

One Washington Phasing and Timelines

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1.0 Deliverable Overview

1.1 Purpose

The Phasing and Timelines deliverable builds on prior analysis from the One Washington project to plan, evaluate, assess, and recommend the rollout and operation of Enterprise Resource Planning (ERP) functionality across in-scope agencies within the twelve fiscal year timeline of the One Washington business case.

1.2 Key Question

The Phasing and Timelines deliverable seeks to answer the following question: How should functionality and agency implementation be phased and what is the timeline?

1.3 Key Considerations

The development of this deliverable has taken into consideration the following:

- The Phasing and Timelines recommend a phased deployment approach for the rollout of ERP functionality based on State input.
- A Phasing and Timelines approach is recommended for Scenario 1 and Scenario 2, and a potential approach for Scenario 3 is described, based on the current market offerings.
- This analysis is based on guiding principles developed in coordination with the State to balance cost with a need to achieve the highest benefits in the shortest period of time with acceptable risk.
- The deliverables referenced throughout this document refer to project deliverables submitted to the State as a part of the One Washington ERP Assessment engagement.
- The Phasing and Timelines correlate to the overall 49 fiscal quarters of the One Washington project effort, described in the Budget, Procurement and Financing Strategy and Staffing Strategy deliverables.
- The Phasing and Timelines deliverable meets the requirement defined in Contract K2636 in the Compensation Section, as well as in the Statement of Work, Section 5.1, related to Phase 2, Deliverable #3.



2.0 Executive Summary

The One Washington Enterprise Resource Planning (ERP) analysis is organized into three stages that encompass the entire project lifecycle. These stages are:

- Pre-implementation Stage: This includes planning and procurement activities to achieve authorization and funding for the One Washington project, development of detailed specifications, requirements and plans, mobilizing the State employee team, and completing several procurements for professional services and ERP software. The outcome of this stage is a complete State and vendor team ready to commence the implementation of the new system. This also includes activities for targeted business process redesign (BPR) for cross-process initiatives (referred to as BPR Round 1a). These BPR activities drive hard dollar and mission benefits, which are described in the One Washington Business Case, and provide the foundation for implementation of the new system.
- Implementation Stage: This includes all the activities for the system development lifecycle, i.e. design, build, test, and deploy the new system. The outcome of this stage is the continuation of benefits derived from BPR activities and retirement of the Agency Financial Reporting System (AFRS) and other legacy systems. This stage also includes innovation of eight selected business processes (referred to as BPR Round 1b).
- 3. Post-Implementation Stage: This includes activities to operate, maintain, and upgrade as necessary the new system and related business processes.

Together, these stages add up to a Total Cost of Ownership (TCO) for the One Washington project. This approach organizes the numerous project activities and work streams to address the sequencing, flow, and interdependencies of each, pursuant to the guiding principles of reducing cost, maximizing benefits, and controlling risk.

As the State develops its strategy for replacing AFRS and other legacy financial systems, three scenarios for analysis have been defined, based on what current options offer the best value for the State. Each of these scenarios requires distinctive considerations for phasing, timelines, factors of risk, interdependencies, time and cost. The analysis described in this deliverable provides valuable input to strategic decisions that State leaders will need to make ahead of an ERP implementation. Our recommendations for the phasing and timing of each scenario are as follows:

- Scenario 1 (Managed Services ERP): The recommended functionality for Scenario 1 includes all finance and procurement functionality being implemented in one integrated ERP system, through five phases in which related functions of the total ERP system are implemented together combined with three agency waves in which groups of agencies are brought onto the new system at the same time. Implementation of the ERP system would be preceded by planning, procurement and business process redesign activities. Implementation would be followed by post-implementation support, provided in a vendor managed services model (i.e. hosting and application maintenance and operation). Of the three scenarios, this results in the replacement of AFRS the quickest.
- 2. Scenario 2 (Best-of-Breed eProcurement with Managed Services ERP Financials): The recommended approach for Scenario 2 includes implementing a Best-of-Breed eProcurement system first, followed by an ERP system implementation including the remaining in-scope functionality. This scenario includes seven phases of functionality again combined with three agency waves. The pre- and post-implementation activities are similar to those described in Scenario 1, with some adjustments made to accommodate the Best-of-Breed functionality. The cost for implementing Scenario 2 is higher and the



time to replace AFRS is longer than Scenario 1, because two systems are being implemented, but the eProcurement functionality would be delivered sooner.

3. Scenario 3 (Best-of-Breed eProcurement with Software-as-a-Service (SaaS) ERP Financials): The phasing and timeline approach for Scenario 3 would be similar to Scenario 2. The pre implementation activities are likely to remain unchanged. The timing of the eProcurement aspects is the same. The major differences are the ERP implementation methodology and post implementation operating model. The implementation methodology for SaaS would be a more iterative, agile type methodology rather than a waterfall type methodology. Thus the time to replace AFRS would be potentially shorter than Scenario 2, but still longer (because there are two systems) than Scenario 1. The post implementation support model for the SaaS ERP Financial system will rely heavily on SaaS vendor.

The recommended phasing and timelines for Scenarios 1 and 2 are presented on the following page, juxtaposed against one another to provide clarity into key similarities and differences.

At the current time SaaS vendors are actively working to provide the functionality and services required by state governments, but actual experience is limited. Until there is more state government experience and SaaS ERP Financial products appropriate for state government mature, it is difficult to provide specific phasing and timeline guidance and estimates. Thus, a recommended phasing and timelines illustration has not been provided for Scenario 3 in this document.









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3.0 Introduction

To develop the Phasing and Timelines recommendations, the team performed a multi-factorial analysis that takes into consideration the following:

- Business process impacts, based on the Business Process Assessment and Business Process Redesign deliverables
- Agency impacts, based on the Readiness Assessment and Change Management Approach deliverables
- The landscape of current financial systems, based on the Current Financial System deliverable
- Considerations of staffing, based on the Staffing Strategy deliverable
- Financial impacts, based on the Budget, Procurement and Financing deliverable

As the State conducted its review and approval of the above deliverables, we then relied upon those decisions as key inputs to this Phasing and Timeline analysis. This was an iterative process that involved the One Washington Executive Sponsors, Executive Steering Committee, Business Advisors, central and line agency staff, and the One Washington core project team. Through a series of workshops and meetings, we gathered and evaluated feedback from these stakeholders to obtain State input and reaction to various options. We continuously provided our research from other states, understanding of the state government ERP marketplace, professional judgment, and unbiased advice to facilitate this process. In addition we continuously focused on risk from the perspective of interdependencies, time, cost, and technology.

