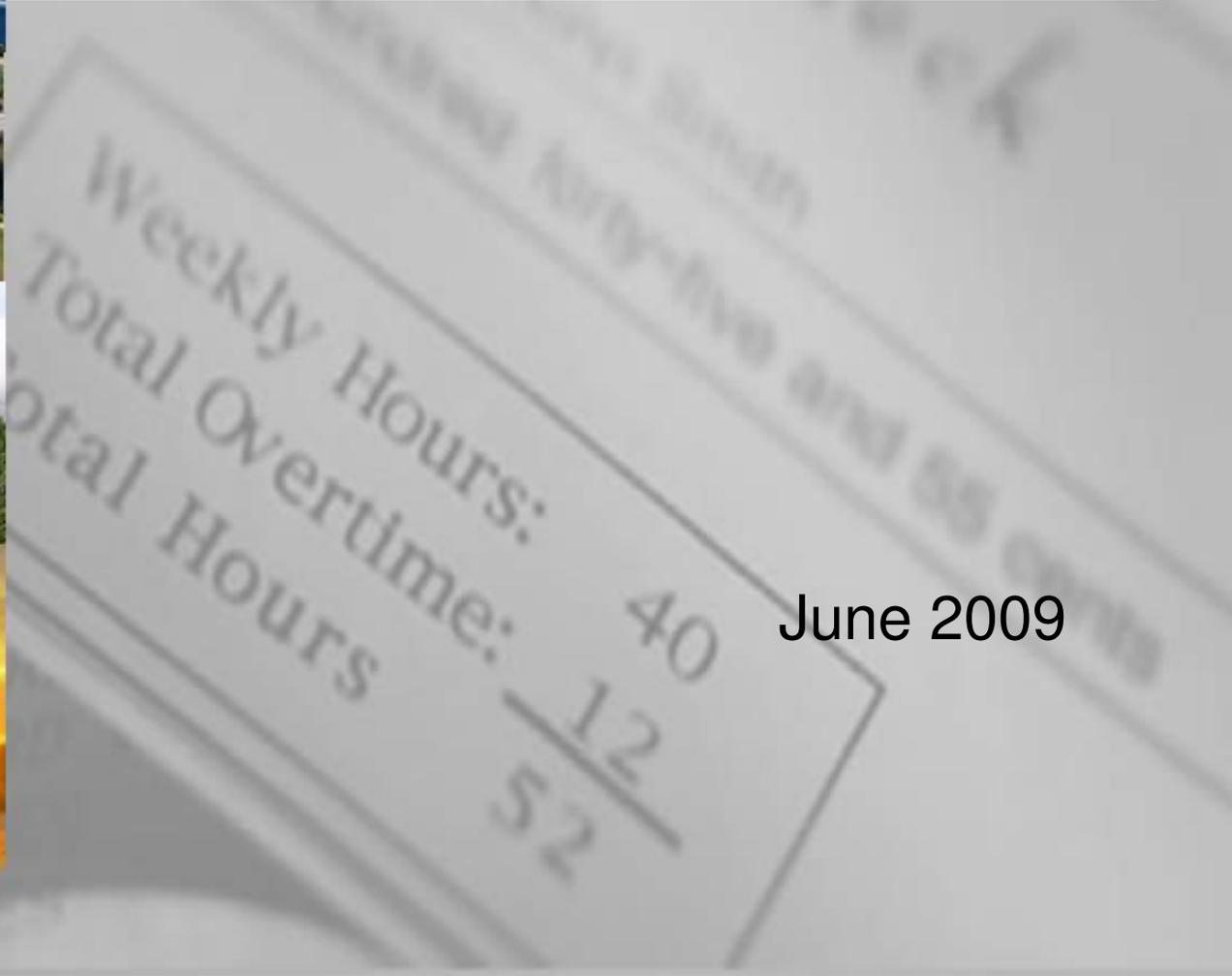




Time, Leave, and Labor Distribution Feasibility Study



June 2009





**State of Washington
Department of Natural Resources
Department of Transportation
Office of Financial Management
Department of Personnel**

Time, Leave, and Labor Distribution Feasibility Study

June 2009

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Executive Summary

The Washington State Departments of Natural Resources (DNR) and Transportation (WSDOT) have jointly prepared, in collaboration with the Office of Financial Management (OFM), and the Department of Personnel (DOP), a feasibility study for a new Time, Leave, and Labor Distribution (TLLD) application. In addition, two Management and Oversight of Strategic Technologies (MOST) consultants from the Department of Information Services (DIS) participated in the effort. While initially focused on meeting the needs of DNR and WSDOT, the new TLLD application is intended to be designed with the flexibility to adapt the new TLLD application to become the enterprise timekeeping and labor distribution solution for Washington state agencies.

DNR was funded during the 2007-2009 biennium to complete a feasibility study for a new timekeeping application. Likewise, WSDOT was directed by the Washington State Legislature to develop during the 2007-2009 biennium a detailed plan for replacing a series of enterprise applications including its timekeeping and labor distribution applications. Through this planning effort, WSDOT identified replacing its two timekeeping applications as a high priority due to the number of critical business issues with the current timekeeping processes and systems. As a result, DNR and WSDOT, with the support of the central services agencies, partnered together to conduct a single feasibility study.

A. Project Scope

The scope of the TLLD feasibility study project included defining system requirements at a level of detail appropriate for inclusion in a future request for proposal (RFP) and preparing a feasibility study report following the Washington State Information Services Board (ISB) standards to evaluate the proposed investment alternatives for a new TLLD application. The detailed requirements have been prepared in a separate document, the Time, Leave, and Labor Distribution Detailed System Requirements. This is the final report of this planning effort for the proposed Time, Leave, and Labor Distribution application.

B. Problem Statement

There are significant business challenges with the existing DNR and WSDOT timekeeping and labor distribution systems and processes. These challenges include the following:

- The current systems do not meet mandatory federal and state requirements for tracking Family and Medical Leave Act (FMLA) leave accruals and liquidations. This is an area of substantial risk; agencies are using manual processes to ensure compliance with FMLA standards
- The current systems increase the complexity of complying with the Federal Fair Labor Standards Act, which mandates that all employees need to submit time worked – not just the exception time, or leave requests as most salaried employees have traditionally done. Because the current systems do not have electronic signature capability, agencies are either

using a separate system to track time sheets or printing, signing and storing paper time sheets for all overtime eligible employees

- Limitations in the current timekeeping systems make it difficult to implement and track provisions of the numerous collective bargaining agreements in place in the two agencies. These limitations increase the risks of a grievance being filed and of a labor union raising a past practices argument during labor negotiations
- Because the current agency (WSDOT and DNR) systems are manual and labor intensive with limited edits at the point of time entry, there is a substantial risk of errors being made in the agencies' timekeeping processes. This includes the risk of miscalculating pay, overtime being earned but not paid, and overuse of leave among other issues
- Both DNR and WSDOT's existing systems lack internal controls. As noted in the State Auditor's 2007 WSDOT Administrative and Overhead Performance Audit, for example, WSDOT's current timekeeping systems lack a number of typical controls such as restricting the charge codes a user can select, a systematic process for reviewing and approving changes to time sheets, and an audit trail of initial entries and any subsequent changes
- The timekeeping and payroll processes in both agencies are very labor intensive due to both the manual entry of employee timesheets by timekeepers in various business units and the time and effort required by agency accounting staff to review and reconcile differences between the respective timekeeping systems and DOP's Human Resource Management System (HRMS), which processes the payroll
- The current systems are complex, fragile and require constant monitoring by each agency's information technology staff. DNR's timekeeping application and one of the two WSDOT timekeeping applications are almost 30 years old. For the most part, only mandated changes are made in order to maintain system stability. This leads to both unintended consequences when changes are made to the current applications and a proliferation of off-line systems needed to address various business requirements
- There are duplications of effort in maintaining multiple time, leave, and labor distribution systems. WSDOT is maintaining two very similar systems, while DNR is also supporting its own agency time and attendance system. In addition, the TLLD feasibility study was able to identify over 40 timekeeping applications, some custom and some commercial-off-the-shelf-based (COTS) that are in use in various Washington State agencies.

C. Proposed Solution

To address these business challenges, DNR and WSDOT are proposing a transformation of the time, leave, and labor distribution business process model to support entry of time by individual employees at their job sites and the implementation of a new TLLD application to support this proposed business model. Key highlights of this proposed solution include:

- Streamlining the time, leave, and labor distribution process based on employee entry at their job site and work-flow driven online approval processes by supervisors and managers.

- Implementing a new TLLD application to support this streamlined process and meet the needs of DNR and WSDOT which will provide:
 - Integration with various time collection devices to allow time entry by agency field staff
 - Enhanced flexibility to meet current and future statutory and regulatory requirements
 - Improved internal controls
 - Improved data integrity through edit checks at the point of time entry
 - Enhanced integration with HRMS to eliminate or substantially reduce the manual and time consuming reconciliation process between agency timekeeping systems and HRMS
 - Deploying the new TLLD application as a centrally supported application that, while initially designed to support DNR and WSDOT, can be adopted as the enterprise timekeeping solution for the state.

D. Alternatives Analyzed and Recommended Approach for Proceeding

As part of determining alternatives to analyze, the TLLD team initially considered transferring or adapting one of the other time, leave, and labor distribution applications implemented in Washington State government. After several meetings and demonstrations, the TLLD team determined that although these applications may currently meet some needs, they could not be deployed to other agencies due to functional and/or technical limitations.

The feasibility study team finally identified and analyzed in detail the following three potential alternatives for implementing the new TLLD application:

- **Alternative 1:** Utilize SAP - This is the SAP-based alternative which is intended to leverage the state's existing investment in SAP technology. It utilizes SAP core functionality and extends the SAP capabilities implemented for HRMS to perform the time capture and labor distribution functionality. Under this alternative, the native SAP application will be supplemented by two SAP co-developed solutions to provide some limited additional time capture capabilities. Under this alternative, however, any integration with time capture devices such as a kiosk, personal data assistant, or a badge reading system would require custom program extensions
- **Alternative 2:** Utilize a third party best of breed solution to perform the required functions - This is the best of breed alternative in which time and leave processing and labor distribution take place in a best of breed product, which is integrated with the existing HRMS application. A number of the best of breed applications support a range of time capture devices. Some of the best of breed applications have labor distribution functionality included as part of their out of the box solution, but may require custom program

extensions to fully meet DNR and WSDOT’s requirements. For some best of breed applications, however, the labor distribution functionality would entail full customization. In addition, this alternative would require design and development of data integration architecture with the existing HRMS application

- Alternative 3:** Utilize a third party best of breed solution for timekeeping and leave processing and perform labor distribution in SAP - This alternative is a hybrid of the first two alternatives. In this scenario, time and leave processing is performed in the best of breed solution, while labor distribution is performed in SAP. This alternative will provide natively supported integration with a number of time collection devices. At the same time, the labor distribution functionality can be performed using core SAP functionality, avoiding customizations that may be required under Alternative 2. In addition, several of the best of breed applications have supported integration with SAP, thereby reducing the risk of integrating with SAP and HRMS. Likewise, this approach is a proven solution as a number of large organizations, including the Commonwealth of Pennsylvania for its enterprise SAP application, have implemented a best of breed timekeeping solution as a front-end to SAP.

Exhibit ES-1 depicts how the various business functions of the TLLD application would be performed under each of the three alternatives.

Exhibit ES-1: Comparison of TLLD Alternatives by Business Function

Business Process	Alternative 1	Alternative 2	Alternative 3
Timekeeping foundation data maintenance	SAP	Best of Breed	Best of Breed
Time capture tools	SAP & SAP Partner Tools	Best of Breed	Best of Breed
Workflow tools	SAP	Best of Breed	Best of Breed
Labor distribution processing	SAP	Best of Breed	SAP

E. Recommended Approach for Proceeding

The TLLD team is recommending Alternative 3 be adopted as the go forward approach for the TLLD application and contends Alternative 3 is the most appropriate alternative for the following reasons:

- This alternative meets most of the TLLD business requirements out of the box, while leveraging the state’s existing investment in SAP to provide labor distribution functionality
- By using SAP for labor distribution, it lays the ground-work for other OFM Roadmap program initiatives or related applications

- It provides the state with its best opportunity to maximize potential benefits by fully eliminating timekeeper entry of timesheets through out of the box integration with time capture devices. At the same time, vendor supported integration between the timekeeping best of breed solution and SAP, and performing labor distribution in SAP, will substantially reduce the manual and time consuming reconciliation issues that currently exist between DNR and WSDOT’s existing timekeeping applications.

F. Proposed Project Schedule

Exhibit ES-2 depicts the proposed schedule for the TLLD implementation. Detailed business process design work and request for proposal (RFP) preparation would begin July 2010, and solution selection and implementation activities would begin July 2011. There may be some opportunity to begin the project initiation and business process design activities prior to July 2010 using DNR and WSDOT existing staff and operating budgets.

ES-2: Proposed TLLD Project Schedule

	Task Name	July 1, 2010- June 30, 2011				July 1, 2011- June 30, 2012				July 1, 2012 – June 30, 2013			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Acquisition & Planning	Initiate Project	■											
	Perform Business Process Design	■											
	Prepare RFP			■									
	Select Software/Integrator					■							
Implementation	Perform Enterprise Design					■							
	Develop and Test Solution							■					
	Deploy/Implement Solution										■		
	Provide Production Support											■	
	Manage Project	■											

G. Risk Mitigation Strategies

A number of project governance issues must be addressed in order to ensure completion of the TLLD project within this proposed schedule and to position TLLD as the future enterprise time, leave, and labor distribution solution. These issues include:

- Establishing a joint governance structure that ensures the opportunity for input from the various stakeholders, but with clear decision-making authority for resolving issues to meet the project schedule
- Including staff from other agencies in some project activities such as solution selection and enterprise design
- Defining the appropriate ownership and support structure at the state level for SAP and other new enterprise applications. This includes identifying the business owners of the various SAP system components and how the systems will be supported, establishing an SAP/Enterprise Systems Center of Excellence to provide application and technical support, determining where this center will reside and where the applications will be hosted and operated
- Establishing specific agency service level agreements with the new central SAP/Enterprise Systems Center of Excellence.

H. Business Case

TLLD will substantially reduce DNR and WSDOT's business risk and provide the agencies with opportunities for future cost avoidance. The TLLD application also jumpstarts the Governor's strategic objective for shared services and further supports the OFM Roadmap strategy for enterprise financial systems.

The estimated cost of implementing the preferred alternative for the TLLD application is \$24.9 million on a pay as you go basis and \$28.8 million if most eligible expenses are financed through the sale of Certificates of Participation.

While the TLLD application does not have a positive return on investment over the ten year period analyzed for the cost benefit analysis, the application will provide a number of key benefits to DNR, WSDOT, and the state as a whole. These include:

1. Reduced business risk to DNR, WSDOT and Washington State

The proposed TLLD application provides for reduced business risk to Washington State through:

- Reduced risk of potential fines for non-compliance with the Federal Fair Labor Standards Act or other federal and state regulations
- Increased capability to monitor and manage compliance with collective bargaining agreements
- Enhanced internal controls consistent with the recommendations made by the State Auditor in the 2007 WSDOT Administration and Overhead Performance Audit
- Migration from mainframe systems that are not longer supported and for which skilled technical support is not readily available.

2. Future cost avoidance

The TLLD application will allow the state to avoid costs in the future through:

- Better management of agency payroll costs as a result of reducing or eliminating agency timekeeping errors through entry of data by employees and edits at the point of entry. Benchmark data from a variety of industries suggests the potential for an up to one-percent reduction in total payroll costs, though there is only limited data specific to highly unionized public sector environments such as DNR and WSDOT
- Increased flexibility to address changes in laws, regulations, rules, and procedures without requiring substantial programming through user configurable parameters and business rules
- Reduced costs associated with time and leave processing through a standardized and highly automated, work-flow driven process
- Reduced complexity and cost of maintaining the DNR, WSDOT, and overall state technical environment through simplified technical timekeeping/payroll interface architectures
- Improved access to timekeeping and labor distribution data for agency managers and financial analysts since the data is online and available for reporting and analysis at all times
- Establishes the framework for shared services environments and enterprise systems.

The proposed TLLD application is consistent with the state's direction towards shared services and elimination of duplication of functions across agencies. Specifically, the TLLD application:

- Supports the Governor's vision for shared services environments through implementation of a multi-agency time, leave, and labor distribution solution designed to serve as the enterprise timekeeping solution for Washington State
- Leverages the state's standards for integration architecture and implements a sustainable strategy for data exchange
- Implements recommendations of the State Auditor's 2007 WSDOT Administrative and Overhead Performance Audit
- Provides a framework for other OFM Roadmap or related enterprise applications in the future, including the modernization of the state's core financial systems.

I. Introduction

The Washington State Departments of Natural Resources (DNR) and Transportation (WSDOT), in conjunction with the Washington State Office of Financial Management (OFM) and the Washington State Department of Personnel (DOP), initiated a joint project to define detailed requirements and develop a feasibility study for a new Time, Leave, and Labor Distribution (TLLD) system. In addition, two Management and Oversight of Strategic Technologies (MOST) consultants from the Department of Information Services (DIS) participated in the effort. While initially envisioned to meet the business requirements of DNR and WSDOT, the detailed requirements have been developed with the intention of the TLLD application serving as the enterprise time, leave, and labor distribution application that can be adopted by most Washington State agencies over time.

This deliverable represents the final packaging and publication of the Time, Leave, and Labor Distribution (TLLD) feasibility study developed in collaboration with DNR, WSDOT, OFM, and DOP. It is intended to provide WSDOT and DNR with the information needed to move the TLLD project forward to the next step, which is the Request for Proposal (RFP) for the selection of a time, leave, and labor distribution solution and system integration services to implement this selected solution. In addition, OFM and DOP, in conjunction with DIS, will need to continue strategic discussions regarding the state's approach to implementing, managing, hosting, and maintaining enterprise systems like TLLD.

A. Report Objectives

The objectives for this report are as follows:

- To summarize the findings of the TLLD feasibility study
- To analyze potential alternatives for implementing a time, leave, and labor distribution application for DNR and WSDOT that can serve as the basis for a future enterprise system; including analysis of the relative merits, cost, benefits and risks of each alternative
- To present a recommended approach for moving forward with the DNR and WSDOT TLLD replacement and the rationale for this recommendation
- To provide a work plan, cost benefit analysis, and risk assessment for the recommended alternative.

B. Target Audience

The intended audience for review and approval of this report includes the following stakeholder groups:

- Washington State Information Services Board
- Department of Information Services staff
- Washington State Legislature
- Washington State Legislative staff

- DNR executive team
- WSDOT executive team
- Other interested stakeholders from DOP and OFM.

C. Report Organization

The remainder of this document is organized as follows:

- **Section II: Background and Needs Assessment** – This section presents an overview of the TLLD feasibility study project including project background, the business environment of DNR and WSDOT in the context of time, leave, and labor distribution, and a brief description of each agency’s existing timekeeping processes. This section also describes the objectives and approach for performing the feasibility study.
- **Section III: Challenges and Objectives** – This section will discuss the primary objectives of the proposed joint DNR and WSDOT investment in implementing a new TLLD application including the problems to be solved, opportunities to be gained, service delivery enhancements, response to statutory and regulatory requirements, and a mapping of the project objectives to the Governor’s reform package goals.
- **Section IV: Impacts** – This section will identify and describe which stakeholders in DNR, WSDOT, OFM, DOP, and any other agencies are impacted by the proposed technology investment in a new TLLD application.
- **Section V: Organizational Effects** – This section describes the envisioned conceptual timekeeping future business model. Based on this conceptual model, it then describes the potential organizational impacts of the proposed investment for DNR and WSDOT such as changes in business processes, anticipated training needs, changes in job content or roles and responsibilities, and the impact on organizational structure.
- **Section VI: Proposed Solution** – This section will describe the core elements of the proposed solution that will meet the identified project objectives.
- **Section VII: Alternative Solutions Considered** – This section describes the three alternatives that have been evaluated as potential approaches for implementing a new TLLD application. These alternatives were identified and developed in conjunction with stakeholders from DNR, WSDOT, OFM, and DOP.
- **Section VIII. Conformity with Agency IT Portfolio** – This section will outline how the proposed joint DNR and WSDOT TLLD implementation is consistent with the state’s, DNR’s, and WSDOT’s strategic objectives and business drivers and their overall information technology direction.
- **Section IX: Project Management and Organization** – This section defines the recommended project management and organization structure for the TLLD project including the proposed governance structure and the key roles and responsibilities of various stakeholders.



- **Section X: Estimated Timeframe and Work Plan** – This section outlines the proposed project schedule and work plan with key milestones and decision points. It includes the estimated timeframe by project phase through implementation, a description of the major tasks and activities to be accomplished in each phase, and the anticipated external and internal resource requirements for each phase.
- **Section XI: Cost Benefit Analysis** – This section presents the cost benefit analysis for the recommended alternative and the two other alternatives evaluated by the team.
- **Section XII: Risk Management** – This section will identify risks in the development of the proposed approach and the manner in which they can be managed.

II. Background and Needs Assessment

This section presents an overview of the TLLD feasibility study project including project background, the business environment of DNR and WSDOT in the context of time, leave, and labor distribution, and a brief description of each agency's existing timekeeping processes. This section also describes the objectives and approach for performing the feasibility study and provides an outline of the remainder of this report.

A. Project Background

Washington State agencies including both DNR and WSDOT continue to encounter a number of issues with their existing timekeeping and labor distribution processes. These issues include the following:

- Timekeeping systems that are not set-up with all of the business rules and edits to account for the various shift differentials and overtime pay situations that may occur. This leads to the risk of non-compliance with the Fair Labor Standards Act and/or issues in monitoring and managing the requirements of all of the different collective bargaining agreements (CBAs) that are in place across Washington State government
- Highly manual and costly data entry processes that require substantial time on the part of employees who act as the timekeeper in each business unit and enter data into the system
- Frequent timekeeping data entry errors due to these manual processes that can lead to both under and overpayments of employees
- An overall lack of internal controls in the timekeeping process
- The need for extensive manual reconciliation between an agency's timekeeping system and the payroll function performed in the state's Human Resource Management System (HRMS)
- The overall age of these systems:
 - DNR's time and attendance system and one of WSDOT's two timekeeping applications are almost 30 years old
 - The proliferation of time, leave, and labor distribution systems: during the TLLD feasibility study, the project team identified over 40 timekeeping systems currently in use across Washington State agencies, some of which are commercial-off-the-shelf (COTS) software applications while many others are custom designed for particular agencies.

Because of these issues and others, Washington State agencies rated time, leave, and labor distribution as their number one priority for a new enterprise system in a survey conducted by the OFM Roadmap project team in 2008. During the 2007-2009 Biennium, DNR received funding to prepare a feasibility study to implement a new time, leave, and labor distribution application. DNR is seeking to replace their online Time and Activity Reporting System (NTAR), which has

become both functionally and technically obsolete and is significantly impacting the agency's service delivery.

During the 2007-2009 Biennium, WSDOT was in the process of scoping and planning for a multi-year program of information technology projects known as the Critical Applications Replacement Program. This effort is intended to define, select, and implement new system solutions to replace a number of enterprise financial management; time, leave, and labor distribution; transportation asset management; program management; and project management applications that are limited functionally and technically. A key element of the Critical Applications Replacement Program is adopting common statewide or enterprise solutions for use at WSDOT where these applications are available and can meet WSDOT's business requirements.

One of the first systems that WSDOT envisions replacing as part of the Critical Applications Replacement Program is the Labor Collection and Distribution System (LABOR), which processes WSDOT employee hours worked, leave taken, equipment used, and the financial (cost accounting) details associated with labor hours (labor distribution). In addition, WSDOT will also replace the related LABOR system used by WSDOT's Ferries Division to provide these same business functions. Currently, output from both of these systems interfaces with the state's enterprise HRMS for payroll processing.

Due to the similarities in the two agencies' business needs for timekeeping and labor distribution, DNR and WSDOT decided to collaborate on planning for and implementing a new TLLD system. The goal of this project effort is to implement a system that meets both agencies' requirements, but also provides the framework for an enterprise solution that can be adopted by other Washington State agencies in the future.

Because of the desire to adopt the resulting TLLD application as an enterprise solution, OFM has provided project management support for this effort. OFM has assisted with reviewing the timekeeping solution requirements with representatives from ten other Washington State agencies, gathered input on the proposed TLLD application from timekeeping stakeholders from these agencies, assisted in organizing and facilitating timekeeping system demonstrations, and worked with the TLLD team to conduct the feasibility study.

Likewise, DOP has provided guidance and input on integrating the proposed TLLD solution with the state's existing SAP-based HRMS application. Staff from the Department of Information Services (DIS) also participated in project team activities, providing guidance on enterprise standards, overall state systems direction, and the feasibility study process.

The manager of DNR's Financial Management Division and WSDOT's Director of Accounting and Financial Services were designated as co-project sponsors. A TLLD steering committee was established to provide overall project guidance and direction. It consisted of senior financial and information technology managers from DNR and WSDOT, the senior assistant director of accounting for OFM, the chief information officer of DOP, and two representatives from the DIS Management and Oversight of Strategic Technologies Division.

A TLLD core team of functional and information technology staff from DNR, WSDOT, OFM, DOP, and DIS was also formed to work closely with the consultant team and quality assurance consultant, Bob Fuller from Pacific Consulting Group, Inc., in the definition of detailed requirements and the preparation of the feasibility study. DNR and WSDOT engaged Dye Management Group, Inc. to assist with defining the TLLD system requirements and to prepare the TLLD Feasibility Study. Exhibit II-1 provides a list of TLLD core team and steering committee members.

Exhibit II-1: TLLD Core Team and Steering Committee Members

Organization	Team Member and Role
DOP	Steve Young, Steering Committee Member
DNR	Jim Morgan, Project Co-Sponsor
	Wendy Huff, Contract Manger
	Carol Gravatt, Team Lead
	Kitty Blocher, Payroll SME
WSDOT	Bob Covington, Project Co-Sponsor
	Grant Rodeheaver, Contract Manger
	Scott Kibler, Team Lead
	Kristine Hubble, Vendor Manager and Business Analyst
OFM	Wendy Jarrett, Steering Committee Member
	Sadie Hawkins, Steering Committee Member
	Lynne McGuire, Project Director
	Tim Vessey, Project Manger
	Steve Nielson, Team Lead
	Steve Ketelsen, Subject Matter Expert
DIS	Connie Michener, Management Consultant
	Tom Parma, Management Consultant

B. Department of Natural Resources Business Environment

This subsection provides a brief overview of the business functions performed by DNR in the context of performing time, leave, and labor distribution functions. It also includes a brief description of DNR’s existing timekeeping processes.

1. DNR business overview

The Department of Natural Resource is responsible for acting as the primary steward of the state of Washington’s public lands. DNR’s mission includes:

- Providing professional, forward-looking stewardship for the state’s lands, natural resources, and environment
- Providing leadership in creating a sustainable future for the various state land trusts and all citizens of the state of Washington.

DNR is responsible for protecting and managing 5.6 million acres of state owned land. More than 3 million acres of this land is state trust land that provided revenue to help pay for construction of public schools, universities and other state institutions, and funds services in many counties.

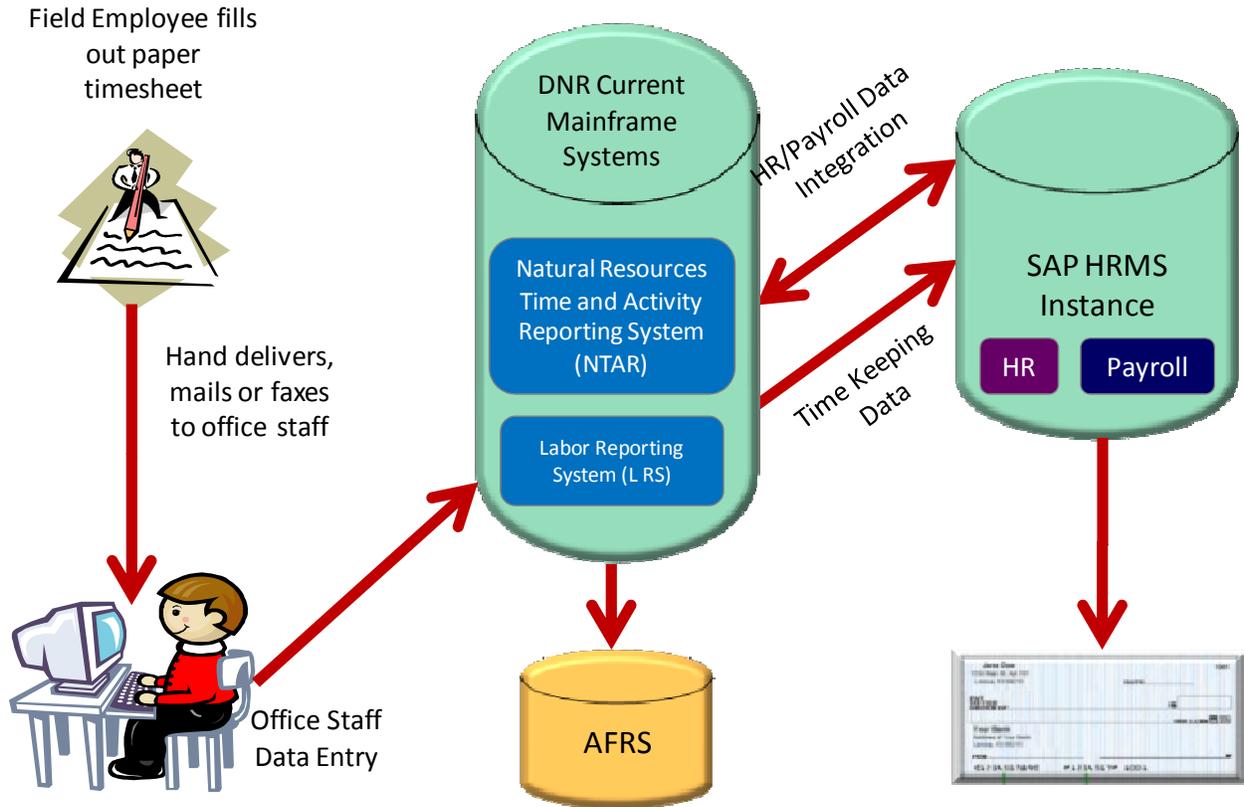
DNR generates income from these lands by selling products such as timber or by leasing lands to private agriculture business. Since 1970, these lands have generated \$6 billion for trust beneficiaries, counties, and the state general fund. DNR also manages these lands to provide fish and wildlife habitat, clean water, and public access. DNR focuses on protecting public resources by regulating forest practices and timber harvests and preventing and suppressing wildfires on more than 12.7 million acres of state, private, and tribal land.

DNR performs these functions through a number of divisions and units, some headquarters based but most located in the field. In addition, a number of these staff work variable shifts and some, such as fire crews, are subject to a significant amount of unplanned overtime. The distributed nature of the DNR workforce and the variability of employee schedules provide additional challenges to effective timekeeping and labor distribution.

2. DNR's current time, leave, and labor distribution processes

Exhibit II-2 illustrates DNR's current time, leave, labor, and distribution process. This process is initiated by a field employee filling out a paper time sheet. This paper time sheet is then hand-delivered, mailed, or faxed to office staff that is responsible for entering the employee's time into DNR's Natural Resources Time and Activity Reporting (NTAR) application. Data from NTAR is then provided to the state's HRMS application for processing payroll and DNR's Labor Reporting system that performs the detail distribution of payroll costs.

Exhibit II-2: Current DNR Time, Leave, and Labor Distribution Process



C. Washington State Department of Transportation Business Environment

This subsection provides a brief overview of the business functions performed by WSDOT in the context of performing time, leave, and labor distribution functions. It also includes a brief description of WSDOT’s existing timekeeping processes. Because the time and attendance business process is more complex and a different timekeeping application is utilized by the Washington State Ferries Division from the rest of WSDOT, the timekeeping business process is presented for the Ferries Division separately from the remainder of WSDOT.

1. WSDOT business overview

The Washington State Department of Transportation is responsible for ensuring the safe and efficient movement of people and goods throughout the state of Washington. As part of carrying out this mission, WSDOT is responsible for the planning, design, construction, maintenance, and operation of the state’s transportation system. This includes both the state highway network and the operation of the Washington State Ferries, the largest ferry system in the United States, and the largest ferry system in the world based on vehicles carried.

WSDOT executes its mission through a number of divisions, some based at headquarters in Olympia and others based in its six regional headquarters across the state, or field offices maintained within each region or in the multiple operating locations maintained by the WSDOT Ferry Division. Like DNR, many WSDOT staff work variable schedules, may be assigned temporarily to different locations, and may have substantial unplanned overtime. In the case of WSDOT Ferry division staff, there are also frequent situations where an employee is working out of class for a particular day or particular voyage based on the employee's skill sets and the skills needed to properly staff the crew of a vessel. This requires the ability to delineate hours worked in specific job classes that are likely at different pay rates than the employee's permanent position and job class.

2. WSDOT's current Time, Leave, and Labor Distribution process – other than Ferries Division

Most WSDOT headquarters and field staff (other than Ferries) complete manual time sheets. These time sheets are given to the employee's supervisor for approval. The supervisor then forwards the time sheet to the timekeeper for the business unit who enters the timesheet into the WSDOT LABOR system. The time data is then interfaced to HRMS for payroll processing.

There may be some variations on this process. For example, the WSDOT Bridge and Structures Office has developed its own time capture system. Bridge and Structures Office employees enter their time into this application and it is then printed out and entered into the WSDOT LABOR system by the unit's designated timekeeper.

Likewise, some field units such as Highway Maintenance crews may complete daily work reports to document the nature of the work they performed and the equipment and materials they used on a given day. These daily work reports are then used by an administrative staff member to prepare employee timesheets for employee signature and entry into the WSDOT LABOR system.

If changes are made by the employee after data has been transmitted to HRMS or data is changed during payroll processing by DOP, the changes must be entered into both the WSDOT LABOR system and HRMS. This leads to significant review and reconciliation efforts between HRMS and the WSDOT LABOR system.

Agency timekeepers maintain the official records for employee leave. There is no specific method as to how the timekeeper maintains the data (for example, spreadsheets, lists, etc.), but the WSDOT headquarters payroll office relies on the timekeepers' records for the most current leave information. There are two updates each month to the WSDOT LABOR system from HRMS of the most current DOP leave balances. Agency timekeepers are required to reconcile their leave records with the updates to the LABOR system and report any changes to headquarters payroll for reconciliation with HRMS.

3. WSDOT Ferry Division current Time, Leave, and Labor Distribution process

Time for all WSDOT Ferry Division (WSF) Merit 5 employees is captured in a second application, the WSDOT Ferries LABOR system. Time for Merit 1 employees is collected in the WSDOT LABOR system and follows a similar process to that outlined for other WSDOT units above.

Crew members enter their time on a daily basis into a log that is maintained on each vessel. These logs are then used by clerical staff to prepare timesheets each pay period for employee review and signature.

The employee timesheets are then sent to the payroll unit at Ferry Division headquarters in Seattle for review and entry into the WSF LABOR system. Each pay period, all WSF crew time sheets are reviewed by a WSF captain assigned to perform this responsibility on a rotating basis.

There are eleven collective bargaining units at WSF, including two that are also represented in the rest of WSDOT. Working knowledge of these agreements is required by supervisors, timekeepers, and WSDOT headquarters payroll office staff. Timekeepers and payroll staff spend a significant amount of time tracking, verifying, and updating employee hours reported for specific pay types (for example, call back, penalty pay, stand by, etc) against the various bargaining agreement rules. Numerous spreadsheets and lists must be created, updated, and maintained in order to verify and report on compliance. This need to track compliance is true for the remainder of WSDOT as well as for WSF.

D. Feasibility Study Project Scope and Guiding Principles

The scope of the TLLD feasibility study effort included two primary deliverables:

- Develop functional requirements at a level of detail appropriate for inclusion in a RFP specifying the business needs of DNR and WSDOT, and extending the requirements as appropriate to meet the needs of other state agencies
- Prepare the Time, Leave, and Labor Distribution Feasibility Study for submission to the Washington State Information Services Board (ISB) when a funding source(s) is identified.

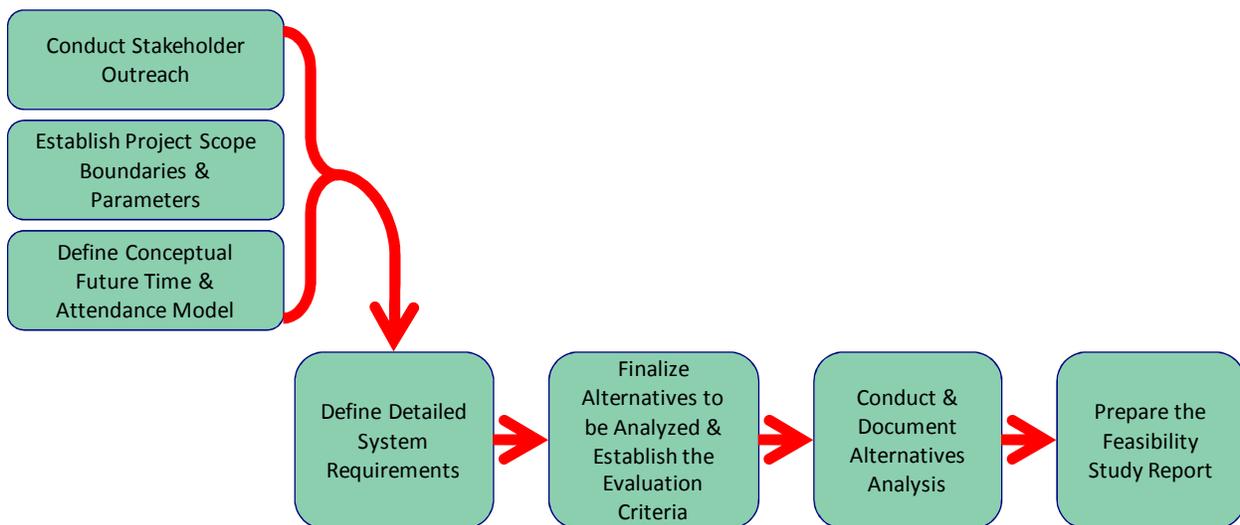
To help provide direction in achieving the project deliverables, the TLLD steering committee established the following guiding principles for the TLLD core team and Dye Management Group, Inc.:

- Focus on implementing a solution that meets the immediate business needs of DNR and WSDOT for a time, leave, and labor distribution application
- Implement a solution that has the breadth and flexibility to be adopted by other agencies and to become the enterprise solution for Washington State government
- Leverage HRMS while minimizing the changes required to the environment to the extent possible.

E. Project Approach

Exhibit II-3 outlines the project approach for the TLLD feasibility study. This approach involved conducting stakeholder outreach to understand business drivers and challenges, establishing the project scope parameters, and defining a conceptual future business model for the time, leave, and labor distribution process. Based on this conceptual future business model, the team then developed detailed functional and technical requirements for a new TLLD application, evaluated alternatives for meeting these requirements, and established a recommended alternative. The final task was documenting the results of this process in this report. Each of these tasks is described in more detail below.

Exhibit II-3: TLLD Feasibility Study Approach



1. Conduct stakeholder outreach

The first task in the stakeholder outreach process was to conduct both one-on-one interviews and team meetings with the TLLD sponsors and the core TLLD team to understand each agency's business drivers, the challenges with their existing timekeeping systems, and their needs for a new TLLD solution. In addition, because the TLLD solution is envisioned to be an enterprise solution, the team also conducted stakeholder interviews with financial, timekeeping, and/or information technology representatives from a number of other Washington State agencies. The purpose of these interviews was to confirm that the other agencies' business challenges and system needs were similar to DNR and WSDOT's and that they would likely see benefit in a future enterprise time, leave, and labor distribution application. The feasibility study team interviewed representatives from the following agencies:

- Office of the Attorney General
- Department of Corrections
- Department of Personnel
- Office of Financial Management

- Department of Social and Health Services
- Employment Security Department.

Appendix B includes the stakeholder interview questionnaire, the list of stakeholders, and the interview schedule.

2. Establish project parameters

In this task, Dye Management Group, Inc. worked with the TLLD core team to establish the parameters for this project. Key elements of this task involved establishing which business processes would be supported in a time, leave, and labor distribution application as opposed to the existing HRMS solution, as well as what functions were envisioned to be in a time, leave, and labor distribution solution versus potentially an agency line of business solution.

3. Define conceptual future time and attendance model

This task involved developing a high level future business model which depicts how the agencies want to perform time, leave, and labor distribution processes in a new TLLD application. This conceptual future business model, which is presented in Section VI, involves a substantial shift from the current model in most agencies in which supervisors or timekeepers enter an employee's time to a model of employee self service where employees are responsible for directly entering their time into the new TLLD application.

4. Define detailed system requirements

Based on the conceptual future time and attendance model and the project scope parameters, the core TLLD team identified and documented detailed TLLD functional, architecture, technical, implementation, and conversion requirements. These requirements were reviewed first by core TLLD team members and other DNR and WSDOT staff. OFM then coordinated a review and comment process with representatives from a number of other state agencies. These agencies included:

- Washington State Patrol
- Department of Corrections
- Department of Ecology
- Department of Social and Health Services
- Employment Security Department
- Department of Agriculture
- House of Representatives
- Washington State Senate
- Office of the Attorney General
- Department of Health.

Input from these agencies was consolidated by OFM and provided to the core TLLD team in a series of requirements review workshops held with DNR, WSDOT, OFM, DOP, and DIS staff.

5. Finalize alternatives to be analyzed and establish the evaluation criteria

This task involved several activities including:

- Developing an initial list of potential alternatives to be analyzed
- Conducting market research or drawing on previously conducted market research to narrow the list of alternatives. This included demonstrations from SAP and two leading best of breed products conducted in December 2008 and January 2009. It also included walk-throughs of the time, attendance, and leave systems being utilized by the Washington State Patrol, Washington Department of Fish and Wildlife, and the Washington State Legislature in February and March 2009
- Finalizing the list of alternatives through discussions with the core TLLD team and the steering committee. This process resulted in the three alternatives described in Section VIII of this report.

