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System Modernization Study

Business Case Analysis

Presented by:

Information Services Group, Inc.
Public Sector

January 12, 2015



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January 12, 2015

Office of the State Controller
700 W. State Street
P.O. Box 83720
Boise, Idaho 83720-0011

Dear Controller Woolf:

Information Services Group (ISG) Public Sector is pleased to submit our report documenting the results of our Business Case Analysis for the System Modernization Study sponsored by your office. We believe the report indicates substantial justification of the need to modernize the central administrative systems of the State of Idaho (State).

It has been our pleasure to work with the management and staff within the State Controller's Office and from a cross-section of other State agencies. We are grateful for the time and effort that State personnel have invested in this process.

We greatly appreciate having had the opportunity to assist the State with this important study and look forward to being of further assistance as you explore the State's next steps for addressing future systems needs. Should you have any questions or comments regarding our report, please do not hesitate to contact me by e-mail at Nathan.Frey@isg-one.com or phone at (512) 970-0745.

Sincerely,

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Executive Overview

1.1 Background

In September 2014, the State Controller's Office (SCO) began a Systems Modernization Study to evaluate the condition of statewide and agency systems supporting the administrative business, financial management, procurement, and HR/Payroll processes of the State of Idaho (State). As part of this study, the SCO engaged Information Services Group (ISG) Public Sector to perform an independent assessment of systems capabilities and assist in the evaluation of alternative solutions to meet the current and future systems needs of the State. This Business Case Analysis (BCA) report summarizes the results of ISG's assessment.

The SCO has undertaken an initiative to research upgrading or replacing current State financial and Human Resources (HR) systems. As part of this initiative SCO is considering alternative solutions to determine whether implementation of a new statewide financial and HR/Payroll system (System) would be business justified. While the SCO has no preconceived notions regarding the nature of any eventual replacement system, it was necessary to have a standard against which to identify and estimate system costs, benefits, and risks. For purposes of this study, the State has assumed that the replacement system will be a potential/hypothetical statewide Enterprise Resource Planning (ERP) system. An ERP system is a suite of fully integrated software applications that perform administrative business functions such as accounting, procurement, human resources, and payroll. Such an initiative would not only replace central systems, such as the Statewide Accounting and Reporting System (*STARS*) and the Employee Information System (*EIS*), but also replace a significant number of other central and agency-specific administrative systems. Furthermore, ERP systems typically offer additional functionality that would expand system capabilities beyond what is presently available to a majority of State agencies.

Note that the financial analysis of this study is based on a hypothetical ERP implementation timeline that is very aggressive and optimistic. Successfully implementing a project of this magnitude and complexity in the assumed timeframe will require fully available staffing, no competing projects, sufficient multi-year funding, and strong inter-governmental sponsorship.

1.2 Objectives

The purpose of this BCA is to provide the SCO with quantitative and qualitative analysis to assist in evaluating the need to modernize the State's administrative systems. We considered the following systems as part of our analysis:

- The SCO *STARS* that serves as the State's accounting system of record.
- The SCO's human resources and payroll systems, which are comprised of the *EIS* and *IPOPS*.

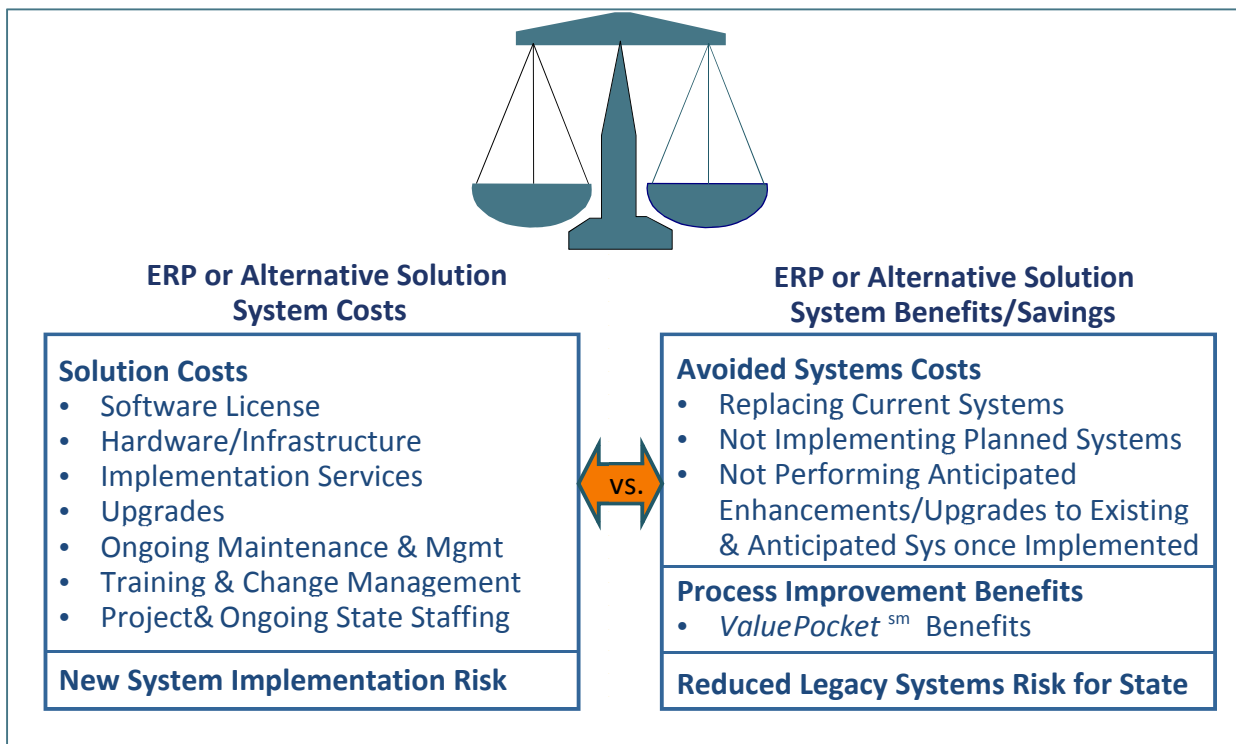
- Approximately 75 agency-specific administrative systems that support key agency business processes and are potential candidates for replacement by a statewide ERP system.

1.3 Project Approach

ISG utilized its proven BCA methodology in performing this analysis. Exhibit 1 depicts the primary components of our methodology. ISG has successfully applied this methodology in 12 other states with similar legacy financial management and HR/Payroll system environments. These states include:

- Arizona
- Kansas
- Louisiana
- Michigan
- Minnesota
- Mississippi
- Tennessee
- Texas
- Virginia
- Washington
- West Virginia
- Wisconsin

Exhibit 1 – Overview of ISG’s Business Case Analysis Approach



ISG’s methodology involves evaluating the estimated costs of implementing and maintaining a new ERP system versus the potential benefits and savings from such an implementation. The potential savings result from eliminating systems costs by: (1) retiring existing systems, and (2) not performing

anticipated systems projects (i.e., upgrading existing systems and/or implementing new systems). The potential benefits follow from realizing improvements in process efficiencies and organizational effectiveness enabled by the enhanced functionality of a new ERP system and greater integration with remaining systems. The methodology is illustrated in Exhibit 2.

Exhibit 2 – ISG’s Business Case Analysis Methodology



ISG used its standard methodology in determining the landscape of the State of Idaho systems, functionalities, gaps, and planned improvements. The enterprise-wide systems, agency systems, and observations documented during agency interviews are delivered within the following pages, as well as financial summaries to move to a new system in the event the State would choose that direction.

1.4 Key Findings

ISG’s analysis of the State’s current Systems environment is based on data gathered from interviews with key stakeholders from 19 participating agencies, which make up approximately 80% of the combined total Operating Budget and 70% of the combined FTEs of the State, excluding colleges and universities. Based on our interviews with key stakeholders, survey responses, and other BCA activities, we identified key findings in the areas of financial management, procurement, and HR/payroll systems. These findings are summarized below.

- Due to limitations in the functionality and flexibility of STARS, many agencies maintain their own internal financial management systems, resulting in redundant data and data entry, duplicate platforms, and additional operating costs; also many agencies build front end systems to avoid SCO transaction fees.
- Many of the State’s current systems are functionally adequate from a statewide perspective but have limited integration, leading to inefficiencies and greater opportunity for error.
- The State’s current systems do not provide support for a number of core agency business requirements (e.g., invoicing and accounts receivable functions).
- To fulfill agency-specific requirements (either programmatic or financial) not met by statewide systems, a number of agency-level supplemental or “shadow” systems have been acquired or

developed, which increases the overall cost to the State to operate its administrative systems environment.

- Decision-makers have difficulty obtaining timely and accurate information. Due to the disparate systems maintaining elements of agency financial and HR/payroll data, the State is unable to achieve a “single source of truth” when providing budgetary and financial reporting. Although SCO has implemented a central data repository called the Idaho Business Intelligence System (IBIS), IBIS is limited to storing data from central systems and often times does not contain agencies’ source (and more detailed transaction data) stored in agency systems.
- The current administrative systems lack flexibility and scalability required to meet changing business requirements.
- In absence of a statewide purchasing system integrated with *STARS*, agencies have their own systems to generate requisitions and purchase orders, to perform budget checking, and to enable receiving and approval processes. This makes it difficult to enforce agencies’ use of statewide negotiated contracts to control “maverick” spend and to track agencies’ spending by commodity and vendor. Disparate systems and disparate data make it impossible to mine the data and establish linkages between commodity codes, vendors, order sizes, pricing, etc., to analyze spend data.

1.5 Alternatives Evaluated

Although numerous alternative solutions are possible to address systems modernization for the State, in considering an analysis of the most likely scenarios, SCO and ISG agreed to limit the scope of the study to provide more clarity to the overall choices facing the State. If needed, additional alternatives could be developed and evaluated as the State’s systems needs are further considered and refined by State leadership. The scope of this study was to evaluate two alternatives:

- **Alternative 1 – Status Quo (maintain the State’s existing systems)**

We based this alternative on the assumption that the State will remain on its current path by the continued use of *STARS* and *EIS/I-TIME/IPOPS*, and agencies continue their efforts to acquire, develop, and use a number of subsystems or “shadow” systems to support administrative operations. Under Alternative 1, SCO would: continue incremental enhancements of front end web development; implement a true accounts receivables capability; add table maintenance for web system tables; enhance the error correction process; implement a unified log-in process; replace FAS with a 3rd party asset management product; and continue ongoing work to expand browser compatibility, as well as expanding compatibility to other types of devices. This alternative uses FY 2015 as the basis for estimating system costs that represent maintaining the status quo.

Alternative 1 serves as a baseline against which to perform an analysis of the full ERP alternative.

This alternative carries forward the limitations and risks described in the previous section.

▪ **Alternative 2 – Implement Full ERP**

This alternative is based on the assumption that the State will acquire and implement statewide a modern ERP system that encompasses a suite of fully integrated financial management, purchasing, and HR/Payroll software modules to perform administrative business functions (i.e., financial accounting/reporting, grants management, HR/payroll, etc.). Notably, Alternative 2 also includes budget preparation and data warehouse/business intelligence capabilities. For this study, avoided costs associated with replacement of the status quo and the benefits associated with implementation of the new ERP system (Alternative 2) are based upon estimated costs and potential savings as of FY 2015.

The following are key, high-level assumptions pertaining to Alternative 2 upon which this BCA was based.

Functional Scope of Alternative 2

ERP systems are comprised of major functional groupings (modules) that address the major administrative functions within state government. Appendix A, *Elements of a Modern ERP*, provides a description of modules required to address the agreed-to scope of functionality included in this study. Additionally, certain features, such as automated workflow and electronic approvals, security, reporting, business intelligence, and data warehousing, cross all functional modules. A typical statewide ERP system does not replace programmatic systems, such as tax revenue management or Medicaid management information systems.

A key assumption of this analysis is that the existing statewide and agency legacy applications used to support financial management, purchasing, and HR/Payroll functions throughout the State (excluding financial management for ITD), would be replaced with the new ERP system. The ERP system would be interfaced with agency programmatic systems whose functionality is specialized and cannot be feasibly replicated in an ERP system.

Proposed Implementation Phasing for Alternative 2

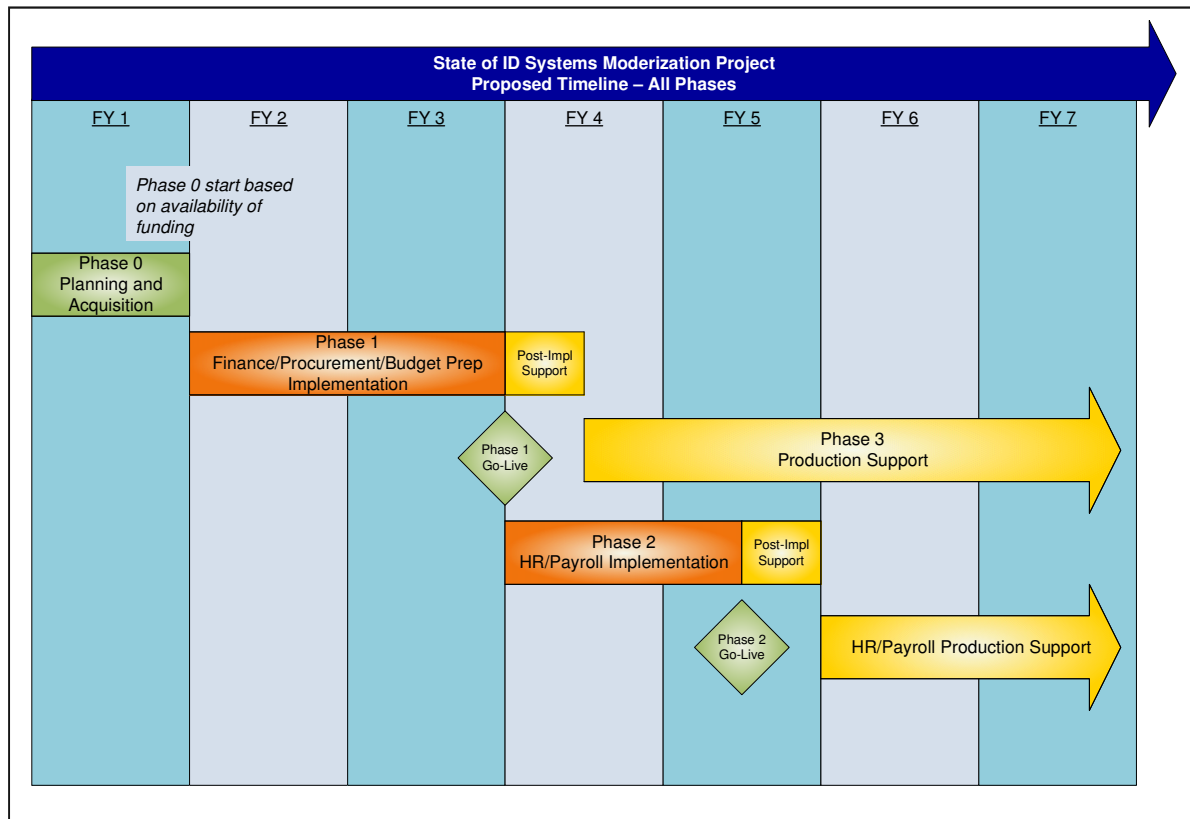
The timeframe for implementation of Alternative 2 is illustrated in Exhibit 3. This is a hypothetical timeline with implementation beginning after funding becomes available.

Alternative 2 assumes a 12-month preparation phase for planning and executing a formal acquisition process. As part of the planning phase, it is recommended that the State take advantage of the year preceding implementation by accomplishing specific “readiness” activities such as documenting “as-is” business processes, performing in-depth analysis of agency interfacing systems and special requirements, defining Federal/State statutory and regulatory requirements, documenting reporting requirements, identifying/recruiting/training team members, and other pre-implementation activities that our experience has shown to decrease implementation time, cost, and risk.

Financial and Other Impacts of Each Alternative

Based on ISG’s analysis from a financial perspective, the State could potentially realize a reasonable return on an investment in the acquisition, implementation, and operation of a statewide ERP system. However in our opinion, the intangible benefits (as presented below) provide the greatest benefits to the State.

Exhibit 3 – Alternative 2 Implementation Phasing and Timeline



As shown in Exhibit 4, ISG estimates that the cost to acquire and implement a statewide ERP system to be approximately \$102.7 million. On-going operational costs would be approximately \$97.5 million over ten years. These ERP costs would be offset by \$98.5 in Avoided Systems Costs plus \$113.4 million in Process-Improvement Benefits/Savings, resulting in a Net Benefit of \$11.7 million (refer to the “Total” column in the Exhibit 4).

As shown in Exhibit 4, ISG estimates that the investment would reach the payback point in the 9th year following the Phase 2 go-live (Yr. 13).

Based on the estimated values in Exhibit 4, the investment in an ERP system has a negative Net Present Value (NPV) during the planning period. We estimated that the investment would achieve a positive NPV in Yr. 15 at a discount rate of 4% per annum and in Yr. 17 at a discount rate of 6% per annum.

Exhibit 4 – Schedule of Estimated Net Costs and Benefits/Savings from Implementing ERP

(\$ millions)

Cost and Benefit Categories	Plan & Acquire	Financials & Procurement		HR/Payroll		Production Support									Total
	Fiscal Years														
	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	
ERP Costs															
Pre-Implementation / Implementation	(1.11)	(26.35)	(29.49)	(26.30)	(19.43)	-	-	-	-	-	-	-	-	-	(102.7)
Ongoing Operations	-	-	-	(3.57)	(5.66)	(7.81)	(8.60)	(15.44)	(8.34)	(8.55)	(9.59)	(9.78)	(9.98)	(10.18)	(97.5)
Total ERP Costs	(1.1)	(26.3)	(29.5)	(29.9)	(25.1)	(7.8)	(8.6)	(15.4)	(8.3)	(8.6)	(9.6)	(9.8)	(10.0)	(10.2)	(200.2)
Benefits															
Avoided System Costs	-	-	-	3.4	4.7	8.2	9.5	9.8	10.0	10.2	10.4	10.6	10.8	11.0	98.5
Process Improvement (effort-based)	-	-	-	-	1.5	4.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	6.0	50.1
Process Improvement (metric-based)	-	-	-	-	3.3	7.1	6.2	6.3	6.4	6.5	6.7	6.8	6.9	7.1	63.3
Total Benefits	-	-	-	3.4	9.5	19.4	20.9	21.3	21.8	22.2	22.7	23.1	23.6	24.0	211.9
Net (ERP Costs vs. Total Benefits)	(1.1)	(26.3)	(29.5)	(26.5)	(15.6)	11.6	12.3	5.9	13.4	13.7	13.1	13.3	13.6	13.9	11.7
Cumulative Net	(1.1)	(27.5)	(56.9)	(83.4)	(99.0)	(87.4)	(75.1)	(69.2)	(55.8)	(42.2)	(29.1)	(15.8)	(2.2)	11.7	
Payback Year	-	-	-												11.7
NPV of Net@ 4% per annum	(1.1)	(26.4)	(53.7)	(77.2)	(90.6)	(81.0)	(71.3)	(66.9)	(57.0)	(47.4)	(38.6)	(30.0)	(21.5)	(13.1)	
NPV of Net@ 6% per annum	(1.1)	(26.0)	(52.2)	(74.4)	(86.8)	(78.1)	(69.5)	(65.5)	(57.1)	(49.0)	(41.7)	(34.7)	(28.0)	(21.5)	
IRR (if > 0)															1.6%

Please note that the totals in the schedule above may reflect variances due to rounding.

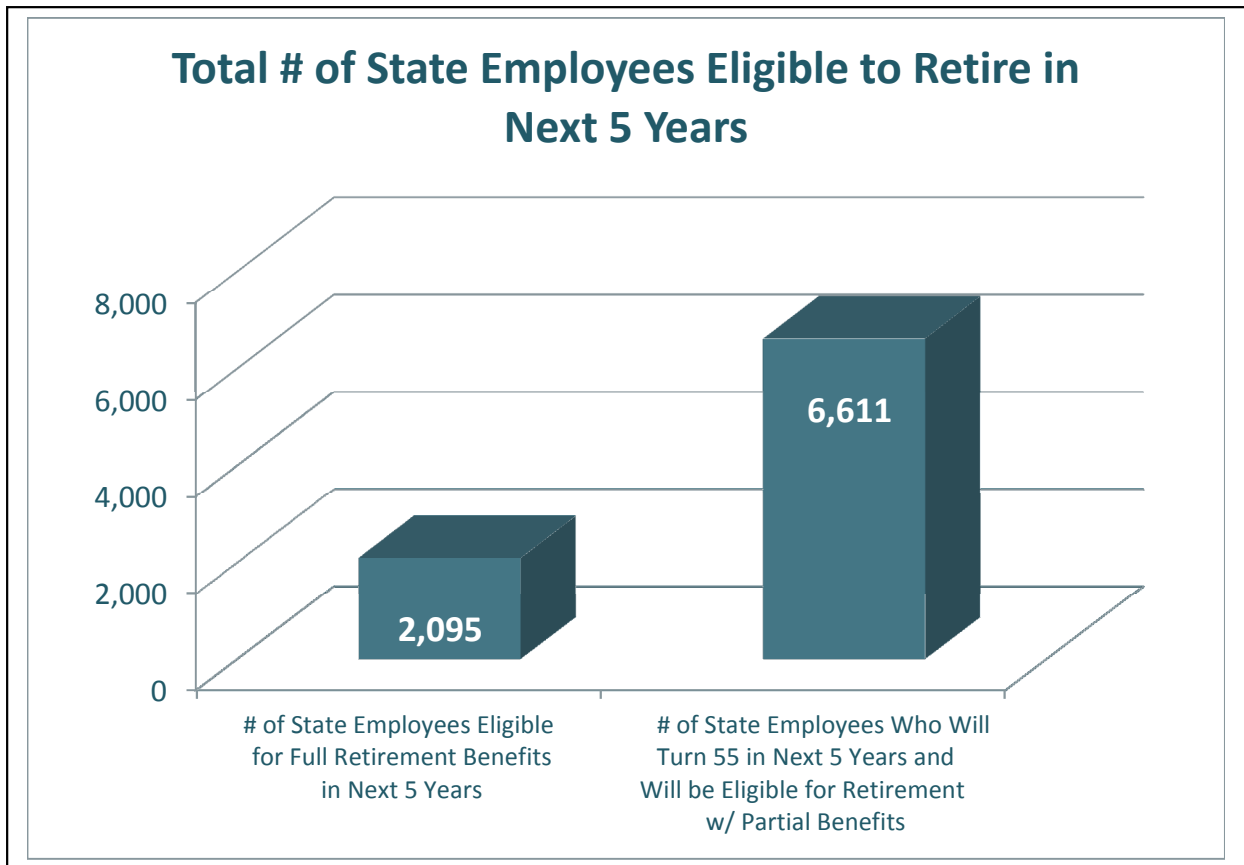
Intangible Benefits Associated with Alternative 2

Other impacts and benefits of Alternative 2 are characterized by mitigating the limitations and risks described above and realizing the intangible benefits described below. Key intangible benefits of Alternative 2 include the following:

- Enhance data consistency and information gathering and reporting capabilities (i.e., single source of truth).
- Increase financial control through improved security, role-based segregation of duties, and configurable workflow and approvals.
- Achieve business process standardization to enable the enterprise-wide implementation of industry and Idaho best practices.
- Reduce training costs and enable a more flexible and mobile workforce.
- Enable a more flexible and configurable system to meet changing statutory, business, and regulatory requirements.
- Reduce technology risk by shifting to vendor-supported and upgradeable software.
- Improve the ability to interface/integrate with new technology and applications.
- Increase accountability, management, and tracking of State assets.
- Repurpose IT resources in programmatic agencies to focus on mission-critical systems rather than on implementing and supporting supplemental administrative systems.
- Address loss of institutional knowledge due to pending attrition in the State workforce through increased automation of business processes.
- Provide LSO better data and information to support Legislative policy and audit responsibilities.
- Leverage technology to improve overall performance and image of State government.

Finally, although not quantified in the financial analysis above, as shown in Exhibit 5, data from the Division of Statewide Payroll indicates that within the next five (5) years over 8,700 State employees will be eligible for some form of retirement – approximately 45% of the State’s workforce. Alternative 2 could negate the need to replace some percentage of these pending retirees due to increased operational efficiencies and fewer central and agency administrative systems to maintain.

Exhibit 5 – Pending and Potential Number of State Retirees over Next Five Years



1.6 Recommendations

Recommended Alternative

ISG recommends that the State select Alternative 2 to replace STARS and EIS with a fully integrated, commercial off-the-shelf ERP system to address current and future statewide and user agency administrative business needs. ISG recommends an ERP solution because it would:

- Enable the State to potentially realize a reasonable Return on Investment (ROI) in the acquisition, implementation, and operation of a statewide ERP system (see Exhibit 4);
- Significantly reduce (and in some cases eliminate) future funding requests for agency-specific administrative systems;
- Increase the efficiency and effectiveness of administrative processes via the ERP’s enhanced functionality and integration;
- Enable the generation of more accurate, consistent, accessible, timely, and useful/meaningful information since all transaction data would be in a central database that is updated in real-time (or near real-time), as well as in a central data warehouse linked to powerful query and reporting tools;

- Reduce technology risk. Aging systems and old technologies expose the State to material risk. Some technologies are becoming obsolete, and it will become increasingly difficult to find technical staff to maintain these systems;
- Enable the State to move to upgradeable, vendor-supported commercial off-the-shelf (COTS) software;
- Enable faster system changes needed to meet new business requirements and maintain compliance with changing laws, regulations, and industry standards;
- Improve financial controls through more efficient security administration, role-based segregation of duties, and configurable approval rules;
- Enforce agencies' use of statewide negotiated contracts to control "maverick" spend and track agencies' spending by commodity and vendor to enable mining the data to analyze spend data.
- Provide for better tracking of the State's assets and, thereby, help agencies and the Legislature plan investments by identifying replacement costs and schedules;
- Address performance, design, security, chart of accounts, and user interface limitations from the design and technology set used for STARS that prevent the State from meeting key accounting, budgeting, transparency, reporting, and other objectives and policies;
- Enable programmatic agencies to utilize their IT resources on mission-critical systems rather than on supplemental administrative systems; and
- Help to address the pending attrition in the State workforce due to retirements.

Furthermore, ISG makes these additional recommendations to align the State's ERP implementation strategy with the details of our business case analysis:

- Department of Health and Welfare should retire its FISCAL system and other administrative systems (within scope of the new ERP system) and replace them with the new statewide ERP system;
- Leverage new ERP functionality to replace the approximately 75 agency-specific systems within scope of the new ERP system;
- ITD should remain on its current financial system during implementation of the new statewide ERP system. The State should reevaluate transition of ITD to the statewide system after replacement of STARS;
- Continue current mainframe migration efforts to reduce the operating cost of current systems and reliance on dated mainframe technology; and
- Initiate statewide procurement standardization to improve data available for "spend analysis" and increase leverage in negotiations for goods and services.

Exhibits 6a and 6b depict high-level systems diagrams of the current environment (Alternative 1) and the potential for a consolidated ERP environment (Alternative 2), respectively. Many of the benefits listed above flow from the more comprehensive, integrated, and simplified environment of Alternative 2.

Exhibit 6a – High-level Depiction of Alternative 1 – Status Quo

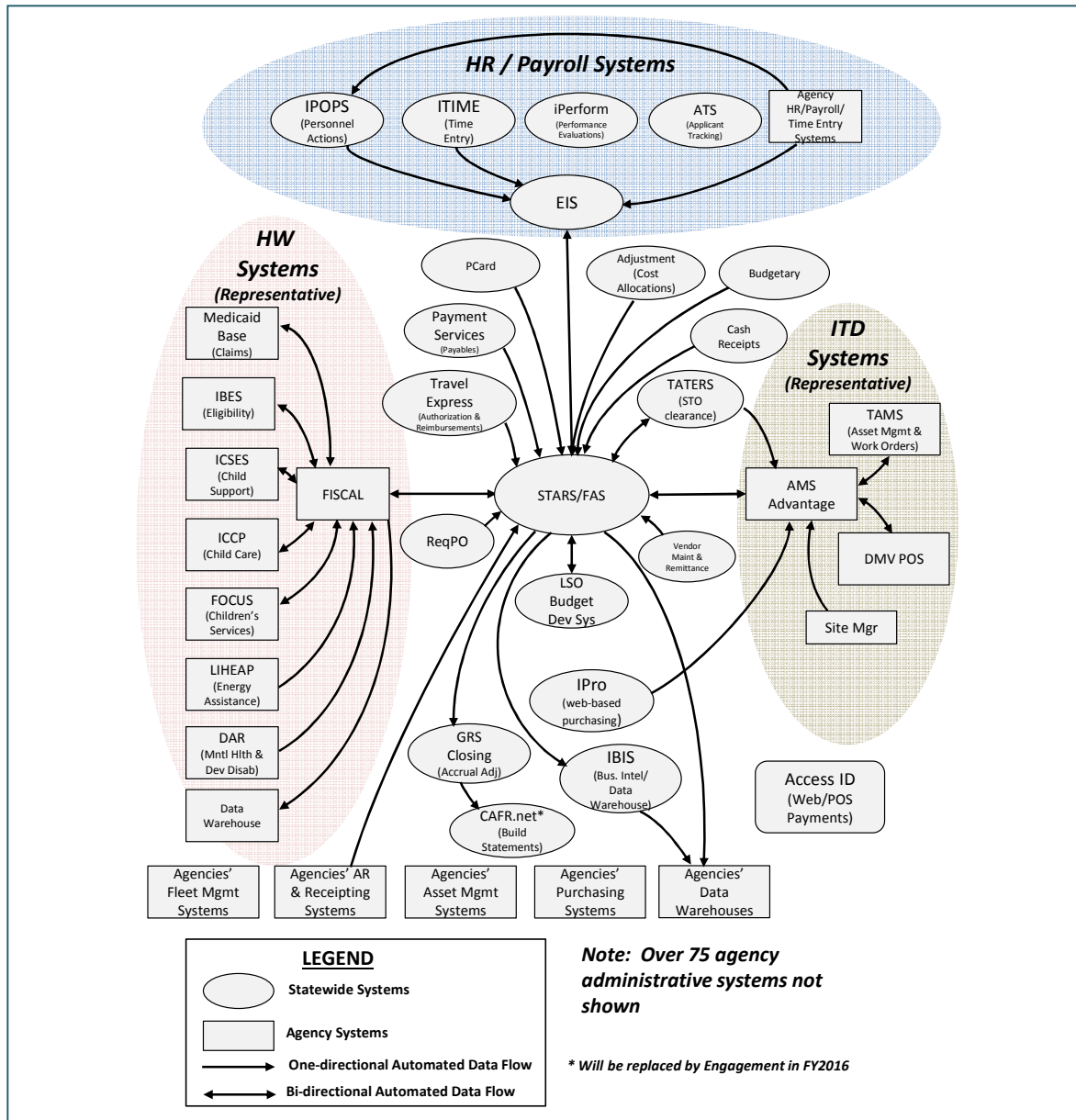
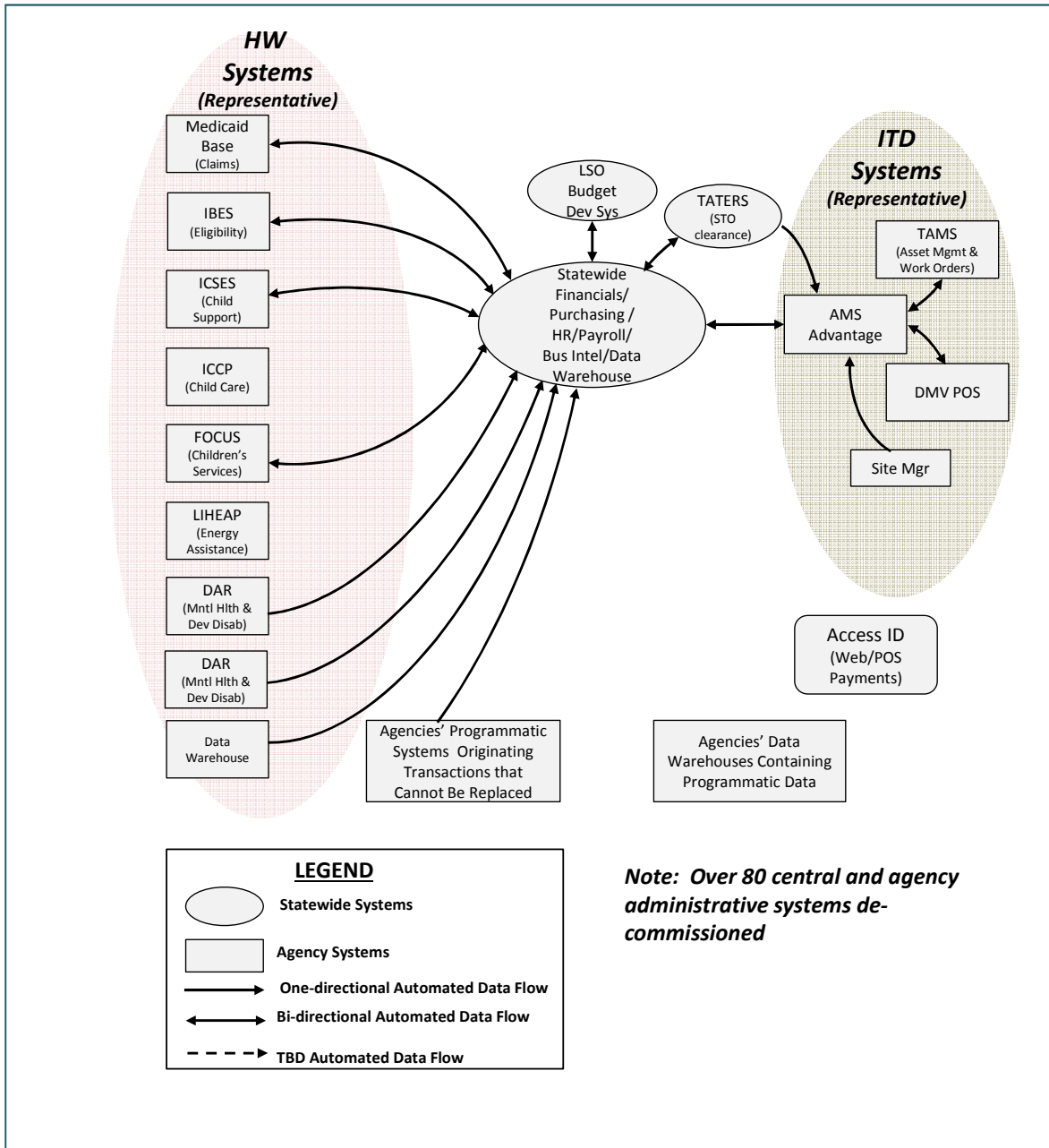


Exhibit 6b – High-level Depiction of Alternative 2 – Implement New ERP System



1.7 Other Alternatives

One alternative is to upgrade or enhance the current *STARS* and *EIS/I-TIME/IPOPS* systems. During our interviews, agency users of central systems have consistently stated the need for compatibility with modern versions of browsers, improved workflow, and more granularity in transaction data. However, these legacy systems are based on dated technology and it would not be feasible to enhance them to provide the level of functionality and integration available in a modern ERP system. This assertion is supported by the fact that no other state has pursued that strategy and, instead, has replaced its financial management and human resource systems with a modern ERP system.