To use an analogy, this deliverable is like a mosaic, with each component piece thoroughly validated and vetted and assembled into a unified, comprehensive, and coherent picture. This analysis builds upon One Washington project decisions and feedback from the stakeholders to determine the optimal approach to the three scenarios. The result is a recommended Phasing and Timelines plan for the lifecycle of the One Washington effort, including pre-implementation, implementation, and post-implementation activities for each scenario.

Pre-Implementation: Planning, Procurement and Business Process Redesign

Detailed background on the activities in this stage is included in the Business Process Redesign and Budget, Procurement and Financing Strategy deliverables. Considerations for this initial stage of the One Washington lifecycle include mobilizing the One Washington project team, securing project authorization and funding, developing Requests for Proposals (RFPs) for relevant procurements within each scenario, evaluation of RFP responses, and selection of vendors. This stage also includes software-agnostic business process redesign related to cross-process initiatives selected by the State for focus ahead of implementation, including redesign of the chart of accounts, development of a master vendor file, development of a master payee file, and development of a reporting strategy. These business process redesign activities are described in Appendix B.

Implementation: Deployment Considerations

We analyzed multiple options when considering how to roll out the State's future ERP solution. Options included:

- The *big bang* approach (i.e., deploying full functionality to all agencies all at once)
- Phasing multiple releases of functionality deployed to all agencies at the same time
- Deploying full functionality to multiple waves of agencies
- Phasing multiple releases of functionality deployed to multiple waves of agencies



Many factors play into the decision of which approach to use - including the business case, governance, technical considerations, other initiatives currently under way, dependencies, resource availability, and the legislative environment.

Through a number of meetings and working sessions with State and additional Accenture subject matter experts, the option of phased functionality deployed to three waves of agencies was selected as the preferred approach. This approach reduces overall business and implementation risk, while accelerating business benefits.

An important objective is to enable agencies to successfully become accustomed to the new ERP system and understand how to effectively use the system in their daily business activities. Accordingly, each scenario starts with a selected group of pilot agencies. Another important objective is to design the total system for all requirements upfront, to minimize rework and redesign later. Accordingly, each scenario also starts with a Blueprint design phase. A single design phase will allow the One Washington project team to focus on designing, configuring, building and testing the new ERP system for the entire State in a more controlled environment. The team will be able to leverage the lessons learned from the first pilot rollout on the subsequent and bigger waves of agencies. It also allows the team to build upon initial functionality, proven and tested in production with the pilot agencies, and add more advanced functionality in subsequent releases.

Building on the Readiness Assessment and Change Management Approach deliverables, the recommended plans for each scenario include activities related to the technical design, development, and implementation of the future ERP solution, and the critical change management activities required for overall success of the project. These activities are assumed to be active throughout the ERP implementation timeline. Also included in the Implementation stage are BPR activities that innovate targeted business processes, including procure to pay strategy, strategic sourcing, accounts payable, accounts receivable, grants management, project accounting, internal customer satisfaction, and vendor relationship management strategy. These BPR activities are described in Appendix B.

The phased functionality deployed to three waves of agencies approach reduces risk, provides incremental business value, and reduces the pace and burden of change to the agencies.

Post-Implementation: Maintenance and Operations

Each scenario provides the State the time necessary to effectively test and become trained on the new ERP system before the system goes into production. Once the new ERP system goes live, the system will need ongoing maintenance and operational support. This includes ongoing application development; for example, the development of new reports, interfaces, data conversions, software product enhancements, forms, and workflows (RICEFW) objects. It also includes application maintenance; for example, fixing bugs and applying patches and new software updates. It also includes application operations, which may include hosting the application at a State data center and managing the services desk for end user inquiries. In Scenario 1 and 2, it also includes the possibility of a major application upgrade (however, recently announced approaches from the major ERP software providers indicate a new process of continuous and small updates that may make major upgrades unnecessary). In Scenario 3, there continues to be a need for State support but the nature of the work is different. In Scenario 3 a major application upgrade is not needed, however the State will continue to need resources that understand how to configure the SaaS ERP Financial software for new releases as well as develop and support interfaces.

In all three scenarios, the State has decided to use a combination of State and vendor resources to accomplish the post-implementation activities. We worked in collaboration with the Department of



Enterprise Services to define the assumptions and the division of labor between State and vendors related to maintenance and operations and factored this into the Phasing and Timelines.



4.0 Implementation Strategy

Creating an ERP implementation strategy revolves around three dimensions:

- 1. An assessment of business processes in scope
- 2. Agency-specific considerations
- 3. The landscape of legacy systems that will overlay with the ERP system

This is a complicated issue to which the Business Process Assessment and Current Financial System Assessment deliverables submitted earlier in the One Washington engagement provide valuable insights.

4.1 Guiding Principles

The following principles were developed in collaboration with the One Washington Executive Steering Committee, providing direction for this analysis:

- Desire to minimize agency interim processes and integration
- Desire to minimize interim/throw-away interface development
- Desire to balance the need to pull the best people into the One Washington project while not depriving agencies of their top performers

4.2 Implementation Strategy for One Washington Scenarios

Through close collaboration, the One Washington team defined the implementation strategies for each scenario as outlined below. These strategies provide input to the separate Staffing Strategy; Budget, Procurement and Financing; and Business Case deliverables, and provide a key foundation for those components of work.

	Phase	Functionality	Agencies
	1	General ledger, procurement, accounts payable, accounts receivable and fixed assets	A small number of agencies (5 to 10) with medium risk and medium functional risk
	2	Advanced functionality including at least project accounting and grants management	A small number of agencies (5 to 10) with medium risk and medium functional risk
Scenario 1: Managed Services ERP	3	 General ledger, procurement, accounts payable, accounts receivable and fixed assets Advanced functionality including at least project accounting and grants management 	A larger number of agencies including the largest and most challenging
	4	 General ledger, procurement, accounts payable, accounts receivable and fixed assets Advanced functionality including at least project accounting and grants management 	Remaining agencies including some with primarily manual processes or special circumstances
	5	Budget development and management systems for at least OFM and line agencies	All agencies