6. Conduct and document alternatives analysis

This task involved conducting a detailed evaluation of the three alternatives based on the established evaluation criteria. This step also included research into costs of implementing and operating each of the proposed alternatives, as well as research to understand the cost for operating the two agencies' current systems in order to prepare the cost benefit analysis for each alternative.

Based on the initial alternatives analysis, the team established a recommended alternative and documented the rationale for this recommendation. A summary of the alternatives analysis and the proposed recommendation was then presented for review, discussion, and validation in a workshop format to financial and information technology managers from DNR and WSDOT, and representatives of OFM, DOP, and DIS.

The alternatives analysis was adjusted as appropriate based on the feedback from these work sessions. The final alternatives analysis, recommendations, and supporting rationale were presented to the TLLD steering committee for review and approval.

7. Prepare the feasibility study

This task involved drafting this feasibility study, providing it to the core TLLD team and other stakeholders for review, and updating the draft report based on any input received. The final report will then be published in a form suitable for submission to the ISB when a funding source(s) for the proposed investment in the new TLLD application is identified.

III. Challenges and Objectives

This section outlines a number of key business challenges related to time, leave, and labor distribution processes and systems at DNR and WSDOT. It then outlines a number of targeted service delivery enhancements expected from the proposed TLLD future business model and the new TLLD application to address the business challenges and provide a mapping of these opportunities to the Governor's reform package goals. Finally, this section summarizes a number of benefits anticipated from the implementation of the new TLLD business model and application.

Each of these items is presented in the subsections below.

A. Current Business Challenges

The TLLD core team conducted a number of interviews with managers and staff across six agencies. One of the goals of these interviews was to identify problems with the existing timekeeping systems and/or processes. Some of the problems noted by stakeholders included:

1. Difficulty complying with regulatory mandates

The current DNR and WSDOT systems do not meet business requirements for capturing, validating, and allocating employee time. The systems being utilized by the two agencies do not meet mandatory federal and state requirements for tracking Federal Family and Medical Leave Act (FMLA) leave accruals or liquidations. These discrepancies have been noted in prior audit findings.

The United States Department of Labor, based on the Fair Labor Standards Act, has mandated that all employees need to submit time worked – not just the exception time, or leave requests as most salaried employees have traditionally done. In order for agencies to comply with the legal requirements set forth by the United States Department of Labor, signed time sheets must be kept on file for all overtime eligible employees. Time sheets must be signed by both the employee and supervisor. At this time agencies are either using paper time sheets or using a separate system. If the system does not have electronic signature capability, the time sheet must be printed, signed, and stored.

2. Frequent agency timekeeping errors leading to payroll discrepancies.

Because the current systems are highly manual and labor intensive with limited edits at the point of time entry, there is a substantial risk of errors being made in the agency's timekeeping process. This includes the risk of:

- Missing time sheets
- Incomplete time sheets (hours or signatures)
- Miscalculating pay
- Overtime earned but not paid

- Overtime paid but not earned
- Overuse of leave
- Complications in and additional effort required to reconcile labor costs with HRMS, Agency Financial Reporting System (AFRS) and WSDOT's Transportation Reporting and Accounting Information System (TRAINS).

For example, some employees may be able to request and take more time off (frequently with pay) than they have leave accrued because the existing systems lack the functionality to track and validate the most current leave information, or to present it to the employees when employees submit their timesheets.

In addition, WSDOT employee performance interviews conducted by Ernst & Young LLP in 2007 as a part of the 2007 WSDOT Administrative and Overhead Performance Audit indicated that a significant number of payroll processing errors occur each pay cycle. The performance audit team found that many of these errors occur because of mid-period changes to employee data, changing the employee pay information. This results in two separate pay rates for the same employee in the same pay period and often results in errors if the changes are not appropriately communicated between the Human Resources and Payroll departments.

3. Difficulty complying with collective bargaining agreements

Limitations in DNR and WSDOT's current timekeeping systems make it difficult to implement and track provisions of the numerous collective bargaining agreements in place in the two agencies. This creates the risk of a grievance being filed. It also creates the risk of a labor union raising a past practices argument during labor negotiations since the current systems could inadvertently allow practices favorable to the employee that are not consistent with the current collective bargaining agreement or agency policy.

4. Limitations in internal controls

Both DNR and WSDOT's existing systems have some gaps from the perspective of internal controls.

As noted in the 2007 WSDOT Administrative and Overhead Performance Audit, WSDOT's current procedures only review time reporting for glaring or obvious errors. For example, WSDOT reviews total hours by employee to identify balances that are not within an acceptable range. While this approach is effective in identifying employees who may not be paid because their time was not entered, the individual time sheet information is not specifically reviewed to validate the accuracy of data keyed into the system. This lack of validation or review increases the risk of time sheet entry errors and potential inaccurate payroll payments.

This same performance audit also identified a number of other typical controls that are not currently in place related to time entry. These control gaps include:

- No limitations or restrictions on an employee's ability to charge a particular account code - The current WSDOT systems do not limit an employee's ability to access or charge only to authorized project or charge numbers
- Direct labor employees do not necessarily record their time on at least a daily basis. In addition, sufficient formal subsidiary records are not maintained to ensure accurate time recording and allocating of labor costs to intermediate and final cost objectives when multiple jobs are worked in a day
- There is no systematic process for ensuring that employees and supervisors electronically sign the time cards/time sheets in accordance with procedures, verifying the accuracy of the recorded effort
- There is no process for ensuring that only the employee uses his/her labor charging instrument (e.g., user ID and password) to access the timekeeping system. Changes are not always initialed, authorized, and dated by the employee and supervisor and do not always include a description of the reason for the change
- There is not a verifiable audit trail process to collect all initial entries and subsequent changes.

5. The current systems are very labor intensive

The time management component of the existing systems is very labor intensive due to manual review, analysis, and editing by supervisors, managers, and clerical support staff. Additionally, reconciling time and activity information entered by payroll staff into the various systems (HRMS, NTAR, WSDOT LABOR, and WSDOT Ferries LABOR) is also a highly manual and time consuming activity.

WSDOT follows a two-step procedure where employees record their time, either by hand or by computer, followed by supervisory approval. The second step requires the timekeeper to enter the approved hours into the system. This means that labor hours are recorded a minimum of two times: once by the employee and once by the timekeeper. Currently there are three different time sheets available, all requiring dual entry along with other manual tasks, such as printing the time sheets and collecting them for entry. In addition, WSDOT estimates that up to five full-time equivalents (FTEs) worth of effort is required each pay period to coordinate and manage the time entry and payroll process and to address reconciliation issues between HRMS and the WSDOT LABOR/WSDOT Ferries LABOR applications.

In DNR it is estimated that 300 plus hours are spent each month in reviewing, editing, and entering timekeeping information by payroll and management staff. This is based on a rough average of 15 minutes per employee multiplied by 1,400 employees. This number goes up significantly during fire season as employees increase to over 1,800 and time reporting becomes increasingly complex.

6. The current systems are becoming quite old and increasingly difficult to enhance and maintain

The current DNR and WSDOT systems are complex, fragile, and require constant monitoring by each agency's information technology staff. Two of them are almost thirty years old. For the most part, only mandated changes are made in order to maintain system stability. Often unintended consequences have occurred when changes are made to the current applications.

As a result of the inability to easily make system changes, 'workarounds' are necessary to keep pace with changing rules and procedures. Program staff utilizes spreadsheets and desktop databases to verify and track transactions, program costs, and make manual adjustments to calculate the proper amount of overtime for part-time and 9-hour schedules.

There is also diminishing expertise within both DNR and WSDOT in the mainframe computer languages used to build and maintain these programs. Most programmers knowledgeable in these mainframe languages are retiring or have updated their skills to more modern computer languages. At DNR, for example, there is only one staff member who is knowledgeable about the NTAR application. At WSDOT, there are just a few staff members with significant knowledge of the two LABOR applications. Thus, there is the potential for system failure if existing resources cannot keep up with the demands for application changes or if they are not available to perform necessary production support activities.

7. There are duplications of effort in maintaining multiple time, leave, and labor distribution system

WSDOT is maintaining two very similar systems. The WSDOT LABOR application supports Merit 1 employees, while the WSDOT Ferries LABOR application, which was started from the original WSDOT LABOR application, supports Merit 5 employees. DNR is also supporting its own agency time and attendance system in NTAR.

This situation is not confined to DNR and WSDOT. During the feasibility study, the team was able to identify over 40 timekeeping applications, some custom and some COTS-based, that are in use in various Washington State agencies. Having each state agency maintain and support a timekeeping solution creates a duplication of effort across state government and represents an opportunity cost for agencies that could instead use these information technology staff to develop and maintain line of business systems to support their specific program areas.

B. TLLD Project Objectives

To address these various business challenges, the TLLD project team established a set of project objectives for the TLLD project intended to result in a set of significant service delivery enhancements for the time, leave, and labor distribution business function. These project objectives include:

- **Enhanced flexibility to meet current and future statutory and regulatory requirements.** This objective involves implementation of a flexible system that can

support federal, state, and agency business needs, and can be easily modified to support changes in mandates, policies, and procedures for all agencies without having to hire specialized programming staff to modify the system. In addition, by implementing a COTS-based solution, the state would be able to take advantage of enhancements in functionality the vendor would be expected to make to their base package to support changes in federal statutory requirements, since this will be a common need of the vendor's entire customer base

- **Streamlining time, leave, and labor distribution processes.** This objective includes definition of standardized timekeeping processes that will support consistency in how employee labor data is managed across the enterprise
- **Elimination of redundant data entry processes.** This objective involves the replacement of paper-based, manual processes with employee time entry by individual employees, and online approval by supervisors through automated workflows, manager, and employee self-service tools and integration with time capture devices for field employees
- **Employee and manager self service functionality.** Implementation of time capture tools for employees that are intuitive/easy to learn and use and are appropriate to the job classification of the employee (i.e., employees who sit at desks have web-based time entry; DNR and WSDOT field employees have access to other appropriate time capture devices, etc.)
- **Improved accuracy of timekeeping data.** Implementation of a timekeeping solution that will validate data as it is entered by employees, thus eliminating erroneous employee time data
- **Improved accuracy of labor allocation data.** Implementation of a labor costing and reporting solution that can be utilized by agency staff and OFM and which has scalable and flexible functionality, capable of managing the variety of labor costing data that the existing systems cannot track
- **A shift to more value-added knowledge work for payroll/timekeeping staff.** Streamlining agency payroll and timekeeping processes will provide the opportunity to redirect and repurpose some of the time of timekeeping staff to higher level, knowledge-based analytical work or work more specific to agency programs, thus improving overall customer service across the enterprise
- **Fewer systems and interfaces to support.** The objective includes implementation of a TLLD application that is closely integrated with HRMS, reducing the effort to reconcile data between HRMS and agency timekeeping and labor distribution systems. Implementation of a TLLD application for DNR and WSDOT that can become the enterprise time, leave, and labor distribution solution for the state will also reduce and eventually eliminate the forty or more timekeeping/time capture systems currently in use across the enterprise and replace these systems with one enterprise solution
- **Elimination of duplication of effort and a reduction in the total cost to support time, leave, and labor distribution applications through implementation of an enterprise solution.** This objective involves reducing the total cost to the state of maintaining timekeeping application through implementation of an enterprise solution which is



centrally supported by an SAP/Enterprise Systems Center of Excellence. This objective also allows DNR and WSDOT and other agencies in the future to redirect the time of their information technology resources currently supporting timekeeping applications to better support their agency program objectives by focusing this repurposed time on their own line of business systems.

Exhibit III-1 provides a mapping of the TLLD objectives to those of the State Auditor's findings and recommendations, and the Governor's Shared Services Directive.

Exhibit III-1: Mapping of TLLD Strategic Objectives to Governor Gregoire’s Shared Services Goals

Governor Gregoire’s Shared Services Directive and State Auditor’s Findings ⇨ TLLD Strategic Objectives ⇩	Improved Efficiency	Improved Accuracy of Data	Standardized Procedures and Processes	Integrated Agency Data Management and Reporting	Elimination of Redundant Systems and Interfaces
1. Enhanced flexibility to meet current and future statutory and regulatory requirements	✓	✓	✓	✓	
2. Streamlining time, leave, and labor distribution processes	✓	✓	✓	✓	✓
3. Elimination of redundant data entry processes	✓	✓	✓	✓	✓
4. Employee and manager self service functionality	✓	✓	✓	✓	
5. Improved accuracy of timekeeping data	✓	✓		✓	
6. Improved accuracy of labor allocation data	✓	✓		✓	
7. A shift to more value-added knowledge work for payroll and timekeeping staff	✓	✓	✓	✓	
8. Fewer systems and interfaces to support	✓	✓		✓	✓
9. Elimination of duplication of effort and a reduction in the total cost to support time, leave, and labor distribution applications through implementation of an enterprise solution	✓	✓	✓	✓	✓

All of the goals and objectives described above will reduce costs to the state. They will also enable WSDOT to respond to the direct request from the State Auditor in the 2007 WSDOT Administrative and Overhead Performance Audit Report to cut costs in its timekeeping and payroll operations.

C. Other Anticipated Service Delivery Enhancements

When the new timekeeping solution is implemented, not only will the key project objectives outlined above be met, but a number of other specific timekeeping and labor distribution service delivery enhancements will also be achieved by DNR and WSDOT. These additional service delivery enhancements have been broken down into four categories: general capabilities, management of timekeeping foundation data, time capture and leave processing, and labor distribution. The service delivery enhancements are inventoried below.

1. General capabilities

General system features and functions of the TLLD application will include the following:

- A single source for time and attendance information capture, processing, reporting, and labor distribution
- Improved accuracy, completeness, and timeliness of payroll and human capital resource information for management decision making
- Work-flow driven review processes, with electronic sign-offs and approvals
- Role-based security
- Improved controls over timekeeping and labor distribution processes, ensuring that hours are appropriately distributed and available for grant reimbursement
- Detailed audit trails of changes to system information including master data, business rules, and employee time and leave data
- Field level on line help tools including unprompted descriptors and data prompts.

2. Management of timekeeping foundation data

Key capabilities in this category include:

- Ability for authorized users to establish and maintain job classes, pay types, locations, and other parameters
- The ability for authorized users to add and maintain additional job class attributes for use in TLLD processing that may vary by agency, organization code, job class, crew list, or other characteristics
- Capability to define and manage employee schedules and work hours
- Ability to define, manage, and maintain crew lists
- Ability to support assignment of job class requirements (skills) to crew lists

- Capability to assign one or more contractors to positions for scheduling and time capture, reporting, and labor cost allocation.

3. Time capture and leave processing

Key time capture and leave processing features will include:

- Employee self-service functionality with real-time feedback
- Automated routing of timesheets and leave requests for review and approval through workflow process established based on agency specific business rules
- Real-time editing of time as it is entered by the employee – editing against program, project, grants, work order, funding source, organization, and other relevant account code information
- The capability to collect statistical data from employees as part of the time capture process to support performance measurement.

4. Labor distribution

Key labor distribution functions of the TLLD application will include:

- The ability to receive and compute the full cost of staff time and associated benefits and overhead from HRMS and other DNR and WSDOT systems using a variety of integration methods based on user configurable formats and time intervals (i.e. real-time)
- The ability for authorized end users to create and maintain multi-tiered and multiple labor distribution rules and calculations with effective begin and end dates associated with the agency as a whole or to specific programs, projects, revenue sources, or grants
- Role-based review and approval requirements for labor distribution rule creation and maintenance processes
- Automated support for development and update of labor distribution rules as frequently as every payroll reporting period
- Automated workflow for labor distribution rule creation and maintenance processes
- The ability to apply labor distribution rules based on end user maintained effective dates, retaining historical views for rules and calculations by program, project, grant, work order, funding source, organization, and other parameters
- The ability to distribute the full cost of staff time and associated benefits and overhead based on established labor distribution rules and associated effective dates
- Automatically distribute, adjust, and reverse the full cost of staff time and associated benefits and overhead based on an end user configurable schedule and cost and other information received
- The ability for manual allocation of the full cost of staff time and associated benefits and overhead by authorized end users

- The ability to allocate employee leave costs as they are accrued rather than as leave is taken
- Role-based review and approval requirements for automated and manual labor distribution, adjustment, and reversal processes
- Automated workflow for automated and manual labor distribution, adjustment, and creation processes.

D. Anticipated benefits

Implementation of the new time, leave, and labor distribution future business model and the TLLD application is expected to yield a number of benefits for DNR and WSDOT. These benefits have been categorized below by quantitative benefits, which will be used as part of the calculation of the cost benefit analysis in Section XI and other qualitative benefits for which it is not possible to specifically quantify the value of the anticipated benefit stream.

1. Quantitative benefits

The primary quantitative benefits include the following:

- Redirection of timekeeping and business unit staff time previously spent entering employee time sheets to higher value analytical or knowledge work or other program specific activities. The redirection is a result of shifting time entry to the employees themselves. Per the findings and recommendations of the State Auditor's 2007 WSDOT Administrative and Overhead Performance Audit Report, the goal is to move toward a support structure that is consistent with the standard payroll industry benchmarks¹ for the ratio of payroll support personnel in relation to the employee population. An efficient organization has a support ratio of one payroll staff for every 1,000 employees. Currently the agencies average six payroll staff per every 1,000 employees. The benefit stream calculated below has a target support metric of two payroll staff for every 1,000 employees
- Redirection of timekeeping and payroll staff time previously spent reconciling agency timekeeping systems with HRMS to higher valued analysis or other program specific activities. The redirection is a result of tighter integration between TLLD and HRMS.
- Redirection of the information technology resources currently maintaining the two WSDOT agency specific timekeeping systems (WSDOT LABOR and WSDOT Ferries LABOR) and the DNR NTAR system as a result of the implementation of a centrally supported enterprise solution. The time of this agency information technology staff can be redirected to support agency specific line of business systems
- Part of the savings from the de-commissioning of the WSDOT mainframe. The WSDOT LABOR and Ferries LABOR systems are two of the applications currently executing on the WSDOT mainframe. The WSDOT Critical Applications Replacement program envisions replacing all of these applications, including the two timekeeping applications and then decommissioning the WSDOT mainframe. This will result in a savings of approximately \$4.5 million annually. Since this savings cannot be achieved until all the

¹ Source of information: Washington State Audit Report, November 2007.

systems including the timekeeping systems are replaced, it is appropriate to allocate a portion of this anticipated savings specifically to TLLD. The benefit stream for TLLD will initially be only the incremental cost of operating the current WSDOT timekeeping systems on the mainframe until all of the other WSDOT mainframe systems are replaced, at which time the full benefit of de-commissioning the mainframe can be achieved, with TLLD being credited with approximately \$500,000 per year of this benefit stream.

2. Other qualitative benefits

Additional benefits expected from the implementation of the new time, leave, and labor distribution future business model and TLLD application include:

- Potential for better managing agency payroll costs in the future as a result of a reducing or eliminating agency timekeeping errors through entry of data by employees and edits at the point of entry. Benchmark data from a variety of industries² suggests the potential for an up to one-percent reduction in total payroll costs, though there is only limited data specific to highly unionized public sector environments such as DNR and WSDOT. Benchmarking of actual DNR and WSDOT agency experience against today's payroll costs following implementation of the new TLLD application will be required to confirm if this type of savings level can be achieved at either DNR or WSDOT. Discussions with agency staff during the feasibility study suggest the level of savings is likely to be lower at DNR since the current DNR system has some additional edits and controls. There is also a seasonality factor in terms of the complexity of DNR's time reporting processes resulting from the significant increase in the size of the payroll from temporary or seasonal workers in the summer months. At WSDOT, the opportunity for savings from reduced timekeeping errors is probably larger in some areas of the department such as ferry operations or highway maintenance crews rather than in administrative or other office based units.
- Reduced risk of potential fines for non-compliance with the Federal Fair Labor Standards Act
- Increased capability to monitor and manage compliance with collective bargaining agreements
- Enhanced internal controls consistent with the recommendations made by the State Auditor in the 2007 WSDOT Administrative and Overhead Performance Audit including:
 - Restricting access to charge codes based on an employee's security
 - Providing the capability for employees and supervisors to electronically sign-off on time entries
 - Supporting accurate time recording and allocating of labor costs to intermediate and final cost objectives when multiple jobs are worked in a day
 - Ensuring any change to time entry data is properly authorized and the reason for the change documented

² "Why Time and Attendance Makes Sense in a Down Economy", Nucleus Research, March 2009

- Providing a detailed audit trail of system transactions including any changes to system parameters, business rules, or employee time and leave data
- Increased flexibility to address changes in laws, regulations, rules, and procedures without requiring substantial programming through user configurable parameters and business rules
 - Reduced costs associated with time and leave processing through a standardized and highly automated, work-flow driven process including:
 - Data entry by employees, rather than hand-written timesheets which are then data entered by timekeeping staff
 - Timely submission of hours worked and leave requests
 - Timely online approval processes
 - Improved access to timekeeping and labor distribution data for agency managers and financial analysts since the data is “online” and available for reporting and analysis at all times
- Reduced complexity in the DNR, WSDOT and overall state technical environment through a greatly simplified technical architecture and simplified timekeeping/payroll interface architecture
- Support for the Governor’s vision for shared services environments through implementation of a multi-agency time, leave, and labor distribution solution designed to serve as the enterprise timekeeping solution for the state
- Implementation of the State Auditor’s 2007 recommendation to implement a new time, leave, and labor distribution application at WSDOT, which consolidates the functionality currently provided by the WSDOT LABOR and Ferries LABOR applications into a single system
- Capability through a successful TLLD implementation to lay the ground work for other OFM Roadmap or related enterprise applications in the future.

IV. Impacts

This section identifies and describes the range of stakeholders in DNR, WSDOT, OFM, DOP, and other agencies that will be impacted by the implementation of a new time, leave, and labor distribution business model and the proposed technology investment in a new TLLD application.

A. Summary of Stakeholder Impacts

This subsection summarizes the specific impacts the new time, leave, and labor distribution business model and proposed TLLD application will have on different types of stakeholders. The impacts on the various stakeholder groups will be principally driven out by the three major changes in business drivers outlined below.

1. Online time entry by employees, with a work-flow based approval process for supervisors

The TLLD conceptual future business model described in Section VI.B envisions a fundamental shift from a manual process where employees complete timesheets for entry by a timekeeper to time entry by employees with a work-flow based approval by supervisors.

This fundamental change will result in office-based employees entering their time directly into the system through a workstation. Field workers will also enter their time directly to the extent possible through either a workstation if they have access to one or various time capture devices such as PDAs or kiosks as these tools are deployed throughout each agency. Each time capture device will be synchronized with the timekeeping solution such that it will display the most up-to-date information needed for the employee to submit time, for the timesheet to be routed automatically for review, and for managers to approve it. Employees will also enter leave requests electronically.

Supervisors will now review and approve employee time entry and leave requests online. Depending on their specific application security, supervisors will also have the ability to adjust employee work schedules and other employee specific timekeeping set-up information.

Managers and supervisors will also have timekeeping reports to check for missing timesheets, to analyze time worked by their staff, and to set up online work schedules so the employees can view their schedule and log time against it. Managers will have access to the ad hoc query tool to retrieve additional information on staff hours worked, pay types, and attendance patterns.

Staff who formerly acted as timekeepers within each business unit will now have additional time available that can be redirected to work on other program specific activities.

2. Implementation of an enterprise system which is tightly coupled with HRMS to replace agency specific systems

The new TLLD application is envisioned to be established as an enterprise, supported centrally by a proposed SAP/Enterprise Systems Center of Excellence, which would likely be housed in one of the central services agencies (OFM, DOP, or DIS).

Because TLLD is an enterprise system, this will allow the time of DNR and WSDOT information technology staff currently supporting their individual agency timekeeping systems to be re-directed to support other critical agency line of business systems. Likewise, the increased integration between the new TLLD application and HRMS should reduce a large part of the reconciliation effort between the two systems that agency accounting and timekeeping staff are required to perform today. This time can then be redirected into more analytical or other program specific activities.

3. Implementation of a highly configurable, rules-based system

The new TLLD application is envisioned to be a highly configurable, rules-based COTS application. The inherent flexibility in this new application will enable timekeeping administrators to perform employee set-up, manage schedules, and do other maintenance of business rules online, whereas today most of these changes require programming work or other intervention by technical staff. This will result in additional work for timekeeping administrators and authorized supervisors, but work that can be performed in a very intuitive, online environment. This will, however, also result in a corresponding reduction in the programming effort to operate and maintain the new TLLD application.

B. Inventory of Anticipated Stakeholder Impacts

Exhibit IV-1 provides an inventory of the anticipated stakeholder impacts that have been identified to date.

Exhibit IV-1: TLLD Stakeholder Impacts by Employee Type

Stakeholder Group	Anticipated Impacts
DNR and WSDOT office workers	<ul style="list-style-type: none"> Moving away from reporting time on paper timesheets to a web-based user interface timesheet that is tightly integrated with the HRMS. Moving away from reporting “exception” time to reporting all time worked, and submitting leave requests online.
Field workers such as WSDOT maintenance crews and ferry workers and DNR fire fighters, etc.	<ul style="list-style-type: none"> Will submit time and leave requests via an appropriate time capture device for online approval by their supervisor.
DNR and WSDOT supervisors and managers	<ul style="list-style-type: none"> Will change from paper-based timesheet to online routing and review. Will have access to timely timekeeping data and reports via the TLLD application.
DNR and WSDOT agency timekeeping and payroll staff	<ul style="list-style-type: none"> Will manage the time consolidation and auditing process, rather than data entering all the employees’ hours into the system. Will elevate work activities toward process improvement and data analysis, and away from data entry.
DNR and WSDOT IT staff currently supporting agency time and attendance applications	<ul style="list-style-type: none"> The time of these staff members spent supporting their agency’s current timekeeping system can be redirected to other agency line of business systems
Enterprise Systems support staff located in a central services agency	<ul style="list-style-type: none"> New type of system to support; will require new skill set, training on the new TLLD application, etc. Will manage the timekeeping system and foundation data for the timekeeping solution, ensuring the timekeeping system is updated and synchronized with the HRMS and thereby enabling employees, managers, and supervisors to effectively and efficiently use the time capture and reporting tools
DOP HRMS support staff	<ul style="list-style-type: none"> New timekeeping interface source Given desired tight integration and enterprise nature of the solution will need to understand integration requirements and approach and work with TLLD support team to ensure applications remain in sync



Stakeholder Group	Anticipated Impacts
DNR and WSDOT executive management	<ul style="list-style-type: none">• Will have timely access to timekeeping data and reports.
DNR, WSDOT and OFM financial analysts	<ul style="list-style-type: none">• Will have timely access to timekeeping data for labor distribution analysis and reporting.

V. Organizational Effects

This section documents the potential organizational effects on DNR, WSDOT, and other agencies as appropriate of the envisioned TLLD conceptual future business model and the proposed technology investment in the TLLD application. These anticipated organizational effects have been categorized by the following:

- Changes in business processes, job content, roles, and responsibilities
- Anticipated training needs
- Impact on organizational structure
- Each of these types of anticipated organizational effects is described in further detail below.

A. Business Process Changes and Organizational Impacts

Based on an understanding of DNR and WSDOT agency business drivers and the two agencies current challenges with their time and attendance systems and processes, the TLLD core project team, with assistance from Dye Management Group, Inc., developed a conceptual future business model. The purpose of this model is to provide a framework for how timekeeping and labor distribution functions will be performed in the future. While Section VI.B of this report addresses the future business model in detail, this subsection describes it at a high level and addresses how the potential business process changes could impact agency organizations.

The TLLD conceptual future business model consists of the following business processes:

- **Establishing and maintaining time capture templates and devices** – the functionality of the proposed TLLD to support the ongoing management of foundational timekeeping data such as work schedules, pay types, shifts, and employee data; and how the system will use this data to present appropriate timekeeping data to the employees when they enter their time online
- **Processing leave requests** – how employees and managers will begin submitting leave requests and processing and approving online
- **Capturing employee time data** – the proposed templates and devices for capturing time data from regular employees, and the proposed process for managing timekeeping data for temporary and non-employee positions (such as contractors, volunteers, and commission members)
- **Reviewing, updating, and approving employee time data** – the proposed automated procedures for routing, reviewing and approving time
- **Managing and reporting on employee time data** – the role of supervisors with the proposed TLLD
- **Allocating human capital and related costs** – the proposed process for distributing human capital and related costs to various cost activities

- **Managing and tracking equipment usage** – the proposed process for tracking equipment usage in the new timekeeping system

The functionality provided in the new TLLD system will enable key process changes to organizational roles and responsibilities. Exhibit V-1 provides a summary of organizational impacts enabled by the proposed TLLD future business model and the TLLD application.

Exhibit V-1: Business Process Changes and Potential Impacts to Organizations

Organizational Group	Impacts
Line Managers and Employee	<ul style="list-style-type: none"> • Moving away from reporting time on paper timesheets to an online process – Requires all employees to submit all time worked and leave requests using the new tool • Provides data validation at the source of data entry, and helps employees with the process of submitting time worked • Requires that managers approve all time data using the new tool • Provides automated triggers and alerts for missing timesheets which frees up managers to focus on analysis of time data and staffing needs, rather than on rounding up timesheets • Provides managers with an online reporting tool for timely reporting and data analysis • Will require limited training for employees • Will require system/report and business process training for managers
Centralized (DOP, OFM) and Agency Timekeeping and Payroll Staff	<ul style="list-style-type: none"> • Efficient online processing will save time for payroll staff during the end of each payroll period – Enables timekeeping staff to manage the data consolidation and auditing process, rather than data entering all the employees hours into the system • Reduce the number of retro issues to correct, and creation of manual checks (due to having data validation at the source) • Requires that timekeeping staff focus on maintaining timekeeping “system” values, rather than employee data • Will require system and business process training for all staff • Will free up staff to focus on process improvements and shared service environment

Organizational Group	Impacts
SAP and Enterprise Systems Application and Technical Support Staff	<p>A centrally supported synchronized HRMS/TLLD technical architecture will require:</p> <ul style="list-style-type: none"> • Maintenance of a new “real time” or near real time interface between SAP HRMS and the TLLD • Dedicated IT headcount in a central services agency • Opportunity to re-direct agency staff currently supporting the agency specific systems • Technical training on the new system
Finance and Accounting	<p>Processing labor distribution will require:</p> <ul style="list-style-type: none"> • Configuration and maintenance of the correct accounts in the TLLD or HRMS system (depending where the labor distribution process is performed) • Finance staff will have access to timely timekeeping data and reports via the TLLD application
Agency and Centralized (OFM, DOP) Executive and Senior Management	<ul style="list-style-type: none"> • Moving away from reporting “exception” time to a process where all employees report all time worked every pay period – Enables the state to be in compliance with FMLA timekeeping policies (FMLA regulations for tracking time worked for all employees) • Prevents the state from being liable for questionable hours which are submitted after payroll runs because all employees will be required to submit and approve their time worked for each pay period

B. Training for the New Business Processes

The process changes noted above will require extensive communications for all employees and focused training for specific groups such as line managers. The integrator will provide training materials for the system, but the state project team will need to modify and enhance these materials to incorporate the enterprise business processes and procedures specific for employees, managers, and timekeeping and payroll staff of DNR and WSDOT.

The training plan should be a part of an organizational change management plan that includes structured, sequenced communications relative to the project lifecycle which is discussed in Section X.B: TLLD Project Work Plan.

Exhibit V-2 provides a summary of the recommended types of training that should be rolled out and to whom.

Exhibit V-2: Time, Leave, and Labor Distribution Training

Business Process and/or System Procedure	Line Managers	Employees	Timekeeping and Payroll Staff	TLLD System Support Staff	Executive and Senior Management
How to submit time worked, manage individual timesheets, how to use time capture tools appropriate for the job classification	✓	✓	✓	✓	
How to submit leave requests to managers for approval	✓	✓	✓		
How to run queries and reports to identify missing timesheets and to consolidate and analyze time data	✓		✓	✓	✓
How to run queries and reports to consolidate and analyze time data	✓		✓		✓
Understanding the underlying roles, rules and responsibilities which automate and trigger the online approval processing	✓		✓	✓	
Database set up and maintenance			✓	✓	
TLLD – SAP HRMS interface support			✓	✓	
Configuring work schedules, shifts et al	✓		✓		
Employee timekeeping data auditing and maintenance	✓		✓	✓	
Setting up and maintaining position data for contractors	✓		✓		✓
Assigning employees and contractors to work schedules, shifts	✓		✓		
Configuration of SAP GL to support labor distribution			✓	✓	

C. Impact on Organizational Structure

The implementation of the new TLLD future business model and the proposed TLLD application is anticipated to have several impacts on organizational structure. These impacts include:

- Shifting responsibility for supporting timekeeping systems from information technology staff in each agency to a SAP/Enterprise Systems Center of Excellence unit that will need to be established either in an existing central services agency or as a separate central services function
- Redirecting DNR and WSDOT information technology staff currently supporting their agency specific timekeeping systems to supporting other critical line of business systems
- Providing the opportunity to re-direct a portion of the time currently spent by agency accounting, timekeeping, and payroll reconciling differences between HRMS and the agency timekeeping system(s)
- Providing the opportunity to re-direct much of the time spent by business unit staff in performing timekeeping functions such as entering employee time and managing employee leave requests off-line.

VI. Proposed Solution

This section describes the primary elements of the proposed TLLD solution. It includes a definition of the project scope, a description of the proposed conceptual future time, leave, and labor distribution business model, and the envisioned TLLD application that will support these objectives.

A. Solution Scoping Assumptions

This subsection outlines a number of key project scoping assumptions for the envisioned conceptual future time, leave, and labor distribution business model and the new TLLD application designed to enable this business model. These assumptions were developed in conjunction with the TLLD project sponsors and steering committee. These assumptions provided the basis for defining the project scope, the conceptual future business model, and the detailed system requirements that were used to prepare this feasibility study.

1. Conceptual future business model

Key assumptions surrounding the proposed future time, leave, and labor distribution conceptual business model include the following:

- The implementation of the new TLLD will be based on and support a substantial shift in business processes, as the work of capturing time will be the responsibility of the employees. Ensuring that employees are correctly set up and entering their time will be the responsibility of their managers. This impact to employees and managers will need to be managed with a comprehensive change management plan that ensures all impacted employees in headquarters, regional, and field offices receive the communications and training required for a successful rollout of the new system
- The scope of the proposed TLLD implementation would include changes to how each agency employee enters their time data, and how each manager reviews and approves time data. The employees who are currently data entering all the employees timesheets would be focusing their time on managing the system, analysis, and reporting.

2. TLLD application

Key assumptions about the proposed TLLD application include:

- The TLLD application will provide the functional capabilities outlined in Section VI.2 and documented in further detail in the Time, Leave, and Labor Distribution Detailed System Requirements deliverable prepared as part of this feasibility study
- It is not intended for the new TLLD application to replace any of the capabilities of the existing HRMS. The new TLLD application will rely on the information stored within HRMS and other integrated systems to assign key employment data at the position and employee level

- Integrated systems from which the new TLLD application will draw information include HRMS, AFRS, TRAINS, and other WSDOT agency financial management systems, DNR agency financial systems and other WSDOT and DNR agency line of business systems
- With regard to employment data, HRMS is the “system of record.” When information is available from AFRS, it will be considered the “system of record.” The new TLLD will support interactive integration with HRMS and the other key systems.

3. TLLD implementation project

The scope of the TLLD implementation project envisioned through this feasibility study will include the following elements:

- Seeking and receiving Information Services Board approval for the project
- Defining quality assurance and independent validation and verification requirements for the project and assigning/procuring resources for the effort
- Preparing an RFP and selecting a software solution and systems integrator
- Planning/conducting required business process reengineering, training, and other change management activities for all stakeholder groups including employees, supervisors, timekeepers, timekeeping administrators, system administrators, and technical staff
- Configuring, implementing, and testing the selected ERP or best of breed software solution
- Configuring the selected software to support DNR and WSDOT requirements immediately, while maintaining flexibility to address needs of other agencies
- Implementing the minimum configuration and other changes to the current HRMS environment required to support the selected alternative
- Implementing required integration with HRMS
- Implementing required integration with TRAINS (WSDOT), AFRS (DNR), and other DNR and WSDOT line of business systems
- Performing any required master data conversion from the existing WSDOT, WSDOT Ferry Division, and DNR timekeeping systems
- Performing required operational data conversion; examples of operational data conversion could include current data for the fiscal year if a mid-year conversion is conducted and some historical data to support training, collective bargaining, and certification reporting needs for WSDOT’s Ferry Division
- Integrating with time capture devices at various field work sites. The project budget includes \$500K of funding for analysis and pilot deployment of different types of devices (i.e. kiosks, personal digital assistants, etc.) on a proof of concept basis.

The following elements are specifically excluded from the proposed project scope:

- Set-up of the SAP General Ledger to support the desired state direction; set-up of the SAP General Ledger module will be limited to those configuration activities required to

specifically support the initial implementation of the TLLD application to WSDOT and DNR

- Re-configuration or re-implementation of HRMS not directly tied to TLLD requirements
- Most historical data conversion other than historical data needed to meet an agency's ongoing operational requirements
- Acquiring additional hand held telecommunications or other computing devices except those included in the remote data collection proof of concept efforts.

B. TLLD Conceptual Future Business Model

This subsection outlines the TLLD conceptual future business model. This conceptual future business model was developed by the TLLD core team to provide a framework for how timekeeping and labor distribution functions would be performed in the future, in order to ensure the system requirements were defined to enable and support this future business process. Additional detailed process design activities will need to be performed as part of the TLLD implementation project efforts to further delineate and detail this new operational model at the individual agency level. Likewise, organizational change management efforts will need to be established to facilitate transition from the current business processes to the envisioned future business model.

The TLLD conceptual future business model consists of the following business processes:

- Establishing and maintaining time capture templates and devices
- Processing leave requests
- Capturing employee time data
- Reviewing, updating, and approving employee time data
- Managing and reporting on employee time data
- Allocating human capital and related costs
- Managing and tracking equipment usage.

The proposed future model for each of these business processes is outlined briefly below.

1. Establishing and maintaining time capture templates and devices

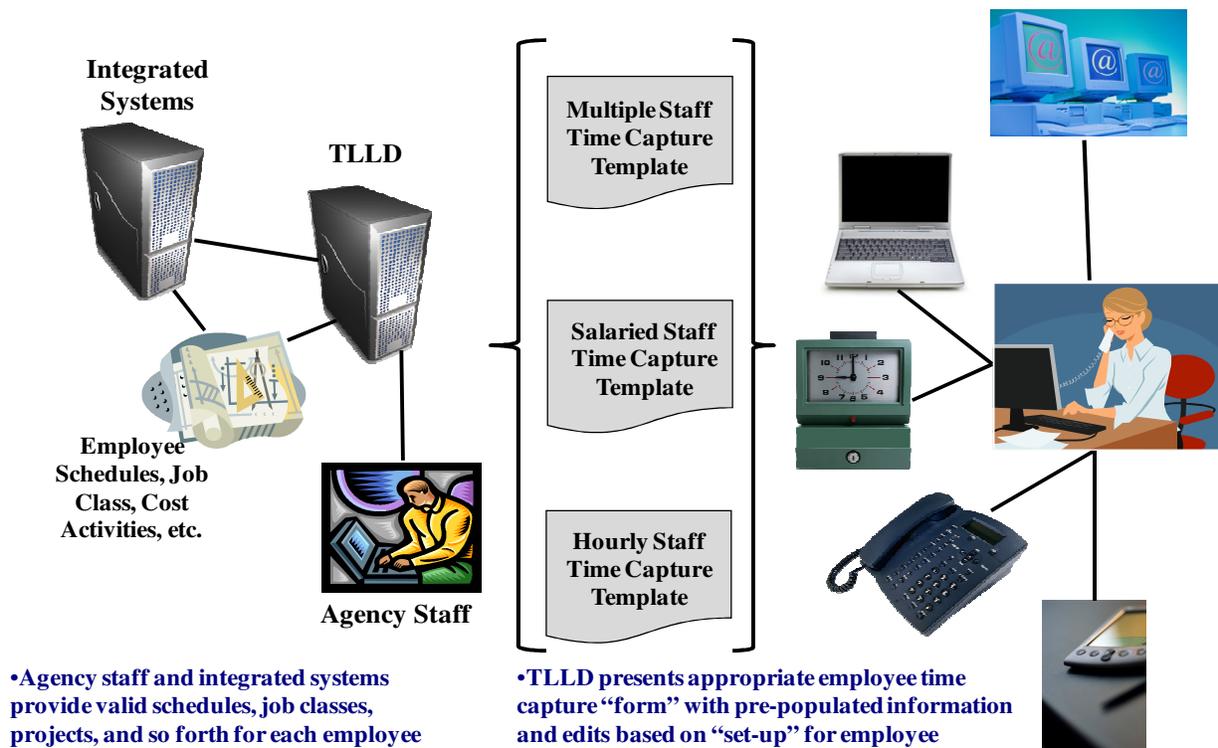
The current environment includes a variety of manual processes and systems to capture and process timekeeping data. The collection of time and entry of the timekeeping data is generally done by centralized staff.

The proposed solution consists of the HRMS, AFRS, agency financial system, and agency line of business systems, hereafter referred to as the "Integrated Systems." The HRMS is the official system of record for state employee job and salary data, and it feeds this information to the other integrated systems, including the new TLLD. The agency integrated systems will send updated

employee data via regularly scheduled interface/updates to the HRMS; and from the HRMS, the current (regular) employee data, including the assigned schedule, job class, and duties related to job costing. Based on this information, the TLLD can present the appropriate time capture form to the employee, which will be pre-populated with the employee’s information (name, title, supervisor name, and other data to be determined). Depending on the agency and the job, employees may be provided with new ways of entering time but in general, employees will use a web-based time entry screen. The reporting tools will be user-friendly, intuitive, and will provide managers and supervisors with an online (and/or printable) view of their employees hours, with a tool for sorting data by column, and enabling managers to review time data by location, work order authorization, employee, or many other sort-able fields.

