members wish to consider findings and recommendations on specific topics. Representatives of the State Auditor's Office will review this audit with JLARC's Initiative 900 Subcommittee in Olympia. The public will have the opportunity to comment at this hearing. Please check the JLARC website for the exact date, time, and location (**www.leg.wa.gov/JLARC**). The State Auditor's Office conducts periodic follow-up evaluations to assess the status of recommendations and may conduct follow-up audits at its discretion.

Audit Results

Question 1: How well does WaTech provide IT services to customers?

Answer in brief

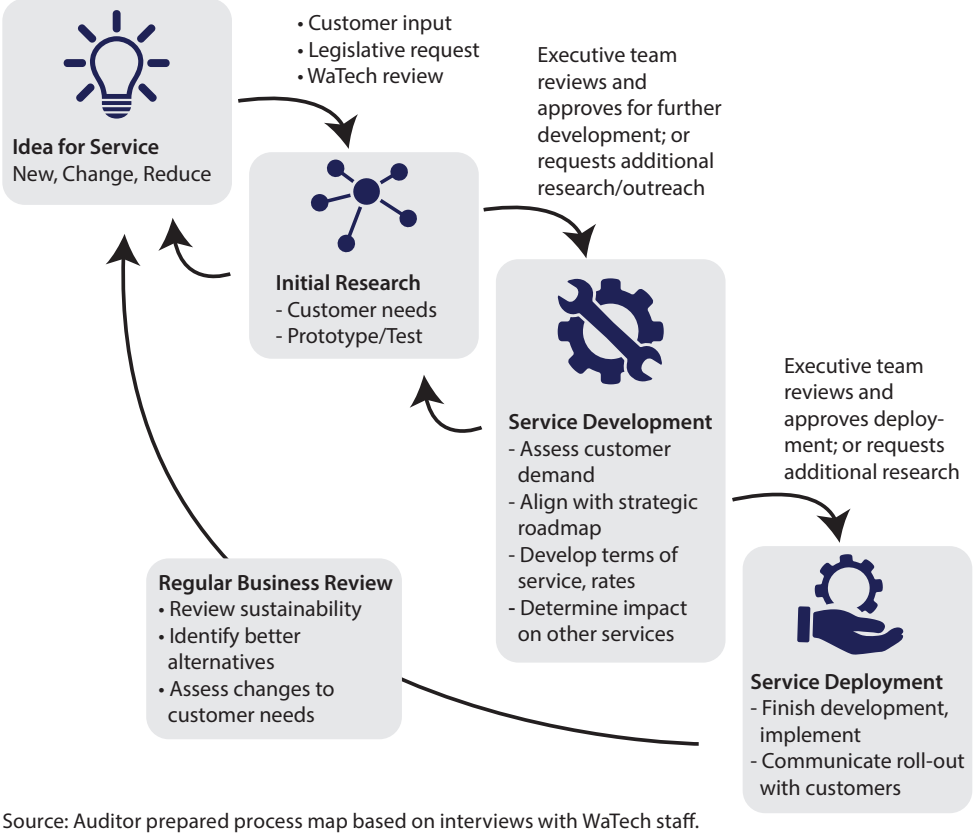
WaTech has several methods to solicit customer comments or feedback on what IT services to provide, including regular group meetings and customer account managers who meet directly with individual agencies. WaTech also uses surveys to measure customer satisfaction. However, some customer agencies believe WaTech does not use these methods effectively or at all. For example, several agencies described a vulnerability scanning service that WaTech replaced without soliciting any comments or feedback. The new service did not meet their needs, and WaTech had to seek another replacement shortly after the first was implemented. WaTech said it is using results from its 2016 customer survey to make improvements that could address many agency concerns.

WaTech has a formalized process to create and adapt IT services and several mechanisms to gather customer input

State law requires WaTech to be accountable to customers and adapt its service catalog to address customer needs. Furthermore, leading practices from the National Association of State Chief Information Officers (NASCIO) recommend that understanding customer IT needs and business activities is an important customer service strategy.

Meetings and dedicated service staff are already part of WaTech's customer comment and feedback strategy. To comply with state law and work toward providing services needed by customers, the formal process WaTech uses to update its catalog of available services includes soliciting customer comments and feedback. One of three actions usually initiate the service-update process: a customer makes a request for a product or service, a WaTech employee identifies a required change in service, or one of WaTech's regular business reviews determines a service change is required. The process has three phases (illustrated in **Exhibit 5**): research, development, and deployment.

Exhibit 5 – WaTech's service development process includes soliciting and incorporating customer feedback



Source: Auditor prepared process map based on interviews with WaTech staff.

Research explores whether the proposed service will meet customer needs. In development, WaTech determines how it can develop and deliver the service. Finally, WaTech executives approve or deny the service for deployment.

WaTech has established a variety of venues where customers can make requests and WaTech can solicit feedback and determine agency needs, including:

Quarterly customer meetings – These meetings are open to all WaTech customers. Meeting topics typically focus on services that are in development or under consideration, service performance measures, rate planning and strategic planning. WaTech develops meeting agendas using customer feedback.

Customer advisory council – The council includes about 15 agency Chief Information Officers (CIOs), representing WaTech's largest customers. The Council helps WaTech develop IT priorities by, among other things, aligning customer agency IT objectives with statewide strategic objectives and recommending priorities for WaTech initiatives and services. Group membership is limited to facilitate discussion; the council generally meets every two months.

Executive board – This group, which includes agency directors, deputies and CIOs, primarily advises the state CIO on policy issues and strategic direction. Meetings are quarterly.

Customer account managers – WaTech account managers are the primary point of contact for customer agencies. They meet regularly with customer agency management to provide updates on the status of service tickets and projects. They also serve as liaisons to the Chief Technology Officer, who is in charge of WaTech's strategic planning, to help ensure that the plan meets customer needs. Four account managers serve around 100 customers.

WaTech also holds periodic meetings with customer agency CIOs, IT managers and staff to discuss policy, regulatory compliance, new technology, legislative changes and project impacts. WaTech uses this venue mainly to provide pertinent information to agency CIOs and IT staff.

In addition to these formal venues, service teams meet with customers as needed or as established by the team. For instance, one manager said his team has quarterly meetings with their customers to provide information on WaTech's strategic direction, to solicit feedback, to provide status updates on individual projects and to explain any changes they are making to services. Another manager said his team telephones customer agencies to solicit feedback and address concerns.

WaTech also uses customer surveys to gather feedback

WaTech measures customer satisfaction to gauge whether its services have incorporated customer feedback and are meeting agency needs and expectations. Current and past tools include:

- **Customer satisfaction survey** – In 2016, WaTech hired a third-party consultant to conduct a telephone survey of customers. The consultant contacted 78 agencies and completed 62 interviews, asking about WaTech services, pricing and communication. The consultant compiled a list of recommendations to address certain issues based on customer responses. WaTech reported it received an overall score of "C+". WaTech plans to conduct another survey in 2018, and then annually.

- **Surveys taken at the end of each IT helpdesk request –** WaTech customers can submit a helpdesk ticket to report problems or make service requests. When WaTech closes a ticket, a survey is automatically sent to the customer who made the request. In addition to scoring their satisfaction with WaTech actions, customers can also provide comments. In the latest performance measures dashboard, WaTech reported that 98 percent of the responses were positive. However, only 13.5 percent of surveys were completed. WaTech also tracks the time taken to close tickets. Managers said they are working to reduce the average time required to resolve incidents and complete requests.

WaTech also plans to meet with every customer agency shortly after they purchase a new service to ensure the service met agency needs and to resolve any issues.

Agencies say WaTech does not consistently gather or implement feedback

Despite WaTech's various venues for gathering customer input to inform service offerings, seven of nine agencies interviewed for this question said WaTech services do not meet their specific needs. Two agencies stated they felt feedback opportunities were limited, and one said WaTech only reserves time at the very end of forums and meetings to hear agency concerns. Another agency said these venues are one-way communication tools that WaTech uses to notify customers of decisions it has already made. Agencies brought up similar issues in WaTech's customer satisfaction survey.

Two of the agencies said the customer account managers are helpful, but others disagreed. Two agencies noted that the information account managers share at meetings could be outlined in an email or found online and another said the managers no longer provide the level of service they once did. While agencies understood they could lodge complaints with account managers, one agency representative said he did not think the information was being communicated to management in a way that could affect WaTech's decisions.

Poor communication results in delays and additional expenses for some agencies

At least five agencies cited one particular incident that involved the launch of a flawed security service, which was representative of agency frustrations. Throughout 2015, agencies said WaTech and its predecessors implemented a vulnerability scanner without first soliciting any comments or feedback from the agencies on service needs. The scanner was included in WaTech's security allocation, which most agencies – including these five – are required to pay. WaTech and other agencies agreed there were issues with the existing scanner, and WaTech believed a replacement was essential.

However, the replacement did not meet these agencies' basic requirements and they reported this to WaTech during initial testing. It did not perform many of the same functions as the original scanner. Two agencies said they purchased products from outside vendors that could run the necessary scans, essentially paying twice for one service. Shortly after implementing the new scanner and receiving a high volume of complaints, WaTech issued a request for proposals (RFP) seeking to replace the scanner that had just been launched.

Agency representatives said this was not an isolated instance and gave other examples where WaTech implemented a service seemingly without considering customer comment, including a multi-factor authentication solution and a security information and event management solution, offered to agencies from 2014 through 2016. One agency IT official said WaTech and its predecessors have solicited feedback from him only once in the four years he has been working for his agency. WaTech's own survey concluded that "all agencies want more inclusion in the processes," and that "they feel as if WaTech makes decisions without agency input."

If WaTech does not solicit and incorporate feedback into the services it offers, these instances could occur more often, wasting time and resources. When WaTech services do not meet agency needs, agencies could be left without critical IT functions. WaTech managers responded to these complaints by saying it is not possible to incorporate all feedback, because agencies may have conflicting needs and WaTech is required to make the best decision on behalf of the state.

WaTech has been making changes to improve customer satisfaction and to solicit and incorporate feedback

WaTech is taking steps to improve processes for gathering and incorporating customer feedback when implementing IT services. The new RFP to replace the vulnerability scanner is an example of change. While the team that selected the flawed scanner did not include any customer representatives, WaTech managers changed their process and reached out to customer agencies for information about their requirements before issuing the new RFP and worked with agencies to review submitted vendor proposals. WaTech also added a pilot phase so customer agencies can verify the scanner does what the vendor says it can.