Scenario 1: Managed Services ERP



	Phase	Functionality	Agencies
	1	Best-of-Breed eProcurement (temporary interfaces to the Agency Financial Reporting System, or AFRS)	A small number of agencies (5 to 10) with medium functional risk
	2	Best-of-Breed eProcurement (temporary interfaces to AFRS)	All remaining agencies
	3	General ledger, procurement, accounts payable, accounts receivable and fixed assets	A small number of agencies (5 to 10) with medium risk and medium functional risk
Scenario 2: Best-of-	4	Advanced functionality including at least project accounting and grants management	A small number of agencies (5 to 10) with medium risk and medium functional risk
Breed eProcurement and Managed Services ERP	5	 General ledger, procurement, accounts payable, accounts receivable and fixed assets Advanced functionality including at least project accounting and grants management 	A larger number of agencies, including the largest and most challenging
	6	 General ledger, procurement, accounts payable, accounts receivable and fixed assets Advanced functionality including at least project accounting and grants management 	Remaining agencies, including some with primarily manual processes or special circumstances
	7	Budget development and management systems for at least OFM and line agencies	All agencies

Scenario 2: Best-of-Breed eProcurement and Managed Services ERP

Scenario 3: Best-of-Breed eProcurement and SaaS ERP Financials

As mentioned previously, there is very limited experience with SaaS ERP Financial implementations in state government at this time. For planning purposes, we assume SaaS ERP providers will have developed and be offering in the state government marketplace functionality equivalent to the functionality in Scenarios 1 and 2. Based on experience in the non-governmental marketplace, we also assume the agile and iterative implementation methodology for SaaS could lead to a slightly different phasing strategy. Rather than three functional releases to three waves of agencies, it is possible to organize the implementation into two functional releases and two waves of agencies.

Our current estimate is that the first functional release could be target to core functions such as general ledger, procurement, accounts payable, accounts receivable, and fixed assets. This first release could be deployed to a pilot set of agencies, followed by a deployment to all remaining agencies. A second release could be all remaining functionality. Again, this could be deployed to the pilot set of agencies, followed by a deployment to all remaining agencies, followed by a deployment to all remaining agencies. The net effect would be to decrease the number of phases, and condense the 39-month implementation timeframe to 36 or even 33 months.



4.3 Project Lifecycle Overview: Scenarios 1 and 2

The ERP project lifecycle includes three major stages of activity: Pre-Implementation, Implementation, and Post-Implementation work. The specific tasks within each major area of activity are provided in Section 5.0.

4.3.1 Pre-Implementation Activities

Pre-Implementation work activities include planning for and procuring the ERP, and Round 1a business process redesign. In this stage of the lifecycle, the One Washington project team will secure ERP project authorization and funding, mobilize the project, define detailed requirements, develop RFPs, and procure software and services.

This stage also includes software-agnostic business process redesign related to cross-process initiatives selected by the State for focus ahead of implementation, including redesign of the chart of accounts, development of a master customer file, development of a master payee file, and development of a reporting strategy. These business process redesign activities are described in Appendix B.

4.3.2 Implementation Work

A mature ERP methodology addresses all system development lifecycle activities, i.e. the plan, analyze, design, build, test, and deploy activities. Additionally it includes implementation activities such as program/project management, additional business process analysis and redesign activities, and change management, i.e. training, performance support, communications, organizational assessment and redesign, and deployment to end users. Also in this stage are BPR activities that innovate targeted business processes, including procure to pay strategy, strategic sourcing, accounts payable, accounts receivable, grants management, project accounting, internal customer satisfaction, and vendor relationship management strategy. These activities will be performed during an overlapping timeframe of the ERP Implementation, but will be performed by a separate team. These business process redesign activities are described in Appendix B.

For the One Washington project, we recommend six distinct project stages. We recommend this six-stage approach for each phase in both Scenario 1 and 2.

1. The **Plan (Blueprint) Stage** involves project-level planning to define the solution Blueprint and overall project delivery strategy.

During this stage, the team creates the Blueprint, which will clearly identify what will be configured and built and establishes a general understanding of how new processes and the new system will operate. It identifies the prerequisite technologies, organizational impacts, and training needs necessary for the successful implementation and deployment of the new business capabilities. As part of the Blueprint, we also conduct another round of business process analysis and redesign, often referred to as fit-gap conference room pilots. In contrast to BPR Round 1a and 1b which are software agnostic, this is BPR focused directly on the capabilities of the selected ERP software.

Creating the Blueprint achieves the following:

- Global common process designs for all agencies and business units in scope
- Identification of all approved process variations which may be necessary for different agencies and business units
- Identification of permissible agency specific configuration or enhancements targeting to only allow statutory, regulatory, or approved agency specific considerations
- Process descriptions and flows



- An inventory of required reports, interfaces, data conversions, software product enhancements, forms, and workflows (RICEFW)
- Detailed application architecture showing relationships between application components and business processes, interactions/interfaces between new and legacy applications, and major data entity relationships
- Update work effort estimates and resource plans for delivery of the program
- Further identification/clarification of technologies required to enable the business processes
- Analysis of the organizational impacts resulting from the new processes and systems
- Analysis of the training and performance support needs to support the new processes
- Establishment of key stakeholder understanding and alignment the Blueprint
- 2. The **Analyze Stage** solidifies the State's vision for each business process and provides an outline solution design for the application. During this stage, the project team (comprised of State and vendor resources) defines deliverables related to processes, business requirements, organization and technical infrastructure to define the integrated future-state solution. The training team begins to prepare the organization for the new solution.
- 3. During the **Design Stage**, the project team develops the initial functional designs for RICEFW components and defines the initial application configurations. The technical architecture team completes the designs for the implementation environments and the training team completes the training designs. Data cleansing and preparation are also initiated in this stage to complete an acceptable level of data cleanup in time for mock conversions of the data. The functional and development teams collaborate to identify data clean-up requirements as part of the functional design process for conversions.
- 4. During the Build Stage, the application, technical architecture and training teams build the detailed technical designs, application configuration, testing documentation, technical architecture, computing environments, and infrastructure, training materials, and job aids. The development team focuses on the creation of technical designs for each RICEFW component. When technical designs are complete, the development team begins coding and testing each component starting with extensions to the standard software. The preparation of test scenarios and scripts begins in the Build stage. This stage also involves building of ERP system execution and operations environments. The project team also prepares the organization for the implementation by defining resource requirements for developing training, performance, and communication materials.
- 5. The **Test Stage** provides a structured way for the State to validate that the requirements and specifications are properly implemented and to confirm that the solution meets the requirements and specifications developed by the State and vendor. From an application perspective, the Test stage focuses on product and integration testing of the entire solution. The training team also performs the test of their training materials to make sure that they are ready to support the solution deployment activities.
- 6. The **Deploy Stage** consists of those activities required to deploy the ERP application to the users and transition application management responsibilities to the post-implementation support team. The project team leads a deployment readiness assessment to help confirm that the State business process owners, IT organization, and post-implementation support resources are ready for cutover from the earlier systems and go-live of the new solution.