Exhibit VI-1 highlights the proposed future business model for establishing and maintaining time capture templates.

Exhibit VI-1: Proposed Future Business Model for Establishing and Maintaining Time Capture Templates



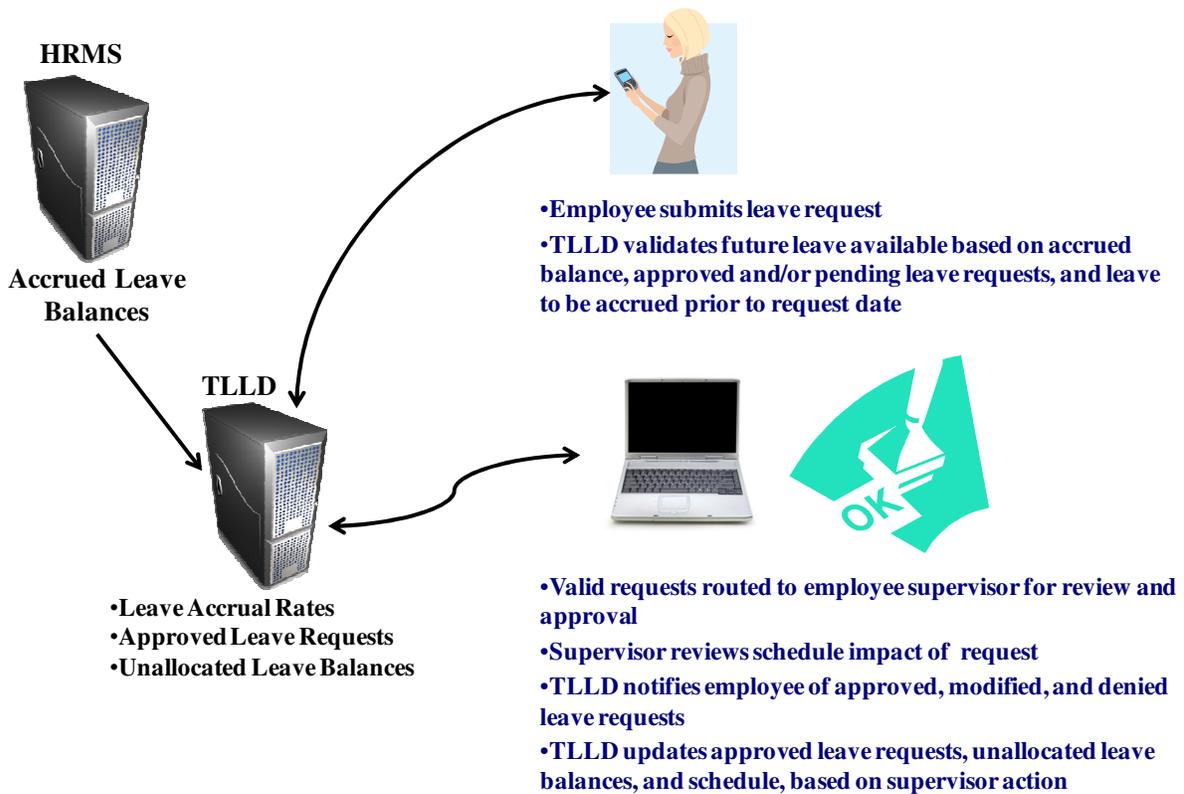
2. Processing leave requests

In the current environment, for the most part, leave requests are handled manually, and most often the data is not entered into an agency’s integrated timekeeping system. This is an issue because in order to be in compliance with FMLA, all employers need to track days worked, leave accrued, and leave taken.

The proposed solution will be an integration of data between the HRMS and TLLD. HRMS will be the official source for accrued leave balances, while the TLLD will be the source for leave accrual rates, approved leave requests, and unallocated leave balances. When an employee submits a leave request, the TLLD will validate whether there is leave available based on the accrued leave balance, including leave that will be accrued prior to the leave start date. If leave time is available to the employee, the TLLD will then route the leave request to the supervisor for approval. Pending and approved leave request data will be available for on-demand reporting.

Exhibit VI-2 outlines the proposed future model for processing leave requests.

Exhibit VI-2: Proposed Future Business Model for Processing Leave Requests



3. Capturing employee time data

In the current environment, there are a variety of ways in which time is collected but for the most part, employees fill out timesheets and turn them into their agency timekeeping staff for data entry into a system. The proposed TLLD solution will include timesheet templates for the major employee types – salaried, hourly, and others.

Implementation of the new TLLD will enable the state to shift the entry of timekeeping data from centralized staff to the employee. When the employee completes the online timesheet, the data will be entered into the system, effectively cutting the processing time for time capture by

about 75% or more and enabling centralized timekeeping staff to focus on data accuracy, reporting, and providing enhanced customer service to the organization.

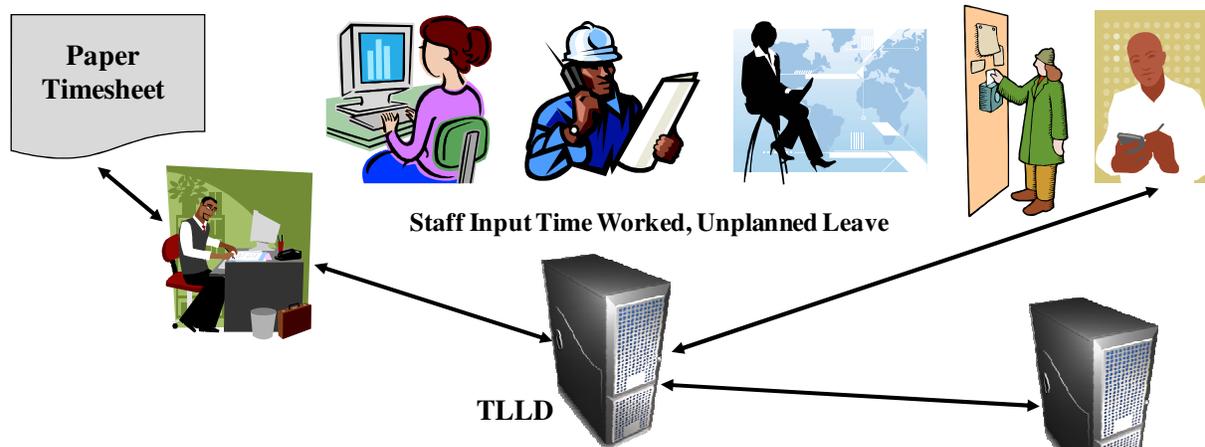
As employees enter time via the designated device, the TLLD will interactively edit the data based on the employee type, the employee's job, work schedule, and other attributes, such as full-time versus part-time, bargaining agreement, pay type, or length of service with the state. The TLLD will be continuously updated with schedule/job/project codes from the integrated systems, but if an employee has a question or issue, they will need to contact the supervisor or other designated support group for updates to project codes and more. The TLLD will validate time entered, present a summary to the employee, and request the employee's electronic signature of the timesheet. Once the employee has approved their time, it is automatically routed to the supervisors "work list."

Since new hires are not always set up in the HRMS quickly enough to enable the employee's data to be available for timekeeping, the TLLD application will provide a place to maintain new hires until they are established within HRMS. Also, since not all types of employees³ are tracked in the HRMS, the TLLD will provide the opportunity to begin tracking timekeeping data for those employees. This will help resolve the issues surrounding positions that are filled versus vacant, because many positions that appear to be vacant are actually filled by contractors – yet the HRMS does not accurately reflect this important headcount and budgeting information. Since the TLLD will be integrated with the HRMS to reflect all active positions, and the TLLD is a separate database, contractors and temps will be able to charge their hours on line against specific positions – thereby substantially improving the reporting accuracy for the hours charged against specific projects and activities.

Exhibit VI-3 highlights the proposed future business model for capturing time data.

³ There are many types of employees including Temporary Employees, Contractors, Interns, Volunteers and Regular employees. The names for the various employee types may differ by agency, and also whether or not the employee data is maintained in the HRMS

Exhibit VI-3: Proposed Future Business Model for Capturing Employee Time Data



- TLLD presents appropriate employee time capture template for chosen input device, staff type, and single or multiple employees
- TLLD interactively edits time input based on current “set-up” and schedule for employee
- Employee or staff inputting paper timesheet data correct entry
- Employee contacts supervisor or other designated party for update of project codes or other set-up items
- TLLD determines hours worked by pay type based on collective bargaining agreements and other pre-established rules
- TLLD presents hours worked by pay type for employee electronic signature
- TLLD routes completed timesheets to supervisors for review and approval

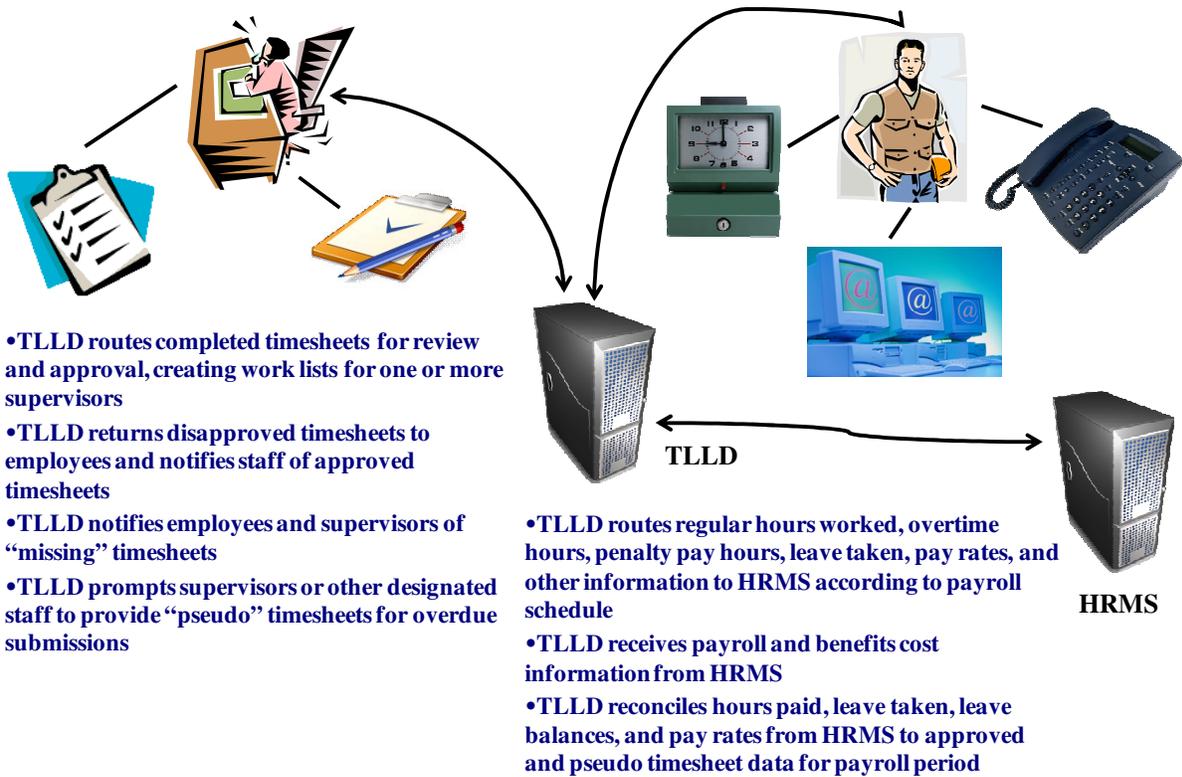
Integrated
Systems

4. Reviewing, updating and approving employee time data

In the proposed solution, the TLLD will route completed timesheets to supervisors and managers for review and approval. Managers will have a “work list” that shows timesheets pending review/approval, leave requests, missing timesheets, and other tasks to be completed. If a manager disapproves a timesheet, a notification message is routed back to the employee for corrections, all online and automated.

Exhibit VI-4 depicts the proposed future business model for employee time data.

Exhibit VI-4: Proposed Future Business Model for Reviewing, Updating, and Approving Employee Time Data

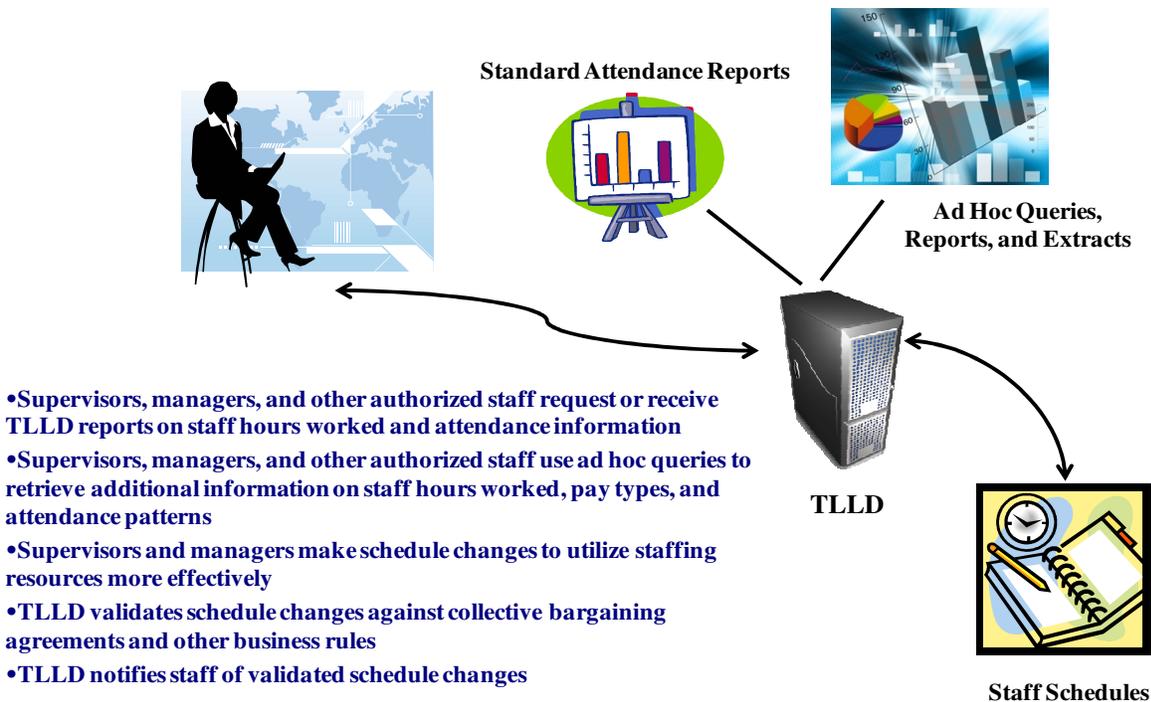


5. Managing and reporting on employee time data

In the current environment there is a lack of reporting functionality, a lack of reports, and a plethora of disconnected systems, all of which make it difficult to analyze and predict staffing and scheduling. The COTS timekeeping systems have standard, easy-to-use reports that will be made available as appropriate to all system users.

Exhibit VI-5 depicts the proposed future business model for managing and reporting on employee time data.

Exhibit VI-5: Proposed Future Business Model for Managing and Reporting On Employee Time Data

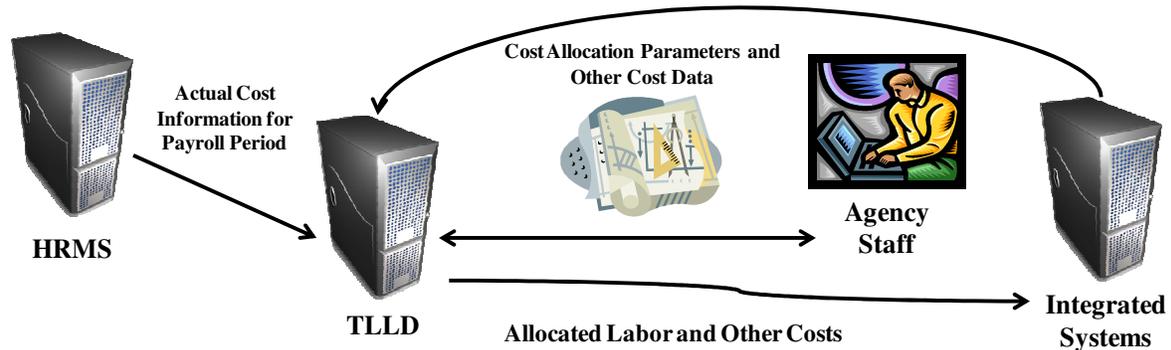


6. Allocating human capital and related costs

In the current environment, the process of allocating labor takes place across several systems and, for the most part, is a manual process that is very error-prone. In the proposed solution, the TLLD will summarize the allocated labor and other allocated costs to the level of detail designated for each receiving system and then distribute the labor costs to each system. The proposed solution is an automated process that receives and reconciles payroll, benefits, and other employer cost information from the HRMS after it is reconciled with AFRS to timesheet data for each payroll period. The TLLD will retrieve cost allocation parameters and rules, and then use projects, programs, organizations, and other cost allocation parameters to distribute the full cost of labor and other pre-established cost types. The TLLD will verify that the allocated costs total the full cost of labor for the payroll period, and will report allocation exceptions to designated staff. The designated staff will manually correct the allocation exceptions and/or modify allocation parameters and then reallocate full cost of labor for the payroll period. The TLLD will summarize the allocated labor and other allocated costs to the level of detail designated for each receiving system and then route the data to these systems using pre-established file formats.

Exhibit VI-6 outlines the proposed future model for allocating human capital and related costs.

Exhibit VI-6: Proposed Future Model for Allocating Human Capital and Related Costs



- TLLD receives and reconciles payroll, benefits, and other employer cost information from HRMS (after reconciled with AFRS) to timesheet data for the payroll period
- TLLD retrieves or receives cost allocation parameters and rules
- TLLD uses projects, programs, organizations, and other cost allocation parameters to distribute the full cost of labor and other pre-established cost types
- TLLD verifies that allocated costs total full cost of labor for payroll period
- TLLD reports allocation exceptions to designated staff
- Designated staff manually correct allocation exceptions or modify allocation parameters and reallocate full cost of labor for payroll period
- TLLD summarizes allocated labor and other allocated costs to the level of detail designated for each receiving system
- TLLD routes allocated labor and other costs for payroll period to designated systems using pre-established file formats

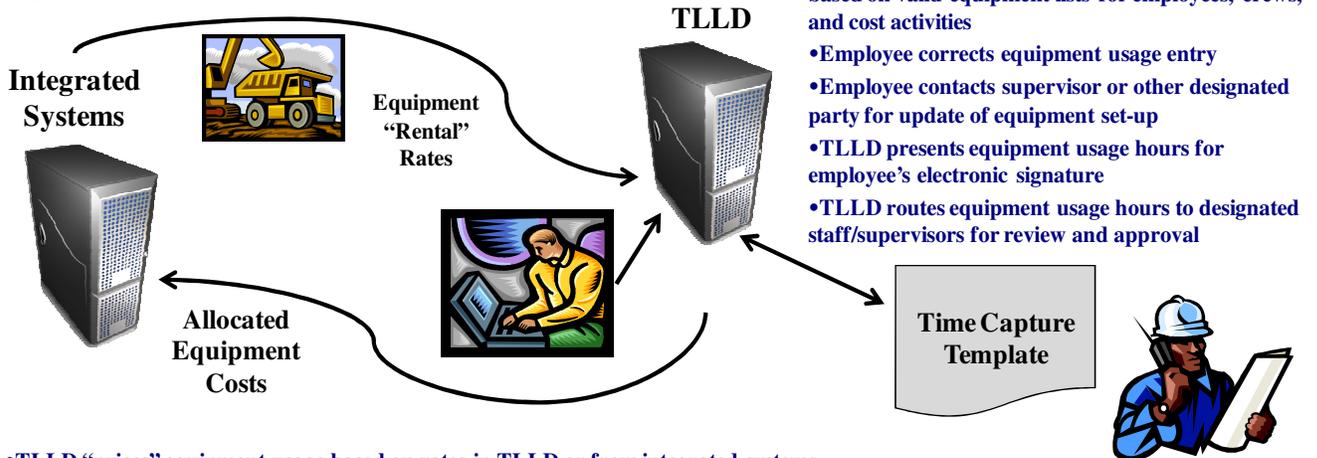
7. Managing and tracking equipment usage

Currently every piece of equipment is default coded to the fund, account, or code it should be charged to, and for what purpose. An employee overrides this coding by manually entering the truck or other equipment number and the number of hours per day they utilize the equipment. Focused management of equipment assignments is critical because the state has to track employee time logged against specific equipment or assets. The short term goal that will be achieved with the new TLLD is that equipment usage data will be passed to the cost accounting system (where equipment rental rates are stored) for analysis and reporting. The long term goal that can be achieved is that asset management processes will be improved with more timely and accurate equipment usage data, which will be available online.

Exhibit VI-7 depicts the proposed future model for managing and tracking equipment usage.

Exhibit VI-7: Proposed Future Model for Managing and Tracking Equipment Usage

- Agency staff and integrated systems provide valid equipment types, identifiers, and rental rates to TLLD
- Agency staff associate equipment with employees, organization codes, cost activities, and so forth
- TLLD timesheet templates present valid equipment listings for employees, crews, and cost activities



- TLLD templates allow separate capture of equipment usage time
- Employee or designated staff enters equipment used
- TLLD interactively edits equipment usage input based on valid equipment lists for employees, crews, and cost activities
- Employee corrects equipment usage entry
- Employee contacts supervisor or other designated party for update of equipment set-up
- TLLD presents equipment usage hours for employee's electronic signature
- TLLD routes equipment usage hours to designated staff/supervisors for review and approval

- TLLD "prices" equipment usage based on rates in TLLD or from integrated systems
- TLLD retrieves or receives cost allocation parameters and rules for equipment
- TLLD uses projects, programs, organizations, and other cost allocation parameters to distribute the cost of equipment usage
- TLLD verifies that allocated equipment costs total full cost for payroll period
- TLLD reports allocation exceptions to designated staff
- Designated staff manually correct allocation exceptions or modify allocation parameters and reallocate full cost of equipment for payroll period
- TLLD summarizes allocated equipment costs to the level of detail designated for each receiving system
- TLLD routes allocated equipment costs for payroll period to designated systems using pre-established file formats

C. High Level TLLD System Requirements

As a first step in defining system requirements to enable the TLLD conceptual future business model, the TLLD core team initially established a high level set of requirements for the functionality, features, and capabilities envisioned for the new TLLD application. These requirements were used as an input to developing the detailed requirements. These high level TLLD system requirements include:

- Provide a single source for time and attendance information capture, processing, reporting, and labor distribution
- Provide employee self-service functionality with real time feedback
- Provide automatic routing for review and approval
- Provide for real time editing of time as it is entered by the DNR and WSDOT employees – editing against program, project, grants, work order, funding source, organization, and other key data related to timekeeping and labor distribution

- Provide the ability to receive and compute the full cost of staff time and associated benefits and overhead from HRMS and other DNR/WSDOT systems using a variety of integration methods based on user configurable formats and time intervals (i.e. real time)
- Include the capability to collect statistical data from employees as part of the time capture process (to support performance measurement)
- Provide the ability for authorized end users to create and maintain multi-tiered and multiple labor distribution rules and calculations with effective begin and end dates associated with the agency as a whole or particular programs, projects, revenue sources, grants, and so forth
- Support the ability to apply labor distribution rules based on end user maintained effective dates, retaining historical views for rules and calculations by program, project, grant, work order, funding source, organization and other parameters
- Support role based review and approval requirements for labor distribution rule creation and maintenance processes
- Provide automated support for development and update of labor distribution rules as frequently as every payroll reporting period
- Support automated workflow for labor distribution rule creation and maintenance processes
- Provide the ability to distribute the full cost of staff time and associated benefits and overhead based on established labor distribution rules and associated effective dates
- Automatically distribute, adjust, and reverse the full cost of staff time and associated benefits and overhead based on an end user configurable schedule and cost and other information received
- Support the ability for manual allocation of the full cost of staff time and associated benefits and overhead by authorized end users
- Support the ability to allocate employee leave costs as they are accrued rather than as leave is taken
- Support role based review and approval requirements for automated and manual labor distribution, adjustment, and reversal processes
- Support automated workflow for automated and manual labor distribution, adjustment, and creation processes
- Provide for field level on line help tools including unprompted descriptors and data prompts.

D. Detailed TLLD System Requirements

Prior to developing the TLLD detailed requirements, the TLLD core team confirmed the functional boundaries of the new TLLD application. The functional boundaries were based on the scope of the detailed requirements gathering effort including business functions, application architecture, technical architecture, interfaces, and conversions.

Most of the requirements, outlined at a summary level below and included in more detail in the separate *Time, Leave, and Labor Distribution System Requirements* deliverable, are focused on system functionality that will enable a shift in the business processes – a shift from a centralized data entry function to employee self-service and from manual processes to automated processes. In order to successfully support employee and manager self-service, a system has to be rule-based, yet flexible. As an example, one of the major issues inherent in the old DNR and WSDOT mainframe systems is the lack of scalability and flexibility. In the current technical environment, the timekeeping team has to fill out a programming request and send it to a programmer (a COBOL programmer within DNR, and DB2 programmer within WSDOT), for without programming skills, a new work schedule cannot be added to the system. In the new COTS timekeeping system, a non-programmer resource can add a new work schedule by opening the Work Schedule screen from the main menu and tabbing through the fields to set up the new schedule.

Exhibit VI-8 below depicts the scope of the proposed TLLD application. It includes the following categories:

1. Time and leave

This category is broken into three sub-areas:

- **Managing Timekeeping Data Elements** – This includes the information and functionality needed to support work schedule setups and a variety of locations and employee pay and shift types, to establish and manage job classifications, and to assign employees to crew lists, work locations, and work schedules
- **Managing Positions** – These requirements are related to the assigning of temporary employees to positions so that their timekeeping data can be tracked and allocated accurately. It has been assumed that only contractor positions will be stored in the TLLD application; HRMS will be the system of record for other position information
- **Processing Time and Leave** – This includes the requirements for capturing, reviewing, and approving timekeeping data, worked and not worked, and managing employee hours and reconciling time and payroll data.

2. Cost distribution

This category includes the business requirements for distributing costs to activities, equipment, funds, and projects. This includes the functionality required to support the valid assignment of activities, equipment, funds, and projects and all varieties of time, leave, and labor data to ensure that data is allocated and distributed to the correct accounting codes; and providing labor allocation data to other downstream systems.

3. Application architecture

Application architecture requirements are general system characteristics and capabilities that must be provided in a consistent and standardized way across all of the functional components of

the TLLD application. Since it is envisioned that the TLLD application will ultimately be used by many state agencies and state employees, the usability, security, configuration, workflow automation, and reporting tools are critical. The TLLD application architecture requirements include: the usability of the system; the ability for users to configure or personalize the system based on their own ways of using the application; data entry standards and conventions; system administration requirements; user documentation; security levels, capabilities and administration; archiving; and audit trailing.

4. Technical architecture

Technical architecture requirements are the underlying technology and system management requirements that must be in place to support the on-going operation of an application. The TLLD technical architecture requirements include: system reliability expectations; system performance standards; data integrity requirements; the ease of maintaining and supporting the application; and the technical infrastructure the application must operate in including network, servers, desktops and database management systems and software development standards for any custom components. It also includes operational standards and requirements including job scheduling and processing and error handling.

5. Conversion and implementation

This category includes requirements regarding the qualifications of the implementation vendor team, the approach for implementation and testing of the new system, the conversion of master and operational data, and the disposition of historical data, end-user, timekeeping administrator and technical staff training and the requirements for future system upgrades.

Exhibit VI-8: TLLD Project Scope Definition

Manage Work Schedules, Types & Locations, Pay Rates, etc.	Manage Positions	Process Time & Leave	Distribute Human Capital & Related Costs to Activities, Funds, Projects, etc.	Application Architecture	Technical Architecture	Conversion/ Implementation
Establish & Maintain Job Classes, Crew Lists, etc.	Authorize New Positions	Establish & Maintain Time Capture Templates & Devices	Validate Activities, Equipment, Funds, Projects, etc. for Time & Leave Reported	Usability	Reliability	Historical Data
Assign Schedules, Pay Rates, etc. to Staff & Positions	Maintain Existing Positions	Process Leave Requests	Allocate Human Capital and Related Costs Incurred	Configurability	Performance	Implementation Timelines & Phasing
	Assign Staff to Positions	Capture Time Worked & Determine Hours to be Paid & Pay Rate	Provide Allocated Time, Leave, and Human Capital and Related Costs to Other Systems	Security	Supportability	Testing
	Manage Temporary Positions	Review, Update, & Approve Hours to be Paid & Pay Rate		Reporting	Data Integrity, Management, & Archive	Training
	Assign Temporary Workers, Contractors to Positions	Manage Hours Worked		Auditability	Hardware	Upgrades
		Reconcile Payroll Information to Time & Leave Reported		Workflow	Network	
					Integration	

In-Scope Components
 Out-of-Scope Components

VII. Alternative Solutions Considered

The purpose of the alternatives analysis was to establish a general direction for the project approach, e.g. to leverage the SAP ERP suite or best of breed solutions; to estimate the order of magnitude cost of doing the project based on an agreed set of assumptions; and establish the business case for the proposed investment.

This section outlines the three alternatives which were analyzed in detail and evaluated during the feasibility study as potential approaches for implementing a new TLLD application, the evaluation criteria utilized to perform the analysis of these alternatives and the results of the alternatives analysis. This section also documents the recommended alternative for proceeding with the TLLD application and the rationale for this alternative.

A. Summary of Alternatives Identified

The TLLD core team and the project steering committee identified three alternative approaches for implementing the new TLLD application. These three alternatives are:

1. Alternative 1: Utilize SAP to support TLLD requirements

This is the SAP-based alternative that is intended to leverage the state's existing investment in SAP technology. It utilizes SAP core functionality and extends the SAP capabilities implemented for HRMS to perform the time capture and labor distribution functionality.

Under this alternative, the native SAP application will be supplemented by two SAP co-developed solutions to provide some limited additional time capture capabilities. SAP Interactive Forms by Adobe allows users to enter information on forms that are similar to the paper forms they are used to and then this data is transferred into the SAP application. Duet is a product SAP co-developed with Microsoft that allows time entry and other functions to be performed by users in an environment similar to Microsoft Outlook and then the data is transferred into the SAP application. Under this alternative, any integration with time capture devices such as a kiosk, personal data assistant, or a badge reading system would require custom program extensions.

2. Alternative 2: Utilize a third party best of breed solution to perform the required time, leave, and labor distribution functions

This is the best of breed alternative in which time and leave processing and labor distribution takes place in a best of breed product, which is integrated with the existing HRMS application. A number of the best of breed applications have supported integration with a range of time capture devices. Some best of breed applications have labor distribution functionality included as part of their out of the box solution, but these applications may require some custom program extensions to fully meet DNR and WSDOT's requirements. For some best of breed applications, however, the labor distribution functionality would be a custom program extension.

3. Alternative 3: Utilize a third party best of breed solution for timekeeping and leave processing and perform labor distribution in SAP

This alternative is a hybrid of the first two alternatives. In this scenario, time and leave processing is performed in the best of breed solution, while labor distribution is performed in SAP. Several best of breed applications have supported integration with SAP. In addition, this alternative allows supported integration with a range of time capture devices. At the same time, the labor distribution functionality can be performed using core SAP functionality, avoiding customizations that may be required under Alternative 2.

Exhibit VII-1 depicts how the various business functions of the TLLD application would be performed under each of the three alternatives.

Exhibit VII-1: Comparison of TLLD Alternatives by Business Function

Business Process	Alternative 1	Alternative 2	Alternative 3
Timekeeping foundation data maintenance	SAP	Best of Breed	Best of Breed
Time capture tools	SAP & SAP Partner Tools	Best of Breed	Best of Breed
Workflow tools	SAP	Best of Breed	Best of Breed
Labor distribution processing	SAP	Best of Breed	SAP

B. Other Alternatives Considered for Evaluation

As part of the process of finalizing the alternatives to be analyzed, the TLLD core team also initially considered transferring or adapting one of the other time, leave, and labor distribution applications that have been implemented in Washington State government. These applications include the in-house developed timekeeping systems within the Washington State Patrol (WSP) and the Washington State Legislature and the commercial-off-the-shelf software solution implemented by the Washington Department of Fish and Wildlife (WDFW).

Demonstrations were conducted of each of these timekeeping applications. Based on the demonstrations, the core TLLD team determined that these systems had significant gaps in meeting DNR and WSDOT’s business requirements for a TLLD application. Exhibit VII-2 summarizes some of the key strengths of the WSP application. Exhibit VII-3 provides this same evaluation for the WDFW solution.

Exhibit VII-2: Evaluation of the Feasibility of Adapting the WSP Timekeeping Solution to Meet the Requirements of the TLLD Application

Strengths of the Solution	Issues/Gaps in Adapting as the TLLD Application
<ul style="list-style-type: none"> • Highly tailored to support WSP’s business requirements • Supports WSP’s time capture requirements • Meets WSP requirements to provide a way for officers to log their calls, events, activities from their shift 	<ul style="list-style-type: none"> • No leave tracking capability • Limited review and approval routing • Limited labor distribution functionality • No supported integration with time capture devices • Lack of tight integration with HRMS – significant manual effort is required for transmission, review and reconciliation • Because it was custom-built for WSP it may be difficult to adapt to support additional agencies • WSP development team is two years behind in completing requested enhancements to the application; thus it is not likely the team could make modifications to support DNR and WSDOT in a timely manner • Significant risk that the application would encounter challenges in scaling to serve as the enterprise solution

Exhibit VII-3: Evaluation of the Feasibility of Adapting the WDFW Timekeeping Solution to Meet the Requirements of the TLLD Application

Strengths of the Solution	Issues/Gaps in Adapting as the TLLD Application
<ul style="list-style-type: none"> • Supports time collection for all WDFW employees – hourly and salaried; represented and non-represented • Supports time capture, leave tracking and labor allocation functionality • Provides online timesheet approval • Provides editing and validation at source of entry • Tracks time and leave in a very user-friendly and intuitive way, which would not require much training for the average person 	<ul style="list-style-type: none"> • No real time integration with HRMS • Inaccuracies with leave accrual; balances are not automatically updated when leave is approved (relies on HRMS data) • No supported integration with time capture devices • Limited reporting capabilities including no ad hoc query capability • Significant business and technical risk to the state of adopting this application as the enterprise solution. The original COTS vendor has discontinued business operations; currently relying on individuals involved in developing the original code for support • Significant risk that the application would encounter challenges in scaling to serve as the enterprise solution

C. Evaluation Criteria

Each of the three alternatives was analyzed against a set of evaluation criteria agreed to by the TLLD core team and the TLLD steering committee. This evaluation criterion includes:

- **Degree of fit with TLLD business requirements** – This criterion refers to the extent to which an alternative meets the DNR and WSDOT business requirements for the TLLD application using a solution’s “out of the box” functionality, without requiring significant customized extensions of the COTS solution(s)
- **Degree of fit with state/agency strategic business direction** – This criterion refers to the extent to which the alternative is aligned with DNR, WSDOT, and Washington State business objectives and strategic plans including support for the Governor’s shared services goals
- **Lifecycle costs/total cost of ownership** – This criterion is based on a comparison of the cost of supporting the system over its lifecycle. For purposes of this analysis, a ten-year cost of ownership was assumed, beginning with the project implementation. Costs include

internal staff to support the system, ongoing end user licenses, one software upgrade cycle, and a refresh of the hardware environment

- **Cost to develop** – This criterion is based on the cost to configure and implement each of the alternatives and includes, among other items, the cost of software licenses, software maintenance during the project period, the development of any custom program extensions or interfaces required, hardware and operating system software, the systems integrator, and the state resources on the project team
- **Degree of risk** – This criterion is based on the relative degree of risk of each alternative, including the risk associated with the development approach (extent of customization required) and the relative risk of the availability and stability of the development team during development and post-deployment
- **Consistency with the state/agency IT direction** – This criterion refers to the extent to which an alternative will fit with state, DNR and WSDOT information technology standards and direction. This includes the extent to which it will leverage and/or support the implementation of the envisioned OFM Roadmap program for statewide financial systems. Other aspects to be considered under this criterion include customer service capability, system sustainability, process efficiencies, security, development platform, database management software, system integration, and reduction of redundant agency or shadow systems, among others
- **Speed of implementation** – This criterion refers to the expected duration of the initial implementation project from the procurement through go-live, and with a period of post go-live support
- **Long-term support considerations** – This criterion is designed to address the degree of ease in which an alternative can be supported by the state following initial implementation. This includes required effort by the proposed SAP/Enterprise Systems Center of Excellence and DNR, WSDOT, DOP, and OFM technical staff. Factors to be considered under this criterion include whether the state will be dependent on a third party for software upgrades, the ease of completing and implementing these upgrades, and the type and number of staff and skills required to maintain the application internally.

Below, subsections VII.D-VII.F document the findings of the TLLD alternatives analysis. In these subsections, each alternative is described in detail, followed by an evaluation of the alternative against the evaluation criteria. Based on this alternatives analysis, subsection VII.F documents the recommended alternative for proceeding with the TLLD application and the rationale for this recommendation.

D. Alternative 1: Utilize SAP to Support TLLD Requirements

Alternative 1 is based on utilizing SAP functionality to meet the TLLD requirements. This alternative is briefly described below, followed by an evaluation of the capabilities of this alternative against the evaluation criteria provided in Section VII.C.

1. Description

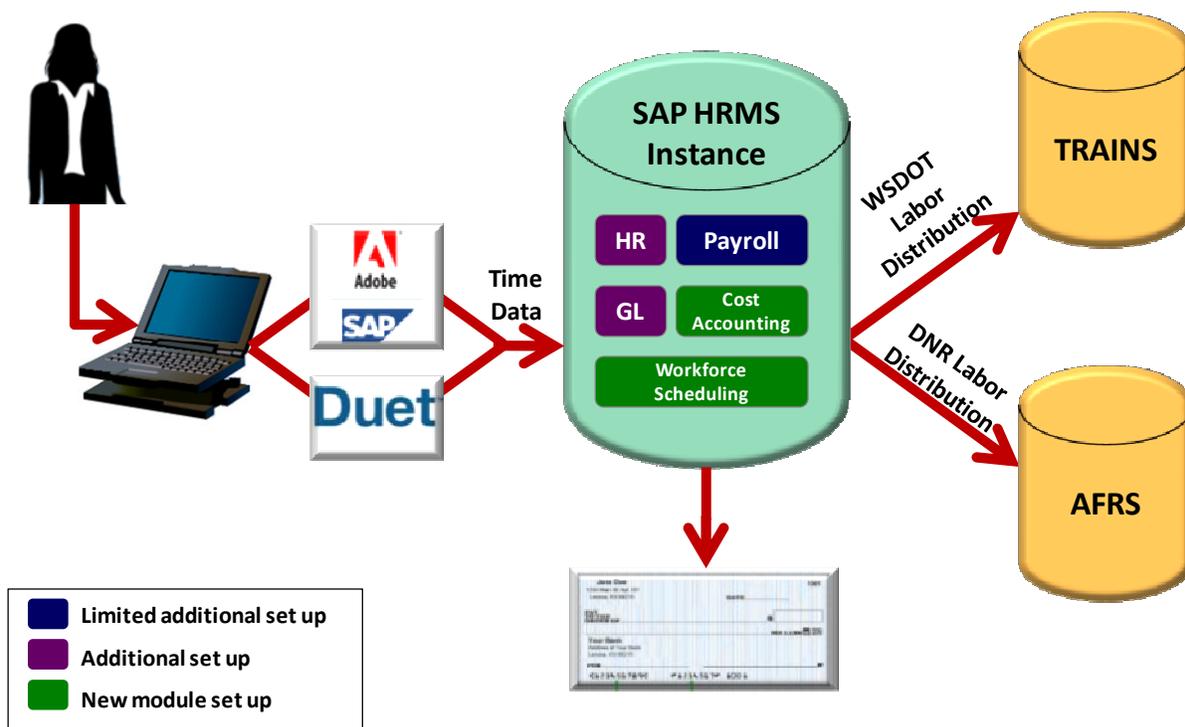
Alternative 1 utilizes SAP core functionality to meet TLLD requirements. It is designed to extend the SAP capabilities implemented for HRMS to perform the time capture and labor distribution functionality. Some of the key elements of this alternative include:

- Modifying the existing HRMS configuration to add job characteristics, shift, crew (work group), and various employee characteristics to the SAP Human Capital Management solution. Some of this data currently exists in SAP HRMS, but is maintained at a higher level than what is needed for accurately tracking time and allocating labor. For example, SAP has a Work Schedule field, which indicates a 40-hour work week, but agencies have many different 40-hour work week schedules and each has its own rules and parameters that would need to be added to SAP HRMS. In addition, some limited changes to the configuration of the SAP Payroll module within HRMS may also be required
- Deploying and configuring the SAP Workforce Scheduling module to assign staff to daily work. This would involve a change for managers and supervisors, as they would now use the system to assign shifts and schedules to their work crews
- Deploying SAP Interactive Forms by Adobe and setting-up a number of user input forms for time capture and leave management processes. These forms could replicate the paper forms employees are using today to log time, thus eliminating the need for intensive training. It would also provide employees with a more user friendly interface than is provided by the SAP timekeeping module
- Deploying Duet to facilitate entering time and processing leave requests through a Microsoft Office interface to provide employees with a more user friendly interface than is available under the SAP timekeeping module
- Modifying the current SAP General Ledger configuration to support labor distribution processing. This involves setting up the General Ledger in SAP for agency level and enterprise level chart of accounts and all variety of charge accounts that are required so that labor hours logged by employees will automatically be charged against the correct account when the payroll is processed
- Deploying and configuring the SAP Cost Accounting module to support labor distribution processing
- Deploying SAP workflow capabilities to support time, leave, and labor distribution processing review and approval. This includes defining and establishing work flows for various business processes and extending the deployment of SAP's employee and manager self service functionality
- Developing and implementing custom integration with various time capture devices implemented to support DNR and WSDOT field units

- Developing and implementing a number of custom program extensions to support TLLD requirements not currently supported by SAP’s timekeeping solution.