The RFP for the scanner requires vendors to resolve many of the problems agencies have with the flawed scanner, indicating WaTech did incorporate customer feedback this time. Agency representatives said they believe the RFP adequately reflects their requirements, and one official added that he believes "the right people are in the room" now to make the correct selection. The WaTech RFP specialist said such outreach is common practice for WaTech, but it is not required and is left to the discretion of the service manager. Due to lack of funding, however, WaTech said it may cease efforts to find a replacement and stop offering the vulnerability scanner.

WaTech is making other efforts to ensure customer agencies are engaged. Managers have developed a plan to address the issues and recommendations highlighted in the 2016 satisfaction survey, and meet regularly to review the progress made. They said customer meetings and forums have been modified to schedule time for agency comments and feedback. WaTech also plans to gather customer feedback by issuing surveys specific to particular services, and will build action plans to address concerns. WaTech said it will continue to work on addressing the customer satisfaction survey recommendations and aims to improve the scores in the next survey. See **Appendix C** for a list of the survey findings and recommendations.

Question 2: How well does WaTech serve customers in providing price transparency?

Answer in brief

WaTech does not provide customers and the public with detailed cost information for IT service rates as recommended by leading practices. WaTech customers need more detailed invoice information to make informed business decisions. Although WaTech is improving price transparency, further changes are necessary to provide customers with the information needed to make informed management decisions and confirm service charges.

WaTech could provide greater transparency about how costs affect customer rates

To promote accountability and foster good customer relationships, it is important that the WaTech rate-setting process be transparent and provide clear cost information to customers and the public. Leading practices published by NASCIO encourage states to be open and transparent about how prices are established. In particular, these practices recommend sharing cost analyses with customers. The State Administrative and Accounting Manual also requires WaTech to provide information on how billing rates are developed, including the methodology used to charge service costs to users.

State law requires WaTech to develop a two-year billing rate plan. The most recent plan, for fiscal year 2018, provides some cost information for WaTech business centers. Specifically, it breaks out each business center's operating expenditures and overhead expenditures for fiscal year 2016. However, this information is insufficient to clearly demonstrate how WaTech developed billing rates to cover service costs. The two-year billing rate plan's primary purpose is to demonstrate the need for rate changes to the Office of Financial Management (OFM) and only includes information on rates for which WaTech is requesting changes. Customers need different information on rates and costs.

To provide the information recommended by leading practices, WaTech should publish a full accounting of how service rates were developed, including the costs associated with providing those services. However, WaTech managers said many of the service rates the agency inherited from the consolidation in 2015 lack clear explanations of how they were developed. As a result, staff will need time to reevaluate them and document how the rates were constructed. In its billing rate plan, WaTech acknowledges it will not be able to address all rate issues in a single biennium. WaTech expects to gradually update most of the rate information because it found many rates do not cover all of the services' costs. WaTech managers said they do not want to change all of the rates at the same time, because doing so could raise prices significantly for customers.

Without transparent service costs and rates, customers cannot evaluate the value of services purchased from WaTech. One agency said that because WaTech does not provide detailed cost information, it could not accurately compare the cost of WaTech's IT services to those offered by private vendors. Such opaque pricing risks undermining customer trust that WaTech is offering good value. Furthermore, without clear costs and rates, customers cannot make sound business decisions to control their own costs. For example, officials at another agency described trying to lower their costs for a service WaTech said was charged based on the number

of their servers by eliminating some servers. Despite their efforts, WaTech charges remained the same.

Providing customers with detailed cost information – as the State Administrative and Accounting Manual requires and leading practices recommend – would give greater assurance that WaTech is only charging customers for costs associated with providing a specific service, as well as make it easier to compare WaTech's optional services to private sector alternatives.

WaTech customers need easier access to detailed billing information

Four customer agencies said they spend excessive time verifying the accuracy of bills and associating WaTech charges with specific divisions and employees. One reason for this extra time is that WaTech's official invoices – eStatements – include minimal information. Fee-for-service charges typically include the total charge and the basis: for example, per mailbox or per month. Invoices for allocations typically list only the total monthly charge. For more detailed information on fee-for-service charges, customers must use a separate reporting system, known as Apptio, and run additional reports; no similar resource exists for allocation charges. **Exhibit 6** briefly describes WaTech's billing and reporting systems.

The WaTech billing system is a mix of new and legacy software systems, driven by expediency upon consolidation. For many years, WaTech's predecessor agencies, the Department of Information Services (DIS) and Consolidated Technology Services (CTS), used a system called the Financial Invoicing System (FINS) to generate invoices and customized billing reports for customers. After DIS dissolved, DES managed invoices for itself and CTS. DES later switched to using the Agency Billing System (ABS) and eStatements; the result was two separate systems running simultaneously. WaTech made Apptio available to customers in 2016 to give them access to detailed billing information, but it was rolled out to customers with little testing, training or outreach to ensure they could access the information they needed.

This lack of easily accessible billing information proved frustrating to three agencies, especially in the context of making their own management decisions. One agency said it has had to develop its own systems and databases to verify invoice charges and allocate them across different divisions. Similarly, the CIO at another agency said that because WaTech invoices lack detailed information, identifying and correcting billing errors could take months. IT managers at the third agency said that to adequately track and allocate charges across divisions, they must reconcile WaTech's electronic invoices with highly detailed hard-copy reports.

Six agencies offered specific examples of changes they would like to see WaTech make. If implemented, they said these changes would make WaTech billing information – for both fee-for-service and allocated services – easier to use. Their ideas included:

- Providing a clear explanation of how WaTech calculates the charges on each invoice, in a format that shows the rate per unit, the number and type of units charged, and the total cost.
- Providing a clear explanation of how WaTech determines the per-unit cost for services.
- Providing a clear explanation of how WaTech determines each customer agency's total charge for allocated services.

Exhibit 6 – WaTech uses a mix of legacy and modern billing and reporting systems

eStatements – WaTech's online invoice system. Includes summary-level descriptions of all types of charges (such as fee-for-service, allocation, etc.).

Apptio – Reporting system that provides additional reports for internal and customer use.

Financial Invoicing System (FINS) – Legacy DIS/CTS system for fee-for-service charges. Feeds into Apptio and the ABS system.

Agency Billing System (ABS) – Produces eStatement invoices; also feeds into Agency Financial Reporting System (AFRS).

- Using individual identifiers, such as personnel ID or purchase order numbers, related to invoice charges so agencies can easily allocate their charges internally.

Other state IT agencies provide more detailed billing information to customers. For example, Ohio's Office of Information Technology allows customers to define special codes to help allocate costs across divisions or individuals, which then appear on their invoices (illustrated in **Exhibit 7**). Utah's Department of Technology Services similarly gives customers access to detail-level billing reports that help customers link charges to specific divisions or employees.

Exhibit 7 – Comparing monthly invoices from Ohio's Office of Information Technology and WaTech

OhioDAS Service · Support · Solutions | Office of Information Technology

Intrastate Invoice
OAKS Vendor ID: DAS01
ISTV Cross Reference: DASB

Payable to:
Treasurer of State
DAS Finance – Room 4060
30 E Broad Street,
Columbus, Ohio 43215-3414

DAS - Custom Invoice with Job Number - Detail

Invoice Number: 144P30C39003
Date Range: 3/1/2014 to 3/31/2014

Computer Usage billing questions: Melinda Hurst (614) 644-3149
MARCS billing questions: Deanna Moore (614) 644-0589

OH.DIR.DAS01.00000000.0000.C390.777347

Department of Administrative Services
Attn[redacted]
30 E Broad St., 39th Floor
Columbus, OH 43215

	Units	Rate	Charge
ITS END-USER SUPPORT	59.00	210.0000	12,390.00
ITS END-USER LIMITED USE CONTRACTORS	434.00	135.0000	58,590.00
INFORMATION TECHNOLOGY SERVICES			**70,980.00**

Total for: OH.DIR.DAS01.00000000.0000.C390.777347 **70,980.00**
Invoice Total **70,980.00**

State	Type	Agency	Non-Agency Client	Aggregation	Customer ID	Job Number
OH	DIR	DAS01	0000000	0000	C390	777347

Invoices from Ohio contain customized codes and job numbers, service rates, and usage amounts

For billing and payment questions: WaTech Support Center
phone: (360) 586-1000
email: support@watech.wa.gov

Remit to: Consolidated Technology Services
CTS Finance
PO Box 41504
Olympia WA 98504-1504

Payment Information: Agency: 163 Federal Tax Id:

Fund	Statewide Vendor #	Amount
		$10,497.07

Please Indicate Invoice/Credit Memo Numbers on Payment Document or Return Top Portion With Payment

	Item Code	Item Description	Reference Number	Unit	Total
1	3321	SWITCHED LD OUTSIDE WA STATE	SCAN00	MINUTE	$26.62
2	3321	SWITCHED LD IN STATE	SCAN00	MINUTE	$8.60
3	3321	SWITCHED LD CANADIAN	SCAN00	MINUTE	$0.40
4	3331	WEB MEETING CENTER CONFERENCE	CENT00	DETAIL	$35.00
5	3341	CENTRAL OFFICE - OLYMPIA	CENT00	DETAIL	$24.00

WaTech's invoices only list the amounts charged, not the rate or usage

Sources: Ohio Department of Administrative Services, Office of Information Technology website and WaTech's e-Statements.

WaTech has been making improvements to increase price transparency

WaTech recognizes that customers should be able to understand how service rates are established and have access to accurate billing information. To this end, and in response to its 2016 customer survey, it is making changes to provide customers with more transparent pricing.

WaTech plans to develop a new billing system that incorporates customer feedback

WaTech plans to consolidate existing systems into a single system that would streamline and simplify the billing process. One WaTech manager said the agency has started gathering customer requirements for the replacement system. However, replacing the billing system will require an appropriation from the Legislature and could take several years to develop and implement.

WaTech is making other improvements to be more transparent

In the meantime, WaTech customers still need easier access to detailed billing information using existing systems. As a result, the agency began updating existing internal processes. WaTech's billing manager has been meeting quarterly with customer agencies to help provide the information they need out of Apptio and learn what additional information agencies need to make management decisions. The billing manager also redesigned some of the reports in Apptio to provide more accessible information. Some agencies acknowledged these efforts, including IT managers at one agency who said that access to Apptio had been very helpful in allowing them to create useful reports and see month-to-month trends.

