



Quality Assurance Lessons Learned

This document was independently prepared by Briskin Consulting and its associates in accordance with State of Washington Information Services Board policies governing independent quality assurance of Washington State information technology projects.

A handwritten signature in black ink that reads "Porsche Everson".

Porsche Everson

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Lessons Learned

Executive Summary

The Shared Services Email Project's vision was to maximize email capabilities and functionality available to all agencies and to provide email as a shared service, thus reducing cost and risk. The vision included the following functions:

- Hosted email services
- Vault email retention
- Secure email
- Remote and mobile email access
- Interfaces with state agency applications that use email
- Service level agreements and high customer satisfaction
- Future extensibility

The overall purpose behind the project was to optimize the value of IT by concentrating email services across state agencies to a centralized service to lower costs and improve service.

This project is unique, in that it is the first major IT initiative that provides centralized hosting of a major IT function. Participating state agencies no longer have to manage the entire spectrum of email services, systems and contracts; instead they simply manage accounts within their agency.

Agencies partnered with CTS to plan, monitor and execute the project. The collaborative nature of the project is notable for several reasons. First, agencies worked together to establish global norms for email services, including mailbox size limitations, blocked file types, and the level of administrative delegation to individual agencies. Second, the project implementation schedule was mutually developed and managed by both CTS and individual agencies. Third, each participating agency had an assigned liaison who worked with them individually to ensure they were ready for implementation and knew what to expect. Fourth, the project developed a remarkable check and adjust process for the agency implementations, which utilized feedback from every single implementation to improve the process for subsequent implementations.

The project successfully delivered on all the business objectives and requirements that were initially established. In addition, the project was able to add in a very popular mobile feature – ActiveSync— that gave agencies the ability to synchronize email, contacts, calendars, and tasks with agency and individually-owned Apple, Android and other approved smartphones and tablets, at no additional charge.

Initially, 66,000 users from 53 agencies were projected to participate in the shared services offering. That number was reduced, to approximately 51,000 users from 46 agencies by the end of the project. This reduction can be attributed to agency consolidations, staff reductions, mailbox cleanup efforts and a change in strategic direction for the state. In February 2012, the state Office of the CIO released a briefing about the future technology direction for the state. It included an affirmation for consolidating services like email, but recommended an alternative approach to cloud-based hosting. About six agencies have chosen to remain in an “on hold” status until more work is done related to a cloud-based system. The change in strategic direction from hosted email services to a cloud platform impacted the project, in terms of reducing the anticipated number of hosted mailboxes from the original plan, and introducing uncertainty about the expected return on investment for the hosted email solution.

Key lessons learned include the following. These lessons have special applicability to major collaborative initiatives, where control is shared between the project team and the agency customers.

- Invest sufficient time in bringing stakeholders on board with major decisions. Communicating frequently using a variety of platforms helps build customer trust. Check for buy-in often.
- Involve executive sponsors in the project. Their ability to lead reform efforts is critical to increasing alignment among stakeholders.
- Identify repeatable processes in any project. Document the process and solicit feedback regularly to improve the repeatable processes.
- Manage expectations about a startup service, describe what could happen during the stabilization period, and provide regular metrics that show how service is performing and how it is expected to improve.
- Develop and implement a knowledge transfer system (including customer knowledge transfer) throughout the project life cycle, not just at the end.
- For a project that has a long implementation period, running concurrent with project work, reduce the project workload during the implementation period to allow staff to help address implementation issues.

Key Assumptions and Methodology

The Lessons Learned evaluation process targeted two key groups for input: The Project Steering Committee, which was comprised of participating agency CIOs and project leadership, and the project team. Approximately 25 people from both groups provided feedback for this report.

There was very limited time for both groups to provide feedback. Participants utilized one of two highly structured customized feedback tools, depending upon their level of involvement (oversight or direct involvement). Feedback was solicited in multiple ways, including large group, small group, and individual feedback. Participants had an opportunity to follow up after the lessons learned events.

The scope of the Lessons Learned review started with the project Pause/Restart that occurred in the spring of 2011. Earlier project work had struggled to gain traction, and project leadership invested heavily in lessons learned on that first phase to prepare a new approach. Thus, this report focuses on project processes, controls and outcomes that occurred after the restart.