Exhibit VII-4 provides a conceptual overview of Alternative 1 under a single production instance deployment strategy, in which the TLLD solution is implemented in the existing HRMS production instance. This would involve extending the configuration of the existing HRMS SAP modules and implementing the additional required SAP functionality in the HRMS instance.

Exhibit VII-4: Conceptual Overview of Alternative 1: Single Production Instance Deployment Strategy



The team also analyzed the feasibility of deploying the TLLD application in a separate SAP production instance. This approach would involve copying the HRMS configurations for Human Capital management and General Ledger and extending them to support the TLLD requirements. This approach would also include setting up SAP Workforce Scheduling and SAP Cost Accounting in the new instance. This new instance would be architected to view and utilize position, employee, and payroll data in HRMS, thus avoiding or substantially limiting the duplication of data between the two instances.

There are two primary reasons for considering the implementation of a second SAP production instance. First, a separate instance significantly reduces the state’s business risk as it would limit the configuration changes that need to be made to the actual HRMS application. Limiting changes to this environment is crucial given the role of HRMS in ensuring the accurate and timely processing of payroll for Washington state employees. Second, a separate production instance for TLLD establishes the framework for the future Roadmap environment. As additional

SAP modules are deployed to support statewide financials and procurement applications, these modules would be added to this second instance.

This two-production instance strategy should be evaluated at this point only as an implementation strategy designed to minimize risk during installation and tuning of new SAP modules. The two instances could be consolidated at some point in the future, for example when most of the planned OFM Roadmap functionality has been deployed and stabilized.

Exhibit VII-5 provides a conceptual overview of Alternative 1 under a two production instance deployment strategy. Exhibit VII-6 outlines where various functional components would be performed under this two-production instance approach.

Exhibit VII-5: Conceptual Overview of Alternative 1: Two Production Instance Deployment Strategy

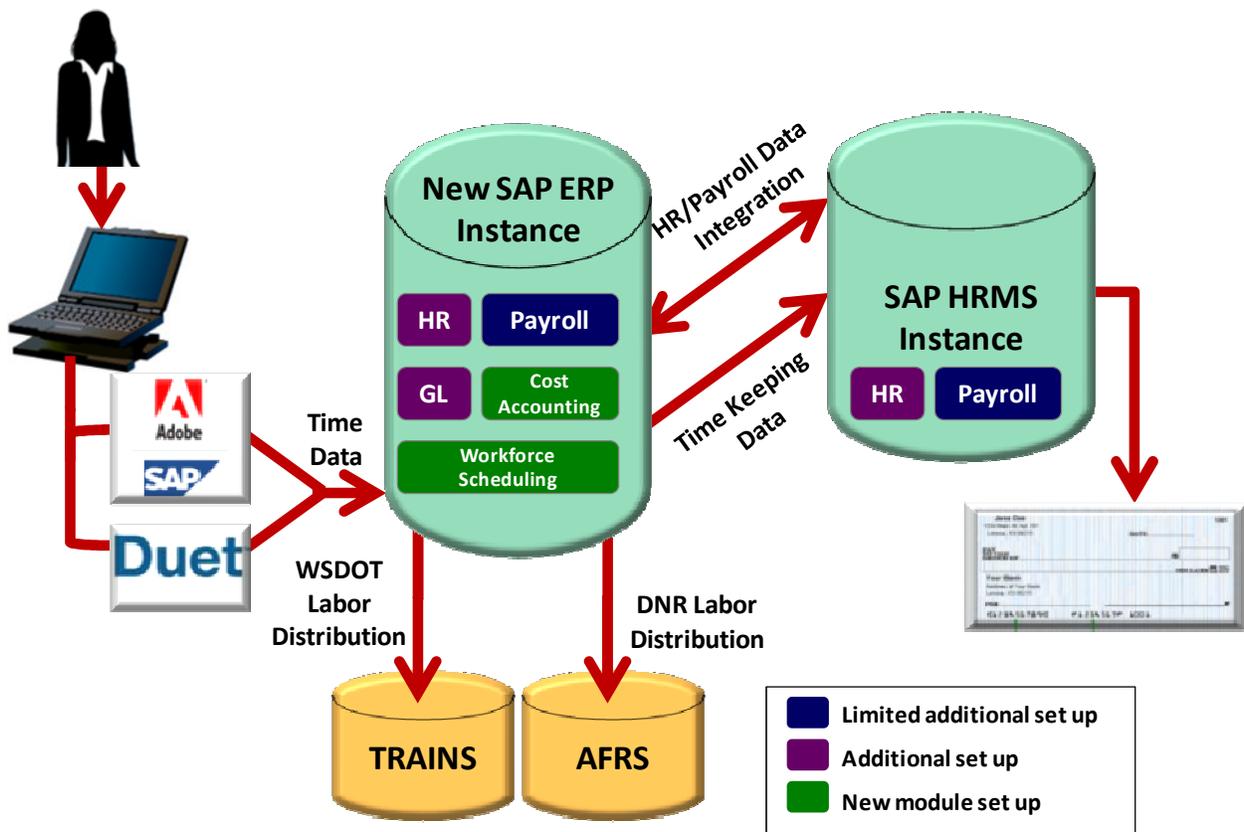


Exhibit VII-6: Summary of Where Various TLLD Business Functions Are Performed in a Two Instance Deployment Strategy

Function		HRMS Instance	TLLD Instance
Manage Work Schedules, Types and Locations, Pay Types, etc.			
	Establish and Maintain Job Classes, Crew Lists, etc.	X	X
	Assign Schedules, Pay Types, etc. to Staff Positions		X
Manage Positions			
	Set Up New Employees	X	
	Maintain Existing Positions	X	
	Assign Staff to Positions	X	
	Manage Temporary Positions	X	
	Assign Contractors to Positions	X	
Process Time and Leave			
	Establish and Maintain Time Capture Templates and Devices		X
	Process Leave Requests		X
	Capture Time Worked and Determine Hours to be Paid and Pay Type		X
	Review, Update, and Approve Hours to be Paid and Pay Type		X
	Manage Hours Worked		X
	Reconcile Payroll Information to Time and Leave Reported	X	X
Distribute Human Capital and Related Costs to Activities, Funds, Projects, etc.			
	Validate Activities, Equipment, Funds, Projects, etc. for Time and Leave Reported		X
	Allocate Human Capital and Related Costs Incurred		X

Function	HRMS Instance	TLLD Instance
Provide Allocated Time, Leave, and Human Capital and Related Costs to Other Systems		X

2. Comparison against evaluation criteria

This subsection provides a comparison of Alternative 1 against the established evaluation criteria. Exhibit VII-7 summarizes the rating for the alternative for each evaluation criteria. The rating is from 0 to 5 with 0 being the least optimal to 5 being the most optimal.

VII-7: Rating of Alternative 1 against Evaluation Criteria

Evaluation Criteria	Rating
Degree of fit with TLLD business requirements	3
Consistency with agency and/or state business strategic direction	5
Lifecycle costs / total cost of ownership	3
Cost to develop	2
Degree of risk	2
Consistency with agency and/or state IT direction	5
Speed of Implementation	4
Long-term support considerations	2
Total Rating	26

A brief discussion of the basis for the rating in each category is provided below.

Degree of fit with TLLD business requirements

Alternative 1 has a number of key gaps in its ability to meet TLLD business requirements out of the box. These gaps, which were identified through a demonstration of the SAP software and then further validated in follow-up discussions with SAP technical sales staff, include:

- Supplying/integrating with “smart” time capture devices, assigning devices to employees and crews, and pre-populating device based templates with work schedule and approved leave information
- Applying business rules (including union bargaining agreement constraints) at time entry and presenting time work categorized as straight time, overtime, penalty pay, and so forth to employee and manager for review and approval
- Establishing crew lists with required roles and responsibilities to be addressed by staff with requisite skills

- Editing time capture against scheduling for work roles and locations at time capture and presenting results to employee and manager for review
- Time and work management reporting to facilitate staff utilization optimization and attendance pattern review
- Fully meeting these requirements will require additional configuration and in most cases significant customization.

Degree of fit with state/agency strategic business direction

This approach is consistent with the strategic goals for DNR and WSDOT, as it involves the implementation of a single, enterprise wide automated timekeeping solution to improve efficiency and eliminate existing manual and/or redundant agency processes. It is also supportive of the Governor's desire to replace the current redundant business support centers with a shared services approach.

Lifecycle costs/total cost of ownership

The estimated ten year cost of ownership of Alternative 1 is \$45.4 million under a pay as you go approach and \$49.8 million if eligible expenses are financed using certificates of participation.

Cost to develop

The estimated cost to develop and implement Alternative 1 is \$26.8 million under a pay as you go approach and \$31.2 million if the implementation is financed using certificates of participation. This is the highest implementation cost of the three alternatives, primarily as a result of the significant customizations required to fully meet TLLD business requirements.

Degree of risk

There is a degree of risk in every system conversion and implementation, but there is a high degree of technical and business risk in this alternative because it involves modifying the existing HRMS and extending the functionality to include timekeeping, as well as configuring the GL to support labor distribution. When a GL is configured, it does not change how an employee's paycheck is processed because the GL is on the receiving end of the payroll process. The larger concern however, is the configuration of SAP to support the many projects, shifts, schedules, activity codes and other attributes to which employees must charge their time, in order for the state to meet labor allocation requirements. The existing HRMS has not been designed to support labor distribution, but to run the payroll that requires far fewer details than the cost accounting of labor. There would also need to be a comprehensive data clean-up effort in SAP to support labor distribution, modifications to the existing data, and the addition of new timekeeping data.

This configuration work likely presents the highest risk of the three alternatives and would require significant regression testing and a solid development and implementation plan to mitigate the risk to the payroll processing.

Consistency with the state/agency IT direction

This solution is consistent with the state information technology and OFM Roadmap direction of eliminating redundant systems and the associated interface programs. The approach in Alternative 1 lays the groundwork for an enterprise ERP to support statewide financials utilizing SAP software which is already owned by the state, while deploying an enhanced time, leave, and labor tracking solution to the enterprise. In addition, one of DOP's underlying business objectives is to maintain a streamlined, efficient, and supportable HRMS/payroll technical architecture, and not to let it become more complicated than it already is. DOP's goal is to minimize silo systems that require interface programs with HRMS. Since Alternative 1 is an SAP-only solution, it is also a good fit with this DOP technology objective.

Speed of implementation

The TLLD implementation is estimated to take approximately two years, with three months post go-live support. This is the same approximate duration as the other two alternatives.

Long-term support considerations

Alternative 1 presents some advantages in terms of long term support as all functionality is being performed within SAP. With an SAP-only solution, the state would not need to coordinate upgrades between the TLLD and the HRMS applications, as there would only be one software solution in SAP to manage when finally consolidated to a single instance. Likewise, state staff would only need to learn one software suite in SAP, part of which is already deployed within the state environment. At the same time, however, a number of complex customizations will need to be supported and upgraded in order to fully meet TLLD requirements. This will complicate and increase the cost of future upgrades of the TLLD application.

3. Overall assessment of the fit to Support TLLD Application

Alternative 1 supports the state's strategic business and information technology direction and highly leverages the state's existing investment in SAP technology. However, this SAP-based alternative has a number of key limitations that include the following:

- The SAP's timekeeping module is difficult to use. While Adobe Interactive forms and Duet provide a partial solution to this limitation, there is no supported solution for integrating with other time capture devices that would need to be used by an agency's field staff
- A number of customizations are required to support various TLLD requirements that can be supported out of the box under the other two alternatives
- The amount of customization significantly increases the project risk
- The amount of customization complicates and increases the cost of future upgrades of the TLLD solution.

E. Alternative 2: Utilize a Third Party Best of Breed Solution to Perform the Required Time, Leave, and Labor Distribution Functions

Alternative 2 is the best of breed alternative in which time and leave processing and labor distribution takes place in a best of breed product, which is integrated with the existing HRMS application.

1. Description

Alternative 2 utilizes the best of breed solution to perform timekeeping and leave processing functionality. As part of this functionality, several of the leading best of breed solution include supported integration with a range of time capture devices.

Labor distribution functionality will be performed in the best of breed solution or in a customization. Some of the best of breed applications have labor distribution functionality included as part of their out of the box solution, but may require some custom program extensions to fully meet DNR and WSDOT's requirements. For other best of breed applications, however, the labor distribution functionality would be a complete customization.

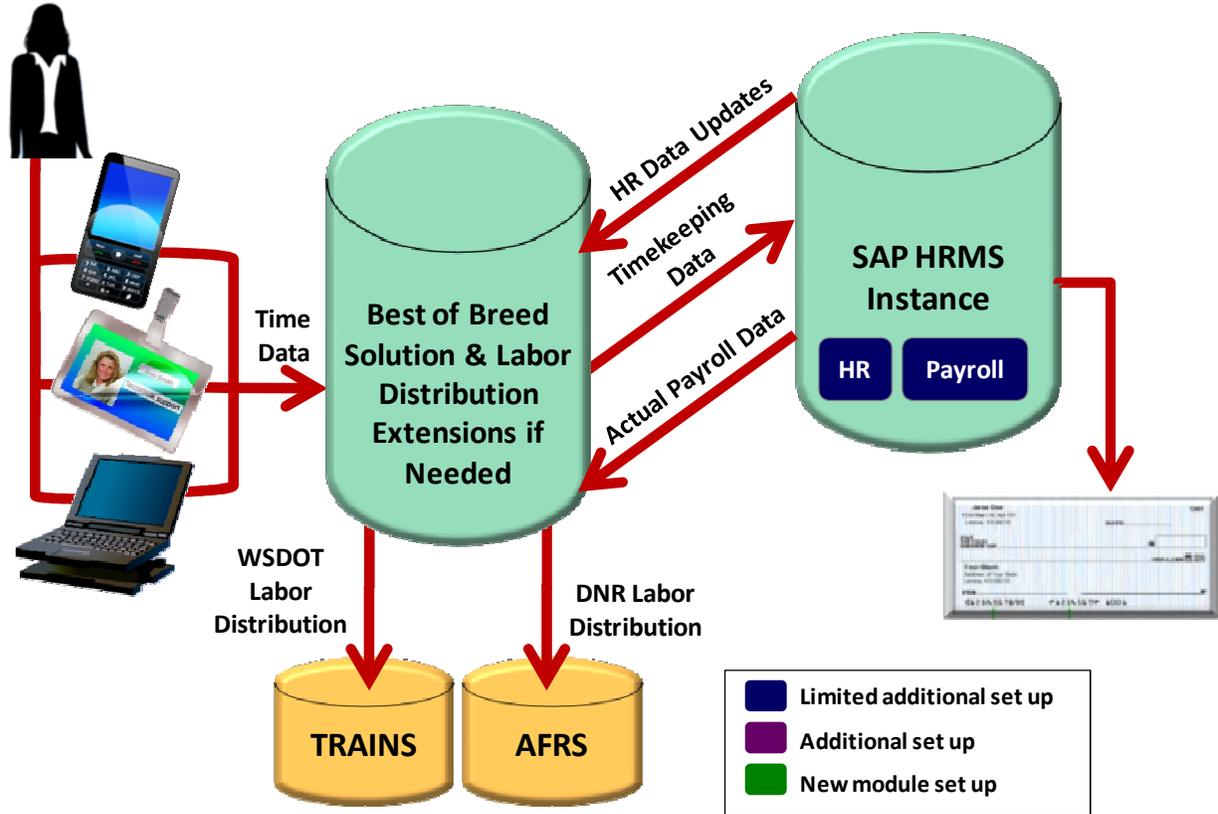
Under this alternative, the best of breed timekeeping solution would need to be set-up with much of the employee and position foundational data that also exists in the HRMS. The TLLD system would handle time capture, send the consolidated data to HRMS for payroll processing, and then receive from HRMS processed payroll data for labor distribution. Time capture and leave requests could be entered through various data collection templates and/or time collection devices and then routed to managers and supervisors through work-flows within the best of breed software for review and approval.

Managers would use the timekeeping tool to assign and record job characteristics such as assigned shift, crew (work group), and various employee characteristics needed for managing timekeeping, and would use the best of breed solution scheduling capabilities to assign staff to daily work.

Implementation of this alternative would require configuration of the best of breed solution and some level of customizations to support labor distribution. It would also require design and development of data integration architecture with the HRMS application. Some of the best of breed solutions have SAP integration capabilities as part of their out of the box solution which could assist with this effort. It would also likely require some minor extensions and/or changes to the configuration of the existing SAP Human Capital Management and Payroll modules in HRMS.

Exhibit VII-8 provides a conceptual overview of Alternative 2.

Exhibit VII-8: Scope of TLLD Implementation under Alternative 2



2. Comparison of evaluation criteria

This subsection provides a comparison of Alternative 2 against the established evaluation criteria. Exhibit VII-9 summarizes the rating for the alternative for each evaluation criteria. The rating is from 0 to 5 with 0 being the least optimal to 5 being the most optimal.

VII-9: Rating of Alternative 2 against Evaluation Criteria

Evaluation Criteria	Rating
Degree of fit with TLLD business requirements	4
Consistency with agency and/or state business strategic direction	4
Lifecycle costs / total cost of ownership	4
Cost to develop	4
Degree of risk	3
Consistency with agency and/or state IT direction	3
Speed of Implementation	4
Long-term support considerations	3
Total Rating	29

A brief discussion of the basis for the rating in each category is provided below.

Degree of fit with TLLD business requirements

Based on vendor demonstrations of two of the market leading best of breed solutions, Alternative 2 is a strong fit with the TLLD timekeeping requirements. However, it is anticipated that some level of customizations will be required to fully meet TLLD's labor distribution requirements.

Degree of fit with state/agency strategic business direction

As is the case with Alternative 1, this approach is consistent with the strategic goals for DNR and WSDOT, as it involves the implementation of a single, enterprise wide automated timekeeping solution to improve efficiency and eliminate existing manual and/or redundant agency processes. It is also supportive of the Governor's desire to replace the current redundant business support centers with a shared services approach.

Lifecycle costs/total cost of ownership

The estimated ten year cost of ownership of Alternative 2 is \$42.4 million on a pay as you go basis and \$46.2 million, if eligible expenses are financed using certificates of participation.

Cost to develop

The estimated cost to develop and implement Alternative 2 is \$24.6 million on a pay as you go basis and \$28.4 million, if eligible expenses are financed using certificates of participation. This is the lowest cost to develop of the three alternatives.

Degree of risk

Alternative 2 has additional project risk related to the need to perform some level of customization to support labor distribution and the need to develop data synchronization architecture with HRMS. Alternative 2 also has additional operational risks related to the need to support the labor distribution customizations and the HRMS integration architecture. There is also operational risk of the accounting staff needing to still perform some level of review and

reconciliation between the best of breed TLLD application and the SAP-based HRMS application.

Consistency with the state/agency IT direction

This solution is consistent with the state information technology and OFM Roadmap direction from the perspective of eliminating redundant systems. Unlike the approach in Alternative 1, however, it does not leverage the existing investment in SAP technology and it requires development of TLLD/HRMS data integration architecture.

Speed of implementation

As is the case with Alternative 1 and Alternative 3, the TLLD implementation under Alternative 2 is also estimated to take approximately two years, with three months post go-live support.

Long-term support considerations

Alternative 2 presents some additional effort from a long-term support perspective since an additional best of breed solution will need to be supported by state staff, along with the integration between this best of breed solution and HRMS. There could also be challenges in upgrading the TLLD application as integration issues with HRMS will need to be considered as part of the upgrading planning.

3. Overall assessment of fit to support TLLD application

Alternative 2 provides most if not all of the TLLD timekeeping requirements out of the box. This includes supported integration between the best of breed solutions and various time collection devices. However, some degree of customizations will likely be required to support the TLLD labor distribution requirements. In addition, data integration architecture will need to be developed and maintained between TLLD and HRMS.

Alternative 2 meets the state's strategic objective of replacing redundant agency systems; however, it does not leverage the state's existing investment in SAP technology, as is the case with Alternative 1 and Alternative 3. In addition, there are additional project risks under Alternative 2 related to the customizations for labor distribution and the integration architecture with HRMS. These components also create operational risk and long-term support considerations. Likewise, there is also operational risk of the accounting staff needing to still perform some level of review and reconciliation between the best of breed TLLD application and the SAP-based HRMS application.

F. Alternative 3: Utilize a Third Party Best of Breed Solution for Timekeeping and Leave Processing and Perform Labor Distribution in SAP

Alternative 3 utilizes a best of breed solution for timekeeping and leave processing, while labor distribution is performed in SAP.

1. Description

Alternative 3 is a hybrid approach of alternatives 1 and 2. This would involve procuring and implementing a third party COTS best of breed timekeeping solution to handle strictly time capture and other timekeeping processes, while extending and configuring SAP to manage the labor distribution processing via the SAP General Ledger and Cost Accounting modules.

As with Alternative 2 there would be an interface program to support synchronicity between the new TLLD application and the existing HRMS. The primary difference between Alternative 2 and Alternative 3 is that under Alternative 2, the labor distribution process would occur in the best of breed software, while in Alternative 3, the labor distribution process would occur in SAP.

In addition, several of the timekeeping best of breed applications have supported integration with SAP to facilitate time capture and leave processing in the best of breed application, with labor distribution and other accounting processes being performed in SAP. The Commonwealth of Pennsylvania, for example, has deployed a best of breed solution with certified SAP integration as its timekeeping front-end to its enterprise SAP solution.

Under Alternative 3, employees would enter time and leave requests in the best of breed software. Managers and supervisors would review and approve time entry and leave requests through work-flow enabled approval processes in the best of breed software. Managers and supervisors would also record job characteristic, shift, crew (work group), and various employee characteristics in the best of breed solution and utilize the best of breed solution's scheduling capabilities to assign staff to daily work.

Time entry data would be sent from the best of breed solution to HRMS. Labor distribution would then be performed in SAP using the payroll data provided by HRMS and timekeeping data from the best of breed solution.

Activities required to implement Alternative 3 would include:

- Configuring and implementing the selected best of breed solution to support timekeeping and leave processing requirements including maintenance of master data, maintenance of employee schedules and work-flow enabled review and approvals by managers and supervisors
- Implementing the supported integration in the best of breed software with various time collection devices
- Making limited modifications to the SAP Human Capital Management and Payroll modules in HRMS as required to support implementing the new best of breed software
- Modifying the current SAP General Ledger configuration to support labor distribution processing. As in Alternative 1, this involves setting up the General Ledger in SAP for agency level and enterprise level chart of accounts and all variety of charge accounts that

are required so that labor hours logged by employees will automatically be charged against the correct account when the payroll is processed

- Deploying and configuring the SAP Cost Accounting module to support labor distribution processing
- Deploying SAP workflow capabilities as required to support labor distribution processing.

As is the case with Alternative 1, Alternative 3 could be implemented in a single SAP production instance with HRMS or a separate production instance for the new SAP-based TLLD components to reduce implementation risks.

Exhibit VII-10 provides an overview of Alternative 3 deployed in a single production instance of SAP with HRMS. Exhibit VII-11 outlines where the various functional components would be performed between the best of breed timekeeping solution, the new SAP components of TLLD and HRMS in this single production instance approach.

Exhibit VII-10: Conceptual Overview of Alternative 3: Single Production Instance Deployment Strategy

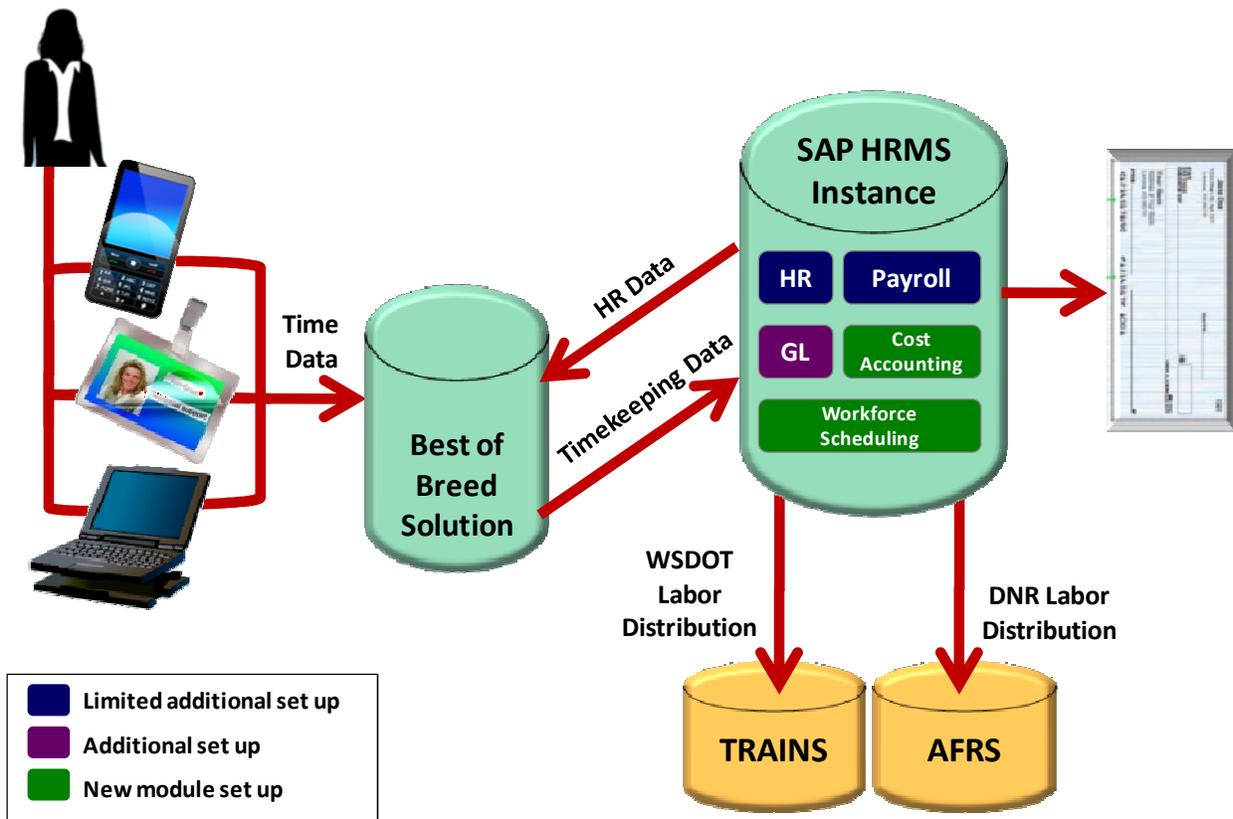


Exhibit VII-11: Summary of Where Various TLLD Business Functions Are Performed in Alternative 3 in a Single Instance Deployment Strategy

Function	HRMS Instance	Best of Breed
Manage Work Schedules, Types and Locations, Pay Types, etc.		
Establish and Maintain Job Classes, Crew Lists, etc.		X
Assign Schedules, Pay Types, etc. to Staff Positions		X
Manage Positions		
Set Up New Employees	X	
Maintain Existing Positions	X	
Assign Staff to Positions	X	
Manage Temporary Positions	X	
Assign Contractors to Positions	X	
Process Time and Leave		
Establish and Maintain Time Capture Templates and Devices		X
Process Leave Requests		X
Capture Time Worked and Determine Hours to be Paid and Pay Type		X
Review, Update, and Approve Hours to be Paid and Pay Type		X
Manage Hours Worked		X
Reconcile Payroll Information to Time and Leave Reported	X	X
Distribute Human Capital and Related Costs to Activities, Funds, Projects, etc.		
Validate Activities, Equipment, Funds, Projects, etc. for Time and Leave Reported	X	
Allocate Human Capital and Related Costs Incurred	X	

Function	HRMS Instance	Best of Breed
Provide Allocated Time, Leave, and Human Capital and Related Costs to Other Systems	X	

Exhibit VII-12 provides an overview of Alternative 3 deployed with TLLD in a separate production instance of SAP from HRMS. Exhibit VII-13 outlines where the various functional components would be performed between the best of breed timekeeping solution, the new SAP components of TLLD and HRMS in this separate production instance approach.

Exhibit VII-12: Conceptual Overview of Alternative 3: Two Production Instance Deployment Strategy

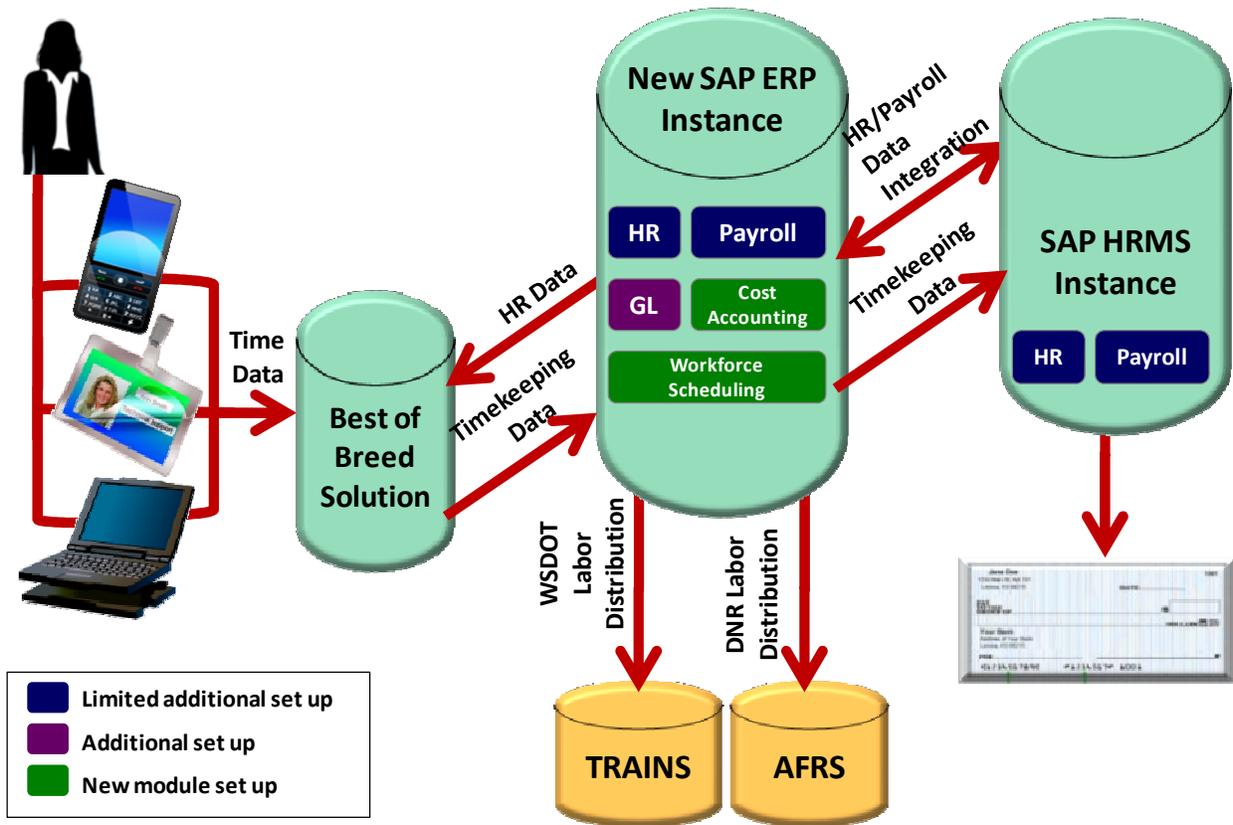


Exhibit VII-13: Summary of Where Various TLLD Business Functions Are Performed in Alternative 3 in a Two Instance Deployment Strategy

Function	HRMS Instance	TLLD Instance	Best of Breed
Manage Work Schedules, Types and Locations, Pay Types, etc.			
Establish and Maintain Job Classes, Crew Lists, etc.			X
Assign Schedules, Pay Types, etc. to Staff Positions			X
Manage Positions			
Set Up New Employees	X		
Maintain Existing Positions	X		
Assign Staff to Positions	X		
Manage Temporary Positions	X		
Assign Contractors to Positions	X		
Process Time and Leave			
Establish and Maintain Time Capture Templates and Devices			X
Process Leave Requests			X
Capture Time Worked and Determine Hours to be Paid and Pay Type			X
Review, Update, & Approve Hours to be Paid and Pay Type			X
Manage Hours Worked			X
Reconcile Payroll Information to Time and Leave Reported	X		X
Distribute Human Capital & Related Costs to Activities, Funds, Projects, etc.			
Validate Activities, Equipment, Funds, Projects, etc. for Time & Leave Reported		X	
Allocate Human Capital & Related Costs Incurred		X	

Function	HRMS Instance	TLLD Instance	Best of Breed
Provide Allocated Time, Leave, Human Capital & Related Costs to Other Systems		X	

2. Comparison against evaluation criteria

This subsection provides a comparison of Alternative 3 against the established evaluation criteria. Exhibit VII-14 summarizes the rating for the alternative for each evaluation criteria. The rating is from 0 to 5 with 0 being the least optimal to 5 being the most optimal.

VII-14: Rating of Alternative 3 against Evaluation Criteria

Evaluation Criteria	Rating
Degree of fit with TLLD business requirements	5
Consistency with agency and/or state business strategic direction	5
Lifecycle costs / total cost of ownership	3
Cost to develop	3
Degree of risk	4
Consistency with agency and/or state IT direction	4
Speed of Implementation	4
Long-term support considerations	4
Total Rating	32

A brief discussion of the basis for the rating in each category is provided below.

Degree of fit with TLLD business requirements

Alternative 3 has the strongest fit in terms of meeting TLLD requirements out of the box. The best of breed timekeeping component will meet most if not all of the time capture and leave processing requirements including supported integration with a variety of time collection devices. SAP can support most of the labor distribution requirements out of the box.

Degree of fit with state/agency strategic business direction

As is the case with Alternative 1 and 2, this approach is consistent with the strategic goals for DNR and WSDOT, as it involves the implementation of a single, enterprise wide automated timekeeping solution to improve efficiency and eliminate existing manual and/or redundant agency processes. It is also supportive of the Governor's desire to replace the current redundant business support centers with a shared services approach.

Lifecycle costs/total cost of ownership

The estimated ten year cost of ownership of Alternative 3 is \$44.0 million on a pay as you go basis and \$47.9 million, if eligible expenses are financed using certificates of participation.

Cost to develop

The estimated cost to develop and implement Alternative 3 is \$24.9 million on a pay as you go basis and \$28.8 million, if eligible expenses are financed using certificates of participation.

Degree of risk

Alternative 3 has additional project risk related to the need to integrate the best of breed timekeeping front-end with SAP. However, certified and supported integration paths are available from several best of breed vendors. In addition, this approach is proven as a number of larger organizations, including the Commonwealth of Pennsylvania, have used similar approaches involving integrating a front-end best of breed timekeeping solution with SAP. Likewise, this approach has the least customizations of any alternative.

Consistency with the state/agency IT direction

This solution is consistent with the state information technology and OFM Roadmap direction from the perspective of eliminating redundant systems and it leverages the state's existing investment in SAP by using SAP for the labor distribution functionality that, unlike timekeeping, is a strong point for the SAP solution. Unlike the approach in Alternative 1, however, it does require development of data integration architecture between the best of breed component of TLLD and the SAP-based components of TLLD and HRMS. However, this integration approach is both supported and proven.

Speed of implementation

As is the case with Alternative 1 and Alternative 2, the TLLD implementation under Alternative 3 is also estimated to take approximately two years, with three months post go-live support.

Long-term support considerations

Alternative 3 presents some additional effort from a long-term support perspective since it will require the state to maintain and support both SAP and a best of breed software module. The state will also have to support the integration between these two modules and consider this integration in planning for software upgrades. However, fewer customizations will need to be supported under this alternative than either of the other two alternatives.

3. Overall assessment of fit to support TLLD application

Alternative 3 provides the most TLLD timekeeping requirements out of the box of any of the three alternatives. Through the best of breed timekeeping module, it also provides supported integration with various time collection devices.

Alternative 3 meets the state's strategic objective of replacing redundant agency systems. It also leverages the state's existing investment in SAP by utilizing SAP to provide the labor distribution functionality.

Data integration will be required with SAP for both TLLD and HRMS components. While this creates additional project and operational risk, this risk is mitigated to some extent by the fact that several best of breed solutions have certified SAP interfaces and a number of large organizations have previously implemented similar approaches, making the solution more proven than under Alternative 2 where HRMS will be integrating with a customized labor distribution engine within the TLLD application.

G. Summary of Alternatives Analysis

Exhibit VII-15 provides a summary of the alternatives analysis. It depicts the scores for each alternative for each of the evaluation criteria that were analyzed.

Exhibit VII-15: TLLD Alternatives Analysis Rating Scorecard

Evaluation Criteria	Alternative 1	Alternative 2	Alternative 3
Degree of fit with TLLD business requirements	3	4	5
Consistency with agency and/or state business strategic direction	5	4	5
Lifecycle costs / total cost of ownership	3	4	3
Cost to develop	2	4	3
Degree of risk	2	3	4
Consistency with agency and/or state IT direction	5	3	4
Speed of Implementation	4	4	4
Long-term support considerations	2	3	4
Total Rating	26	29	32

H. Recommended Alternative and Rationale

It is recommended that Alternative 3 be adopted as the go forward approach for the TLLD application. Alternative 3 is the most appropriate alternative for the following reasons:

- It is the alternative which best meets the TLLD business requirements out of the box, while still leveraging the existing investment in SAP since SAP will be used to provide the labor distribution functionality
- By using SAP for labor distribution, it lays the groundwork for other future OFM Roadmap or related enterprise applications
- It fully supports the Governor's vision for shared services environments
- It provides the state with its best opportunity to maximize the potential benefits from the TLLD application since it provides the option to fully eliminate any entry of timesheets by timekeepers through supporting out of the box integration with various time capture devices. At the same time, through vendor supported integration between the timekeeping best of breed solution and SAP and performing the labor distribution in SAP, this will substantially reduce the manual and time consuming reconciliation issues that currently exist between DNR and WSDOT's existing timekeeping applications and HRMS. To this end, certified integration between SAP and the best of breed timekeeping application will be a mandatory requirement in the RFP.

While the costing for Alternative 1 and Alternative 3 was developed to support implementation of TLLD in a separate production instance, the feasibility study team did not specifically develop a recommendation on whether this was the most appropriate implementation approach. It is believed that the decision on whether to implement TLLD in a separate production instance should be made in conjunction with finalizing the ownership of the SAP environment at the enterprise level and establishing the proposed SAP/Enterprise Systems Center of Excellence.

VIII. Conformity with Agency IT Portfolio

This section outlines how the recommended alternative for the proposed joint DNR and WSDOT TLLD implementation is consistent with the strategic objectives and business drivers and overall information technology direction of the state, DNR, and WSDOT. The recommended solution supports standardization of common business processes across agencies and the implementation of shared services environments.

The proposed TLLD application replaces three agency specific and maintained applications with a single application for both agencies, which is intended to become the enterprise time, leave, and labor distribution application for the state.

Ideally, the proposed TLLD application will be supported by a centralized SAP/Enterprise Systems Center of Excellence, allowing DNR and WSDOT to redirect staff currently supporting their time, leave, and labor applications to agency line of business systems.

1. The proposed solution leverages the state's existing investment in SAP technology

The recommended alternative leverages the state's existing investment in SAP by utilizing SAP for the labor distribution and other accounting functions within TLLD for which SAP is best suited. The timekeeping functionality will be performed by a best of breed solution; however, this best of breed solution will need to have certified integration with SAP that has been previously implemented in multiple complex business and technical environments.

2. The recommended solution establishes the framework for the future OFM Roadmap initiative and other enterprise system efforts

By utilizing SAP for the labor distribution and the other accounting functions of TLLD, this project is helping to lay the groundwork for implementation of the OFM Roadmap project for statewide financial systems and/or the rest of the WSDOT Critical Applications replacement program which proposed by WSDOT to be implemented as the first stage of the statewide OFM Roadmap project.

3. The proposed TLLD application is consistent with both DNR and WSDOT's agency level information technology portfolio

DNR already uses SAP to support its accounts receivable and real estate management functionality; thus, TLLD represents an additional extension of using SAP functionality to support agency accounting functions.

WSDOT has established as part of its information technology strategy a strong preference for using an enterprise solution, like TLLD, when such a solution is available. WSDOT also has demonstrated, through its Critical Applications Replacement Program, a preference for leveraging the state's investment in SAP technology where applicable to meet WSDOT's business requirements.

IX. Project Management and Organization

This section defines the recommended governance structure for the envisioned TLLD implementation project and outlines the key roles and responsibilities of various project stakeholders including DNR, WSDOT, OFM, DOP, and other agency business and IT staff and software vendors/systems integrators. This section also outlines suggested project decision-making processes and recommended procurement and quality assurance strategies for the project.

A. Assumptions about Agency Roles in the TLLD Effort

In order to construct a proposed governance structure, it is necessary to establish certain assumptions about the roles of different agencies in the implementation process. The anticipated role of each agency or organization used for constructing the proposed TLLD project governance approach is described below.

1. DNR and WSDOT

For purposes of this feasibility study, it is assumed that DNR and WSDOT are the first end-customers of the completed TLLD solution and are the primary funding sources for the implementation effort. As such, there is an expectation that senior financial managers from these two agencies will serve as project sponsors and co-chair the TLLD project steering committee. There is also an expectation that each agency will contribute staff to the implementation team. This includes both functional staff from accounting functions and information technology staff who will be responsible for assisting with data conversions from the existing agency timekeeping systems and interfaces to/from other agency line of business systems.