Another alternative is the in-house development of a new fully integrated, Web-based ERP application that will meet the State's functional and technical system requirements including transparency. However, due to the numerous risks associated with a project of this magnitude and the ongoing costs associated with maintaining and enhancing the system for future use, custom development of a new fully integrated statewide system is not considered a feasible alternative.

Also, even with upgrades or enhancements to the current *STARS* and *EIS/I-TIME/IPOPS* systems or in-house development of a new ERP, objectives cannot be met without all agencies using a standardized coding block (i.e., to categorize information used in expenditures, revenue transactions). This would involve a significant effort and impact processes, procedures, and other legacy systems.

It is a question of *when* the State should move to an ERP system and not *if* it should move to an ERP system. Maintenance of the current systems will become increasingly difficult for several reasons: (1) vendor support of older systems eventually cuts off or becomes exorbitantly expensive due to the fact that programmers to support older applications and their programming languages are rare and can essentially write their own rates; and (2) some applications cannot be modified because their compilation engines are no longer compatible with current hardware or operating system environments (which have their life cycles) and will simply not work. Left alone, the central fiscal and administrative systems may last quite some time; however, elements of data, networking, operating system, and hardware introduce new factors and points of failure that were not anticipated during creation of these legacy applications, and could cause them fail, without an immediate fix available. In addition, State IT support staff that understands these systems may be nearing retirement or may have already left government service.

1.8 Considerations for Moving Forward with an ERP Implementation

The statewide implementation of the financial management, purchasing, and HR/Payroll functionalities of an ERP system is a significant undertaking. It is recommended that the State establish minimum requirements for the software and systems integrator. Minimum software requirements should include only systems that cover the breadth of necessary functionality and have been satisfactorily implemented and are successfully operating in other states. Minimum system integrator qualifications would be a vendor that has successfully implemented the selected software package in a statewide project in the past three years.

Although the Idaho Transportation Department (ITD) has licensed and successfully uses the CGI *Advantage* ERP financial and HR/Payroll products, investment in a statewide ERP is a "once in a generation" endeavor. The State should carefully evaluate all candidate Tier 1 products in the market

and the merits of each to meet the enterprise needs of the State. Also, if the State does consider leveraging the ITD solution, we recommend the State perform an analysis to better understand how ITD has configured the system (e.g., project-centric and chart of accounts definitions), as some of the cornerstone implementation decisions made by ITD may not be ideal for the State as a whole.

Project preparation and planning is an essential first step to successfully acquiring and implementing a new ERP system. As with any large, enterprise-wide project, an established, detailed, and methodical approach should be taken to increase the likelihood of project success. This includes rigorous change management and scope control.

Pre-implementation activities that prepare the State for a large ERP project are a sound investment. Such activities should be undertaken approximately one year prior to beginning implementation. Pre-implementation activities may include but are not limited to:

- Documenting central and key agency “as-is” business process;
- Reviewing how different agencies use *STARS* account coding and developing a model chart of accounts;
- Understanding which agencies’ programmatic systems (and what types of transactions) will interface with the new system and assessing the impact on agencies’ business systems and IT operations;
- Performing more in-depth analysis of the feasibility of de-commissioning certain additional agency systems, as this could not be ascertained during our brief, high-level interactions with these agencies;
- Assessing the current *STARS* vendor file and developing a data validation and consolidation plan for vendor data;
- Identifying and documenting business, statutory, and regulatory reporting requirements for core business, control, departmental, and self-service;
- Establishing what interim IT investments will be made for central systems and agency systems before a new statewide ERP is in production;
- Establishing a Project Management Office and infrastructure; and
- Recruiting and building the State’s internal project team.

Finally, an Executive Sponsor team should be established during the planning phase to provide leadership across State-government political boundaries, to address overarching decisions, to establish critical success factors, and to help recruit the State’s internal project team. A Steering Committee composed of key agencies, agencies representing all branches of State government, and a small agency advocate should be formally chartered to guide project direction.

Based on the results of this analysis and our experience providing project management and project oversight services to other states that have successfully implemented ERP systems statewide, ISG has provided a number of recommendations for the State to consider when making future plans regarding the implementation of an ERP system. Those recommendations are presented in Appendix B, *Recommendations for Moving Forward with an ERP Solution*.

2.0 Evaluation of Existing Administrative Systems

Note: Please refer to the *Executive Summary* for Background Information, Study Objectives, and an overview of our Methodology.

The purpose of this phase of our methodology is to obtain a high-level understanding of the State's various financial management systems within the scope of this BCA (e.g., *STARS*, *EIS/I-TIME/IPOPS* and certain agency-specific financial management systems), including their strengths and weaknesses, functionality being provided by each system, functionality not being provided, potential process-improvement opportunities, and the degree of interfacing/integration across the various systems. The purpose of this phase also includes identifying, preliminarily, agency-specific systems that could be retired or replaced by implementation of an ERP system, as well as quantifiable and intangible process-improvement benefits, and risks associated with the legacy systems.

This portion of the report provides a brief description of the existing statewide administrative systems, an overall analysis of the capabilities of those systems, and an overview of agency systems potentially within the scope of an ERP implementation.

Review of the State's current administrative systems environment included *STARS*, *EIS/I-TIME/IPOPS*, and more than 100 systems in use at the 19 State agencies participating in the scope of this BCA. Of the systems we reviewed, approximately 75 systems were identified as candidates for replacement by an ERP system. A listing of these systems can be found in Appendix C, *Inventory of Candidate Systems for Replacement*. Note that it is likely that a number of additional administrative systems would be replacement candidates at agencies not included in the study. Also note that the scope of this BCA does not include agency programmatic systems, such as tax collection systems and Medicaid Management Information Systems.

The following sections address the capabilities, limitations, and risks in areas of financial management, purchasing, and HR/payroll systems.

2.1 Statewide Fiscal Administrative Systems: Capabilities, Limitations and Risks

STARS is a comprehensive statewide financial management and accounting information system. The system was purchased in 1988 and implemented in FY90 – FY94 and was designed to comply with Generally Accepted Accounting Principles (GAAP). *STARS* includes basic accounting requirements, such as budgetary and general ledger accounting. Beyond these functions, *STARS* offers the following capabilities:

- **Appropriation Accounting** – encompasses recording and controlling, and provides for appropriation allotments to control spending on a quarterly or monthly basis. Profiles are maintained by the SCO to ensure that proper controls are in place at all times. *STARS* supports reporting of appropriations passed by the Legislature and any unexpended appropriation authorized to be carried over to a new appropriation year.

- **Expenditure Budgeting** – allows agencies to establish an internal operating budget to record, control, and report expenditures at more granular levels than the appropriation level. In addition, agencies can use budget allotments to control quarterly or monthly spending.
- **Revenue Budgeting** – allows agencies to measure revenues by comparing the revenue figures to the estimated revenue without the controlling aspects provided by Expenditure Budgeting.
- **Grant/Project Accounting** – allows agencies to monitor and control their expenditures against a grant or project.
- **Reporting and Inquiry** – provides reporting and management information through *IBIS*. Staff with limited programming knowledge can use the data query tools for complex and non-complex reports in basic formats. Staff with greater programming knowledge can also use *IBIS* for ad hoc reporting.

However, this functionality is relatively limited as compared to the robust functionality of a modern ERP system.

STARS lacks key functionality. For example:

- *STARS* does not have an accounts receivable module. Therefore, agencies have implemented numerous accounts receivable and billing systems. This has led to a decentralized accounts receivable functions across the State, which require a manual, year-end compilation and closing process to record accounts receivable for financial reporting purposes.
- Although all agencies enter capital asset information into *STARS*, the data available to effectively manage the assets is limited. Several agencies operate their own fixed asset systems to manage their capital and non-capital assets.
- In numerous agency interviews, the limited reporting available from central systems was a commonly cited issue. Several agencies have tried to work around this limitation by creating their own financial data warehouses that supplement *STARS* data with data from their own internal agency systems.

STARS includes a nightly batch process that either generates or records all payments made by the State of Idaho. Due to the volume of payments, batch processing is the optimal method to perform payment processing. During the batch cycle payments are consolidated, where appropriate, which reduces the number of warrants printed and the number of EFTs transmitted.

STARS is based on dated technology and lacks the flexibility that would make it feasible to enhance the software to provide the level of functional support available in a modern ERP system. This assertion is further supported by the fact that no other states have pursued a broad legacy system enhancement strategy but rather, have replaced their financial management system with a modern ERP system.

Within the limitations of the existing *STARS* architecture, over the past 15 years, the State has done an admirable job in making material enhancements to *STARS*. These enhancements were intended to make *STARS* “invisible” to most agency staff by providing a Web-based user interface and some enhanced capabilities to improve the usability of *STARS*. These enhancements have included:

- *Travel Express* in 2000 – an application for employees to make travel requests and to file and receive reimbursement for travel expenditures;
- PCard in 2001 – an application for agencies to approve and reconcile PCard expenditures to statements;

- Payment Services in 2006 – an application for agencies to enter and approve payables through a web front end;
- ReqPO in 2008 – an application for agencies to generate requisitions and purchase orders;
- Cash Receipts in 2008 – an application for agencies to record payments for fees, permits, and other sources of revenue collected from the public;
- Adjustments in 2008 – an application for agencies to enter transaction adjustments; and
- Budgetary in 2010 – an application to enable agencies to upload budgets to STARS; budgetary transactions are entered and electronically routed for various approvals and then interfaced to STARS.

While these enhancements did not address a number of the underlying deficiencies, the State should be commended for implementing these enhancements. For a relatively small investment, STARS was enabled with a more modern user interface and additional capabilities, and its effective life was extended.

Even with these enhancements, agency interviews offered examples of additional deficiencies that could not be readily addressed within State's legacy environment. These examples included: loss of data when the system goes down, occasional slow processing times, timing out, browser incompatibility, limitations on the number of cash receipt lines per transaction, lack of robust edits, and limitations on approvals of certain batch transactions.

Even with upgrades or enhancements to the current STARS system, central oversight objectives (e.g., easily accessible financial information in a consistent format and in sufficient detail) cannot be met without a standardized coding block (i.e. chart of accounts) used consistently by all State agencies. In order to work within the limitations of STARS and to meet their information needs, agencies adapted the PCA and index coding blocks for their specific needs, resulting in a lack of consistent agency data on a statewide basis. Agencies have been creative in defining a multitude of "intelligent codes" which enable the agencies to work around the limited number of characters and transaction data fields that are available. Modifying these coding blocks is infeasible as it would involve a significant effort affecting processes, procedures, data, and other legacy systems.

In summary, STARS, and the applications deployed over the past 15 years to supplement STARS, provide a stable, but less-than-ideal, statewide financial management system. Relative to a modern financial management system, STARS limits central and programmatic agencies' ability to: (1) improve administrative efficiencies, (2) support management decision making, and (3) provide easily accessible and timely data to support external requests.

Fixed Assets System (FAS) is a module of STARS that provides a basic level of integration between STARS accounting functions and fixed asset accounting. FAS is used by most agencies to record capital assets that meet the thresholds established by the State. The FAS module stores basic information about the asset (primarily for accounting purposes). It computes depreciation for use in agency year-end and CAFR reporting. FAS lacks the capabilities to provide agencies with the required information for managing capital assets in areas of asset tracking/assignments, linkage to service contracts, and the ability to store and associate warranty information. FAS has deficiencies that limit agencies' abilities to link assets to federal funding sources. FAS cannot support multiple depreciation schedules needed to meet state and federal reporting requirements.

Idaho Business Intelligence System (IBIS) is the data repository for *STARS* and *EIS/IPOPS/ITIME* transactions. *IBIS* was deployed in 2004 by the SCO. *IBIS* data is accessed via *COGNOS*, a third-party analytics and reporting tool. *IBIS* supports the CAFR development process and is used by agencies to view, download and analyze financial data. Agencies' use of, and satisfaction with, *IBIS* is generally positive. Some agencies' staffs have significant experience and capabilities to query *IBIS* for management information. Others find the system difficult to use and the results of their queries to be unreliable; although this perception may be more related to intermittent use and unfamiliarity with the tool, rather than a true issue with *IBIS*. Several agencies commented that *IBIS* does not adequately support queries for HR/Payroll data and that there are many "disconnects" in the data structures. Agencies noted that it can take up to one week for transactional data to be loaded into *IBIS*. Agencies using ancillary fiscal systems report the need to query *IBIS*, as well as two or three other systems, to obtain information to support management reporting needs. Several agencies remarked that *IBIS* is a "great tool" and a key enhancement to the statewide systems that they use on a daily basis. Some agencies commented that they would like more granular security so that access to data could be granted based on organizational delineations. Other comments included the need for more training opportunities (e.g., refresher courses). Agencies reported that SCO was responsive in addressing support issues and developing agency-requested reports.

Nevertheless, even with these incremental investments, there are inherent limitations in these central fiscal systems. A modern ERP system would address the problems listed below.

Aging Technology

STARS is based on CICS/COBOL technology of 1980s vintage. At that time, client server technologies with graphical user interfaces were gaining favor and represented the bulk of comparable implementations that occurred in the 1990s. Further, *STARS* uses a non-relational database. Because *STARS* is not upgradeable, the core architecture is virtually unchanged since implementation. Technological limitations adversely affect performance and responsiveness to the State's changing environment, reporting, the quality of the user interface (notwithstanding the user interface enhancements described above), and limit the State to manually advancing and tracking work due to the lack of workflow capabilities. In addition, the skills and experience needed to maintain the aging technology set are also diminishing in the marketplace. The state of the existing technology hampers agencies' productivity which adversely impacts their ability to meet their fiduciary responsibilities and programmatic missions. Also, the current state of the technology imparts inherent risk to the State should a key functional element of these systems go down and is not able to be fixed in a timely manner.

Limitations on Accounting Detail

Limitations of the *STARS*' coding blocks (i.e., chart of accounts) have forced agencies to limit the level of detailed information associated with financial transactions interfaced to *STARS*. As a corollary, this has necessitated that agencies implement ancillary systems to record and retain detailed data.

Implementation and ongoing support of these agencies' administrative systems represent additional operational expense and consume internal IT resources that could be better utilized supporting agencies' programmatic systems. In addition, use of agency "shadow systems" and summarization of transactions inhibits the ability to trace transactions back to the source systems, which hinders operational reporting, auditing, and transparency, as well as creating a reconciliation workload.

Limited Functionality

Full Budget Preparation, Project Accounting, Grants Management, Cost Allocation, Cash Reconciliation, Fixed Assets (Capital Assets), and Accounts Receivable functionality was not included in the State's *STARS* implementation. As a result, central and programmatic agencies have developed numerous manual and inefficient processes (e.g., Budget Preparation, Cost Allocation, Bank Reconciliation, Accounts Receivable) and/or have implemented a multitude of agency systems that must interface with *STARS* (or be re-keyed into *STARS*) to process, for example, grant, project, and billing information. These manual processes and agency systems fragment business processes and transaction processing and introduce a host of reporting issues related to different classification schemes, synchronization issues, and posting lags.

Limited Reporting

The extent of manual processing and fragmented agency processing spanning Budget Preparation, Cost Allocation, Project Accounting, Grants Management, and Accounts Receivable/Billing that takes place outside of *STARS* limits the timeliness, reliability, and value of financial reporting that can be generated from *IBIS*, the State's administrative data warehouse (which is updated by *STARS* and *EIS* but not by agency systems). Its current design requires significant time to identify and join tables in a way that allows for easy, integrated reporting. The timeliness and usefulness of *IBIS* reports are hampered by running reports out of cycle; for example, if the bi-weekly payroll process has not run, an *IBIS* report can produce inaccurate results. *IBIS* contains limited HR data (i.e., generic personnel and payroll data). In summary, incomplete and fragmented data constrains agencies' ability to quickly respond to management and Legislative inquiries. The lack of standardized coding blocks further diminishes the State's capability to easily produce statewide reports.

Pending Loss of Institutional Knowledge

In some agencies, senior fiscal and HR employees who are very familiar with how the current fiscal and HR/Payroll systems operate, including the interfaces, intricacies, and work-around processes, are nearing retirement. These individuals may not be available in the future to participate in a project to implement a new system and share their knowledge and expertise, particularly during system implementation when agency policies and tacit knowledge need to be translated into system configurations and to support data conversion.

2.2 Statewide Purchasing Systems: Capabilities, Limitations and Risks

The Department of Administration, Division of Purchasing at any one time oversees approximately 800 contracts with a combined contract value over \$3.3 billion. With the exception of agencies headed by elected officials, all State agency purchases fall under the auspices of the Division and must abide by Division policies. Many agencies have delegated authority of varying thresholds; for example, the Department of Health and Welfare has delegated authority of \$25 million, while smaller agencies have delegated authority of \$25,000, and the Division manages all acquisitions above \$25,000. The Division has a robust procurement staff with experienced buyers who support agencies' purchasing activities. If a State Purchasing Manager signs the contract, then the Division manages the contract; however, in most cases once a contract is awarded, the agency manages and administers the contract.

***IPRO* Web Procurement** is a newly implemented Web-based sourcing system. In July 2014, the Department of Administration, Division of Purchasing implemented a cloud-based procurement product from Perfect Commerce called *WebProcure* (i.e., *IPRO*) that is used by approximately 150 individuals across multiple agencies.

IPRO is a complete public sector eProcurement solution; however, only a limited set of functionality has been deployed. *IPRO* is currently configured to create the solicitation and store related attachments such as sample contracts or specifications. *IPRO* has vendor self-service capabilities. Potential bidders register via self-service, pay a nominal fee and are responsible for updating their company information. Registered bidders are notified of business opportunities (based on the commodity codes). Registered bidders can log into and view the solicitations. Vendors can submit bids electronically. *IPRO* supports real-time Q&A. *IPRO* tracks vendors who have viewed and downloaded solicitations and posted responses.

IPRO does not interface with any State financial systems, so it does not track financial transactions associated with a purchasing agreement. Due to this lack of integration, *IPRO* cannot be used for analyzing spend.

Annual licensing and support costs for *IPRO* are approximately \$200,000. A module for letting service contracts is scheduled to be implemented in Q1 2015.

If the State decides to move forward with acquisition of an ERP system, it is recommended that (as part of the pre-implementation phase) an analysis be performed to determine the advantages and disadvantages of retaining (and interfacing *IPRO* with the ERP system) versus decommissioning *IPRO* and deploying the integrated strategic sourcing and purchasing capabilities of an ERP.

Despite the recent investment in deploying *IPRO*, there are inherent limitations, inefficiencies, and risks associated with the Division's (and agencies') purchasing systems and processes, which are described below.

Multiple and Disparate Purchasing Systems and Processes

In absence of a statewide purchasing system integrated with *STARS*, agencies have developed or purchased and implemented their own systems to generate requisitions and purchase orders, to perform budget checking, and to enable receiving and approval processes. This makes it difficult for the Department of Administration to enforce agencies' use of statewide negotiated contracts to control "maverick" spend and to track agencies' spending by commodity and vendor. Disparate systems and disparate data make it impossible to mine the data and establish linkages between commodity codes, vendors, order sizes, pricing, etc., to analyze spend data as discussed below.

Inability to Perform Comprehensive Analysis of Spend Data

The Division of Purchasing is responsible for efficient expenditure of public funds. To this end, the Division reviews agency practices and analyzes spend data for strategic sourcing opportunities. The Division uses *IBIS* to analyze spend data (at the sub-object level), but given the limitations of *STARS*, spend data cannot be effectively tracked and analyzed. Without: (1) a centrally integrated system which tightly links accounting to purchasing, (2) standardization of coding, (3) consolidation of data, and (4) more central control of the vendor file, the Division will continue to lack the capabilities to more comprehensively analyze spend data to enable the State (and perhaps local governments) to negotiate better contracts at lesser cost and (conservatively) realize several millions of dollars in annual savings.

2.3 Statewide Human Resources / Payroll Systems: Capabilities, Limitations and Risks

The State currently supports a custom-developed employee information, position control, and payroll system called Employee Information System (*EIS*) that is used by the majority of State agencies. Two Web-based front ends to *EIS* have also been developed that allow departments and employees to enter data that is passed through to *EIS*. One is *I-TIME*, a Domino-based application for employee time-sheet entry. The other is the Idaho Paperless Online Personnel/Payroll System (*IPOPS*). *IPOPS* is the State's Web-based front end for *EIS* where users can make changes to positions, employee personnel information, and some payroll actions for processing by *EIS*. Employees can also make some changes to their records using a self-service option in *IPOPS*.

Since several of these systems were developed at different times and use different technologies, there is little integration except through custom-built interfaces. In addition, users often have to use separate logons to access the HR systems. For example, users have one logon for *I-TIME*, *IPOPS*, and *IBIS* and separate logons each for *EIS* and Application Tracking System (*ATS*). Single sign-on capabilities have not been deployed at this time for HR applications.

EIS has been designed to fully meet the needs of the State's position requirements and is fully aligned with budgetary position rules. It meets the needs for tracking and managing positions. It also includes the State payroll system. In addition, the system supports complex Idaho-specific rules for leave entered on the employee time record in *I-TIME*. These include automatic adjustment entries over leave balances that default to Sick, Comp, Hours Held, Vacation, and Leave Without Pay based on the particular leave entry of the employee and his/her associated leave balance.

EIS is limited in its ability to address functionality available in a full-featured Human Resource Management System, including capabilities for discipline, grievances, learning management, employee relations, performance management, talent management, onboarding, off boarding, and succession planning. Absent these capabilities, agencies have been forced to employ manual workarounds, develop internal software solutions, or use third-party products to meet those needs.

The system also has limited search capabilities and no automated routing or notification features. Employee personnel records do not support maintenance of some information such as phone numbers or e-mail addresses. Future-dating capabilities are limited, and group-searching capabilities are unavailable. Benefits administration features are limited.

I-TIME is integrated with *EIS* and can be easily accessed by employees via the state's intranet site. The system supports employee and manager approval functions as well. In addition, employees can submit leave requests through *I-TIME*.

The system is not available on handheld or iOS (Apple) operating system devices, which forces field users to track and submit their time on paper. Nor is it available on a 24-hour basis, limiting access by non-first shift workers. There are no notification capabilities to alert supervisors when employees have completed their timesheets and that the timesheets are ready for approval. Further, once a timesheet is approved, there is no automatic notification back to the employee.

In addition, the system does not support project time tracking at a detailed level, which is a requirement for some agencies. Supervisors are limited to viewing only the recent time record of an employee versus the employee's historical timesheets.

IPOPS is the system that supports the State's position-control requirements for employee data. It is a customized solution that meets the needs of position management and payroll processing. It provides limited query capabilities but has no ability to export data to other systems, such as *Excel*, in order to perform analysis of data, nor are there copy and paste capabilities.

ATS is an internally developed applicant-tracking system that meets the needs of the majority of State agencies for viewing applications. It is also available to the public on the State's website, where external applicants can submit job applications. The system performs automatic scoring of applicants based on State criteria. It does not track full interview documentation, such as interviewer name, time of interview, etc.; nor does it support non-multiple choice exams. It is not integrated with *EIS*. When an applicant is hired and becomes an employee, the onboarding process of *ATS* is all self-contained. A supervisor cannot see at what stage an employee is in the onboarding process. Although some agencies consider *ATS* their recruitment system, as well as their applicant-tracking system, *ATS* does not support recruitment capabilities. Current practices for recruitment include public postings on the Idaho website and participation in job fairs and other public events.

IPERFORM is an internally developed online application that supports a statewide performance management system for State agencies. In addition to the ability to document, create, review, finalize, and retrieve employee evaluation records, supervisors have the ability to document day-to-day performance. It is not used by all agencies, nor does it support personal development goals well. In addition, it requires the use of paper copies for performance-review signatures.

Some of the key limitations, inefficiencies, and risks associated with *EIS* and *IPOPS* are described in detail below. Other potential deficiencies in terms of "missing" functionality are also identified below.

Limited HR Functionality

The HR capabilities within the *EIS* system are very limited and are primarily focused on how it supports payroll processing (position control, benefit deductions, time entry). As a result, many agencies use third-party software products (or paper) to track employee-related information such as learning management, recruitment, performance management, and other related areas.

Limited Reporting

Reporting is limited given that the data warehouse (*IBIS*) is not updated until Payroll is run every two weeks, forcing users to keep track of current pay period information on paper for reference purposes. Also, the extent of fragmented, manual processing in the agencies that takes place outside of *EIS/I-TIME/IPOPS* limits the value of HR reporting that can be produced from within the applications or from *IBIS*; *IBIS* contains limited human resource data outside of generic personnel and payroll data.

Pending Loss of Institutional Knowledge

Similar to the risk identified with *STARS*, in some agencies, senior HR staff, who are very familiar with how the current HR systems operate, including how requirements are embedded in the system and work-around processes, are nearing retirement. These individuals may not be available in the future to participate in a project to implement a new HR system and share their knowledge and expertise, particularly during system implementation when HR requirements and tacit knowledge need to be translated into system configurations and to support data conversion.

Inefficient Onboarding Processes for New Hires

New hire employee onboarding processes include many paper-based forms and instructions both at the employee and manager level. The lack of fully featured employee self-serve and manager self-serve systems that integrate with a full HR package increases the time it takes to bring new employees on board and creates risks for errors associated with paper documents.

Multiple Systems Using HR Data

Agencies' use of paper documents and third-party software products to manage HR data creates a risk of inaccurate information. Relying on paper provides no controls over data entry selections. Third-party systems organize and use HR attributes differently, based on the system, which leads to mismatching of employee information within those systems and *EIS*.

HR Systems Missing Functionality

Within human resources management, there are a number of activities for which the State has no formal systems to support those functions. In some cases, those that perform those activities do so manually. In other cases, the function is not part of the normal business process. Human resource functions that are currently missing or performed manually could be considered candidates in the scope of a future ERP system. The following functions are not supported by formal systems: Discipline, Grievance, Recruitment, Employee Relations, Manager Self-Serve, Performance Management, and Career Planning. The following additional activities are not currently part of general State of Idaho human resources practice but could be considered as an expansion of capabilities as part of a larger ERP initiative: Talent Management, Succession Planning, Compensation Management, Goal Management, and Organization Management.

The next section of this report addresses ways agencies have developed systems and adopted business processes to address the limitations (as described above) in the State's central systems.

2.4 Agency Systems and Observations

In consultation with the SCO, a group of State organizations, herein referred to as the "participating agencies", were identified for inclusion in the scope of our assessment. The participating agencies include the largest State agencies but exclude colleges and universities. The participating agencies comprise approximately 80% of the combined total Operating Budget and 70% of the combined FTEs of the State. The participating organizations are listed below. Key to this study was a review of these agencies' systems and business processes that are reliant on central administrative systems. A summary of ISG's findings regarding each agency's administrative systems (and deficiencies cited with the State's central systems) is included in this study. Additionally, the participating agencies represent the population surveyed for estimation of avoided systems costs and process improvement benefits.

Programmatic Agencies: Narratives of observations regarding administrative systems for each of these agencies are provided in Appendix D, *Agency Observations*.

1. Department of Administration (Division of Financial Services, Division of Human Resources, Division of Public Works)
2. Department of Agriculture
3. Board of Education

4. Department of Corrections
5. Department of Education
6. Department of Environmental Quality
7. Department of Fish and Game
8. Department of Health & Welfare
9. Department of Labor
10. Department of Lands
11. Legislative Services Office – Budget and Policy Analysis Division
12. Legislative Services Office – Audits Division
13. Military Division
14. Bureau of Occupational Licenses
15. Idaho State Police
16. Idaho State Treasurer
17. Idaho Supreme Court
18. Idaho Transportation Department
19. Division of Veteran's Services

In summary, a common theme in the majority of agency interviews was that statewide fiscal, purchasing, and HR/payroll systems do not fully support the business and regulatory requirements of many agencies. Therefore, agencies must implement and maintain ancillary systems to fill the functional gaps between statewide systems and agency business needs. This paradigm leads to the proliferation of agency-specific systems, reconciliation issues, duplication of data and data entry, and the need for agencies to maintain internal staff to support these applications. There is little opportunity to leverage support and infrastructure costs across the State, which likely results in increased ongoing costs for the State as a whole.

As a secondary theme, many agencies cited the “per-transaction” model currently used by the SCO to recover costs for STARS as a financial hardship. For the largest agencies this incentivizes them to create internal processes and systems that summarize transactions prior to sending to STARS versus capturing all transaction detail within STARS.

3.0 Analysis of Alternatives

The purpose of this phase is to identify and define the alternative solutions that would be considered in performing this BCA. ISG conducted work sessions with Project Sponsors to consider the pros and cons of a number of alternative solutions for meeting the administrative systems needs of the State – functionality to replace *STARS* and *EIS/I-TIME/IPOPS*, as well as to provide systems to support

administrative functional areas of the State that are not currently met by statewide systems such as purchasing.

As a preface to this activity, we made several assumptions in order to set a baseline for comparisons. These assumptions included the scope of modules to be considered, in what phases those modules were grouped, and a potential implementation timeline. These assumptions are listed below, with the results of this exercise immediately in succession.

The scope of this study included the evaluation of two alternatives: (1) maintaining the State's existing central systems, or (2) replacing, to the maximum extent practical, central financial, purchasing, payroll, and HR systems, as well as agency administrative systems whose functionality would be included in a full ERP system.

3.1 Alternative 1 – Status Quo – Maintain the State's Existing Systems

This alternative is based on the assumption that the State will remain on its current path with the continued use of *STARS* and *EIS/I-TIME/IPOPS*, and agencies will continue their efforts to acquire, develop, and use a number of subsystems or "shadow" systems to support administrative operations. This alternative was evaluated to serve as a baseline against which to perform an analysis of the full ERP alternative. According to SCO management, if the State does not proceed with acquisition of a new system then SCO would finish off front end web development; implement a true accounts receivables capability; add table maintenance for web system tables; enhance the error correction process; implement a unified log-in process; replace FAS with a 3rd party asset management product; and continue ongoing work to expand browser compatibility, and expand compatibility to other types of devices.

3.2 Alternative 2 – Implement Full ERP

This alternative is based on the assumption that, within the scope of this project, the State will implement a modern ERP system statewide that encompasses a suite of fully integrated financial management, purchasing, and HR/Payroll software modules to perform administrative business functions (i.e., Financial Accounting, Purchasing, Grants Management, Facilities Management, HR/Payroll, etc.). Alternative 2 also includes Budget Preparation and Data Warehouse/Business Intelligence capabilities.

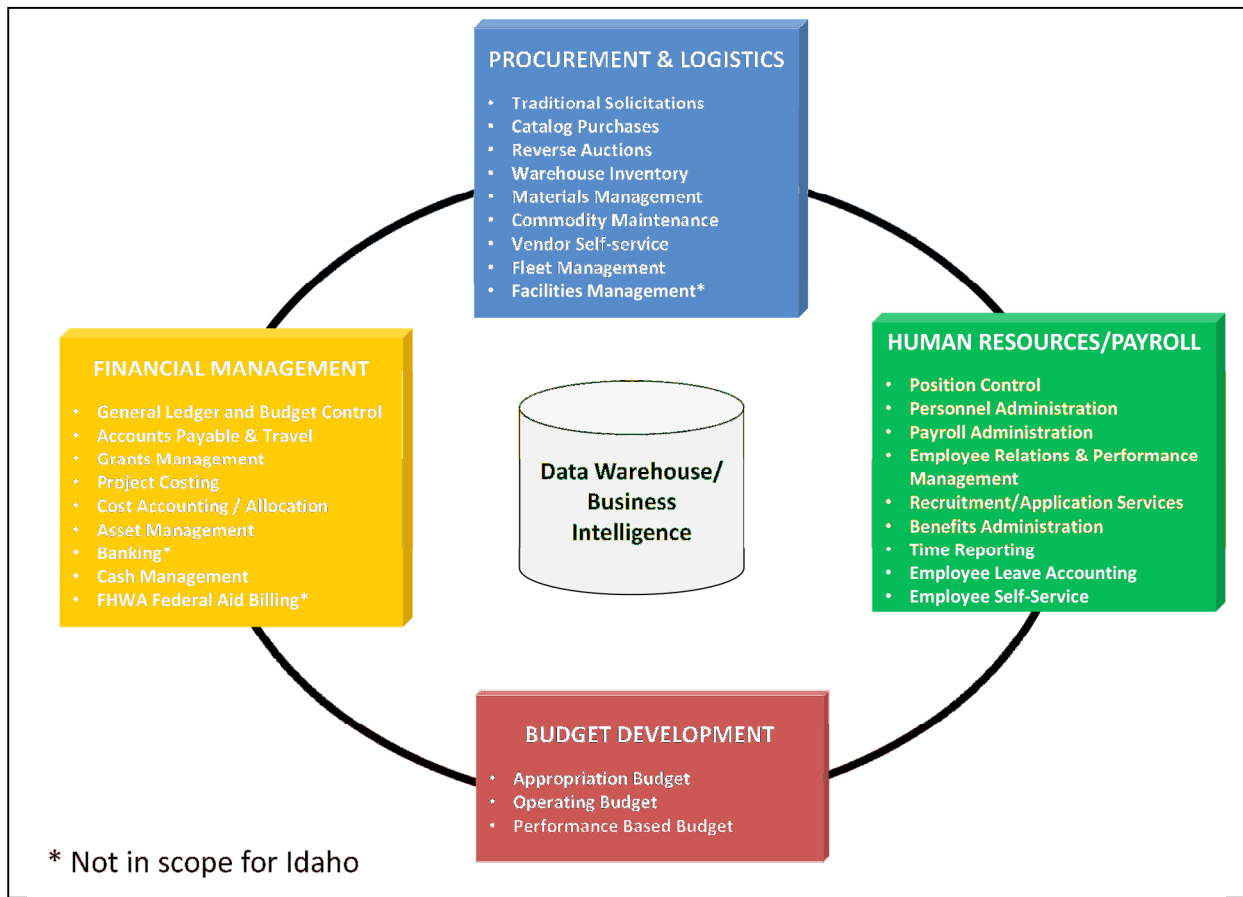
3.2.1 Major Assumptions Pertaining to Alternative 2

Following are key, high-level assumptions pertaining to a statewide implementation of an ERP system upon which this BCA was based.

Functional Scope of Alternative 2

As illustrated in Exhibit 7, ERP systems are composed of major functional groupings (modules) that address the major administrative functions within state government. Appendix A, *Elements of a Modern ERP*, provides a description of modules required to address the agreed-to scope of functionality included in this study.

Exhibit 7 – Functional Groupings of ERP Systems



Additionally, certain features, such as automated workflow and electronic approvals, security, reporting, business intelligence, and data warehousing, cross all functional modules. It should be noted that a typical statewide ERP system would not replace programmatic systems, such as bridge management, tax revenue management, or Medicaid management information systems. Exhibit 8 lists the functional areas within the scope of this effort.