WaTech is also improving the overall billing process to make even more information available to customers. For example, since the customer survey found that inconsistency in the online service catalog confused customers, WaTech is revising the catalog to make references to services more consistent across invoices, the website and internal documents. WaTech has added information to the website about allocated services, another area that many customers said lacked transparency. Finally, WaTech trained customer account managers on the invoice systems so they can better answer customer questions.

Question 3: Is WaTech monitoring costs for IT services and identifying strategies for balancing costs with quality?

Answer in brief

WaTech is analyzing and employing several options to recover costs, including bundling services, reducing prices for some services to attract more customers, increasing rates for other services to recover costs and ending services that are not sustainable. However, the agency has struggled to balance its budget, in part due to factors out of its control, such as the state's reliance on the mainframe. WaTech's own monitoring efforts revealed 11 of 20 business centers operate at deficits.

WaTech uses several tools to gauge customer satisfaction as a way to measure quality. A customer survey found many agencies think the costs of services are too high and do not consistently meet customer needs. WaTech managers said they regularly look at changing technology, the agency's strategic direction, and the financial situation of each service. However, comparing the cost of services to the private sector is not always a part of their review.

WaTech reports many services are not fully supported by their rates

WaTech and OFM policies require WaTech services to be self-sustaining. Leading practices from the Government Finance Officers Association support these policies, stating rates should be set to recover costs.

WaTech monitors spending using monthly reports that compare service revenues and expenditures. However, as shown in **Exhibit 8** (on following page), 11 of 20 business centers that provide services to agencies were operating at deficits in 2017, contrary to state policies and leading practices. In 2016, WaTech hired a rates analyst to review the rates of all services and is analyzing options to recover costs for some. These options include bundling services, reducing rates for some services to attract more customers, increasing rates for other services to recover costs and ending services that are not sustainable. WaTech managers added that ending unsustainable services generates its own problems as it may take a significant amount of time for agencies to find replacements.

Exhibit 8 – More than half of WaTech's business centers are not cost recoverable

Fiscal year 2017 amounts projected by WaTech

	Fiscal year 2016			Fiscal year 2017		
Business centers	Revenues	Expenditures	Difference	Revenues	Expenditures	Difference
Cyber Security*	–	–	–	$1,288,645	$4,171,942	($2,883,297)
Data Center	$4,485,599	$7,181,658	($2,696,058)	$4,066,455	$6,795,664	($2,729,209)
Server Hosting	$4,306,954	$6,851,478	($2,544,524)	$4,614,194	$6,941,800	($2,327,606)
Messaging	$6,050,150	$6,747,961	($697,811)	$6,559,459	$7,075,219	($515,761)
Other E-Gov	$27,028	$771,980	($744,952)	$280,164	$691,268	($411,104)
Mainframe	$17,059,602	$17,442,100	($382,497)	$13,827,487	$14,000,226	($172,740)
Content Management	$913,797	$1,084,589	($170,792)	$921,721	$1,088,402	($166,680)
Disaster Recovery	$1,067,536	$1,293,089	($225,554)	$435,101	$565,183	($130,082)
WABOS/Access WA	$1,539,961	$1,561,776	($21,816)	$1,530,921	$1,611,447	($80,525)
Phone	$20,169,653	$21,230,089	($1,060,436)	$20,572,672	$20,643,271	($70,599)
Forensics*	–	–	–	$31,769	$65,683	($33,914)
Jindex, TLA	$415,800	$355,830	$59,970	$365,939	$364,810	$1,129
CSD Other (includes Wireless, Remote Access)	$342,667	$936,370	($593,703)	$1,497,798	$1,449,152	$48,645
Geospatial Portal, WAMAS	$356,499	$260,093	$96,406	$396,213	$341,471	$54,742
Web Platform	$11,000	$0	$11,000	$283,334	$79,251	$204,083
Desktop & Network, Applications	$8,141,215	$7,658,246	$482,968	$7,617,921	$6,925,531	$692,390
Enterprise Storage Management	$3,608,520	$3,338,326	$270,195	$3,698,318	$2,781,580	$916,738
Enterprise Solutions, SWV Unit, Warrants	$37,392,994	$38,122,341	($729,346)	$32,461,152	$31,442,381	$1,018,771
CSD Security*	–	–	–	$3,382,521	$2,251,107	$1,131,414
Data Network	$23,239,132	$21,754,385	$1,484,747	$24,678,841	$20,988,307	$3,690,534

*Notes: * These business centers were not established in 2016. Negative amounts shown in red (parentheses).*

Source: Auditor prepared using data supplied by WaTech.

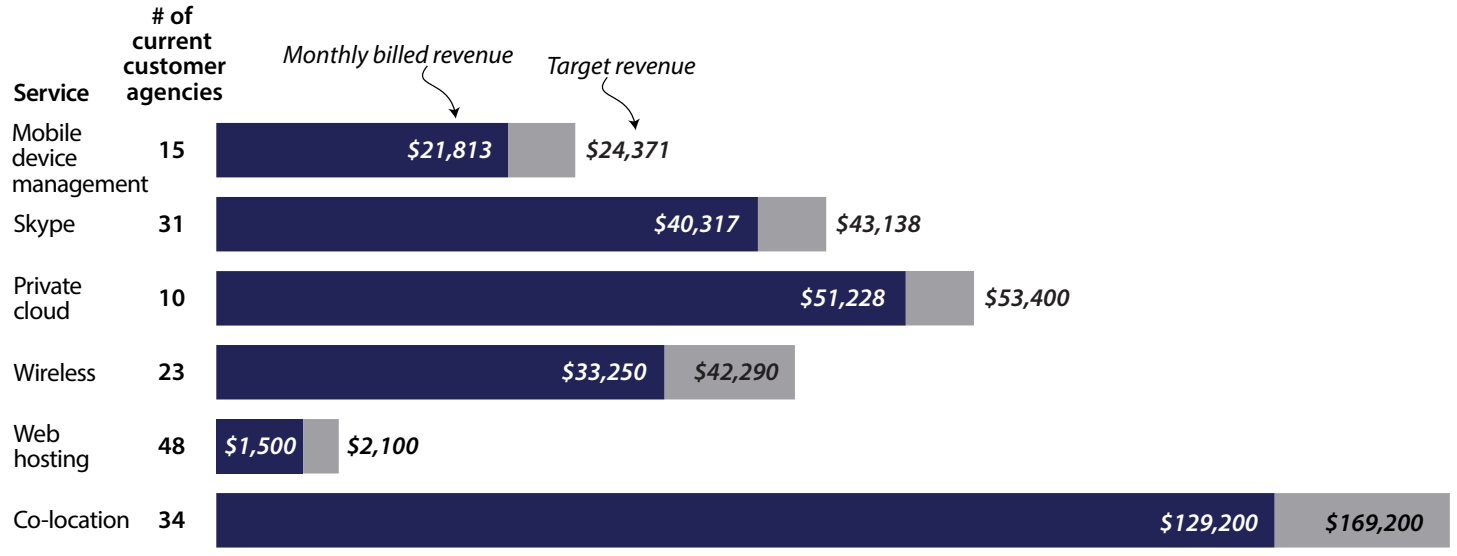
Three service areas are operating at million-dollar deficits, putting WaTech's financial sustainability at risk. For example, WaTech's server hosting program is currently more than $2 million over budget. WaTech said it did not get as many customers for its server hosting services as expected. However, the agency has made investments in a private cloud service in hopes of attracting new customers. WaTech decreased private cloud rates to compete with the private sector. WaTech also stated it does not charge agencies to download data from the cloud as private vendors do, which could lead to cost savings for agencies.

WaTech is working to improve its financial position, but some budget items will be difficult to resolve

WaTech has set a goal of increasing revenue for a number of other fee-for-services by attracting more customers, as shown in **Exhibit 9**. Washington has about 100 state agencies, representing more than 63,000 workers, so WaTech has opportunities to expand its customer base and increase revenue. For example, WaTech's Skype for Business service currently has only about 12,000 user accounts from 31 agencies, but as teleworking becomes more popular for state workers, WaTech has the potential to attract more users.

Exhibit 9 – WaTech aims to increase revenue by attracting more customers

Targets set for summer 2017



Source: WaTech's 2017 Quarter 2 Dashboard.

The business division with the largest deficit is the cyber-security program, operating at $2.8 million over budget in fiscal year 2017. The program funds WaTech's Office of Cyber Security. Managers said the Office does not have a direct funding source. For the 2017-2019 biennium, OFM approved, and the Legislature granted, a new allocation to fund the Office.

In addition, WaTech said it inherited many services that were operating at deficits prior to the consolidation in July 2015, as shown in **Exhibit 10** on the following page. At the end of fiscal year 2017, WaTech reported the data network service had a negative cash balance of $7.1 million; the agency has been slowly decreasing that balance. Managers said that due to a reduction in rates in 2012, WaTech was not collecting enough revenue to cover the cost of the data network. However, the agency switched to an allocation model beginning in 2015, which allowed them to reduce the negative cash balance.

The Office of Cyber Security was set up in 2015, at the time WaTech was established, to help protect the state against cyber threats to privacy, infrastructure and the economy.

Exhibit 10 – Many WaTech services operated at deficits prior to consolidation in 2015

Fiscal year 2017 amounts projected by WaTech

Business centers	Beginning cash balance	2016 difference	2017 difference	Ending cash balance
Data Network	($12,311,999)	$1,484,747	$3,690,534	($7,136,718)
Data Center	($2,770,068)	($2,696,058)	($2,729,209)	($8,195,335)
Enterprise Storage Management	($2,665,604)	$270,195	$916,738	($1,478,671)
Mainframe	($2,517,043)	($382,497)	($172,740)	($3,072,280)
Desktop & Network, Applications	($1,861,856)	$482,968	$692,390	($686,498)
Server Hosting	($1,315,224)	($2,544,524)	($2,327,606)	($6,187,354)
Messaging	($1,018,604)	($697,811)	($515,761)	($2,232,175)
CSD Other (includes Wireless, Remote Access)	($801,429)	($593,703)	$48,645	($1,346,486)
Phone	($336,834)	($1,060,436)	($70,599)	($1,467,869)
Geospatial Portal, WAMAS	($63,252)	$96,406	$54,742	$87,897
Jindex, TLA	($12,912)	$59,970	$1,129	$48,186
Other E-Gov	$0	($744,952)	($411,104)	($1,156,056)
Web Platform	$0	$11,000	$204,083	$215,083
Disaster Recovery	$50,067	($225,554)	($130,082)	($305,569)
Content Management	$363,472	($170,792)	($166,680)	$26,000
WABOS/Access WA	$375,028	($21,816)	($80,525)	$272,687
Enterprise Solutions, SWV Unit, Warrants	$5,849,468	($729,346)	$1,018,771	$6,138,893
Cyber Security*	–	–	($2,883,297)	($2,883,297)
Forensics*	–	–	($33,914)	($33,914)
CSD Security*	–	–	$1,131,414	$1,131,414

** These business centers were not established in 2016.*
Notes: Data verification was limited; see Scope & Methodology for details. Negative amounts shown in red (parentheses).