In addition, feedback from timekeeping stakeholders in the two agencies leads us to also recommend that steps be taken to ensure the involvement of both headquarters and field staff from both DNR and WSDOT. It may be appropriate to establish agency level steering committees for these efforts that include representatives from each agency's field units such as WSDOT's regional business managers. Likewise, DNR and WSDOT may want to select staff from field units to fill some of the project roles.

2. Office of Financial Management (OFM)

OFM is responsible for statewide consolidated accounting and financial reporting. In order to achieve that goal, OFM needs consistent data from all agencies, which requires standardization of timekeeping and labor distribution data. Although OFM does not necessarily have a need to participate in the daily activities of the project team, OFM does need to participate in and approve the data mapping between timekeeping, payroll, and the general ledger, and must ultimately sign off on enterprise labor distribution data and reporting. OFM will also need to contribute technical resources familiar with AFRS. OFM has a responsibility to ensure that the project team develops and rolls out enterprise processes, procedures, and timekeeping data, and to that end, the project team has to include an OFM executive manager on the TLLD steering committee.

3. Department of Personnel (DOP)

DOP is responsible for HRMS, which is the official source of all employee and position data. The TLLD application will be tightly integrated with and highly dependent on HRMS. Therefore the need for a close partnership with the HRMS team is required. Consequently, DOP will need to be represented by an executive manager on the TLLD steering committee. DOP will also be expected to contribute a functional specialist resource familiar with the current HRMS configuration to the project team, a senior technical resource to help architect the integration of HRMS and TLLD, and programmers and other technical resources to develop and implement the integration between the two applications.

4. Department of Information Services (DIS)

From the perspective of the implementation project, DIS provides staff to the ISB who is responsible for statewide information technology policies and project management oversight. Consequently, the DIS staff from the Management and Oversight of Strategic Technologies group assigned to DNR and WSDOT should participate on the TLLD project steering committee and provide independent reports to the ISB.

In addition, staff from DIS' Integration Competency Center should be involved in designing and developing required integration between TLLD, HRMS, and agency line of business systems to ensure this integration is developed consistent with state standards. Likewise, it is anticipated that DIS would likely be responsible for hosting (either initially or at some later point) the TLLD application in its data center.

5. Proposed SAP/Enterprise Systems Center of Excellence

There is an assumption that the implemented TLLD application will be supported by a centralized SAP/Enterprise Systems Center of Excellence, which will either be a new central services function or housed in one of the existing central services agencies (DIS, OFM, or DOP). This Center of Excellence will have resources that will be responsible for managing and maintaining the configuration of SAP and best of breed software components. The Center of Excellence will also have technical staff such as programmers to develop reports and interfaces into or out of TLLD and other future SAP-based applications. It would also have application database administrators.

This Center of Excellence will be responsible for providing leadership to an Enterprise Change Control Board with representatives from multiple agencies that will guide decisions on proposed changes or enhancements first for TLLD and then for the overall envisioned OFM Roadmap solution.

The establishment of this group, along with finalizing the approach for functional and technical ownership of the future SAP/Enterprise Systems environment, is a key prerequisite for initiating the TLLD project effort. It is expected that staff from this function will participate as members of the project team and/or for members of the project team to potentially transition into this organization at the completion of the project.

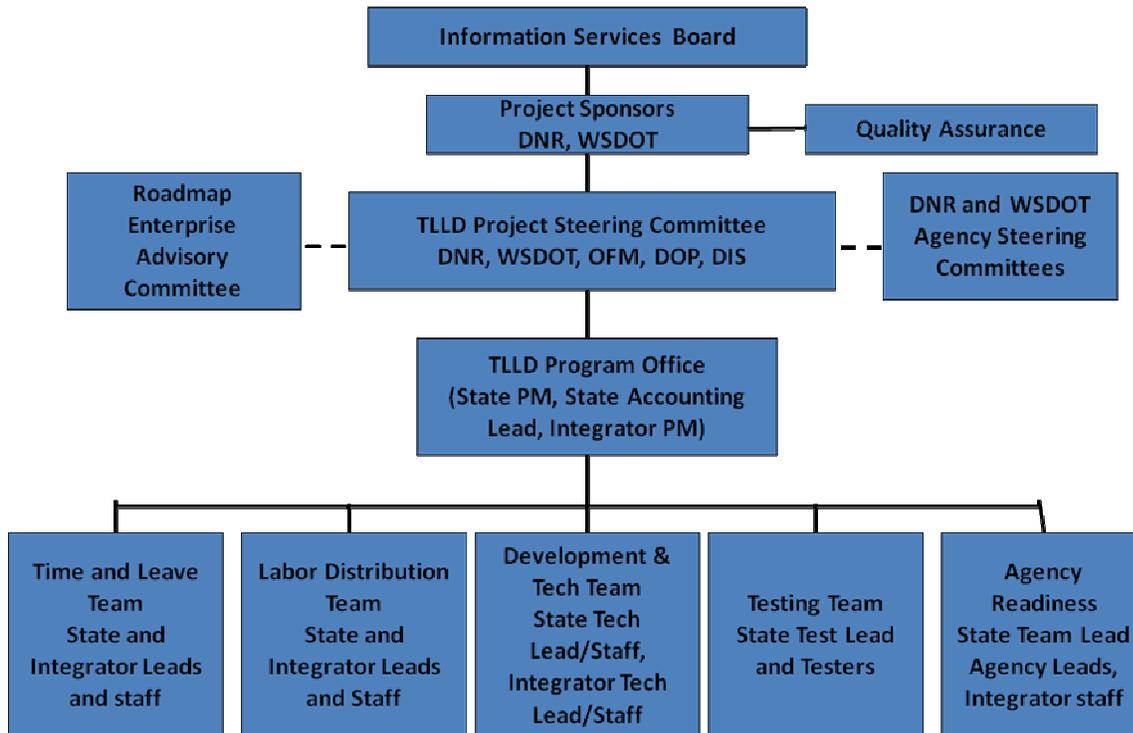
6. Other Washington State agencies

Because it is assumed that the resulting TLLD solution is intended to become an enterprise application, the project should seek and encourage participation from other agencies in various project activities such as selection of the software solution and systems integrator; detailed definition of the future business processes, enterprise design to establish the configuration of the selected software, and user acceptance testing of the completed TLLD application. Participation from other agencies is expected to be on a part-time, as needed basis as appropriate points in the project lifecycle.

B. Proposed Project Organization

Exhibit IX-1 outlines the proposed project organization for the TLLD project. Each of the components of the proposed project organization is then described in further detail below.

Exhibit IX-1: Proposed TLLD Project Organization



1. Washington State Information Services Board (ISB)

The ISB will provide authorization and oversight throughout the project lifecycle of the TLLD. ISB activities include, but are not limited to, approving the project plan prior to procurement, design, and development; authorizing the project to proceed through milestones or other pre-established review “gates”; and periodically receiving and reviewing project progress reports summarizing variances to scope, schedule, and budget and describing issues, quality assurance processes, and current and anticipated risks both in person and in written format.

2. TLLD Project Sponsors

The project sponsors are senior financial managers from DNR and WSDOT who have ownership for the TLLD application in their agencies from a business perspective. The project sponsors are the co-chairs of the TLLD project steering committee. The project sponsors have responsibility for guiding and directing project efforts and ensuring the overall project success. The project sponsors will be responsible for providing clear direction to the TLLD program office including assisting with the resolution of management issues as necessary that cannot wait for the next project steering committee meeting.

3. TLLD Project Steering Committee

The TLLD project steering committee is responsible for providing overall guidance and direction to the TLLD project team within the approved scope of the project effort. The TLLD project steering committee will consist of senior financial and information technology managers from DNR and WSDOT, senior managers from OFM and DOP, and the staff from the DIS Management and Oversight of Strategic Technologies group assigned to DNR and WSDOT.

4. Roadmap Enterprise Steering Committee

The Roadmap Enterprise steering committee will participate in the TLLD project in an advisory role, working to ensure that the completed TLLD application can become an enterprise solution for the state and that the TLLD application will both leverage and fit within the envisioned overall Roadmap initiative.

5. DNR and WSDOT Agency Steering Committees

Project steering committees will be established at both DNR and WSDOT to guide the implementation of the TLLD application in each agency. These steering committees should include representatives of the range of stakeholders who will be impacted by the new TLLD application including accounting, information technology, and business managers from field units among others.

6. Quality assurance

It is envisioned that contracts will be established with third parties to perform quality assurance and independent verification and validation (IV & V) services for the TLLD procurement and implementation effort. Quality assurance activities ensure that standards, processes, and procedures are appropriate and correctly implemented. IV & V activities include review and in-depth analysis of project life cycle products that have a high risk of failure. Examples of IV & V activities include a review of software design to validate that requirements are addressed, analysis of embedded algorithms to verify accuracy, and reviews of critical code sections to validate conformance with standards for maintainability. The quality assurance and IV & V consultants will report to the TLLD project sponsors and provide reports to the steering committee and DIS oversight consultants.

7. TLLD Program Office

The TLLD program office and program/project manager will be responsible for the day-to-day management of the TLLD implementation project. It will consist of the state project manager, the state accounting lead, and the selected system integrator's project manager. It is assumed that the state project manager will be a contracted resource, with extensive experience in implementing time, leave, and labor and/or other enterprise resource planning applications in a complex multi-business unit environment.

8. Time and Leave Team

The time and leave team will have responsibility for defining and documenting business processes, configuring the time and leave parts of the TLLD application to support these business processes and the defined system requirements, developing functional specifications for any required extensions, planning for and testing the TLLD time and leave application components and supporting the deployment of the application. The time and leave team will consist of staff from the state and the selected integrator, working in collaboration. The integrator will provide staff experienced in the set-up and configuration of the TLLD best of breed timekeeping solution. The state will assign staff familiar with the business processes of DNR, WSDOT, and other state agencies to the extent possible. DOP will also assign a resource familiar with the current configuration of the Human Capital Management module in HRMS.

9. Labor Distribution Team

The labor distribution team will have responsibility for defining and documenting business processes, configuring the labor distribution parts of the TLLD application to support these business processes and the defined system requirements, developing functional specifications for any required extensions, planning for and testing the TLLD labor distribution components and supporting the deployment of the application. The labor distribution team will consist of staff from the state and the selected integrator, working in collaboration. The integrator will provide staff experienced in the set-up and configuration of SAP's General Ledger and Cost Accounting modules. The state will assign staff familiar with the business processes of DNR, WSDOT, and other state agencies to the extent possible.

10. Development and Technical Team

The development and technical team will be responsible for developing any required program extensions, interfaces, and conversion programs. It will also be responsible for establishing required technical infrastructure, installing the COTS software components, and installing other required operating system and database management software.

This team will be staffed jointly by the integrator and the state. The integrator will provide designers and developers familiar with the selected TLLD best of breed solution and SAP. DNR will provide programmers familiar with their existing timekeeping system for data conversion activities, as well as development staff familiar with any DNR line of business systems which TLLD will integrate with. WSDOT will provide programmers familiar with the WSDOT LABOR and WSDOT Ferries LABOR system to perform data conversion activities, as well as development staff familiar with TRAINS and any other line of business systems that TLLD will integrate with. DOP will contribute senior technical resources to assist with integrating TLLD and HRMS. OFM will provide development resources familiar with the AFRS application.

The integrator will also provide database administrator and technical specialist resources. These resources will work collaboratively with state resources envisioned to be assigned from the proposed SAP/Enterprise Systems Center of Excellence.

11. Testing Team

The testing team will be responsible for coordinating all TLLD testing efforts. This team will consist of state staff, working in collaboration with the team of the selected systems integrator. The responsibilities of this team will include establishing standards and providing period quality control and oversight of the unit testing performed by the selected systems integrator of program extensions, interfaces and conversions; providing guidance to the system testing effort and monitoring the progress and quality of this testing effort; and planning for and managing execution of the state's user acceptance testing effort.

12. Agency Readiness Team

The agency readiness team is responsible for managing the organizational change aspects of the TLLD project, ensuring WSDOT and DNR are prepared for and ready to accept the system for production operations, and leading the deployment efforts. This team will be staffed jointly by the state and the selected systems integrator. From the state perspective, it will include an overall agency readiness team lead, a lead for both DNR and WSDOT, and a number of DNR and WSDOT staff who will be engaged on a part-time basis during the project as change agents and system champions. It will also include one DNR and WSDOT staff assigned on a full-time basis during the later stages of the implementation effort to assist with the training effort.

C. Project Roles and Responsibilities

This subsection outlines various project roles and responsibilities for the TLLD project. These roles and responsibilities are shown in the form of a Responsible, Accountable, Consulted, Informed, or RACI chart. Exhibit IX-2 outlines anticipated roles and responsibilities during the

Acquisition phases of the project. Exhibit IX-3 outlines anticipated roles and responsibilities during the Implementation phases of the project. The codes for each task/activity reflect the nature of the function's responsibility for that task as follows:

- **R:** Responsible for/Manages the Process
- **A:** Accountable Member (Assigned)
- **V:** Verifies Deliverables (Usually also a "C")
- **C:** Needs to be Consulted (Valuable Input)
- **I:** Informed of Process (Stakeholders)
- **S:** Sign-Off (For Final Delivery, Sponsor)

Exhibit IX-2: TLLD Project RACI Chart for Planning and Acquisition Phase

Project Roles ⇔							
Project Tasks, Activities, and Deliverables ↓	Project Sponsors and Steering Committee	Program Office	State Functional Analysts and Subject Matter Experts	Staff from Other State Agencies	Business Process and RFP Consultant	Quality Assurance	IV & V
Initiate Project							
Update and Finalize Project Charter	C/V	A/R	C/V			I	
Confirm Sourcing Strategy	C/V	A/R	C/V			I	
Develop Initial Work Plan	C/V	A/R	C/V			I	
Select IV & V Vendor	C/V	A/R	C/V				
Select Business Process and RFP Consultant	C/V	A/R	C/V				
Perform Business Process Design							
Define detail business processes	C/V	A/C	A/R		A/R	I	
Define time capture strategy for field forces	C/V	A/C	A/R		A/R		
Update systems requirements if required					A/R		
Prepare RFP							
Develop RFP	C/V	-	C/V	C	A/R	I	
Finalize and Release RFP	C/V	A/R			C		
Select Software/Integrator							
Conduct Pre-Bid Conference	C/V	A/R			C		
Respond to Vendor Questions		A/R	C/V		A/R		
Develop Demonstration Strips		A/R	C/V		A/R	I	
Evaluate Vendor Proposals	C/V	A/R	A/R	C	C	I	
Select Vendor	C/V	A/R	C			I	
Finalize Vendor Contract	C/V	A/R				I	

Exhibit IX-3: TLLD Project RACI Chart for Implementation Phase

Project Roles ⇨										
Project Tasks, Activities, and Deliverables ⇩	Project Sponsors and Steering Committee	Program Office	Staff from Other State Agencies	Time and Leave Team	Labor Distribution Team	Development and Technical Team	Testing Team	Agency Readiness Team	Quality Assurance	IV & V
Perform Enterprise Design										
Finalize Project Work Plan		A/R		C	C	C	C		I	
Application / System Design	C/V	C/V	C	A/R	A/R	C/I	C/I		I	V
Develop and Test Solution										
Configure TLLD Solution	C/V	C/V	C	A/R	A/R	C/I	I		I	V
Update HRMS Configuration		C/V	C	A/R	C	C/I	I		I	V
Develop Required TLLD Solution Extensions	C/V	C/V		C/V	C	A/R	I		I	V
Develop Any Required HRMS Modifications	C/V	C/V		C/V	C	A/R	I		I	V
Change / Configuration Management	C/V	A/R		C	C	A/R	A/R			
Design and Develop Extracts Interfaces		A/C		C/V	C/V	A/R	I		I	V
Data Conversion Planning	I	R		A/R	A/R	A/R	I		I	
Design and Develop Data Conversion Routines	I	A/C		C/V	C/V	A/R	I		I	V
Perform Required Data Cleanup	I	A/C		A/R	A/R	C			I	V
Perform Manual Data Conversions	I	A/R		A/R	A/R	C			I	V
Prepare and Conduct System	I	A/R			A/R	A/R	A/R		I	V

Project Roles ⇨	Project Sponsors and Steering Committee	Program Office	Staff from Other State Agencies	Time and Leave Team	Labor Distribution Team	Development and Technical Team	Testing Team	Agency Readiness Team	Quality Assurance	IV & V
Project Tasks, Activities, and Deliverables ⇩										
Testing										
Prepare for and Conduct User Acceptance Testing (UAT)	C/V	A/R		A/R	A/R	A/C	A/R		I	V
Develop Training Materials	I	A/C		C	C			A/R	I	
Conduct Train-the-Trainer Sessions	I	A/C		C	C			A/R		
Conduct End-User Training Sessions	I	A/C						A/R		V
Conduct Technical Training		A/C				A/R	A/C	A/R		
Deploy/ Implement Solution										
Establish Production Environment	I	A/C		C	C	A/R	C	A/R		
Perform Production Cut-Over	I	A/R		A/R	A/R	A/R		A/R	I	V
Provide Production Support										
Manage/Troubleshoot Operations	I	A/C		A/R	A/R	A/R	C/I	C/I	I	
Provide End User Support		A/C		A/R	A/R	A/R		A/R		
Manage Project										
Validation of Deliverables	C/V	V							C/V	
Program Management	C/V	A/R								
Project Status Reporting	C/V	A/R								
Project Closure/Signoff	S	C		C	C	C	C	C	C/I	

D. Issue Resolution and Other Project Decision Making Processes

Issue resolution and other decision-making processes will flow upward through the project organization. The co-team leads from the state and the selected integrator will be responsible for resolving issues within their individual teams.

Issues that cannot be resolved by the co-team leads or issues that require coordination across multiple teams will be raised to the program office during regular project status meetings and/or on an expedited basis if required. The program office will attempt to address these issues.

Issues which the program office believes require management input and direction because they affect policy and/or project scope, schedule, budget, or other factors will be discussed with the TLLD project sponsors and elevated to the TLLD project steering committee. DIS oversight staff will also be notified. If issues require immediate resolution and cannot wait until the next project steering committee, the project sponsors may choose to resolve the issue themselves and/or informally poll TLLD steering committee members for input prior to making a decision.

E. Procurement Strategies

The following procurement strategies are recommended for the TLLD project:

- Contracting with an experienced program/project manager with extensive experience implementing time, leave, and labor distribution or other ERP modules in large, complex organizations where the applications were deployed to multiple business units. This resource could be procured through a separate RFP, through one of the existing information technology master services contracts or possibly through seeking to hire a temporary employee on a term basis
- Contracting with a consulting firm to assist with the preparation of the RFP. This consultant must be experienced in preparing RFPs and assisting state agencies to procure and select ERP and other enterprise application software. This consultant could be procured through a separate RFP or through an existing state information technology master contract. Consistent with DIS and IBS policies, this consultant would not be eligible to bid on the software solution and systems integration RFP
- Contracting with two different consulting firms to provide quality assurance and independent, verification, and validation services. The selected consultants must be experienced in performing these types of services for the implementation of ERP and other enterprise application software solutions for state agencies. These consultants could be procured through separate RFPs or through existing state information technology master contracts
- Selecting the TLLD best of breed software solution and a systems integrator to deploy the TLLD application including the best of breed and SAP components of the solution set. It is recommended that this acquisition be done in a single RFP process versus selecting the best



of breed software and then procuring the systems integrator. The rationale for this recommendation includes:

- The state will have a single prime vendor with full ownership and responsibility for the successful implementation of the TLLD solution
- The state will save time by eliminating an additional three to six months that would be required for a second procurement step, thus allowing the implementation effort to begin sooner.

X. Estimated Timeframe and Work Plan

This section outlines the proposed project schedule and work plan with key milestones and decision points. This section also includes the estimated timeframe by project phase through implementation, a description of the major tasks and activities to be accomplished in each phase and the anticipated external and internal resource requirements for each phase.

A. Overall Project Schedule

Exhibit X-1 outlines the timeline and sequencing of the major activities or phases of the TLLD implementation. The proposed schedule is anticipated to last approximately 36 months. This elapsed duration includes project initiation, procurement activities, enterprise design, development, testing, deployment/implementation and three (3) months of production support by the selected systems integrator and the assigned state project team members. Because no funding source has been identified at the time of the preparation of this feasibility study, the schedule does not show a specific start date. Thus, this project plan will need to be adjusted once a funding source(s) has been identified and a specific start for the project established.

Exhibit X-1: High Level TLLD Implementation Schedule

	Task Name	July 1, 2010- June 30, 2011				July 1, 2011- June 30, 2012				July 1, 2012 – June 30, 2013			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Acquisition & Planning	Initiate Project										
Perform Business Process Design													
Prepare RFP													
Select Software/Integrator													
Implementation	Perform Enterprise Design												
	Develop and Test Solution												
	Deploy/Implement Solution												
	Provide Production Support												
	Manage Project												

B. TLLD Project Work Plan

The TLLD project work plan consists of two phases:

- **Planning and Acquisition** - This phase includes the formal initiation of the project, additional detailed business process design in each agency, the preparation of the RFP to select a TLLD best of breed software solution and a systems integrator and the selection of the TLLD best of breed software solution and systems integrator.
- **Implementation** – This phase includes the enterprise design of the TLLD application, the development and unit testing of required custom program extensions and interfaces, the system testing and user acceptance testing of the TLLD application, user training and other agency readiness activities, the planning for and executing of the cut-over of the new TLLD application and a period of production support following cut-over.

The remainder of this subsection provides a brief description of the primary tasks that will be performed in each project phase.

1. Initiate project

This phase involves establishing the project management structure, finalizing and implementing the governance structure, finalizing and obtaining approval of the project charter and identifying the various state project team members and developing the project management plan. An initial work plan for the entire project will also be developed in this phase at a somewhat higher level of detail. This work plan will then be adjusted once the systems integrator has been selected. A more detailed work plan will also be established for the acquisition activities leading to the selection of the systems integrator.

This phase will also include procurement activities required to select a consultant to assist with the RFP process and system integrator/software solution selection, select the quality assurance and IV & V consultants, and select the contract state program/project manager. In addition, it will include the development of an initial agency readiness plan to guide organizational change management and other deployment activities at DNR and WSDOT.

This phase will begin immediately upon identification of a funding strategy for the project and ISB approval to proceed with the project. Some activities in this phase such as preparing the work plan and the draft procurement vehicles to select the program manager, RFP consultant, and quality assurance consultant may be able to be performed earlier by state staff funded through existing operating budgets.

2. Perform detailed business process design

This task involves conducting detailed business process design activities in both DNR and WSDOT. The objective of this task will be to carry the conceptual TLLD future business model developed during the feasibility study to a lower level of detail within each of the different types

of business unit and employee groupings in the two agencies for which the timekeeping process may have some variability based on the employees' work location, job characteristics, bargaining units, anticipated time capture devices or other factors. Examples could include:

- DNR
- Headquarters staff
- Staff assigned to a specific field location,
- Staff who may work in multiple locations such as a DNR fire crew.
- WSDOT
- Headquarters staff
- Region or Ferry Division staff assigned to a specific field office
- Highway maintenance crews who are in the field most of the time
- Construction inspection staff working on one or more project site
- WSDOT Ferry crews.

Based on the additional process design work, the project team will make any updates that may be required to the functional requirements. The team will also finalize the data capture devices that will be field tested during the implementation and the number and location of each type of device.

As is the case with the Initiate Project task, some activities in this phase may be able to be performed earlier than shown in the schedule by state staff funded through existing operating budgets.

3. Prepare RFP

This phase includes the activities required to prepare RFPs and publish them to the vendor community. During this phase, the RFP Consultant will develop the functional and technical scope of work elements for an RFP to select a best of breed timekeeping application and a systems integrator. The project team will then work with agency procurement staff, the quality assurance consultant, and DIS oversight consultants to finalize and publish the RFP.

4. Select software solution/systems integrator

In this phase, the state team, with assistance from the RFP consultant, will evaluate vendor proposals and select a systems integrator and software solution. The team will first evaluate vendor proposals and develop a short list for further evaluation, if required, then conduct vendor demonstrations and perform reference checks as appropriate, identify the finalists, conduct

competitive negotiations with the finalists and select and contract with an integrator to implement the TLLD application.

5. Perform Enterprise Design Phase

The Enterprise Design Phase begins with the initiation of the solution implementation effort, including the on-boarding of the systems integrator, confirming project understanding for both the state team and the systems integrator, performing tasks associated with enterprise and system design, and managing the phase through completion, including independent verification and validation and closeout activities.

In this phase, the selected systems integrator will establish an initial configuration of the TLLD application software components based on the detailed requirements matrix. The systems integrator and members of the state team will then lead a series of workshops with DNR, WSDOT and some staff from other agencies to demonstrate and validate the software configuration for each component of the TLLD solution. Required changes to the software configuration will be identified and made. In addition, any gaps in the software configuration requiring customization effort will be confirmed and further analyzed.

Based on the enterprise design efforts, the system integrator and the state team will develop an inventory of required customizations, interfaces, and data loads. The systems integrator will also work with state functional team members to develop screen and report layouts for any required customizations. The results of the system design will then be documented and published in a TLLD System Design document.

This phase also includes the creation of a data conversion plan that details the specific tasks associated with initial data migration from existing DNR and WSDOT timekeeping systems to the new TLLD application. This activity is a joint effort between the selected systems integrator, DNR and, WSDOT. This plan serves as the basis for the design and development of required data conversion programs in the Develop and Test Solution phase.

Likewise, this phase includes updating and finalization of the agency readiness plan based on the solution design. This plan will then guide communications, training, and deployment activities for the remainder of the project.

6. Develop and test solution

Develop and Test Solution involves the tasks associated with preparing the software solutions for installation via application development and configuration activities. This includes the detail design, programming, unit testing and independent verification and validation of required customizations, interfaces and initial data loads.

The Develop and Test Solution phase also includes a set of structured testing activities to ensure the designed systems meet all defined functional requirements. This includes planning and conducting system testing activities in which the system is tested as an integrated application following scripts modeled based on typical business scenarios. It also includes planning and

conducting user acceptance testing activities in which the state team and other extended stakeholders from DNR, WSDOT, OFM, DOP and potentially some representatives from other state agencies validate that the TLLD application meets the defined functional requirements and is ready for production operation.

7. Deploy/implement solution

The Deploy/Implement Solution phase involves preparing user training materials, conducting end-user training, conducting manual data conversion activities, performing associated independent verification and validation and deploying the accepted TLLD application into a production environment.

The systems integrator will be responsible for developing the training plan, preparing custom training materials, and leading the initial pilot training courses for the TLLD solution. DNR and WSDOT staff will then perform the remainder of the training with support from the systems integrator. As part of the training effort, the systems integrator, with assistance from the state team, will modify the standard training materials for SAP and the best of breed timekeeping solution to reflect DNR and WSDOT business scenarios and data. This customized training material will then be utilized to perform the training.

The systems integrator and state team technical support and database administrators will be responsible jointly responsible for establishing the training environment, with the systems integrator configuring the application environments to be used for training.

A detail cutover plan will be developed to detail the steps for moving the user acceptance tested TLLD application from the user acceptance testing environment to the production environment. This cutover plan will detail the tasks associated with the production cutover for the new system, including the resources required and associated timeframes, the order in which the activities will occur, and a contingency or fallback plan in the event that the cutover is not successful. This activity will be prepared by the selected systems integrator with support from all project resources.

For purposes of this feasibility study, the assumption is that the cutover will occur for both agencies at one time. This approach reduces the need for additional interfaces to or on-going maintenance of the existing timekeeping applications. However, this approach does require user training to be completed for all users in a compressed period of time before the cutover to the new system. This should not be a significant issue for the TLLD implementation, if the training team is staffed with sufficient resources from the various business units within the two agencies.

While the number of users requiring training is substantial, the amount of information that needs to be delivered to each employee is fairly limited. Most employees will only require training on how to record their time and submit leave requests. Managers and supervisors will also need to understand the workflow enabled approval processes and potentially the functionality for managing work schedules. Timekeeping administrators will need to understand additional functions, but the number of these users in each agency is fairly limited.

Cutover to production begins only after the TLLD application has passed user acceptance testing and continues until the system is operating in the production environment in accordance with the defined user requirements.

The activities associated with the migration of the TLLD application to production include both the application environment moving from the user acceptance testing environment into production, as well as a migration of the underlying data and system interfaces going live as part of the same exercise. This would include any required manual conversion activities.

Due to the number of activities involved in the production migration phase, best practices state that any data that is considered “static” should be moved prior to the actual cutover weekend. Static data is generally defined as data that is not updated on a regularly-scheduled (i.e., daily, weekly) basis. For the TLLD application, this would include the foundational tables such as schedules, shifts, work weeks, hourly/salaried, and other attributes that are assigned to the employee. The remaining data is then converted during the cutover weekend.

The following activities will be required to migrate the TLLD application to production:

- Establish production hardware and software environments
- Configure software in production environments
- Install/migrate custom programs
- Convert master data
- Convert operational data
- Perform manual conversions
- Initiate production.

8. Provide production support

The effort and cost estimates prepared for this feasibility study included three months of post production support. This task includes providing end-user support, documenting and resolving application issues, making any necessary software configuration changes and making any necessary changes to custom program extensions or interfaces. This task also includes a structured transition of responsibility for the system from the systems integrator to the state’s SAP/Enterprise Systems Center of Excellence.

9. Manage project

This task includes all of the ongoing tasks required to manage execution of the TLLD project effort. During the Project Planning and Acquisition phase, this is a joint activity between the state’s Program/Project Manager, the state’s Business Lead, the RFP consultant, and the QA

Consultant. During the Implementation phase, this is a joint activity between the state's Program/Project Manager, the state's Business Lead, and the system integrator's Project Manager. In addition, the selected quality assurance and IV & V consultants' activities throughout the project lifecycle are included as part of the Manage Project task. Activities in this task include:

- Monitor and update project work plan
- Monitor and update project management plan
- Monitor and update project issues log
- Monitor and update risk management plan
- Perform on-going quality assurance reviews
- Perform independent verification and validation reviews as appropriate
- Prepare monthly progress reports
- Conduct bi-weekly Project Management meetings
- Conduct periodic steering committee meetings.

C. Project Staffing

The TLLD project will require the following types of resources:

- A contracted Program/Project Manager with extensive experience implementing time, leave, and labor distribution or other ERP modules in large, complex organizations where the applications were deployed to multiple business units. The contracted manager should also have a detailed understanding of Washington State government and the nuances of managing large information technology projects in the state
- A consulting firm to assist with finalizing the detailed future business model, preparing the request for proposal (RFP) and facilitating the software selection process that has substantial experience in preparing request for proposals (RFPs) and assisting state agencies to procure and select ERP and other enterprise application software
- A consulting firm to provide quality assurance and independent, verification, and validation services that has significant experience in performing these types of services for the implementation of ERP and other enterprise application software solutions for state agencies
- A systems integrator or systems integrator team with experience implementing the proposed TLLD best of breed component for timekeeping and integrating it to SAP and experience implementing SAP to support labor distribution. The types of resource that will be required from the systems integrator include:

- Project management
- Functional consultants to configure the SAP or best of breed modules
- Technical Lead to oversee the software development and the technical infrastructure
- Integration architect with experience integrating the proposed best of breed solution with SAP
- Database administrator(s) experienced with SAP and the proposed best of breed solution
- Designers and developers to design, code and unit test any required custom program extensions, interfaces with existing systems and data conversions routines
- State staff including:
 - Business/Accounting Lead
 - Subject matter experts familiar with DNR and WSDOT's timekeeping and labor distribution business processes and those of other agencies if possible
 - Functional specialist familiar with the current HRMS configurations and set-ups
 - Technical Lead to work with the systems integrator and assume ownership for the infrastructure following implementation
 - Database Administrator(s)
 - Integration Architect familiar with the current HRMS configuration and environment
 - Developers familiar with the existing DNR and WSDOT timekeeping systems to code/test data conversion export programs
 - Developers familiar with existing DNR and WSDOT line of business systems to code imports to or extracts from these systems for required interfaces
 - Test Lead and testers to plan and perform system testing and lead user acceptance testing
 - Agency Readiness Lead to guide organizational change management and other activities to plan and support deployment at DNR and WSDOT
 - Additional staff to support agency readiness activities
 - DNR and WSDOT user champions on a part-time basis
 - DNR and WSDOT trainers.

XI. Cost Benefit Analysis

This section outlines the cost benefit analysis for the TLLD project. It outlines the assumptions used to prepare the cost estimate for each alternative and the assumptions about the anticipated quantifiable benefit streams from the project. A summary of the return on investment analysis for each alternative is then presented, followed by the detailed cost benefit analysis for each alternative following the DIS templates. A summary of anticipated intangible benefits is also provided, along with an estimate for planning purposes of the anticipated cost of extending this solution to other Washington State agencies.

A. Cost Estimate Assumptions

The following assumptions were utilized to develop the cost estimates for the three alternatives for proceeding with the TLLD project. Unless specifically noted, assumptions apply to all three of the alternatives evaluated.

1. COTS software

Assumptions related to COTS software include the following:

- A total of \$700,000 was included in Alternative 1 and 3 for the cost of additional SAP licenses based on negotiating with SAP for a limited purpose license for 70 additional users in DNR and WSDOT to use elements of the SAP Business Suite for performing only time, leave, and labor distribution functionality. These licenses would support staff utilizing the Human Capital Management, Workforce Scheduling, and General Ledger and Cost Accounting functionality. Employees entering their time through SAP and managers approving time would utilize Employee Self Service and Manager Self Service for which the state has acquired sufficient licenses as part of the HRMS project. This cost estimate was developed based on discussions with SAP, research on costs incurred by other states and the consultant team's recent experience on other projects
- This cost assumption for SAP licenses is conservative in that it does not assume the state can utilize any of the existing licenses for the SAP Business Suite owned by DOP or DNR (which it should be able to do subject to agency agreement and negotiations with SAP). In addition, it assumes the acquisition of SAP licenses only to support TLLD, the specific scope of this feasibility study. If the state determines it is going to move forward with other ERP modules, it may be more cost effective to acquire full use licenses of the SAP Business Suite. For example, at the 60% discount DOP negotiated with SAP at the time of the acquisition of the licenses for HRMS, the cost of full use licenses for these 70 users would be about \$1.1 million. These licenses would, for example, provide a portion of the licenses needed to fully deploy SAP as the ERP solution for WSDOT
- A total of \$900,000 was included in Alternative 2 for the best of breed timekeeping solution. \$750,000 was included in Alternative 3 for a more limited use license of a best of breed timekeeping solution with certified and supported integration to SAP. These cost estimates were based on the mid-point of estimates received from several of the market leading timekeeping best of breed software vendors

- An estimate of \$350,000 was included in Alternative 1 for SAP Interactive Forms by Adobe. This is based on pricing for 5,000 users across DNR and WSDOT
- A total of \$150,000 was included for Duet licenses for Alternative 1. This is based on pricing for 2,000 users at \$75 a copy. The cost per copy was established by adjusting downward slightly the existing quoted state price of \$100 from SAP and Microsoft to reflect lower prices for Duet that the feasibility study team found in the market place
- In all three alternatives, the timing of the software acquisition cost was divided between the start-up of implementation activities where approximately 20% of the licenses are acquired and just prior to the deployment of the TLLD application where the larger proportion of the licenses are acquired. This allows the state to better manage its cash flow and avoid paying maintenance on licenses it is not going to utilize during the development period. However, this approach will be subject to negotiation with each software vendor
- Software licensing costs of 22% of the acquisition price are included in the cost estimate beginning in the year following the acquisition of the software. These costs are escalated 5% annually.

2. Hardware, operating system software and database licenses

Assumptions in the cost estimates related to hardware, operating system software, and database licenses include the following:

- The cost of a new development instance and a new production instance was included in the cost of each alternative. This included hardware, operating system software, and SQL server database licenses
- The development instance was assumed to be acquired at the start of the Implementation phase and the production instance just prior to deployment of the TLLD application
- The acquisition cost for the hardware was based on market research for current pricing for suggested hardware configurations provided by software vendors. Maintenance for the hardware, operating system software and database licenses was included at 20% of the acquisition price, beginning in the year following acquisition. These costs are escalated 5% annually
- A total of \$600,000 was included in the cost estimate for each alternative to support establishment of a disaster recovery environment. It is assumed that this environment can be partially shared with another application
- Data processing costs to cover the TLLD application's share of data center overhead costs (such as heat, lights, etc.) were included in the cost estimate. An incremental cost of \$2 per employee was assumed beyond the \$14 per employee per pay period DNR and WSDOT are currently paying for data processing costs for the HRMS application. The \$2 cost was believed by the team to be a reasonable approximation of the incremental cost of supporting TLLD in addition to the existing HRMS application
- A total of \$800,000 was included in the estimate in Year 7 for a hardware refresh.

- Included as a placeholder was \$500,000 for the cost of remote time capture devices. This cost estimate was based on the estimated cost for 100 kiosks. Additional work is needed by DNR and WSDOT to fully assess the types of devices which are most appropriate for various field units. The cost estimate for this item should then be updated following this assessment.

3. Systems integration and other professional services

Assumptions related to systems integration and other professional services costs include the following:

- A total of \$250,000 was included for the cost of a consultant to facilitate detailed process design efforts, prepare the RFP and facilitate and support the selection of the systems integrator and software solution
- Costs were also included for a contracted state program/project manager (\$950,000 based on a \$250/hour rate) and quality assurance and IV & V consultants (\$677,000)
- Systems integrator costs were established based on the estimated level of effort for each alternative and competitive rates for the skill sets needed in each alternative. These costs vary somewhat between the alternatives based on the number and type of highly skilled SAP resources needed under each alternative. The hourly rates for SAP resources used in building the cost estimates is based on discussions with SAP and several mid-tier systems integrators who specialize in performing SAP integration. The hourly rates for implementing the best of breed timekeeping solutions were developed through discussions with multiple best of breed software vendors
- State staff was included in the cost estimate for each alternative at the levels of participation defined in Section X. The cost of state staff assigned to the project on a less than full-time basis was determined by using either the current state information technology or finance/accounting salary scales, escalated by 5% annually. For staff assigned to the project full-time, the cost of filling the position with a consultant was used. This will provide the state additional flexibility in staffing the position and/or re-assigning the work currently being performed by a state staff member when that person is assigned to the project
- The cost of one software upgrade in Year 7 and 8 is included in the cost of each alternative. The actual costs of this upgrade vary by alternative based on the extent of customizations and the mix of resources required to perform the work.

4. Other costs

Other cost assumptions include:

- Debt service cost was estimated based on utilizing ten year certificates of participation (COP) at 6.25% interest. It assumes the sale of COPs each year during the Implementation phase of the project for eligible expenses to be incurred during that year

- Costs were included for facilities for the Implementation phase of the project. These costs are estimated at \$15,000 per month based on current market rates in the Olympia area
- A total of \$80,000 was included for DNR, WSDOT, and other state staff assigned to the project to attend SAP Boot Camp in Alternative 1 and SAP Boot Camp and/or training on the best of breed solution in Alternative 3. \$40,000 was included for training on the best of breed solution in Alternative 2. These costs were based on the current market rates for SAP training and training on multiple best of breed timekeeping solutions.

B. Benefit Stream Assumptions

The primary quantitative benefits include the following:

- Redirection of the time of timekeeping staff and business unit staff who served as timekeepers that was previously spent entering employee time sheets as a result of shifting time entry to be done by the employees themselves. This time can be re-directed into higher valued analytical or knowledge work or other program specific activities. Per the findings and recommendations of the State Auditor's WSDOT Administrative and Overhead Performance Audit Report, the goal is to move toward a support structure that is consistent with the standard payroll industry benchmarks⁴ for the ratio of payroll support personnel in relation to the employee population. An efficient organization has a support ratio of one payroll staff for every 1000 employees. Currently the agencies average six payroll staff per every 1000 employees. The benefit stream calculated below has a target support metric of two payroll staff for every 1000 employees
- Redirection of the time of timekeeping and payroll staff that was previously spent reconciling the agency timekeeping systems with HRMS as a result of tighter integration between TLLD and HRMS. This time can be re-directed into higher valued analysis or workforce utilization trends or other program specific activities
- Redirection of the information technology resources currently maintaining the two WSDOT agency specific timekeeping systems (WSDOT LABOR and WSDOT Ferries LABOR) and the DNR NTAR system as a result of the implementation of a centrally supported enterprise solution. The time of this agency information technology staff can be redirected to support agency specific line of business systems
- Part of the savings from the de-commissioning of the WSDOT mainframe. The WSDOT LABOR and Ferries LABOR systems are two of the applications currently executing on the WSDOT mainframe. The WSDOT Critical Applications Replacement program envisions replacing all of these applications, including the two timekeeping applications and then decommissioning the WSDOT mainframe. This will result in a savings of approximately \$4.5 million annually. Since this savings cannot be achieved until all the systems including the timekeeping systems are replaced, it is appropriate to allocate a portion of this anticipated savings specifically to TLLD. The benefit stream for TLLD will initially be only the incremental cost of operating the current WSDOT timekeeping systems on the mainframe until all of the other WSDOT mainframe systems are replaced, at which

⁴ Source of information: Washington State Audit Report, November 2007.



time the full benefit of de-commissioning the mainframe can be achieved, with TLLD being credited with approximately \$500,000 per year of this benefit stream.

Exhibit XI-1 outlines the assumptions used to determine the anticipated benefit streams for each of these quantified benefits.