Exhibit 8 – Functional Areas within Scope

Core Financials	
▪ General Ledger and Budgetary Control	▪ Project Accounting / Management
▪ Accounts Payable / Travel	▪ Bank Reconciliation
▪ Accounts Receivable / Billing	▪ Cost Accounting / Allocation / Labor Distribution
▪ Cash Receipting	▪ Cash Management and Forecasting
▪ Asset Management	▪ Budget Development
▪ Grant Accounting and Administration	

Procurement & Logistics

- Bid Solicitations
- Catalog Procurement / Punch-Out
- Vendor Management
- Commodity Management
- Inventory Management
- Contract Administration
- Receiving
- Vendor Self-Service
- Fleet Management

Human Resources / Payroll

- Recruitment and Applicant Services
- Position Control
- Employee/Manager Self-Service
- Employee Time & Attendance
- Benefits Administration
- Personnel Administration
- Payroll
- Classification and Compensation
- Learning Management
- Onboarding
- Off boarding
- Employee Relations
- Discipline and Grievances
- Performance Management
- Safety
- Talent Management

Assumed ERP Implementation Phasing and Timeline

For the purpose of this analysis, it was assumed that the implementation would be performed in several phases, as shown in Exhibit 9. As the need to upgrade the financial management capabilities is paramount, implementation of financials would precede the implementation of HR/Payroll.

A key assumption of this analysis is that the existing legacy applications used to support financial management, purchasing, and HR/Payroll functions throughout the State would be replaced with the new ERP system and integrated or interfaced with:

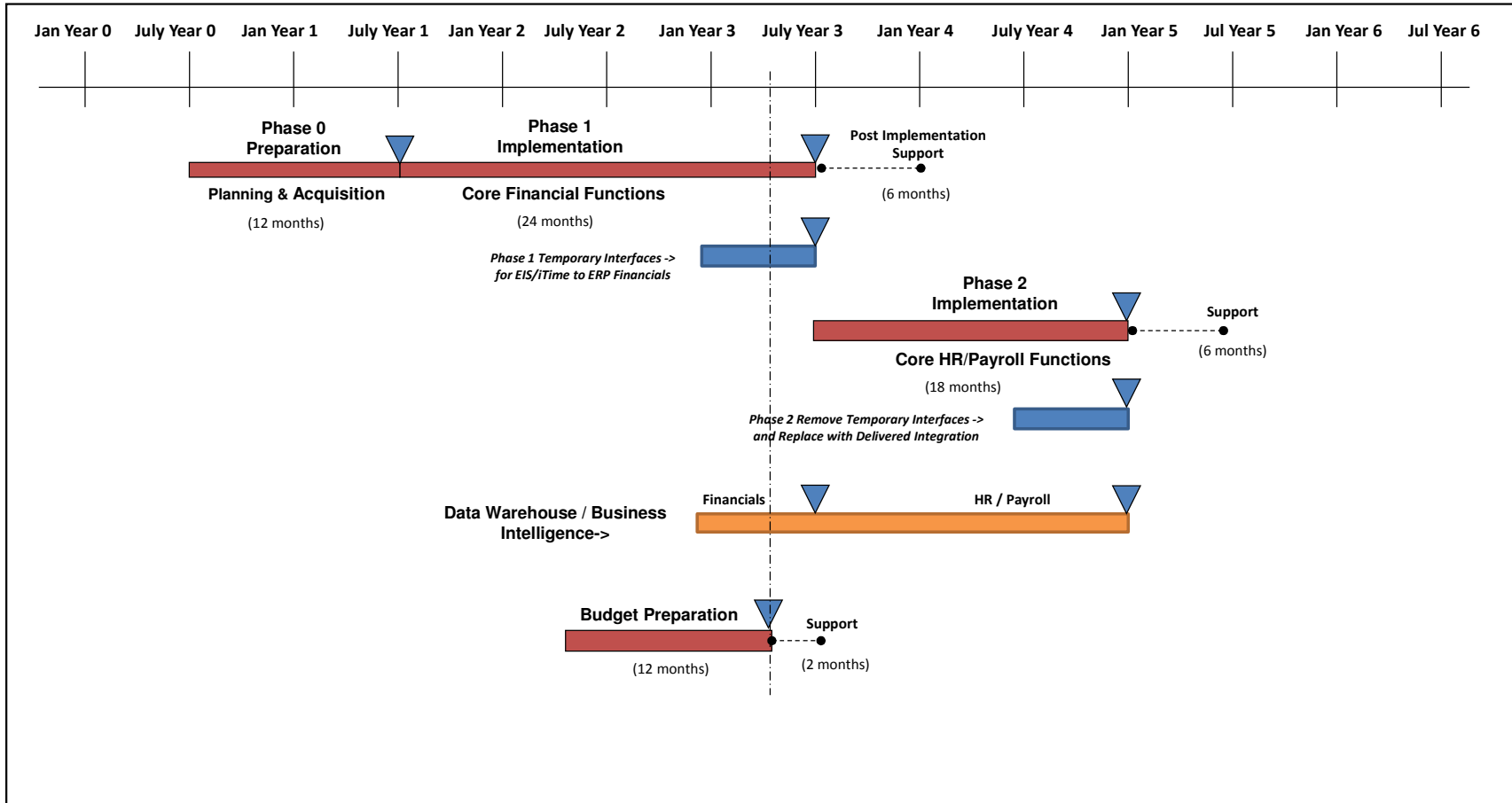
- ITD's financial management system.
- Agency-specific programmatic systems that would not be replaced with an ERP.

The project would begin with a 12-month *Preparation* phase (Phase 0) which would include developing requirements, drafting an RFP, and executing an acquisition process.

Phase 1 would be a 24-month project to implement core financials and purchasing, beginning at the end of the *Preparation* phase. As part of Phase 1, temporary interfaces would be built between the new financial system and the existing HR/payroll system. Phase 1 would include the implementation of the Budget Development module as well as the financials' data warehouse and business intelligence/reporting capabilities.

Phase 2 would be an 18-month project to implement the HR/payroll modules and remove the temporary financials-to-HR/payroll interfaces and replace them with the delivered product integration. Phase 2 would also include implementing the HR/payroll budget integration, as well as the HR/payroll data warehouse and business intelligence/reporting capabilities.

Exhibit 9 – Alternative 2 Implementation Phasing and Timeline



4.0 Identify and Analyze Costs and Benefits

4.1 Methodology

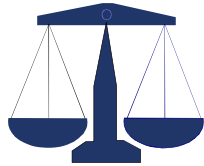
This phase of ISG's methodology is composed of four major activities:

1. **Estimate ERP Costs** – the costs to acquire, implement, and operate/maintain an ERP system over a multi-year period.
2. **Estimate Avoided System Costs** – costs the State could avoid by implementing an ERP system and, thereby, retiring/replacing existing systems and avoiding investments in additional systems.
3. **Estimate Value Pocketsm Benefits** – includes significant process-improvement benefits and risks that can be credibly dollar-quantified.
4. **Identify Intangible Benefits** – benefits, including avoidance/mitigation of risks pertaining to the State's current environment that cannot be credibly dollar-quantified.

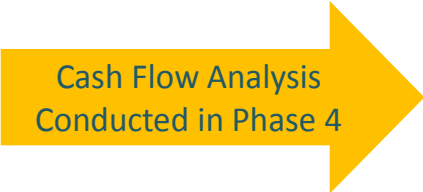
As illustrated in Exhibit 10, estimates were made as part of Activities 1, 2, and 3 (see above) that were used to perform the cash flow analysis conducted as part of the *Financial Analysis*.

Exhibit 10 – Activities 1, 2 and 3 of Analysis of Alternatives

Activities 1, 2, and 3 of Phase 3



ERP Costs/Risks	vs.	ERP Benefits/Risks
1 ERP Costs • Software License • Hardware/Infrastructure • Implementation Services • Upgrades • Ongoing Maintenance & Mgmt. • Training & Change Management • Project & Ongoing Government Staff ERP Implementation Risk		2 Avoid Certain System Costs • Replace/Retire current systems • Not implement planned systems • Not perform anticipated enhancements/upgrades to existing and anticipated systems once implemented 3 Realize Process-Improvement Benefits • Value Pockets SM Benefits Reduce or Eliminate Risks Associated with Current Environment



Summary Cash Flow Analysis
(\$ millions)

Illustrative

	Fiscal Years											Total
	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9		
1 Costs	ERP Costs											
	Pre-Implementation Costs (Planning & Acquisition Support)	(0.4)										(0.4)
	Implementation Costs		(18.0)	(33.0)	(37.0)	(8.0)						(96.0)
	Ongoing Operating Costs (excludes end user costs)					(4.4)	(9.2)	(10.0)	(10.4)	(11.0)	(11.2)	(56.2)
	Total ERP Cost	(0.4)	(18.0)	(33.0)	(37.0)	(12.4)	(9.2)	(10.0)	(10.4)	(11.0)	(11.2)	(152.6)
	Cumulative Total ERP Cost	(0.4)	(18.4)	(51.4)	(88.4)	(100.8)	(110.0)	(120.0)	(130.4)	(141.4)	(152.6)	
2 Avoided Systems Costs	Ongoing Operating Costs of Current Systems					2.0	7.0	9.0	10.1	11.2	12.5	51.8
	Systems and Planned/Anticipated New Systems			2.0	3.0		1.0		3.0			9.0
	Total Avoided Costs	-	-	2.0	3.0	2.0	8.0	9.0	13.1	11.2	12.5	60.8
3 Benefits	Process-Improvement Benefits											
	Process Execution Benefits (e.g., reduce FTEs required)						3.0	8.0	12.0	14.0	15.0	52.0
	Process Results Benefits (e.g., reduce cost of goods and services)						8.0	16.0	18.0	18.7	19.4	80.1
	Total Process Improvement Benefits	-	-	-	-	-	11.0	24.0	30.0	32.7	34.4	132.1
	Cumulative Total Benefits	-	-	2.0	5.0	7.0	26.0	59.0	102.1	146.0	192.9	
Net	Net Analysis (ERP Costs vs. Benefits)											
	Net (ERP Cost vs. Benefits/Savings)	(0.4)	(18.0)	(31.0)	(34.0)	(10.4)	9.8	23.0	32.7	32.9	35.7	40.3
	Cumulative Net	(0.4)	(18.4)	(49.4)	(83.4)	(93.8)	(84.0)	(61.0)	(28.3)	4.6	40.3	
	Breakeven Year	-	-	-	-	-	-	-	-	4.6	-	
	PV of Net @ 5% per annum	(0.4)	(17.1)	(28.1)	(29.4)	(8.6)	7.7	17.2	23.2	22.3	23.0	9.8
	NPV	(0.4)	(17.5)	(45.7)	(75.0)	(83.6)	(75.9)	(58.7)	(35.5)	(13.2)	9.8	
IRR (if > 0)									1%	7%		
ROI (if > 0)									3%	26%		

4.2 Estimate ERP Costs

During the initial stages of the project, ISG worked with the State to establish a preliminary implementation strategy and timeline for the ERP implementation project (Exhibit 9). To develop the detailed estimate, ISG and SCO reviewed and agreed to key assumptions and ISG utilized its proprietary estimating model, which incorporates estimating standards/metrics and provides an overall framework for the cost estimate.

In applying our methodology, ISG began with a detailed, bottom-up estimate of the cost to implement and operate the statewide ERP system. The results of this detailed estimate were then compared on a top-down basis to other comparable statewide ERP projects to confirm the reasonableness of our estimates.

The major estimating factors used in ISG's proprietary model include:

- Estimating the number of consulting hours required to implement the functional modules within the planned scope of the ERP initiative. The estimated number of hours addressed the following services:
 - Project management.
 - Pre-implementation services/project oversight/quality assurance.
 - ERP software installation, configuration, and reengineering of the processes supported by the ERP system, in order to leverage the best-practices processes inherent in a modern ERP system.
 - Custom development, including:
 - Automated interfaces.
 - Software modifications/enhancements.
 - Custom report development.
 - Data conversion and loading.
 - Workflow development.
 - Forms development.
 - Organizational change management.
 - End-user training and documentation.
- Estimating the “loaded” consulting rate (after estimating the total number of consulting hours) for each role assumed to be provided by vendors. The term “loaded rate” refers to an hourly rate that includes labor and travel-related costs. The loaded rate was then multiplied by the total estimated number of project hours to determine the total cost of vendor-provided implementation services.
- Estimating the total cost for State personnel was calculated by estimating the total hours, applying a benefits-loaded rate, and using a backfill percentage of 75%. Backfill refers to hiring new personnel to replace agency staff while assigned to the project.
- Estimating the costs of other services and project components associated with acquiring and implementing the ERP system, which included the following:

- Project team training.
- Technical infrastructure and support for the production environment.
- Technical infrastructure for all non-production environments (e.g., servers, system software, relational database management system, and networking infrastructure).
- Project facilities and equipment.
- Estimating the cost of application software annual maintenance fees, as well as ongoing costs of operating and supporting the system after placement into production.

After completing the detailed estimate, we performed a top-down comparison of key elements from our proprietary estimating model to the actual experiences of other states in order to validate that our estimate was in line with what other state projects of similar size and scope have experienced.

4.2.1 Key Estimating Assumptions

The primary assumptions to migrating to an ERP system follow.

Assumed Project Timeline

For estimating purposes, the project timeline follows as described above (Exhibit 9).

For comparative purposes, Exhibit 11 contains information regarding the timeline strategies that were employed by nine (9) states for their respective statewide ERP projects. In the first row of the table, under “Financials/Procurement”, “All” means either all agencies in the “Agency Timing” column or modules in the “Module Timing” column were implemented simultaneously. “Phased” means that either the agencies in the “Agency Timing” column or modules in the “Module Timing” column were implemented using a phased approach. “Duration” provides the length of the implementation, as well as the length of the post go-live support. If a range is provided, the first number indicates the number of months from inception until the first deployment, and the second number indicates the number of months for the entire implementation.

Exhibit 11 – State ERP Implementation Duration Schedule

State	Financials / Procurement		Duration	
	Agency Timing	Module Timing	Implementation	Post Go-Live
Alaska*	All	All	24 months	Extended
Arizona*	All	All	24 months	15 months
Arkansas	All	All	15 months	3 months
Kansas	All	All	24 months	6 months
Louisiana*	Phased	All	27 months	3 months
Minnesota	All	All	24 months	6 months
Mississippi*	All	All	30 months	6 months
Tennessee	Phased	All	24-33 months	6 months

*Planned implementation duration

Note that the National Association of State Auditors, Comptrollers and Treasurers (NASACT) in its 2012 Financial System Survey, *The Challenge of Change*, cited two years as the expected implementation time period for a financial system implementation. Data for HR/Payroll implementations is less consistent and not readily available for many statewide implementations. However, discussions with a number of systems integration firms and anecdotal information available from other states indicate that an expected project duration of 18-24 months is considered reasonable for an HR/Payroll implementation. With an existing project infrastructure in place (i.e., from an earlier financials/purchasing implementation), we assumed an 18-month implementation project as reasonable, followed by 6 months of post go-live support.

Other General Assumptions

The following assumptions were used as the foundation for developing the cost estimate. This estimate is consistent with the State’s plans and assumptions regarding the approach for implementing the statewide ERP system, as documented in this report.

The implementation project will be conducted in three phases, as discussed above under Assumed ERP Implementation Phasing and Timeline.

The assumed hourly rates for each identified implementation role was multiplied by the estimated level of effort (i.e., hours) for each role over the implementation period. This estimating process yielded an average hourly, expense-loaded rate of \$191 for the ERP systems integrator and a rate of \$205 for the project oversight contractor. These average hourly rates are consistent with ISG observations of market rates for each type of service.

The cost of State project team and ongoing support roles was estimated on the basis of an average project team salary of \$58,896, which is \$87,166 when marked up for an average benefits overhead rate of 48%. Assuming that 13.2% of staff hours are unavailable due to various forms of leave (e.g., sick, vacation, holiday); there are approximately 1,806 hours per year available to the project. Over the implementation period, these calculations yielded an average hourly, benefits-loaded rate of \$52 (inclusive of the inflation assumptions described below). This rate was used for the budget cost analysis.

The cost estimate reflects the assumption that the State will backfill (e.g., hire replacement staff or new staff) for 75% of the cost of the State team members assigned to the project.

The cost estimate includes only incremental costs for State resources. Costs related to positions that are not backfilled (e.g., agency employees participating in periodic design sessions or system testing) are assumed to be borne by the employing agency and will not be reimbursed from ERP project funds.

An average annual inflation rate of 2% was assumed for the overall measurement period.

An ERP software upgrade will occur during Year 7 of the planning period.

The implementation work effort will be conducted using a ratio of approximately 1.0 State resource for every 1.0 contractor (i.e., non-State) resource.

ISG's proprietary ERP cost estimating model was used to develop the cost estimate. Input into the model was based on our experience with similar ERP projects for state and large local governments and on assumptions provided by the State's project leadership.

Line Item Cost Assumptions

The assumptions that follow pertain to specific line items in *Exhibit 12 Estimated Costs by Fiscal Year of Implementing a Statewide ERP System* and *Exhibit 15 Estimated Costs by Fiscal Year of Implementing and Operating a Statewide ERP System* presented below. Note that Exhibit 15 is divided into two primary sections: (1) Implementation and (2) Ongoing Operations, which represent a "total cost of ownership" view of the ERP initiative.

Pre-Implementation and Implementation Assumptions

Project Advisory/Oversight (Pre-Implementation Planning and Acquisition)

The costs in this line item are for advisory services in support of the State's acquisition of ERP software and associated implementation assistance. The primary services included in this line item are the following:

- Documenting ERP functional and technical requirements;
- Developing solicitation document(s) to support the acquisition of ERP software and associated integration services;
- Facilitating the evaluation of proposals received for ERP software and integration services;
- Performing change management planning and communications support; and
- Facilitating contract negotiations between the State and the awarded ERP software and integration services vendor(s).

Systems Integrator – Implementation

This cost category includes all Systems Integrator staff work effort required to successfully implement the ERP and third-party software (as necessary) across State government in accordance with the assumed implementation approach described above.

Following is a description of the major components of the Systems Integrator Implementation cost category.

System Configuration and Deployment Services

This category includes the Systems Integrator's effort pertaining to:

- Project management including mapping methodology to the product suite;
- "To-Be" business process design that will be enabled and supported by the ERP system;
- Software configuration in accordance with the defined "To-Be" business processes;
- Testing (leadership of and participation in unit, integration, system, and stress testing, and support for user acceptance testing);
- End-user training and documentation;
- Organizational change management and agency readiness;
- Knowledge transfer; and
- Deployment (roll-out) support.

Technical Infrastructure Support and Customizations

This category includes the Systems Integrator's effort pertaining to:

- Technical architecture and infrastructure design;
- Internal Control Risk Assessment;
- Database administration;
- Systems programming;
- Security configuration;
- Customizations
 - Forms,
 - Reports,
 - Automated interfaces,
 - Data conversion/loading,
 - Software enhancements, and
 - Workflow configuration;
- Business Intelligence and Data Warehouse implementation and support;
- Testing (participation in unit, integration, system, and performance/stress testing, and support for acceptance testing);
- Knowledge transfer; and
- Deployment (roll-out) support.

State Team Members

This cost category includes all State project team members' work effort required to successfully implement the ERP and third-party software (as necessary) across State government in accordance with the assumed implementation approach described above. Note that this work effort corresponds to the work effort for the "Systems Integrator – Implementation" category (see above). Following is a description of the major components of the State Team Members cost category.

System Configuration and Deployment

This category includes the State team members' effort pertaining to:

- Project management;
- "To-Be" business process design that will be enabled and supported by the acquired ERP system;
- Software configuration in accordance with the defined "To-Be" business processes;
- Testing (participation in unit, integration, system, and stress testing, and leadership and execution of user acceptance testing);
- End-user training and documentation;
- Organizational change management and agency readiness;
- Knowledge transfer; and
- Deployment (roll-out) support.

Technical Infrastructure Support and Customizations

This category includes the State team members' efforts pertaining to:

- Technical architecture and infrastructure design;
- Database administration;
- Systems programming;
- Security configuration;
- Customizations:
 - Forms,
 - Reports,
 - Automated interfaces,
 - Data conversion/loading,
 - Software enhancements, and
 - Workflow configuration;
- Business Intelligence and Data Warehouse implementation and support;
- Testing (participation in unit, integration, system, and stress testing, and execution of acceptance testing);
- Knowledge transfer; and
- Deployment (roll-out) support.

Project Oversight

It is assumed that the State will engage an independent project oversight/quality assurance consultant for the duration of the ERP implementation period. Ongoing project oversight activities include (but are not limited to):

- Facilitating issue and problem resolution;
- Monitoring project timelines and deadlines (including submission of deliverables) per the detailed project plan; variances from the planned schedule must be researched and contingency plans established, where necessary, to ensure that the project remains on schedule;
- Conducting periodic risk assessments and leading risk mitigation efforts;
- Preparing monthly progress reports to project executive management;
- Planning and conducting executive and management briefings;
- Reviewing project deliverables to ensure they meet standards for deliverables;
- Performing project milestone reviews;
- Scrutinizing the quality of vendor performance;
- Managing contract specifics between the vendor and the State (including enforcement of penalties, when necessary);
- Monitoring project scope and project budget;
- Delivering periodic written status reports to executive management; and
- Providing overall project guidance and direction.

Third-Party Integration Support

Third-party integration support is the estimated cost of engaging third-party vendors to enhance their systems in order to interface their systems with the new statewide ERP system, as well as provide assistance in developing the requisite interfaces. The support also includes the cost to provide additional consultant support to agencies that do not have the resources to successfully execute their agency IT initiatives and the ERP activities concurrently. This line item represents the estimated funding that would be required if the State chooses to compensate agencies for such third-party or agency support costs.

Team Training

This estimate includes the costs to train the State project team members on the ERP and third-party software included in the implementation (if applicable). Note that end-user training costs are included in the systems integrator and State project team categories. It is assumed that end-user training will be delivered primarily by using a train-the-trainer approach with a ratio of 1.0 systems integrator FTE to 3.0 State FTEs.

Software License

It is estimated that the State will pay a onetime fee of approximately \$6.0 million for the functions within the scope of the project. This is reported in the estimated cost schedules as a software license fee. Note: State implementation team training is included in this cost element.

Software Maintenance during Implementation

Annual software maintenance fees typically range between 17% and 22% of the original software license fee. We estimate that the annual ERP software maintenance fee will be 22%. We assume that all annual maintenance fees will begin in the year the ERP software licenses are acquired by the State, fee rates will remain frozen for five years, and fee rates then will escalate by a factor of 5% per year. Note that the fees for the ERP software implemented during the project shift from the “Implementation” portion of the cost schedule to the “Ongoing Operations” portion as each phase goes live.

Production Environment – On-Premise

This category is intended to provide a high-level estimate of infrastructure hosting costs and is based on ISG’s experience with similar statewide ERP projects. Principally, these are the costs to establish and operate the development and production environments for the new ERP system. The hardware and technical infrastructure estimates include the following elements:

- Processors
 - Application/database server(s) processing hardware,
 - Maintenance and server upgrades, and
 - New server operating system software and server operating system upgrades and maintenance;
- Data Storage and Management
 - Disk/Storage Area Network (SAN) capacity,
 - RDBMS Software,
 - MIDB upgrade, and
 - Maintenance;
- Systems Management and Security software
 - Transaction monitoring software,
 - “Middleware” such as gateways,
 - Testing tools and software, and
 - Batch scheduling tools and software;
- Communications
 - LAN/WAN upgrades, and
 - Telecommunications costs; and
- Backup/Disaster Recovery
 - Hardware costs,

→ Software costs.

Project Facilities and Equipment

We estimated the cost of ERP Project Facilities and Equipment based on input from State management and our experience with similar statewide ERP implementation projects and included the following items:

- Office space for the project team
- Training facilities
- Furnishings – staff workspace
- Furnishings – conference rooms / training rooms
- Computers for project team members
- Phone lines
- Internet (circuits, cabling)
- Copiers/faxes/printers
- Office supplies

Contingency

In addition to the Third Party Integration Support, a reserve for contingency has been included to address any additional costs that have not been included in our estimates. The need for contingency funds could result from uncertain project-related items and/or other conditions or events that are unknown at project initiation. The 15% reserve rate was based on our discussions with State management regarding risk tolerance and our experience with a number of other statewide ERP implementations. The annual contingency amount was calculated as 15% of the respective, combined internal and external labor costs.

Ongoing Operations

Systems Integrator

A number of States have found it beneficial to maintain a consulting presence by the systems integrator to help support and/or manage ongoing systems operations.

Consultant Support for Upgrade

Based on ISG's prior experience with state and local governments in performing ERP software upgrades, we assumed that it will require systems integrator support of approximately 17.5 FTEs over a one-year period (estimated at 37,440 hours) to perform a software upgrade of the new ERP system. This estimate assumes a major upgrade of the existing functional and technical capabilities.

State Staff and Benefits

State staffing and benefits for ongoing operations assume the following staffing levels in each of the following operations areas:

Staffing for Ongoing Operations

Ongoing Operations Area	FTEs
Project Management Office	2.0
Functional Support	22.0
Technical Support	10.0
Enterprise Readiness	4.0
Total	38.0

The ongoing support staff will be responsible for overseeing the ongoing operations services provided by the systems integrator. State support staff activities include managing the vendor contract(s) (e.g., monitoring compliance with SLAs, assisting in resolving disputes, etc.) and performing user acceptance testing. At peak testing times, it is assumed that the ongoing support staff will be supplemented on a temporary basis by other State staff. It is assumed that the ongoing support resources will fill these positions at the same average compensation rates described above for the State implementation team. In developing estimates for this category, we took into consideration the staffing levels of other states and ISG’s prior ERP experience. Also, the assumption was made that the best and brightest resources from the State’s implementation team will fill these ongoing operations and support positions.

Software Maintenance

Refer to the assumptions pertaining to Software Maintenance described above.

Production Environment

This is a high-level estimate of ongoing data center and infrastructure costs. It is based on the State’s current hosting contract and ISG’s experience with similar statewide ERP projects. Refer to the assumptions for the Technical Infrastructure category in the Implementation section above.

Facilities and Equipment

This category includes our estimate of the annual cost of providing facilities and equipment for the ongoing ERP support effort. The estimates are based on input from State management and ISG’s experience with similar statewide government ERP initiatives.

4.2.2 Results of Cost Estimate

Estimated Implementation Costs

Exhibits 12 - 15 present the estimated costs and level of effort required to implement an ERP system.

Exhibit 12 – Estimated Cost to Implement a Statewide ERP System – Bottom-up Estimate

Cost Categories	Plan & Acquire	Financials & Procurement	HR / Payroll	Total
Software License & Team Training (including software maintenance)	\$ -	\$ 4,601,250	\$ 5,580,000	\$ 10,181,250
Selection, Oversight, and Staff Augmentation Services	\$ 1,106,400	\$ 4,001,040	\$ 2,882,160	\$ 7,989,600
Integrator Consulting Services	\$ -	\$ 32,660,640	\$ 18,981,760	\$ 51,642,400
Third Party Interface Assistance	\$ -	\$ 1,094,400	\$ 921,600	\$ 2,016,000
State Team Members (75% backfill positions for State project team)	\$ -	\$ 7,499,781	\$ 5,413,659	\$ 12,913,440
Technical Infrastructure	\$ -	\$ 3,096,720	\$ 2,234,904	\$ 5,331,624
Project Facilities & Equipment	\$ -	\$ 1,128,077	\$ 461,130	\$ 1,589,207
Subtotal	\$ 1,106,400	\$ 54,081,908	\$ 36,475,213	\$ 91,663,521
Contingency	\$ -	\$ 6,660,784	\$ 4,357,472	\$ 11,018,256
Total	\$ 1,106,400	\$ 60,742,692	\$ 40,832,685	\$ 102,681,777

Please note that the totals in the schedule above may reflect variances due to rounding.

As shown in Exhibit 12, and based on the assumptions described previously, it is estimated that the implementation of a statewide ERP system, including \$11.0 million in contingency, would cost approximately \$102.7 million; this expenditure for implementing the system would run through Year 4.

Exhibit 13 presents the implementation costs in greater line item detail and by State fiscal year.

Exhibit 14 summarizes the level of effort associated with the estimated effort-based costs contained in the two preceding schedules (i.e., the total estimated number of man-hours to implement the system). Between State staff and contractor staff, ISG estimates it will require more than 650,000 man-hours to implement the system in the assumed timeframe and with the assumed phasing.

Exhibit 13 – Estimated Costs by Fiscal Year of Implementing a Statewide ERP System

Project Phases/Component	Phasing -->		Fiscal Years				Total
	Plan & Acquire	Financials & Procurement	HR/Payroll				
	Year 0	Year 1	Year 2	Year 3	Year 4		
Pre-Implementation Planning							
Project Advisory/Oversight	\$ 1,106,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,106,400
Implementation							
Systems Integrator -- Implementation	\$ -	\$ 10,966,400	\$ 15,815,200	\$ 14,371,200	\$ 10,489,600	\$ -	\$ 51,642,400
State Team Members (incl. benefits)	\$ -	\$ 2,138,443	\$ 3,850,924	\$ 3,632,966	\$ 3,291,108	\$ -	\$ 12,913,440
Project Oversight	\$ -	\$ 1,672,800	\$ 1,672,800	\$ 2,056,800	\$ 1,480,800	\$ -	\$ 6,883,200
Third Party Integration Support	\$ -	\$ -	\$ 1,008,000	\$ 144,000	\$ 864,000	\$ -	\$ 2,016,000
Subtotal	\$ -	\$ 14,777,643	\$ 22,346,924	\$ 20,204,966	\$ 16,125,508	\$ -	\$ 73,455,040
Software Cost & Team Training							
Team Training	\$ -	\$ 281,250	\$ -	\$ 270,000	\$ -	\$ -	\$ 551,250
Software License	\$ -	\$ 6,000,000	\$ -	\$ -	\$ -	\$ -	\$ 6,000,000
Software Maintenance during Impl.	\$ -	\$ 1,320,000	\$ 1,320,000	\$ 660,000	\$ 330,000	\$ -	\$ 3,630,000
Subtotal	\$ -	\$ 7,601,250	\$ 1,320,000	\$ 930,000	\$ 330,000	\$ -	\$ 10,181,250
Technical Infrastructure							
Production Environment -- On Premise	\$ -	\$ 1,224,000	\$ 1,872,720	\$ 1,910,174	\$ 324,730	\$ -	\$ 5,331,624
Project Facilities & Equipment	\$ -	\$ 528,734	\$ 599,343	\$ 225,898	\$ 235,232	\$ -	\$ 1,589,207
Subtotal: Estimated Project Cost	\$ 1,106,400	\$ 24,131,627	\$ 26,138,987	\$ 23,271,038	\$ 17,015,470	\$ -	\$ 91,663,521
Contingency	\$ -	\$ 2,216,646	\$ 3,352,039	\$ 3,030,745	\$ 2,418,826	\$ -	\$ 11,018,256
Total Estimated Project Cost	\$ 1,106,400	\$ 26,348,273	\$ 29,491,025	\$ 26,301,783	\$ 19,434,296	\$ -	\$ 102,681,777
Cumulative Total Estimated Project Cost	\$ 1,106,400	\$ 27,454,673	\$ 56,945,698	\$ 83,247,481	\$ 102,681,777	\$ -	\$ 102,681,777

Please note that the totals in the schedule above may reflect variances due to rounding.

Exhibit 14 – Estimated Hours that Correspond to Effort-Based Implementation Costs

Phasing -->	Plan & Acquire	Financials & Procurement		HR/Payroll		Total	
	Fiscal Years						
	Year 0	Year 1	Year 2	Year 3	Year 4		
Project Phases/Component	Year 0	Year 1	Year 2	Year 3	Year 4	Total	
Pre-Implementation Planning							
Project Advisory/Oversight	5,376	-	-	-	-	5,376	
Implementation							
Systems Integrator -- Implementation	-	54,640	84,960	75,040	55,040	269,680	
State Team Members (incl. benefits)	-	56,438	101,287	92,407	81,571	331,702	
Project Oversight	-	8,160	8,160	10,080	7,200	33,600	
Third Party Integration Support	-	-	6,720	960	5,760	13,440	
Subtotal	-	119,238	201,127	178,487	149,571	648,422	
Total	5,376	119,238	201,127	178,487	149,571	653,798	
Total State FTEs	-	31.3	56.1	51.2	45.2	367.3	
Total Non-State FTEs	2.8	32.7	52.0	44.8	35.4	335.5	
Total State FTEs / Total Non-State FTEs	-	0.96	1.08	1.14	1.28	1.09	
Total State Hours	-	56,438	101,287	92,407	81,571	331,702	
Total Non-State Hours	5,376	62,800	99,840	86,080	68,000	322,096	
Total State Hours / Total Non-State Hours	-	0.90	1.01	1.07	1.20	1.03	

Please note that the totals in the schedule above may reflect variances due to rounding.

Estimated Total Cost of Ownership

Exhibit 15 contains the estimated implementation costs presented in the schedules above, plus the estimated cost to operate and maintain the ERP system through the end of the 14-year period. Ongoing operations costs begin in Yr. 3 with the go-live of Phase 1 finance and procurement functionality. Over the planning horizon, total costs of ongoing operations are estimated at \$97.5 million. For the 14-year period, total cost of ownership for Alternative 2 is estimated to be \$200.2 million.