Source: Auditor prepared using data supplied by WaTech.

WaTech does not have immediate solutions to address sustainability for two other services that are losing the most money and make up a significant portion of the deficit – the mainframe and the State Data Center. As technology has improved, the mainframe has become costly and obsolete, and agencies have been steadily removing their systems. However, a dozen agencies continue to use it. Only some of those agencies have plans to transfer or replace the dozens of systems that still run on the mainframe.

Some of those systems are critical to state operations, including the Agency Financial Reporting System (AFRS), which WaTech and most other state agencies use for financial information. Until every agency moves off the mainframe, WaTech must continue to operate the costly service and will operate at a deficit unless rates are increased. WaTech engaged a third-party earlier this year to assess options for the mainframe and help develop a strategic direction.

Changing technology, such as smaller servers and the use of virtual machines and cloud computing, will leave the data center underused. WaTech has reported that even if every state agency moved their remaining servers into it as required by law, the two empty halls would remain empty and the center would still be running at a deficit. With OFM's approval, WaTech would need to raise data center rates by 26 percent to recover operating costs.

In 2013, the State Auditor published an audit report examining issues around the state's aging financial management systems, including AFRS. Read "Creating a 21st-century Financial Management System in Washington" online at:

www.sao.wa.gov/state/Documents/PA_ Financial_Management_ar1009673.pdf

One issue is particularly difficult to solve

One issue already mentioned in this report bears heavily on WaTech's budget problems. Many WaTech rates were developed years ago. WaTech managers pointed out that contract and overhead costs, such as its facility and salaries, have risen, but rates have not. This contributes to WaTech's deficit. Managers also said increasing rates would take considerable planning and collaboration with OFM to ensure agencies have sufficient funding to pay higher rates.

WaTech has strategies to improve the quality of service while reducing costs

Simply raising rates to balance funds may not be beneficial to WaTech as it may drive away potential or current customers, many of whom already view WaTech's services as too expensive. In 2016, OFM asked WaTech to identify spending cuts it could make to help reduce its deficit. WaTech proposed $9.8 million in deferred expenditures and other savings. OFM reviewed the proposed savings and selected $5.4 million in reductions that WaTech could implement immediately, including holding a number of positions vacant and deferring upgrades and maintenance for equipment. Because of these cuts and other savings, WaTech projected its cash deficit will end for fiscal year 2017. However, many of its services are still operating over budget. Those individual deficits will continue to rise year after year until WaTech can collect more revenue than it spends for each service.

In addition to the $5.4 million in cuts selected and mandated by OFM, WaTech managers shared several strategies to reduce the costs of services while improving quality. Although there are multiple ways of measuring quality, this audit focused on only one important aspect: customer perception. For this audit, quality services are defined as those meeting agency needs. As described earlier, customers have stated WaTech's services do not consistently meet their requirements. However, WaTech is making some changes to services to meet customer expectations. In the 2016 customer satisfaction survey, agencies stated they wanted upgraded technology and lower prices. Three WaTech service managers described the actions they are taking to address agency needs.

- **Telephone Services** is in the process of converting from traditional technology to the cheaper voice-over-internet protocol (VoIP), which uses internet connections to make calls. WaTech does not expect all agency phones to be VoIP capable until 2024, and acknowledges that even though VoIP has fewer startup costs than traditional technology, agencies will need to make their own equipment and infrastructure investments.
- **Email Services** has invested in the newest exchange server, which will allow WaTech to transition to cloud-based email services. This manager said cloud-based email will eventually be cheaper than email hosted on WaTech's premises, and the agency will be ready to make the switch with the new server. Five agencies specifically mentioned a desire to use cloud-based services.
- **Data Network Services** has been upgrading equipment, infrastructure and circuits for faster and cheaper connections. WaTech has been promoting the use of circuits that could be shared by multiple agencies at the same site rather than having each agency purchase individual circuits. WaTech has also been migrating away from old transport and connectivity technology such as DSL to newer technologies such as Ethernet and others, which increases capacity and reduces costs. One agency brought up the cost of the data network as a major concern.

WaTech could not demonstrate it is offering all services at competitive prices

Even if all of WaTech's services met agency needs, it still needs to ensure prices are competitive in order to attract and retain customers, especially since the cost of WaTech's services was a major concern expressed by agencies. State law requires WaTech offer high quality services at the lowest possible price, but WaTech could not demonstrate that it is offering services at the best value. WaTech's own policy requires it to be competitive with the private sector, but managers said that although they regularly review their services looking at changing technology, their strategic direction, and financial situations, comparing the cost of their services to the private sector is not consistently part of their review.

As a result, pricing comparisons are not routine. WaTech has a process in place to complete price comparison reviews for new services, but only some managers have completed price comparison reviews for existing services. Existing services where price comparisons have been completed include listserv, private cloud, central office telephones, and the data center.

For the listserv, WaTech found its prices to be, on average, more than double those of the lowest priced vendor. The manager of the service recommended ending it and outsourcing to the private sector. For its private cloud, WaTech actually lowered its prices to be more competitive with the private sector and attract more customers.

For the two other price comparisons, central office telephones and data centers, WaTech found its prices were cheaper than private vendors, and managers have recommended increasing prices to help recover costs. However, WaTech's conclusion that its data center prices are cheaper than private vendors is questionable. The review did not include the cost of the state facility in WaTech's rates. Vendor rates likely include the cost of their facilities. While the State Data Center is paid by customer agencies through a separate allocation, including the cost of the building in the price review may reveal data center prices to be higher than what is available in the private market. The private vendors also offer variable pricing, where the per unit cost goes down as more server space is purchased. WaTech does not provide a similar option.

WaTech offers dozens of other services that it has not yet compared to the private sector. WaTech managers offered several reasons for this. One said he could not find comparable private IT services to compare his prices to; another said that since agencies are not required to use some of their services, the sheer fact that WaTech has customers shows its prices are competitive. Without price comparison reviews, WaTech cannot fully demonstrate it is offering customer agencies the best value, and the state may be paying more for IT services than necessary.

Seven of the nine agencies interviewed do not believe WaTech prices are competitive and may be less likely to purchase WaTech's optional services. Two agencies said it seems that WaTech often provides more features in services than what agencies actually need in order to justify charging higher prices. Three agencies brought up purchasing Microsoft Office 365 outside of WaTech as a way of saving money. This cloud-based subscription service offers the normal Microsoft Office suite plus SharePoint, email, and Skype for Business. WaTech offers SharePoint, email and Skype as separately charged services: agencies must pay to upgrade the Office suite at their discretion. WaTech managers said they plan to offer Office 365 in the future.

A few customer agencies have completed their own pricing reviews. Since WaTech charges agencies for data center operations based on their servers' power usage, one agency compared its estimated monthly data center bill to its current electricity bill. The customer found that the data center bill would be more than the cost to power its own data center and entire office building. Another agency provided documentation showing the monthly cost to house servers would increase from under $2,000 to more than $16,000 after it moves to the data center. WaTech's price, however, includes server backups in another facility, which the agency currently does not have. A third agency found that using a private vendor's cloud service would be about 9 percent more expensive than moving servers to the State Data Center, but the agency chose the vendor because it had more confidence in the vendor's level of service.

WaTech is planning to evaluate its services to determine what it can offer at an equal value to the private sector. Monitoring the costs of services and ensuring they are sustainable, competitive with the private sector, and meet agency needs will be vital to WaTech's success.

Conclusion

WaTech needs to ensure it solicits and incorporates customer comment and feedback into IT services, and check with customers to determine if they are satisfied with the services.

Increasing pricing transparency will provide customers the information they need to make decisions on which services to purchase and could build trust between WaTech and the agencies.

Reviewing services to determine which meet agency needs, are sustainable, and competitively priced could help inform WaTech on which services to offer and maintain. It also must continue to create plans to become cost recoverable where feasible while keeping the prices of services competitive with the private sector. Doing this could also reduce costs and attract customers. However, without additional review, we cannot determine if the steps WaTech is taking will lead to long-term financial sustainability.

Recommendations

We recommend WaTech:

1. Work with customer agencies to determine how best to gather comments and feedback when implementing IT services.
2. Strengthen existing processes to ensure customer comment and feedback is considered as the agency develops, purchases and provides IT services. If customer suggestions are not incorporated, communicate the reasons why.
3. Ensure the cost components that make up service rates are readily available to customers.
4. Provide clarity to customers on what is included in allocated costs and services.
5. Continue meeting with customers to ensure they can obtain necessary information from billing reports, and gather input on requirements for a new billing system.
6. Continue to develop plans to recover costs.
7. Periodically compare the cost of services to alternatives that meet customer needs.
8. Periodically review services considering sustainability, cost and agency needs to determine whether the services should be continued.

Agency Response

STATE OF WASHINGTON

September 20, 2017

The Honorable Pat McCarthy
Washington State Auditor
P.O. Box 40021
Olympia, WA 98504-0021

Dear Auditor McCarthy:

Thank you for the opportunity to review and respond to the State Auditor's Office (SAO) performance audit report on IT services provided by Washington Technology Solutions (WaTech). We worked with the Office of Financial Management to provide this response.

In 2015, the Legislature expanded the Consolidated Technology Services agency — commonly known as Washington Technology Solutions — to establish a central IT organization that enables public agencies to improve services for the people of Washington through technology. Our more than 300 customers include state agencies and county, city and tribal governments, as well as nonprofits.

The Legislature created WaTech to include two separate, but related responsibilities:

1. WaTech Operations maintains the state's core technology infrastructure, including the central network, data center and enterprise applications.
2. The Office of the Chief Information Officer (OCIO) sets the strategic direction for information technology for state government. The OCIO also houses the State Office of CyberSecurity and the Office of Privacy and Data Protection.

It is our understanding that this performance audit focuses only on WaTech Operations.