It is recommended that agencies have significant participation during the Plan (Blueprint), Analyze and Design stages of Phase 1 to allow the project team to design and create a common core configuration and



build that will be used by Phases 2, 3, 4 and 5 (and 6 and 7 in Scenario 2). The Build, Test and Deploy stages will be specific to each wave of agencies. The objective is to have minimal additional design and development for each wave after the initial pilot wave for the functionality being deployed. If missed or new agency requirements are identified on an exception basis, new changes will be approved through the agreed upon governance and change control process.

4.3.3 Post-Implementation Support

The One Washington project has concluded to take a managed service approach for post-implementation support in Scenarios 1 and 2. The Managed Services Operating Model, shown below, defines the interaction between the vendor and the State and outlines their roles and responsibilities. The Managed Services vendor must work closely with State personnel. All service requests are channeled through the centralized help desk. This process gives clear visibility to issue prioritization, responsible parties and a single governance process that concentrates on the most pressing issues while avoiding confusion or misunderstanding. Key components on this service include:

- Regular service reports including service level scorecards and trend analysis
- Issue and risk management as agreed and appropriate
- Scheduled system maintenance as planned and agreed
- Review and prioritization of enhancements and/or new development as required and agreed
- Note: Data Center Services could be in either the State or vendor-managed Data Center



One Washington Managed Services ERP Operating Model



More detailed descriptions of key areas of the managed services model can be found in Appendix C of this document.

4.4 Project Lifecycle Overview: Scenario 3

4.4.1 Pre-Implementation Activities

These activities are the same as described for Scenarios 1 and 2 in Section 4.3.1.

4.4.2 Implementation Work

The approach for the eProcurement part of Scenario 3 is the same as Scenario 2, namely the same Plan (Blueprint), Analyze, Design, Build, Test, and Deploy stages.

However, as mentioned previously, the implementation approach for the SaaS ERP Financial system is different. The SaaS approach uses a methodology referred to as "agile". The agile approach uses a prototype of the solution to jumpstart the design process. After review and testing, a second prototype is developed. In essence, the solution is created through a rapid and iterative prototyping process. Aspects of the solution (demonstrated via prototypes) and approved by the State advance to integration testing and deployment for service delivery. This is typically referred to as "wave release 1, wave release 2, etc." An important characteristic of the agile approach is that portions of the solution are released to production more quickly than is the case with the waterfall approach described for Scenarios 1 and 2.

While the final solution is undergoing the iterative design and development process, activities related to project management, change management, and preparation for service delivery introduction are performed. The agile approach is illustrated below.



4.4.3 Post-Implementation Support

The activities are the same in this final stage, but division of responsibility is different for the SaaS ERP Financial system in Scenario 3. Typically, the SaaS vendor assumes 100% responsibility (rather than shared responsibility) for service desk level 2 and 3. Also a greater proportion of responsibilities for application management and service management are shifted from the State to the vendor than is the case described for Scenario 1 and 2 (however the State does retain some responsibility in these areas).



4.5 Current Financial System Landscape

The One Washington Current Financial System Assessment analysis engaged agency business and IT staff to evaluate the State's current financial applications to create a preliminary list of financial systems that will be replaced by an ERP system and those that will not be replaced but will interface with the new system.

Based on the input provided by sixteen agencies, the following recommendations were made:

- The State should replace 138 of the 170 systems identified as in-scope for this assessment with the ERP system.
- Of the remaining 32 systems:
 - 19 will need to interface with the new ERP.
 - 5 systems were candidates for decommissioning in the near future, or already have been decommissioned.
 - 8 systems will be replaced by the State's Time, Leave and Attendance System.

Interface work is a key cost driver. The Current Financial System Assessment was also used to estimate the relative number, complexity and scope of interfaces. This estimate was then compared to the experience of other states with similar size and scope to Washington. We also included in the estimating process the nature and degree of agency interfaces, often used for programmatic or other management purposes, into and out of the new ERP. We have provided resources in the budget and time in the Phasing and Timeline to address these needs.

Confirmation and timing of systems to be retired, systems to be interfaced, and detailed requirements will be completed during the Analysis stage of the ERP implementation project. We recommend final decommissioning of systems being retired be scheduled after six months of stable operations with the new ERP.



4.6 Risks

The risks in the chart below are based on our experience delivering similar implementations for state governments. A critical component to the success of deploying large-scale ERP transformation projects like the One Washington project is identifying risks early and effectively managing them throughout the entire lifecycle of the project. Specific risks associated with each scenario are provided in Section 5.0 of this document.

Risk Category	Risk	Mitigation Strategies
Project Planning – Scope	Inability for end-users and organization to manage the degree of change due to the amount of functionality and change associated with each release	 Comprehensive agency readiness and change management from the beginning of the project, with opportunities for agency-specific inputs Communications program
Project Planning – Resources/Schedule	Large project team size, complex project schedule, ability to manage resources and work plan	 Strong project manager with field-tested Project Management processes Consistent project management plans used across all teams Staffing approach to include recruiting and retaining project personnel
Project Planning – Scope	Risk and complexity of data conversion and data cleansing effort needed due to existing production applications, number of applications and volume of data	 Robust conversion plan, with well planned and executed mock conversions and dry runs Assure that the conversion test plans meet the business requirements of the application Involve business users early in the conversion validation and testing activities Test conversion with actual live production data Manage data cleanup efforts, planning for major clean up prior to go-live. Make sure sufficient time is allocated for this activity Clearly communicate roles and responsibilities of conversion cutover activities to personnel involved
Project Planning - Schedule	Loss of business continuity if deployment exceeds acceptable system down time during deployment go-live window	 Develop and test detailed deployment through dry-run testing prior to go-live Include checkpoints throughout deployment to validate schedule Execute backups to allow for roll-back to a prior checkpoint, to minimize schedule delays due to issues Develop detailed roll-back and recovery contingency plan