Exhibit 15 – Estimated Costs by Fiscal Year of Implementing and Operating a Statewide ERP System

Phasing -->	Plan & Acquire		Financials & Procurement		HR/Payroll										Total	
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13		
Pre-Implementation Planning																
Project Advisory/Oversight	\$ 1,106,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,106,400
Implementation																
Systems Integrator -- Implementation	\$ -	\$ 10,966,400	\$ 15,815,200	\$ 14,371,200	\$ 10,489,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 51,642,400
State Team Members (incl. benefits)	\$ -	\$ 2,138,443	\$ 3,850,924	\$ 3,632,966	\$ 3,291,108	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,913,440
Project Oversight	\$ -	\$ 1,672,800	\$ 1,672,800	\$ 2,056,800	\$ 1,480,800	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,883,200
Third Party Integration Support	\$ -	\$ -	\$ 1,008,000	\$ 144,000	\$ 864,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,016,000
Subtotal	\$ -	\$ 14,777,643	\$ 22,346,924	\$ 20,204,966	\$ 16,125,508	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 73,455,040
Software Cost & Team Training																
Team Training	\$ -	\$ 281,250	\$ -	\$ 270,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 551,250
Software License	\$ -	\$ 6,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,000,000
Software Maintenance during Impl.	\$ -	\$ 1,320,000	\$ 1,320,000	\$ 660,000	\$ 330,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,630,000
Subtotal	\$ -	\$ 7,601,250	\$ 1,320,000	\$ 930,000	\$ 330,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,181,250
Technical Infrastructure																
Production Environment -- On Premise	\$ -	\$ 1,224,000	\$ 1,872,720	\$ 1,910,174	\$ 324,730	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,331,624
Project Facilities & Equipment	\$ -	\$ 528,734	\$ 599,343	\$ 225,898	\$ 235,232	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,589,207
Subtotal: Estimated Project Cost	\$ 1,106,400	\$ 24,131,627	\$ 26,138,987	\$ 23,271,038	\$ 17,015,470	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 91,663,521
Contingency	\$ -	\$ 2,216,646	\$ 3,352,039	\$ 3,030,745	\$ 2,418,826	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,018,256
Total Estimated Project Cost	\$ 1,106,400	\$ 26,348,273	\$ 29,491,025	\$ 26,301,783	\$ 19,434,296	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 102,681,777
Ongoing Operations																
Systems Integrator	\$ -	\$ -	\$ -	\$ 733,507	\$ 1,122,266	\$ 1,526,281	\$ 1,556,807	\$ 1,587,943	\$ 1,619,702	\$ 1,652,096	\$ 1,685,138	\$ 1,718,841	\$ 1,753,217	\$ 1,788,282	\$ 1,823,350	\$ 16,744,080
Consultant Support for Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,305,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,305,600
State Staff and Benefits	\$ -	\$ -	\$ -	\$ 1,951,455	\$ 2,985,727	\$ 4,060,588	\$ 4,141,800	\$ 4,224,636	\$ 4,309,129	\$ 4,395,311	\$ 4,483,218	\$ 4,572,882	\$ 4,664,340	\$ 4,757,626	\$ 4,848,912	\$ 44,546,713
Software Maintenance	\$ -	\$ -	\$ -	\$ 660,000	\$ 990,000	\$ 1,386,000	\$ 1,455,300	\$ 1,528,065	\$ 1,604,468	\$ 1,684,692	\$ 1,768,926	\$ 1,804,305	\$ 1,840,391	\$ 1,877,199	\$ 1,914,886	\$ 16,599,345
Production Environment	\$ -	\$ -	\$ -	\$ -	\$ 324,730	\$ 662,448	\$ 1,351,395	\$ 689,211	\$ 702,996	\$ 717,056	\$ 1,462,793	\$ 1,492,049	\$ 1,521,890	\$ 1,552,328	\$ 1,583,116	\$ 10,476,896
Facilities & Equipment	\$ -	\$ -	\$ -	\$ 225,898	\$ 235,232	\$ 173,186	\$ 99,620	\$ 101,613	\$ 103,645	\$ 105,718	\$ 191,211	\$ 195,036	\$ 198,936	\$ 202,915	\$ 207,800	\$ 1,833,011
Subtotal: Ongoing Operations	\$ -	\$ -	\$ -	\$ 3,570,860	\$ 5,657,954	\$ 7,808,504	\$ 8,604,922	\$ 15,437,068	\$ 8,339,940	\$ 8,554,873	\$ 9,591,287	\$ 9,783,112	\$ 9,978,775	\$ 10,178,350	\$ 10,376,166	\$ 97,505,645
Total Estimated ERP Program Cost	\$ 1,106,400	\$ 26,348,273	\$ 29,491,025	\$ 29,872,643	\$ 25,092,251	\$ 7,808,504	\$ 8,604,922	\$ 15,437,068	\$ 8,339,940	\$ 8,554,873	\$ 9,591,287	\$ 9,783,112	\$ 9,978,775	\$ 10,178,350	\$ 10,376,166	\$ 200,187,422
Cumulative Estimated ERP Program Cost	\$ 1,106,400	\$ 27,454,673	\$ 56,945,698	\$ 86,818,341	\$ 111,910,592	\$ 119,719,096	\$ 128,324,018	\$ 143,761,087	\$ 152,101,026	\$ 160,655,899	\$ 170,247,186	\$ 180,030,298	\$ 190,009,072	\$ 200,187,422	\$ 210,563,588	\$ 411,146,810

Please note that the totals in the schedule above may reflect variances due to rounding.

4.3 Estimate Avoided System Costs

The State may avoid incurring certain system-related costs by: (1) retiring existing systems and avoiding associated ongoing and one-time costs (modifications, enhancements, upgrades, etc.) as a result of a new ERP system implementation, and (2) avoiding costs that would likely be incurred to procure, implement, maintain, and upgrade planned/anticipated systems if a new ERP system were not implemented.

We employ a two-step process for estimating *Avoided System Costs* that includes the following:

1. Estimate Status Quo Systems Costs

During this step, we develop a high-level estimate of what the State could potentially spend on financial management and HR/Payroll systems during the next 10 years for ongoing system operations, as well as planned/anticipated investments in systems if a statewide ERP system was not implemented (i.e., the State were to continue on its current path/status quo).

2. Estimate Avoided Systems Costs

During this step, we determine which of the *Status Quo System Costs* would likely be avoided if the State were to move to a new statewide ERP system.

Each of these two steps, along with the results associated with each, is described below.

Step 1: Estimate Status Quo Systems Costs

Detailed Approach for Step 1

During the course of the meetings conducted with each of the participating agencies, ISG identified, preliminarily, each agency's systems that would likely be replaced/retired if the financial management and HR/Payroll functionalities of an ERP system were implemented statewide.

Following those meetings, ISG's proprietary Systems Costs Survey was sent to each of the participating agencies in order to confirm which systems could potentially be replaced/retired, and then captured: (1) the estimated annual cost of operating and maintaining/enhancing each of the systems during the next 10 years, and (2) the planned/anticipated investments in new planned/anticipated systems during the next 10 years, that could potentially be avoided if a new ERP system were implemented statewide.

Eleven (11) of the participating agencies responded to ISG's *System Costs Survey* with estimated costs for 37 systems that were within the scope of this effort. Note that the costs associated with some of the systems identified as candidates for replacement/retirement by a new ERP system were not material enough to report via the *System Costs Survey* (e.g., a Microsoft Access database system that only requires a few hours per year to maintain). Appendix C, *Inventory of Candidate Systems for Replacement*, provides a detailed inventory of the current State application systems included in the *Status Quo System Cost* analysis.

Candidate systems that may be replaced by a modern ERP system were reported by the participating agencies. However, as an initial step in acquiring and implementing an ERP system, the agencies should

use documented system requirements to determine whether the identified systems can indeed be replaced.

Results for Step 1

Exhibits 16 - 20 show the results of the *System Cost Survey* data-collection effort. Note that reported costs determined to be out of scope are not included in the schedules below. Also note that only 11 of the 19 participating agencies responded to the *System Cost Survey*.

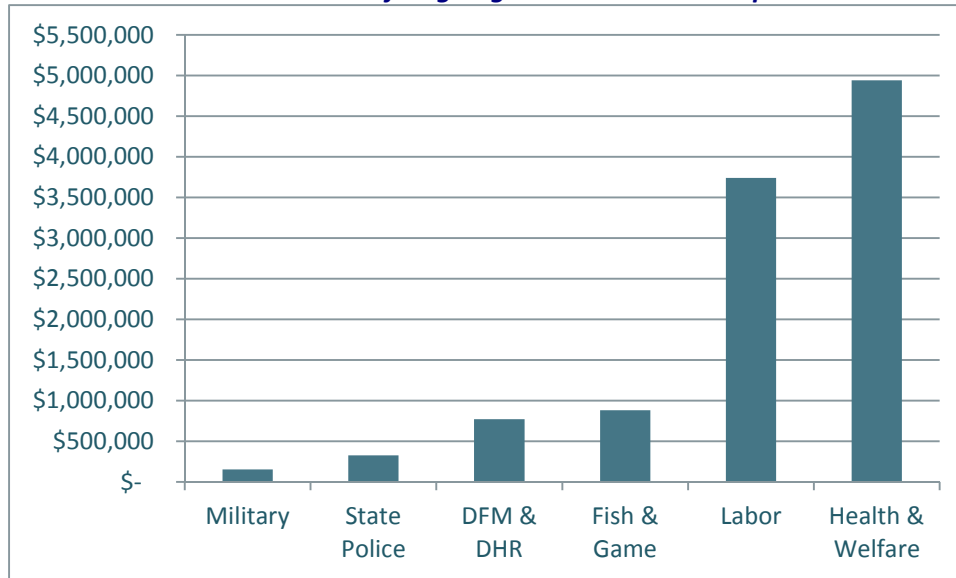
Exhibit 16 – Estimated Status Quo Systems Costs – Ongoing Maintenance and Operations

Agency	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Total (Yr 2 - 11 only)
Controller	\$3,089,693	\$2,830,640	\$6,336,744	\$7,122,715	\$7,257,108	\$7,395,957	\$7,539,467	\$7,687,847	\$7,841,321	\$8,000,122	\$8,162,139	\$70,174,060
State Police	\$ 23,866	\$ 23,866	\$ 23,866	\$ 23,866	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 323,598
Labor	\$ 839,651	\$ 683,978	\$ 300,770	\$ 309,794	\$ 319,088	\$ 328,660	\$ 338,520	\$ 348,675	\$ 359,135	\$ 369,909	\$ 381,008	\$ 3,739,537
Health & Welfare	\$ 370,800	\$ 389,500	\$ 409,400	\$ 430,500	\$ 452,600	\$ 476,000	\$ 500,900	\$ 527,200	\$ 555,000	\$ 584,400	\$ 615,400	\$ 4,940,900
Treasurer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transportation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Military	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 149,940
Occupational Lic	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fish & Game	\$ 87,069	\$ 87,069	\$ 87,069	\$ 87,069	\$ 87,069	\$ 90,819	\$ 87,069	\$ 87,069	\$ 87,069	\$ 87,069	\$ 90,819	\$ 878,190
Legislative Svcs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
DFM & DHR	\$ 222,000	\$ 109,500	\$ 90,000	\$ 90,000	\$ 90,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 769,500
Total	\$4,648,073	\$4,139,547	\$7,262,843	\$8,078,938	\$8,256,859	\$8,407,430	\$8,581,950	\$8,766,785	\$8,958,519	\$9,157,494	\$9,365,360	\$80,975,725

Please note that the totals in the schedule above may reflect variances due to rounding.

Exhibit 17 – Estimated Status Quo Systems Costs

Estimated Total Cost of Ongoing Maintenance and Operations



Note that the table above excludes "Controller" as it is an outlier.

Exhibit 18 – Total Estimated Planned/Anticipated Investments in Systems

Agency	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Total (Yr 2 - 11 only)
Controller	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
State Police	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Labor	\$ 112,910	\$ 315,591	\$ 460,875	\$ 474,702	\$ 488,943	\$ 503,611	\$ 518,719	\$ 534,281	\$ 550,309	\$ 566,819	\$ 583,823	\$ 4,997,673
Health & Welfare	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Treasurer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transportation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Military	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Occupational Lic	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fish & Game	\$ 25,653	\$ 90,211	\$ 26,502	\$ 26,502	\$ 26,502	\$ 27,335	\$ 26,502	\$ 26,502	\$ 26,502	\$ 26,502	\$ 27,335	\$ 330,396
Legislative Svcs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
DFM & DHR	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 138,563	\$ 405,802	\$ 487,377	\$ 501,204	\$ 515,445	\$ 530,946	\$ 545,221	\$ 560,783	\$ 576,811	\$ 593,321	\$ 611,158	\$ 5,328,068

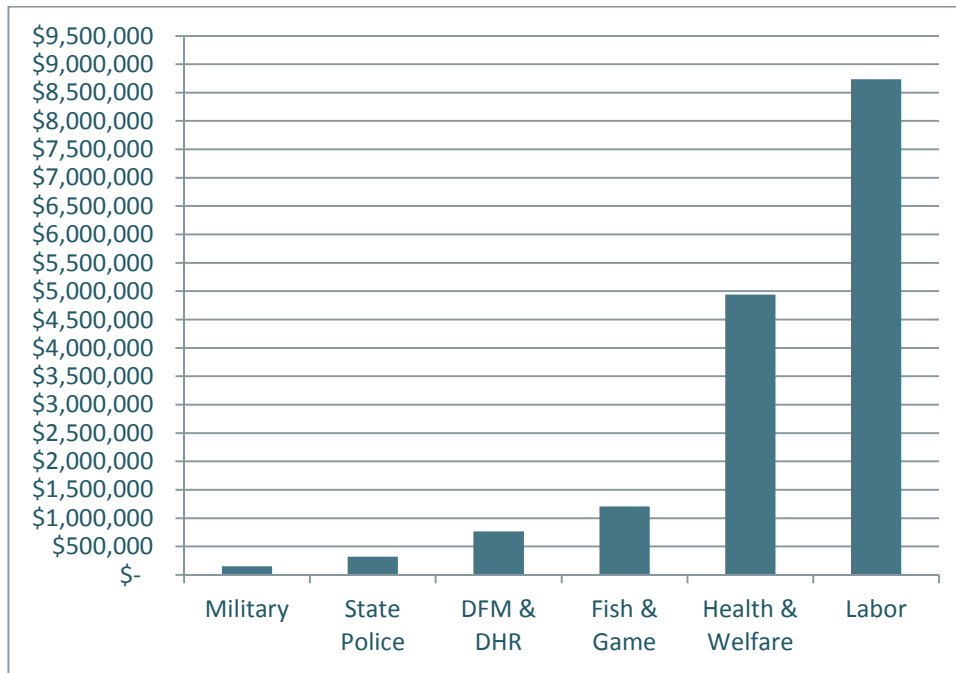
Please note that the totals in the schedule above may reflect variances due to rounding.

Exhibit 19 – Estimated Status Quo Total Systems Costs

Agency	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Total (Yr 2 - 11 only)
Controller	\$3,089,693	\$2,830,640	\$6,336,744	\$7,122,715	\$7,257,108	\$7,395,957	\$7,539,467	\$7,687,847	\$7,841,321	\$8,000,122	\$8,162,139	\$70,174,060
State Police	\$ 23,866	\$ 23,866	\$ 23,866	\$ 23,866	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 323,598
Labor	\$ 952,561	\$ 999,569	\$ 761,645	\$ 784,496	\$ 808,031	\$ 832,271	\$ 857,239	\$ 882,956	\$ 909,444	\$ 936,728	\$ 964,831	\$ 8,737,210
Health & Welfare	\$ 370,800	\$ 389,500	\$ 409,400	\$ 430,500	\$ 452,600	\$ 476,000	\$ 500,900	\$ 527,200	\$ 555,000	\$ 584,400	\$ 615,400	\$ 4,940,900
Treasurer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transportation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Military	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 14,994	\$ 149,940
Occupational Lic	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fish & Game	\$ 112,722	\$ 177,280	\$ 113,571	\$ 113,571	\$ 113,571	\$ 118,154	\$ 113,571	\$ 113,571	\$ 113,571	\$ 113,571	\$ 118,154	\$ 1,208,586
Legislative Svcs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
DFM & DHR	\$ 222,000	\$ 109,500	\$ 90,000	\$ 90,000	\$ 90,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 769,500
Total	\$4,786,636	\$4,545,349	\$7,750,220	\$8,580,142	\$8,772,304	\$8,938,376	\$9,127,171	\$9,327,568	\$9,535,330	\$9,750,815	\$9,976,519	\$86,303,794

Please note that the totals in the schedule above may reflect variances due to rounding.

Exhibit 20 – Estimated Status Quo Systems Costs
Estimated Total System Costs



Note that the table above excludes "Controller" as it is an outlier.

Step 2: Estimate of Avoided Systems Costs

Detailed Approach for Step 2

Avoided System Costs are the estimated *Status Quo Costs* that would likely not be incurred if current systems were replaced by a statewide ERP system. Avoiding of these costs is based on the timing of the assumed go-live schedule for the ERP system. Note that the *Estimated Avoided System Costs* schedules below represent the costs from Exhibits 16 - 20 that will not be incurred due to implementation of a statewide ERP system. Also note that for the purpose of this analysis, Yr. 0 in the schedules below corresponds to Yr. 3 cost data in the schedules above.

Results for Step 2

Exhibit 21 shows results of the *Avoided System Costs* analysis. Note that the values for Yr. 9 through Yr. 13 were inflated 2% per annum from the values in Yr. 8.

Exhibit 21 – Estimated Avoided System Costs

Avoided System Costs – Existing (\$ millions)

Phases	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Total
Phase 1	-	-	-	3.3	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	52.6
Phase 2	-	-	-	-	-	3.2	4.3	4.4	4.5	4.6	4.7	4.7	4.8	4.9	40.0
Total	-	-	-	3.3	4.5	7.7	9.0	9.2	9.4	9.6	9.7	9.9	10.1	10.3	92.6

Avoided System Costs – Planned (\$ millions)

Phases	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Total
Phase 1	-	-	-	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.4
Phase 2	-	-	-	-	-	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	3.5
Total	-	-	-	0.1	0.2	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	5.8

Avoided System Costs – Total (\$ millions)

Phases	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Total
Phase 1	-	-	-	3.4	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	55.0
Phase 2	-	-	-	-	-	3.4	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	43.5
Total	-	-	-	3.4	4.7	8.2	9.5	9.8	10.0	10.2	10.4	10.6	10.8	11.0	98.5

Please note that the totals in the schedules above may reflect variances due to rounding

It is estimated that during the 14-year implementation and operations period, total Avoided System Costs (\$98.5 million) would more than offset the estimated total cost of operating an ERP system (\$97.5 million) and that annual Avoided System Costs would exceed the annual cost of operating an ERP system beyond the 14-year planning period. Also note that the estimates of System Costs are conservative (i.e., lower than expected), as only 11 agencies responded to the System Costs survey.

4.4 Estimate Value Pockets Benefits

4.4.1 Purpose and Approach

The State could potentially realize process improvements in a number of functional areas as a result of implementing a new statewide ERP system. Note that only process-improvement benefits that could potentially result from the new implementation are included. We have coined the term “Value Pockets” to refer to the most likely sources of significant value (i.e., cost savings and other benefits) to be found in each functional/process area within the scope of a new statewide ERP implementation.

In applying our BCA Methodology, we identify dollar-quantifiable (tangible) and non-dollar-quantifiable (intangible) process improvements.

Dollar-quantifiable process-improvement benefits/cost savings or Value Pockets are composed of:

- Improved process outcomes/results (i.e., improved process effectiveness), for example:
 - Decreasing Accounts Receivable balances and associated carrying costs; and
 - Decreasing the cost of goods and services procured by the State.
- Reduced cost of process execution (i.e., improved process efficiency), for example, reassigning/reducing the number of full-time equivalents (FTEs) required to:
 - Enter data into systems;
 - Obtain and consolidate data from multiple sources (also results in faster and better decision-making);
 - Reconcile data among multiple systems; and
 - Track transactions spread over multiple systems (e.g., avoiding use of paper logs).

Our BCA Methodology includes proprietary formulas and calculations that are used to quantify Value Pocket benefits. Savings factors are key variables in these formulas and the values that were used for these factors were derived from a variety of sources, including the experiences of other government organizations, estimates made by ISG based the respective processes, and our experience in general, as well as input from State personnel.

Note: Many Value Pocket benefits are based upon an assumed reduction in effort by State personnel. In other words, the State may experience savings by reducing the number of FTEs that perform certain activities in various scenarios. Because most of these activities only represent a portion of an employee’s complete job responsibility, elimination of specific positions rarely occurs in the near term. In our experience, the most likely manifestation of these savings is to realigned employee efforts from redundant and/or labor-intensive activities reduced or eliminated by an ERP system to focus on higher-value activities. Where desired, states most often achieve FTE-related savings by eliminating unfilled positions in the near-term and through retirements and attrition over the long term.

Our methodology also identifies non-dollar-quantifiable process-improvement benefits/cost savings (intangible items). Examples include the following:

- Reduced cycle times;
- Realignment of processes in support of a strategic initiative(s);
- Increased data and reporting accuracy; and
- Improved usefulness of information.

We employ a four-step process for estimating *Value Pocket* benefits that includes the following:

1. Identify Applicable *Value Pockets*

During this step, we identify the significant, dollar-quantifiable process-improvement benefits that could potentially be realized from implementing the financial management, purchasing, and HR/Payroll functionality of a modern ERP system statewide.

2. Conduct ISG's *Value Pocket* Survey and Analyze the Results

During this step, we: (1) conduct ISG's *Value Pocket* Survey, (2) compile and analyze the survey's results, and (3) follow up with the respondents, as appropriate.

3. Estimate *Value Pocket* Benefits

During this step, we apply ISG's *Value Pocket* Savings Factors to the *Value Pocket* Survey results in order to dollar-quantify the savings/benefits that could potentially be realized from the statewide implementation of an ERP system.

4. Determine the Assumed Timing of the Realization of the Estimated *Value Pocket* Benefits

During this step, we determine the assumed timing of the realization of *Value Pocket* benefits during a multi-year planning period, which is typically 10 years. *Value Pocket* benefits will not begin to be realized until some period of time after the assumed ERP system has been placed into production, as the ERP system would enable the achievement of the *Value Pocket* benefits.

Each of these four steps, along with the results associated with each, is described below.

Step 1: Identify Applicable *Value Pockets*

During this step, we identified *Value Pockets* that: (1) appeared to be applicable to the State's existing financial management and HR/Payroll technology environment, (2) could be credibly dollar-quantified, and that (3) the dollar-quantified amounts would likely be material.

ISG's *Value Pocket* analysis includes two types of *Value Pockets*:

1. Effort-Based *Value Pockets*

Effort-based *Value Pockets* are activities that would be eliminated, as well as activities that would likely require significantly less effort to perform, if those activities were supported by the functionality of a modern, fully integrated ERP system.

2. Metric-Based Value Pockets

Metric-based *Value Pockets* are not based on the number of hours of effort (and associated compensation) required to perform *Value Pocket* activities but on the values of other metrics (e.g., dollar balances, postage costs).

During the course of the meetings conducted with each of the participating agencies in performing the **Evaluate Existing Enterprise Administrative Systems** phase of our methodology, we identified the *Value Pockets* that would likely be applicable to the State’s financial management and HR/Payroll technical environment, assuming an ERP system were implemented statewide. In identifying these benefits, we drew from the sizable, proprietary inventory of *Value Pockets* that ISG has built over the years in performing statewide ERP evaluation efforts similar to what is required for this portion of the business case analysis.

Effort-Based Value Pocket Results

We identified 100 effort-based Value Pockets, as summarized by functional area in Exhibit 22.

Exhibit 22 – Number of Effort-Based Value Pockets Identified by Functional Area

Functional Areas	# of Effort-Related Value Pockets
Accounts Payable	8
Accts. Receivable / Billing	5
Asset Management	5
Budget Development	3
Cash Management	4
Cost Allocation	6
GL / Budgetary Control	8
Grant Accounting	7
Project Accounting	6
Applicant Services	5
Benefits Administration	5
Payroll	4
Performance Management	1
Personnel Administration	5
Position Control	2
Timekeeping	5
Training	5
Fleet Management	4
Procurement	12
Total	100

For the functional areas within the scope of the analysis, we identified current activities performed by the State that would be eliminated or significantly reduced through implementation of a statewide ERP system. The following activities apply across all functional areas and would possibly be eliminated or reduced as a result of the ERP system:

- Vendor developed and supported integration, which would eliminate/reduce much of the following:
 - Generating ad hoc and standard reports that require retrieving data from multiple sources;
 - Manually entering the same data into a “shadow” system(s) that is also entered into a primary system;
 - Tracking transactions spread over multiple systems (e.g., avoid tracking transactions using spreadsheets, paper logs, etc.);
 - Researching, troubleshooting, and reconciling transactions and data across multiple systems (central system, agency tracking system, etc.).
- Enhanced functionality such as the following:
 - Vendor, employee, and manager self-service; and
 - Automated workflow routings and approvals.

Metric-Based Value Pocket Results

We identified five (5) metric-based Value Pockets that we believe would provide material benefits by reducing:

- Accounts receivable balances and associated carrying costs
- Bad debt expense
- The cost of vehicle downtime
- Annual maintenance and repair costs
- Cost of goods and services purchased statewide

Step 2: Conduct ISG’s Value Pocket Survey and Analyze the Results

We provided an overview of, and answered questions pertaining to, the Value Pocket Survey process during a meeting with the primary contact(s) for each of the participating agencies, among others. We explained that we would conduct the survey to collect data that would serve as input into ISG’s Value Pocket calculations. Following the meeting, we: (1) developed and issued the survey, which included the Value Pockets we identified, (2) answered questions the respondents had as they completed the survey, and then (3) compiled and analyzed the responses to the survey. Once we received and reviewed the survey responses, we followed up with the respondents, as appropriate.

Effort-Based Value Pocket Results

Seven (7) of the 19 participating agencies responded to the *Value Pocket* survey. Given the limited response to the survey, we proposed to project leadership that we employ an alternative approach to

estimate the effort-based process-improvement benefits that the new system could potentially yield; Project leadership supported the alternative approach.

We based the alternative approach on end-users counts for the *STARS* system (financial management) and the *IPOPS* system (HR/Payroll). The steps of the alternative approach follow:

- Identified the total number of Transaction Users and Information Users of the *STARS* and *IPOPS* systems;
- Calculated the estimated benefits-loaded compensation for each user type;
- Estimated the approximate percentage of time each user type spends performing system-related activities; this is the approximate percent of time the user type would use the ERP system; and
- Estimated the annual efficiency improvement, in terms of FTEs and associated benefits-loaded compensation using an assumed efficiency-improvement percentage for each user type of 10% for Transaction Users and 5% for Information Users.

The results of the alternative approach are presented in the “Effort-Based Process-Improvement Results (alternative approach to ISG’s Effort-Based Value Pocket approach)” section below.

Metric-Based Value Pocket Results

Of the four identified metric-based Value Pockets that were included in the Value Pocket survey, only one provided an estimated benefit that was material. Exhibit 23 shows the estimated reduction in average annual accounts receivable balances in two agencies.

Exhibit 23 – Estimated Values for Metric-Based Value Pockets

Functional Area	Value Pocket Measure	Consolidated \$ Amount / Count	Comments
Accounts Receivable / Billing	<p>Average annual Accounts Receivable balance (excluding FHWA) (Only answer this question if your agency does not utilize a truly integrated, full-featured Accounts Receivable system with modern system functionality that could help improve data accuracy, visibility, and related communication, which in turn could help reduce the aggregate AR balance, thereby lowering the interest cost of carrying AR)</p>	\$ 27,052,095	<p>Fish & Game = \$4,052,095 Health = \$23,000,000</p>

Step 3: Estimate Value Pocket Benefits

During this step, ISG estimated the *Value Pocket* benefits by applying *Value Pocket* Savings Factors to the data we collected during Step 2. Some of the *Value Pocket* Savings Factors are intuitively obvious (e.g., all of the effort currently devoted to system reconciliations that would no longer be required after the implementation of a fully-integrated ERP system would be saved/avoided), and others are based on ISG's experience with statewide implementations of ERP systems. We then evaluated the results of the analysis for reasonableness and made adjustments, as appropriate.

Effort-Based Process-Improvement Results (alternative approach to ISG's Effort-Based Value Pocket approach)

Presented below are the results of our estimation of the effort-based process-improvement benefits the State could potentially realize from the implementation of a statewide ERP system. As shown in Exhibit 24, our analysis resulted in the estimation that approximately 66.7 FTEs of effort is spent annually performing activities that could potentially be saved/avoided/redirected if the financial management and HR/Payroll functionality of an ERP system were implemented statewide. The associated annual compensation for the 66.7 FTEs equates to approximately \$4.6 million. Note that the estimated savings/benefits of approximately \$4.6 million are approximately 4% of the estimated \$116.7 million of total benefits-loaded compensation of the system users included in this analysis. Restated, this analysis suggests that a typical user of the STARS or IPOPS systems could save, on average, 4% or 1.6 hours per week through ERP-enabled system efficiencies. Based upon interviews conducted with the participating agencies, this level of efficiency saving appears achievable and conservative (i.e., the efficiency savings could potentially be much greater).

Exhibit 24 – Estimated Effort-Based Process-Improvement Benefits

STARS

User Types	# of Users	Approx. Avg. Base Comp.	Benefits-Load Comp. @ 48%	Total Benefits-Loaded Comp.	Assumed % of Time Spent on System-Related Activities	FTE Efficiency Improvement			\$ Efficiency Improvement		
						@ 5%	@ 10%	Total	@ 5%	@ 10%	Total
Transaction Users	503	\$ 45,000	\$ 66,600	\$ 33,499,800	75%		37.7	37.7		\$ 2,512,485	\$ 2,512,485
Information Users	322	\$ 60,000	\$ 88,800	\$ 28,593,600	20%	3.2		3.2	\$ 285,936		\$ 285,936
Total	825			\$ 62,093,400				40.9			\$ 2,798,421

IPOPS

User Types	# of Users	Approx. Avg. Base Comp.	Benefits-Load Comp. @ 48%	Total Benefits-Loaded Comp.	Assumed % of Time Spent on System-Related Activities	FTE Efficiency Improvement			\$ Efficiency Improvement		
						@ 5%	@ 10%	Total	@ 5%	@ 10%	Total
Transaction Users	291	\$ 45,000	\$ 66,600	\$ 19,380,600	75%		21.8	21.8		\$ 1,453,545	\$ 1,453,545
Information Users	397	\$ 60,000	\$ 88,800	\$ 35,253,600	20%	4.0		4.0	\$ 352,536		\$ 352,536
Total	688			\$ 54,634,200				25.8			\$ 1,806,081

Total

User Types	# of Users	Approx. Avg. Base Comp.	Benefits-Load Comp. @ 48%	Total Benefits-Loaded Comp.	Assumed % of Time Spent on System-Related Activities	FTE Efficiency Improvement			\$ Efficiency Improvement		
						@ 5%	@ 10%	Total	@ 5%	@ 10%	Total
Transaction Users	794	\$ 45,000	\$ 66,600	\$ 52,880,400	75%		59.6	59.6		\$ 3,966,030	\$ 3,966,030
Information Users	719	\$ 60,000	\$ 88,800	\$ 63,847,200	20%	7.2		7.2	\$ 638,472		\$ 638,472
Total	1,513			\$ 116,727,600				66.7			\$ 4,604,502

Please note that the totals in the schedule above may reflect variances due to rounding.

Metric-Based Value Pocket Results

Data was collected for Accounts Receivable/Billing metric-based *Value Pocket* using the *Value Pocket* survey. The metric-based Procurement *Value Pocket* was evaluated directly with the Department of Administration's Division of Purchasing. The combined estimated benefits/savings that could potentially be realized from the metric-based *Value Pockets* are presented in Exhibit 25.

Exhibit 25 – Estimated Savings for Metric-Based Value Pockets

Functional Area	Value Pocket Measure	Consolidated \$ Amount / Count	Savings Factors	Onetime Benefit	Annual Interest	Annual Savings	Comments
Accounts Receivable / Billing	Average annual Accounts Receivable balance (excluding FHWA) (Only answer this question if your agency does not utilize a truly integrated, full-featured Accounts Receivable system with modern system functionality that could help improve data accuracy, visibility, and related communication, which in turn could help reduce the aggregate AR balance, thereby lowering the interest cost of carrying AR)	\$ 27,052,095	5.0%	\$ 1,352,605	3%	\$ 40,578	Fish & Game = \$4,052,095 Health = \$23,000,000
Procurement	Reduction in cost of goods and services purchased statewide (The new system's catalog/contract eProcurement functionality will help to reduce "maverick" spend and improve spend intelligence, resulting in the State being better able to leverage its purchasing power, and thereby reduce costs)	\$ 181,000,000	3.0%	\$ -		\$ 5,430,000	
				\$ 1,352,605		\$ 5,470,578	

Please note that the totals in the schedule above may reflect variances due to rounding.

As indicated in Exhibit 25, estimated onetime metric-based *Value Pocket* benefits total approximately \$1.35 million. The Accounts Receivable/Billing onetime benefit represents cash balances tied up as working capital. Utilizing a modern, full-featured ERP system would allow for more effectively managed Accounts Receivable and reduced unavailable cash. The reduction in working capital account balances would essentially lead to incremental cash available (i.e., cash inflows) to the State. We included these working capital reductions in the cash flow analysis in this report (refer to the results of the Perform Financial Analysis phase).

Also as indicated in Exhibit 25, estimated ongoing annual metric-based *Value Pocket* benefits total approximately \$5.47 million.

Following is information regarding the Procurement *Value Pocket* in Exhibit 26: Reduction in the Cost of Goods and Services Purchased Statewide:

The estimated dollar benefit for this *Value Pocket* is the estimated savings from the reduction in the cost of goods and services procured by the State that could potentially be realized from the implementation of the catalog/contract eProcurement functionality of a modern, fully integrated ERP system. This functionality would enable State employees to shop via a Web browser for goods/services maintained in catalogs that contain items the State has on contract. These catalogs would list the State's negotiated prices, terms, etc., as well as commodity-level data. The catalogs could reside inside the State's firewall and/or at vendors' sites, in which case, the State employee would "punch-out" to shop the external catalogs. The online order would automatically create a requisition for the items the State employee selects when he/she checks out, and the requisition would contain commodity-level data from the catalog. The system would electronically route the requisition via workflow for approval. If approved, the requisition could generate a purchase order (PO) for the item(s), and the PO could then be sent electronically to the vendor. Employees could also make purchases via State Pcards using the new system.

The reduction in the cost of goods and services would come from the following two (2) sources:

(1) Improved Spend Intelligence

The enhanced spend intelligence gained by capturing more commodity-level data on items that are procured would enable the State to leverage its purchasing power and put the State in a significantly stronger negotiating position with vendors.

(2) Reduced "Maverick" Spend (i.e., in general, purchases made that are not in compliance with State policy, and in particular, not utilizing contracts the State has negotiated with vendors). The new system's ease of use, along with State-mandated and enforced use of the system, would result in State agencies procuring more goods and services through favorable contractual agreements the State has negotiated with vendors.

We have evaluated and included this *Value Pocket* in most of the business case analyses we have perform for implementing a statewide ERP system; in certain cases, this *Value Pocket* is not applicable. The steps in our standard process for dollar-quantifying this *Value Pocket* benefit follow:

▪ **Identify relevant goods and services categories**

We work closely with a state's Procurement personnel to identify the categories of goods and services likely to be good candidates for strategic sourcing which the State has not already identified as such. Strategic sourcing involves performing a thorough analysis of the procurement history and anticipated future procurement activity for the goods/services. The resulting spend intelligence is used to negotiate favorable statewide contracts.

- **Compile the amount of expenditures for the identified relevant goods and services**

For the relevant goods and services, we identify and compile the dollar expenditures for the procurement transactions with commodity coding at a level that is detailed enough to sufficiently understand what was procured and, thereby, would be able to effectively manage that spend.

- **Apply ISG’s Value Pocket Savings Factor**

We work with the state’s Procurement personnel to determine the *Value Pocket* Savings Factor percentage to apply to the estimated relevant spend. In working with various states’ Procurement personnel, we have determined that states can easily reduce identified relevant spend by 1% to 3% if that spend were brought under better management, as enabled by improved spend intelligence.

We were not able to perform ISG’s standard detailed analysis of this *Value Pocket* benefit as the State could not provide the data needed to perform the analysis. As a result, we developed a high-level, conservative, comparative estimate based on our experience analyzing this *Value Pocket* benefit for other states. Exhibit 26 provides the comparative analysis.