WaTech Operations is a young organization (less than 13 months old at the start of the audit period) that was created, in part, to address the very issues raised by this audit: longstanding customer service and financial issues associated with the historical IT structure. This agency has been highly focused from the beginning on finding new and innovative ways to meet state technology needs, while at the same time enabling its customers to transition from outdated systems and processes. We recognize there is always room for improvement, and we welcome the many recommendations to continue the efforts started two years ago with the creation of the agency.

We would like to thank the Auditor for affirming that WaTech's actions to address financial and customer service issues are on the right track. We appreciate that seven of your eight recommendations affirm actions already in place. We further agree with your characterizations that some of those existing actions should be "continued" or "strengthened."

However, we are concerned with how the opening page of the report could be interpreted. We believe additional context would provide a more complete synopsis for the report that follows.

The opening page states:

1. "Most of the agencies interviewed for this performance report say WaTech's services don't meet their needs."
2. "…these agencies said it does not incorporate customer input into the services."
3. "Agencies also took issue with WaTech's pricing saying its rates are not transparent or competitive."

While we recognize this is important feedback for us, it may or may not accurately reflect the opinions of other agencies throughout the state. The SAO notes on page 10 that auditors talked to 13 agencies overall and fully interviewed nine of them (roughly four percent of the 300 public organizations WaTech serves). Additionally, it conflicts with the feedback WaTech has received from its customers:

- During the first six months of 2017, WaTech received direct responses from over 14,000 customers served by its help desk. Ninety-eight percent of the responses were positive.
- In addition, while our customers shared many ways we can improve our services for them in our customer survey, 61 percent gave WaTech A or B grades when answering the question, "WaTech offers technology that works and is reliable." We consider 61 percent at this level low and are working to improve this number. However, 61 percent does not support the statement that most agencies report that WaTech services do not meet their needs.

We appreciate that, later in the report, the SAO provides multiple examples of where our services do meet customer needs, illustrate and detail the processes by which we incorporate customer input, and demonstrate multiple examples of competitive services and transparent rates.

All of our customers and their satisfaction are vital to our mission. We have attached a robust action plan that we believe demonstrates our commitment toward continual improvement.

We also would like to address a few other points made in the report.

Transparency

As your audit report points out on page 15, WaTech's own research confirms that some of our customers feel like there is a lack of transparency in the rates they pay for our services. We believe customers should have a clear view of how costs are calculated and a clear picture of what services are included for a particular rate or allocation they pay, and we are committed to improving in this regard.

Customer input

The performance audit report says some customers report WaTech does not incorporate customer input into the services. The primary example cited repeatedly in the report refers to a vulnerability-scanning tool that was replaced, based on input from customers, in early 2015. The audit states the service was "replaced without soliciting any comments or feedback" from customers. That statement is inaccurate. While we understand some customers may have felt this way, the service was replaced in response to feedback from several state agencies. In addition, it should be noted the scanning tool was actually purchased and put in place prior to WaTech's creation.

WaTech firmly believes that understanding what customers value and gaining their input is vital. We will be incorporating customer feedback from existing forums into a plan of action by November 2017.

Fiscal responsibility

While it is accurate that several of WaTech's business centers have not been able to fully cover costs, the agency has made significant strides toward balancing its budget. As the report notes on page 9, the actual revenue/expenditure imbalance in Fiscal Year 2016 was approximately $9.9 million. In early FY 2017, WaTech's internal forecasts indicated it would have an approximately $13.1 million revenue/expenditure imbalance for FY 2017. Due to many belt-tightening exercises and tough decisions, WaTech closed FY 2017 with a positive variance of approximately $500,000.

It is worth noting that most of the agency's overall shortfall stems from two legacy issues:

1. WaTech is housed in a $300 million building purchased by the state in 2009. The facility was designed to partially recoup costs by offering data hosting services that have since been eclipsed by new technology. However, WaTech remains responsible for establishing rates that are sufficient to pay for the entire cost of the building with the exception of the State Data Center debt service funded by an allocation.
2. WaTech is required to operate a costly and obsolete mainframe computer that runs the Agency Financial Reporting System. WaTech will not be able to stop using the equipment until every state agency has stopped using the mainframe.

Since WaTech's formation two years ago, significant organizational change and growth have occurred. We have already made progress in addressing the issues identified in the performance audit, and we are committed to continual improvement. We hope our customer agencies' responses from 2015 no longer reflect our current operations. We act on customer feedback, and we also are working toward greater transparency and ensuring clarity in billing and our costs of doing business. We are tracking our performance in these areas, among others, through the WaTech Dashboard, which is produced quarterly by our Office of Performance and Accountability.

We have attached our response and steps to address each recommendation.

Sincerely,

Michael Cockrill
Director and State Chief Information Officer
Washington Technology Solutions

David Schumacher
Director
Office of Financial Management

cc: David Postman, Chief of Staff, Office of the Governor
Kelly Wicker, Deputy Chief of Staff, Office of the Governor
Drew Shirk, Executive Director of Legislative Affairs, Office of the Governor
Pat Lashway, Deputy Director, Office of Financial Management
Scott Merriman, Legislative Liaison, Office of Financial Management
Inger Brinck, Director, Results Washington, Office of the Governor
Tammy Firkins, Performance Audit Liaison, Results Washington, Office of the Governor
Wendi Gunther, Chief Financial Officer, Washington Technology Solutions

OFFICIAL STATE CABINET AGENCY RESPONSE TO PERFORMANCE AUDIT ON ENSURING TRANSPARENT PRICING AND CUSTOMER-FOCUSED IT SERVICES AT WATECH – SEPTEMBER 20, 2017

This coordinated management response to the State Auditor's Office (SAO) performance audit report received on August 29 is provided by the Office of Financial Management and Washington Technology Solutions (WaTech).

SAO PERFORMANCE AUDIT OBJECTIVES:

The SAO designed the audit to answer:

1. How well does WaTech provide IT services to customers?
2. How well does WaTech serve customers in providing price transparency?
3. Is WaTech monitoring costs for IT services and identifying strategies for balancing costs with quality?

SAO Findings:

1. Customers do not believe WaTech consistently uses established venues to gather feedback.
2. Some WaTech services do not meet customer needs.
3. State agencies do not have sufficient information about their IT expenditures to be able to make informed management decisions about maintaining or purchasing new services.
4. Customers do not have easy access to billing information to confirm services charges.
5. Some WaTech services are not recovering their costs.
6. WaTech could not demonstrate it is offering all services at competitive prices.
7. Some WaTech services are not meeting requirements to address agency need, be self-sustaining and be competitively priced.

SAO Recommendation 1: Work with customer agencies to determine how best to gather comments and feedback when implementing IT services.

SAO Recommendation 2: Strengthen existing processes to ensure customer comment and feedback is considered as the agency develops, purchases and provides IT services. If customer suggestions are not incorporated, communicate the reasons why.

STATE RESPONSE FOR RECOMMENDATION 1 AND 2: Customer satisfaction has been a primary goal of WaTech since its creation in 2015. One of the reasons the agency was formed was to "…be accountable to our customers for the efficient and effective delivery of critical business services." This is why one of the first activities WaTech undertook early in its existence was to complete a comprehensive Customer Survey by an outside consultant with 62 of our small, medium, and large customers.

It is also why a focus on customers is one of the three core pillars of the agency:

- **Pillar 1: Transform Our Customers' Experience**
  - Supply the technical foundation that enables agencies to focus on their highest value
  - Become the supplier of choice for state agencies
  - Be intentional with customer relationships

- **Pillar 2: Change the Way We Work Together**
  - Enhance our working experience
  - Build a new identity for Washington's central IT organization
  - Build a diverse workforce of the future

- **Pillar 3: Execute with Excellence**
  - Increase accountability and trust with stakeholders
  - Simplify; increase reliability and resilience
  - Continuous improvement is paramount

WaTech gathers comments and feedback from customers from a wide variety of sources to inform the development, purchase and provision of our services. Some of these sources are enterprise in nature and some are related to specific parts of the WaTech Service Catalog. Examples include:

- *The WaTech Executive Board:* The board was created soon after WaTech was formed. The intent of this body is to give WaTech customers both visibility and direct input into the business priorities of their central IT organization. The Board also provides oversight and a system of checks and balances between WaTech and its customers. The goal is to foster a true partnership between WaTech Operations and the customers it serves. Membership includes OFM; Governor's Office; the departments of Licensing, Social and Health Services, Transportation, and Labor and Industries; Washington courts; Legislative Service Center; and the Association of County and City Information Systems.

- *The WaTech Advisory Council:* The WAC participates in developing the information technology priorities for the Washington Technology Solutions agency. The committee:
  - Provides strategic leadership for statewide IT by aligning customer agency IT strategic objectives and activities with enterprise strategic objectives and processes.
  - Recommends priorities for WaTech initiatives/services.
  - Supports strategic initiatives by representing customer agencies' perspectives, providing resources when needed, championing the outcome and advocating for success.
  - Ensures open communication.

- *CIO Forum:* The CIO Forum meets monthly and draws chief information officers and deputy CIOs from Washington state agencies, state boards and the higher education community. This forum is primarily an information sharing opportunity and a venue for WaTech to communicate in person with the state CIOs about information technology policy changes, legislative activities, fiscal matters, reporting requirements, and updates about publications and awards related to the state IT community.

- *WaTech quarterly customer meetings:* These meetings provide a forum for customers to discuss particular services. Agenda items are driven by customer feedback and service focus areas. The purpose of these meetings is to inform, collaborate and collect feedback on current and future strategic initiatives, as well as review performance effectiveness of services. Recent topics include: WaTech security allocation, secure Access Washington, telephony, WaTech's change management process, open data vs. security, and WaTech's new systems status notification site (support.watech.wa.gov).

- *Technology Services Board:* The TSB acts as an advisory board to the Office of the state Chief Information Officer. It provides strategic advice and guidance in carrying out the Chief Information Officer's (CIO) responsibilities in providing strategic vision and oversight of technology in Washington state government. The TSB focuses primarily on IT strategic vision and planning, enterprise architecture, policy and standards, and major project oversight. Members include legislators, business leaders, agency directors and a union representative.

- *WaTech customer account managers:* WaTech formed a customer relations team focused on ensuring that agency partners receive the highest level of service possible. The customer relations team includes four dedicated customer account managers (CAMs) who establish and maintain customer relationships while working to ensure a high level of satisfaction with WaTech products and services. CAMs serve as a primary point of contact for WaTech customers, ensuring the agency is responsive to customers' needs. The customer relations team manages interactions with WaTech customers to ensure their business needs are clearly understood. The team helps customers navigate the various WaTech service offerings, and assists them in determining whether their business needs can be met by WaTech. They also provide feedback and recommendations to WaTech managers regarding improvements in the pricing and delivery of quality products and services. Each CAM is assigned a group of customers to manage.