Project Steering Committee Feedback

The Project Steering Committee used a tool based upon the Project Management Institute matrix of knowledge areas and process groups, as shown in **Error! Reference source not found.** below. The tool provided a comprehensive way of examining the entire project by providing sample questions in each intersecting cell. For example, for Scope, during the Initiating process, the sample question was: “Was there additional scope that you felt should have been included in the vision?” Participants were able to use either the sample questions or generate their own questions to answer. Both individuals and small groups selected 5-7 questions to address from the matrix that had the highest potential to generate lessons learned. Participants addressed all the process groups: Initiating, Planning, Executing, Monitoring and Closing; and the nine knowledge areas: Integration, Scope, Time, Cost, Quality, Human Resources, Communications, Risk and Procurement. Feedback was synthesized and used to develop lessons learned, which is shown in *Table 1*.

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Figure 1. PMI Framework Matrix used by the Project Steering Committee.

		Process Group				
		Initiating	Planning	Executing	Monitoring/ Controlling	Closing
Knowledge Area	Integration (of the project into state strategy and structure)	1. How did the project align with state strategy and priorities?	10. How were changes in strategy or priorities factored into ongoing planning?	19. How did all parts of the organization do their part to support project delivery?	28. How were decisions made on project direction and issues?	37. How were lessons learned applied to integration as they surfaced?
	Scope	2. Was there additional scope that you felt should have been included in the vision?	11. How did the architecture and design choices contribute to meeting the project requirements?	20. How did the delivery of scope meet the expectations of the business?	29. How well were changes to scope managed?	38. How did the project do at meeting all the scope requirements?
	Time	3. Was the initial (re-planned) project schedule reasonable and measurable?	12. Did agencies have sufficient opportunity to provide input into scheduling?	21. How effective were the project schedule and Milestone Reports?	30. Was the schedule generally met? What would have helped?	39. How were lessons learned applied to quality and testing as they surfaced?
	Cost	4. How were costs in line with the needs of the business and the other constraints?	13. How could we have better calculated cost comparisons for pre-/post-email costs?	22. Were there any cost savings identified during the project?	31. How were budget issues identified in a way that allowed effective adjustments?	40. How did the state experience economies of scale with shared services?
	Quality	5. How did the organization agree to what constituted a quality outcome at project initiation?	14. Were the implementation checklists, pre-takeover guides, and end user training materials high quality?	23. Did processes exist to ensure that implementations were successful?	32. How were issues with project quality identified and managed appropriately?	41. Did the Lessons Learned help team members reflect on ways to do a better job next time?
	Human Resources	6. How did the organization apply the right people in the right roles at the initiation of the project?	15. Did staff have sufficient training and support to do their jobs?	24. Was staffing adequate?	33. How were staffing issues or new needs identified and addressed during the project?	42. Has the project team effectively transferred knowledge to appropriate agency staff?
	Communications	7. Were the right people informed? Who else might the project included in the initiation phase?	16. What would have made a more robust communications plan?	25. How effective were the ETAG, Implementation Coordinator, and individual customer planning meetings?	34. Was the communications plan effectively executed?	43. How were lessons learned applied to communications and feedback during the project?
	Risk	8. How was risk tolerance and level assessed and applied to project strategy?	17. How was risk identification and mitigation addressed in the plan?	26. When risks were encountered, did the project effectively handle them?	35. Were risks monitored appropriately?	44. How were lessons learned applied to risk management during the project?
	Procurement	9. How were procurement requirements sufficiently identified?	18. Did we get the right vendors?	27. How well did the vendors provide the expected support?	36. How was vendor performance monitored?	45. Were contracts closed out when the work was complete?

The following observations and lessons learned were synthesized from feedback received by the Project Steering Committee. The observations reflect common themes from many of the participants. The vast majority of Lessons Learned presented in this report reconfirm best practices which were implemented by the project team and contributed to the success of the project. In a few instances, they represent approaches that would have improved outcomes. Those improvement lessons are *italicized* to distinguish them from the best practices utilized by the project.

Table 1. Project Steering Committee Observations and Lessons Learned.