Exhibit 26 – Comparative Analysis of Value Pocket Benefit

Estimated Potential Reduction in the Cost of Goods and Services Purchased Statewide

State	2011 Expenditures (\$ millions)	Estimated Relevant Spend (\$ millions)	Relevant Spend as a % of 2011 Expenditures	Savings Factor	Estimated Annual \$ Savings (\$ millions)
#1	\$ 14,778	\$ 300	2.0%	1.0%	\$ 3.0
#2	\$ 32,082	\$ 320	1.0%	2.5%	\$ 8.0
#3	\$ 21,492	\$ 261	1.2%	3.0%	\$ 7.8
#4	\$ 30,174	\$ 758	2.5%	1.0%	\$ 7.6
Idaho*	\$ 7,242	\$ 181	2.5%	3.0%	\$ 5.4

*2013 expenditures

As indicated in Exhibit 26, we estimated the State’s annual dollar benefit for this Value Pocket to be \$5.4 million (“Estimated Annual \$ Savings”).

First, we developed a high-level estimate of the State’s relevant spend, and then we applied a *Value Pocket* Savings Factor to the estimated relevant spend to develop an estimated dollar benefit for this Value Pocket. The specific steps we took in performing this analysis follow:

- Identified certain states for which we have analyzed this *Value Pocket* benefit to use for comparison purposes.
- Populated all of the entries in the table above except for those in the following columns for Idaho:
 - Relevant Spend as a % of 2011 Expenditures,
 - Estimated Relevant Spend,
 - Savings Factor, and
 - Estimated Annual \$ Savings.

Note that the values in the “2011 Expenditures” column are the estimated “Total State Expenditures—Capital Inclusive” for fiscal year 2011 from a report issued by the National Association of State Budget Officers (NASBO) entitled “State Expenditure Report – Examining Fiscal 2009 – 2011 State Spending”.

- Estimated relevant spend for Idaho by applying an assumed “Relevant Spend as a % of 2011 Expenditures”, based on the derived percentages for the comparative states, to the State’s estimated 2013 expenditures in order to arrive at an “Estimated Relevant Spend” amount. We used the percentage at the upper end of the comparative range, 2.5%, given that Idaho’s lack of commodity-code information prevents the State from effectively managing much of its spend.
- Applied a *Value Pocket* Savings Factor of 3% to the estimated relevant spend for Idaho to calculate an “Estimated Annual \$ Savings” amount of \$5.4 million.

Step 4: Determine the Assumed Timing of the Realization of the Estimated Value Pocket Benefits

During this step, we determined the assumed timing of the realization of the estimated *Value Pocket* benefits during the multi-year planning period. The assumed timing of this realization is a function of: (1) the assumed timing of when the State would implement certain ERP functionality for certain agencies, and (2) the assumed amount of time it would likely take for the respective enhanced functionality to yield the estimated benefits. The State would not begin to realize *Value Pocket* benefits until some period of time after the assumed ERP system had been placed into production, as the ERP system would enable the achievement of the *Value Pocket* benefits. Therefore, it is assumed that estimated *Value Pocket* benefits would be realized for an agency after the agency goes live on the pertinent ERP system functionality as shown in Exhibit 27.

Exhibit 27 – Realization of Process-Improvement Benefits

Time Period	% of Process-Improvement Benefits Realized	
	Phase 1	Phase 2
Year of go-live	0%	0%
1 st year following go-live	50%	50%
2 nd year following go-live	100%	100%

Also note the continued assumption that the State would realize most of the effort-based benefits across time through assignment to higher-value activities, attrition, employee retirement, reassignment to approved but unfilled positions, etc. The summarized results from Step 4 are presented in Exhibit 28.

Exhibit 28 – Estimated Realization of Process-Improvement Benefits by Fiscal Year(\$ millions)

Inflation	Value Pocket Category	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Total
Not Inflated	Effort-Based Process Improvements	-	-	-	-	1.4	3.7	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	41.9
	Ongoing Annual Metric-Based Value Pockets	-	-	-	-	2.7	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	52.0
	Onetime Metric-Based Value Pockets	-	-	-	-	0.3	1.0	-	-	-	-	-	-	-	-	1.4
	Total (not inflated)	-	-	-	-	4.5	10.2	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	95.2
Inflated @ 2% per Annum	Effort-Based Process Improvements	-	-	-	-	1.5	4.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	6.0	50.1
	Ongoing Annual Metric-Based Value Pockets	-	-	-	-	2.9	6.0	6.2	6.3	6.4	6.5	6.7	6.8	6.9	7.1	61.9
	Onetime Metric-Based Value Pockets	-	-	-	-	0.4	1.1	-	-	-	-	-	-	-	-	1.5
	Total (inflated)	-	-	-	-	4.8	11.2	11.3	11.6	11.8	12.0	12.3	12.5	12.8	13.0	113.4

Please note that the totals in the schedule above may reflect variances due to rounding. Also note that an assumed 2% per annum inflation factor was applied to the estimated Value Pocket benefits.

4.5 Identify Intangible Benefits

In addition to the quantitative activities undertaken to estimate avoided costs and process improvement savings, additional tasks were performed during this activity to identify potential intangible benefits that could not be quantified in our analysis. Those additional tasks included:

- Interviewing participating agencies' business and technical staff responsible for managing the administrative system.
- Leveraging data obtained from surveys.

Results

Throughout the course of the study, key intangible benefits were identified that could potentially be realized from implementing an ERP system:

- Enabling the generation of more accurate, consistent, accessible, timely, and useful/meaningful information. Specifically, maintaining:
 - Transaction data in a central database that is: (1) updated in real-time as well as in a central data warehouse, and (2) powerful query and reporting tools;
 - The ability to standardize the use of the chart of accounts elements used in budget and financial reporting;
 - Simplified and streamlined fund accounting; and
 - Standardized expenditure classifications used across agencies.
- Enabling enhanced reporting capabilities. Specifically, reporting capabilities that enable:
 - Faster generation of information requested by State leadership and the Legislature;
 - Improved taxpayer transparency by enhanced reporting across state government;
 - Greater return on citizens' investments – better information leads to improved management decision-making and aids State leadership in maximizing the return on citizens' investments; and
 - Improved reporting of uses of the State's borrowing by enabling decision-makers to easily identify expenditures with the debt issuance.
- Enabling greater accounting detail postings from agency systems. Currently, many agency systems post summarized accounting information in the State's financial system via automated interfaces. Going forward, the intent would be to capture detailed postings to improve reporting and available level of detail.
- Enabling faster system changes needed to meet new business requirements. It is often difficult to modify older systems when the need for changes arise (i.e., changes in policy, legislation, etc.). Older systems typically require "hard-coding" (i.e., changes must be made to the actual computer code). Whereas, with newer systems many system changes can be accomplished by simply changing data table entries. The ability to make system changes faster also improves the capability to maintain compliance with changing laws, regulations, and industry standards.
- Improving the level of customer service. Web-based functionality makes certain information readily available to many of the State's internal and external customers (i.e., stakeholders and citizens), reducing the amount of time customers have to wait to receive products/services, as well as

potentially expanding the hours during which such services would be made available via self-service functionality and enhance the overall performance and image of State government.

- Improving financial controls through improved security, role-based segregation of duties, and configurable approval rules.
- Providing for better tracking of the State's assets and, thereby, helping agencies and the Legislature in budget planning by identifying replacement costs and schedules.
- Reducing technology risk. Aging systems and old technologies expose the State to significant risk – some technologies are becoming obsolete, and it will become increasingly difficult to find technical staff to maintain these systems.
- Allowing the State to shift much of its critical processing from internally supported applications based on aging technology to vendor-supported and upgradeable software that is protected against technological obsolescence and updated based on ongoing vendor research and development.
- Achieving business process standardization which reduces training costs and enables the enterprise-wide implementation of industry best practices, as well as Idaho-specific best practices.
- Enabling programmatic agencies to re-purpose IT resources to focus on mission-critical systems rather than on supplemental administrative systems.
- Addressing the loss of institutional knowledge due to pending retirements in the State workforce through increased automation of business processes.
- Enabling a more flexible, productive and mobile State workforce.

5.0 Financial Analysis

In this phase, the estimated and dollar-quantifiable cost components of a potential new ERP system are weighed against the estimated and dollar-quantifiable system savings and process-improvement benefits of the new system (i.e., process-improvement benefits and Avoided Systems Costs) to calculate the net benefit that investing in a new, fully integrated ERP system could potentially yield. During this phase, we perform standard financial analyses of dollar-quantifiable net benefits/savings, including:

- Net Present Value (NPV)
- Internal Rate of Return (IRR)
- Payback Point

Exhibit 29 summarizes the results of our analysis.

**Exhibit 29 – Schedule of Estimated Net Costs and Benefits/Savings from Implementing ERP
(\$ millions)**

Costs	New System Costs	Fiscal Years													Total	
		Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12		Yr 13
		Production Support														
		Plan & Acquire														
		Financials & Procurement														
		HR/Payroll														
		Production Support														
		Fiscal Years														
		Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Total
	Pre-Implementation / Implementation Costs	(1.1)	(24.1)	(26.1)	(23.3)	(17.0)										(91.7)
	Implementation Contingency		(2.2)	(3.4)	(3.0)	(2.4)										(11.0)
	Ongoing Operating Costs (excludes end user costs)				(3.6)	(5.7)	(7.8)	(8.6)	(15.4)	(8.3)	(8.6)	(9.6)	(9.8)	(10.0)	(10.2)	(97.5)
	Total ERP Costs	(1.1)	(26.3)	(29.5)	(29.9)	(25.1)	(7.8)	(8.6)	(15.4)	(8.3)	(8.6)	(9.6)	(9.8)	(10.0)	(10.2)	(200.2)
	Cumulative Total ERP Costs	(1.1)	(27.5)	(56.9)	(86.8)	(111.9)	(119.7)	(128.3)	(143.8)	(152.1)	(160.7)	(170.2)	(180.0)	(190.0)	(200.2)	
	Avoided System Costs															
	Ongoing Existing-System Costs				3.3	4.5	7.7	9.0	9.2	9.4	9.6	9.7	9.9	10.1	10.3	92.6
	Future Investments in Current Systems and Planned/Anticipated New Systems				0.1	0.2	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	5.8
	Total Avoided Costs	-	-	-	3.4	4.7	8.2	9.5	9.8	10.0	10.2	10.4	10.6	10.8	11.0	98.5
	Process-Improvement Benefits															
	Effort-Based Benefits	-	-	-	-	1.5	4.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	6.0	50.1
	Ongoing Metric-Based Benefits	-	-	-	-	2.9	6.0	6.2	6.3	6.4	6.5	6.7	6.8	6.9	7.1	61.9
	Onetime Metric-Based Benefits	-	-	-	-	0.4	1.1	-	-	-	-	-	-	-	-	1.5
	Total Process-Improvement Benefits	-	-	-	-	4.8	11.2	11.3	11.6	11.8	12.0	12.3	12.5	12.8	13.0	113.4
	Total Benefits	-	-	-	3.4	9.5	19.4	20.9	21.3	21.8	22.2	22.7	23.1	23.6	24.0	211.9
	Cumulative Total Benefits	-	-	-	3.4	12.9	32.3	53.2	74.5	96.3	118.5	141.2	164.3	187.8	211.9	
	Net Analysis: New System Costs less Total Benefits															
	Net (ERP Costs less Total Benefits)	(1.1)	(26.3)	(29.5)	(26.5)	(15.6)	11.6	12.3	5.9	13.4	13.7	13.1	13.3	13.6	13.9	11.7
	Cumulative Net	(1.1)	(27.5)	(56.9)	(83.4)	(99.0)	(87.4)	(75.1)	(69.2)	(55.8)	(42.2)	(29.1)	(15.8)	(2.2)	11.7	
	Payback Year															11.7
	PV of Net@ 4% per annum	(1.1)	(25.3)	(27.3)	(23.5)	(13.3)	9.5	9.7	4.5	9.8	9.6	8.8	8.7	8.5	8.3	(13.1)
	NPV of Net@ 4% per annum	(1.1)	(26.4)	(53.7)	(77.2)	(90.6)	(81.0)	(71.3)	(66.9)	(57.0)	(47.4)	(38.6)	(30.0)	(21.5)	(13.1)	
	Payback Year (NPV basis @ 4% per annum)															
	PV of Net@ 6% per annum	(1.1)	(24.9)	(26.2)	(22.2)	(12.4)	8.7	8.7	3.9	8.4	8.1	7.3	7.0	6.8	6.5	(21.5)
	NPV of Net@ 6% per annum	(1.1)	(26.0)	(52.2)	(74.4)	(86.8)	(78.1)	(69.5)	(65.5)	(57.1)	(49.0)	(41.7)	(34.7)	(28.0)	(21.5)	
	Payback Year (NPV basis @ 6% per annum)															
	IRR (if > 0)															1.6%

Please note that the totals in the schedule above may reflect variances due to rounding.

As shown in Exhibit 29, ISG estimates that the cost to acquire and implement a statewide ERP system to be approximately \$102.7 million. On-going operational costs would be approximately \$97.5 million over ten years. Also as indicated in Exhibit 29, those ERP costs would be offset by \$98.5 million in Avoided Systems Costs plus \$113.4 million in process-improvement benefits/savings, resulting in a net benefit of \$11.7 million (refer to the “Total” column in Exhibit 29). Note that an annual net benefit of at least \$14 million has been calculated for Yr. 14 and beyond (refer to the “Net (ERP Cost less Benefits/Savings)” row in the schedule above). This level of net benefit would continue beyond the planning period documented in this work effort for some period of time, and could continue for a number of years into the future, assuming the State continued to keep the system relatively current. It is believed that the annual benefit of at least \$14 million far exceeds the cost of the effort required to stay current on the ERP system.

Based on the estimated values in Exhibit 29, the investment in an ERP system has a negative Net Present Value (NPV) during the planning period. It is estimated that the investment would achieve a positive NPV in Yr. 15 at a discount rate of 4% per annum and in Yr. 17 at a discount rate of 6% per annum.

We took a conservative approach (i.e., did not underestimate the cost and did not overestimate the benefits) to estimate ERP Costs, as well as Avoided Systems Costs savings and process-improvement benefits. Our approach included using conservative cost factors (e.g., assuming higher hourly rates, number of modification hours, State backfill percentage, etc.), as well as conservative benefit factors (e.g., assuming lower savings factors, including savings from a small number of agencies).

- ERP Costs

We believe our estimates of the costs to acquire, implement, and operate a statewide ERP system, with the functional and organizational scope of this analysis, are conservative; plus, we included a contingency amount of \$11.0 million in the estimate to address any additional costs that have not been included in our estimates but could result from uncertain project-related items, conditions, and/or events, based on our experience with a number of other statewide ERP implementation initiatives.

- Avoided Systems Costs

We believe the estimate of Avoided System Costs savings is very conservative as:

- Only 11 agencies responded to the Avoided System Costs survey; therefore, the resulting estimate of Avoided Systems Costs is understated by the amount of any savings that could come from other agencies retiring systems and avoiding planned systems;
- Two (2) of the 19 participating agencies provided estimates of additional planned investments in financial management and HR/Payroll systems (i.e., replacement systems, new functionality, etc.) for FY 2015 through FY 2024, collectively totaling \$2.6 million for the planning period. Given our experience in other states and the limited response from some agencies, we assume the potential avoided systems costs are far greater than the amounts derived from the estimates provided by these two agencies; and
- In conducting the financial analysis, we assumed estimated Avoided Systems Costs benefits/savings to be realized at 75% in the year the respective portions of the ERP system are placed into production and 100% each year thereafter.

- Process-Improvement Benefits (Value Pocket Benefits)

In conducting the financial analysis, we assumed the estimated process-improvement benefits to be realized at 0% for the year relevant portions of the ERP system were placed into production, 50% the 1st year following go-live, and 100% each year thereafter.

6.0 Recommendations

Recommended Alternative

ISG recommends that the State select Alternative 2 - Implement Full ERP for addressing current and future statewide and agencies' administrative business needs. We recommend this alternative because it would:

- Enable the State to potentially realize a reasonable return on its investment in the acquisition, implementation, and operation of a statewide ERP system;
- Reduce (and in some cases eliminate) future funding requests for agency-specific administrative systems that would provide functionality not provided by existing statewide systems;
- Increase the efficiency and effectiveness of administrative processes via ERP's enhanced functionality and integration. For example, an ERP system would provide functionality that is currently lacking, such as billing and accounts receivable processing. Additionally, integrated functionality for Budget Preparation, Cost Allocation, and automated workflow could replace many functions primarily accomplished through spreadsheets in today's environment;
- Enable the generation of more accurate, consistent, accessible, timely, and useful/meaningful information by: (1) maintaining transaction data in a central database that is updated in real-time, as well as in a central data warehouse, and (2) implementing powerful query and reporting tools;
- Reduce technology risk. Aging systems and old technologies expose the State to significant risk. Some technologies are becoming obsolete, and it will become increasingly difficult to find technical staff to maintain these systems;
- Enable the State to move to upgradeable, vendor-supported commercial off-the-shelf (COTS) software, and perhaps managed services, to match state IT workforce responsibilities to the expected state IT workforce capacity;
- Enable faster system changes needed to meet new business requirements and maintain compliance with changing laws, regulations, and industry standards;
- Improve financial controls through improved security, role-based segregation of duties, and configurable approval rules;
- Provide for better tracking of the State's assets and, thereby, help agencies and the Legislature in budget planning by identifying replacement costs and schedules; and
- Address performance, design, security, chart of accounts, and user interface limitations from the design and technology set used for *STARS* and *EIS/I-TIME/IPOPS* that prevent the State from meeting key accounting, budgeting, reporting and other objectives and policies.

Furthermore, ISG makes these additional recommendations to align the State's ERP implementation strategy with the details of our business case analysis:

- Department of Health and Welfare should retire its FISCAL system and other administrative systems (within scope of the new ERP system) and replace them with the new statewide ERP system;
- Leverage new ERP functionality to replace the approximately 75 agency-specific systems within scope of the new ERP system;
- ITD should remain on its current financial system during implementation of the new statewide ERP system. The State should reevaluate transition of ITD to the statewide system after replacement of STARS;
- Continue current mainframe migration efforts to reduce the operating cost of current systems and reliance on dated mainframe technology; and
- Initiate statewide procurement standardization to improve data available for "spend analysis" and increase leverage in negotiations for goods and services.

As stated previously, *STARS* and *EIS/I-TIME/IPOPS* is based on dated technology and lack the flexibility that would make it feasible to enhance the software to provide the level of functional support that is available in a modern ERP system. This assertion is supported by the fact that no other state has pursued that strategy and, instead, has replaced its Financial Management and Human Resource/Payroll systems with a modern ERP system. It appears that it is more a case of when the State should move to an ERP system than if it should move to an ERP system.

It is our understanding that the State would need to pursue executive support for acquiring and implementing software to replace *STARS* and *EIS/I-TIME/IPOPS* and to obtain ongoing contractor support for the necessary hosting, disaster recovery, IT maintenance, and operations support. Despite providing and implementing substantially more functionality as compared to that in *STARS* and *EIS/I-TIME/IPOPS*, the estimated costs (once adjusted for inflation) of Alternative 2 are less than were required for the *STARS* implementation in fiscal years 1990-1994.

Considerations for Moving Forward with an ERP Implementation

The statewide implementation of the financial management and HR/Payroll functionality of an ERP system is a significant undertaking. It is recommended that the State establish minimum requirements for the software and systems integrator. Minimum software requirements should include only systems that cover the breadth of necessary functionality and have been satisfactorily implemented and are successfully operating in other states. Minimum systems integrator qualifications would be a vendor that has successfully implemented the selected software package in a statewide project in the past three years.

Although the Idaho Transportation Department (ITD) has licensed and is successfully using the CGI *Advantage* ERP financial and HR/payroll products, investment in a statewide ERP is a "once in a generation" endeavor. The State should carefully evaluate all candidate Tier 1 products in the market and the merits of each to meet the enterprise needs of the State. Also, if the State does consider leveraging the ITD solution, it is recommended that an in-depth analysis be performed to better understand how ITD has configured their system (e.g., project-centric and chart of accounts definitions), as some of the cornerstone implementation decisions made by ITD may not be ideal for the State as a whole.

Project preparation and planning is an essential first step to successfully acquiring and implementing a new ERP system. As with any large, enterprise-wide project, an established, detailed, and methodical approach should be taken to increase the likelihood of project success. This includes rigorous change management and scope control.

Pre-implementation activities that prepare the State for a large ERP project are a sound investment. The State should undertake pre-implementation activities approximately one year prior to beginning implementation. Pre-implementation activities may include but are not limited to:

- Documenting central and key agency “as-is” business processes;
- Reviewing how different agencies use *STARS* account coding and developing a model chart of accounts;
- Understanding which agencies’ programmatic systems (and what types of transactions) will interface with the new system and assessing the impact on agencies’ business systems and IT operations;
- Performing more in-depth analysis of the feasibility of de-commissioning certain additional agency systems; we were not able to conduct the required analysis during our brief, high-level interactions with these agencies;
- Assessing the current *STARS* vendor file and developing a data validation and consolidation plan for vendor data;
- Establishing what interim IT investments the State will make for central systems and agency systems before a new statewide ERP is in production;
- Establishing a Project Management Office and infrastructure; and
- Recruiting and building the State’s internal project team.

Finally, an Executive Sponsor team should be established during the planning phase to provide leadership across State-government political boundaries to address overarching decisions, to establish critical success factors and to help recruit the State’s internal project team. A Steering Committee composed of key agencies, agencies representing all branches of State government, and a small agency advocate should be formally chartered to guide project direction.

Based on the results of this analysis and our experience providing project management and project oversight services to other states that have successfully implemented ERP systems statewide, ISG has provided a number of recommendations for the State to consider when making future plans regarding the implementation of an ERP system. Those recommendations are presented in [Appendix B Recommendations for Moving Forward with an ERP Solution](#).

Appendix A: Elements of a Modern ERP

Following are descriptions of each functional area included in the assumed scope of a statewide ERP system initiative for this work effort.

Financial Management Functionality

General Ledger and Budgetary Control

The General Ledger is an integrated central repository of statewide financial data. Numerous types of financial transactions are recorded in the General Ledger, both directly and through data received from other ERP modules and from interfacing external systems. The General Ledger is the key function used for financial reporting. The Chart of Accounts is established and maintained in the General Ledger. Additionally, budgetary control is established and enforced through this function. Traditionally, this function is implemented first as most other functions require some interaction with the General Ledger.

Additionally, the General Ledger provides:

- Journal entry processing;
- Recurring transaction generations;
- Interfund/interagency journal vouchers;
- Interfund/interagency billings and receivables;
- Month-end and year-end closing;
- Fund accounting;
- Encumbrances and Pre-encumbrances; and
- Operating budgets.

Accounts Payable

The Accounts Payable function addresses the various means by which the State pays for goods and services. This function records liabilities and payments and performs the automated matching process, which matches the vendor invoice to the original purchase order and the receiving report. The automated match ensures that the invoice complies with quantity and pricing terms defined in the purchase order and that the goods and services were received in good order. Before a payment is processed, a successful “match” must be completed and sufficient budget must exist to cover the payment. The Accounts Payable function shares the vendor file with the Procurement function.

Accounts Payable functionality includes:

- Invoice processing;
- Automated matching process (Purchase Order [PO], Receiving Report, Invoice);
- Disbursement and remittance processing (warrant/check printing, direct deposit, and handling);
- Refund processing;
- Payment holds;

- Discounts;
- Banking information;
- Payment authorization;
- Processing cancelled and stale dated warrants;
- Trust account processing;
- Payment information requests;
- Automated bank reconciliation;
- Form 1099 processing; and
- Procurement/payment card processing.

Accounts Receivable and Billing (includes Cash Receipting)

The Accounts Receivable function is a fully integrated component of the ERP system. The Accounts Receivable function creates invoices, establishes receivables, and records payments received. This function creates and maintains a customer file and accounts for all transactions effecting specific customer accounts. Through ERP integration, the Accounts Receivable function automatically updates the summary Accounts Receivable balances in the General Ledger.

Accounts Receivable functionality includes:

- Customer maintenance;
- Billing/Invoicing;
- Debt set-off;
- Interagency billings;
- Cash receipts processing; and
- Point-of-sale transaction processing.

In addition, the Accounts Receivable function will provide limited collection functionality, including the ability to automatically generate dunning notices.

Budget Development

The ERP Budget Development function enables the development of a state's budget at the agency (operating) and the statewide (allotment) levels. Budget Development integrates with the Human Resources modules to facilitate salary projections and the General Ledger to upload budget data for budgetary control. This module is intended to support the analysis of historical expenditure and budget data, allow "what if" analyses, salary and position budgeting, salary projections, and other types of forecasting.

Additionally, the Budget Development module provides Word Processing and Publishing functionality to support the development of the Governor's budget submissions.

Budget Development functionality required by sophisticated governments has been the "weak link" in ERP systems in the past; so many governments have addressed their budget preparation needs through

electronic spreadsheets or third-party Budget Development applications. That being said, there have been significant functional enhancements to the Budget Development modules in ERP systems in recent years to make them viable solutions for potentially meeting statewide and agency-specific Budget Development needs.

Grants Management

Grants Management includes functionality to manage the full life cycle of a grant from the application process through initiation, grants accounting, ongoing reporting and closeout. This includes situations in which an agency is both a grantee and a grantor.

Grant Management capabilities support the establishment of a grant budget and the recording of expenditure activity against the grant budget and predefined grant budget categories. These capabilities also allow for the reporting of grant activity by period or over the life of the grant award.

Other Grants Management capabilities allow for the recording of detailed information about each grant, grant application activity, as well as grant drawdown activity. In addition, grantees of grants can provide required reporting submissions electronically via the Web.

Project Management

The Project Management functionality addresses the recording, tracking, and reporting of financial data for projects and contracts. This function typically supports the key processes for operating and capital projects, including budget development, project development, execution, and project closure.

The Project Management function typically supports the establishment of a project budget (which is typically linked to a funding source), and the recording of expenditure activity against the project budget (by predefined project task or activity). These modules also allow for the reporting of project activity by period or over the life of the project. The Project Management function also includes the ability to maintain and track against a high-level project schedule and integrate with other scheduling tools such as Oracle Primavera.

Cost Accounting/Allocation

The Cost Accounting/Allocation function supports the development of the annual Statewide Cost Allocation Plan (SWCAP). The purpose of the SWCAP is to allocate administrative and other indirect costs to services provided and programs operated by the State. Additionally, the SWCAP is used to burden federally funded programs with their reasonable, allowable, and allocable share of these administrative and indirect costs. As a result, the State's SWCAP must be approved by the Division of Cost Allocation of the United States Department of Health and Human Services.

This function supports statewide and agency-level Cost Accounting/Allocation requirements to distribute indirect and administrative costs. Agencies are faced with the problem of accurately charging direct and indirect costs to programs, projects, and grants. Agencies employ a variety of methods to distribute labor costs to the various programs, projects, and grants. Integration with the Time Reporting and Payroll Administration modules will provide the cost accounting/allocation function with the time and labor cost information it needs to accurately charge labor costs to the appropriate programs, projects, and grants.

This labor-related data can also be used as an allocation base to allocate non-labor costs. In addition, the Cost Accounting/Allocation function will capture non-financial statistical data (e.g., square footage, number of employees, kilowatt hours, miles of road, etc.) that is also used to allocate non-labor-related costs.

Asset Management

The Asset Management function is used to capture and maintain information associated with the organization's leased, capitalized, and non-capitalized assets. Information maintained by this function includes acquisition cost, asset type, anticipated useful life, location, asset description, model number, serial number, insurance information, and replacement cost.

The Asset Management function provides the ability to track assets for both internal control and financial reporting purposes. This function provides automatic "flagging" of goods as potential capitalized and controllable assets based on specified parameters (selected object codes and threshold amounts) to reduce the possibility of capital assets going unrecorded. This function also provides the ability to define what assets will need to be depreciated, as well as the method of depreciation appropriate for each asset.

Asset Management functionality includes:

- Asset additions and maintenance;
- Disposal, retirement, and theft of assets;
- Surplus property;
- Asset depreciation;
- Physical inventory;
- Capital projects;
- Capital leases; and
- Warranties and service.

Travel

The Travel function is intended for use in processing travel advances, settling travel advances, processing travel card payments, and reimbursing employees for travel expenses.

Cash Management

The Cash Management function processes all cash transactions. Cash payments are made by warrant/check, EFT, and wire transfer. Cash receipt transactions are recorded as agencies receive cash and make deposits to centralized or local bank accounts. Each of these transactions is processed by the cash management function.

Cash Management also maintains a history and status of all payment transactions. This information is made available online to State agencies and to vendors through vendor self-service, which allows agencies to easily respond to inquiries concerning the status of vendor payments and provides vendors with the ability to check the status of their own payments.

Additionally, the Cash Management function provides the capability to fix the State's cash position each day, develop cash projections, and support the identification of cash requirements for both the long and short term. The Cash Management function also performs the Cash Management Improvement Act (CMIA) calculation to support the drawdown of Federal funds.

Procurement and Logistics Functionality

Warehouse Inventory

The Warehouse Inventory function supports the establishment, storage, tracking, and disposal of inventory items, automated inventory replenishment at predefined reorder points, and recording of all inventory activity. The Warehouse Inventory function is typically integrated with the Purchasing and Accounts Payable functions, and checks the General Ledger for funds availability when replenishing goods in inventory.

This function will only be used by organizations that maintain warehouse inventories.

Fleet Management

The Fleet Management function provides an enterprise-wide repository for managing all of the fleet and equipment units, while providing flexibility for managing fleet and equipment either centrally or at the agency level. The Fleet Management function supports a wide range of fleet and equipment types, ranging from passenger vehicles, light duty trucks, buses, and all-terrain vehicles to construction and agricultural equipment.

The Fleet Management function provides a comprehensive fleet inventory, warranty and preventive maintenance scheduling, work order management, parts history, and repair history. It also provides labor tracking/analysis, downtime analysis, fuel management/ analysis, and tire management.

The Fleet Management function supports the management of multiple enterprise or agency-level motor pools and provides support for costing and billing of agencies and third parties for Fleet Management services.

Facilities Management

The Facilities Management function provides a repository to support managing a range of facilities owned and operated by the State.

The Facilities Management function maintains an inventory of facilities, sub-facilities, systems, and sub-systems. The Facilities Management function can provide a tool for tracking building, facility and other space needs of State agencies. It also supports tracking of utility and other operating costs at a facility or sub-facility level. This functionality provides the State with better information to evaluate the total cost to own or operate a facility, and enables more accurate comparisons of facility alternatives.

The Facilities Management function supports tracking warranties and preventive maintenance, scheduling maintenance work crews, managing problem reporting from State employees and the public, and managing work requests, work orders, and work reporting. It also tracks keys and security cards and manage parking assignments and parking priority lists.

Human Resources Management

Personnel Administration

The Personnel Administration module provides for the maintenance of personnel information pertaining to each employee from application through retirement. This information includes the following:

- Basic demographic and address information;
- Emergency contact data;
- Military and other status;
- Equipment tracking;
- Organizational and funding source data;
- Performance history;
- Employment history; and
- Personnel actions (demotion, promotion, transfer, salary increase, leave without pay).

Position Control

The Position Control module supports the maintenance of all budgeted and authorized positions. More specifically, position control provides the following functionality:

- Provides edits to ensure that no personnel action can take place without an available qualified and active funded position;
- Tracks and reports budgeted, filled, frozen and vacant positions;
- Associates career paths to positions;
- Links positions to a funding source; and
- Links positions to required skills and certifications.

Classification and Compensation

The Classification and Compensation module enforces the administration of the State's rules for classifying positions in relation to the grade and step tables used to determine classified employee pay. In addition, this module includes specific functions as follows:

- Maintains job classes and the effective dates for salary tables, including minimum, mid-point, and maximum salary;
- Maintains salary grade and step tables for each job class;
- Calculates future pay increases;
- Calculates additional pay based on flexible, user defined criteria;
- Calculates step, increment, and percentage pay increases for all or a group of employees;
- Projects costs for future fiscal years; and
- Provides analysis of compensation by Chart of Account element.

Payroll Administration

The Payroll Administration module provides for the “gross-to-net” calculation, production, and distribution of payroll warrants and the processing of direct deposits. In addition, this module provides the following functionality:

- Maintains salary, deduction, taxable wages, and pay history by payroll cycle, including pay period, quarterly and year-to-date totals by employee;
- Complies with State, Federal and Local payroll tax withholding and reporting requirements;
- Supports retroactive payment processing;
- Supports recording of manual payments made outside the system, and various pay cycle frequencies;
- Supports recording of on-line payments made outside the payroll cycle;
- Calculates benefit deductions based on rules specified in Benefit Administration module;
- Calculates pay based on Federal, State and user-defined criteria (e.g., pay status, overtime rules);
- Prepares deposit advices for payees;
- Prepares the labor distribution accounting entries for the General Ledger module; and
- Optionally, provides employee travel reimbursement processing.

Time Reporting

Time Reporting addresses the administration of the State's rules for capturing and reporting of time incurred by employee for each payroll cycle. This module includes functions to:

- Support positive and negative (exception) time entry;
- Provide on-line time entry and the charging of time to pre-defined project, activity, or other Chart of Accounts elements;
- Calculate overtime hours and eligibility;
- Support flexible definition of shift and work schedules;
- Control the use of available leave hours; and
- Provide flexible workflow for the review and approval of automated timesheets.

Employee Leave Accounting

Employee Leave Accounting addresses the administration of the State's rules for earning and using the various types of employee leave. In addition, this module provides the following features:

- Determine leave eligibility and maintain leave accruals rate tables;
- Allow employees to request leave on-line with automatic routing for approval;
- Account for the usage, donation, and receipt of donated leave;
- Notify employees of leave that will be lost or automatically paid;

- Provide for the tracking of multiple leave balances;
- Prevent employee request for paid leave in excess of their banked leave;
- Support unpaid leave request processing;
- Integrate leave types with Benefits Administration and Payroll; and
- Track leave taken, leave lost, and leave payments by leave type and reason.

Benefits Administration

The Benefit Administration module supports the comprehensive administration of multiple employee benefit, retirement, and insurance plans. In addition, this module addresses the ability to:

- Maintain multiple eligibility rules;
- Maintain eligibility dates for different benefit plans based on different rules;
- Track individual eligibility and provide for enrollment of participant, spouse, and dependents;
- Maintain beneficiary information (life insurance);
- Calculate employer and employee costs by benefit plan;
- Provide on-line (Web-based or kiosk) and telephone benefit enrollment;
- Provide for the tracking of qualified events that can impact benefit plan participation;
- Interface with benefit providers and third-party administrators;
- Provide functionality to ensure compliance with requirements of the Consolidated Omnibus Budget Reconciliation Act (COBRA); and
- Track information related to requirements of the *Health Insurance Portability and Accountability Act* (HIPAA).

Recruitment and Applicant Services

This module provides functionality to support the application process associated with new job postings. Additionally, this module includes the capability to:

- Manage the posting of position openings;
- Manage recruiting of both internal and external candidates;
- Manage testing requirements and results;
- Enable automatic scoring of applications based on position requirements;
- Track costs associated with third party recruitment services;
- Automatically score applications based on applicant responses;
- Manage the tracking of position candidates; and
- Support the submittal of applications, documents (e.g., resumes), and links (e.g., publication references) through the Web.