- *WaTech technical service groups:* WaTech also has several customer groups that exist at the service level to inform and guide specific technologies. As an example, WaTech communication services (email, Exchange, Skype, Secure Email, Mobile Device Management, etc.) utilizes and is guided by user groups such as:

    - Exchange Technical Administrators Group
    - Forest Resource Group
    - Forest Application Development Group
    - Discovery Accelerator Users Group

- *WaTech service symposiums:* The purpose of WaTech service symposiums is to create a collaborative space for WaTech and customer agencies to build enterprise solutions together. As an example, the most recent symposium focused on the "cloud highway" implementation strategy. This symposium was an opportunity for agencies to engage in conversation with each other and WaTech centered on the proposed shared state cloud highway. Meetings that are part of the symposium can focus on technical aspects of the highway, including but not limited to why paths were chosen, hardware, redundancy and future growth. Further conversations can revolve around the finances and how the highway will be maintained. We are working to create a true co-op service where each agency is involved in some way, from technical to financial. The goal is for agencies to be involved, have a say, and be part of something bigger. This

symposium received positive feedback from participating customers which prompted the scheduling of another symposium.

- *WaTech Lean project customer involvement:* A core tenant of WaTech's Lean program is to ensure customers are part of any formal Lean project that relates to WaTech products and services. As an example, the recent IT Decision Package Review Process Lean Project completed by the Office of the Chief Information Officer included representatives from the Department of Health, Department of Labor and Industries, and OFM on the project team.

- *Customer survey action plan customer involvement:* Early in the process of creating an approach to address customer survey results, WaTech identified that customer involvement was vital. As a result, before moving forward with any action item, it is our practice to contact the state CIO community to ask for volunteers to work on the action item with the WaTech team. Members of the CIO community can choose which action items they have interest in helping with.

While robust, WaTech is aware some of the existing feedback mechanisms and processes need enhancement and welcome the insight and recommendations outlined in this audit.

Action Steps and Time Frame

- During each customer interaction, make it a practice to ask agency customers for feedback and comments related to implementing IT services. *By October 2017.*
- Train employees to strengthen documentation of feedback collected during customer interactions to include action plans and responses and strategy of how that feedback was considered. *By December 2017.*
- Follow up work sessions, symposiums and trainings with a document to participants that asks for explicit suggestions and comments that will be reviewed and responded to by the organizer of those events and activities. *By October 2017.*
- Enhance existing ticket transaction customer surveys to allow the customer further feedback mechanisms when they rate their service experience. *By October 2017.*
- Review the internal process of addressing customer suggestions for improvement (captured from ticket transaction customer surveys) to ensure managers are responding to the suggestions. *By January 2018*.
- Complete the next annual customer survey. *By April 2018.*
- Create a process to collaborate and validate with customers regarding service strategies to collect feedback and have symposiums so agencies can hear each other's feedback. *By March 2018*

SAO Recommendation 3: Ensure the cost components that make up service rates are readily available to customers.

STATE RESPONSE: WaTech continues to make strides to ensure cost components that make up service rates are readily available to customers.

WaTech customers are charged for WaTech services either through an allocation or a fee-for-service. Cost components of WaTech allocations can be found in the state's Agency Financial Reporting System (AFRS) and the Central Service Billing Model. Cost components for WaTech fee-for-services can also be found in AFRS (which is also viewable in the Apptio system) along with spreadsheets maintained by WaTech service areas. WaTech finance staff are always available to share cost component information with customers when they have questions.

To help customers understand financial information, WaTech created a "Billing Information" page in the Customer Resources section of WaTech's Internet site. From this page, customers have access to a wide variety of WaTech financial resources:

- WaTech eStatement tool for summary level invoices and other available invoices.

- The Technology Business and Billing Management Apptio tool to view and export summary or detail level billing reports for any WaTech billing (including allocations at the summary level). A customer instructional training guide was also created.

- The billing notification page that contains the historical archives for customer billing notifications.

- Enterprise Output Solutions tool to print fee-for-service summary and detail level reports from the Fee-for-Service Billing System.

- The customer feedback based billing improvements page was created to provide more information on how allocations come into existence, what services are provided within existing allocations, and how customers can fully utilize the allocation. This page was the result of a customer survey and feedback provided to WaTech billing staff.

- Introduction to WaTech allocation page and PDF, which contains detailed information on WaTech allocations and the allocation process:
    - The Allocation Process
    - Customer Base, Methodology & Invoicing Structure
    - Do Agencies Receive Funding to Pay Allocation Charges?
    - Implementation Timeline of WaTech Allocations
    - Allocation Customers & Services
    - Enterprise System Rates Allocation
    - Security Gateway Allocation
    - State Data Center Allocation
    - Location Based Services Allocation (GIS/WAMAS)
    - OCIO Allocation
    - Office of Cybersecurity (OCS) Allocation

Based on customer survey feedback and to answer additional questions from customers, WaTech also created a communication piece that contained more detailed information about the WaTech security allocation services. This piece was presented and emailed to the WaTech Advisory Council in July 2017 and customers at the WaTech Quarterly Customer Meeting in August 2017 (note: due to the nature of the content, security concerns prohibited the posting of this piece).

WaTech creates a rate plan every year and submits it to OFM. The first rate plan was submitted in March 2016, and was shared with agencies in June 2016. WaTech's second rate plan was submitted in May 2017.

WaTech also participates in the state's "Rate Day," which is held to provide a forum for central service agencies such as WaTech to inform customers about the nature of central service rates. Details related to the WaTech rate plan and proposed changes were presented by WaTech at Rate Day in July 2016.

As part of the 2017-19 biennial budget, WaTech is required to conduct a *zero-based budget review* of the agency's services. Planning is underway and will include customer representation. This review will be conducted by an outside vendor and will include:

- A description with supporting cost and staffing data of each program or service and the populations served by each program or service, and the level of funding and staff required to accomplish the goals of the program or service if different than the actual maintenance level.
- An analysis of the major costs and benefits of operating each program or service and the rationale for specific expenditure and staffing levels.
- An analysis estimating each program's or service's administrative and other overhead costs.

As part of the WaTech customer survey action plan, WaTech is also in the process of creating a service catalog that contains cost components of each service model. That work is expected to be completed by August 2018.

WaTech will continue to work with customers to determine the level of cost components to make visible.

Action Steps and Time Frame

- Create and publish annual rate plan. *By May 2018.*
- Participate in Rate Day 2018. *By June 2018.*
- Complete the zero-based budget review with outside consultant. *By May 2018.*
- Complete service catalog with cost components. *By August 2018.*

SAO Recommendation 4: Provide clarity to customers on what is included in the allocated costs and services.

STATE RESPONSE: As mentioned in Recommendation 3 above, WaTech continues to make strides in communicating information about allocations to customers through its billing information website. A service notification was sent to customers on May 25, 2017, that this resource was available.

WaTech recently updated all the allocation pages. One more allocation page is being created. This work is expected to be complete by the end of October when a communication will be sent to Apptio users, agency financial officers and agency budget staff about the updated information. WaTech will continue to communicate with customers when allocations change in the future.

Based on customer survey feedback and to answer additional questions from customers, WaTech created a communication piece that contained more detailed information about the WaTech security allocation services. This piece was presented and emailed to the WaTech Advisory Council in July 2017 and customers at the WaTech quarterly customer meeting in August 2017 (note: due to the nature of the content, security concerns prohibited the posting of this piece).

In addition, WaTech made changes to central service model allocation invoices for the 2017–19 biennium. Agencies that received multiple CSM allocation invoices started receiving just one invoice and all CSM allocation invoices had new OFM object-level account coding included for ease of payment processing. These changes were communicated to customers in a service notification on August 3, 2017.

Action Steps and Time Frame

- Complete the biennial allocation building process for the 2019–21 biennium. *By August 2018*.
- Communicate results of the 2019–21 biennial allocation building process with customers. *By June 2019.*
- Finalize remaining allocation page. *By October 2017.*
- Send communication to customers announcing changes to allocation pages on the WaTech billing website. *By October 2017.*

SAO Recommendation 5: Continue meeting with customers to ensure they can obtain necessary information from billing reports, and gather input on requirements for a new billing system.

STATE RESPONSE: WaTech continues to make progress on work related to billing that started when the agency formed.

WaTech completed its Billing Modernization Project in October 2015. This project was reported out on the biannual WaTech Lean Report to the Governor's Office. This project used Apptio (Technology Business Management Tool) to create electronic customer access to billing detail files. It automated 19 of 30 manual spreadsheet processes, making detailed billing reports available through customer self-service. It eliminated duplicate spreadsheets and manual tracking processes and resolved multiple billing errors associated with the manual process. In addition, to help with billing information, the language now matches the state enacted budget language.

The WaTech customer survey also made several recommendations related to billing. All of the activities related to these recommendations have been completed:

- Kick-off meeting with customers to discuss invoice issues.
- Invoice training for agency customer account managers.
- Audit invoices and solicit feedback from customers on why invoices are confusing (DNR, DRS, DSHS, LCB, ESD, AGR, DOC, DFI, and DVA).
- Discuss invoice issues at quarterly TBBM meetings. WaTech will continue to discuss invoice issues with customers at future quarterly TBBM meetings.

WaTech is also working with customers to initiate a project to modernize its billing, purchasing, contracting and operational support systems. The first phase of this modernization project will be to hire a modernization contractor to develop a detailed plan and design that will improve the reliability and efficiency of the billing systems. WaTech worked with customers to gather requirements for the system and an RFI was released and vendor responses have been received.

Action Steps and Time Frame

- Secure funding for modernization project. *By June 2018.*
- Hold another invoice training for customer account managers. *By October 2017.*
- Complete the zero-based budget review with outside consultant. *By May 2018.*

SAO Recommendation 6: Continue to develop plans to recover costs.

STATE RESPONSE: WaTech has made great strides over the past fiscal year to balance its budget. At the beginning of the fiscal year, WaTech projected costs would exceed revenue by $13 million at the end of the fiscal year. Through a dedicated focus and a series of activities designed to reduce costs and increase revenue, WaTech is now projected to end the fiscal year with revenue exceeding costs by $500,000. WaTech's executive team, finance team, managers, supervisors, staff, the Governor's Office and OFM worked closely to accomplish this turnaround.