Knowledge Area	Observations	Lessons Learned
Integration	It was difficult to sell the project to all stakeholders, particularly in the beginning. Larger agencies had well-established processes for managing email. It wasn't always clear to individual agencies how the overall savings to the State applied to their individual agency.	<ul style="list-style-type: none"> • Develop a solid business case first, before focusing on technology or implementation of a mandate. • Understand that agencies can have completely different levels of interest, based on their size,

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Knowledge Area	Observations	Lessons Learned
		existing infrastructure, support staff, and cost allocation <ul style="list-style-type: none"> • <i>Communicate more clearly and more often the statewide savings across all functional areas, including contracts, administration, oversight, and technology investments.</i>¹
Scope	The core project scope was comprehensive and clear. Some details were initially unclear, but became clearer as time went on. Because the project was so big, any ambiguity was unsettling for some.	<ul style="list-style-type: none"> • Invest time early in the project to ensure stakeholders are clear on project scope, costs, constraints and outcomes. Check for buy-in often. • Monitor implementation, expect continuous improvement.
Time	The project implementation schedule was negotiated between CTS and individual agencies, and sometimes those schedules changed. Most project areas were on schedule, but a few, like secure email and SMTP relay, were delayed.	<ul style="list-style-type: none"> • Understand tradeoffs regarding schedule changes, communicate about the schedule frequently. • Continue the best practice of collaborating with agencies to set their implementation schedules. • <i>Protect project staff from large bow-waves of delayed work by limiting the number of migration “slots” that can occur in any given month.</i>
Cost	The project staff and steering committee spent a significant amount of time analyzing a rate structure that would cover costs for shared services, and provide value to end users. However, concern remained among some agencies about the costs. There were often expressed expectations for a level of service that was not achievable within the existing rate structure. In most instances, agencies could not calculate current costs for hosting email internally, and so could not compare current costs to the proposed rate for shared services. Many agencies repurposed equipment and staff, and did not	<ul style="list-style-type: none"> • Invest sufficient time in bringing stakeholders on board with major decisions. Check for buy-in often. • <i>Manage expectations by providing sample cost data from other service providers.</i> • Understand that agency cost savings may be difficult to quantify, especially if staff or equipment is retained and repurposed.

¹ Italicized comments represent approaches that would have improved outcomes, if implemented.

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Knowledge Area	Observations	Lessons Learned
	see a bottom line reduction in their overall technology costs.	
Quality	The project used guides and checklists to assist agencies in their transition to shared services email. The quality of the materials was very high, and the project team solicited feedback after every implementation to improve the process.	<ul style="list-style-type: none"> • Identify repeatable processes in any project. Document the process and solicit feedback regularly to improve the repeatable processes.
Human Resources	The project team worked collaboratively with customers to implement mailbox migrations and vault ingestions. Agencies were pleased with this approach. Technical staff had a heavy workload and it was sometimes difficult to juggle competing responsibilities. The project team relocated to a central project area with all staff in close proximity, which enabled rapid, effective collaboration. It was not always clear to the customers when they transitioned from the project team for support to maintenance and operations for support.	<ul style="list-style-type: none"> • Develop and implement a knowledge transfer system (including customer knowledge transfer) throughout the project life cycle, not just at the end. • <i>Communicate very clearly to all customers when their transition from project to maintenance and operations occurs.</i> • Build in tasks and assign resources to knowledge transfer work so it becomes part of the project plan. • Relocate project team to a centralized area in close proximity to each other to improve collaboration.
Communications	The project identified several stakeholder groups and communicated regularly to them. Initially, information was targeted to specific groups, however stakeholders expressed a desire to have full information across all groups so the communications team adjusted their approach to provide more consistency. The project provided liaisons to every agency, and that process worked exceptionally well. Implementation questions were repeated as each agency began implementation activities. Having thorough documentation and a customer liaison role protected the technical team from having to divert their time from technical tasks to answer the same questions repeatedly and the customers all received consistent information.	<ul style="list-style-type: none"> • Establish consistent communications among all stakeholder groups, tailored for each group. • Seek feedback regularly from selected stakeholders about what messages they need to receive. Also seek feedback about what might be considered too much project communication. • Use multiple communication methods, including meetings, emails, and web repositories to deliver project-related content. • Develop FAQs and tune documentation based upon user questions, to reduce subsequent support inquiries. • <i>Add distribution list for agency</i>