Risk Category	Risk	Mitigation Strategies
External Dependencies (Agencies)	Extensive training plan, requiring commitment of personnel to attend training, removing them from production activities	 Review expectations early and obtain Agency Sponsor commitment Prioritize who needs to get trained and when Provide alternate training options and mechanisms including instructor led, web based training, and job aids
Project Planning – Resources	Project resources are required for post-production support, and are unable to work on the future releases	 Prepare detailed production support plan and staffing model in advance Prepare contingency plan
Project Planning – Resources	The project team and OFM/DES organization is unable to support the agencies at go-live	 Prepare detailed production support plan and staffing model in advance Prepare contingency plan
Project Planning Resources	Low agency morale and support of overall ERP project	 On-going communication with participating agencies Identify and engage change agents at each participating agency
Technical	Technical performance of the application is poor due to volume of data and users	 Develop detailed performance test plan Set clear performance targets, manage business user expectations Execute performance test with full production volume and anticipated growth volumes up to one year beyond go-live, involving business users



4.7 Key Considerations and Differences for Scenario 3

The ERP industry is in an inflection point, with many changes and differences as the solutions for ERP evolve. The following table highlights considerations and differences between a SaaS ERP Financial system and a Traditional ERP system.

Considerations	Software as a Service	Traditional Model
Software fees	Customers pay subscription fee per seat/user and module. This is an operational expense. The customer does not own the software.	Customers pay fee for perpetual license and fee for software maintenance. This can be either a capital or operational expense. The customer owns the software.
Hardware and Maintenance fees	Hardware and maintenance fee are embedded in the subscription fee and managed by the vendor.	Additional costs apply for hardware and maintenance fees and managed by the State or by a vendor on its behalf.
Upgrade Process	On a regular (i.e. monthly or quarterly basis) the vendor releases patches, functionality enhancements or full upgrades, so that the customer solution will be automatically updated at no additional cost. New functionality releases happen anywhere from $2 - 4$ times a year. Customers must remain up to date with the SaaS vendor upgrade schedule. This must be accounted for as part of the Customer's maintenance and support plan and schedule.	On a regular (i.e. monthly or quarterly basis) the vendor releases patches, functionality enhancements or full upgrades which must be done by the customer or a vendor on behalf of the customer. Major new releases traditionally have happened every 3 to 4 years. Many ERP vendors are planning to release smaller more frequent functionality releases to avoid major updates.
Technology Ownership	Technology platform is owned, hosted and operated by the SaaS vendor; accessed by the customer via web, mobile device.	Hardware and software are installed at the customers hosting vendor (i.e. the managed service approach in Scenario 1 and 2) and accessed via web, mobile device. The hardware is owned by the hosting vendor, and the software can either be owned by the State or hosting vendor.
Application Ownership	The application is offered in a multitenant architecture with all of the vendor's customers accessing a single code base. Ownership of the software resides with the SaaS vendor and not with the customer.	The implemented solution is supported and operated by the hosting/managed service vendor. The application can be owned by the customer.
Flexibility of unique Customer requirements	Will not allow customizations for unique Customer requirements. If requirements cannot be meet within the software, State requirements and/or processes either need to be changed or a workaround outside of the SaaS software created.	Will allow customizations for unique Customer requirements.
Frequency of new functionality	More frequent additions of new software functionality.	Less frequent additions of new software functionality.



In moving to a SaaS ERP Financial model, trade-offs arise as organizations change the degree of multitenancy. Multi-tenancy refers to having many different organizations using the same software with their data in the same database, but segregated via security and system configuration. Industry studies suggest in general, maximizing multi-tenancy and sharing while meeting business requirements leads to a lower cost to managing and supporting the ERP system, while addressing unique requirements and ongoing subscription fees leads to higher costs, so the net Total Cost of Ownership over the timeframe of the business case is not dramatically different.



Some of the top reasons organizations choose SaaS ERP Financial systems include:

- 1. Speed and standardization: Speed to deliver, ease of use and access via any device, anywhere. This assumes the functionality to be delivered by the SaaS vendor is already developed.
- 2. *Reduced initial costs*: Reduced demand on in-house IT staff, upgrades included in service, always on the latest version, reduction in hardware costs, and hardware break fixes are included.

3. Flexibility: Flexible software, end user configurable, and flexibility to try with low up-front investment.

Some of the top reasons organizations choose managed service ERP solutions:

- 1. Control of the application: Customizations allowed for unique requirements.
- 2. Managed service: State has more flexibility to scale resources up or down based on demand.
- 3. *Credentials/functional coverage*: There are numerous State examples of complete and mature functional coverage.

Moving to a SaaS model poses some risks and challenges identified below. These matters can be mitigated by implementing appropriate internal management processes and working closely with SaaS vendors as their products and services evolve.

Governance: Configuration of SaaS ERP Financial systems depends on strong governance and crisp decision making to achieve the benefits of standardization. Having a clear governance process with the agencies and SaaS vendor will be critical to the success of the project. The One Washington governance group should work with Agencies to clearly define what areas of the SaaS ERP Financial system can be configured for agency specific purposes, versus the areas that are allowed to have workarounds. Specific details cannot be defined until a SaaS vendor is selected.



- Integration: Integrations to local systems should only be added if there is a clear need. Most implementation strategies focus on limited interfaces.
- Change Management: Implementing a SaaS ERP Financial system will also require higher degree and more frequent involvement by the business owners compared to a traditional ERP implementation. The post implementation operating model for a SaaS ERP Financial system will be different from the State's current ERP support model, so change management will be critical to providing the necessary training, communication and new role descriptions needed to support the new system.
- Vendor Lock-in: Entrusting critical applications to a SaaS provider creates barriers to bringing the application back on premise or to another supplier, and exposes the organization to the risk of being "locked-in". However, a diverse ecosystem of vendors is rapidly emerging and demand in the marketplace is driving the creation of tools to re-platform, thus mitigating this risk.
- Security and privacy: Concerns about SaaS/cloud computing have traditionally centered on security and privacy of data and systems. SaaS ERP Financial vendors have met or exceeded traditional ERP security compliance requirements and data centers provide the same security measures as traditional hosting providers.



5.0 Recommendation

We recommend the phasing and timelines described and illustrated below for each of the scenarios.