There is still work to be done as not all WaTech cost centers are recovering their costs. WaTech plans include:

- Reviewing all lines of business to become cost recoverable.
- Ensuring rates recover costs as part of the annual rate development process. WaTech will request rate adjustments subject to OFM approval. WaTech will implement results, including determining how to live within existing revenues if rate adjustments are not possible.
- Continuing working with OFM and the Governor's Office on an overall agency business plan.

The zero-based budget review will also help the agency identify plans to recover costs. Deliverables of the review include:

- A description with supporting cost and staffing data of each program or service and the populations served by each program or service, and the level of funding and staff required to accomplish the goals of the program or service if different than the actual maintenance level.
- An analysis of the major costs and benefits of operating each program or service and the rationale for specific expenditure and staffing levels.
- An analysis estimating each program's or service's administrative and other overhead costs.

Action Steps and Time Frame

- Continue working with OFM and the Governor's office on an overall agency business plan to balance revenues and costs. *By October 2017.*
- Review all lines of business to become cost recoverable. *By June 2018.*
- Ensure proposed rates recover costs as part of annual rates development process. *By May 2018.*

SAO Recommendation 7: Periodically compare the cost of services to alternatives that meet customer needs.

SAO Recommendation 8: Periodically review services considering sustainability, cost and agency needs to determine whether the services should be continued.

STATE RESPONSE FOR RECOMMENDATION 7 AND 8: Maintaining the health and competitiveness of WaTech products and services is an important goal of WaTech. In fact, our authorizing statute requires us to "offer high quality services at the best value." We appreciate the focus this audit brings to the processes we have in place to ensure our services are relevant to customer needs and look forward to the opportunity to enhance and strengthen them. Some of these processes include:

- *Service strategy meetings:* WaTech holds regular meetings with service owners to review current service offerings and the strategy they have for the future of those services. To prepare for these sessions, some service owners solicit feedback from customers on the overall health and performance of the service. In addition, these strategy meetings are designed to incorporate a "service health check," which is a documented process that was created to periodically review the health of WaTech products and services.

- *IT Strategic Roadmap:* The Roadmap is a coordinated and comprehensive strategy — with key objectives, options and decision points identified — that provides a long-term direction for agency focus and a foundation for priorities and investments. This interactive tool is published on the WaTech Internet site.

- *IT strategic plan:* WaTech's strategic plan focuses on the next three to five years with actions related to key technologies for the next biennium. It lays out the specific, actionable areas that define where the operations of WaTech will focus. The vision articulated in this document is constructed through partnership with the IT industry and WaTech customers to provide a broad line of services to ensure costs and alternatives are considered.

- *Zero-based budget review:* In addition to the deliverables listed in recommendation #4 above, the zero-based budget review will also include:
    - An analysis and recommendations for alternative service delivery models that would save money or improve service quality.
    - Performance measures indicating the effectiveness and efficiency of each program and service.
    - A description of how each program or service fits within the strategic plan and goals of the agency and an analysis of the quantified objectives of each program or service within the agency.

- *Quarterly service performance reviews:* Service owners present results based on performance, customer adoption, customer satisfaction and cost effectiveness.

Action Steps and Time Frame

- Enhance the service strategy meeting process to include documenting cost comparison analysis. *By March 2018.*
- Modify the quarterly service performance review to include a comparison of like services and cost models as appropriate on an annual basis. *By March 2018.*
- Explore elevating the quarterly service performance reviews to the executive team level on a quarterly or semi-annual basis. *By January 2018*.
- Complete the zero-based budget review with outside consultant. *By May 2018.*

Appendix A: Initiative 900

Initiative 900, approved by Washington voters in 2005 and enacted into state law in 2006, authorized the State Auditor's Office to conduct independent, comprehensive performance audits of state and local governments. Specifically, the law directs the Auditor's Office to "review and analyze the economy, efficiency, and effectiveness of the policies, management, fiscal affairs, and operations of state and local governments, agencies, programs, and accounts." Performance audits are to be conducted according to U.S. Government Accountability Office government auditing standards.

In addition, the law identifies nine elements that are to be considered within the scope of each performance audit. The State Auditor's Office evaluates the relevance of all nine elements to each audit. The table below indicates which elements are addressed in the audit. Specific issues are discussed in the Audit Results section of this report.

I-900 element	Addressed in the audit
1. Identify cost savings	**No.** The audit focused on how WaTech could achieve better customer service, improve price transparency, and monitor its costs.
2. Identify services that can be reduced or eliminated	**No.** However, the audit's recommendations could help WaTech identify services that cannot meet customer needs at competitive prices and could therefore be eliminated.
3. Identify programs or services that can be transferred to the private sector	**No.** However, the audit's recommendations could help WaTech identify services that cannot meet customer needs at competitive prices and could therefore be transferred to the private sector.
4. Analyze gaps or overlaps in programs or services and provide recommendations to correct them	**Yes.** The audit identifies gaps in WaTech's processes for incorporating customer feedback and reviewing the competitiveness of its IT services, and makes recommendations to strengthen those processes.
5. Assess feasibility of pooling information technology systems within the department	**No.** However, WaTech has already identified an area where its technology systems could be consolidated and streamlined, and is working to do so.
6. Analyze departmental roles and functions, and provide recommendations to change or eliminate them	**Yes.** The audit recommends WaTech improve or create processes for incorporating customer feedback, comparing service prices to competitors, and periodically reviewing its services considering their sustainability, cost and agency need.
7. Provide recommendations for statutory or regulatory changes that may be necessary for the department to properly carry out its functions	**No.** We did not identify any statutory or regulatory changes that would help WaTech carry out the functions related to our audit objectives.
8. Analyze departmental performance data, performance measures and self-assessment systems	**No.** The audit focused on how WaTech could achieve better customer service, improve price transparency, and monitor its costs.
9. Identify relevant best practices	**Yes.** The audit identifies industry leading practices for customer service and price transparency that WaTech should implement to strengthen its customer relationships, and makes recommendations that WaTech strengthen its processes to better conform to these leading practices.

Appendix B: WaTech Allocated Costs

Leading practices note that state central IT agencies should clearly demonstrate to their customers how prices are established. The tables below provide information on cost components for four of WaTech's top allocated services. It also provides examples of how each allocation would affect an agency.

State Data Network

The state data network allocation covers the costs to operate and maintain the state data network, which includes the State's Wide Area Network (WAN), internet access, connectivity to enterprise applications and services, and connection to the State Data Center. WaTech breaks the costs for this allocation into two categories: network core, which includes the state network segment housed in the State Data Center; and transport and connectivity, which covers direct customer connection to the network.

Beginning with its 2017-19 biennium proposed rates, WaTech will allocate costs for these service categories differently. For the network core (23 percent of allocation costs), costs are allocated based on agency full time equivalent employees (FTEs). Transport and connectivity costs (77 percent of allocation costs) are allocated based on the number and type of connections each agency has to the network. **Figure 1** is an example of one agency's state data network calculation for the 2017-19 biennium.

Figure 1 – An example of data network calculations for an agency with about 1,400 employees

2017-2019 biennium; all numbers rounded

Transport and connectivity		
Calculated on:	**Subtotals**	**Transport & connectivity total**
1 SMON connection ($27,600 per connection)	$27,600	$3.7 million
2 100 megabyte connections ($22,200 per connection)	$44,400	
13 T-1 connections ($14,400 per connection)	$187,200	
230 10 megabyte connections ($15,000 per connection)	$3.45 million	
Network core costs		
Calculated on:		**Network core costs total**
$89.00 per FTE		$124,000
Biennial grand total		**$3.8 million**

For the 2017-19 biennium, the enacted budget allows WaTech to bill $52.8 million for the data network allocation. **Figure 2** shows WaTech's cost breakouts for fiscal year 2016 and fiscal year 2017 through April.

Figure 2 – Expenditure categories for WaTech's state data network allocation

Dollars in millions; Fiscal year 2017 costs through April 2017

	FY 2016 cost	Percent of total	FY 2017 cost	Percent of total
Employee direct costs (salaries, benefits, travel)	$4.4	20%	$3.6	23%
Capital (equipment, other assets)	$1.3	6%	$0.6	4%
Debt service	$0.7	3%	$0.6	4%
Operating costs including:	$13.5	62%	$9.1	59%
Telecommunications	*$10.1*	*46%*	*$7.3*	*47%*
Maintenance	*$1.8*	*8%*	*$1.0*	*6%*
Other operating	*$1.6*	*7%*	*$0.9*	*6%*
Agency overhead	$1.9	9%	$1.4	9%
Total	**$21.8**		**$15.4**	

Source: Auditor analysis of WaTech's expenditure data in AFRS.

Enterprise System rates

The enterprise system rates allocation supports access to enterprise systems most state agencies use. These systems include the Agency Financial Reporting System (AFRS); Travel & Expense Management System (TEMS); Human Resource Management System (HRMS); Employee Self Service (ESS); and Washington Electronic Business Solutions (WEBS). For the 2017-19 biennium, the enacted budget allows WaTech to bill $68.9 million for this allocation. WaTech allocates costs for these services across state agencies based on their number of FTEs. For example, a large agency with about 2,900 FTEs represents 2.64 percent of total state FTEs, so it would pay 2.64 percent of $68.9 million for the biennium, about $1.8 million. **Figure 3** shows WaTech's cost breakouts for fiscal year 2016 and fiscal year 2017 through April.

Figure 3 – Expenditure categories for WaTech's enterprise system rates allocation

Dollars in millions; Fiscal year 2017 costs through April 2017

	FY 2016 cost	Percent of total	FY 2017 cost	Percent of total
Employee direct costs (salaries, benefits, travel)	$18.0	48%	$14.1	55%
Capital (equipment, other assets)	$0.1	0%	N/A	N/A
Debt service	$4.2	11%	N/A	N/A
Operating costs including:	$7.4	20%	$6.0	24%
Software maintenance	*$4.0*	*11%*	*$3.5*	*14%*
Data processing	*$2.3*	*6%*	*$1.7*	*7%*
Other operating	*$1.0*	*3%*	*$0.8*	*3%*
Agency overhead	$8.0	21%	$5.4	21%
Total	**$37.7**		**$25.5**	

Note: N/A = not applicable

Source: Auditor analysis of WaTech's expenditure data in AFRS.