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Knowledge Area	Observations	Lessons Learned
		<i>CIOs.</i>
Risk	Risks were identified early in the project, and were regularly monitored. The risk of a major change in strategic direction was not initially identified, but mitigation plans were put in place as it emerged. There were a few highly visible service outages during the implementation phase (some of which were unrelated to the email project) which heightened the perceived risk of using centralized shared services email. Face-to-face customer meetings were scheduled to communicate service issues, which were very well received, and helped ease concerns about the service.	<ul style="list-style-type: none"> • <i>Evaluate fundamental assumptions, and assess what happens if those fundamental assumptions are not met.</i> • Manage expectations about a startup service, describe what could happen during the stabilization period, and provide regular metrics that show how service is performing and how it is expected to improve. • Provide opportunities for face-to-face customer meetings to address service issues, and to allay concerns.
Procurement	The project had support contracts with key technical vendors. While the vendor staff were very knowledgeable, their participation in the project decreased as the project progressed which shifted more work to the project team.	<ul style="list-style-type: none"> • <i>Schedule consistent availability and/or on-site work for technical support vendors.</i>

Project Team Feedback

The project team provided a more detailed perspective in their lessons learned. They used a tool that examined all the project processes and specific functional areas, like Secure Email, ActiveSync, and disaster recovery design and setup. Both individuals and small groups selected 5-7 processes or functional areas to evaluate. For each topic, they identified a few things that worked well, and that could have been better.

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Figure 2. Process & Functional Area Tool used by the Project Team.

Topic Name

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INITIALS

On a half sheet of paper, quickly evaluate the following processes and functional areas.

- Draw a T on the paper as shown
- Label the top with the specific process or functional area
- List a few things that worked well on the left
- List a few things that could have been better on the right
- If willing, put your initials on the bottom for follow-up if necessary

Broad Project Processes

- Change Management
- Scope Management
- Schedule Management
- Cost Management
- Procurement Management
- Project Quality Management
- Communications Management
- Issue Management
- Risk Management
- HR Management
- Stakeholder Management (Customer Engagement)
- Implementation Management
- Handoffs to Help Desk/M&O
- Training
- Testing

Specific Functional Areas

- Exchange 2010 shared services design
- Vault design
- Secure email
- Service Level Agreements
- Documentation
- Webmail
- IronPort filtering (email hygiene)
- Agency application integration
- Network/Firewall integration
- Blackberry service
- ActiveSync
- Disaster Recovery/Business Continuity design & setup
- Delegated Administrator design and implementation
- SMTP relay services

The following observations and lessons learned were synthesized from feedback received by the Project Team. The observations reflect common themes from many of the participants.

Table 2. Project Team Observations and Lessons Learned.

Project Processes	Observations	Lessons Learned
Change Management	There were very few project change requests, and most of them used a standard process. On a few occasions, the project absorbed changes without using the change management process, which caused some impact to the schedule for the core work. Over time, the process for notifying customers of planned changes became streamlined.	<ul style="list-style-type: none"> Using a well-established change management system helps with scope management, and engages stakeholders in the process. Be aware of the potential for changes to scope through informal channels.
Scope Management	Scope was well managed. The PM used good project processes to control scope. In some instances, it was a bit unclear to customers the details about project scope. Sometimes, establishing clarity about the scope occurred	<ul style="list-style-type: none"> Understand that it is very difficult to completely define scope at the beginning of the project. Issues will arise that may