Scenario 1: Managed Services ERP

Scenario Description

Pre-Implementation

- Secure project authorization and funding
- Pre-Implementation BPR Work (Round 1a: Cross-Process Initiatives)
- Mobilize project, develop RFPs and procure software and services

Implementation

- Round 1b BPR: Innovative Processes
- ERP Blueprint (complete ERP design for all agencies)
- Phase 1 (Release 1 Functionality, Wave 1 agencies)
- Phase 2 (Release 2 Functionality, Wave 1 agencies)
- Phase 3 (Release 1 and 2 Functionality, Wave 2 agencies)
- Phase 4 (Release 1 and 2 Functionality, Wave 3 agencies)
- Phase 5 (Release 3 Functionality, All Agencies)

Post-Implementation

Post-Implementation Support

Implications & Considerations

Risks: Typical ERP Implementation risks identified in Section 4.5. An additional risk relates to go-live for some phases mid-Fiscal Year. This risk will need to be mitigated.

Interdependencies: Scenario 1 is the best scenario for dealing with interdependencies because all new functionality will be in the new ERP system. The State will have to deal with some temporary interfaces during the different wave deployments, but this scenario will require fewer temporary interfaces for a shorter period of time.

Time: A shorter timeline to replacing AFRS than Scenarios 2 and 3.

Cost: A lower implementation cost than Scenario 2.





Scenario 2: Best-of-Breed eProcurement and Managed Services ERP

Scenario Description

Pre-Implementation

- Secure project authorization and funding
- Pre-Implementation BPR Work
- eProcurement: Mobilize project, develop Best-of-Breed eProcurement RFP and procure software and services
- ERP: Develop ERP RFPs, procure software & services

Implementation

- Round 1b BPR: Innovative Processes
- eProcurement
 - Best-of-Breed eProcurement Blueprint (includes AFRS interface design for all agencies)
 - Phase 1 (Release 1 Functionality, Wave 1 agencies)
 - Phase 2 (Release 1 Functionality, Remaining agencies)
- ERP
 - ERP Blueprint (complete ERP design for all agencies)
 - Phase 3 (Release 1 Functionality, Wave 1 agencies)
 - Phase 4 (Release 2 Functionality, Wave 1 agencies)
 - Phase 5 (Release 1 and 2 Functionality, Wave 2 agencies)
 - o Phase 6 (Release 1 and 2 Functionality, Wave 3 agencies)
 - Phase 7 (Release 3 Functionality, All agencies)

Post-Implementation

- eProcurement Post-Implementation Support
- ERP Post-Implementation Support

Implications & Considerations

Risk: Typical ERP Implementation risks are identified in Section 4.5. An additional risk relates to go-live for some Phases mid-Fiscal Year. This risk will need to be mitigated. In addition, with Scenario 2 (and 3) the State will be managing two projects instead of one. This will require a high level of coordination and communication to ensure the two applications are developed in a manner that accomplishes integration. There is also a risk that the current system (AFRS) will malfunction before the replacement is completed. From a funding and authorization perspective, there is a risk the Legislature might not fund the project after the eProcurement stage.

Interdependencies: More system interdependencies exist with this scenario compared to Scenario 1 because more systems will need to integrate in this scenario. There will be more temporary interfaces needed and for a longer period of time.

Time: Longer overall timeline than Scenario 1. However, this scenario will take a shorter period of time to get the first wave of new functionality (eProcurement) compared to Scenario 1.

Cost: Higher cost compared to Scenario 1, because this is essentially two projects rather than one.





Scenario 3: Best-of-Breed eProcurement and SaaS ERP

In accordance with the Revised Statement of Work, we estimated a summary Phasing and Timelines for Scenario 3 and compared it to Scenario 2

The Phasing and Timeline approach for Scenario 3 will in many ways look similar to Scenario 2, but with some key differences and considerations.

- Impact on Pre-Implementation: There is a slight difference in the planning and procurement in Scenario 3 when compared to Scenarios 2. The State may need to approach planning for and procuring a SaaS solution differently, given the nature of the market and product offerings. There is no impact on the BPR.
- Impact on Implementation: As mentioned previously, there is very limited experience with SaaS financial implementations in state government at this time. For planning purposes we assume SaaS ERP providers will have developed and be offering in the state government marketplace functionality equivalent to the functionality in Scenarios 1 and 2. Based on experience in the non-governmental marketplace, we also assume the agile and iterative implementation methodology for SaaS could lead to a slightly different phasing strategy. Rather than three functional releases to three waves of agencies, it is possible to organize the implementation into two functional releases and two waves of agencies. Our current estimate is that the first functional release could be target to "core" functions such as general ledger, procurement, accounts payable, accounts receivable, and fixed assets. This could be deployed to a pilot set of agencies, followed by a deployment to all remaining agencies. A second release could be all remaining functionality. Again this could be deployed to the pilot set of agencies, followed by a deployment to all remaining agencies. The net effect would be to decrease the number of phases, and condense the 39 month implementation timeframe to 36 or even 33 months.
- Impact on Post-Implementation: Since SaaS ERP has a faster implementation date than Scenario 2, an additional year of support has been added.



A. Appendix A: Assumptions

Assumptions used in creating the different Phasing and Timeline scenarios in this document are provided below:

Assumptions

There are three ERP scenarios included in this Phasing and Timeline deliverable:

- Scenario 1 (ERP Managed Services scenario)
- Scenario 2 (Best-of-Breed eProcurement with Managed Services ERP)
- Scenario 3 (Best-of-Breed eProcurement with Software-as-a-Service (SaaS) ERP Financial system)

The following assumptions guide agency waves:

- Wave 1 will include a small number of agencies (5 to 10) with medium risk and medium functional complexity, as defined by the One Washington project team.
- Wave 2 will include a larger number of agencies, including the largest and most functionally complex agencies.
- *Wave 3* will include remaining agencies, including agencies with primarily manual processes or special circumstances.
- For eProcurement implementation across Scenarios 2 and 3, Wave 3 agencies will be combined with Wave 2 agencies.

Definition of agencies belonging to each wave will be completed by the One Washington team.

Phasing Assumptions for Scenario 1 (Managed Services ERP):

- Phase 1: General ledger, procurement, accounts payable, accounts receivable, and fixed assets modules, which will be deployed to Wave 1 of state agencies.
- Phase 2: Advanced financial modules including project accounting and grants management deployed to Wave 1 of state agencies.
- Phase 3: Deployment of general ledger, procurement, accounts payable, accounts receivable, and fixed
 assets modules as well as advanced financial modules including project accounting and grants management
 for Wave 2 of state agencies.
- Phase 4: Deployment of general ledger, procurement, accounts payable, accounts receivable, and fixed
 assets modules as well as advanced financial modules including project accounting and grants management
 for Wave 3 of state agencies.
- Phase 5: Deployment of budget development and management modules for all agencies designated by the One Washington team.