Learning Management

Learning Management addresses the management of employee training and skills development. Additionally, this module includes the capability to:

- Provide standard career development curriculum based on position, skill category, and other criteria;
- Allow employees to request training on-line and route request for appropriate approvals;
- Record training attendance, grades, costs, certifications, and other information pertinent to a training session;
- Track classes and courses needed for career/job progression planning; and
- Track training class prerequisites.

Employee Relations and Performance Management

Employee Relations and Performance Management is focused on the tracking of employee performance in the workplace. This component includes the capability to:

- Establish employee performance goals and objectives (e.g., annual, bi-annual);
- Record employee performance at user-defined time intervals;
- Record employee disciplinary actions;
- Record employee-filed grievances, actions throughout the grievance process, and grievance outcomes; and
- Link employee performance to recognition and reward policies.

Employee Self-Service

Employee Self-Service (ESS) allows employees to perform common functions through a secured Web browser or kiosk after related to management of their personnel record. Some functions typically accessed through an ESS include;

- Viewing pay stub and withholding information for each pay cycle;
- Changing basic employee information (e.g., address change, emergency contacts, bank details);
- Changing benefit plan elections and options during open enrollment periods;
- Checking leave balances and requesting time off;
- Initiating travel authorization requests and travel reimbursement requests;
- Checking the status of the travel reimbursements; and
- Registering to attend a training course.

Manager Self-Service

Manager Self-Service allows supervisors easy access to their employee data to look up employee and job related information such as the following:

- View non-personal employee contact information;
- View employee learning history associated with position learning plans;
- Conduct electronic performance reviews with results and responses;
- Approve timesheets;
- Approve time off requests against employee specific banks; and
- Approve learning requests.

Government Reporting

Government reporting concerns State and Federal required reporting related to human resource management including:

- Support Federal reporting requirements (out of the box formatted to comply with regulations) for 941, W2, EEOC, EEO-4, EEO-1, and Veterans reporting;
- Support State withholding reporting;
- Support Affordable Care Act reporting;
- Support Census Bureau reporting for both active and retired employees;
- Federal subcontractor reporting; and
- Idaho and U.S Department of Labor reporting regarding delinquent spousal / dependent payments.

Security

Security is used to regulate who has access to what information. ERP systems typically offer a comprehensive security function that provides for:

- User log-in;
- Row level (record) security;
- Data field level security;
- Restricted access to specific screens or processes;
- Object security; and
- User group security.

Workflow

Workflow functionality allows for the establishment of business rules, roles, and routings that are used to route electronic documents (e.g., Purchase Requisition, Employee Timesheet) to proper supervisors and management for approval. Governments most often use workflow in conjunction with

Procurement and Personnel Administration processes. Workflow facilitates an organization's transition to a "paperless" environment. To work properly, workflow typically requires configuration and a degree of standardization of approval processes across the enterprise. For this reason, the workflows, including decentralized/centralized approval steps that are implemented, must be business-justified.

Reporting

ERP systems typically provide a suite of reporting tools that are used to develop ad hoc reports and online queries.

- Core business reports to support day-to-day business functions (e.g., payroll register, check register);
- Control reports generated to ensure the operational integrity of the ERP business functions (e.g., control totals, record counts);
- Typical federal and state government reporting requirements;
- Predefined reports that are automatically generated and distributed (available from end users' desktops); and
- Self-service reports and downloads that are either predefined and selected (pulled by the user) or created ad hoc from a prepopulated user-friendly database structure using user-friendly report tools.

Data Warehouse and Business Intelligence

More and more governments are utilizing Data Warehouses and supporting Business Intelligence tools to address their enterprise reporting requirements. These data repositories collect data from the ERP system and other external data sources after being normalized. Various financial reports can then be generated from the Data Warehouse. Additionally, the Data Warehouse is typically a key component in addressing taxpayer transparency initiatives.

Technology Enablers

In addition to providing fully integrated functionality across State government, other leading elements of an ERP system lie within the technology enablers that support the system. Key technology enablers found in ERP software include:

Integration with a Common Database

The most distinguishing factor of an ERP system is its integration across all system modules. Alternatively, the current environment utilizes separate stand-alone statewide administrative systems and agency "shadow" systems to address business needs not being met by the existing statewide systems. Some legacy systems include automated interfaces to simulate a limited level of integration.

Integration in an ERP system is supported by a single database across all functions (or a set of fully integrated databases). In this way, data elements (e.g., account codes) are not duplicated when used for more than one purpose. With no duplication, every function has access to the most recent information, and once any change is made, it is immediately available to all functions.

Real-Time Processing

Many of the current administrative systems perform a majority of their transaction processing via batch jobs that process only a few times a day or during a nightly batch run. This limitation results in delays between entry of an action into the system and availability of the data for use by the end user. In contrast, ERP systems use real-time (or near real-time) processing, so transaction results are immediately available to all system modules. Reports are generated using a single, up-to-date data source that helps to provide the State's leadership with a "single source of the truth."

Increased Functionality/Best Business Practices

Today's ERP systems provide a considerable amount of functionality to meet governmental financial management, procurement, asset management, HR/Payroll, and other administrative business needs. The application modules that often compose ERP systems have been designed in accordance with industry-standard best business practices.

While best practices have not been defined by any governing body or research firm for the private or public sector, such practices have evolved over time with each new software release and have been validated with each ERP implementation. Best practices, together with the flexibility provided by other technology enablers inherent in ERP software today, allow governments to conduct their administrative business processes in a more efficient and effective manner. Best practices promote standardization of business processes across government, and it is critical that the State embrace these practices in order to implement the ERP software with minimal customization. Some simple examples of best practices found in ERP systems include:

- Asset Management module "sweeping" the Accounts Payable module for potential capitalized and controllable assets based on specified parameters (selected object codes and threshold amounts) to reduce the possibility of capital assets going unrecorded; and
- Vendor access to self-service payment information reduces staffing required to answer vendor inquiries.

Web-Based/Open Architecture

Today's leading ERP solutions are designed to be accessed through the use of an industry-standard Web browser. Vendor products are transitioning to a "pure Web-based" architecture whereby no code resides on the client other than the Web browser. Web-based ERP solutions result in easier deployment and lower costs of IT infrastructure, network administration, and information access.

As ERP functionality matures, the need will arise to grant access to those individuals not traditionally considered users of ERP systems, such as vendors, mobile managers, and all employees for self-service functions, to name a few. A Web-based system facilitates providing this access at a lesser cost to the State. End users can gain access to the ERP system at any time as long as he/she has access to a Web browser and the proper security authorizations.

The leading ERP systems also comply with open architecture standards. Open architecture provides a means whereby the ERP system can be linked to specific "best-of-breed" software if the need arises (e.g., possibly to meet Fleet Management requirements). Open architecture also provides the ability to

interface the ERP system to common desktop “office suite” applications (see Desktop Software Integration below).

Scalability

Scalability allows the State to size its system components to meet its ever-changing business needs. Increased capacity can be added, upgraded or removed as computing needs change, without substantial changes to the application. Scalability considerations include increasing memory, adding additional processors, and installing additional disk storage.

Portability

Portability provides the flexibility for application software systems to run on multiple hardware platforms or provides built-in capabilities for switching between platforms without requiring additional customization, thus allowing the State to adapt the system to the State’s technical landscape as it changes over time.

Graphical User Interface

ERP systems utilize a graphical user interface (GUI) that provides user-friendly features similar to other office functions on the user’s desktop, such as intuitive icons, pull-down menus, point-and-click navigation, pop-up windows, scroll bars, radio buttons, the use of color for clarity and emphasis, and tool bars to assist in the user’s learning and ongoing use of the system. They also provide online help menus and online documentation, as well as screens that can be customized to user roles, to enhance the end user experience. The same interface and commands are used for all functions, thereby facilitating training for users that access multiple functions and functional areas.

Extensive Development Toolset

ERP systems provide for a single (often proprietary) toolset to support software configuration, customization, troubleshooting, and ongoing maintenance of the system. Although use of the toolset requires specialized training and technical knowledge, the development toolset is typically integrated with the functional ERP software and is supported by the vendor. The development tools are also utilized in establishing workflow, managing security, and in implementing a software upgrade.

Application Modularity

An ERP system consists of a series of application modules (e.g., General Ledger, Accounts Payable, Purchasing, Asset Management, and Payroll). A breakdown of typical modules is described above in the sections titled Financial Management Functionality Human Resources Functionality, and Procurement and Logistics Functionality. Some of these application modules are designed to work in stand-alone mode if necessary, though some modules require that other modules be in place to fully utilize the functionality provided. This modular approach allows governments to selectively implement ERP functionality based on functional need, priorities, funding availability, and staff availability to implement and support the system. The entire ERP solution may be built on a piecemeal basis. Additionally, the government can substitute a third-party solution in lieu of a specific ERP module if necessary to meet a specific business need.

Security

ERP systems provide a robust security function across all ERP modules, including role-based security, screen, and field level security.

Drill-Down Capability

ERP drill-down capabilities allow an end user to drill down on a field on a screen or report through successively lower levels of detail all the way to the initial entry source document.

Comprehensive Audit Trail

ERP systems provide online access to a comprehensive history of all changes made to a record in the system.

Desktop Software Integration

ERP systems provide the ability to easily extract data from the ERP system into common desktop “office suite” applications such as the Microsoft Office suite for data manipulation and analysis. Most ERP software also supports the import and export of data to/from the ERP system, which can facilitate the uploading and downloading of information from different systems or sources.

Appendix B: Recommendations for Moving forward with an ERP Solution

Project preparation and planning is an essential first step to successfully acquiring and implementing a new ERP application across the State of Idaho. As with any large, enterprise-wide project, a detailed and methodical approach must be taken to enhance the likelihood of success. Based on the results of the business case analysis and our experience providing project management and project oversight services to other states that have successfully implemented statewide ERP systems, ISG provides the following series of recommendations to the State to consider when evaluating future ERP plans.

Project Management

- **Experienced Project Management** – Due to the complex integration aspects of implementing an ERP system statewide, prior public sector ERP experience is a critical success factor. It is imperative that the State’s Project Director have previous experience in implementing ERP systems in the public sector. Because very few individuals have both solid project management skills and ERP public sector implementation experience, we have found the use of a state project director who has experience managing large projects, together with a firm experienced in providing independent project management services on public sector ERP projects, to be a successful combination.
- **Well-Defined Project Scope** – To reduce the likelihood of costly change orders and to ensure that the project is completed on time and on budget, the State must carefully define and control project scope. A clear, well-defined statement of work (SOW) must be created and included in the request for proposal. A thorough and detailed SOW not only documents the functional and implementation scope and timeline, but also outlines roles and responsibilities for both the State and the implementation vendor. We recommend the SOW be developed, in conjunction with the State, by a firm experienced in developing an ERP SOW for large governmental entities. During the implementation, this firm should utilize a detailed project work plan and budget to control “scope creep”, and rigorously follow a structured scope control process to ensure that the awarded vendor meets all of its commitments.
- **Ensure the ERP System is Perceived as a Business Transformation Project and not an IT Project** – Enterprise-wide acceptance of the new ERP system is a crucial prerequisite to the State’s project success. The project should, therefore, be led by a State functional team, consisting of carefully selected senior personnel who represent each of the broad functional areas to be addressed by the ERP transformation. Further, the project must receive strong executive sponsorship and include project participation by user agency subject matter experts (SME). This approach not only encourages acceptance of the new ERP system, but also initiates important knowledge transfer to agency users, a crucial component of overall project success. In addition, as part of the project governance structure, the core agency functional stakeholders must have a strong voice in making project decisions. The IT organization should provide the technical knowledge and support (and, at times, the project management) for the ERP project.

Staffing

- **Dedicate Proper Level and Number of Full-time Employees to the Project Team** – To avoid costly change orders or project delays, and to meet State staffing commitments as defined by the statement of work, the State should commit to providing dedicated project team members on a full-time basis. The State must commit to recruiting the best and most knowledgeable resources to the project team and should plan to provide incentives for keeping them. The user agencies need to fully understand and support the commitment being made and that some project resources may be asked to stay as part of the ongoing support organization. It is our experience that clients often meet their commitments from a “numbers” standpoint, but then they fail to provide the skill levels needed to ensure the project’s success. For example, user agencies sometimes volunteer less productive staff instead of their best performers, out of fear that they may never return. The software is too complex and the business changes too dramatic to trust the project to anyone other than the best and most knowledgeable State resources.
- **Ensure Adequate Knowledge Transfer** – To avoid open-ended reliance on consultants to support for the system after “go-live”, the State should ensure that the ERP vendor’s implementation methodology actively transitions the consultants’ role from building the system to mentoring the State staff who will be responsible for the system after the consultants leave. In addition, the State’s resources must be available when needed and must have the types of skills required for their given project role. ERP projects frequently experience inadequate knowledge transfer and thus continue to rely on consultants to provide ongoing support for the system. It is not uncommon for consulting resources to continue providing post-implementation support to a government for several years after “go live”.
- **Qualified Implementation Consultants** – To mitigate the risk of project delays or even project failure, the State must ensure the awarded vendor’s implementation consulting team has thorough knowledge of the ERP software to be implemented and/or knowledge of public sector operations. We recommend, approximately one month into the project work plan, that each State project team member be surveyed to ensure that their assigned consultant(s) have gained their confidence and have established a good working relationship with them. Consultant team changes should be made based on survey results and monitoring should continue as the work progresses.

Change Management/Organizational Alignment

- **ERP Governance** – Adopt governance best practice roles to ensure effective oversight and demonstrate the importance of the financial management and HR/Payroll system and provide the necessary visibility into the performance of the governance process supporting implementation and ongoing operation of an ERP solution. Key best practice roles include: Executive Sponsor, Executive Committee and Steering Committee. The Executive Sponsor will champion, advocate and build executive level state-wide support for the ERP solution. The Executive Committee includes a select number of executives from state agencies will make-up the Executive Committee and be charged with providing strategic direction and oversight of the ERP solution, from the perspective of what is in the best interests of the state at an enterprise level. Finally, the Steering Committee will focus solely on the ERP solution and associated business processes, allocating sufficient time to understand issues, consider/debate alternatives and arrive at decisions and recommendations that balance enterprise level benefits and individual agency needs.

- **Ensure Executive Support** –Strong executive management support and commitment across the State is paramount to the success of the State’s ERP project; any perceived or real lack of support will almost certainly ensure the project’s failure. We recommend that project governance documents (e.g. project charter) are drafted and signed by the sponsoring State executives. Project governance defines (at a minimum) project sponsorship roles and responsibilities, key success criteria, and standards under which the project will operate. Widespread communication of executive support is essential to obtaining buy-in from all levels of the organization, especially since ERP systems generate extensive change across the enterprise. Executive support must be provided by the user agency leadership as well as central agency leadership. Accordingly, we recommend a change management effort that includes an executive outreach program to establish meaningful communication with user agency executive leadership on a consistent basis for the project duration.
- **Ensure Elected Officials Buy-in to ERP Project** – To reduce overall project cost, risk, and customizations, it is important to ensure the buy-in of elected officials. ERP systems often include functionality which resides organizationally under an elected official who has an option to participate in the system, but who typically cannot be compelled to do so. When elected officials choose to not participate, additional effort and funding are required to build interfaces between the ERP system and the legacy system under the elected official’s purview. Such customizations add project risk, increase project costs, and “break” the integration and best practice efficiencies inherent in ERP systems.
- **Provide Adequate Change Management and Communications to the End User Community** – Organizational change impacts can disrupt the project implementation effort and system acceptance, decrease employee productivity, and increase employee stress and anxiety. These impacts can and must be recognized and actively managed. It is a common miscalculation for organizations to underestimate the level of change management required as part of an ERP implementation. Most ERP projects that fail do so because the human aspects of the project fall short – not because the system does not work as designed. The new system will drive the implementation of new business processes that may radically change the work environment and job tasks of employees. We recommend that the State hire a firm experienced with ERP Change Management to lead State personnel with proven strategies for solving the complex problems related to end user resistance to ERP.
- **Sufficient End User Training and Support** – It is essential that the State deliver sufficient end user training and support to ensure that end users can do their jobs efficiently and effectively soon after the ERP system goes live, and that important business process efficiencies are realized across the State. Care must be taken to properly staff the training function, especially if a “train-the-trainer” approach is to be used. Additionally, end user training must be provided on a “just in time” basis before the system goes “live”. Finally, comprehensive training evaluation must be implemented to measure the effectiveness of the training to end users. Only through an evaluation of the training efforts can improvements to the overall ERP training program be realized.
- **Thorough Knowledge of GAAP Accounting** – It is essential that the State’s financial staff have the appropriate GAAP accounting knowledge to process agency transactions in the new ERP system. In the public sector, it is not uncommon for employees with basic bookkeeping skills (but no formal GAAP accounting educational background) to be promoted into key financial management roles over time (especially in smaller agencies). Due to the implementation of GASB 34 (which requires a thorough knowledge of accrual and modified accrual accounting) and the fact that most ERP systems are no longer transaction code driven (in which a user could enter a code for a particular

accounting event and the system would assign the proper debit and credit), ISG has found that some financial staff require additional training in basic governmental accounting principles. We recommend the State add a basic governmental accounting principles class to the overall ERP training curriculum to ensure users are equipped with both the software application skills and accounting knowledge to be successful in the new ERP system.

Software Implementation

- **Adopt Best Practice Business Processes and Limit Modifications to the Software** – To avoid costly future ERP software upgrades, it is in the best interest of the State to adopt the delivered best practice business processes and to limit modifications to the software. In early governmental ERP projects, a heavy emphasis was placed on modifying the software to better meet the perceived needs of governmental entities. Extensive modifications to the ERP software increase project risk, lead to project cost and time overruns, and often impair the ability to upgrade the software to future product releases. ERP functionality for the public sector has matured in recent years and governments have begun to embrace process change by adopting the best practices found in today's ERP systems. This has resulted in a significant decrease in the amount of customizations to the underlying software code. We recommend the State utilize software best practices to the maximum extent possible and that all customization requests be scrutinized to determine if the gap can be met through alternative (non-customization) means or if the requirements can be eliminated. As part of the project organizational structure, a change control board (CCB) should be established to review and approve each customization. If the customizations are approved by the CCB, the customizations, to the fullest extent possible, must be completed without changes to the underlying base code so as not to impede the application of future software upgrades.
- **Reasonable Implementation and Deployment Timelines** – To avoid cost overruns, unwarranted project risk, and scaled-back functionality, the State should avoid unreasonable implementation and deployment timelines. ERP vendors are now promoting accelerated implementation methodologies to reduce implementation costs. However, the timelines associated with an accelerated approach may be unrealistic given the degree of change that must be absorbed across the entire State enterprise. The State needs to ensure that enough time is provided to adequately design the new ERP system and fully understand the impacts of that design. Additionally, the State must ensure that adequate time is given for testing the new system and for providing training to end users whose job roles may change substantially. If and when the State moves forward with a new administrative system, the fundamental timeline assumptions included in this audit should be reconfirmed.
- **Limit Migration of Old Data** – To reduce implementation cost and project risk, the State should limit the migration of old data to the new ERP system. Often governments spend substantial amounts of money to migrate large volumes of data that are seldom used and/or are not applicable to the new account coding structure. The more data that is converted from the legacy system, the greater the risk and cost to the ERP project. We recommend the State review and develop a data archive and data conversion strategy document that provides a preliminary assessment of all the data sources, indicating which data will be converted into the new ERP system and which data will be converted to a data warehouse or some other information storage medium that allows information to be archived and retrieved through cost-efficient means. In addition, data conversion is a task often performed by State personnel as a means to reduce overall project cost, with the additional benefit that they understand the legacy data to be converted. Therefore, care must be taken to ensure that appropriate State personnel will be available and adequate time is assigned for data conversion activities.

- **Prepare for Production Operations** – Care should be taken to ensure that the organization has the capability to adequately maintain the system and provide end user support after “go live”. Detailed planning for this responsibility will reduce risk and cost in the immediate aftermath of “go live”. We recommend that State functional and technical ERP project personnel transition to the Production Operation organization to provide help desk and production support services. In addition, the State might consider creating a SWAT team to provide agencies with one-on-one support at their location on an as-needed basis. The SWAT team would be composed of State ERP Project Team members, who have become subject matter experts (SMEs) in the ERP system. This additional support would be available to agencies for the time period immediately after “go-live” and help ensure agencies are successful in transitioning to the new ERP system. The cost estimate includes 12 months of operation support.
- **Prepare for Report Development** – To ensure that agency reporting needs are met, we recommend the State fund some number of ad hoc report developers for a period of time after “go live”. Most public sector ERP projects have greatly under-estimated the need for custom reports to meet the end user’s reporting needs. The ERP vendors also oversell the ad hoc reporting capabilities within their systems. While the ad hoc reporting tools are very powerful, we have not observed that the typical end user in government entities is developing their own ad hoc reports.
- **Sufficient Contract Accountability** – Some governments that have implemented ERP systems have not been able to hold the contractor(s) accountable for project results. There are two primary reasons for this problem: the usage of a “time and materials” payment plan and/or the client’s failure to meet its commitments to the project (e.g., failure to provide client subject matter experts, failure to resolve issues on a timely basis).

To help alleviate this concern, we recommend that State hire a firm experienced with ERP contract negotiations to assist in:

- Drafting a comprehensive contract and statement of work (SOW) with the vendor that is results-based and ties vendor payments to deliverables and project milestones.
- Monitoring the State’s system requirements on an ongoing basis to ensure that the system is designed and configured to meet the client’s business requirements. As part of acceptance testing, the system must properly meet each requirement as documented in the functional matrices.
- Opposing the deferral of any issues affecting cost to the design phase. By doing so, the State reduces its negotiating leverage.
- Withholding a large retainage (approximately 15%) and not releasing the retainage for payment until the software has been accepted by the client (based on established acceptance criteria in SOW) and the initial three-month post-implementation support period has expired.

- Finalizing ERP vendor and State responsibilities for:
 - Forms,
 - Reports,
 - Interfaces,
 - Data conversion,
 - Workflow development, and
 - Enhancements.
- Closely monitor the State's progress against the project plan to ensure all the State's commitments per the statement of work are being met.

Appendix C: Inventory of Candidate Systems for Replacement

Replace (Yes/No)	Agency	System Name	System Description	Functionality					
				GL	AP	CA	BC		
Yes	All	STARS	Statewide Accounting and Reporting System (STARS) is a financial management and accounting system implemented in the mid-80s; STARS was designed to comply with GAAP. STARS includes basic accounting requirements; STARS functionality is limited relative to modern ERP systems.	GL	AP	CA	BC		
Yes	All	FAS	Fixed Asset System (FAS) stores basic fixed information and provides basic asset management accounting functions; it is integrated with STARS; used by agencies to record capital assets that meet thresholds established by the state	AM					
Yes	Some	Travel Express	Central system implemented in 2000 enables state travelers to identify expense elements (and justification) for travel and route to supervisor for approval; following completion of travel employee updates trip details and requests reimbursement; reimbursement requests are routed to the supervisor and following approval interfaced to STARS for disbursement to the employee	TR					
Yes	Most Agencies	IBIS	IBIS (Idaho Business Intelligence Solution) is a multi-agency effort to provide a business intelligence and data warehouse solution for the two legacy mainframe systems – STARS (Financial) and EIS (HR/Payroll). It supports COGNOS, a third party reporting tool, for query processing.	RT					
Yes	Some	IPro WebProcure	On-line cloud-based sourcing system implemented in mid-2014; creates solicitations and posts on-line; allows	PU					

Replace (Yes/No)	Agency	System Name	System Description	Functionality						
				GL	AP	AR	RC	IAT	BC	RT
			registered vendors to be automatically notified; bidders can log in and post responses to solicitations; <i>IPRO</i> is not integrated into fiscal systems							
Yes (if not replaced sooner)	Admin – Financial Services	IFIS	IFIS is a mainframe system used as a front-end to enter payables/ receivables/ receipts/cash transfers which uploads to <i>STARS</i> ; IFIS is being de-commissioned in 2015 and functionality rolled into <i>STARS</i> and <i>IBIS</i> (check); IFIS used to manage claims against carriers; Fiscal pays claims to agencies then collects claims against carriers (via Risk Management's ATS)	GL	AP	AR	RC	IAT	BC	RT
Yes	Admin - Fiscal Systems	Infomaker	Infomaker is used to do ad-hoc queries	RP						
Yes	Admin - Fiscal Systems	Spreadsheets for Budget Control and Cash flow	IFIS data (expense by index) is re-keyed into Excel (similar for 3 Divisions (e.g., Group Insurance))	BC	CF					
No	Admin - Fiscal Systems	Postal/Copy (need name)	Sends monthly postal and copy center invoices; report of agency usage is generated and interfaced to IFIS (similarly for telephone charges); invoices are mailed to agencies	AR						
Yes	Admin - Division of Public Works (DPW)	DPWeb	Internally developed system (interfaces to IFIS) that manages design and construction projects; assigns coding to match budget; 10-yr-old system (maintained by contractor); plan to replacement DPWeb within next 18 months w/ a SAAS solution (\$350K)	PC						
Yes	Admin - Division of Public Works (DPW)	BidExpress	Agency working with vendor to deploy a web-based system to implement electronic bidding system	PU						

Replace (Yes/No)	Agency	System Name	System Description	Functionality							
Yes	Agriculture	Purchasing	Purchasing supported by paper-based processes and email	PU							
No	Agriculture	Access Idaho/Cash Receipt System	Access Idaho is 3rd party web site/service used by citizens to make payments to Agency for permits and other fees	RC							
Yes	Agriculture	AR/Billing	Agency uses in-house system to generate invoices; each agency has own "system" to track receivables	AR							
Yes	Agriculture	Grants Management	Agency uses combination of spreadsheets, STARS, IBIS to manage 20-30 grants	GM							
Yes	Agriculture	FM Spreadsheet	Fleet - Agency uses spreadsheets (one per vehicle) to track mileage	FL							
Yes	Agriculture	AM IT Spreadsheet	Asset Management - Agency uses spreadsheet to track IT assets	AM							
Yes	Agriculture	Budget Control	Agency uses internal linked spreadsheets, cash flow report/trends, IBIS	BC							
Yes	Board of Education – Public TV	Navigator	3 rd -party modular accounting application used for numerous function within Public Television business process (e.g., tracking donations)	GL	AP	PU	AM				
Yes	Corrections	Background Checking Invoicing	Excel system to track and generate invoices for background checks provided to Correctional Industries	AR							
Yes	Corrections	Purchasing	Purchase order log kept on internal website	PU							
Yes	Corrections	Financial Statement Generator	Access database to capture downloads from IBIS and posted to internal website	BC							
Yes	Corrections	Inventory	Excel spreadsheet to track firearms, radios, vehicles	IN							

Replace (Yes/No)	Agency	System Name	System Description	Functionality							
Yes	Corrections	AM - IT	Excel spreadsheet to track IT assets	AM							
No	Education	Grants Reimbursement Application	Internally developed .NET application that captures grant transactions (made to school districts) and balances in STARS; enables document attachments; deployed in 2009; Programs keep spreadsheets to track details not stored in GRA	AP	GM						
Yes	Education	Payment Management System	Manages transactions for miscellaneous grants	GM							
No	Education	My Idaho CNP	Web application used by districts to request reimbursement for school lunch program; Department reviews and approves requests; system sends FTP file to STARS; built and maintained by Collier Consulting Group	AP							
Candidate for replacement depending on barcode requirement	Education	IT AM	Web application to store fixed assets; generates a barcode which is affixed to asset	AM							
Yes	Education	CATS	Contract creation system that uses pre-defined templates; has built-in supervisory and legal approvals; built in SharePoint; stores documents (including amendments) electronically	PU							
Yes	Education	Teacher Certification Tracking	Spreadsheet that identifies who as paid for teacher certification; hardcopy receipts (carbon copy) for checks received by Department; batch transactions entered into STARS; for payments processed via Access ID Department receives a hardcopy of transaction details showing who has paid; similar process for reimbursement for travel and registration fees for	RC							

Replace (Yes/No)	Agency	System Name	System Description	Functionality						
			conferences							
Yes	Education	Various Receivables Managed by Programs	Programs manage receivables including overpayments for checks sent to districts	AR						
Yes	Education	Budget Development	Department uses many Excel spreadsheets (DAFR and IBIS) data to manually populate budget prep spreadsheets	BD						
Yes	Environmental Quality	Grants	Internally developed Access database to store transactional data needed for grants billing/reimbursement; used to administer grants to sub-recipients	GM						
Yes	Environmental Quality	QuickBooks	Used for receipts and receivables; generates financial statements for the Water Program	RC	AR					
Yes	Environmental Quality	General Online Financial Reports (GOFR)	Access database that extracts transactions from STARS; STARS cannot support the level of detail required (e.g., Water Program is funded by approximately 20 sources; GOFR also used to report expenditures to budget)	RP						
Yes	Environmental Quality	Contract Generation	Internally developed contract management system (Access) to generate contracts using templates	CN						
No	Environmental Quality	HP Trim	Document management system	DM						
Yes	Environmental Quality	DEQ Time	Internally developed time reporting system.	TR						
Yes	Environmental Quality	LIPPS	Loan information processing; tracks what has been disbursed	AR						

Replace (Yes/No)	Agency	System Name	System Description	Functionality							
Yes	Environmental Quality	PCN	Database to track positions and classifications and job descriptions	HR							
Yes	Environmental Quality	Fleet	Access database to store vehicle information (make model, tag #)	FL							
Yes	Fish & Game	Purchasing Spreadsheet	Supports manual purchasing process; paper based routing.	PU							
Yes	Fish & Game	Access Reporting	Access database and query capability to develop standard and ad-hoc reports of STARS transactions	RP							
Yes	Fish & Game	Budget Development Tool	Internally developed system for budget development; uploads to state system; in process of migrating from Oracle to Sequel	BD							
Yes	Fish & Game	Grants System (under development)	Internally developed grants management system that will track expenditures, match, grant billing, approval routings	GM							
Yes	Fish & Game	Fleet System	Externally developed which captures and allocates costs for equipment use	FL	CA						
Yes	Fish & Game	Fuel System	Externally developed system that allocates fuel costs	CA	PC	GM					
Yes	Fish & Game	ABC	Activity based costing data collection tool to calculate spend (including time) by "activity"	PC							
Yes	Fish & Game	Allocations	Internally developed set of systems and manual processes to collect labor rates, vehicle costs, interest on trust accounts and other elements; allocations are uploaded to STARS	CA							
Yes	Fish & Game	Citation Tracking	Tracks citations issued by counties and AR (due from counties); billing is done manually but AR tracking for citations will be in new Grants system	AR							

Replace (Yes/No)	Agency	System Name	System Description	Functionality						
Yes	Fish & Game	Footwear Tracking	Excel spreadsheet to track footwear purchases by field staff	PU						
Yes	Fish & Game	Fitness Award Tracking	Excel spreadsheet to track fitness related activities for scoring and awards	PC						
Yes	Fish & Game	Payroll Corrections	Externally developed system to correct labor hours and dollars incorrectly entered	PR						
Yes	Fish & Game	Human Resources System	Internally developed system that captures and tracks personnel information that EIS does not support such as supervisor, performance evaluations, BA33s and other employee information	HR						
Yes	Health & Welfare	FISCAL	Mainframe system cloned from STARS due to limitations in STARS, e.g. cost allocation; entry point for majority of Agency transactions; not system of record (STARS is); STARS transactions interface back to FISCAL	GL	AP	AR	CM	BC	CA	RP
Yes	Health & Welfare	FISCAL - Rotary	Subsystem of FISCAL to generate on-demand checks for emergencies, e.g. emergency medications	AP						
Yes	Health & Welfare	FISCAL - BARS	Subsystem of FISCAL to manage Agency's cash receipting to manage/collect overpayments primarily for child support and Medicaid	AR						
Yes	Health & Welfare	FISCAL - Trust	Subsystem of FISCAL which stores information on savings accounts for foster care clients, state hospital patients; maintains donation accounts	RC						
Yes	Health & Welfare	NAVISION	Fills in functionality gaps in FISCAL; payment processing entry point; transactions are interfaced to FISCAL which interfaces to STARS; can attach documents to transactions; does requisitions and purchase orders, receiving/matching; tracks and manages assets and calculates depreciation; robust workflow	AP	PU	AM	RP	BC		

Replace (Yes/No)	Agency	System Name	System Description	Functionality						
Yes	Health & Welfare	Contraxx	Stores and generates contract documents; stores additional information not stored in FISCAL; contains leases and sub-recipient grants/contracts but does not include grants management functionality	CN						
Yes	Health & Welfare	CARS	Tracks mileage of Department's fleet (300-400 vehicles); CARS' fleet management capabilities are not used	FL						
Yes	Health & Welfare	Contract Generation System	Contract templates and tracking services contracts.	CN						
Yes	Health & Welfare	Grants System	No formal system for grants management; grant administration is done using a combination of systems (FISCAL, Contraxx, spreadsheets)	GM						
Yes	Health & Welfare	HWAP	Stores some vendor information and used to intercept warrants and redirect to a different address; creates "stub" record (agency would like to decommission)	AP						
No	Health & Welfare	SharePoint	Used to route budget development docs; routes travel approvals and reconciliations (travel reimbursement is primarily a paper-based process)	BD						
No	Health & Welfare	Business Objects	The Department's financial reporting data warehouse is comprised of Department-wide sequel files. <i>Business Objects</i> is the primary query tool. The Department's data warehouse contains administrative as well as programmatic data and information so replacement of the Department's data warehouse is likely beyond the scope of an ERP project.	RP						
May be a candidate for replacement; requires more analysis	Health & Welfare	WebFocus	Similar to Business Objects, but reports can be real-time. Use for year-end financial reporting and some Medicaid. Managed by Fiscal Services; requires programming expertise and is written in proprietary	RP						

Replace (Yes/No)	Agency	System Name	System Description	Functionality							
			language.								
Yes	Health & Welfare	Host Utilities (TSO & SYSD)	Tools to facilitate systems administration and troubleshooting; used to look into mainframe processing, i.e. diagnose analyze and troubleshoot transactions and errors in FISCAL; tools can “reverse engineer” reports from FISCAL to know what rolls up into a particular balance	Tech							
Yes	Judicial	Criterion	SaaS HR software application that tracks positions, manages HR actions, and has a self-service module for timesheets, timesheet approvals, leave submittals and look-up for leave accruals. The Court purchased a module for personnel hiring that will be deployed in January 2015.	HR	TE						
Yes	Labor	Purchasing	Internally developed (2000) on-line system; client server (written in VB); generates purchase orders; no interface to Cost Accounting	PU							
Yes	Labor	Cost Accounting	Internally developed (2010); receives feeds from timesheets, AP and receipts and posts to specific funds, cost centers and activity codes; generates reports; tracks transaction details, accruals, reversals; supports entries into federal systems	CA	RP						
Yes	Labor	Workforce Investment Act Fiscal System	Subsystem of Cost Accounting; takes workforce participant payments and does allocations required by federal grants and produces information needed for federal reporting	CA	RP						
Yes	Labor	AP	Internally developed (FoxPro 1991) planned to be replaced by internally written system that will share tables with Cost Accounting and interfaces to Cost Accounting (monthly); processes payments for	AP							