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Project Processes	Observations	Lessons Learned
	as the work was unfolding. The effort to support public folder migration from Exchange 2003 to Exchange 2010 was not clear in the initial design or planning documents. This increased the scope of work substantially.	impact scope and will need to be addressed, preferably using the change management process, which will help with communications and expectation management.
Schedule Management	Most tasks were accomplished on schedule. Staff had responsibilities in both the project and in operations support, making it difficult to predict timelines for the concurrent project work. Some adjustments had to be made to the project schedule during the implementation period.	<ul style="list-style-type: none"> • <i>For a project that has a long implementation period, running concurrent with project work, reduce the project workload during the implementation period to allow staff to help address implementation issues.</i>
Cost Management	Internal management of the project budget worked well, with clear communications within the team about cost projections. The project did not receive financial reports from DES in a timely manner, and was not able to corroborate their internal reports.	<ul style="list-style-type: none"> • Work with fiscal staff to establish a project budget report where possible.
Procurement Management	A key vendor had difficulty staffing a production support position and this created an added burden on the project team for several months. Another vendor provided unsatisfactory service which resulted in increased workload on the team.	<ul style="list-style-type: none"> • Escalate early and often to ensure vendors meet commitments. • Withhold payment for less than satisfactory work.
Project Quality Management	The project used the services of an external QA vendor to assess and report progress to management and stakeholders. The vendor had access to the technical team and customers to gather feedback throughout the project.	<ul style="list-style-type: none"> • Full visibility for objective assessment increases confidence of stakeholders.
Communications Management	The project developed and executed a comprehensive communications plan, including an external SharePoint site, emails, and regular meetings, targeted to specific groups (Exchange Technical Administrators, Project Steering Committee, Agency Implementation Coordinators, daily standup meetings, etc.). The process was generally smooth, although the team identified some minor improvements regarding incident reporting, and standardized communications to all groups.	<ul style="list-style-type: none"> • Share all information with all audiences regularly. • Project stand-up meetings work well and should be time limited. Ensure that longer discussions get offloaded to the relevant staff to address.

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Project Processes	Observations	Lessons Learned
Issue Management	<p>The project documented both global project issues and customer specific issues. In addition, an “Exception Log” was used to track any exception requests to deviate from the standard implementation path. The system involved a single channel to triage reported issues. The team used a continuous improvement process to solicit feedback regarding issue management, and improved support over time. Identifying root causes was sometimes difficult, because there was a fear of blame. Project leadership continues to work on cultural changes to establish a perspective that errors are almost always a result of a systems issue, and can be reduced by understanding root causes and implementing processes to reduce variability and the potential for human error.</p>	<ul style="list-style-type: none"> • Develop a clear process for handling and following up with issues. • Establish a culture of “no blame” to help identify root causes quickly and easily to resolve core issues. • Production support services need to be established as soon as implementation starts.
Risk Management	<p>The risk management process functioned as intended. The project team met early to identify risks and risks were reviewed regularly by project leads. Mitigation strategies were realistic and supported by management. The risk of a major change in strategic direction was unforeseen, but was appropriately managed when it arose. While the internal team leadership reviewed risks periodically, they didn’t regularly solicit formal feedback from the steering committee or project staff.</p>	<ul style="list-style-type: none"> • <i>Periodically seek the opinions of project staff and stakeholders in assessing project risks.</i>
HR Management	<p>The project team was carefully selected to provide the right level of support for a key agency initiative. The project team appreciated that the Project Manager was sensitive to protecting their time and tried to minimize over-commitments. Stand-up meetings were used to check progress on tasks in order to minimize disruptions and longer meetings. There was some ambiguity around the role of the Service Owner vs. the role of the Project Manager. It worked well to ramp up M&O support when the first customers went live, instead of waiting for the entire implementation to complete. There could have been even more focus on this.</p>	<ul style="list-style-type: none"> • Engage in thoughtful selection of and negotiation for project team members to help ensure the goals of the project can be met. • Establish positions for post-implementation support before needed, to allow sufficient time for knowledge transfer.