Exhibit XI-1: Assumptions Determining Anticipated Benefit Streams

Potential Benefit Stream	Transactions	Savings	Loaded Employee Cost for Benefit Calculation	Anticipated Annual Benefit Stream
WSDOT: Timekeeping Staff Time Savings - Time that was previously spent data entering all employees timesheets can be repurposed to knowledge work such as reporting, analysis, or customer service and process improvement. (7,500 employees x 2 minutes x 2 timesheets per month x 12 months)	180,000	5 minutes	\$65,000 per year	\$468,750
DNR: Timekeeping Staff Time Savings - Time that was previously spent data entering all employees timesheets can be repurposed to knowledge work such as reporting, analysis, or customer service and process improvement. (2,500 employees x 2 minutes x 2 timesheets per month x 12 months)	60,000	5 minutes	\$65,000 per year	\$156,250
WSDOT: Redirection of Timekeeping/Payroll staff: Resources previously spending time reconciling issues between WSDOT LABOR, Ferries LABOR, and HRMS	2 FTEs		\$65,000 /year	\$130,000
DNR: Redirection of Timekeeping/Payroll staff: Resources previously spending time reconciling issues between NTAR and HRMS	0.5 FTE		\$65,000 /year	\$32,500
WSDOT: Redirection of IT resources currently supporting Ferries LABOR and WSDOT LABOR applications to other line of business systems	1 FTE		\$120,636	\$120,636
DNR: Redirection of IT resource currently supporting NTAR to other line of business systems	0.25 FTE		\$30,159	\$30,159
WSDOT: TLLD share of reduced IT operational costs from decommissioning of the existing WSDOT mainframe – initial reduction is incremental cost associated with labor applications. \$500,000 once all other mainframe applications decommissioned.			\$500,000 of \$4.5M	\$500,000

These benefit streams were applied to all three alternatives with the following exception: under Alternative 2, the benefit stream related to the redirection of the time of timekeeping staff and payroll staff spent reconciling agency systems to HRMS was not applied due to some concern over the potential complexities of the integration between HRMS and the best of breed TLLD solution which could result in reconciliation work for agency accounting staff.

The cost benefit analysis assumes 50% of each potential benefit stream will be achieved in the first year after implementation and 100% of the benefit stream will be achieved beginning in Year 2 forward. The exception to this rule is the savings related to the WSDOT mainframe, where there is a small incremental savings immediately and additional savings recognized in Year 6 when it is assumed the entire WSDOT mainframe is decommissioned through WSDOT's Critical Applications Replacement Program.

C. Summary of Return on Investment

Exhibit XI-2 outlines the anticipated return on investment for each of the three alternatives. This cost benefit analysis analyzed the development and operational costs and anticipated benefits for a period of ten years from project initiation.

Exhibit XI-2: Anticipated Return on Investment for Alternatives Analyzed

Element	Alternative 1	Alternative 2	Alternative 3
Cost to Develop – Pay as You Go	\$26.8 million	\$24.6 million	\$24.9 million
Cost to Develop – Financed	\$31.2 million	\$28.4 million	\$28.8 million
Total Cost of Ownership – Pay as You Go	\$45.4 million	\$42.4 million	\$44.0 million
Total Cost of Ownership - Financed	\$49.8 million	\$46.2 million	\$47.9 million
Net Payback – Pay as You Go	(\$38.5 million)	(\$36.6 million)	(\$36.6 million)

D. Cost Benefit Analysis: Alternative 1

This subsection provides a summary of the cost benefit analysis for Alternative 1 assuming a pay as you go approach. Exhibit XI-3 outlines the estimated cost to develop Alternative 1. Exhibit XI-4 outlines the cost of ownership for Alternative 1 over a ten year period. Exhibit XI-5 depicts the estimated payback for Alternative 1 over a ten year period.

The DIS cost benefit analysis forms for each alternative are included in Appendix D.

Exhibit XI-3: Alternative 1 – Summary of Development Costs, Pay as You Go

Project Component	Total	Year 1	Year 2	Year 3
Implementation Services	\$ 8,036,518	\$0	\$ 3,235,740	\$ 4,800,777
RFP Preparation and Procurement Support	275,000	150,000	125,000	0
Program Management	844,800	0	422,400	422,400
Quality Assurance	648,040	25,000	216,480	406,560
Software Licenses and Maintenance	1,241,800	0	190,000	1,051,800
Technical Infrastructure (Hardware, OS, DB Licenses, etc.)	1,940,000	0	200,000	1,740,000
Facilities for Project Team	360,000	0	180,000	180,000
End User Training	346,380	0	0	346,380
Training for State Staff	80,000	0	80,000	0
Data Processing Costs	320,000	0	120,000	200,000
Subtotal: External Costs	\$14,092,538	\$175,000	\$4,769,620	\$9,147,917
Salaries and Benefits of State Employees Assigned to Project	8,243,075	283,399	3,106,993	4,852,683
Subtotal: Estimated Project Costs Less Contingency	\$22,335,612	\$458,399	\$7,876,613	\$14,000,601
Contingency at 20%	4,467,122	91,680	1,575,323	2,800,120
Total Estimated Project Cost:	\$26,802,735	\$550,079	\$9,451,935	\$16,800,721

Exhibit XI-4: Alternative 1 - Estimated Total Cost of Ownership, Pay as You Go

Project Component	Total	Year 1	Year 2	Year 3	Year 4	Year 5
Software Acquisition	\$1,200,000	\$0	\$190,000	\$1,010,000	\$0	\$0
Ongoing Software Licensing	2,208,307	0	0	41,800	266,090	279,395
Hardware Acquisition	2,700,000	0	200,000	1,700,000	0	0
Hardware Maintenance	3,194,821	0	0	40,000	382,000	401,100
Process and RFP Consultant	275,000	150,000	125,000	0	0	0
Implementation Vendor	8,036,518	0	3,235,740	4,800,777	0	0
Program Mgmt Support	844,800	0	422,400	422,400	0	0
Quality Assurance	648,040	25,000	216,480	406,560	0	0
Facilities for Project Team	360,000	0	180,000	180,000	0	0
End User Training	346,380	0	0	346,380	0	0
Training for State Team Members	80,000	0	80,000	0	0	0
Internal TLLD Core Team Base Pay & Benefits	8,243,075	283,399	3,106,993	4,852,683	0	0
Data Processing Services	4,342,152	0	120,000	200,000	494,000	518,700
Ongoing System Maintenance - Base Pay and Benefits	3,350,894	0	0	0	732,692	403,896
Software Upgrade	5,144,711	0	0	0	0	0
Other Operational Expenses	0	0	0	0	0	0
Subtotal: Cost of Ownership	\$ 40,974,698	\$458,399	\$7,876,613	\$14,000,601	\$1,874,782	\$1,603,091
Contingency @ 20% for Project	4,467,122	91,680	1,575,323	2,800,120	0	0
Total Estimated Cost of Ownership - State	\$ 45,441,820	\$550,079	\$9,451,935	\$16,800,721	\$1,874,782	\$1,603,091

Exhibit XI-4: Alternative 1 - Estimated Total Cost of Ownership, Pay as You Go (Continued)

Project Component	Total	Year 6	Year 7	Year 8	Year 9	Year 10
Software Acquisition	\$1,200,000	\$0	\$0	\$0	\$0	\$0
Ongoing Software Licensing	2,208,307	293,364	308,032	323,434	339,606	356,586
Hardware Acquisition	2,700,000	0	800,000	0	0	0
Hardware Maintenance	3,194,821	421,155	442,213	478,463	502,386	527,505
Process and RFP Consultant	275,000	0	0	0	0	0
Implementation Vendor	8,036,518	0	0	0	0	0
Program Mgmt Support	844,800	0	0	0	0	0
Quality Assurance	648,040	0	0	0	0	0
Facilities for Project Team	360,000	0	0	0	0	0
End User Training	346,380	0	0	0	0	0
Training for State Team Members	80,000	0	0	0	0	0
Internal TLLD Core Team Base Pay & Benefits	8,243,075	0	0	0	0	0
Data Processing Services	4,342,152	544,635	571,867	600,460	630,483	662,007
Ongoing System Maintenance - Base Pay and Benefits	3,350,894	407,925	419,102	440,057	462,060	485,163
Software Upgrade	5,144,711	0	4,280,399	864,311	0	0
Other Operational Expenses	0	0	0	0	0	0
Subtotal: Cost of Ownership	\$ 40,974,698	\$1,667,079	\$6,821,613	\$2,706,725	\$1,934,534	\$2,031,261
Contingency @ 20% for Project	4,467,122	0	0	0	0	0
Total Estimated Cost of Ownership – State	\$ 45,441,820	\$1,667,079	\$6,821,613	\$2,706,725	\$1,934,534	\$2,031,261

Exhibit XI-5: Alternative 1 – Estimated Payback, Pay as You Go

	Total	Year 1	Year 2	Year 3	Year 4	Year 5
Estimated Costs Including Contingency	\$45,441,820	\$550,079	\$9,451,935	\$16,800,721	\$1,874,782	\$1,603,091
Anticipated Annual Benefit Streams	6,951,493	0	0	0	389,280	690,092
Net Payback	(\$38,490,328)	(\$550,079)	(\$9,451,935)	(\$16,800,721)	(\$1,485,501)	(\$912,999)
Cumulative Payback		(\$550,079)	(\$10,002,014)	(\$26,802,735)	(\$28,288,236)	(\$29,201,235)

	Total	Year 6	Year 7	Year 8	Year 9	Year 10
Estimated Costs Including Contingency	\$45,441,820	\$1,667,079	\$6,821,613	\$2,706,725	\$1,934,534	\$2,031,261
Anticipated Annual Benefit Streams	6,951,493	1,128,377	1,150,945	1,173,964	1,197,443	1,221,392
Net Payback	(\$38,490,328)	(\$538,702)	(\$5,670,668)	(\$1,532,761)	(\$737,091)	(\$809,869)
Cumulative Payback		(\$29,739,937)	(\$35,410,605)	(\$36,943,367)	(\$37,130,380)	(\$38,490,328)

E. Cost Benefit Analysis – Alternative 2

This subsection provides a summary of the cost benefit analysis for Alternative 2 assuming a pay as you go approach. Exhibit XI-6 outlines the estimated cost to develop Alternative 2. Exhibit XI-7 outlines the cost of ownership for Alternative 2 over a ten year period. Exhibit XI-8 depicts the estimated payback for Alternative 2 over a ten year period. The DIS cost benefit analysis forms for Alternative 2 are included in Appendix E.

Exhibit XI-6: Alternative 2 – Summary of Development Costs, Pay as You Go

Project Component	Total	Year 1	Year 2	Year 3
Implementation Services	\$ 6,707,253	\$0	\$ 2,668,508	\$ 4,038,745
RFP Preparation and Procurement Support	275,000	150,000	125,000	0
Program Management	844,800	0	422,400	422,400
Quality Assurance	648,040	25,000	216,480	406,560
Software Licenses and Maintenance	939,600	0	180,000	759,600
Technical Infrastructure (Hardware, OS, DB Licenses, etc.)	1,940,000	0	200,000	1,740,000
Facilities for Project Team	360,000	0	180,000	180,000
End User Training	188,111	0	-	188,111
Training for State Staff	40,000	0	40,000	0
Data Processing Costs	320,000	0	120,000	200,000
Subtotal: External Costs	\$12,262,805	\$175,000	\$4,152,388	\$7,935,417
Salaries and Benefits of State Employees Assigned to Project	8,243,075	283,399	3,106,993	4,852,683
Subtotal: Estimated Project Costs Less Contingency	\$20,505,879	\$458,399	\$7,259,381	\$12,788,100
Contingency at 20%	4,101,176	91,680	1,451,876	2,557,620
Total Estimated Project Cost:	\$24,607,055	\$550,079	\$8,711,257	\$15,345,720

Exhibit XI-7: Alternative 2 – Estimated Total Cost of Ownership, Pay as You Go

Project Component	Total	Year 1	Year 2	Year 3	Year 4	Year 5
Software Acquisition	\$900,000	\$0	\$180,000	\$720,000	\$0	\$0
Ongoing Software Licensing	1,667,839	0	0	39,600	199,980	209,979
Hardware Acquisition	2,700,000	0	200,000	1,700,000	0	0
Hardware Maintenance	3,194,821	0	0	40,000	382,000	401,100
Process and RFP Consultant	275,000	150,000	125,000	0	0	0
Implementation Vendor	6,707,253	0	2,668,508	4,038,745	0	0
Program Mgmt Support	844,800	0	422,400	422,400	0	0
Quality Assurance	648,040	25,000	216,480	406,560	0	0
Facilities for Project Team	360,000		180,000	180,000	0	0
End User Training	188,111	0	0	188,111	0	0
Training for State Team Members	40,000		40,000	0	0	0
Internal TLLD Core Team Base Pay & Benefits	8,243,075	283,399	3,106,993	4,852,683	0	0
Data Processing Services	4,342,152	0	120,000	200,000	494,000	518,700
Ongoing System Maintenance - Base Pay and Benefits	3,350,894	0	0	0	732,692	403,896
Software Upgrade	4,880,880	0	0	0	0	0
Other Operational Expenses	0	0	0	0	0	0
Subtotal: Cost of Ownership	\$38,342,865	\$458,399	\$7,259,381	\$12,788,100	\$1,808,672	\$1,533,675
Contingency @ 20% for Project	4,101,176	91,680	1,451,876	2,557,620	0	0
Total Estimated Cost of Ownership – State	\$42,444,041	\$550,079	\$8,711,257	\$15,345,720	\$1,808,672	\$1,533,675

Exhibit XI-7: Alternative 2 – Estimated Total Cost of Ownership, Pay as You Go (Continued)

Project Component	Total	Year 6	Year 7	Year 8	Year 9	Year 10
Software Acquisition	\$900,000	\$0	\$0	\$0	\$0	\$0
Ongoing Software Licensing	1,667,839	220,478	231,502	243,077	255,231	267,992
Hardware Acquisition	2,700,000	0	800,000	0	0	0
Hardware Maintenance	3,194,821	421,155	442,213	478,463	502,386	527,505
Process and RFP Consultant	275,000	0	0	0	0	0
Implementation Vendor	6,707,253	0	0	0	0	0
Program Mgmt Support	844,800	0	0	0	0	0
Quality Assurance	648,040	0	0	0	0	0
Facilities for Project Team	360,000	0	0	0	0	0
End User Training	188,111	0	0	0	0	0
Training for State Team Members	40,000	0	0	0	0	0
Internal TLLD Core Team Base Pay & Benefits	8,243,075	0	0	0	0	0
Data Processing Services	4,342,152	544,635	571,867	600,460	630,483	662,007
Ongoing System Maintenance - Base Pay and Benefits	3,350,894	407,925	419,102	440,057	462,060	485,163
Software Upgrade	4,880,880	0	4,060,892	819,988	0	0
Other Operational Expenses	0	0	0	0	0	0
Subtotal: Cost of Ownership	\$38,342,865	\$ 1,594,193	\$ 6,525,575	\$ 2,582,044	\$ 1,850,159	\$ 1,942,667
Contingency @ 20% for Project	\$4,101,176	0	0	0	0	0
Total Estimated Cost of Ownership – State	\$42,444,041	\$ 1,594,193	\$ 6,525,575	\$ 2,582,044	\$ 1,850,159	\$ 1,942,667

Exhibit XI-8: Alternative 2 – Estimated Payback, Pay as You Go

	Total	Year 1	Year 2	Year 3	Year 4	Year 5
Estimated Costs Including Contingency	\$42,444,041	\$550,079	\$8,711,257	\$15,345,720	\$1,808,672	\$1,533,675
Anticipated Annual Benefit Streams	5,802,135	0	0	0	306,405	521,027
Net Payback	(\$36,641,906)	(\$550,079)	(\$8,711,257)	(\$15,345,720)	(\$1,502,266)	(\$1,012,648)
Cumulative Payback		(\$550,079)	(\$9,261,335)	(\$24,607,055)	(\$26,109,322)	(\$27,121,970)

	Total	Year 6	Year 7	Year 8	Year 9	Year 10
Estimated Costs Including Contingency	\$42,444,041	\$1,594,193	\$6,525,575	\$2,582,044	\$1,850,159	\$1,942,667
Anticipated Annual Benefit Streams	5,802,135	955,931	975,049	994,550	1,014,441	1,034,730
Net Payback	(\$36,641,906)	(\$638,262)	(\$5,550,525)	(\$1,587,494)	(\$835,718)	(\$907,937)
Cumulative Payback		(\$27,760,232)	(\$33,310,757)	(\$34,898,251)	(\$35,733,969)	(\$36,641,906)

F. Cost Benefit Analysis: Alternative 3

This subsection provides a summary of the cost benefit analysis for Alternative 3 assuming a pay as you go approach. Exhibit XI-9 outlines the estimated cost to develop Alternative 3. Exhibit XI-10 outlines the cost of ownership for Alternative 3 over a ten year period. Exhibit XI-11 depicts the estimated payback for Alternative 3 over a ten year period. The DIS cost benefit analysis forms for Alternative 3 are included in Appendix F.

Exhibit XI-9: Alternative 3 – Summary of Development Costs (Pay as You Go)

Project Component	Total	Year 1	Year 2	Year 3
Implementation Services	\$ 6,268,624	\$0	\$ 2,566,530	\$ 3,702,095
RFP Preparation and Procurement Support	275,000	150,000	125,000	0
Program Management	844,800	0	422,400	422,400
Quality Assurance	648,040	25,000	216,480	406,560
Software Licenses and Maintenance	1,513,800	0	290,000	1,223,800
Technical Infrastructure (Hardware, OS, DB Licenses, etc.)	1,940,000	0	200,000	1,740,000
Facilities for Project Team	360,000	0	180,000	180,000
End User Training	346,380	0	-	346,380
Training for State Staff	80,000	0	80,000	0
Data Processing Costs	320,000	0	120,000	200,000
Subtotal: External Costs	\$12,596,644	\$175,000	\$4,200,410	\$8,221,235
Salaries and Benefits of State Employees Assigned to Project	8,129,070	283,399	3,059,491	4,786,180
Subtotal: Estimated Project Costs Less Contingency	\$20,725,714	\$458,399	\$7,259,900	\$13,007,415
Contingency at 20%	4,145,143	91,680	1,451,980	2,601,483
Total Estimated Project Cost:	\$24,870,857	\$550,079	\$8,711,880	\$15,608,898

Exhibit XI-10: Alternative 3 – Estimated Total Cost of Ownership, Pay as You Go

Project Component	Total	Year 1	Year 2	Year 3	Year 4	Year 5
Software Acquisition	\$1,450,000	\$0	\$290,000	\$1,160,000	\$0	\$0
Ongoing Software Licensing	2,687,074	0	0	63,800	322,190	338,300
Hardware Acquisition	2,700,000	0	200,000	1,700,000	0	0
Hardware Maintenance	3,194,821	0	0	40,000	382,000	401,100
Process and RFP Consultant	275,000	150,000	125,000	0	0	0
Implementation Vendor	6,268,624	0	2,566,530	3,702,095	0	0
Program Mgmt Support	844,800	0	422,400	422,400	0	0
Quality Assurance	648,040	25,000	216,480	406,560	0	0
Facilities for Project Team	360,000		180,000	180,000	0	0
End User Training	346,380	0	0	346,380	0	0
Training for State Team Members	80,000		80,000	0	0	0
Internal TLLD Core Team Base Pay & Benefits	8,129,070	283,399	3,059,491	4,786,180	0	0
Data Processing Services	4,342,152	0	120,000	200,000	494,000	518,700
Ongoing System Maintenance - Base Pay and Benefits	3,350,894	0	0	0	732,692	403,896
Software Upgrade	5,144,711	0	0	0	0	0
Other Operational Expenses	0	0	0	0	0	0
Subtotal: Cost of Ownership	\$39,821,566	\$1,728,929	\$6,886,556	\$2,774,915	\$2,006,134	\$2,106,440
Contingency @ 20% for Project	4,145,143	91,680	1,451,980	2,601,483	0	0
Total Estimated Cost of Ownership - State	\$43,966,709	\$550,079	\$8,711,880	\$15,608,898	\$1,930,882	\$1,661,996

Exhibit XI-10: Alternative 3 – Estimated Total Cost of Ownership, Pay as You Go (Continued)

Project Component	Total	Year 6	Year 7	Year 8	Year 9	Year 10
Software Acquisition	\$1,450,000	\$0	\$0	\$0	\$0	\$0
Ongoing Software Licensing	2,687,074	355,214	372,975	391,624	411,205	431,765
Hardware Acquisition	2,700,000	0	800,000	0	0	0
Hardware Maintenance	3,194,821	421,155	442,213	478,463	502,386	527,505
Process and RFP Consultant	275,000	0	0	0	0	0
Implementation Vendor	6,268,624	0	0	0	0	0
Program Mgmt Support	844,800	0	0	0	0	0
Quality Assurance	648,040	0	0	0	0	0
Facilities for Project Team	360,000	0	0	0	0	0
End User Training	346,380	0	0	0	0	0
Training for State Team Members	80,000	0	0	0	0	0
Internal TLLD Core Team Base Pay & Benefits	8,129,070	0	0	0	0	0
Data Processing Services	4,342,152	544,635	571,867	600,460	630,483	662,007
Ongoing System Maintenance - Base Pay and Benefits	3,350,894	407,925	419,102	440,057	462,060	485,163
Software Upgrade	5,144,711	0	4,280,399	864,311	0	0
Other Operational Expenses	0	0	0	0	0	0
Subtotal: Cost of Ownership	\$39,821,566	\$1,728,929	\$6,886,556	\$2,774,915	\$2,006,134	\$2,106,440
Contingency @ 20% for Project	4,145,143	0	0	0	0	0
Total Estimated Cost of Ownership - State	\$43,966,709	\$1,728,929	\$6,886,556	\$2,774,915	\$2,006,134	\$2,106,440

Exhibit XI-11: Alternative 3 – Estimated Payback, Pay as You Go

	Total	Year 1	Year 2	Year 3	Year 4	Year 5
Estimated Costs Including Contingency	\$43,966,709	\$550,079	\$8,711,880	\$15,608,898	\$1,930,882	\$1,661,996
Anticipated Annual Benefit Streams	7,389,778	0	0	0	389,280	1,128,377
Net Payback	(\$36,576,931)	(\$550,079)	(\$8,711,880)	(\$15,608,898)	(\$1,541,601)	(\$533,619)
Cumulative Payback		(\$550,079)	(\$9,261,959)	(\$24,870,857)	(\$26,412,458)	(\$26,946,077)

	Total	Year 6	Year 7	Year 8	Year 9	Year 10
Estimated Costs Including Contingency	\$43,966,709	\$1,728,929	\$6,886,556	\$2,774,915	\$2,006,134	\$2,106,440
Anticipated Annual Benefit Streams	7,389,778	1,128,377	1,150,945	1,173,964	1,197,443	1,221,392
Net Payback	(\$36,576,931)	(\$600,552)	(\$5,735,611)	(\$1,600,951)	(\$808,691)	(\$885,049)
Cumulative Payback		(\$27,546,629)	(\$33,282,241)	(\$34,883,192)	(\$35,691,883)	(\$36,576,931)



G. Cash Flow Analysis for Preferred Alternative 3

This subsection provides a summary of the anticipated cash flow for preferred Alternative 3 if the state chose to finance eligible expenses. For planning purposes, we assumed two sales of Certificates of Participation with a 10 year term, monthly payments at 6.25% interest. One sale was in Year 2 and one sale was in Year 3 for the eligible expenses in those years. Exhibit XI-12 depicts the cash flow requirements over the period of the bonds.

Exhibit XI-12: Alternative 3 – Cash Flow Analysis If Financed

			Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Internal Project Costs			\$13,680,593	\$550,079	\$5,016,471	\$8,114,043	\$0	\$0	\$0
Principal and Interest - External Services	Borrowed Amt	Payment							
Bond Sale 1 - Year 2	\$3,695,410	\$41,492	4,979,051	0	497,905	497,905	497,905	497,905	497,905
Bond Sale 2 - Year 3	7,494,855	84,152	10,098,276	0	0	1,009,828	1,009,828	1,009,828	1,009,828
Subtotal: Principal and Interest Payments			\$15,077,327	\$0	\$497,905	\$1,507,733	\$1,507,733	\$1,507,733	\$1,507,733
Annual Net Investment Required			\$28,757,920	\$550,079	\$5,514,376	\$9,621,776	\$1,507,733	\$1,507,733	\$1,507,733

			Total	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
Internal Project Costs			\$13,680,593	\$0	\$0	\$0	\$0	\$0	\$0
Principal and Interest - External Services	Borrowed Amt	Payment							
Bond Sale 1 - Year 2	\$3,695,410	\$41,492	4,979,051	497,905	497,905	497,905	497,905	497,905	
Bond Sale 2 - Year 3	7,494,855	84,152	10,098,276	1,009,828	1,009,828	1,009,828	1,009,828	1,009,828	1,009,828
Subtotal: Principal and Interest Payments			\$15,077,327	\$1,507,733	\$1,507,733	\$1,507,733	\$1,507,733	\$1,507,733	\$1,009,828
Annual Net Investment Required			\$28,757,920	\$1,507,733	\$1,507,733	\$1,507,733	\$1,507,733	\$1,507,733	\$1,009,828

H. Anticipated Intangible Benefits

While none of the three alternatives evaluated has a positive net benefit to the state during the period analyzed for the cost benefit analysis, the implementation of the TLLD application is critical for DNR, WSDOT and the state as a whole from the perspective of reducing future business risk and providing for future cost avoidance by eliminating inefficient manual processes and redundant operations. The proposed TLLD application also helps to establish the framework for future shared services environments and enterprise financial applications.

Key intangible benefits of the proposed TLLD application are outlined below.

1. Reduced business risk to the State

The proposed TLLD application provides for reduced business risk to the state through:

- Reduced risk of potential fines for non-compliance with the Federal Fair Labor Standards Act
- Increased capability to monitor and manage compliance with collective bargaining agreements
- Enhanced internal controls consistent with the recommendations made by the State Auditor in the 2007 WSDOT performance audit including:
 - Restricting access to charge codes based on an employee's security
 - Providing the capability for employees and supervisors to electronically sign-off on time entries
 - Supporting accurate time recording and allocating of labor costs to intermediate and final cost objectives when multiple jobs are worked in a day
 - Ensuring any changes to time entry data is properly authorized and the reason for the change documented
 - Providing a detailed audit trail of system transactions including any changes to system parameters, business rules, or employee time and leave data.

2. Future cost avoidance

The TLLD application will allow the state to avoid costs in the future through:

- Potential for better managing agency payroll costs in the future as a result of a reducing or eliminating agency timekeeping errors through entry of data by employees and edits at the point of entry. Benchmark data from a variety of industries⁵ suggests the potential for an up to one-percent reduction in total payroll costs, though there is only limited data specific to highly unionized public sector environments such as DNR and WSDOT. Thus, benchmarking of actual DNR and WSDOT agency experience against today's payroll costs following implementation of the new TLLD application will be required to confirm

⁵ "Why Time and Attendance Makes Sense in a Down Economy", Nucleus Research, March 2009

whether this type of savings level can be achieved at either DNR or WSDOT. Discussions with agency staff during the feasibility study effort suggest that the level of savings is likely to be lower at DNR since the current DNR system has some additional edits and controls and there is a seasonality factor in terms of the complexity of DNR's time reporting processes resulting from the significant increase in the size of the payroll from temporary or seasonal workers in the summer months. At WSDOT, the opportunity for savings from reduced timekeeping errors is probably larger in some areas of the department such as ferry operations or highway maintenance crews rather than in administrative or other office based units

- Increased flexibility to address changes in laws, regulations, rules, and procedures without requiring substantial programming through user configurable parameters and business rules
- Reduced costs associated with time and leave processing through a standardized and highly automated, work-flow driven process including:
 - Data entry by employees, rather than hand-written timesheets which are then data entered by timekeeping staff
 - Timely submission of hours worked and leave requests
 - Timely online approval processes
 - Reduced complexity and cost of maintaining the DNR, WSDOT and overall state technical environment through a greatly simplified technical architecture and simplified timekeeping/payroll interface architecture
 - Improved access to timekeeping and labor distribution data for WSDOT and DNR agency managers and financial analysts since the data is "online" and available for reporting and analysis at all times.

3. Establishes the framework for shared services environments and enterprise systems

The proposed TLLD application is consistent with the state's direction towards shared services and elimination of duplication of functions across agencies. Specifically, the TLLD application:

- Supports the Governor's vision for shared services environments through implementation of a multi-agency time, leave, and labor distribution solution designed to serve as the enterprise timekeeping solution for the state
- Implements the State Auditor's recommendation in the 2007 WSDOT Administrative and Overhead Performance Audit to implement a new time, leave, and labor distribution application at WSDOT, which consolidates the functionality currently provided by the WSDOT LABOR, and Ferries LABOR applications into a single system
- Provides the capability through a successful TLLD implementation to lay the ground work for other OFM Roadmap or related enterprise applications in the future.

I. Estimated Cost of Extending the TLLD Application to Other State Agencies

While initially intended to support DNR and WSDOT, the goal of the project is to select and implement a system that can become the enterprise time, leave, and labor distribution solution for the state. Consequently, for planning purposes, the following estimate of extending TLLD to support other agencies is provided below. This cost estimate was based on the agency specific costs of deploying TLLD for DNR and WSDOT, scaled to other Washington state agencies at a macro level based on WSDOT being a large agency and DNR a medium size agency. The agency specific costs of implementing TLLD for DNR and WSDOT include data conversion, interface design, and development and user training costs. These costs do not include the cost of developing the enterprise design and configuring the selected software to support this design. This cost estimate does not include agency specific hardware costs such as time capture devices for mobile workers.

These estimates are based on deploying the TLLD application only. Economies of scale may be possible if TLLD is deployed in conjunction with other SAP functionality envisioned as part of the OFM Roadmap program. In addition, while a per-agency cost estimate is provided, it is anticipated that additional agencies would likely be deployed in groups, thus obtaining savings on project management and technical support costs and on the regression testing effort.

This estimate is based on the following assumptions:

- Incremental SAP licensing cost for each agency for a limited purpose license for time, leave, and labor distribution functionality only
- Roll-in of the agency to the TLLD application configuration with no or limited changes to the configuration of the application
- Implementation services including:
 - Training on the TLLD solution for agency staff participating on the implementation team
 - Conduct of a conference room pilot with agency staff to verify the fit of the solution with their business processes
 - Limited configuration adjustments
 - Data conversion of agency master data
 - Design, coding and unit testing of interfaces to line of business systems
 - System testing with the agency staff
 - User acceptance testing with the agency staff
 - User training

- Staff from the agency assigned to the implementation team.

Exhibit XI-13 provides a cost range by agency size.

Exhibit XI-13: Planning Level Estimates for Deploying TLLD to Additional State Agencies

Agency Size	Estimated Cost Range
Tier 1 (> 5,000 employees)	\$2.5 million - \$3 million
Tier 2 (> 1,000 and < 5,000)	\$1 million - \$1.5 million
Tier 3 (> 200 but < 1,000 employees)	\$200,000 to \$500,000
Tier 4 (< 200 employees)	\$50,000 to \$100,000

In addition to these per agency estimates, an additional \$2 million - \$3 million should be planned for to scale the technical environment (hardware, operating system, database licenses, etc.) as additional agencies roll into the system.

XII. Risk Management

This section identifies potential organizational and technical risks to project success, establishes the probability of these risks occurring, and delineates potential mitigation strategies to address these risks. This risk assessment is performed first at the detailed level and then summarized following DIS' Portfolio-based Severity and Risk matrix. Based on this risk assessment, the recommended quality assurance strategy for the project is then detailed. This section also discusses in more detail several risk mitigation strategies that are critical to the success of a project involving multiple agencies or for developing an enterprise solution.

A. Risk Management Objectives

The objectives of project risk management are to increase the probability and impact of positive events and to decrease the probability and impact of events adverse to the project. Risk management begins during project planning and continues throughout the lifecycle of the project. Any assumptions made in the development of a plan, schedule, or resource allocation should be considered for documentation as a risk. Factors external to the project may also have an impact on the team's ability to deliver, and should be included. In addition, it is recommended that the project team obtain formal approval to move from one phase to the next. The health check process enables the project manager to review key areas of the project with the TLLD project steering committee and as appropriate the ISB.

Key areas that should be reviewed include project scope, schedule, budget, resource allocations, risk management, and the issue resolution process. Because this is a project involving at least four state agencies, the project health check should also include a survey/assessment distributed to all timekeeping stakeholders as appropriate for each phase, to assess the effectiveness of the project communications.

B. Risk Management Process

The following steps have been utilized to identify, assess impact, and define mitigation strategies for the TLLD project.

1. Risk identification

This is the process of identifying risks that could affect the project and their characteristics. For the TLLD project, during the feasibility study, several techniques were utilized to identify potential risks including the experience of the consultant team, informal discussions with the TLLD core team, and discussions with TLLD stakeholders. Each identified risk was then documented in a risk log. For each risk that was identified, the team classified the risk as either business, organizational, or technical. The risk is also classified as internal (under the control of the sponsoring agencies or the TLLD project team) or external (the result of factors over which the project has limited to no control).

2. Risk analysis and prioritization

For each risk that was identified, the team then assessed the probability of occurrence using a standard probability scale (from 0.1 to 1.0) and the level of impact using a standard impact assessment matrix (from 1 to 10 based on team member judgment) in the event that the risk does occur. The impacts may be to the project or a component of the project. The product of probability and the impact yielded the risk score to the project or impacted component that will help to determine risk planning. Risks that have a risk score of 6.0 or higher are considered “High” risk, those with a risk score between 2.5 and 6.0 are considered “Medium” risk, and those with a risk score less than 2.5 are considered “Low” risk.

3. Risk planning

This step involved identifying an owner of the risk and devising a risk response plan for handling each of the high priority risks identified in risk analysis and prioritization. During the feasibility study, this activity primarily involved iterative discussion with the TLLD core team. Going forward, it is expected that this will be an on-going process involving the TLLD project sponsors, the TLLD project steering committee, the TLLD program office, and project team members. Guidance may also be received from the quality assurance consultant and members of agency steering committees or the OFM Roadmap steering committee.

4. Risk control and monitoring

This step includes executing the appropriate risk response plan during the project lifecycle to reduce the probability of a risk occurring or to mitigate its impact should it occur. This includes monitoring the progress in handling all risks that have occurred and continuing to identify and assess new risks that may emerge throughout the project.

For purposes of the feasibility study, the risks have been categorized into either business/organizational risks or technical risks. Each of these risk categories is described below and the various risks identified in each category are inventoried, prioritized, and appropriate risk response strategies identified.

C. Business/Organizational Risks

This subsection identifies business and organizational risks associated with the proposed TLLD project. The impact of any identified risks is assessed and potential risk response strategies are defined for each of these risks. Business risks include those risks that impact the existing timekeeping, labor distribution, and payroll business operations. For example, risks in this category could include items such as the need to change existing processes and procedures, the need for organizational change management, and the need to implement standardized processes.

Organizational risks relate to the impact of the project on DNR or WSDOT’s organization and the organization of other state agencies involved in the project. Issues that should be considered in this regard include:

- Level of executive and staff support for the change being proposed
- Agency's demonstrated ability to manage projects of this size and complexity
- Skills and experience available to implement this approach
- Agency's ability to manage internal and external (contractor) staff and contracts
- Number of users impacted
- Level of training that might be required
- Length of time the agency has to complete the project or implement an alternative

Exhibit XII-1 highlights the high and medium business and organizational risks identified to date for the TLLD project.

Exhibit XII-1: Risk Register Log for Business and Organizational Risks

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
BUS01	Resistance to changing the existing business processes to effectively utilize the new software. This resistance may vary by agency and could become more of an issue as the TLLD is rolled out to agencies after the DNR/WSDOT implementation	Internal	0.9	9	8.1	Project Team	TLLD Steering Committee	Mitigate	Establish organizational change management program Engage stakeholders from various agencies in defining process changes
BUS02	Inconsistent processes and standards across agencies could impact drive to (and the need to) standardize business processes	Internal	0.9	9	8.1	Project Team	TLLD Steering Committee	Mitigate	Establish organizational change management program Engage stakeholders from various agencies in defining process changes

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
BUS03	Agency concern about apparent loss of tailored functionality provided in legacy timekeeping systems (and as in BUS01, this concern may be more pronounced when rolled out to other agencies after DNR/WSDOT)	External	0.8	8	6.4	Project Team	TLLD Steering Committee	Mitigate	Early and consistent involvement to ensure that priority business needs are being met Change Management and Communication Plan that emphasizes benefits of enterprise solution Consistent and ongoing senior management support
ORG01	Significant organizational change required to accept a strategy that seeks to find a Best of Breed COTS timekeeping solution to meet a range of agency needs	Internal	0.8	10	8.0	Project Team	TLLD Steering Committee, individual DNR and WSDOT Steering Committees	Mitigate	Proactive change management and communication plan Ongoing and clearly demonstrated senior management support and buy-in from agency executives

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
ORG03	A change in state priorities may cause a delay in obtaining funding for implementation phase	External	1.0	10	10.0	Project Team	TLLD Project Steering Committee	Avoid & Accept	Active engagement with stakeholders and policy makers to obtain approval Revisit budgets at each steering committee meeting; economic factors should be on agenda for discussion where appropriate. Adjust project schedule as necessary based on timing of funding Identify activities that could continue in the interim (process analysis, etc.) to maintain momentum Team Note: you cannot “mitigate” a decision not to fund the project; you must try to avoid letting this happen and if it does happen you must accept it and do whatever you can to keep the project alive even without the funding
ORG04	Less funding than requested is approved for the implementation phase	External	1.0	10	10.0	Project Team	TLLD Project Steering Committee	Avoid & Accept	Active engagement with stakeholders and policymakers to obtain approval Revisit budgets at each steering committee meeting; economic factors should be on agenda for discussion where appropriate. Adjustments in scope and/or project schedule as necessary based on timing of funding

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
BUS04	Potential that DNR, WSDOT, DOP, OFM and other agencies will not be able to agree on the timekeeping solution that best fits the needs of all agencies	Internal	0.5	10	5.0	Project Team	TLLD Project Steering Committee	Avoid	The extended team should work together on developing requirements Vendor demos during the planning phase to try to identify potential differences in requirements and/or expectations early on Careful attention to evaluation factors to ensure weighting is consistent with each agencies' business priorities
BUS05	Difficulty in getting project stakeholders to take an enterprise view and/or in reaching consensus on enterprise needs versus needs of specific agencies	Internal	.4	9	3.6	Project Team	TLLD Project Steering Committee	Mitigate	Active encouragement to take "agency" hat off and put "state" hat on during project activities Encouraging team members to explain "why something can't work for me" Identifying and communicating benefits of enterprise solution to team members Leveraging best practices experience of pre-planning and implementation consultants Team note: as the project moves forward past the Enterprise Design phase, the probability of this risk decreases
BUS06	Specialized requirements or significant gaps identified in one or more agencies	External	0.7	8	5.6	Project Team	TLLD Project Steering Committee	Avoid and Mitigate	Assess potential for modifying business processes in individual agencies or modifying enterprise process slightly Assess need for additional third-party software and/or minor customizations as a last resort Avoid this risk by ensuring that the requirements are the major tool used in selecting the vendor

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
BUS07	Desired business benefits not achieved	Internal	0.5	10	5.0	Project Team	TLLD Project Steering Committee	Avoid	Adhere to requirements, <u>involve stakeholders</u> and tie scope decisions to performance measures to ensure success Need to keep the list of business benefits clear, and set a tolerance level for each: for example 80% of reports are written by xx date
ORG05	Staff not being able to participate in workshops or review deliverables within schedule	Internal	0.6	8	4.8	Project Team	TLLD Project Sponsors	Mitigate	Project approach that leverages best practices as a starting point for discussions to better leverage staff time Proactive identification of resource constraints by TLLD Project Managers and timely escalation as appropriate Potential re-assignment of some responsibilities of key extended team members Reprioritization of some activities assigned to extended team members
ORG06	Changes in agency executive management can impact project	External	.5	9	4.5	Project Team	TLLD Project Steering Committee, TLLD Program Office	Mitigate & Accept	Immediately brief new management on project objectives and status Engage existing Advisory Board members to assist in presenting project benefits to new management team members

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
ORG07	Changes in state priorities impact the priority of TLLD implementation	External	0.5	10	5.0	Project Team	TLLD Steering Committee	Mitigate & Accept	Keep executive management apprised of project status and anticipated benefits Adjust project scope/timelines based on priority changes, remaining focus to extent possible on implementing highest payback areas first in any project plan revisions
ORG08	Change in and/or implementation of agencies other projects and/or priorities impacting TLLD implementation and driving changes to TLLD project costs and timeline	External	0.5	10	5.0	Project Team	TLLD Project Sponsors	Mitigate & Accept	Adjust project scope/timelines based on any agency priority changes and the impact of these changes on TLLD as a related project. In making adjustments, minimize additional costs to TLLD and keep focus to extent possible on implementing highest payback areas first in any project plan revisions

D. Technical Risks

This subsection identifies technical risks with the proposed TLLD project, assesses the impact of these risks, and delineates potential risk response strategies for each of these risks.

Examples of risk include the system implementation effort itself, the need to integrate or interface with other systems, the need to implement new technology infrastructure, the technical skill sets required for the new system, and any skill set gap with current staff and other similar items.

Exhibit XII-2 highlights the high and medium technical risks identified to date for the TLLD project.