Replace (Yes/No)	Agency	System Name	System Description	Functionality							
			operating expenses, training program participant costs, medical determinations for disability services								
Yes	Labor	Capital Property Management	Internally developed (VB) system to store asset information	AM							
Yes	Labor	HRIS	Internally developed .net application that manages HR business functions including classifications and pay rates	HR							
Yes	Labor	HR Evaluations	Internally developed database to track employee evaluations	HR							
Yes	Labor	Employee Recruitment	Internally developed system (used statewide)	HR							
Yes	Labor	Learning Central	Learning management system developed in Ukraine and maintained internally	HR							
Yes	Labor	Time Entry	Internally developed time reporting system that feeds into the internal cost accounting system which feeds into the payroll system; some in agency use paper timesheets which are input in the Cost Accounting system	TR							
Likely not a candidate for replacement	Lands	NAVISION	NAVISION is used for entering detailed AR transactions which are interfaced to STARS Navision is highly configured/customized to manage some of the A/R business processes with granular detail; supports AR for timber sales, leases, permits; calculates interest on AR balances; stores information on maintenance fees for leased property. NAVISION holds STARS chart fields; entry point for intra and interagency transfers.	AP TR	AR	RC	PM	RT	BC	AM	
Yes	Lands	Billings for Fire Suppression	Excel spreadsheet used to track invoices for billings to USFS and BLM; costs accumulated from multiple sources to generate bills	AR	PC						

Replace (Yes/No)	Agency	System Name	System Description	Functionality							
No	Lands	HelpStar	Tracks IT assets and is coupled with IT helpdesk support functionality	AM							
No	Land	IQS	Incident Qualification System - national training software for Fire employees.	TR							
No	Land	Skillsoft	Third party software for learning management including capabilities for leadership development, IT training and certification, compliance and risk management, talent management, and state and federal government. Their offerings include both library content and delivery - most of which the state participates using online courses.	TR							
No	Land	Inquire Hire	Third party agency that the state uses for background checks on prospective employees.	HR							
Likely not a candidate for replacement	Occupational Licensing	IBOL System	<i>IBOL</i> system developed in 2002 by a local vendor. It is currently running on Access 2010. <i>IBOL</i> manages the following business functions: 1) administrative, 2) licensing, 3) fiscal, 4) investigative and 5) legal, i.e. hiring and contracting for attorneys for prosecutorial services. <i>IBOL</i> interfaces with <i>STARS</i> . It is unlikely that <i>IBOL</i> could easily be replaced as it has considerable programmatic information and configurations.	AP	AR	AM	CA	TR	RT		
Yes	Military Division	HAL	The Division's main financial system is an internally developed Windows-based application (<i>HAL</i>). For convenience and usability, <i>HAL</i> 's primary function is to create batches that are transmitted to <i>STARS</i> . Underlying <i>HAL</i> is an SQL database that is refreshed every morning from <i>STARS</i> . Staff uses download data to perform internal reporting which is produced by MS SQL Reporting Services for standard <i>HAL</i> reporting, and Crystal Reports for ad hoc reporting of <i>HAL</i> data. There	CA	AR	AP	PU	RT			

Replace (Yes/No)	Agency	System Name	System Description	Functionality					
			is an additional interface from the Engineering Management System (iEMS), i.e. the military purchasing system describe below, to HAL to load payables transactions that are batched and sent to STARS. The Division's IT staff is planning to update HAL by updating the Sequel database to the 2012 version. Future updates are needed to move HAL to a .net framework.						
No	Military Division	MCM	MCM is a stand-alone system that provides microwave communication for other State agencies and creates invoices for services provided. MCM supports the Public Safety Communications Group. Invoices from MCM are batched through HAL to generate the revenue transactions. MCM includes work tickets, inventory, project management, and reporting. Payables for purchases are entered into Payment Services.	IN	AR				
May be a candidate for replacement; requires more analysis	Military Division	SPARRS	A grants life cycle management system that Military makes available to Idaho counties to apply for and report on public safety grants. SPARRS provides three main functions: SPARRS. Allows Military to summarize the data in SPARRS and pull a single report for federal reporting purposes. SPARRS tracks personnel side of payroll, tracks additional info needed for military data. Used to forecast the timing of employees' next step increases and to keep track of credited state service. SPARRS is also used to track reimbursable costs for coop agreements.	GM					

Replace (Yes/No)	Agency	System Name	System Description	Functionality						
May be a candidate for replacement; requires more analysis	Military Division	iEMS	All Department of Defense (DOD) purchases are done through iEMS (Engineering Management System). iEMS was developed on the base at Military Affairs, and has spread to become a de facto standard for purchasing for other state military affairs organizations. iEMS includes requisition and purchase order functionality and tracks every expense to a facility. The detail captured in iEMS facilitates collection of the Federal portion of Military's expenditures. Encumbrances created in iEMS are batched in HAL each day and loaded to STARS. iEMS and STARS should reconcile each day.	PU						
Yes	Military Division	Equipment Tracker	Equipment Tracker was created by Military to track sub-grants of Homeland Security funds. The system is used to purchase and track public safety equipment on behalf of local governments that might not be able to cover the initial purchase from their local budgets. The need for Equipment Tracker should be going away in 2 years. After that, reimbursement will be done through traditional reimbursement and tracked through SPARRS grant system.	GM						
Yes	Military Division	Timeforce	Tracks time entry for disaster response. Time is summarized in reports from Timeforce, which are manually entered into <i>I-Time</i> to show funding split at PCA detail. Military would like to see from/to times, actual hours, showing ins/outs. Federal auditors are requesting to see the ins/outs - this would be a future enhancement to capture actual times for punch in / punch out.	TE						

Replace (Yes/No)	Agency	System Name	System Description	Functionality						
				AP	RC	AR	GM	GL	IN	PU
Yes	Military Division	QuickBooks	Used for 501c3's for other duties as assigned for non-state funds. Also use QuickBooks to generate checks on the Rotary fund.	AP						
Yes	State Police	NAVISION	System is used to enter payment information and is interfaced to STARS; also used for invoicing, interagency transfers; includes edits, workflow, budget checking	AP BD	RC RP	AR	GM	GL	IN	PU
Yes	State Police	GMS	Internally developed grants management system that interfaces transaction information to NAVISION	GM						
Yes	State Police	Excel	Spreadsheet to track allocation of time for developing indirect cost factor	CA						
No	State Police	ABC Licensing	Internally developed system for licensing retail liquor stores; transactions entered manually into NAVISION	RC						
No	ITD	AMS	Advantage Manage System, primary Financials system for ITD. (V: CGI)	GL	AP	AR	PC	GM	CA	
No	ITD	SiteManager	Transportation construction management software: construction and materials management process from after award through contract finalization, integrates field based data collection, administration of contract records, contractor payments and materials management. (V: AASHTO)							
May be a candidate for replacement; requires more analysis	ITD	ePATS: Professional Agreement Tracking System	Front end for the Professional Agreement Tracking System (PATS), used to track professional service agreements and term agreements. It is in the process of being rewritten. Tracks payments and availability of budget, manages the sub-contractors as well as automates some of the forms and documentation for the users. We do not interface Advantage with PATS. They double enter transactions (payments) in both systems							

Replace (Yes/No)	Agency	System Name	System Description	Functionality						
May be a candidate for replacement; requires more analysis	ITD	Applicant Tracking System (ATS)	Initial Job Posting / Prospective Applicant Submission (V: DOL)							
Uncertain if this is a candidate for replacement	ITD	Cornerstone: Learning Management	Tracking and delivering training							
No	ITD	DMV / AccessIdaho	Title/Registrations & Fee Collection							
No	ITD	TAMS – AgileAssets	Fleet, Maintenance, Pavement							
No	ITD	Ralph	Tracks employees vehicle accidents, work claims, bio testing (CDL licenses)							
No	Veteran's Administration	Point Click Care	Performs AR functions and also manages State Veterans Nursing Homes billing.	AR						
Not a Candidate for Replacement	ITD	File 360	A third party document management system used to store and manage paper employee records. It provides content capture, data entry automation (bar code reading, OCR, etc.), routing, and security. It also supports archiving, records management, email management, and Integration with other systems.	HR	PR	BN	DIS			
Yes	Veteran's Administration	Contracts	Contract documents are maintained centrally by Division and at each Program. Specific contract items are monitored and tracked in Excel.	CN						
Yes	Veteran's Administration	Budget Control	Excel spreadsheets used to generate budget to actual reports. Data is downloaded from STARS and manually keyed in to Excel; process requires 5-6 hours per month to generate the reports that are distributed to Programs.	BC						

Replace (Yes/No)	Agency	System Name	System Description	Functionality						
Yes	Veteran's Administration	Labor Distribution	SCO generate a labor distribution report (from STARS?) which is sorted by location, PCA, etc. Report used to ensure that staff charges to correct locations	LD						

Legend – Finance/Procurement

AM Asset Management
 AP Accounts Payables
 AR Accounts Receivables
 BC Budget Control
 BD Budget Development
 CA Cost Allocation
 CF Cash flow
 CN Contract Management
 FL Fleet
 GL General Ledger
 GM Grants Management
 IAT Inter-agency Transfers
 IN Inventory
 LD Labor Distribution
 PC Project Costing
 PU Purchasing
 RC Receipts
 RT Reporting
 Tech Technical Troubleshooting
 TR Travel

Legend – HR/Payroll

AT Applicant Tracking
 BN Benefits
 HR Human Resources
 LM Learning Management
 PR Payroll
 TE Time Entry
 TR Training

Agency HR/Payroll Systems: The following organizations and systems were reviewed by the ISG Human Resources / Payroll Functional Lead. The inventory of the systems used by each agency is presented below.

Agency	DHR	Agriculture	Police	ITD	Corrections	DHW	Labor	Land
HR	<i>EIS</i>	<i>EIS</i>	<i>EIS</i>	Advantage		<i>EIS</i>	HRIS	<i>EIS</i>
Personnel	<i>IPOPS</i>	<i>IPOPS</i>	<i>IPOPS</i>	<i>IPOPS</i>	<i>IPOPS</i>	<i>IPOPS</i>	HRIS	<i>IPOPS</i>
Position Mgt	<i>IPOPS</i>	<i>IPOPS</i>	<i>IPOPS</i>	<i>IPOPS / EIS</i>	<i>IPOPS</i>	<i>IPOPS</i>	HRIS / SharePoint	<i>IPOPS</i>
Benefits	<i>EIS</i>	<i>EIS</i>	<i>EIS</i>	<i>IPOPS / EIS</i>	<i>EIS</i>	<i>EIS</i>	<i>EIS</i>	<i>EIS</i>
Payroll	<i>IPOPS</i>	<i>IPOPS</i>	<i>IPOPS</i>	Advantage	<i>IPOPS</i>	<i>IPOPS</i>	<i>IPOPS</i>	<i>IPOPS</i>
<i>I-TIME / EIS</i>	<i>I-TIME / EIS</i>	Manual	<i>I-TIME / EIS</i>	<i>I-TIME / EIS</i>	Manual	<i>EIS</i>	<i>I-TIME / EIS</i>	Leave Management
Time Tracking	<i>I-TIME</i>	Paper / <i>I-TIME</i>	<i>I-TIME</i>	Advantage / TAMS	<i>I-TIME</i>	<i>I-TIME</i>	<i>I-TIME</i>	<i>I-TIME</i>
Recruiting	ATS	ATS	ATS	ATS	ATS	ATS	CIS	Inquire Hire

Agency	DHR	Agriculture	Police	ITD	Corrections	DHW	Labor	Land
Applicant Tracking	ATS	ATS	ATS / Paper	ATS	ATS	ATS	CIS	ATS
Onboarding	Manual	Manual	Manual	File 360	Manual	Manual	No response	Manual
Offboarding	<i>IPOPS</i>	<i>IPOPS</i>	<i>IPOPS / Paper</i>	Nothing	Manual	Manual	No response	Agency Template
Learning Management	Learning Express	No response	POST / Internal	Cornerstone	POST Academy	Manual	Learning Central	Skillsoft, IQS
Performance Management	I-PERFORM / Performance Evaluation	Word / I-PERFORM	Paper	File 360	Manual	Manual	I-PERFORM	I-PERFORM and manual
Talent Management	Nothing	Nothing	Nothing	Cornerstone	Nothing	Nothing	No response	Nothing
Succession Planning	Nothing	Nothing	Survey Monkey	Nothing	Nothing	Nothing	No response	Nothing
Discipline	Manual	Manual	Manual	File 360	Manual	Manual	No response	Manual
Grievances	Manual	Manual	IA	SharePoint	Manual	Manual	No response	Manual

Agency	DHR	Agriculture	Police	ITD	Corrections	DHW	Labor	Land
Safety	Manual	Manual	Manual	Ralph	Manual	Manual	Manual	Manual
Government Reporting	<i>EIS / IBIS</i>	<i>IBIS</i>	<i>EIS / IBIS</i>	<i>EIS / IBIS</i>	<i>IBIS</i>	<i>IBIS</i>	<i>EIS / IBIS</i>	<i>IBIS</i>
Medical Exams	NA	NA	Manual	NA	NA	NA	NA	NA

Appendix D: Agency Observations

Representatives from the agencies listed below were interviewed for this study.

1. Department of Administration (Division of Financial Services, Division of Human Resources, Division of Public Works)
2. Department of Agriculture
3. Board of Education
4. Department of Corrections
5. Department of Education
6. Department of Environmental Quality
7. Department of Fish and Game
8. Department of Health & Welfare
9. Department of Labor
10. Department of Lands
11. Legislative Services Office – Budget and Policy Analysis Division
12. Legislative Services Office – Audits Division
13. Military Division
14. Bureau of Occupational Licenses
15. Idaho State Police
16. Idaho State Treasurer
17. Idaho Supreme Court
18. Idaho Transportation Department
19. Division of Veteran's Services

Department of Administration (Divisions of Financial Services, Human Resources and Public Works)

Note: This agency write-up was not validated by the agency.

Division of Financial Services

The Financial Services Division provides financial accounting, analysis, budget preparation, and internal control functions for central administration. The Division also provides administrative support (primarily accounts payables, billing, receipting, and performance reporting) to several small agencies under an MOU. The Division fulfills a diverse set of functions with significant activity in A/R billing for state and non-state agencies.

Within the Fiscal arena, the Division uses a mainframe system called Integrated Financial & Administrative Solution (IFIS). *IFIS* is used as front end to enter payables, receivables, receipts, and transfers which are uploaded to *STARS*.

The Division bills agencies for use of telephones, copies, postage, and insurance (group/risk/space/vehicles). When receivables are entered into *IFIS* it prints a batch of invoices. The Division is working with SCO to be able to run A/R through *STARS*. The Division sends out approximately 300 bills per month. Most bills are sent out via US mail. Some agencies enter transfers via *STARS* for these bills. Other agencies send checks which are physically taken to STO and entered into *STARS*. *IFIS* also provides a critical reporting function including budget to actuals which are index-driven. Other reports include cash flow by fund detail. Expenses (by index) are queried in *IFIS* but cannot be downloaded so they are re-keyed into a spreadsheet. Other Divisions (e.g. Insurance) run *IFIS* reports and manually enter the transaction amounts into *Excel*. As part of the SCO's effort to migrate off of the mainframe, the Division is planning to phase out *IFIS* (which costs about \$100K/yr.) at the end of the 2014 calendar year; in any event the migration must be complete by the end of the fiscal year to sync with year-end close.

The Division uses *IFIS* and *STARS* to manage cash flow. The Division runs *IFIS* reports and verifies against *STARS* (3rd working day after month close). *STARS* reports are reconciled w/ *IFIS* for cash, AR, expenses, receipts, and revenue.

There are *IFIS* users in other Divisions. For example: Group Insurance for receipt batches, Division of Purchasing for payables and receipts, and the Division of Public Works for receipts. When *IFIS* is retired the plan is to train these *IFIS* users to use Payment Services, Cash Receipts and the Adjustments modules.

Reporting transactions originating in *STARS* (payroll, inter-agency transfers) are downloaded daily into *Infomaker*. The Division is a heavy user of *Infomaker* which performs ad-hoc queries which are saved into *Excel* and used to generate reports.

The Division also uses Payment Services and Cash Receipts to enter transactions. Division staff commented that Payment Services is efficient when it works; however, a couple times per month staff enter extensive amounts of data and when the system goes down and their data is lost. Authorization of transactions is problematic and the system sometime times out. Edit checks in Payment Services are problematic. Once transactions are committed, fixing errors is challenging versus the system knowing that the coding is incorrect (i.e., the system should check the funding string before the user commits the transaction). For Cash Receipts the system accepts only 20 lines which require tapes to be re-run. This

is expected to be an issue for Group Insurance which currently uses *IFIS* which has an unlimited number of lines. Some download from *STARS* (to *IFIS*) have issues with Tran Code which can affect cash causing a funding imbalance requiring manual adjustment in *IFIS* (which do not go back to *STARS*).

For fixed assets the Division uses *FAS*. *FAS* meets Division needs for tracking vehicles and some (under \$2K) pilferable items such as laptops. The Idaho Education Network (IEN) has all of their assets in inventory. The Division leases PCs using a three-year refresh period.

Travel Express (TE) is used by the Department of Administration Divisions. If an individual is going to travel, the traveler completes a travel request which workflows to a supervisor for approval (where, when, why, cost center). Meals and lodging are paid via direct bill or PCard. When the traveler returns they enter *TE* and note what charges were paid and how (e.g., direct bill or PCard). Reimbursement requests go to the supervisor for approval; after approval the reimbursement request is routed to Fiscal for coding (index and sub-object) then routed for approval by the Division Director, then routed back to Fiscal. Notifications are via email. The process becomes cumbersome if attachments or other supporting documents are missing. *TE* has edit checks for meal amounts. *TE* sends reimbursement (payment) requests to *STARS*. These transactions are eventually downloaded from *STARS* into *IFIS*.

Division of Public Works (DPW) does construction, design, and maintenance for all state building. DPW does work on behalf of agencies and bills come from DPW via *DPWeb* (a construction management system). *DPWeb* interfaces to *IFIS*. These transactions are then uploaded to *STARS*. Bills for agency reimbursement can be tens of millions of dollars per year.

It was noted that SCO will need to develop a new interface from *DPWeb* to *STARS*.

The software used for postal and copy center billing sends out bills for the previous month (e.g., when statehouse mail is run a report of agencies charges is generated and interfaced into the postal/copy center software which generates the bills). The system interfaces into *IFIS*. The process for telephone charges is similar and interfaced to *IFIS* via a flat file.

Risk Management Division (Department of Administration) handles risk insurance for all state agencies. The Division has an internal system called *ATS*. *ATS* interfaces premiums and claims transactions with *IFIS*. The Division pays claims to agencies then collects claims against carriers (*ATS* is specialized system that manages the detailed transactions).

PCards are used more in some divisions more than in others. Divisions such as Public Works have more cards and use those cards more frequently. One person in each Division is responsible for their PCard transactions. They use SCO's system where the employee prints out transactions and attach receipts for approval by the supervisor. Then transactions and supporting documents are manually routed to Fiscal for coding and approval, and then the Fiscal officer enters the payment into Payment Services or *STARS*. The Financial Services Division performs a similar role for small agencies under an MOU.

The Division has policies and checkpoints in place so that PCards can only be used for certain purchases and amounts, including daily and monthly limits. Staff can get approval to purchase above certain limits. The Fiscal staff would like to improve the timeliness of the process to make closing out a month "cleaner" (e.g., when a bill from the bank is received the PCard bill could be paid in the same month). An improved system supporting a streamlined process (coupled with the initiative of the PCard holder) would address this issue.

For budget development, the Division downloads actuals from *STARS* as well as other inputs such as preloaded rates and DAFRs for appropriations, changes, and shift of appropriations from Ops to Cap, and any holdbacks. These are entered into budget development manually using the appropriate forms,

e.g. personnel costs and changes in benefit rates (such as building in 1% increase in employee compensation); vacancies; and planned fund transfers. DUs are entered for line items such as system modernization, vehicle replacements, new position and building repairs.

Excel spreadsheets are used to track receipts and expenses for different funds; due by 1st working day in Sept (two copies to DFM and one to LSO).

The Fiscal staff suggests that the number of expense sub-objects be reviewed with a new financial management system, e.g. budgeting for calls for local vs. long distance vs. cell, minor tools vs. major tools, regular postage vs. Fed Ex. This creates extensive accounting effort. Staff sees no apparent reason to budget at its level; this level of granularity makes it difficult for non-financial staff to code transactions, e.g. major vs. minor tools. With a new system it is recommended that budgeting be done at a higher level but that a new system's Business Intelligence capabilities are configured to report out various types of expenditures.

The Division's use of *IBIS* is mixed. The Division Director uses *IBIS* extensively but other staff do not use *IBIS* due to lack of understanding. It is believed that these staff could benefit from more frequent training or periodic refresher courses.

Procurement Current State Environment

The Division's primary purchasing activities are for office supplies. Any service contracts are managed through Division of Purchasing.

Division of Human Resources

As the State of Idaho's central human resources agency under the Office of the Governor, the Division provides consultation on various HR issues to state agencies, employees, and Idaho citizens. Its areas of emphasis include recruitment, compensation, employee relations, classification, and HR management. The Division is the central owning organization of several state-wide Human Resource management systems except for payroll (PR) which reports to the Office of the State Controller (SCO). Most agencies use the HR and PR systems managed by DHR and SCO including:

- ATS – applicant tracking;
- *IPOPS* – Idaho Paperless Online Personnel/Payroll System -the State's web based front end for *EIS* (home grown) that produces, routes, tracks and archives personnel, payroll, and position documents online for state agencies
- *I-TIME* – Employee portal (Domino based) for time submission that feeds *EIS*;
- *EIS* - Employee Information System – the back end mainframe application of *IPOPS* and *I-TIME*;
- Leave Management – (requested via *I-TIME* and tracked in *EIS*);
- *IPERFORM* – custom written domino based performance management system; and

- *IBIS* – Idaho Business Intelligence Solution (data warehouse) - a reporting application allowing state agencies to have secure, organized access to *FAS*, *EIS*, and *STARS* data using tools such as *COGNOS ReportNet*, *Query Studio*, *Report Studio*, or *COGNOS PowerPlay*.

Division of Public Works

The Division of Public Works (DPW) is a division under the Department of Administration. DPW is responsible for all design and vertical construction for the State. DPW provides these services to most agencies including higher education. There is a State statute mandating that agencies use DPW services if the construction project exceeds \$100K; five agencies (ITD, Water, Fish & Game, Lands, Parks and Recreation) are exempt from this requirement. DPW also manages the Capitol Mall and State properties in Lewiston & Idaho Falls including security, grounds, and custodial contracts. All security, custodial, and grounds keeping is outsourced and DPW manages custodial and security contracts for the Capitol Mall. DPW is responsible for all commercial leasing for the State. DPW has 55 employees. The Division generally has approximately \$200-\$500 million under contract. There is no charge back process for DPW services; their operating budget comes from the permanent building fund which is an annual appropriation or agency funding or a combination of the two.

In the Fiscal area, the Division's financial transactions are managed in *STARS* by the Financial Services group (Fiscal) within the Division of Insurance and Internal Support under the Department of Administration. Fiscal provides several monthly reports from *IFIS* for DPW to manage their operating budget.

The main system used by DPW is a 20-year old, internally-developed system (*DPWeb*) to manage design and construction projects. Once a contract is awarded contractual obligations are entered into *DPWeb* which has a built in approval process. *DPWeb* puts transactions into the proper coding to match the budget. DPW provides agencies access to status reports of their construction projects. DPW has lost staff that had significant institution knowledge of *DPWeb*. *DPWeb* will be replaced in the next 18 months with a new Software-as-a-Service application. *DPWeb* has standard templates for contracts.

The new system will include functionality not in *DPWeb* such as the ability to scan and upload change requests. It will also generate and store all contract documents.

DPW contracts with professional architects to manage most construction contractors.

DPW/Fiscal uses IAT billing to make payments for projects and services funded by other agencies.

Construction contracts include a milestone which designates when the capital asset receives a "certificate of substantial completion". This triggers an entry into *FAS*.

DPW negotiates leases on behalf of some agencies but does not enter any information into *STARS*. This is done by FISCAL or by the agency.

DPW does not use *IBIS*.

DPW both owns and rents vehicles. DPW's fleet includes 16 vehicles of which ten are used by project managers and field reps. DPW also owns a boom crane.

DPW uses *Travel Express*. Staff commented that the application is somewhat cumbersome to use so there is a single staff person who enters information into *Travel Express*. All receipts and paper copies

of travel authorizations and reimbursements are routed to the *Travel Express* staff person using paper copies. Reimbursement is quick, about 48 hours. PCards are not used for travel.

DPW has a website to post RFPs and awards.

In the Purchasing arena, DPW does not use *iPRO*. DPW is in the process of initiating use of an online bidding product (*BidExpress*). DPW is working with a vendor to develop this capability. Bid opportunities will be electronically “pushed” to contractors who register on the website. IT purchases are made through the Office of the CIO and are purchased from State contracts.

Department of Agriculture

Note: This agency write-up was not validated by the agency.

The Department of Agriculture has regulatory and educational responsibilities. The Department employs a staff of approximately 375. Total 2013 agency spend was approximately \$30M. The Department relies heavily on cyclical revenue received from various fees and other funding sources and must carefully manage cash flow.

The Department has employed in-house administrative and technical resources to develop ancillary systems to address deficiencies in *STARS* and to integrate systems to support their business processes in an efficient manner. The Department characterized *STARS* as a transaction “engine” which interacts with numerous internally developed interfacing systems. The Department uses *Access Idaho* (3rd party e-commerce portal) to enable businesses and individuals to make on-line payments for permits, fees, and other transactions. The agency would like to eliminate use of *Access Idaho* due to the administrative fees charged and the lack of sufficient transaction details which make reconciliation of revenue challenging.

Within the Fiscal arena, the Department has developed a sophisticated system to generate invoices and to reconcile e-commerce payments with receivables and STO receipts. This in-house system and integration investment has significantly reduced staff time for revenue reconciliation. EFT payments received by the STO are still problematic as they do not contain sufficient detail for automated reconciliation and there is no notification of receipts. Availability of additional information could increase efficiencies further. Management of A/R is decentralized and each program has its own A/R “system”. The Department plans to centralize A/R in a phased approach. The Department has approximately 180 vehicles and uses a spreadsheet to track mileage and maintenance of vehicles. The Department utilizes *Travel Express* to facilitate reimbursement for employee travel expenses. For developing their annual budget the Department relies on historic trend analysis of funds and institutional knowledge to set fees. The Department relies heavily upon *IBIS* to manage budget execution and (fiscal) program reviews.

Within the Procurement area, the Department performs significant purchasing activities. There is a small purchasing staff. The Department does not use a requisitioning process. Purchases normally originate with an email from the requester. Thresholds are defined and budget checking is done manually. The Department uses *IPRO* to post solicitations. A three-way match process is used for authorizing payments. Fixed assets are assigned a property tag containing the serial number, responsible staffer, and assigned location.

Within the Human Resources / Payroll environment, functions include both automated and manual processes. The manual functions exist to fill gaps in the current legacy system (*IPOPS* and *EIS*) as well as to accommodate the distributed nature of employee locations. For example, many employees don’t work in offices but work in outside environments. Consequently, they don’t have access to a computer or electronic timesheet to enter their time. As a result, field employees fill out manual timesheets instead of using *I-TIME*. These paper timesheets are sent to the main office where they are then rekeyed into the system by a staff person in HR. Once submitted, supervisors are required to sign off on their employee timesheets, although today there is no automated reminder / message that communicate this to the supervisor.

Reporting is limited. Employee information does not get updated in *IBIS* (the data warehouse) until payroll is run (creating up to a two week gap in current information). The Department therefore does not use it extensively but relies on its internal personnel files to validate data.

Although the HR department uses *ATS*, there is no integration between the applicant system and *IPOPS*, forcing staff to rekey a hired application into *IPOPS* manually. Additionally, *IPOPS* does not have the capability to store all employee information (such as phone number) so that information is stored on paper in employee files.

Because of some limitations, both functionally and technically in *I-Perform*, the agency has chosen to write performance reviews in *Word* and copy them to *I-Perform*.

Board of Education

Note: This agency write-up was not validated by the agency.

The State Board of Education (SBOE) is comprised of five agencies: 1) Vocational Rehabilitation, 2) Idaho Public Television (Public TV), 3) Office of the Idaho State Board of Education (proper), 4) Professional Technical Education (P&T), and 5) the State Department of Education. SBOE has approximately 39 employees and a 2014 budget of approximately \$45.6M. (State Board of Education (proper), P&T, and Public TV participated in the interview.)

In the Fiscal area, SBOE and P&T use *STARS* as their primary system including use of projects and grants within *STARS*. Public TV uses a third-party accounting and procurement system called *Navigator* for their internal financial and procurement needs. *Navigator* interfaces to and from *STARS* on a daily basis.

Below is a summary of fiscal systems that support these agencies' key business processes:

- For General Ledger, *STARS* is the system of record for SBOE and P&T. Public TV has its own GL in *Navigator*.
- For A/P, all agencies use SCO's Payment Services.
- For asset management, all agencies use *FAS*. Staff mentioned that *FAS*' functionality is not very good but that this is less of an issue since the capitalization threshold was increased to \$5,000. Staff noted that replacement cost is captured in *FAS*, but it is not tied to State risk management systems that also capture replacement cost for assets.
- There is no system for A/R. P&T has inter-agency billings and has to wait on reimbursements from federal grant drawdown. P&T has a 7-day clearance pattern. SBOE doesn't release funds until cash is received from the federal government. Public TV requests reimbursement long after payments clear, so that there are no CMIA issues.
- For project accounting, P&T assigns a project number in *STARS* for payments to school districts so that payments can be tracked by district. Essentially, the project field is used as an extra chart of accounts element rather than tracking for project accounting purposes.
- Cost accounting activities are performed in spreadsheets and primarily used for internal cost distribution purposes. Agency needs are not complex enough to justify an automated cost accounting process. P&T has a system to calculate formula distribution for each school district and program. However, this function is programmatic in nature and would be beyond the scope of an enterprise-wide financial system.
- Budget development is performed in *Excel*. Appropriations are loaded into *STARS* for appropriation/budgetary control. This is consistent for all three agencies interviewed.
- For travel advances, authorizations, and reimbursements, agencies use *Travel Express*.
- For reporting, Public TV has a separate financial and CRM system which creates reporting challenges. The system pulls data from *STARS* and *EIS* thru *IBIS*. P&T can pull all data straight from *STARS* for online reporting for federal reports and compares this to *IBIS* data to confirm accuracy. SBOE downloads from *IBIS* and loads into *Excel* which serves as its query tool. SBOE uses the State's report distribution tool instead of printing.
- For grants, SBOE awards over \$31M in grants and other miscellaneous awards and \$6.2M in scholarship & fellowship awards. SBOE uses Grants instead of Projects codes in *STARS*. Public TV

only requests reimbursement after issuing warrants. Agency convention is to use the *Location* field for Board Name; *Task* field is used for cost of each board meeting; the *Multi-Purpose Code* is a text (non-validated field) that agencies can use at their discretion.

In the Procurement arena, SBOE uses an internally developed *Excel*-based “process”. The process for purchasing goods and services begins with a requisition PR and log which is routed for approval (paper based). After approval, the PR goes to another staff member or the originator and the PR becomes the PO number. Staff manually tracks PRs and payments against PRs. Encumbrances are recorded at year-end. When payments are made, staff enters the multipurpose code to apply the payment against the PR. Staff runs a payment report once per month from *IBIS* to see what has been paid against each PR. P&T tracks contracts with PR; once approved the staff executes the contract which is routed to accounting for tracking and payment.

Public TV uses a manual PR process. After approval, it is entered in *Navigator* as a purchase order. (The *Navigator* accounting system is used by 4-6 other agencies.) *Navigator* interfaces to and from *STARS* each day. The *Friends of ID Corporation* (Public TV) transfers funds to STO to cover warrants. CRM is important to Public TV. Fixed assets are tracked in *Navigator* and manually entered into *FAS*. *FAS* computes depreciation which is entered into *Navigator*.

Within the Human Resources / Payroll environment, agencies use *I-Time* for time entry for employee self-service. All personnel actions are paper based.

Below is a summary of which HR/Payroll systems support the SBOE agencies’ HR business processes:

- Agencies use *I-Time* to enter time and *IPOPS* for payroll.
- For recruiting and classification, agencies use an interview register, conduct the interview, and make a job offer. The process is paper-based from there. The announcement process for classified personnel is through the Department of Labor. Agencies receive a register of rankings and interviews. The top ten candidates go from Labor back to DHR for hiring.
- For payroll calculations, the Chief Payroll Officer reviews all timesheets which are submitted and approved by the supervisor prior to routing to payroll. Pay corrections are handled through *IPOPS*.
- For employee evaluations, SBOE does not use *I-PERFORM* because agencies use self-evaluation which is not accommodated by *I-PERFORM*. All evaluations are paper-based.
- Grievance and disciplinary actions are managed via a paper-based process.

In summary, with respect to SOBE’s systems and business processes all three entities are able to adequately perform their required functions within the current systems. None of the agencies has any plans for system upgrades. SBOE and P&T have very manual, paper-based systems that facilitate routings and approvals prior to entry into *I-Time*, *IPOPS*, and *Payment Services*. Public TV seems reasonably satisfied with their *Navigator* system, although there was a noted lack of integration between the *Navigator* financial modules and their CRM system.

The staff mentioned that reconciliation between *STARS* and other system can be laborious as is reconciliation between PCard and *Travel Express*. The many *STARS* transaction codes are confusing and staff does not understand how these codes impact system tables and other aspects of *STARS*. *IPOPS* could be more user-friendly. It was also mentioned that financial reporting (i.e. seeing a complete view of all financial activity) is a challenge.

Department of Corrections

Note: This agency write-up was not validated by the agency.

The Idaho Department of Corrections (IDOC) is responsible for managing felony offenders in prison and on probation and parole. IDOC houses inmates in ten prisons, four community work centers, and numerous probation and parole offices in Idaho. IDOC also uses county jail beds and an out-of-state facility to house inmates. IDOC's four divisions include Prisons, Management Services, Education, Treatment and Reentry, and Probation and Parole. IDOC employs approximately 1,960 staff. Most are correctional officers and probation and parole officers. IDOC also employs a variety of non-uniform staff which include teachers, mental health clinicians, and drug and alcohol rehabilitation specialists. IDOC has approximately 25 IT staff. IDOC's 2014 budget is approximately \$200M. IDOC's revenue comes from the General Fund. IDOC does not receive any federal funds.