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Project Processes	Observations	Lessons Learned
Implementation Management	<p>The project provided agency liaisons to support individual agencies before, during and after their implementations. Agencies appreciated this approach very much. Project resources were strained during the early implementation and stabilization period as issues surfaced that needed their support to resolve. Project work sometimes was delayed to address production issues. The project team consistently sought feedback from agencies who completed their implementations to improve the process for subsequent agencies.</p>	<ul style="list-style-type: none"> • Establish a single point of contact for each agency within the project to give customers the consistent support and tracking they need. • <i>Reduce project team workload for team members who have implementation support responsibilities.</i> • Establish early knowledge transfer processes between project staff and operations to minimize the impact of production support on project staff.
Handoffs to Service Desk/M&O	<p>Throughout the project, the team met regularly with M&O staff and Service Desk to plan and implement support services. Initially, the M&O team relied heavily on project staff to resolve customer issues, but as knowledge transfer progressed, the M&O team took over responsibility for monitoring and responding to customer tickets, decreasing both the workload of the project team and the response time to tickets.</p>	<ul style="list-style-type: none"> • <i>Schedule less project work during the height of early implementation, until universe of issues is stable and M&O can address vast majority of issues.</i> • Build in sufficient time for knowledge transfer, and monitor to ensure it is occurring throughout the project, not just at the end. • Meet early and often with the Service Desk and customers to help ensure more accurate routing of tickets.
Training	<p>The project provided access to training for staff, through both standard scheduled training opportunities, and specialized training/knowledge transfer from onsite vendors. It was difficult for staff to cross-train, because of the normal project workload. Staff felt they would have benefitted from follow-up training activities later in the project, once they had gained more experience.</p>	<ul style="list-style-type: none"> • Provide follow-up opportunities from external experts to assist technical staff on specific topics. • <i>Build cross-training into the project schedule so that the staff have time to train others.</i>
Testing	<p>Technical testing was robust, and handled with internal resources. It was challenging to</p>	<ul style="list-style-type: none"> • <i>Customized implementations should be</i>

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Project Processes	Observations	Lessons Learned
	work with customized implementations, because there was not enough time to thoroughly test those customizations and/or testing of customizations increased the scope of work and detracted from other assignments. There were some production components which could not be tested outside of a production environment, like SMTP relay, which by definition involves routing email through the Internet.	<i>treated as a change order, and fully tested in advance of production deployment.</i>

Functional Areas	Observations	Lessons Learned
Exchange 2010 shared services design	Technical staff on the project team worked side-by-side with vendor experts to design the system. This vendor partnership that was established early in the process helped ensure project success. During the design period, detailed requirements were clarified as necessary.	<ul style="list-style-type: none"> • Engage appropriate vendor resources early in the design. • Include a process to check and adjust requirements during the design phase.
Vault design	The transition from Vault 2003 environment backups to the Vault 2010 environment took longer than originally estimated. Despite the design being developed and reviewed by both a Symantec services partner and Symantec and confirmed during a post-production health check, design issues were discovered later that consumed extensive resource hours to resolve. The project would have benefitted from more comprehensive vendor support during the testing and early production phases.	<ul style="list-style-type: none"> • <i>Earlier and additional support from other groups like the Storage group and the Exchange team would have benefited the Vault team.</i> • <i>Post production Health Checks should be performed by an independent vendor.</i> • <i>Ensure there is adequate testing time prior to implementing first customer.</i>
Secure email	Due to the complexity of this new service, the procurement process took longer than originally anticipated, causing implementation to also happen much later than originally scheduled. This actually provided a greater benefit by allowing the team to get better requirements from agencies.	<ul style="list-style-type: none"> • Sometimes there are benefits to deferring important work that is not on the critical path, like establishing better requirements from customers.
Service Level Agreements	The process for developing Service Level Agreements (SLA) was very collaborative. Agencies participated in the generation and revision of the SLAs.	<ul style="list-style-type: none"> • Engage customers in drafting standard agreements.
Documentation	The project set up an Internet site accessible to all customers, and organized a document	<ul style="list-style-type: none"> • Have a well-organized document repository

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Functional Areas	Observations	Lessons Learned
	<p>repository, complete with standard templates for the dozens of project documents produced. Writers used a continuous improvement cycle to obtain feedback and update the user and technical documentation regularly. The team worked to ensure the revision history and last updated date was clear to the reader. The team received frequent positive feedback about the quality of documentation.</p>	<p>accessible by customers.</p> <ul style="list-style-type: none"> • Establish process for revising documents, make revision history clear. • Establish a master list of expected documents to ensure all documentation is being produced. • Create templates and standards for project documentation, and write documents for the intended audience (tech admin, end user, etc.).
<p>Webmail</p>	<p>The project implemented new webmail tools from Microsoft, which were a significant improvement from prior OWA versions. End users didn't know the full capabilities of the remote access tool.</p>	<ul style="list-style-type: none"> • Establish ongoing training or communication channel to effectively highlight the full capabilities of webmail.
<p>Agency application integration</p>	<p>Early in the project, the staff requested a list of applications from each agency that integrated with their existing email system (e.g. integrated fax/email tools, resource scheduling, bulk mailers, etc.) This list proved very helpful to identify the scope of work that was necessary, and provided for the first time a comprehensive list of applications by agency that might require ongoing support in the future. There were actually less integrated applications than were originally anticipated.</p>	<ul style="list-style-type: none"> • Identifying the scope of work within a subproject is an important first step in quantifying and estimating planned work. • <i>Initial estimates of work impact may be greater than reality.</i>
<p>Network/Firewall integration</p>	<p>The project depended on involvement with other CTS units, including network, storage and firewall teams. Involving these outside resources at the very beginning of the design stage and throughout the project was a key to success. However, it was challenging to involve the part-time resources with the other demands of their work.</p>	<ul style="list-style-type: none"> • For any projects which require network access, involve network and firewall staff at the very beginning of the conceptual design stages, and maintain their involvement through production implementation. • As much as possible, provide advance notice to part-time resources when their skills will be needed, to avoid incurring delays in the project due to resource