Exhibit XII-2: Risk Register Log for Technical Risks

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact 1 - 10	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
TEC01	Changes in requirements during implementation	Internal	1.0	5	5.0	Project Team	TLLD Program Office and TLLD Steering Committee	Mitigate	Involvement by agencies in developing initial requirements Formal sign-off by Advisory Board on requirements Well defined scope change process including Steering Committee approval
TEC02	The risk that, with an implementation of new timekeeping tools which require employee self-service, the employees, for whatever reason, do not attend the training, or do not respond well to or receive the training needed	Internal	0.9	7	6.3	Project Team	Agency Readiness Team	Mitigate	Develop training strategy and deploy as agencies are implemented

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact 1 - 10	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
TEC03	Some employees may not have easy access to PCs or the Internet to utilize employee self-service functions to submit time (or approve time data)	Internal	1.0	10	10.0	Project Team	TLLD Program Office, Agency Readiness Team	Mitigate	Identify potential issues prior to implementation Work with individual agencies to determine potential for providing some access to other time capture devices Team note: this is past the risk stage and is an issue – the implementation plan needs to address how employees will access the timekeeping application
TEC04	Lack of IT (programming or configuration) experience with selected TLLD software solution	Internal	0.5	9	4.5	Project Team	TLLD Program Office, Development and Technical Team Lead	Mitigate	Detailed technical training plan that is initiated upon software selection Inclusion of maintenance option within systems integrator agreement to allow for application support or hosting for some period of time following implementation Joint planning for application and technical support with other agencies Team note: this risk as well as the entire risk log will be revisited and updated throughout the project. Risks such as this one, which can be effectively dealt with (by training the employees) will decrease and/or be completely resolved and removed from the Risk Log

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact 1 - 10	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
TEC05	Project scope too large or complex and/or implementation inadequately planned	Internal	0.5	9	4.5	Project Team	TLLD Steering Committee, TLLD Program Office	Avoid	Scope defined to replacing business functionality currently provided by LABOR and NTAR Implementation plan incorporates deployment to pilot agencies Scope linked to business benefits Careful review by TLLD Steering Committee of requirements and implementation plan before approving implementation go-ahead Develop scope change process that requires demonstrated link to targeted business benefits and Steering Committee approval of any proposed scope changes
TEC06	Vendor proposals exceed cost estimate	External	0.5	10	5.0	Project Team	TLLD Steering Committee	Mitigate	Detailed estimates to the extent possible during development of the business case Conducting of vendor software demos to assess the fit of vendor solutions with agency requirements Key gaps and their impacts to be identified as early as possible Benchmarking of costs incurred by other states or agencies who have recently implemented timekeeping solutions

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact 1 - 10	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
TEC07	Complexity of integrating new TLLD with existing applications including SAP HRMS, TRAINS and AFRS	Internal	.7	9	6.3	Project Team	TLLD Program Office and Development and Technical Team	Avoid	Develop interface strategy that utilizes same layout and format used today for downstream systems Early engagement of business and IT owners of these other systems
TEC08	Specialized requirements of one or more agencies identified at time of implementation, resulting in unplanned time and/or cost impacts	Internal	0.5	10	5.0	Project Team	TLLD Program Office, TLLD Steering Committee	Avoid	Early and active involvement by agencies in requirements definition and definition of global design and initial configuration of selected timekeeping solution Design implementation plan to be a “roll-in” of system functionality to the extent possible where focus during implementation is then on agency-specific issues such as interfaces and data conversion from individual agency systems

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact 1 - 10	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
TEC09	Availability of state agency resources from OFM, DOP, DNR and WSDOT (business and technical) to support implementation and/or understanding the “ownership” for providing support	Internal	.8	9	7.2	Project Team	TLLD Project Sponsors	Avoid	Detailed estimates of resource requirements as early as possible as part of pre-implementation planning Develop an implementation strategy and work plan that is in sync with availability of state resources Obtain specific commitment of resources from all agency management prior to start of implementation
TEC10	Delay in implementation of DNR and/or WSDOT could impact stakeholder confidence and the adoption of TLLD as an enterprise solution	Internal	0.5	9	4.5	Project Team	TLLD Steering Committee and TLLD Program Office	Avoid	Establish reasonable schedule for pilot deployment including schedule contingency Ensure sufficient gap between completion of DNR and WSDOT implementation and initiation of subsequent deployments to other agencies Plan for multiple implementation teams to allow for balance of deployment work to agencies coming on the system and production support of agencies already deployed

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact 1 - 10	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
TEC11	Complexity of converting data from multiple agency shadow systems into new TLLD solution	Internal	0.7	8	5.6	Project Team	TLLD Program Office and Development and Technical Team	Avoid	Sufficient time in implementation for agency-level data conversion planning Standardized conversion architecture for load routines into TLLD minimizing work for each specific agency implementation Adequate time included in agency deployment schedule for assessment of conversion requirements, design of load routines from existing agency systems to put data into standard formats required by TLLD solution
TEC12	Complexity of establishing interfaces between TLLD and other systems	Internal	0.7	8	5.6	Project Team	TLLD Program Office and Development and Technical Team	Avoid	Sufficient time in implementation for agency-level interface planning Standardized interface architecture for load routines into TLLD minimizing work for each specific agency implementation Adequate time included in agency deployment schedule for assessment of interface requirements, design of load routines from existing agency systems to put data into standard formats required by TLLD solution

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact 1 - 10	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
TEC13	Quality of data in current HRMS, LABOR and NTAR agency systems impacting conversion efforts	Internal	0.7	8	5.6	Project Team	TLLD Program Office, TLLD Business Lead and Development and Technical Team	Mitigate	Early identification of potential quality issues during pre-implementation planning Sufficient time in implementation for agency-level interface planning Sufficient involvement by agency personnel familiar with data
TEC14	Project completes late and/or over budget	Internal	0.6	9	5.4	Project Team	TLLD Program Office	Avoid	Fixed price systems integration contracts; potential penalties for later delivery Monitor project budget on a monthly basis
TEC15	Implementation strategy attempts to implement too much at one time	Internal	0.4	10	4.0	Project Team	TLLD Program Office	Avoid	Continue to carefully manage scope throughout the project
TEC16	Less skilled resources than expected provided by selected systems integrator	External	0.6	9	5.4	Project Team	TLLD Program Office	Avoid	Require TLLD Project Team and Steering Committee approval of project staff Include in contract protections such as process for removing staff Use of performance bond or other incentives/disincentives to ensure vendor performance within agreed-to schedule

Risk ID	Risk Description	Risk Classification Internal External	Probability 0.1 – 1.0	Impact 1 - 10	Risk Score (PxI)	Identified By	Risk Owner	Response (Accept / Avoid / Mitigate / etc.)	Risk Response Strategy and Notes
TEC17	Agencies unable to agree on hosting solution – where the new timekeeping system will be housed, and who will provide ongoing support	Internal	0.4	10	4.0	Project Team	TLLD Project Steering Committee & Central Services Agency Executive Management	Mitigate	Develop an implementation strategy and work plan that is in sync with availability of state resources at the Data Center Obtain specific commitment of management from all agencies involved (OFM, DOP, DNR, DOT, Data Center) prior to start of implementation

E. Evaluation of Project Risk against DIS’ Portfolio-based Severity and Risk Matrix

The detailed risk assessment planning outlined in the prior subsection was used as the basis for completing the DIS Portfolio-based Severity and Risk Matrix. The DIS process evaluates proposed information technology investments on both severity factors related to the impact of project on various stakeholders and on project risk factors.

Based on the DIS Severity and Risk Matrix, the TLLD implementation has an overall Level 3 rating based on both a high severity rating and a high risk rating. Exhibit XII-3 summarizes the basis for this rating.

Exhibit XII-3: Overall TLLD Project Risk and Severity Rating

High Severity	<i>(i) Level 2</i>	<i>(ii) Level 2</i>	<i>(iii) Level 3</i>
Medium Severity	<i>(iv) Level 1</i>	<i>(v) Level 2</i>	<i>(vi) Level 2</i>
Low Severity	<i>(vii) Level 1</i>	<i>(viii) Level 1</i>	<i>(ix) Level 1</i>
	Low Risk	Medium Risk	High Risk

The evaluation of the TLLD project against the DIS severity criteria and risk criteria is outlined below.

1. Evaluation of TLLD project against the DIS severity criteria

The severity matrix assesses the proposed project’s impact on citizens and state operations, its visibility to stakeholders, and the consequences of project failure. Exhibit XII-4 summarizes the evaluation of the TLLD project against the DIS severity criteria.

Exhibit XII-4: Evaluation of TLLD against DIS Severity Criteria

Categories				
Levels	Impact on Clients	Visibility	Impact on State Operations	Failure or Nil Consequences
TLLD Rating	Low	High	High	Medium
High	Direct contact with citizens, political subdivisions, and service providers – including benefits payments and transactions.	Highly visible to public, trading partners, political subdivisions and Legislature. Likely subject to hearings. System processes sensitive / confidential data (e.g. medical, SSN, credit card #'s).	Statewide or multiple agency involvement / impact. Initial mainframe acquisitions or network acquisitions.	Inability to meet legislative mandate or agency mission. Loss of significant federal funding.
Medium	Indirect impacts on citizens through management systems that support decisions that are viewed as important by the public. Access by citizens for information and research purposes.	Some visibility to the Legislature, trading partners, or public the system / program supports. May be subject to legislative hearing.	Multiple divisions or programs within agency.	Potential failure of aging systems.
Low	Agency operations only.	Internal agency only.	Single division. Improve or expand existing networks or mainframes with similar technology.	Loss of opportunity for improved service delivery or efficiency. Failure to resolve customer service complaints or requests.

2. Evaluation of TLLD project against the DIS risk matrix

The risk matrix measures the impact of the project on the organization, the effort needed to complete the project, the stability of the proposed technology, and agency preparedness. Exhibit XII-5 presents the evaluation of the TLLD project against the DIS risk criteria.

Exhibit XII-5: Evaluation of TLLD against DIS Risk Criteria

Categories				
Levels	Functional Impact on Business Processes or Rules	Development Effort & Resources	Technology	Capability & Management
TLLD Rating	High	High	Medium	Low
High	<p>Significant change to business rules.</p> <p>Replacement of a mission critical system.</p> <p>Multiple organizations involved.</p> <p>Requires extensive and substantial job training for work groups.</p>	<p>Over \$5 million. Development and implementation exceeds 24 months. *</p> <p>Requires a second decision package.</p> <p>* Clock starts after feasibility study or project approval and release of funding.</p>	<p>Emerging. Unproven.</p> <p>Two or more of the following are new for agency technology staff or integrator, or are new to the agency architecture: programming language; operating systems; database products; development tools; data communications technology.</p> <p>Requires PKI certificate.</p> <p>Complex architecture – greater than 2 tier.</p>	<p>Minimal executive sponsorship.</p> <p>Agency uses ad-hoc processes.</p> <p>Agency and/or vendor track record suggests inability to mitigate risk on project requiring a given level of development effort.</p>
Medium	<p>Moderate change to business rules.</p> <p>Major enhancement or moderate change of mission critical system.</p> <p>Medium complexity business process(es).</p> <p>Requires moderate job training.</p>	<p>Under \$5 million but over agency delegated authority. 12 to 24 months for development and implementation. *</p> <p>* Clock starts after feasibility study or project approval and release of funding.</p>	<p>New in agency with 3rd party expertise and knowledge transfer.</p> <p>One of the technologies listed above is new for agency development staff.</p>	<p>Executive sponsor knowledgeable but not actively engaged.</p> <p>System integrator under contract with agency technical participation.</p> <p>Agency and/or vendor record indicates good level of success but without the structure for repeatability.</p>

Based on the overall Level 3 rating, the project will utilize an external quality assurance consultant. This consultant will perform quality assurance and independent, verification, and validation activities. In addition, technology investments rated as a Level 3 are subject to full ISB oversight, which includes DIS MOST staff written reports to the ISB, periodic status reports to the ISB by the agency director and staff, and submission of other reports as directed by the ISB.

For projects rated as a Level 3, the project team will also provide copies of key project documents, including the feasibility study, project external quality assurance reports, project management plans, risk management plans, change management plans, and closeout and evaluation reports to its ISB MOST consultants as staff to the ISB. The MOST consultants will also participate in all steering committee and project status meetings. DNR and WSDOT will also include the TLLD project in their information technology portfolios.

F. Suggested Risk Mitigation Strategies for Developing Multi-agency and/or Enterprise Solutions

This subsection highlights several risk mitigation strategies that are integral to the successful DNR and WSDOT partnership in the initial implementation of the new TLLD system and the positioning of this application as an enterprise solution. These include:

- Establishing a joint governance structure with clear decision-making authority
- Implementing enterprise change control
- Including staff from other agencies in some project activities
- Defining the appropriate ownership and support structure at the state level for SAP and other new enterprise applications
- Establishing specific agency service level agreements for the new centralized SAP/Enterprise Systems Center of Excellence
- Defining a highly structured acquisition and contracting strategy

Each of these strategies is discussed in further detail below.

1. Establishing a joint governance structure with clear decision-making authority

Development of a multi-agency or enterprise solution requires collaboration, ownership, and buy-in from all of the participating agencies. For the TLLD implementation, Dye Management Group, Inc. recommends this be accomplished through a TLLD project steering committee including representatives from DNR, WSDOT, OFM, DOP, and DIS. In addition, Dye Management Group, Inc. suggests that the existing OFM Roadmap steering committee serve as an advisory committee to this project to provide guidance from the perspective of enterprise solutions.

At the same time, a project the size and scope of TLLD will frequently require issue resolution and other decision-making on a short turnaround. Thus, it is important that the TLLD Program Office and the selected systems integrator clearly understand the project decision-making process and that there be clear accountability for final decision-making. It is recommended that the TLLD Project Sponsors, in consultation with DIS oversight consultants, be assigned this final sign-off and decision-making role.

2. Implementing enterprise change control

Enterprise change control is critical when there are multiple agencies involved in an implementation. There are multiple points during the project when cross-agency coordination and communication will be necessary, for example, in creating the development and testing environments in ensuring that a code freeze is in effect across multiple agencies and in the coordination for migration of data from one environment to another (data refreshes). The project

will need to create a change control team that includes resources from DNR, WSDOT, OFM, and DOP. This team will also need to either be an extension of or closely coordinate with the existing enterprise change control team/process for HRMS. This team will determine and document the data migration and refresh strategy and will be responsible for communicating environment changes on a regular basis to the project team. This change control team work will need to work closely with the TLLD Program Office to ensure that all team members and other timekeeping stakeholders understand the data migration process and are notified of when they can and cannot make changes to the new system.

3. Including staff from other agencies in some project activities

In keeping with the state's goal of implementing an enterprise system, the new timekeeping solution needs to be flexible in design in order to eventually support all agencies. The system will need to be configured such that it will "scale up" for a large agency, and yet "scale down" for a mid-sized or smaller agency. In order to increase the likelihood of project success, and reduce the risk of system configuration issues, representatives from several different agencies should be invited to participate in an advisory capacity in the procurement process, during Enterprise Design to help establish the configuration of the software and to assist in user acceptance testing activities. Involvement of the ISB's Enterprise Architecture Committee may also facilitate this effort.

4. Defining the appropriate ownership and support structure at the state level for SAP and other new enterprise applications

Prior to initiating the TLLD project, executive management from the four central services agencies (OFM, DOP, General Administration and DIS) must establish the approach for owning and managing the current and future SAP applications and other enterprise systems. This includes establishing who the business owners are of the various system components, how the systems will be supported, where the application and technical support for these applications will reside, and where the applications will be hosted and operated.

For purposes of this feasibility study, the following assumptions have been made in this regard:

- There will be distinct business owners for various elements of the SAP application suite as follows:
- Budgeting, Accounting, Financial Management, Timekeeping and Labor Distribution – OFM
- Human Capital Management and Payroll – DOP
- Procurement – General Administration
- An SAP/Enterprise Systems Center of Excellence will be established either as a new central services unit or as a part of an existing central services agency. This Center of Excellence will consist of functional specialists knowledgeable in configuring SAP and the TLLD best of breed software solution; designers and developers who would be responsible

for any required program extensions and the TLLD specific components of system interfaces and application database administrators and technical specialists.

- The TLLD application will be hosted centrally in a DIS or another data center, yet to be determined. The data center will have the responsibility for providing any required system programmers and other required operations staff in addition to other defined services such as the Enterprise Services Bus (ESB).

5. Establishing specific agency service levels for the new central SAP/Enterprise Systems Center of Excellence

Because agency information technology staff will no longer be supporting the timekeeping applications and instead DNR and WSDOT and in the future other agencies will be relying on the SAP/Enterprise Systems Center of Excellence, it is critical that service level agreements (SLAs) be established between DNR and WSDOT and the Center of Excellence. These SLAs should specify service costs, the processes for requesting system enhancements, agreed to up time for the system and the Center of Excellence's service turnaround times for various activities. These SLAs should be written much the same as they would be with a private sector partner, with clearly defined escalation timelines and procedures for issue resolution. In addition, it is a best practice to include penalty clauses for the central services agency in these SLAs for failing to meet agreed to system up times or turnaround times.

6. Defining a highly structured acquisition and contracting strategy

A highly structured acquisition and contracting strategy is critical to guiding a multi-agency procurement process. One key recommendation is that the state move the procurement process along expeditiously. Dragging out the project during the procurement stages serves no good purpose and actually has been proven to create negative feelings about the success of the project. There are only a few large, successful timekeeping software vendors in the market that the state will find meet the business, technical, and service level requirements. Therefore it is highly recommended that the TLLD selection team focus on the key players and move the process along quickly.

Procurement includes the following areas:

- Creation of a selection team
- Requirements finalized, prioritized, and "weighted"
- Development of an RFP to select the software and the integration vendors
- Review of the vendors' proposals
- Review of vendors' product offerings through scripted software demonstrations
- Selection of a software product
- Selection of a system integrator
- Negotiation of the contract.

For the TLLD selection and evaluation processes, Dye Management Group, Inc. recommends that WSDOT and DNR, along with OFM and DOP, and the agency procurement staff, form a timekeeping software and integrator selection team. The selection team, by definition, is an impartial, open-minded team whose primary responsibility is to select the software that most closely meets the TLLD requirements, and in doing so reduces the risk of “non-acceptance” after the system has been implemented.

The project sub-teams should provide the finalized requirements to the selection team. The TLLD core team has completed the first draft of the TLLD functional, application, technical, implementation, and conversion requirements, which have been prioritized according to high, medium, or low priority. Using the priorities assigned by the project team, the selection team should assign “weights” to each requirement, thereby creating an efficient method to calculate the value of the vendor responses to each requirement. Finalized requirements should be included in the RFP, but the priority columns should not be included in what is sent out in the RFP. Prior to selection of the package, vendors should not be informed as to the weight or priority of any requirement.

The Procurement resources should distribute the RFP to the vendors, and should list their names only on the instructions for completing the RFP. Once the RFP is released, no team member other than Procurement should have communications with any vendor. Team members should be instructed to not communicate with the vendors and that if vendors contact them, the calls are forwarded to Procurement so that the procurement resources can consolidate and organize all follow-up questions, responses, and coordinate the software demonstrations. If software vendors do have the opportunity to communicate with the team members, it will place the state in a risky position of having given preferential treatment to one vendor over another. Evaluation of the software should be based upon three areas:

- How well the software meets the TLLD requirements (per vendor proposal documents)
- The viability and stability of the systems integrator and software vendor (if different)
- The ability of the vendors to prove their software meets key requirements by performing scripted software demonstrations.

Note: Demonstration scripts should be guided by the state and more specifically by the subject matter experts on the TLLD team. The scripts should focus on mandatory and high priority requirements. The content of the product demonstrations should not be left to the vendors as they will showcase the bells and whistles of their software.

The selection team should gather and consolidate the demonstration evaluations from all project team members and stakeholders, and should facilitate the software selection. Selection of the software does not necessarily include selection of the system integrator. System integrator, in this context, represents a consulting firm that will help install and configure the software to meet enterprise TLLD requirements; who will develop interfaces to and from legacy systems in conjunction with agency IT staff; will define conversion requirements and processes, provide training, and support the implementation. So it is important to note that the state may select a vendor to install the software that is not from the software company, i.e., the integrator does not

have to work for the software company selected. Many firms have an excellent track record in implementing public sector timekeeping systems, and many also offer expertise in project management and organizational change management that software vendors may not have. In a project the size of the state enterprise TLLD implementation, an experienced management consulting firm will provide guidance and reduce risk for the state.

Governance is critical for project success for a variety of areas such as issue management and scope creep. For the TLLD project, the need for governance may be even more critical if the WSDOT and DNR are unable to agree on the choice of the system integrator and TLLD best of breed solution component. It is the responsibility of the TLLD Project Sponsors and the TLLD project steering committee to remove roadblocks by making executive decisions. If the project team should hit a roadblock in terms of selection, the selection team will need to engage these sponsors and the TLLD project steering committee for assistance in making the decision.

Negotiating the contract is the next step in the process, and as a key part of the state's contracting strategy, Dye Management Group, Inc. recommends that DNR and WSDOT retain counsel that is experienced specifically in software contract negotiations. Contract terms should include not only the modules licensed and the number of licenses, but also other elements such as:

- Degree of vendor/integrator participation in post-implementation activities and the length of time for these services. Options may include “through three payroll cycles,” or “through two month-end closings” or “through the first upgrade”
- The caps that will be placed on annual software maintenance cost increases
- The warranty provided by the software vendor
- Timing of the purchase of software licenses - the state will want the vendor to charge “just in time” for end-user licenses, not all of the licenses up front. This will allow the state to purchase enough licenses for initial development and the remaining licenses just prior to deployment of the new system
- Locking-in the price of purchasing additional licenses – this is critical given the intention of making TLLD an enterprise solution and for the future Roadmap initiative from an SAP perspective.

Appendix A – Consolidated List of Assumptions

This appendix provides a consolidated list of assumptions utilized in constructing the Time, Leave, and Labor Distribution feasibility study.

A. Solution Scoping Assumptions

This subsection outlines a number of key project scoping assumptions. These assumptions provided the basis for defining the project scope, the conceptual future business model, and the detailed system requirements that were used to prepare this feasibility study.

1. Conceptual future business model

Key assumptions surrounding the proposed future time, leave, and labor distribution conceptual business model include the following:

The implementation of the new TLLD will be based on and support a substantial shift in business processes, as the work of capturing time will be the responsibility of the employees. Ensuring that employees are correctly set up and entering their time will be the responsibility of their managers. This impact to employees and managers will need to be managed with a comprehensive change management plan that ensures all impacted employees in headquarters, regional, and field offices receive the communications and training required for a successful rollout of the new system

The scope of the proposed TLLD implementation would include changes to how each agency employee enters their time data, and how each manager reviews and approves time data. The employees who are currently data entering all the employees timesheets would be focusing their time on managing the system, analysis, and reporting.

2. TLLD application

Key assumptions about the proposed TLLD application include:

- The TLLD application will provide the functional capabilities outlined in Section VI.2 and documented in further detail in the Time, Leave, and Labor Distribution Detailed System Requirements deliverable prepared as part of this feasibility study
- It is not intended for the new TLLD application to replace any of the capabilities of the existing HRMS. The new TLLD application will rely on the information stored within HRMS and other integrated systems to assign key employment data at the position and employee level
- Integrated systems from which the new TLLD application will draw information include HRMS, AFRS, TRAINS, and other WSDOT agency financial management systems, DNR agency financial systems and other WSDOT and DNR agency line of business systems

- With regard to employment data, HRMS is the “system of record.” When information is available from AFRS, it will be considered the “system of record.” The new TLLD will support interactive integration with HRMS and the other key systems.

3. TLLD implementation project – in scope activities

The scope of the TLLD implementation project envisioned through this feasibility study will include the following elements:

- Seeking and receiving Information Services Board approval for the project
- Defining quality assurance and independent validation and verification requirements for the project and assigning/procuring resources for the effort
- Preparing an RFP and selecting a software solution and systems integrator
- Planning/conducting required business process reengineering, training, and other change management activities for all stakeholder groups including employees, supervisors, timekeepers, timekeeping administrators, system administrators, and technical staff
- Configuring, implementing, and testing the selected ERP or best of breed software solution
- Configuring the selected software to support DNR and WSDOT requirements immediately, while maintaining flexibility to address needs of other agencies
- Implementing the minimum configuration and other changes to the current HRMS environment required to support the selected alternative
- Implementing required integration with HRMS
- Implementing required integration with TRAINS (WSDOT), AFRS (DNR), and other DNR and WSDOT line of business systems
- Performing any required master data conversion from the existing WSDOT, WSDOT Ferry Division, and DNR timekeeping systems
- Performing required operational data conversion; examples of operational data conversion could include current data for the fiscal year if a mid-year conversion is conducted and some historical data to support training, collective bargaining, and certification reporting needs for WSDOT’s Ferry Division
- Integrating with time capture devices at various field work sites. The project budget includes \$500K of funding for analysis and pilot deployment of different types of devices (i.e. kiosks, personal digital assistants, etc.) on a proof of concept basis.

4. TLLD implementation project – out of scope activities

The following elements are specifically excluded from the proposed project scope:

- Set-up of the SAP General Ledger to support the desired state direction; set-up of the SAP General Ledger module will be limited to those configuration activities required to

specifically support the initial implementation of the TLLD application to WSDOT and DNR

- Re-configuration or re-implementation of HRMS not directly tied to TLLD requirements
- Most historical data conversion other than historical data needed to meet an agency's ongoing operational requirements
- Acquiring additional hand held telecommunications or other computing devices except those included in the remote data collection proof of concept efforts.

B. TLLD functionality

Prior to developing the TLLD detailed requirements, Dye Management Group, Inc. worked with the TLLD core team to confirm the functional boundaries of the new TLLD application. The functional boundaries were based on the scope of the detailed requirements gathering effort for the new TLLD application in terms of business function, application architecture, technical architecture, interfaces, and conversions.

Exhibit A-1 below depicts the scope of the proposed TLLD application. It includes the following categories:

1. Time and leave

This category is broken into three sub-areas:

- **Managing Timekeeping Data Elements** – This includes the information and functionality needed to support work schedule setups and a variety of locations and employee pay and shift types, to establish and manage job classifications, and to assign employees to crew lists, work locations, and work schedules
- **Managing Positions** – These requirements are related to the assigning of temporary employees to positions so that their timekeeping data can be tracked and allocated accurately. It has been assumed that only contractor positions will be stored in the TLLD application; HRMS will be the system of record for other position information
- **Processing Time and Leave** – This includes the requirements for capturing, reviewing, and approving timekeeping data, worked and not worked, and managing employee hours and reconciling time and payroll data.

2. Cost distribution

This category includes the business requirements for distributing costs to activities, equipment, funds, and projects. This includes the functionality required to support the valid assignment of activities, equipment, funds, and projects and all varieties of time, leave, and labor data to ensure that data is allocated and distributed to the correct accounting codes; and providing labor allocation data to other downstream systems.

3. Application architecture

Application architecture requirements are general system characteristics and capabilities that must be provided in a consistent and standardized way across all of the functional components of the TLLD application. Since it is envisioned that the TLLD application will ultimately be used by many state agencies and state employees, the usability, security, configuration, workflow automation, and reporting tools are critical. The TLLD application architecture requirements include: the usability of the system; the ability for users to configure or personalize the system based on their own ways of using the application; data entry standards and conventions; system administration requirements; user documentation; security levels, capabilities and administration; archiving; and audit trailing.

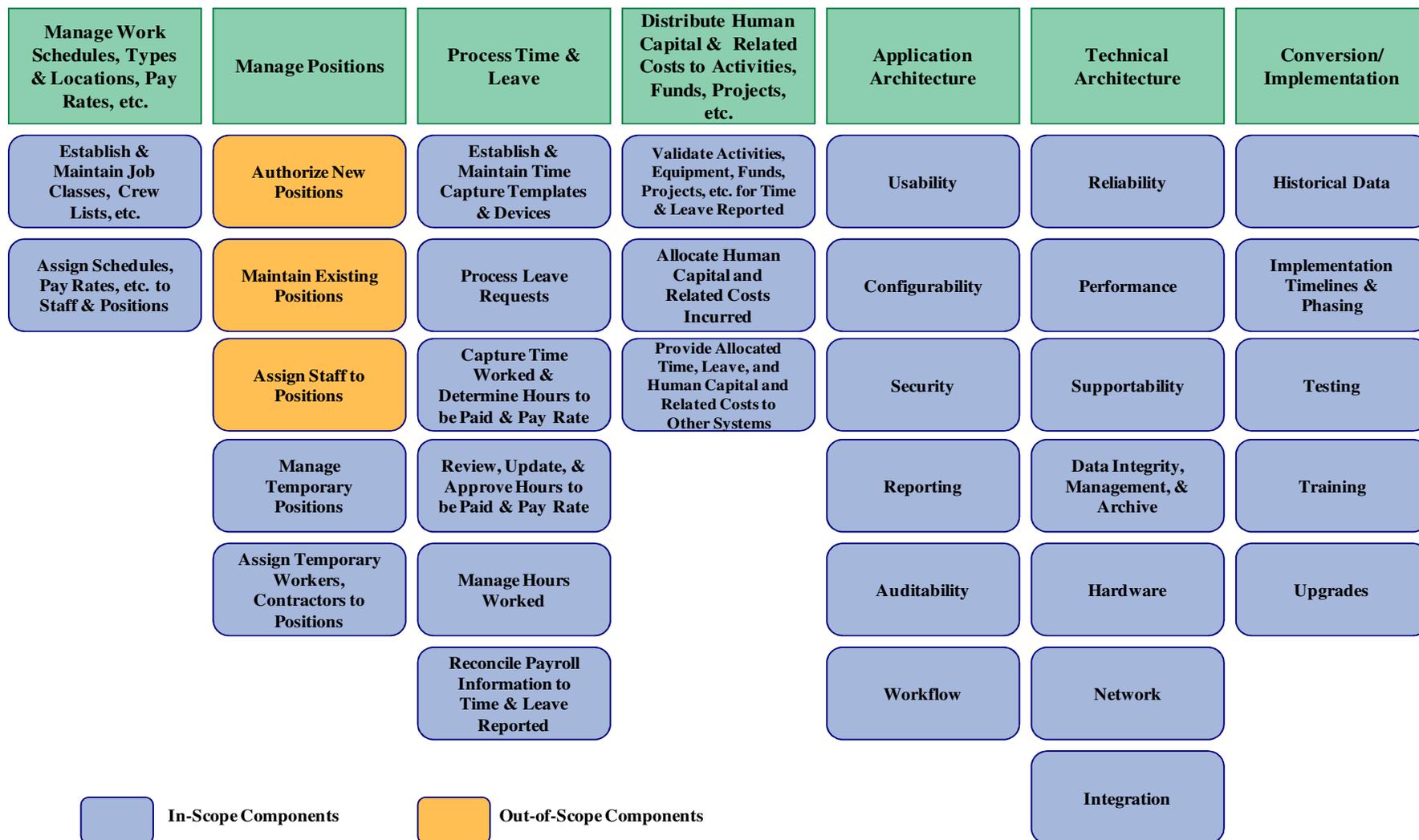
4. Technical architecture

Technical architecture requirements are the underlying technology and system management requirements that must be in place to support the on-going operation of an application. The TLLD technical architecture requirements include: system reliability expectations; system performance standards; data integrity requirements; the ease of maintaining and supporting the application; and the technical infrastructure the application must operate in including network, servers, desktops and database management systems and software development standards for any custom components. It also includes operational standards and requirements including job scheduling and processing and error handling.

5. Conversion and implementation

This category includes requirements regarding the qualifications of the implementation vendor team, the approach for implementation and testing of the new system, the conversion of master and operational data, and the disposition of historical data, end-user, timekeeping administrator and technical staff training and the requirements for future system upgrades.

Exhibit A-1: TLLD Project Scope Definition



C. Assumptions about Agency Roles in the TLLD Effort

The anticipated role of each agency or organization used for constructing the proposed TLLD project governance approach is described below.

1. DNR and WSDOT

For purposes of this feasibility study, it is assumed that DNR and WSDOT are the first end-customers of the completed TLLD solution and are the primary funding sources for the implementation effort. As such, there is an expectation that senior financial managers from these two agencies will serve as project sponsors and co-chair the TLLD project steering committee. There is also an expectation that each agency will contribute staff to the implementation team. This includes both functional staff from accounting functions and information technology staff who will be responsible for assisting with data conversions from the existing agency timekeeping systems and interfaces to/from other agency line of business systems.

In addition, feedback from timekeeping stakeholders in the two agencies leads us to also recommend that steps be taken to ensure the involvement of both headquarters and field staff from both DNR and WSDOT. It may be appropriate to establish agency level steering committees for these efforts that include representatives from each agency's field units such as WSDOT's regional business managers. Likewise, DNR and WSDOT may want to select staff from field units to fill some of the project roles.

2. Office of Financial Management (OFM)

OFM is responsible for statewide consolidated accounting and financial reporting. In order to achieve that goal, OFM needs consistent data from all agencies, which requires standardization of timekeeping and labor distribution data. Although OFM does not necessarily have a need to participate in the daily activities of the project team, OFM does need to participate in and approve the data mapping between timekeeping, payroll, and the general ledger, and must ultimately sign off on enterprise labor distribution data and reporting. OFM will also need to contribute technical resources familiar with AFRS. OFM has a responsibility to ensure that the project team develops and rolls out enterprise processes, procedures, and timekeeping data, and to that end, the project team has to include an OFM executive manager on the TLLD steering committee.

3. Department of Personnel (DOP)

DOP is responsible for HRMS, which is the official source of all employee and position data. The TLLD application will be tightly integrated with and highly dependent on HRMS. Therefore the need for a close partnership with the HRMS team is required. Consequently, DOP will need to be represented by an executive manager on the TLLD steering committee. DOP will also be expected to contribute a functional specialist resource familiar with the current HRMS configuration to the project team, a senior technical resource to help architect the integration of HRMS and TLLD, and programmers and other technical resources to develop and implement the integration between the two applications.

4. Department of Information Services (DIS)

From the perspective of the implementation project, DIS provides staff to the ISB who is responsible for statewide information technology policies and project management oversight. Consequently, the DIS staff from the Management and Oversight of Strategic Technologies group assigned to DNR and WSDOT should participate on the TLLD project steering committee and provide independent reports to the ISB.

In addition, staff from DIS' Integration Competency Center should be involved in designing and developing required integration between TLLD, HRMS, and agency line of business systems to ensure this integration is developed consistent with state standards. Likewise, it is anticipated that DIS would likely be responsible for hosting (either initially or at some later point) the TLLD application in its data center.

5. Proposed SAP/Enterprise Systems Center of Excellence

There is an assumption that the implemented TLLD application will be supported by a centralized SAP/Enterprise Systems Center of Excellence, which will either be a new central services function or housed in one of the existing central services agencies (DIS, OFM, or DOP). This Center of Excellence will have resources that will be responsible for managing and maintaining the configuration of SAP and best of breed software components. The Center of Excellence will also have technical staff such as programmers to develop reports and interfaces into or out of TLLD and other future SAP-based applications. It would also have application database administrators.

This Center of Excellence will be responsible for providing leadership to an Enterprise Change Control Board with representatives from multiple agencies that will guide decisions on proposed changes or enhancements first for TLLD and then for the overall envisioned OFM Roadmap solution.

The establishment of this group, along with finalizing the approach for functional and technical ownership of the future SAP/Enterprise Systems environment, is a key prerequisite for initiating the TLLD project effort. It is expected that staff from this function will participate as members of the project team and/or for members of the project team to potentially transition into this organization at the completion of the project.

6. Other Washington State Agencies

Because it is assumed that the resulting TLLD solution is intended to become an enterprise application, the project should seek and encourage participation from other agencies in various project activities such as selection of the software solution and systems integrator; detailed definition of the future business processes, enterprise design to establish the configuration of the selected software, and user acceptance testing of the completed TLLD application. Participation from other agencies is expected to be on a part-time, as needed basis as appropriate points in the project lifecycle.

D. Project Staffing

The TLLD project will require the following types of resources:

- A contracted Program/Project Manager with extensive experience implementing time, leave, and labor distribution or other ERP modules in large, complex organizations where the applications were deployed to multiple business units. The contracted manager should also have a detailed understanding of Washington State government and the nuances of managing large information technology projects in the state
- A consulting firm to assist with finalizing the detailed future business model, preparing the request for proposal (RFP) and facilitating the software selection process that has substantial experience in preparing request for proposals (RFPs) and assisting state agencies to procure and select ERP and other enterprise application software
- A consulting firm to provide quality assurance and independent, verification, and validation services that has significant experience in performing these types of services for the implementation of ERP and other enterprise application software solutions for state agencies
- A systems integrator or systems integrator team with experience implementing the proposed TLLD best of breed component for timekeeping and integrating it to SAP and experience implementing SAP to support labor distribution. The types of resource that will be required from the systems integrator include:
 - Project management
 - Functional consultants to configure the SAP or best of breed modules
 - Technical Lead to oversee the software development and the technical infrastructure
 - Integration architect with experience integrating the proposed best of breed solution with SAP
 - Database administrator(s) experienced with SAP and the proposed best of breed solution
 - Designers and developers to design, code and unit test any required custom program extensions, interfaces with existing systems and data conversions routines
- State staff including:
 - Business/Accounting Lead
 - Subject matter experts familiar with DNR and WSDOT's timekeeping and labor distribution business processes and those of other agencies if possible
 - Functional specialist familiar with the current HRMS configurations and set-ups

- Technical Lead to work with the systems integrator and assume ownership for the infrastructure following implementation
- Database Administrator(s)
- Integration Architect familiar with the current HRMS configuration and environment
- Developers familiar with the existing DNR and WSDOT timekeeping systems to code/test data conversion export programs
- Developers familiar with existing DNR and WSDOT line of business systems to code imports to or extracts from these systems for required interfaces
- Test Lead and testers to plan and perform system testing and lead user acceptance testing
- Agency Readiness Lead to guide organizational change management and other activities to plan and support deployment at DNR and WSDOT
- Additional staff to support agency readiness activities
- DNR and WSDOT user champions on a part-time basis
- DNR and WSDOT trainers.

E. Cost Estimate Assumptions

The following assumptions were utilized to develop the cost estimates for the three alternatives for proceeding with the TLLD project. Unless specifically noted, assumptions apply to all three of the alternatives evaluated.

1. COTS software

Assumptions related to COTS software include the following:

- A total of \$700,000 was included in Alternative 1 and 3 for the cost of additional SAP licenses based on negotiating with SAP for a limited purpose license for 70 additional users in DNR and WSDOT to use elements of the SAP Business Suite for performing only time, leave, and labor distribution functionality. These licenses would support staff utilizing the Human Capital Management, Workforce Scheduling, and General Ledger and Cost Accounting functionality. Employees entering their time through SAP and managers approving time would utilize Employee Self Service and Manager Self Service for which the state has acquired sufficient licenses as part of the HRMS project. This cost estimate was developed based on discussions with SAP, research on costs incurred by other states and the consultant team's recent experience on other projects
- This cost assumption for SAP licenses is conservative in that it does not assume the state can utilize any of the existing licenses for the SAP Business Suite owned by DOP or DNR

(which it should be able to do subject to agency agreement and negotiations with SAP). In addition, it assumes the acquisition of SAP licenses only to support TLLD, the specific scope of this feasibility study. If the state determines it is going to move forward with other ERP modules, it may be more cost effective to acquire full use licenses of the SAP Business Suite. For example, at the 60% discount DOP negotiated with SAP at the time of the acquisition of the licenses for HRMS, the cost of full use licenses for these 70 users would be about \$1.1 million. These licenses would, for example, provide a portion of the licenses needed to fully deploy SAP as the ERP solution for WSDOT

- An estimated of \$900,000 was included in Alternative 2 for the best of breed timekeeping solution. \$750,000 was included in Alternative 3 for a more limited use license of a best of breed timekeeping solution with certified and supported integration to SAP. These cost estimates were based on the mid-point of estimates received from several of the market leading timekeeping best of breed software vendors
- A total of \$350,000 was included in Alternative 1 for SAP Interactive Forms by Adobe. This is based on pricing for 5,000 users across DNR and WSDOT
- A total of \$150,000 was included for Duet licenses for Alternative 1. This is based on pricing for 2,000 users at \$75 a copy. The cost per copy was established by adjusting downward slightly the existing quoted state price of \$100 from SAP and Microsoft to reflect lower prices for Duet that the feasibility study team found in the market place
- In all three alternatives, the timing of the software acquisition cost was divided between the start-up of implementation activities where approximately 20% of the licenses are acquired and just prior to the deployment of the TLLD application where the larger proportion of the licenses are acquired. This allows the state to better manage its cash flow and avoid paying maintenance on licenses it is not going to utilize during the development period. However, this approach will be subject to negotiation with each software vendor
- Software licensing costs of 22% of the acquisition price are included in the cost estimate beginning in the year following the acquisition of the software. These costs are escalated 5% annually.

2. Hardware, operating system software and database licenses

Assumptions in the cost estimates related to hardware, operating system software, and database licenses include the following:

- The cost of a new development instance and a new production instance was included in the cost of each alternative. This included hardware, operating system software, and SQL server database licenses
- The development instance was assumed to be acquired at the start of the Implementation phase and the production instance just prior to deployment of the TLLD application
- The acquisition cost for the hardware was based on market research for current pricing for suggested hardware configurations provided by software vendors

- Maintenance for the hardware, operating system software and database licenses was included at 20% of the acquisition price, beginning in the year following acquisition. These costs are escalated 5% annually
- A total of \$600,000 was included in the cost estimate for each alternative to support establishment of a disaster recovery environment. It is assumed that this environment can be partially shared with another application
- Data processing costs to cover the TLLD application's share of data center overhead costs (such as heat, lights, etc.) were included in the cost estimate. An incremental cost of \$2 per employee was assumed beyond the \$14 per employee per pay period DNR and WSDOT are currently paying for data processing costs for the HRMS application. The \$2 cost was believed by the team to be a reasonable approximation of the incremental cost of supporting TLLD in addition to the existing HRMS application
- An estimate of \$800,000 was included in the estimate in Year 7 for a hardware refresh
- A total of \$500,000 was included as a placeholder for the cost of remote time capture devices. This cost estimate was based on the estimated cost for 100 kiosks. Additional work is needed by DNR and WSDOT to fully assess the types of devices which are most appropriate for various field units. The cost estimate for this item should then be updated following this assessment.