Definition of final ERP scope and specific phases will be completed by the One Washington team during Planning and Analysis phase of the Implementation project.



Assumptions

Phasing Assumptions for Scenario 2 (Best-of-Breed eProcurement with Managed Services ERP):

- Phase 1: Deployment of eProcurement functionality to Wave 1 agencies.
- Phase 2: Deployment of eProcurement functionality to all remaining agencies (Wave 2 and Wave 3)
- Phase 3: General ledger, procurement, accounts payable, accounts receivable, and fixed assets modules, which will be deployed to Wave 1 of state agencies.
- Phase 4: Advanced financial modules including project accounting and grants management deployed to Wave 1 of state agencies.
- Phase 5: Deployment of general ledger, procurement, accounts payable, accounts receivable, and fixed
 assets modules as well as advanced financial modules including project accounting and grants management
 for Wave 2 of state agencies.
- Phase 6: Deployment of general ledger, procurement, accounts payable, accounts receivable, and fixed
 assets modules as well as advanced financial modules including project accounting and grants management
 for Wave 3 of state agencies.
- Phase 7: Deployment of budget development and management modules for all agencies designated by the One Washington team.

Definition of final ERP scope and specific phases will be completed by the One Washington team during Planning and Analysis phase of the Implementation project.

Phasing Assumptions for Scenario 3 (Best-of-Breed eProcurement with Software-as-a-Service (SaaS) ERP):

- The pre-implementation activities are likely to be slightly changed. The timing of the eProcurement aspects is the same as Scenario 2.
- The major differences are the ERP implementation methodology and post implementation operating model
- The implementation methodology for SaaS would be a more iterative, agile type methodology rather than a
 waterfall type methodology. Thus the time to replace AFRS would be potentially shorter than Scenario 2, but
 still longer (because there are two systems) than Scenario 1.
- The post-implementation support model for the SaaS ERP Financial system will rely heavily on SaaS vendor.
- SaaS providers are developing more functionality and capability appropriate for state government, which is likely to be available in the marketplace by the time Washington needs to make the ERP software decision.
- Given the agile implementation methodology typically associate with SaaS ERP, it may be possible to combine implementation phases and complete the implementation process shorter than 39 months.

Definition of final ERP scope and specific phases will be completed by the One Washington team during Planning and Analysis phase of the Implementation project.

Estimates for agency costs to update line of business systems directly impacted by the new Financial ERP (e.g. inbound/outbound interfaces to new ERP system and data cleaning activities required for the ERP implementation) are included in the cost estimates. Estimates for agency costs for further updates to downstream line of business systems that do not directly interface with the new Financial ERP system, are not included in the cost estimates. Estimates are based on previous experience with similar sized projects.

Post-implementation support for all three scenarios will be estimated for not less than five years, or 60 quarters, and continue through the duration of the business case.

State and vendor staff will be responsible for Business Process Redesign work for Round 1a BPR (Cross-Process Initiatives), which includes creating a Payee Master Data File, a Customer Master Data File, a Uniform Chart of Accounts and Outcomes, and a Master Reporting Strategy. State and vendor staff will also be responsible for BPR work for Round 1b BPR (Innovate Processes), which includes these processes: Accounts Payable, Accounts Receivable, Grants Management, Project Accounting, Strategic Sourcing, Vendor Relationship Management, Internal Customer Satisfaction, and Procure to Pay Strategy.



Assumptions

Round 1a BPR (Cross Process Initiatives) activities approved by the State will be accomplished either prior to or in conjunction with eProcurement and ERP implementation. Round 1b BPR (Innovate BPR) activities will be accomplished in conjunction with eProcurement and ERP implementation.

Software-driven Business Process Redesign activities for all business process areas in scope (Round 2) will be accomplished in conjunction with eProcurement and ERP implementation.

The timelines and dependencies in the overall project are based on industry experience.



B. Appendix B: Description of Business Process Redesign Rounds

Round 1a Business Process Redesign: Cross-Process Initiatives

The five cross-process initiatives included in Round 1a BPR are described below. The timing of these activities has been incorporated into the Phasing and Timelines, staffing needs are addressed in the Staffing Strategy, and associated costs and benefits of these activities are reflected in the One Washington business case.

Activity	Description
Define "payee" master data	This activity would create standard data definitions for all classes of payees (whether in a master database or across multiple databases) such as vendors, employees, recipients, beneficiaries, fiduciaries, bondholders, other governments, and entities receiving revenue refunds. There are three steps in this activity. First, identify the sources and uses of payee data. Second, resolve policy issues such as data privacy, security, and access. Lastly, develop an agreed upon governance and management structure for payee master data.
Define "customer" master data	This activity would create standard data definitions for all classes of customers (whether in a master database or across multiple databases) such as taxpayers, other governments, and entities remitting revenue associated with fees, fines, licenses, sales, rents, and assessments. The steps in this process are the same as the payee data. First, identify the sources and uses of customer data. Second, resolve policy issues such as data privacy, security, and access. Lastly, develop an agreed upon governance and management structure for customer master data.
Define a uniform chart of accounts, to be activated after ERP software is selected	This includes the provision for mandatory coding block elements across the state, including the taxonomy and hierarchy for funds, organizations, expenditure accounts, revenue accounts, commodities, programs, and outcomes. This also includes the provision for optional (but consistent) coding block elements for agencies to include the taxonomy and hierarchy for projects and grants, and agency-based options for lower levels of the mandatory hierarchy (e.g., lower levels of detail that are useful to agencies but not mandated by the State).
Create a reporting strategy for in-scope business processes.	This activity involves three key steps to integrate data and analytics into business processes as discussed with stakeholders during the Strategy Labs. The first step is to identify the most important things to measure. Part of this initial step is to confirm that processes are compliant with relevant statutes and policies. Next, identify the sources of information (digital, manual, non-existent) – based on the source of information, related activities may be to establish a process for collecting relevant data, or to transition manually available data to a digitized format. Finally, confirm the use of data to identify issues related to the consumption and reporting of data that may stem from access, organizational hierarchy and scope of reporting. Once these three steps have been completed, the ongoing process for review and validation of reports needs to be defined and established.
Implement a business process management capability	 The ultimate success of any business process redesign effort lies in the ability to ensure that improvements actually take hold. We recommend that Washington launch a business process management capability with three objectives: 1. Define and implement a governance structure for all process changes 2. Create a system to monitor process changes and track their impact on performance 3. Develop a central repository for the newly defined processes



Round 1b Business Process Redesign (BPR): Innovate BPR

The eight business processes included in Round 1b BPR, noted as *Innovate BPR*, are described below. The timing of these activities has been incorporated into the Phasing and Timelines, staffing needs are addressed in the Staffing Strategy, and associated costs and benefits of these activities are reflected in the One Washington business case. The redesign of these processes is software-agnostic.