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Functional Areas	Observations	Lessons Learned
		availability.
Blackberry Service	The migration path for BlackBerry service included migrating customers from their own BES servers to CTS servers in the Exchange 2003 environment and then migrating again to the BES servers in the Exchange 2010 environment. This work was performed outside the project team and customers expressed frustration about differences in implementation support. Many issues were encountered during these migrations and BES service was unstable (both locally and globally for RIM). It took a coordinated effort between the project team, the BlackBerry team, and the agencies to migrate BlackBerry users. The project team solicited feedback and used that feedback to improve the implementation process and readiness checks.	<ul style="list-style-type: none"> • <i>Including this work as part of the project could have provided the customers with a more consistent experience.</i> • <i>Determining a direct migration path into the Exchange 2010 environment would have reduced impact of 2003 instability and would have only been one migration to coordinate.</i>
ActiveSync	Originally not in scope, the project team researched this very popular request and concluded it could be incorporated into the project scope with no additional charge. A workgroup was formed with customer participation. While ActiveSync supports multiple platforms (Apple, Android, etc.) and devices, testers discovered that device performance and features varied widely, and that some devices did not allow minimum ISB security standards to be set. Thus, the project provided a list of tested and approved devices.	<ul style="list-style-type: none"> • It is important to manage customer expectations regarding approved devices and why certain devices are not approved.
Disaster Recovery/Business Continuity design & setup	The Exchange 2010 design includes a highly available, redundant system. This design type replaces the 2003 Exchange disaster recovery model of production and DR backup and was difficult for some stakeholders to understand. A core component of the project was to provide comprehensive disaster recovery/business continuity services. This highly technical work required significant resources to complete, and took quite a bit of effort.	<ul style="list-style-type: none"> • Less visible areas of technical projects need sufficient attention and resources to be completed effectively. • <i>Additional documentation and communication about the system design would have helped build understanding.</i>
Delegated Administrator design and implementation	The design of the shared services email system involved shared administrative responsibilities. Agencies were responsible	<ul style="list-style-type: none"> • Work with customers early on to identify roles and responsibilities and to

Functional Areas	Observations	Lessons Learned
	for basic user maintenance, like adding, deleting and modifying users, and customizing global settings specific to their agency. This model provided enormous benefit to agencies to maintain local control and responsiveness, but some agencies didn't understand the degree of local control and responsibility this design required.	obtain buy-in.

Conclusion

There are several key takeaways from this report.

- Large scale comprehensive projects such as the Shared Services Email Project not only require, but benefit from, the collaborative planning and control established in this project.
- A continuous improvement cycle involving detailed checklists and agency feedback, successfully executed by the project team during the long implementation phase, is a critical success factor.
- Constant communications, including both listening and sharing, using multiple avenues, is important to build buy-in.
- Finally, executive support is absolutely critical for success. Without strong executive support, including regular interactions with key stakeholders, efforts such as the Shared Services Email Project would be very challenged to succeed.

This project is remarkable in that it represents the first of many major consolidation efforts that the state of Washington plans to engage in to improve service delivery and reduce costs. The cultural shifts established in this project from independent agency responsibility and control, to shared decision making and shared involvement set the stage for subsequent collaborative efforts.

The lessons learned within this project can benefit future projects of this size and scale to establish trust, cooperation, and mutual agreements among agencies to work together for the benefit of all.