3. Systems integration and other professional services

Assumptions related to systems integration and other professional services costs include the following:

- A total of \$250,000 was included for the cost of a consultant to facilitate detailed process design efforts, prepare the RFP and facilitate and support the selection of the systems integrator and software solution
- Costs were also included for a contracted state program/project manager (\$950,000 based on a \$250/hour rate) and quality assurance and IV & V consultants (\$677,000)
- Systems integrator costs were established based on the estimated level of effort for each alternative and competitive rates for the skill sets needed in each alternative. These costs vary somewhat between the alternatives based on the number and type of highly skilled SAP resources needed under each alternative. The hourly rates for SAP resources used in building the cost estimates is based on discussions with SAP and several mid-tier systems integrators who specialize in performing SAP integration. The hourly rates for implementing the best of breed timekeeping solutions were developed through discussions with multiple best of breed software vendors
- State staff was included in the cost estimate for each alternative at the levels of participation defined in Appendix A.I above. The cost of state staff assigned to the project on a less than full-time basis was determined by using either the current state information technology or finance/accounting salary scales, escalated by 5% annually For staff assigned to the project full-time, the cost of filling the position with a consultant was used. This will provide the state additional flexibility in staffing the position and/or re-assigning the work

currently being performed by a state staff member when that person is assigned to the project

- The cost of one software upgrade in Year 7 and 8 is included in the cost of each alternative. The actual costs of this upgrade vary by alternative based on the extent of customizations and the mix of resources required to perform the work.

4. Other costs

Other cost assumptions include:

- Debt service cost was estimated based on utilizing ten year certificates of participation (COP) at 6.25% interest. It assumes the sale of COPs each year during the Implementation phase of the project for eligible expenses to be incurred during that year
- Costs were included for facilities for the Implementation phase of the project. These costs are estimated at \$15,000 per month based on current market rates in the Olympia area
- An estimate of \$80,000 was included for DNR, WSDOT, and other state staff assigned to the project to attend SAP Boot Camp in Alternative 1 and SAP Boot Camp and/or training on the best of breed solution in Alternative 3. \$40,000 was included for training on the best of breed solution in Alternative 2. These costs were based on the current market rates for SAP training and training on multiple best of breed timekeeping solutions.

F. Benefit Stream Assumptions

Exhibit A-2 outlines the benefit assumptions utilized to construct the cost benefit analysis:

Exhibit A-2: Assumptions Determining Anticipated Benefit Streams

Potential Benefit Stream	Transactions	Savings	Loaded Employee Cost for Benefit Calculation	Anticipated Annual Benefit Stream
WSDOT Timekeeping Staff - Time Savings: Time that was previously spent data entering all employees timesheets can be repurposed to knowledge work such as reporting, analysis, or customer service and process improvement. (7,500 employees x 2 minutes x 2 timesheets per month x 12 months)	180,000	5 minutes	\$65,000 per year	\$468,750
DNR Timekeeping Staff - Time Savings: Time that was previously spent data entering all employees timesheets can be repurposed to knowledge work such as reporting, analysis, or customer service and process improvement. (2,500 employees x 2 minutes x 2 timesheets per month x 12 months)	60,000	5 minutes	\$65,000 per year	\$156,250
WSDOT: Redirection of Timekeeping/Payroll staff: Resources previously spending time reconciling issues between WSDOT LABOR, Ferries LABOR, and HRMS	2 FTEs		\$65,000 /year	\$130,000
DNR: Redirection of Timekeeping/Payroll staff: Resources previously spending time reconciling issues between NTAR and HRMS	0.5 FTE		\$65,000 /year	\$32,500
WSDOT: Redirection of IT resources currently supporting Ferries LABOR and WSDOT LABOR applications to other line of business systems	1 FTE		\$120,636	\$120,636
DNR: Redirection of IT resource currently supporting NTAR to other line of business systems	0.25 FTE		\$30,159	\$30,159

Potential Benefit Stream	Transactions	Savings	Loaded Employee Cost for Benefit Calculation	Anticipated Annual Benefit Stream
WSDOT: TLLD share of reduced IT operational costs from decommissioning of the existing WSDOT mainframe – initial reduction is incremental cost associated with labor applications. \$500,000 once all other mainframe applications decommissioned.			\$500,000 of \$4.5M	\$500,000

These benefit streams were applied to all three alternatives with the following exception: under Alternative 2, the benefit stream related to the redirection of the time of timekeeping staff and payroll staff spent reconciling agency systems to HRMS was not applied due to some concern over the potential complexities of the integration between HRMS and the best of breed TLLD solution which could result in reconciliation work for agency accounting staff.

The cost benefit analysis assumes 50% of each potential benefit stream will be achieved in the first year after implementation and 100% of the benefit stream will be achieved beginning in Year 2 forward. The exception to this rule is the savings related to the WSDOT mainframe, where there is a small incremental savings immediately and additional savings recognized in Year 6 when it is assumed the entire WSDOT mainframe is decommissioned through WSDOT's Critical Applications Replacement Program.

Appendix B – TLLD Stakeholder Interviews

During the months of March and April 2009, the TLLD team conducted stakeholder interviews to gather input for the TLLD Feasibility Study. The team distributed the following questionnaire to solicit stakeholder input on the key business drivers, benefits, and implementation risks for the proposed project. Exhibit B-1 at the end of the questionnaire provides a list of stakeholders that were interviewed.

Background

The Washington State Departments of Transportation (WSDOT) and Natural Resources (DNR) and the Office of Financial Management (OFM) are currently conducting a feasibility study for a new Time, Leave, and Labor Distribution (TLLD) system. The feasibility study will identify business and technical requirements for and explore viable solution options to address TLLD business needs. The scope of the TLLD project includes:

- Managing work schedules, types, and locations
- Managing temporary and non-employee positions (such as contractors, volunteers, and commission members)
- Processing time and leave
- Distributing human capital and related costs to various cost activities
- Application and technical architecture required to support the new system, conversion from the two departments' existing applications, and implementation of the new business processes and system for WSDOT and DNR
- In preparing the feasibility study, WSDOT, DNR, and OFM are seeking to maximize opportunities to support an enterprise vision by streamlining and modernizing current time and leave collection and labor distribution processes and examining potential solutions that are both flexible and scalable to meet the unique requirements of other Washington State agencies.

Dye Management Group, Inc. has been engaged by WSDOT and DNR to assist with the preparation of the feasibility study. As part of the analysis of alternative implementation approaches and preparation of the final report, Dye Management Group, Inc. is conducting a series of stakeholder interviews. The goal of these interviews is to identify agency and/or state strategic business objectives that could be supported by new time, leave, and labor distribution business processes and tools. Likewise, these interviews are intended to identify stakeholder interests and concerns as they relate to the feasibility study process to ensure that these items are proactively addressed during both the study itself and the preparation of the report. To ensure consistency in data collection from these interviews, we have developed this questionnaire to serve as a framework for the process.

Interview Questionnaire

In preparation for our meeting, we ask you to consider the following questions:

- Please briefly describe some of the key strategic business drivers of your Department and/or your division.
- How could the proposed TLLD processes, tools, and data help your organization achieve these business objectives?
- What are some of the potential benefits you see for the state and your department from the TLLD effort?
- What are key success factors for the TLLD effort for you and your staff?
- What do you see as the primary risks or issues associated with the effort? Do you have recommendations for mitigating these risks or resolving the issues?
- In your past experience with these types of projects, what has worked and what did not work for you and your staff?
- What will make this feasibility study process a success from your perspective?
- What other individuals would you suggest we talk to as part of preparing the feasibility study?

Exhibit B-1: Interview Schedule and Attendee List

Time	Agency	Attendees
March 24, 2009	Office of Financial Management	Lynn McGuire
March 24, 2009	Department of Personnel	Steve Young
March 24, 2009	Office of Financial Management	Steve Nielson Sadie Hawkins
March 31, 2009	Department of Corrections	Tom George
March 31, 2009	Department of Natural Resources	Jim Morgan Wendy Huff Carol Gravatt
March 31, 2009	Attorney General	Janis Henry Sarian Scott John Capaluti Crystal Showers
March 31, 2009	Employment Security Department	Mary Beth Strand
April 3, 2009	Department of Social and Health Services	Jay Minton

Appendix C – Time, Leave, and Labor Distribution Glossary

Exhibit C-1 below provides a glossary of key timekeeping terms used throughout this document.

Exhibit C-1: Glossary of Terms

Requirement Term	HRMS Related Term	Definition
Accrued (leave)		Leave balances (sick, annual, compensatory, shared, etc.) that an employee earns based on hours worked, time spent in pay status, donations, or other methods/requirements. The accrued leave is the leave balance from which an employee draws/requests paid time off.
Allocated (leave)		This is the sum amount of leave hours by leave category (sick, annual, compensatory, shared, etc.) that have been submitted and approved, but not yet taken as paid time off.
Assignment Pay	Pay Type	A premium added to the base pay PAY TYPE to recognize special skills, assigned duties, and/or unique circumstances. Penalty Pay is one type of ASSIGNMENT PAY.
Authorized User		A person given permission to perform some function within the TLLD system. The functions that can be performed by an authorized user are determined by their security role.
Crew List		A group of employees assigned to a particular WORK LOCATION, project, program, etc.
Employee Characteristics		Information about an employee such as certifications obtained, classes attended, special skills, etc.
Exempt Position	EEGroup	A POSITION where the employee is not covered by civil service rules.
Intermittent Employee		Staff assigned to a position where the nature of work is intermittent.
Job Class	Job Class	A position or group of positions performing similar duties and having the same title and compensation range.
Job Share		Two employees with similar skills share a single POSITION
Location		The “home” work site for an employee, i.e. the Seattle Regional Office (same as Work Location)
Master Calendar	Calendar and Work Schedule Rule	Statewide calendar with work days, non-work days, and holidays by WORK SCHEDULE.
Near Real-Time		Information posted to the system of record is available for view, updated, or added immediately.

Requirement Term	HRMS Related Term	Definition
Overtime Exempt	EESubgroup	A POSITION not eligible for the mandatory overtime provisions of the Fair Labor Standards Act.
Pay Type	Wage Rate	The annual, monthly, hourly, and standby compensation amounts for employees based on job class and pay range. There are various PAY TYPES, including base pay, assignment pay, call-back pay, exchange time, overtime pay, penalty pay, shift premium pay, and standby pay.
Position	Position	A group of duties and responsibilities performed by an employee and assigned by the supervisor. A position can be occupied or vacant, full or part time
Unallocated (leave)		This is the sum amount of leave hours by leave category (sick, annual, compensatory, shared, etc.) that an employee may use for future leave requests.
Work Location / Home Base		The “home” work site for an employee, i.e. the Seattle Regional Office (same as Location).
Work Schedule	Work Schedule Rule	Typical work days for an employee, i.e., Sun., Mon., Tues., Fri., Sat. OR a listing of a group of employees by job function with assigned work days and hours.
Work Shift/Work Hours	Work Schedule Rule & Planned Working Time Info Type	Scheduled hours for an employee each work day, i.e. 6 a.m. to 2 p.m.
Work Week		Start and end times for an employee’s working week, i.e. 12:00 a.m. Monday to 11:59 p.m. Sunday.



Appendix D – Cost Benefit Analysis – Alternative 1

Appendix D provides the completed DIS Forms 1 and 3-5 for the cost benefit analysis for Alternative 1 under a pay as you go scenario.

Form 1: Summary Cost Benefit and Cash Flow Analysis - Alternative 1

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	GRAND TOTAL
TOTAL OUTFLOWS	(367,396)	6,791,322	12,570,573	1,916,845	1,313,158	1,367,298	2,238,455	1,560,610	1,660,297	1,765,401	30,816,563
TOTAL INFLOWS	0	0	0	389,280	690,092	1,128,377	1,150,945	1,173,964	1,197,443	1,221,392	6,951,493
NET CASH FLOW	367,396	(6,791,322)	(12,570,573)	(1,527,564)	(623,066)	(238,921)	(1,087,511)	(386,647)	(462,854)	(544,009)	
INCREMENTAL NPV	NA	(5,670,058)	(16,150,226)	(17,348,853)	(17,808,992)	(17,975,058)	(18,686,486)	(18,924,544)	(19,192,759)	(19,489,458)	
Cumulative Costs	NA	6,423,926	18,994,499	20,911,344	22,224,502	23,591,800	25,830,256	27,390,866	29,051,163	30,816,563	
Cumulative Benefits	NA	0	0	389,280	1,079,373	2,207,750	3,358,694	4,532,658	5,730,101	6,951,493	

Cost of Capital	Break-even Period - yrs.* Non- Discounted	Discounted	NPV \$	IRR %
6.25%			(19,489,458)	1919.01%

* - "Non-Discounted" represents breakeven period for cumulative costs and benefits (no consideration of time value of money).

* - "Discounted" considers effect of time value of money through incremental Net Present Value.

Form 3: Summary Operations Incremental Cost of Project – Alternative 1

		FY 2010	FY 2011	FY2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	TOTAL
OPERATIONS INCREMENTAL COSTS OF PROJECT (Per Form 4 - Column C)												
Salaries and Wages	(A)	132,604	2,953,182	4,695,796	572,667	240,671	241,435	249,282	270,237	288,844	308,482	9,953,200
Employee Benefits	(B)	0	0	0	732,692	403,896	407,925	419,102	440,057	462,060	485,163	3,350,894
Personal Service Contracts	(CA)	0	3,235,740	4,800,777	0	0	0	0	0	0	0	8,036,518
Communications	(EB)	0	0	0	0	0	0	0	0	0	0	0
Hardware Rent/Lease	(ED)	0	0	0	0	0	0	0	0	0	0	0
Hardware Maintenance	(EE)	(500,000)	(510,000)	(480,200)	(148,604)	(129,504)	(120,061)	(109,828)	(73,578)	(60,695)	(46,838)	(2,179,308)
Software Rent/Lease	(ED)	0	0	0	0	0	0	0	0	0	0	0
Software Maintenance & Upgrade	(EE)	0	0	41,800	266,090	279,395	293,364	308,032	323,434	339,606	356,586	2,208,307
DP Goods/Services	(EL)	0	120,000	200,000	494,000	518,700	544,635	571,867	600,460	630,483	662,007	4,342,152
Goods/Services Not Listed	(E)	0	422,400	422,400	0	0	0	0	0	0	0	844,800
Travel	(G)	0	0	0	0	0	0	0	0	0	0	0
Hardware Purchase Capitalized	(JC)	0	200,000	1,700,000	0	0	0	800,000	0	0	0	2,700,000
Software Purchase Capitalized	(JC)	0	190,000	1,010,000	0	0	0	0	0	0	0	1,200,000
Hardware Purchase - Non. Cap	(KA)	0	0	0	0	0	0	0	0	0	0	0
Software Purchase - Non. Cap	(KA)	0	0	0	0	0	0	0	0	0	0	0
Hardware Lease/Purchase	(P)	0	0	0	0	0	0	0	0	0	0	0
Software Lease/Purchase	(P)	0	0	0	0	0	0	0	0	0	0	0
Other (specify)	()	0	180,000	180,000	0	0	0	0	0	0	0	360,000
TOTAL OPERATIONS		(367,396)	6,791,322	12,570,573	1,916,845	1,313,158	1,367,298	2,238,455	1,560,610	1,660,297	1,765,401	30,816,563
TOTAL OUTFLOWS		(367,396)	6,791,322	12,570,573	1,916,845	1,313,158	1,367,298	2,238,455	1,560,610	1,660,297	1,765,401	30,816,563
CUMULATIVE COSTS			6,423,926	9	4	2	0	6	6	3	3	

(1) Total Outflows the sum of Fiscal Total Operations and Total Development from Form 2.

(2) Total Outflows carried to Form 1.

Form 4: Current versus Proposed Method Operations Costs – Alternative 1

		FY 2010			FY 2011			FY 2012			FY 2013			FY
		(a)	(b)	(c) = (b)-(a) Incremental Effect of Project (to summary)	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project (to summary)	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project (to summary)	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project (to summary)	(a)
OPERATIONS COSTS	Obj. Codes	Current	Project		Current	Project		Current	Project		Current	Project		Cu
Salaries, Wages and Benefits (Implementation and Ongoing Support)	(A)	150,795	283,399	132,604	153,811	3,106,993	2,953,182	156,887	4,852,683	4,695,796	160,025	732,692	572,667	16
Employee Benefits (Included in Salaries and Wages Above)	(B)	0	0	0	0	0	0	0	0	0	0	732,692	732,692	0
Personal Service Contracts (implementation vendor)	(CA)	0	0	0	0	3,235,740	3,235,740	0	4,800,777	4,800,777	0	0	0	0
Communications	(EB)	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware Rent/Lease	(ED)	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware Maintenance	(EE)	500,000	0	(500,000)	510,000	0	(510,000)	520,200	40,000	(480,200)	530,604	382,000	(148,604)	53
Software Rent/Lease	(ED)	0	0	0	0	0	0	0	0	0	0	0	0	0
Software Maintenance & Upgrade (ongoing licensing)	(EE)	0	0	0	0	0	0	0	41,800	41,800	0	266,090	266,090	0
DIS Goods/Services -- Centralized Data Processing Costs	(EL)	0	0	0	0	120,000	120,000	0	200,000	200,000	0	494,000	494,000	0
Goods/Services Not Listed (prog mgmt)	(E)	0	0	0	0	422,400	422,400	0	422,400	422,400	0	0	0	0
Travel	(G)	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware Purchase Capitalized	(JC)	0	0	0	0	200,000	200,000	0	1,700,000	1,700,000	0	0	0	0
Software Purchase Capitalized (s/w acquisition)	(JC)	0	0	0	0	190,000	190,000	0	1,010,000	1,010,000	0	0	0	0
Hardware Purchase - Non. Cap	(KA)	0	0	0	0	0	0	0	0	0	0	0	0	0
Software Purchase - Non. Cap	(KA)	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware Lease/Purchase	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0
Software Lease/Purchase	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0
Other (specify) (Training Facility)	()	0	0	0	0	180,000	180,000	0	180,000	180,000	0	0	0	0
TOTAL OPERATION COSTS		650,795	283,399	(367,396)	663,811	7,455,133	6,791,322	677,087	13,247,661	12,570,573	690,629	2,607,474	1,916,845	69
FTE'S				0			0			0			0	

Form 5: Benefits Cash Flow Analysis – Alternative 1

BENEFITS												
	OFM	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	TOTAL
TANGIBLE BENEFITS	Object Codes	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Hard \$												
Revenues (specify)	(revenue codes)	0	0	0	0	0	0					0
Reimbursements (specify)	(object codes)	0	0	0	0	0	0					0
Cost Reduction (specify) (1)	(object codes)	0	0	0	0	0	0					0
WSDOT: TLLD part of savings from decommission of WSDOT mainframe		0	0	0	102,000	104,040	530,604	541,216	552,040	563,081	574,343	2,967,325
Soft \$												0
Cost Avoidance (specify)	(object codes)	0	0	0	0	0	0					0
WSDOT Timekeeping Staff - Time Savings		0	0	0	95,625	195,075	198,977	202,956	207,015	211,155	215,379	1,326,182
DNR Timekeeping Staff - Time Savings		0	0	0	31,875	65,025	66,326	67,652	69,005	70,385	71,793	442,061
WSDOT: Redirection of DNR timekeeping staff		0	0	0	66,300	135,252	137,957	140,716	143,531	146,401	149,329	919,486
DNR: Redirection of DNR timekeeping staff performing reconciliations, etc.		0	0	0	16,575	33,813	34,489	35,179	35,883	36,600	37,332	229,871
WSDOT: Redirection of IT resources		0	0	0	61,524	125,510	128,020	130,580	133,192	135,856	138,573	853,255
DNR: Redirection of IT resources		0	0	0	15,381	31,377	32,005	32,645	33,298	33,964	34,643	213,314
Other (specify)	(object codes)	0	0	0	0	0	0					0
												0
TOTAL INFLOWS		0	0	0	389,280	690,092	1,128,377	1,150,945	1,173,964	1,197,443	1,221,392	6,951,493
CUMULATIVE BENEFITS			0	0	389,280	1,079,373	2,207,750	3,358,694	4,532,658	5,730,101	6,951,493	

(1) Reflect all Cost Reduction Benefits except Operations reductions (which are reflected in Cost of Operations).

(2) Total Inflows carries to Form1



Appendix E – Cost Benefit Analysis – Alternative 2

Appendix E provides the completed DIS Forms 1 and 3-5 for the cost benefit analysis for Alternative 2 under a pay as you go scenario.

Form 1: Summary Cost Benefit and Cash Flow Analysis - Alternative 3

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	GRAND TOTAL
TOTAL OUTFLOWS	(367,396)	6,174,609	11,577,388	1,972,945	1,372,063	1,429,148	2,303,398	1,628,800	1,731,896	1,840,580	29,663,432
TOTAL INFLOWS	0	0	0	389,280	690,092	1,128,377	1,150,945	1,173,964	1,197,443	1,221,392	6,951,493
NET CASH FLOW	367,396	(6,174,609)	(11,577,388)	(1,583,664)	(681,971)	(300,771)	(1,152,453)	(454,837)	(534,453)	(619,188)	
INCREMENTAL NPV	NA	(5,123,766)	(14,775,909)	(16,018,555)	(16,522,196)	(16,731,252)	(17,485,164)	(17,765,207)	(18,074,913)	(18,412,614)	
Cumulative Costs	NA	5,807,213	17,384,601	19,357,546	20,729,609	22,158,757	24,462,155	26,090,956	27,822,852	29,663,432	
Cumulative Benefits	NA	0	0	389,280	1,079,373	2,207,750	3,358,694	4,532,658	5,730,101	6,951,493	

Cost of Capital	Breakeven Period - yrs.* Non- Discounted	Discounted	NPV \$	IRR %
6.25%			(18,412,614)	1752.07%

* - "Non-Discounted" represents breakeven period for cumulative costs and benefits (no consideration of time value of money).

* - "Discounted" considers effect of time value of money through incremental Net Present Value.

Form 3: Summary Operations Incremental Cost of Project - Alternative 2

		FY	FY	FY	FY	FY	FY	FY	FY	FY	GRAND	
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	TOTAL
OPERATIONS INCREMENTAL COSTS OF PROJECT (Per Form 4 - Column C)												
Salaries and Wages (A)		132,604	2,905,680	4,629,293	572,667	240,671	241,435	249,282	270,237	288,844	308,482	9,839,195
Employee Benefits (B)		0	0	0	732,692	403,896	407,925	419,102	440,057	462,060	485,163	3,350,894
Personal Service Contracts (CA)		0	2,566,530	3,702,095	0	0	0	0	0	0	0	6,268,624
Communications (EB)		0	0	0	0	0	0	0	0	0	0	0
Hardware Rent/Lease (ED)		0	0	0	0	0	0	0	0	0	0	0
Hardware Maintenance (EE)		(500,000)	(510,000)	(480,200)	(148,604)	(129,504)	(120,061)	(109,828)	(73,578)	(60,695)	(46,838)	(2,179,308)
Software Rent/Lease (ED)		0	0	0	0	0	0	0	0	0	0	0
Software Maintenance & Upgrade (EE)		0	0	63,800	322,190	338,300	355,214	372,975	391,624	411,205	431,765	2,687,074
DP Goods/Services (EL)		0	120,000	200,000	494,000	518,700	544,635	571,867	600,460	630,483	662,007	4,342,152
Goods/Services Not Listed (E)		0	422,400	422,400	0	0	0	0	0	0	0	844,800
Travel (G)		0	0	0	0	0	0	0	0	0	0	0
Hardware Purchase Capitalized (JC)		0	200,000	1,700,000	0	0	0	800,000	0	0	0	2,700,000
Software Purchase Capitalized (JC)		0	290,000	1,160,000	0	0	0	0	0	0	0	1,450,000
Hardware Purchase - Non. Cap (KA)		0	0	0	0	0	0	0	0	0	0	0
Software Purchase - Non. Cap (KA)		0	0	0	0	0	0	0	0	0	0	0
Hardware Lease/Purchase (P)		0	0	0	0	0	0	0	0	0	0	0
Software Lease/Purchase (P)		0	0	0	0	0	0	0	0	0	0	0
Other (specify) ()		0	180,000	180,000	0	0	0	0	0	0	0	360,000
TOTAL OPERATIONS		(367,396)	6,174,609	11,577,388	1,972,945	1,372,063	1,429,148	2,303,398	1,628,800	1,731,896	1,840,580	29,663,432
TOTAL OUTFLOWS		(367,396)	6,174,609	11,577,388	1,972,945	1,372,063	1,429,148	2,303,398	1,628,800	1,731,896	1,840,580	29,663,432
CUMULATIVE COSTS			5,807,213	17,384,601	19,357,546	20,729,609	22,158,757	24,462,155	26,090,956	27,822,852	29,663,432	

(1) Total Outflows the sum of Fiscal Total Operations and Total Development from Form2.
 (2) Total Outflows carried to Form1

Form 4: Current versus Proposed Method Operations Costs – Alternative 3

		FY 2010			FY 2011			FY 2012			FY 2013			FY 2014		
		(a)	(b)	(c) = (b)-(a) Incremental Effect of Project	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project
OPERATIONS COSTS	Obj. Codes	Current	Project	(to summary)	Current	Project	(to summary)	Current	Project	(to summary)	Current	Project	(to summary)	Current	Project	(to summary)
Salaries, Wages and Benefits (Implementation and Ongoing Support)	(A)	150,795	283,399	132,604	153,811	3,059,491	2,905,680	156,887	4,786,180	4,629,293	160,025	732,692	572,667	163,225	403,896	240,671
Employee Benefits (Included in Salaries and Wages Above)	(B)	0	0	0	0	0	0	0	0	0	0	732,692	732,692	0	403,896	403,896
Personal Service Contracts (implementation vendor)	(CA)	0	0	0	0	2,566,530	2,566,530	0	3,702,095	3,702,095	0	0	0	0	0	0
Communications	(EB)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware Rent/Lease	(ED)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware Maintenance	(EE)	500,000	0	(500,000)	510,000	0	(510,000)	520,200	40,000	(480,200)	530,604	382,000	(148,604)	530,604	401,100	(129,504)
Software Rent/Lease	(ED)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Software Maintenance & Upgrade (ongoing licensing)	(EE)	0	0	0	0	0	0	0	63,800	63,800	0	322,190	322,190	0	338,300	338,300
DIS Goods/Services -- Centralized Data Processing Costs	(EL)	0	0	0	0	120,000	120,000	0	200,000	200,000	0	494,000	494,000	0	518,700	518,700
Goods/Services Not Listed (program mgmt)	(E)	0	0	0	0	422,400	422,400	0	422,400	422,400	0	0	0	0	0	0
Travel	(G)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware Purchase Capitalized	(JC)	0	0	0	0	200,000	200,000	0	1,700,000	1,700,000	0	0	0	0	0	0
Software Purchase Capitalized (s/w acquisition)	(JC)	0	0	0	0	290,000	290,000	0	1,160,000	1,160,000	0	0	0	0	0	0
Hardware Purchase - Non. Cap	(KA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Software Purchase - Non. Cap	(KA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware Lease/Purchase	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Software Lease/Purchase	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other (specify) (Training Facility)	()	0	0	0	0	180,000	180,000	0	180,000	180,000	0	0	0	0	0	0
TOTAL OPERATION COSTS		650,795	283,399	(367,396)	663,811	6,838,420	6,174,609	677,087	12,254,475	11,577,388	690,629	2,663,574	1,972,945	693,829	2,065,892	1,372,063
FTE'S				0						0			0			0

Form 4: Current versus Proposed Method Operations Costs – Alternative 3 (Continued)

Obj. Codes		FY 2015			FY 2016			FY 2017			FY 2018			FY 2019		
		(a)	(b)	(c) = (b)-(a) Incremental Effect of Project	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project
		Current	Project	(to summary)												
OPERATIONS COSTS																
	(A)	166,490	407,925	241,435	169,820	419,102	249,282	169,820	440,057	270,237	173,216	462,060	288,844	176,680	485,163	308,482
	(B)	0	407,925	407,925	0	419,102	419,102	0	440,057	440,057	0	462,060	462,060	0	485,163	485,163
	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(EB)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ED)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(EE)	541,216	421,155	(120,061)	552,040	442,213	(109,828)	552,040	478,463	(73,578)	563,081	502,386	(60,695)	574,343	527,505	(46,838)
	(ED)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(EE)	0	355,214	355,214	0	372,975	372,975	0	391,624	391,624	0	411,205	411,205	0	431,765	431,765
	(EL)	0	544,635	544,635	0	571,867	571,867	0	600,460	600,460	0	630,483	630,483	0	662,007	662,007
	(E)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(G)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(JC)	0	0	0	0	800,000	800,000	0	0	0	0	0	0	0	0	0
	(JC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(KA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(KA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	()	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATION COSTS		707,706	2,136,854	1,429,148	721,860	3,025,258	2,303,398	721,860	2,350,660	1,628,800	736,297	2,468,193	1,731,896	751,023	2,591,603	1,840,580
FTE'S				0			0			0			0			0

(1) FY Column (c) for each Cost Code carried to Form3

Form 5: Benefits Cash Flow Analysis – Alternative 3

TANGIBLE BENEFITS	OFM Object Codes	BENEFITS										TOTAL
		FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	
Hard \$												
Revenues (specify)	(revenue codes)	0	0	0	0	0	0	0	0	0	0	0
Reimbursements (specify)	(object codes)	0	0	0	0	0	0	0	0	0	0	0
Cost Reduction (specify) (1)	(object codes)	0	0	0	0	0	0	0	0	0	0	0
WSDOT: TLLD part of savings from decommission of WSDOT mainframe		0	0	0	102,000	104,040	530,604	541,216	552,040	563,081	574,343	2,967,325
Soft \$												0
Cost Avoidance (specify)	(object codes)	0	0	0	0	0	0	0	0	0	0	0
WSDOT Timekeeping Staff - Time Savings		0	0	0	95,625	195,075	198,977	202,956	207,015	211,155	215,379	1,326,182
DNR Timekeeping Staff - Time Savings		0	0	0	31,875	65,025	66,326	67,652	69,005	70,385	71,793	442,061
WSDOT: Redirection of DNR timekeeping staff		0	0	0	66,300	135,252	137,957	140,716	143,531	146,401	149,329	919,486
DNR: Redirection of DNR timekeeping staff performing reconciliations, etc.		0	0	0	16,575	33,813	34,489	35,179	35,883	36,600	37,332	229,871
WSDOT: Redirection of IT resources		0	0	0	61,524	125,510	128,020	130,580	133,192	135,856	138,573	853,255
DNR: Redirection of IT resources		0	0	0	15,381	31,377	32,005	32,645	33,298	33,964	34,643	213,314
TOTAL INFLOWS		0	0	0	389,280	690,092	1,128,377	1,150,945	1,173,964	1,197,443	1,221,392	6,951,493
CUMULATIVE BENEFITS			0	0	389,280	1,079,373	2,207,750	3,358,694	4,532,658	5,730,101	6,951,493	

- (1) Reflect all Cost Reduction Benefits except Operations reductions (which are reflected in Cost of Operations).
- (2) Total Inflows carries to Form1.



Appendix F – Cost Benefit Analysis – Alternative 3

Appendix F provides the completed DIS Forms 1 through 5 for the cost benefit analysis for Alternative 3 under a pay as you go scenario.

Form 1: Summary Cost Benefit and Cash Flow Analysis - Alternative 3

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	GRAND TOTAL
TOTAL OUTFLOWS	(367,396)	6,174,609	11,577,388	1,972,945	1,372,063	1,429,148	2,303,398	1,628,800	1,731,896	1,840,580	29,663,432
TOTAL INFLOWS	0	0	0	389,280	690,092	1,128,377	1,150,945	1,173,964	1,197,443	1,221,392	6,951,493
NET CASH FLOW	367,396	(6,174,609)	(11,577,388)	(1,583,664)	(681,971)	(300,771)	(1,152,453)	(454,837)	(534,453)	(619,188)	
INCREMENTAL NPV	NA	(5,123,766)	(14,775,909)	(16,018,555)	(16,522,196)	(16,731,252)	(17,485,164)	(17,765,207)	(18,074,913)	(18,412,614)	
Cumulative Costs	NA	5,807,213	17,384,601	19,357,546	20,729,609	22,158,757	24,462,155	26,090,956	27,822,852	29,663,432	
Cumulative Benefits	NA	0	0	389,280	1,079,373	2,207,750	3,358,694	4,532,658	5,730,101	6,951,493	

Cost of Capital	Breakeven Period - yrs.*		NPV \$	IRR %
	Non- Discounted	Discounted		
6.25%			(18,412,614)	1752.07%

* - "Non-Discounted" represents breakeven period for cumulative costs and benefits (no consideration of time value of money).

* - "Discounted" considers effect of time value of money through incremental Net Present Value.

Form 3: Summary Operations Incremental Cost of Project - Alternative 2

		FY	FY	FY	FY	FY	FY	FY	FY	FY	GRAND	
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	TOTAL
OPERATIONS INCREMENTAL COSTS OF PROJECT (Per Form 4 - Column C)												
Salaries and Wages (A)		132,604	2,905,680	4,629,293	572,667	240,671	241,435	249,282	270,237	288,844	308,482	9,839,195
Employee Benefits (B)		0	0	0	732,692	403,896	407,925	419,102	440,057	462,060	485,163	3,350,894
Personal Service Contracts (CA)		0	2,566,530	3,702,095	0	0	0	0	0	0	0	6,268,624
Communications (EB)		0	0	0	0	0	0	0	0	0	0	0
Hardware Rent/Lease (ED)		0	0	0	0	0	0	0	0	0	0	0
Hardware Maintenance (EE)		(500,000)	(510,000)	(480,200)	(148,604)	(129,504)	(120,061)	(109,828)	(73,578)	(60,695)	(46,838)	(2,179,308)
Software Rent/Lease (ED)		0	0	0	0	0	0	0	0	0	0	0
Software Maintenance & Upgrade (EE)		0	0	63,800	322,190	338,300	355,214	372,975	391,624	411,205	431,765	2,687,074
DP Goods/Services (EL)		0	120,000	200,000	494,000	518,700	544,635	571,867	600,460	630,483	662,007	4,342,152
Goods/Services Not Listed (E)		0	422,400	422,400	0	0	0	0	0	0	0	844,800
Travel (G)		0	0	0	0	0	0	0	0	0	0	0
Hardware Purchase Capitalized (JC)		0	200,000	1,700,000	0	0	0	800,000	0	0	0	2,700,000
Software Purchase Capitalized (JC)		0	290,000	1,160,000	0	0	0	0	0	0	0	1,450,000
Hardware Purchase - Non. Cap (KA)		0	0	0	0	0	0	0	0	0	0	0
Software Purchase - Non. Cap (KA)		0	0	0	0	0	0	0	0	0	0	0
Hardware Lease/Purchase (P)		0	0	0	0	0	0	0	0	0	0	0
Software Lease/Purchase (P)		0	0	0	0	0	0	0	0	0	0	0
Other (specify) ()		0	180,000	180,000	0	0	0	0	0	0	0	360,000
TOTAL OPERATIONS		(367,396)	6,174,609	11,577,388	1,972,945	1,372,063	1,429,148	2,303,398	1,628,800	1,731,896	1,840,580	29,663,432
TOTAL OUTFLOWS		(367,396)	6,174,609	11,577,388	1,972,945	1,372,063	1,429,148	2,303,398	1,628,800	1,731,896	1,840,580	29,663,432
CUMULATIVE COSTS			5,807,213	17,384,601	19,357,546	20,729,609	22,158,757	24,462,155	26,090,956	27,822,852	29,663,432	

(1) Total Outflows the sum of Fiscal Total Operations and Total Development from Form2.
 (2) Total Outflows carried to Form1

Form 4: Current versus Proposed Method Operations Costs – Alternative 3

Obj. Codes	FY 2010			FY 2011			FY 2012			FY 2013			FY 2014			
	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project (to summary)	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project (to summary)	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project (to summary)	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project (to summary)	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project (to summary)	
	Current	Project		Current	Project		Current	Project		Current	Project		Current	Project		
OPERATIONS COSTS																
Salaries, Wages and Benefits (Implementation and Ongoing Support)	(A)	150,795	283,399	132,604	153,811	3,059,491	2,905,680	156,887	4,786,180	4,629,293	160,025	732,692	572,667	163,225	403,896	240,671
Employee Benefits (Included in Salaries and Wages Above)	(B)	0	0	0	0	0	0	0	0	0	0	732,692	732,692	0	403,896	403,896
Personal Service Contracts (implementation vendor)	(CA)	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0
Communications	(EB)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware Rent/Lease	(ED)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware Maintenance	(EE)	500,000	0	(500,000)	510,000	0	(510,000)	520,200	40,000	(480,200)	530,604	382,000	(148,604)	530,604	401,100	(129,504)
Software Rent/Lease	(ED)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Software Maintenance & Upgrade (ongoing licensing)	(EE)	0	0	0	0	0	0	0	63,800	63,800	0	322,190	322,190	0	338,300	338,300
DIS Goods/Services -- Centralized Data Processing Costs	(EL)	0	0	0	0	120,000	120,000	0	200,000	200,000	0	494,000	494,000	0	518,700	518,700
Goods/Services Not Listed (prog mgmt)	(E)	0	0	0	0	422,400	422,400	0	422,400	422,400	0	0	0	0	0	0
Travel	(G)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware Purchase Capitalized	(JC)	0	0	0	0	200,000	200,000	0	0	1,700,000	0	0	0	0	0	0
Software Purchase Capitalized (s/w acquisition)	(JC)	0	0	0	0	290,000	290,000	0	0	1,160,000	0	0	0	0	0	0
Hardware Purchase - Non. Cap	(KA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Software Purchase - Non. Cap	(KA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware Lease/Purchase	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Software Lease/Purchase	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other (specify) (Training Facility)	()	0	0	0	0	180,000	180,000	0	180,000	180,000	0	0	0	0	0	0
TOTAL OPERATION COSTS		650,795	283,399	(367,396)	663,811	6,838,420	6,174,609	677,087	12,254,475	11,577,388	690,629	2,663,574	1,972,945	693,829	2,065,892	1,372,063
FTE'S				0			0			0			0			0

Form 4: Current versus Proposed Method Operations Costs – Alternative 3 (Continued)

Obj. Codes		FY 2015			FY 2016			FY 2017			FY 2018			FY 2019		
		(a)	(b)	(c) = (b)-(a) Incremental Effect of Project	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project	(a)	(b)	(c) = (b)-(a) Incremental Effect of Project
		Current	Project	(to summary)												
OPERATIONS COSTS																
	(A)	166,490	407,925	241,435	169,820	419,102	249,282	169,820	440,057	270,237	173,216	462,060	288,844	176,680	485,163	308,482
	(B)	0	407,925	407,925	0	419,102	419,102	0	440,057	440,057	0	462,060	462,060	0	485,163	485,163
	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(EB)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ED)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(EE)	541,216	421,155	(120,061)	552,040	442,213	(109,828)	552,040	478,463	(73,578)	563,081	502,386	(60,695)	574,343	527,505	(46,838)
	(ED)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(EE)	0	355,214	355,214	0	372,975	372,975	0	391,624	391,624	0	411,205	411,205	0	431,765	431,765
	(EL)	0	544,635	544,635	0	571,867	571,867	0	600,460	600,460	0	630,483	630,483	0	662,007	662,007
	(E)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(G)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(JC)	0	0	0	0	800,000	800,000	0	0	0	0	0	0	0	0	0
	(JC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(KA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(KA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	()	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATION COSTS		707,706	2,136,854	1,429,148	721,860	3,025,258	2,303,398	721,860	2,350,660	1,628,800	736,297	2,468,193	1,731,896	751,023	2,591,603	1,840,580
FTE'S				0			0			0			0			0

(1) FY Column (c) for each Cost Code carried to Form3

Form 5: Benefits Cash Flow Analysis – Alternative 3

TANGIBLE BENEFITS	OFM Object Codes	BENEFITS										TOTAL
		FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	
Hard \$												
Revenues (specify)	(revenue codes)	0	0	0	0	0	0	0	0	0	0	0
Reimbursements (specify)	(object codes)	0	0	0	0	0	0	0	0	0	0	0
Cost Reduction (specify) (1)	(object codes)	0	0	0	0	0	0	0	0	0	0	0
WSDOT: TLLD part of savings from decommission of WSDOT mainframe		0	0	0	102,000	104,040	530,604	541,216	552,040	563,081	574,343	2,967,325
Soft \$												
Cost Avoidance (specify)	(object codes)	0	0	0	0	0	0	0	0	0	0	0
WSDOT Timekeeping Staff - Time Savings		0	0	0	95,625	195,075	198,977	202,956	207,015	211,155	215,379	1,326,182
DNR Timekeeping Staff - Time Savings		0	0	0	31,875	65,025	66,326	67,652	69,005	70,385	71,793	442,061
WSDOT: Redirection of DNR timekeeping staff		0	0	0	66,300	135,252	137,957	140,716	143,531	146,401	149,329	919,486
DNR: Redirection of DNR timekeeping staff performing reconciliations, etc.		0	0	0	16,575	33,813	34,489	35,179	35,883	36,600	37,332	229,871
WSDOT: Redirection of IT resources		0	0	0	61,524	125,510	128,020	130,580	133,192	135,856	138,573	853,255
DNR: Redirection of IT resources		0	0	0	15,381	31,377	32,005	32,645	33,298	33,964	34,643	213,314
TOTAL INFLOWS		0	0	0	389,280	690,092	1,128,377	1,150,945	1,173,964	1,197,443	1,221,392	6,951,493
CUMULATIVE BENEFITS			0	0	389,280	1,079,373	2,207,750	3,358,694	4,532,658	5,730,101	6,951,493	

(1) Reflect all Cost Reduction Benefits except Operations reductions (which are reflected in Cost of Operations).

(2) Total Inflows carries to Form1



Time, Leave, and Labor Distribution
Feasibility Study

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