Function	Process	Potential Improvement Opportunity
	Accounts Payable	 Balance the Optimization of Prompt Pay Discounts and Reduction in Late Payment Penalties in order to maximize interest on cash flow.
	Accounts Receivable	 Improve collections process, particularly for agencies where collections is not a mission-critical activity (e.g., nursing or foster care overpayments, courts fines).
Finance	Grants Management	 State as Grantee Create an office or organizational capability for Federal Grants Management that provides central monitoring structure for Catalogue of Federal Domestic Assistance (CFDA) grant opportunities and provides guidelines for the full grant management lifecycle Implement an enterprise-wide policy that provides guidance for the matching of grant match requirements with state funds, in order to make decisions based on long term financial impact Maximize indirect cost recovery, especially for federal grants pursuant to allowable cost recovery principles (i.e., Circular A-87) State as Grantor Create a Customer Service Center of Excellence to reduce the level of effort (and costs) required by potential grant applications or grantees Launch Center of Excellence for Project Accounting
	Project Accounting	 Manage clearance patterns, for example: Dept. of Transportation – project accounting to facilitate daily billing for Federal Highway Administration Unemployment Insurance – monthly lag times to get reimbursed for administrative expenses
	Strategic Sourcing	 Leverage the state's buying power to secure better terms and prices from suppliers Identify a pilot agency or commodity to test various strategic sourcing tactics Demand rationalization Vendor aggregation Specification rationalization Use of sophisticated sourcing and negotiation techniques (e.g., reverse auction) Use Total Cost of Ownership approach to vendor/product selection
Procurement	Internal Customer Satisfaction	 Create formal channels of communication as a formal signal to create buy in for broader procurement transformation Implement tools designed to improve customer satisfaction, such as Service Level Agreements, methods for customer redress (e.g., refunds for customers who do not receive what they order), and formal complaint/monitoring capabilities



Function	Process	Potential Improvement Opportunity
	Procure to Pay Strategy	 Map Procure to Pay cycle across all involved agencies Introduce Procure to Pay concept to all business process owners Implement service-type concepts into the Procure to Pay cycle (Service Level Agreements, Redress Methods, Formal Complaint and Monitoring Capability, etc.)
	Vendor Relationship Management Strategy	 Explore opportunities to pilot vendor partnership programs as a tool for building engagement in the broader initiative Develop risk-based vendor management strategy Launch specialized vendor management programs (e.g., minority-woman owned businesses, green businesses, veterans) including procurement preferences, educational/mentoring programs, and capacity building efforts.

Round 2 BPR: Software-Driven

Software-driven Business Process Redesign activities for all business process areas in scope, to be accomplished in conjunction with system implementation. The timing of these activities has been incorporated into the Phasing and Timelines, staffing needs are addressed in the Staffing Strategy, and associated costs and benefits of these activities are reflected in the One Washington business case. The redesign of these processes is software-driven.



C. Appendix C: Managed Services Detailed Descriptions

Managed Services are provided by three levels of support defined as follows:

Level 1 Help Desk Support

The vendor support team would be designed to integrate with the State's Level 1 Help Desk and other IT and support entities to help deliver quick response to end user issues, clear understanding of issue status, and a collaborative resolution to end user issues.

Level 2 Support

Level 2 Support would interface with Level 1 regarding issues to obtain pertinent details. The Level 2 support team (comprised of State and vendor resources) would either resolve the issues or they would work with the Level 3 application maintenance team and/or the hosting team. Some of the components on this service include:

- Accept and triage inbound issue calls and e-mails and log cases through integration with State's 24x7 help desk
- Communicate status and resolution of cases to the State, and manage logged cases through completion
- Manage incidents in collaboration with the State's policies
- Escalate urgent application-based client issues

Level 3 Support

These services keep the environments available and meet the service level agreements (SLAs). Issues handled by Level 3 support are possible application break/fix issues, environmental defects and system/ application availability. The two main services within the Managed Services Operating Model are Application Services and Infrastructure Services. They are further described below.

Application Services

A brief summary of Standard ERP application services are discussed below:

- Application Operations and Monitoring: Ongoing operation of an application including both cyclic and non-cyclic activities, which enable a system to operate effectively. Activities consist of application monitoring and management, availability management, data replication services and continuity management.
- Application Testing and Maintenance: Modifying and testing application software and applying vendor
 patches to correct faults, improving application performance and reliability, and adapting the software
 to changes in the IT environment.
- Application Development (Small-scale enhancements): Development work consisting of minor upgrades, typically limited to some predefined number of hours or percent of team size, level of complexity/total work days effort, or done as time allows after SLA targets are met, for existing applications.
- Application Development Services: Encompasses major upgrades and releases, which can be included in the scope of an Application Services deal as agreed appropriate.
- Service management: Processes which govern all aspects of service delivery as follows:
 - <u>Incident Management</u>: Activities that provide organizations with the ability to manage (record, assign, track, monitor and close) unplanned interruptions to service (incidents) with the primary objective of restoring normal service operation as quickly as possible.
 - <u>Problem Management</u>: Activities for managing and diagnosing the underlying cause of an interruption to normal service delivery.



- <u>Demand Management</u>: Process of managing incoming work while helping to increase resource utilization.
- <u>Resource Management</u>: Process of securing and allocating resources to meet demand in a timely manner and at a reasonable cost.
- <u>User Relationship Management</u>: Maintaining open communications with and gathering feedback from the User community, both formally and informally.
- <u>Performance Management</u>: Activities to help confirm that goals are consistently being met in an effective and efficient manner by implementing goal-based measures and reporting results to stakeholders.
- <u>Release and Configuration Management</u>: Planning, scheduling, deploying and maintaining information about changes to the production environment.

Infrastructure Services

Infrastructure Services provide the State with an environment to support their ERP system, enterprise storage solutions, and other IT hardware related to the ERP project.

Infrastructure services consist of providing a set of capabilities that are bundled into the core service. The core service elements within Infrastructure Services are:

- Data Center management
- Security
- Network local area network (LAN)/wide area network (WAN) management
- DBA
- System Monitoring
- Third Party Vendor support