State Data Center

The data center allocation covers the debt service costs for the State Data Center. WaTech allocates the costs to agencies based on their percentage of statewide IT spending. For the 2017-19 biennium, WaTech estimates that it will bill $27.6 million for this allocation. For example, a small agency with about $100,000 in annual IT expenditures represents 0.02 percent of total state IT spending; it would pay 0.02 percent of total costs, or approximately $5,000 for the biennium. **Figure 4** shows WaTech's cost breakouts for fiscal year 2016 and fiscal year 2017 through April.

Figure 4 – Expenditure categories for WaTech's state data center allocation

Dollars in millions; Fiscal year 2017 costs through April 2017

	FY 2016 cost	Percent of total	FY 2017 cost	Percent of total
Interest payments	$8.9	71%	$8.0	69%
Principal payments	$3.7	29%	$3.5	31%
Total	**$12.6**		**$11.5**	

Source: Auditor analysis of WaTech's expenditure data in AFRS.

Enterprise Security infrastructure

Prior to the 2017-19 biennium, the enterprise security infrastructure allocation supports equipment, software, and staffing to protect information across the state's networks. WaTech allocates costs using two different methods. First, agencies with 50 FTEs or more pay a base rate of $2,000 a month ($48,000 per biennium). Second, all agencies pay a per-FTE rate to cover the remaining costs. For the 2017-19 biennium, the enterprise security infrastructure allocation was rolled into the state data network allocation and the new office of cyber security allocation. **Figure 5** shows WaTech's cost breakouts for fiscal year 2016 and fiscal year 2017 through April.

Figure 5 – Expenditure categories for WaTech's enterprise security infrastructure allocation

Dollars in millions; Fiscal year 2017 costs through April 2017

	FY 2016 cost	Percent of total	FY 2017 cost	Percent of total
Employee direct costs (salaries, benefits, travel)	$0.8	16%	$2.4	40%
Capital (equipment, other assets)	$0.9	19%	$0.1	2%
Debt service	$0.1	2%	$0.1	3%
Operating costs including:	$2.9	57%	$2.5	41%
Repair & maintenance	*$1.3*	*27%*	*$1.4*	*23%*
Software licensing	*$0.7*	*15%*	*$0.4*	*7%*
Data processing	*$0.5*	*10%*	*$0.4*	*7%*
Other operating	*$0.3*	*6%*	*$0.2*	*3%*
Agency overhead	$0.3	7%	$0.9	15%
Total	**$5.0**		**$6.1**	

Note: Columns may not add due to rounding.

Source: Auditor analysis of WaTech's expenditure data in AFRS.

Appendix C: Customer Satisfaction Survey Action Plan

After receiving the results and recommendations from a consultant's customer satisfaction survey, WaTech created an action plan to address the recommendations. We have included a list of issues and recommendations from the survey, grouped according to WaTech's prioritization.

Goal focus area	Title	Recommendation
Executive priorities		
Marketing	Define Service Catalog & Update along with Website	At a minimum, the service catalog needs to be removed from the website or updated. The purpose of the service catalog must be defined so it can be consistently maintained to meet the purpose.
Communication	Audit 3 Months of Communications	WaTech should create a task force to audit communications that have been sent to agencies in the past three months. Evaluate the content for ease-of-comprehension, timeliness, etc. Are the most important messages being given priority communication status?
Expertise & Structure	Create Customer Portal	Create a portal for customers so they can monitor open tickets, update their contact lists, read bulletins and submit questions, etc.
Technology & Innovation	Communicate Cloud Service Strategy	WaTech needs to communicate their strategy with Cloud services. Potentially, dedicated communications on this topic should be shared on a fixed schedule.
Value & Price Structure	Determine Solutions WaTech Can Offer Equal to Private Sector	WaTech needs to evaluate its service offerings to determine which solutions WaTech can offer at an equal value as the private sector (value defined as cost, functionality, technical support, etc.).
Additional Recommendation	Additional Level of Monitoring Tickets	Monitor WaTech service tickets to make sure they are picked up in a timely manner and contact is made with the customer.
High benefit, Low effort		
Customer Service	All-Staff Customer Service Training	All WaTech personnel need customer service training. One or two flippant remarks overshadow attempts at building a customer-oriented organization. Topics should include: How to work with agencies in a crisis/during a service failure AND How to accept blame (work under the scenario the customer is right and WaTech may have made an error).
	Train Technical Staff to Interface with Agencies	The technical staff not only needs technical expertise, but also needs training to interface with agency personnel. In the short run, technical staff need to understand how to diffuse "heated" conversations and accept their role as a problem solver, regardless of the source of the problem. In the longer run, the CAMs need to have a more active role in interfacing between the agency and WaTech's technical staff.
Communication	More 2 Way Customer Communications	More opportunities for two-way communication need to be designed into the agency relationship program. The CAMs are doing well, but are not the single point of contact. Therefore, interactions with other WaTech staff are setting the tone.
Expertise & Structure	Create Multiple Communication Models	WaTech needs to either explain to agencies how changes are reviewed and evaluated and/or commit to instituting a Change Control Board (Change Management Board).
Marketing	Optimize Relationship with Customers (services paid for, not used)	WaTech also needs to determine if it will identify services agencies pay for, but do not use. And, with that information, will WaTech consult with the agency on how to optimize its total relationship with WaTech.

Goal focus area	Title	Recommendation
High benefit, Low effort – *continued*		
Communication	Solicit Customer Feedback	Feedback should be sought regularly and the systems should be formalized so the feedback is used as part of the quality control initiatives.
Technology & Innovation	Seek Customer Feedback on Services	WaTech needs to seek feedback from agencies regarding their perception of services with respect to functionality, security, etc. Based on what is learned, WaTech needs to address the issues in meetings so agencies understand how WaTech is moving forward.
Customer Service	Create Process to Update Agencies on Ticket Progress	Formalize the process of updating agencies on the progress of their tickets.
Value & Price Structure	Audit Invoices	WaTech should audit the contents of invoices to understand why they are confusing.
	Invoice Review Meeting	WaTech should offer an invoice review meeting for any agency that would like to discuss their invoice.
	Invoice Training for CAMs	WaTech should provide extensive training to the CAMs on the invoices for their respective agencies.
Expertise & Structure	Give Liaisons Time to Spend with Agency	This requires liaisons to have enough time to spend with the agency so they understand the personnel structure, unique stress points, etc.
Communication	Create Protocol for Incident Communications	WaTech needs a protocol or standard operations procedure (SOP) on how communications will be handled during a service failure (incident). Agencies should be categorized into levels with one group designated for more technical communications, a second group might be willing to monitor a dashboard, a third group might choose just one communication when the problem has been resolved.
Relationship	Review Entire Agency Solution Set	WaTech needs to schedules meetings with agencies for the single purpose of reviewing their entire IT solution set. Individual short and long term planning should be documented and reviewed periodically with the CAM.
Expertise & Structure	Vet Changes Before Implementation	Agencies believe that the impact of changes are not fully evaluated before being implemented.
Communication	Create Multiple Communication Models	WaTech will not be able to meet the needs of such a diverse group of agencies with one communication model.
Technology & Innovation	Improve New Technology Communications	WaTech needs to focus on communicating the process for evaluating and prioritizing the introduction of new technologies.
	Focus on New Technology Integration Communications	WaTech needs to focus on communicating how and when new technologies will be integrated.
Communication	Customize Customer Communications	Agencies want customized communications. The liaisons should handle communicating the more important and impactful messages.
High benefit, High effort		
Communication	Reduce Barriers Keeping Staff from Solving Agency Issues	WaTech staff should be asked to identify the barriers they face when they are trying to solve issues for agencies. These barriers need to be reduced. Staff should be empowered to help the agency reach a resolution.

Goal focus area	Title	Recommendation
High benefit, High effort – *continued*		
Marketing	Market Services	WaTech must decide if it is going to market its services or respond to requests.
	Actively Sell Solutions	WaTech needs to determine if its role is to provide only the services when agencies ask WaTech to provide them, or if WaTech is going to actively sell its solutions.
	Marketing Service Task Force and Strategy	WaTech needs a task force to review marketing plans and to determine which marketing strategy WaTech is able to implement.
Customer Service	Explore Root Cause of Technical Issues	The root cause of most technical issues appears to be grounded in customer service issues.
Marketing	Develop Sales Approach with Product Specialists	If WaTech wants to increase the number of services used by agencies, it will need to develop a sales approach with product specialists who can identify which agencies could benefit from the service and can work with the agency until the product is fully integrated into the agency's systems.
Customer Service	Create System to Reward Staff for Accepting Blame	WaTech needs to examine internal systems to be sure employees are "rewarded" for accepting blame and not fearful of finding their own mistakes.
Expertise & Structure	Dedicated Contact for Small Agencies	Small agencies have a dedicated contact. Small agencies do not have the resources to network within WaTech to find their own points of entry. They need to speak to a person who understands their limited access to internal technical expertise.
Expertise & Structure	Create "Go-To" List of Staff for Liaisons	All liaisons are given a list of "go to" WaTech personnel who can address issues that arise. These "go to" personnel members are to be trained on the role of the liaisons and are to give liaisons priority (i.e. a "go to" person to explain invoices, a "go to" person to track down status of an outstanding ticket, etc.) Liaisons must be able to solve problems and serve as a single point of contact. Otherwise, agencies create their own access points.
Technology & Innovation	Be Responsive and Speed Up Introduction of New Technology	Agencies expect WaTech to have technology constraints; however, they do not want to work with a supplier that is both slower to introduce technology and non-responsive when issues arise.
Communication	Consistent Internal & External Staff Communication	WaTech needs to create a communication process internally so all staff are consistent in their communications with agencies. When information is inconsistent from WaTech, agencies doubt the accuracy of all information. (This is exacerbated by the fact that agencies create their own access points so they may not be getting information from the "right" WaTech staff member.)
Low benefit, Low effort		
Communication	Evaluate Communication Patterns	Communication patterns should be evaluated. Are systems in place to provide feedback on a timely basis to keep the agency updated to show respect for their time and the inconvenience they are experiencing?
Technology & Innovation	Create Platform to Show Answers to Misperceptions	In addition, WaTech needs a platform to populate the conversation with facts about WaTech's services if misinformation exists.
Low benefit, High effort		
Expertise & Structure	Update Customer DLs	At a minimum, a system to update distribution lists on a monthly basis needs to be created.

Source: WaTech Customer Satisfaction Survey Action Plan.