Within the Fiscal arena, IDOC uses *STARS* with no interfaces to other IDOC systems. Idaho is part of a consortium of States that share development costs for *Reflections/CIS*, which is a 1960's era inmate banking system that also does inmate management and sentencing. It is linked to a web-based system for downloads of sentencing. A new system is being planned to replace *Reflections/CIS*.

For accounts payable, IDOC uses the vendors entered by SCO. For new vendors IDOC receives vendors' W-9s and enters the vendors in *STARS*; SCO performs vendor approvals to make vendors active. The payment addresses maintained in *STARS* are sufficient for payment management. Searching for vendors is relatively simple because of the vendor location by suffix. Special projects, such as when an offender works on a fire fighting crew or works in a potato factory, are coded and IDOC tracks costs for these projects. For these payables, IDOC uses *Payment Services* which creates batches and attachments for payments in *STARS*.

IDOC has several A/R business processes such as *Cost of Supervision*, wherein released inmates pay the State \$50/month for Supervision. Checks are entered into *Reflections* and physically taken to STO which creates the entry into *STARS*. Inmate money is deposited in US Bank, and STO enters the transactions into *STARS*. When inmates request funds within the institution, a memo entry is made in *Reflections*; when the funding is released the institution processes a check. The inmate receives the net balance remaining in their account when they are released.

Another A/R process is billing the Department of Lands when IDOC inmates work on a fire fighting crew. Inmates receive \$1.30/hour for working a fire which is considered inmate payroll.

IDOC also conducts background checks for Correctional Industries (a separate agency) and bills them by creating invoices in *Excel* and recording the transaction in *STARS*.

No aging or tracking is done through *STARS*. Every month IDOC may have 30 invoices with 12 or so outstanding at any given point.

There is no special cost allocation performed within the agency, other than to Grants. Within *STARS*, IDOC uses the Project/Grants fields for special projects. Grant performance monitoring is a manual process performed outside of *STARS*.

For financial reporting, the agency uses the *STARS* DAFR reports and *IBIS*. Some frustration was expressed with *IBIS* because in some cases compiling data for reports can take up to a week.

Contract administration and contract management is completely manual (e.g., to capture terms and conditions and balances of a contract).

For fixed assets, an asset is recognized as a capitalized asset before the purchase, i.e. if the purchase is \$2K or more. However, if the purchase has a Sub Object 6000 code, then a request for an asset tag is generated from *FAS* to *STARS*. The data for the asset goes into a "hold file" in SCO if not tagged early in the process. IDOC inventories radios and firearms which are tracked in *Excel*. The IT Department tracks IT assets in separate system, and capitalized items are sent to *FAS*.

IDOC develops their annual budget using *IBIS* & *DAFRs* reports. *IBIS* reports are downloaded into an *Access* database that is posted to an internal website called *Financial Statement Generator*. For budget execution, an *IBIS* history extract is downloaded weekly to review budget and expenditures by PCA. The data is not reconciled back to *STARS*. Budget info is also loaded to the database month-to-date and year-to-date. Budget adjustments also flow through on the history file.

In the Procurement area, all items go through the IDOC Purchasing group. State Contract law from DOA are followed for purchases, and most purchases are under State contract. Regular facilities purchases are also done from State contracts. Off-contract purchases must go through a bidding process. All IT purchases are approved by the IT staff. IDOC stated that *IPRO* is not working for them and that they keep a purchase order log on an internal website where it is manually updated. Requisitions and POs are one and the same, and all POs are created centrally. The encumbrances are recorded in *STARS* one at a time and reconciliation is done at year-end. POs are issued to vendors from the IDOC central office (accounting was centralized only recently). Receiving is decentralized. Most invoices received from vendors are scanned locally and emailed to the central site. Routing is done by email for approvals, with *Adobe Writer*. The electronic batch is attached through *Payment Services* and the payment transaction is sent to *STARS*.

Within the Human Resources / Payroll environment, the agency uses *ATS* for applicant tracking, *I-TIME* for time and leave reporting, *EIS* for HR, Benefits, and payroll processing. Employees track time against grants in *I-TIME*. *IPOPS* is used for all personnel actions. Staff complained about the significant lag time.

IDOC works with the POST (Peace Officer Standards and Training) group at the Idaho State Police, who track all probation officers/local guard certifications for IDOC. IDOC pays POST for certifications, training, etc. If an officer leaves before two years, then the officer owes POST for repayment of training. All transactions are paper-driven, and this is cumbersome for IDOC given the large number of guards and security personnel employed.

IDOC also uses *RELIAS* (a third party product) for online training and *POST Academy* for managing licenses and certifications as well as an internally developed scheduling tool for resource scheduling.

Onboarding, off-boarding, talent management, leadership training, performance management, and discipline are tracked manually.

Correctional officers are paid overtime after working 160 hours. Law enforcement officers are on a different pay scale (Rule of 80) for retirement withholding.

HR representatives are assigned to facilities. A log is kept in *Excel* (by date) of occurrences to track disciplinary events and actions taken. Letters of reprimand are placed in a central employee file. Working files are maintained by each supervisor which follows the employee through promotions and transfers.

Idaho State Department of Education

The Department of Education is primarily responsible for administering State and federal funds to Idaho school districts as well as certifying teachers and providing training. The agency has a small administrative staff that administers approximately 80 programs and almost \$2B in funding.

Within the Fiscal area, the Department uses *Payment Services* for invoice payments and contract payments. Recurring transactions are set-up in *STARS*. There are two users of *Payment Services* and four users of *STARS*. *STARS'* limited character description fields were cited as a major deficiency. Other *STARS'* deficiencies called out were: a) inability to store a DUNS # (required for federal grant reporting), b) number of characters for grants/projects requires complex "intelligent" coding, c) problematic vendor and payment searches, and d) absence of comment fields for making payments.

In terms of transaction volume, the Department's largest receivables stream is teacher certifications. This business process begins with teachers downloading forms from the Department's website. Payments are made either via check or *Access Idaho* (The public website where Idahoans can pay taxes, register vehicles, apply for licenses online or make other transactions that replace the need to mail manual checks). There is a significant amount of manual processing for these transactions.

The Department uses three systems for grants administration. *AccountsOne* is an Access database used to show grant balances and drawdowns and would likely be replaced with a new system. *My Idaho CNP* (child nutrition grants) contains programmatic information; this system would likely remain and interface to the new ERP system. The third system, *Payment Management*, would likely be de-commissioned with implementation of a new ERP system.

The Department is a heavy user of *IBIS* and has five "power" users to develop reports. Approximately 60 staff personnel run *IBIS* reports. *IBIS* training is provided within the Department. *IBIS'* inability to support multiple browsers inhibits staff from performing their work out of the office and impacts staff productivity. (It was mentioned during the interview that this browser issue applies to other SCO systems as well).

It was mentioned that producing the CAFR is a challenge for the Department as outputs are not aligned with data inputs. The Department spends hundreds of hours to manipulate the data at a time of the year when staff is in the midst of quarterly federal reporting activities.

Other Observations:

- The Department does not have a centralized system to manage A/R. The business processes are decentralized and spread across a multitude of programs.
- Over 100 Departmental staff uses *Travel Express*. The Department cited various problems with the application (e.g., stability and usability issues, and provided a detailed list of functional and usability deficiencies).
- The Department has an internally developed system for managing and tracking assets. The system includes bar code tagging and scanning.
- Budget control is managed using spreadsheets and *IBIS* reports which are regularly provided to program managers.
- The Department does not have a fleet; travelers use POV or rental cars.

In the Procurement arena, the Department functions under the auspices of the Constitution and is not required to do competitive bidding. The Department does not have a robust procurement process or purchasing system. The Department uses PCards to pay for commodity purchases. The Department initiates approximately 1,500 service contracts per year using a contracting system (*CATS*) which includes contract templates and workflow capabilities. *CATS* electronically stores associated documents with the contract. Further analysis is required to determine the feasibility of replacing *CATS* and would be dependent on the Department being able to retain the capabilities of *CATS*.

Within the Human Resources / Payroll environment, the Department uses *EIS* for human resource and payroll functions. Currently only one individual uses *EIS* for employee data management and payroll processing. There is a lag time on the direct deposit process which often forces the issuance of paper checks which is problematic. Because *EIS* is based on an older technology, users are unable to open and access multiple screens at the same time. Users often want to have *I-TIME* and *IPOPS* open alongside *EIS*, but the system does not allow it.

IPOPS is used for personnel actions. However, when trying to modify an employee's record, the user needs to know the specific category/action code versus having the ability to select from a drop-down list of options. Navigation is cumbersome and documentation is lacking. If a correction action (e.g., reclassification) needs to be made, users need to wait for the upload of data. The system is generally slow with a 15+ second wait time for a screen load. It does not retain a history of position control numbers. In addition, the system processes transactions serially versus all at once, which creates wait times for the users.

I-TIME is used for timesheet processing. One issue associated with the system is its inability to move employees from one processing group to another. After assigning employees to groups, an individual employee cannot be moved to a different group without changing the organizational structure all over again.

Department of Environmental Quality

The Department of Environmental Quality (DEQ) is accountable to ensure clean air, water, and land in the State and protect Idaho citizens from the adverse health impacts of pollution. As a regulatory agency, they also enforce various state environmental regulations and administer a number of federal environmental protection laws including the Clean Air Act, the Clean Water Act, and the Resource Conservation and Recovery Act. The Department issues a multitude of permits as part of its regulatory responsibilities. The Department has approximately 350 employees. The Department's 2014 operating budget is approximately \$65M. Approximately 60% of the Department's funding is federal grants (primarily the EPA). The Department manages 60-80 grants at any one time. The Department operates six regional offices and additional satellite offices.

Within the Fiscal arena, DEQ has created an "Enhanced Accounting System" comprised of *Access* and *QuickBooks* to provide functionality not supported by *STARS* and *EIS*. Key Department administrative processes are project accounting, grants management and A/R. This "system" uses a multidimensional accounting structure, e.g. program, fund, grant, stakeholder, and transfers data to and from *STARS*. The Department provides loans to local government agencies as part of a State revolving fund that includes federal funding, state matching, and local government repayment. Fiscal and contract information is stored in the "system".

Progress reports are stored in the "system" for grant billing purposes and management of sub recipients. DEQ also uses information in *STARS* to produce reports on grant and fund balances. Inter-agency billing and sub granting occurs for services provided to and received by other agencies, respectively.

QuickBooks is used for DEQ's accounts receivable activities as *STARS* does not have an accounts receivable capability. DEQ receipts most incoming monies and creates invoices for cost recoveries, various fees, and other miscellaneous billings with *QuickBooks*. While financial statements created by DEQ may use information from *QuickBooks*, DEQ does not use *QuickBooks* to create the financial statements.

The Department maintains a large number of separate funds. DEQ uses the Department of Environmental Quality Fund to pay most of the bills; this Fund has multiple fund details. The Department is scrutinized by LSO because the funding sources in *STARS* transactions are not easily recognized unless the viewer has been trained on DEQ's system.

All invoices are paid centrally and reviewed and approved by the Field. Data is loaded into a local system for reporting after all entry. *STARS* has detail on expenditures but not on labor. (In *STARS*, each line of payroll comes back as 8 lines of data because of Sub Object breakdown of pay, insurance, etc.) DEQ summarizes this information. Because *STARS* charges by the transaction, DEQ's bill for *STARS* usage decreased from \$500K to \$100K when the summary programs were implemented in *Access*.

The Department has also developed and deployed numerous *Access* forms programmed with data rules and edits that capture and store data elements that Statewide systems cannot. These include:

- Certifications & Training required by OSHA.
- FMLA information.
- Time entry which interfaces with *ITIME*.
- Grant tracking which also contains information on MBE/WBE vendors.

- A loan servicing & processing application (LIPPS) which receives downloads from *STARS*. (DEQ services 157 loans totaling \$300million.) *LIPPS* produces reports on loan disbursements.
- Vehicle maintenance records for the Department's 70 owned and 20 leased vehicles.
- A Contract Generation System (CGS) for contract generation and monitoring.
- General Online Financial Reports system (GOFR) – an *Access* database that extracts from *STARS* – as the Department's detailed fiscal reporting requirements cannot be supported by *STARS*, e.g. the Water Program is funded by 20 funding sources.

(Note: The Department has one primary employee on staff to support these systems who is nearing retirement.)

DEQ owns specialty equipment (fixed assets) for air quality and water quality monitoring, cameras, etc. These are tracked in *FAS*. For vehicles, tags are stored in a folder with the paperwork and information on mileage stored in a local data base and manually entered into *FAS*. DEQ does not track consumable inventory.

Budget development is done in each regional office. Each office requests by PCA. Budget data is loaded into *GOFR*. The internal allocations process starts in mid-April, after the official appropriation is received. The three page budget document from the LSO becomes 4000 lines in *GOFR*, after these allocations are made to record expenditures to budget. Encumbrances are only used when carrying State funds across fiscal years. The Department has a technical services pool that charges to six or more funding sources on each timesheet which makes staffing encumbrances difficult to establish and manage with the current systems. The Department loads high level appropriations into *STARS* for six major programs to ensure that federal funds are sufficient to cover operations. Three main programs work with the Director to determine staff increase or reduction in personnel and other aspects of the budget. Allocation is by person and balances to 2080 hours. Budget codes and templates are posted to the network where regional offices only see their staff numbers and a reconciliation is performed – a roll-up and comparison is done to funding sources – making sure that federal funds are sufficient. DEQ spends about 6-8 weeks per year performing these activities. Data is thereafter loaded into a modified history table of *GOFR*, which is also used to report budget to expenditures.

Within the Procurement area, SCO's *ReqPO* is used by the Department on a limited basis. Buyers process requisitions which are workflowed for approval. There is a process for budget checking. If the PO is within the Department's delegated authority it can be posted for solicitation via *iPRO*. Receiving is done by the central office Contracts Officer or a Field Manager. Matching is done via a phone call or when entered into inventory. Invoices to support matching are received centrally or through a regional office and approved via a payment document. Payment approvals (approximately 3,000 per month) are made centrally.

ReqPO is used by the agency but on limited basis – mostly users from regional offices when the need arises for a good/service. The process is to enter and hold charge codes which are then routed for approvals for approval and available funds. Within the Department's delegated authority, the PO is created or taken to *iPRO* which has a receiving function and can create reports. Two users do this in the Department, but they do not use it for requisitions. Receipts are done through matching process via phone call or when entered into inventory.

Within the HR/Payroll environment, DEQ is currently testing the *ITIME* system (and adding DEQ's coding structure) and will be migrating to this next month. This will enable consolidation of transactions to reduce the administrative fee. When the Department migrates to *ITIME*, DEQ will receive a download and will be keeping codes that support these labor transactions.

New employees are entered into *IPOPS* (limited self-service), *DEQ Time*, Names file (DEQ system). Various databases are connected to the Names databases for tracking training and medical exams. DEQ does not track educational attainments (e.g. in a learning management system), but as mentioned above, DEQ does have a local Certification database. Also, DEQ has an internally-developed family medical leave database which automatically populates federal-like forms.

The *IBIS* data warehouse doesn't have supervisor names on their history on HR/Payroll side, which DEQ would find useful. For this reason and others, there is a Position Control Number (PCN) local Access database to track positions and classifications, and current job description, which links to NAMES file.

Department of Fish and Game

The Department of Fish and Game's mission is "to protect, preserve, perpetuate and manage Idaho's wildlife resources." The Department currently employs a staff of 558 FTE plus temporary employees that vary by season. The Department's original 2014 budget is approximately \$89M. Department funding is comprised of revenue from fish and hunting licenses and tags, grants from both federal and other sources, and other miscellaneous revenue.

Within the Fiscal arena, the Department uses a combination of central and agency developed fiscal and administrative systems. The Department employs approximately 4 internal IT staff to develop and support administrative and programmatic systems. Department personnel at Headquarters and at the Regional Offices use *Payment Services* for initiating AP transactions. The *STARS* index coding block is used to capture transaction detail (e.g., stocking/cutthroat trout). Encumbrances are entered directly into *STARS* and other budget transactions are either directly entered or uploaded to *STARS*. Cash receipts are manually entered into *STARS*. Inter-agency receivables are entered directly into *STARS*; Inter-agency payments are entered directly into *Payment Services*. The Department does not have visibility into what is due other agencies and uses *IBIS* to get information on these liabilities. *STARS* transactions are downloaded on a daily basis into SQL which feeds the Department's standard reports; *Access* is then used to provide ad-hoc reports.

Other fiscal systems and supported business processes of note are highlighted below.

- For asset management the Department uses *FAS* and also enters similar information for insurance purposes.
- For fleet management, the Department uses a fleet system developed by a contractor in 2001. The fleet system feeds the cost allocation process for chargeback to all programs. Fuel use transactions are interfaced from the vendor to *STARS* and a file from ITD is sent to the agency.
- The Department is developing a grants management system that will track expenditures, budget execution, match, billings, and approvals. The system will include security and workflow capabilities.
- The Department has a database for tracking citations. The system tracks A/R from 44 counties.
- Invoices are generated manually. A/R tracking will be a functional component of the new grants management system.
- The Department uses a combination of systems and manual processes for calculating allocations. This involves collecting labor rates, vehicle costs, interest on trust accounts, and other cost elements. Allocations are uploaded to *STARS*. The Department calculates a loaded labor rate (for grant reimbursement) by allocating an average rate from the past six payrolls.
- The Department has also developed a fairly sophisticated activity based costing system to calculate expenditures (and staff time) by "activity". Department staff spends a significant amount of time extracting segmenting and transforming data to support this activity based costing process.
- The Department receives a daily download of transactions from the POS system (Active Network) used by consumers to purchase hunting and fishing licenses at retail outlets.

- The Department uses an *Excel* form for employee travel. The Department does not use *Travel Express*.
- The Department has an internal system for budget development which uploads to the State system. The system is being migrated from *Oracle* to *Sequel*. Department staff expressed a desire for a more comprehensive system to track budget execution.
- The Department has numerous set-aside accounts mandated by the Legislature to support specific programs and beneficiaries.
- The Department is developing an in-kind tracking system projected to be complete in FY 2015. Currently, in-kind contributions are tracked on paper (e.g., timesheets and donations, and compiled in *Excel*).

Department personnel mentioned that the central systems do not have useful reporting capabilities. Several staff expressed a need for a comprehensive data warehouse with data cubes (e.g., spend analysis) and automated reporting capabilities.

Within the Procurement area, the purchasing process is primarily manual with paper-based routing and purchasing activities managed and tracked using a spreadsheet. The Department has not started using *IPRO*. The Department expressed a desire for a fully integrated purchasing system.

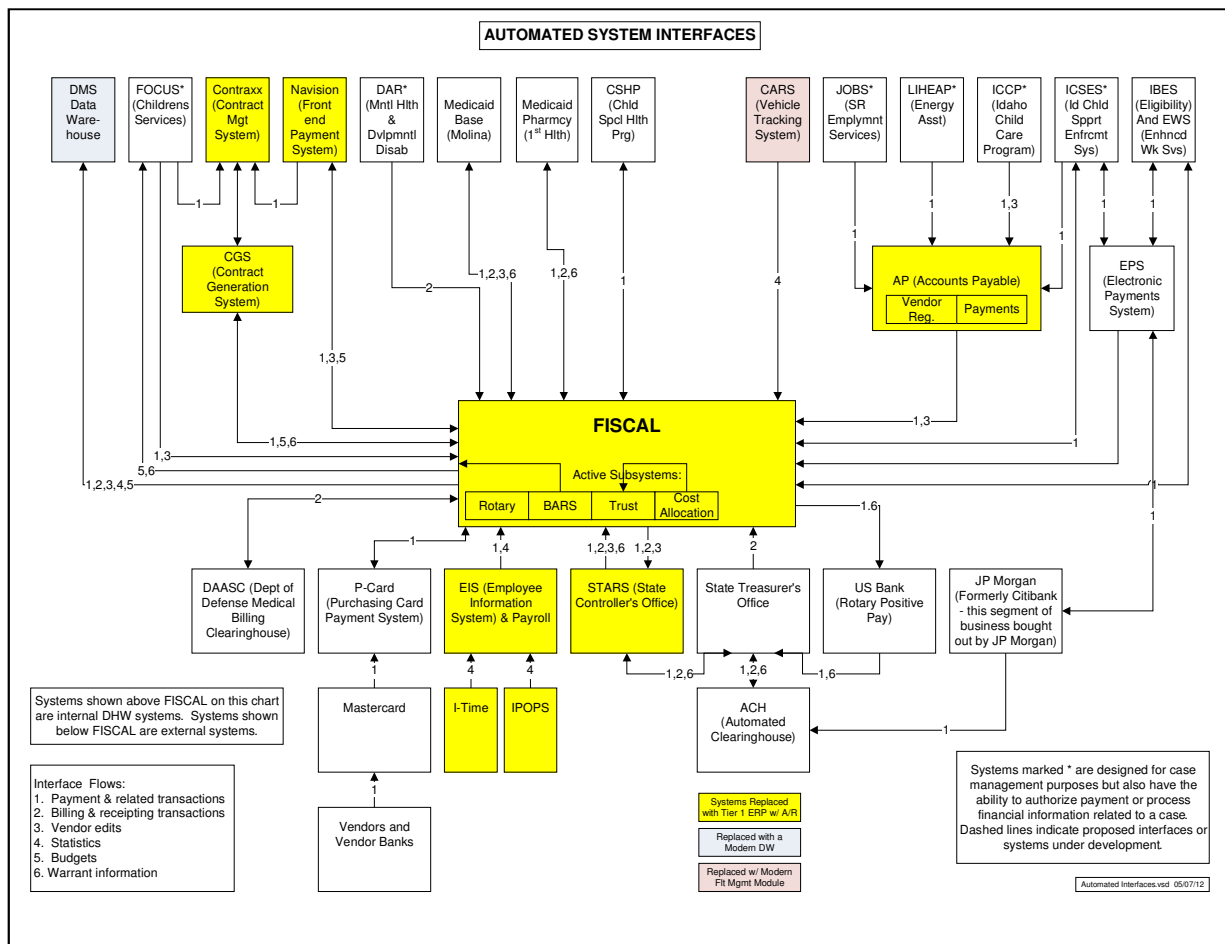
Within the Human Resources / Payroll environment, central systems are used for time reporting and payroll. There are two internally developed HR/Payroll related systems. *Payroll Corrections* is a contractor-developed system used to correct labor hours and dollars that were incorrectly entered. The *Human Resources System* is an internally developed system that captures and tracks personnel information that *EIS* does not support such as supervisor, performance evaluations, and other employee information. The Department would like to track P-1s which are currently routed through *SharePoint*.

Department of Health and Welfare

The mission of Idaho Department of Health and Welfare (DHW) is to promote and protect the health and safety of Idahoans by providing programs and services designed to help people live healthy and be productive, strengthening individuals, families, and communities. The agency employs approximately 2,900 employees. The Department's 2014 budget is approximately \$2.4B.

In the Fiscal arena, the Department maintains 11 agency-specific systems to support its administrative business processes and 11 programmatic systems to support its core mission business processes. There are approximately 20 interfaces between these administrative and programmatic systems to enable automated data exchange. Exhibit 30 illustrates the Department's systems, interfaces and relationships to the statewide financial systems.

Exhibit 30 Department of Health and Welfare's Systems Environment



The Department's core system (FISCAL) was implemented in FY1993 and is modeled after STARS. It contains coding blocks that map to STARS. FISCAL was "cloned" from STARS and modified primarily to support cost allocation. It requires more transaction detail than STARS. For general ledger accounting, FISCAL rolls up 5-6 tran codes before sending data to STARS. FISCAL has the same number of approval levels as STARS. FISCAL has real-time reporting capabilities for some cash receipts but most print jobs

run in an overnight batch; the primary users for *FISCAL* reports are Financial Services and IT staff. *FISCAL* is in the process of being re-platformed from the mainframe to reduce operational costs; system functionality will not be changed. *FISCAL* would be replaced as part of a statewide systems modernization project. Replacing *FISCAL* will entail a significant effort by the Department to develop, test and deploy new interfaces between an ERP and the 11 programmatic systems that currently exchange data with *FISCAL*. Also, the programmatic systems themselves will likely be impacted to varying degrees.

FISCAL houses four subsystems: *BARS*, *ROTARY*, *TRUST* and *COST ALLOCATION*.

The *BARS* subsystem provides billing and non-billing, (i.e., receipting) functions. *BARS* is used by the Department for (non-contractor related) receipting. *BARS* is used to manage overpayments of benefits. State hospitals use *BARS* for receipting and some limited billing. In the billing area, *BARS* has significant functional limitations and cannot be relied upon to provide accurate information on beneficiaries' inquiries regarding debts owed to the State. *BARS* also requires extensive internal technical support.

The *ROTARY* subsystem provides the capability for the Department to issue checks on demand in emergency situations. The Department has authorization from SCO to write checks for pre-approved purposes. The Department issues approximately 100K *ROTARY* checks per year. *ROTARY* also provides a redundant solution to issue checks if an interface in another system is not functioning.

The *TRUST* subsystem manages savings accounts for foster kids, state hospital patients, school-based services, and donation accounts for charitable activities (e.g., patient Christmas fund). These monies are deposited into a State fund. *TRUST* takes the interest earned from STO's allocation of interest and calculates the average daily balance to allocate interest to individuals' accounts. *TRUST* includes features such as locking an account based on assessment of an individual's mental capacity to expend their funds. *TRUST* maintains donation accounts. *TRUST* manages a reserve fund so that hospitals can make a notation of money that a client may have already spent before the bill has arrived which prevents over expenditure of funds. On a daily basis an ACH file is received from STO and processed on the mainframe to record deposits in *TRUST*. If a child is in foster care and child support is received, the monies are deposited into *TRUST*. The number of *TRUST* transactions is high so the Department would like to automate reading the ACH file. *TRUST* uses a Common Client Directory number. *TRUST* disbursements use *FISCAL*'s tiered approvals.

To manage **Cost Allocations**, *FISCAL* has a *COST ALLOCATION* subsystem (which was the primary reason for implementing *FISCAL*). The Department's monthly cost allocation is statistically driven indirect cost pool calculations. *COST ALLOCATION* gathers information used in the cost allocation process. On a monthly basis after allocable pools are collected (e.g., labor hours, buildings), IT runs a job to generate cost allocations. *COST ALLOCATION* could be run quarterly but is run monthly to reduce the volume of errors and necessary corrections. *COST ALLOCATION* does not have a traceable stepdown process; the process is characterized as a "black box" with little or no visibility of interim allocation steps. A *COST ALLOCATION (FISCAL)* report is downloaded to *Excel* (using *Monarch*) into a pivot table to track the input/output of the cost allocation process. Department budget analysts review the costs allocated to each grant to identify any issues with the allocation charges to a particular grant (e.g., not appropriate to allocate per the grant rules). One deficiency of *COST ALLOCATION* is the inability to perform "what-if" scenarios, i.e. there is no capability to run the process and see the results prior to committing the adjustment entries. (There is a significant level of tacit knowledge vested in a very limited number of Department staff who are able to support this critical business process as opposed to having the process and associated knowledge embedded in software and running in a more automated fashion.)

Note: Allocated costs are fund split, but the allocation and the fund split are totally separate processes in *FISCAL*.

For **Fund Splits**, within the grant functionality of *FISCAL* there is a code to distinguish allocated costs from direct costs. After allocation, *FISCAL* runs a fund split process to split applicable expenditure totals in 0220 Cooperative Welfare Only, between State (03 fund detail) and Federal (02 Fund Detail) and Receipt (05 Fund Detail). These splits are based on a predefined percentage calculation determined by the budget analyst and driven by *FISCAL* automation as a monthly process.

After running cost allocation, the funds split is run to generate the General Fund and Federal fund split. It was noted that the Department is being asked to apply these cost allocation processes to more than just Fund 0220 (Cooperative Welfare Fund); however, the design of *FISCAL* assumed that all federal funds would be Fund 0220 and the cost allocation process cannot cross funds.

Note: LSO would like to see the Fed/State split at any point in time in support of a Legislative initiative to have more granularity and transparency, but the system cannot support this request. According to the Department, at the time of *FISCAL*'s development there was a requirement that dedicated funds (anything not 0220) would never have any connection to any federal funding (0220 exclusively). State-only dedicated funds would have no need to participate in the cost allocation process if the "any fund other than-0220" functionality was specifically for the purpose of capturing and reporting dedicated state funds ONLY and would have no Federal ties. The possibility that the multi-fund functionality would someday be looked at to cross over into Federal Fund accounting was never considered as a part of the requirements. The system is not designed to run cost allocation on anything other than Fund 0220. An effort to change that would require a significant redesign or more backend (manual) processing. Moving to a multi-fund process would also affect the drawdown process and likely impact source (programmatic) systems.

The **Grant Upload** process is another supplement to *FISCAL* related to both the Direct & Indirect expenses for a grant in need of intervention based on unique grant requirement and analysis efforts. It improves the efficiency of making adjust for things like allowability limitations and other grant requirements that are not accounted for in the automation of the cost allocation or fund split processes. An example might be fixed MOE requirement or an indirect cap. The amounts determined during fund split between 02, 03, 05, can be adjusted POST analysis by using the Grant Upload tool. Grant Upload is used only after Cost Allocation is complete and Fund Split is complete and a financial analysis of grant requirements has been completed by the Budget Analyst.

NAVISION is a supporting system for *FISCAL* and fills some of the gaps in *FISCAL*. The Department has *NAVISION* 4 (2008) version and has plans to upgrade in the future. A third-party vendor provides the software and support. *NAVISION* supports the following business functions:

- Entry point for payables for product-related purchases (as it stores more detail than *STARS*).
- Asset management including calculating depreciation.
- Document storage to support requisitioning/purchasing/receiving.

NAVISION has been customized to meet the needs of the Department. There is approximately 600 staff with access to *NAVISION*; it has automated approval routing and most *NAVISION* users are approvers. *NAVISION* interfaces to *FISCAL* by creating a flat file and sending a daily batch file to *FISCAL* containing contract payment requests, budget uploads, expenditure adjustments, and grant depreciation. The interface from *FISCAL* to *NAVISION* includes vendor records, budget structure changes, payment and warrant information; the interface runs nightly. *NAVISION* does not send data to the Department's data

warehouse (Business Objects). Querying data in *NAVISION* is difficult including the approval process. *NAVISION* would be replaced as part of modernization project.

CONTRAXX is a COTS application with approximately 300 users. *CONTRAXX* manages service-related contracts, sub grants, and building leases. It does not include grant financial management functionality. The system was implemented in 2003. The system stores and generates contract documents (which cannot be stored in *FISCAL*). The approval process for contract-type documents is manual. *CONTRAXX* has its own user security. *CONTRAXX* interfaces contract information (amount, start/end dates) to *FISCAL*. *CONTRAXX* does not contain a full chart of accounts. *CONTRAXX* would be replaced by a new ERP system.

AP is an internally developed system used to override vendor information (e.g., child support can intercept warrants through *AP* and redirect the payment to a different address). This system would be decommissioned as part of a new ERP implementation.

The Department's financial reporting data warehouse is comprised of Department-wide sequel files. *Business Objects* is the primary query tool. The Department's data warehouse contains administrative as well as programmatic data and information, so replacement of the Department's data warehouse is likely beyond the scope of an ERP project.

The Department administers a large number of grants to sub recipients. Grant agreements are managed in the *CONTRAXX* system. Grant accounting is managed in *FISCAL* (see above). Grant reporting is done from *FISCAL* and the data warehouse.

Budget development is done primarily in *Word* and *Excel*. *SharePoint* is used for routing approvals. *FISCAL* reports are critical to developing the budget due to the reliability of the data. There are approximately 400 grants active in the system which translates to approximately 4,000 lines of budget structure. The Department provides an original submission to meet the required timeline then runs 1 or 2 revisions to reflect new information available after the original submission. The Budget Office has been automating areas of budget development. For budget revisions, changes are entered into *NAVISION* which feeds *FISCAL* which feeds *STARS*. As described above, the Department's Financial Management team accomplishes a significant amount of work with limited automation as much of the budget development process requires manual manipulation.

In summary, keeping all of these systems reconciled and functioning is a significant workload for the Department's administrative and IT resources. Across the systems there is a major disconnect in that *FISCAL*, *NAVISION*, and *CONTRAXX* do not communicate comprehensively with each other. The Department seems supportive of a system modernization project that would consolidate these systems assuming no loss in functionality. Aside from the mainframe migration, the Department did not indicate plans for any significant IT projects.

Within the Procurement area, the Department has an internal purchasing staff, systems, and delegated authority to meet agency purchasing requirements. Department purchasing follows different workflow paths depending on the dollar value and types of goods and services. The Department's purchasing process generally follows a requisition-approval to purchase order-approval to receiving sequence. Once a requisition is submitted, the Purchasing department buyer transforms the requisition into a PO. The PO is dispatched outside of *NAVISION* by the buyer. Approvals are driven by budgetary structure (or PCA). Each user is assigned a workflow path. The Department requires a minimum of four levels of approval. *NAVISION* stores all approvals and supporting documents. *NAVISION* sends email alerts so that approvers know a purchasing action is in their work queue. *NAVISION* has edits for valid PCAs, but does not do budget checking for available funding. Appropriation control is performed in *FISCAL*. Note:

Requisitions and POs do not generate encumbrances as the Department does not feel encumbrances are necessary since it operates on a cash basis. The encumbrance process is typically used during year-end activities in accordance with DFM guidance and approval. Encumbrances are not a part of day-to-day business and are limited to only the Budget/Financial Management team.

Within the Human Resources / Payroll environment, the Department uses the same systems that are used by the Division of Human Resources, i.e. *I-TIME* for time entry, the *IPOPS* web front end for personnel and payroll data entry and maintenance and *EIS* for position control, personnel, benefits management and payroll processing. In addition, the Department uses *I-PERFORM*, the State's system for online performance evaluations. The Department also uses *SharePoint* for routing of position management related documents such as Fill Requests, Pay Requests, Reclassification requests, etc.

Department of Labor

The Department of Labor is primarily responsible for administering and managing state workforce programs, connecting job seekers to employers and administering the State Unemployment Insurance Program. The Department employs a staff of approximately 650 employees. There are approximately 60 IT personnel. The Central office is located in Boise. The Department has 25 field offices throughout the State. The Department receives \$15M in state funds and also receives \$47M annually in federal grants.

In the Fiscal area, the Department uses a client-server *AP* system which was developed in FoxPro in 1991. This will be replaced by an internally written system; this new system will have some improvements; it will share tables with other systems such as *Cost Accounting* and will use the *STARS* vendor table. Six Central staff uses *AP*. They receive a hardcopy from staff for items not requiring a purchase approval. *AP* also pays operating expenses, training, and medical determinations. It produces payment transactions including disability services (which is a division of the Department). Payment batches from field offices are sent to Central via US mail (field) or internal mail. *AP* produces a transaction file that is sent to *Cost Accounting*. *AP* has internal cost codes that convert to *STARS* codes then writes a daily file to *STARS*. *AP* transactions are interfaced monthly to *Cost Accounting*.

Direct entries are made into *STARS* for establishing appropriation budgets and encumbrances. Inter-agency billings are done in *STARS* then re-keyed into *Cost Accounting*.

The *Cost Accounting* system was re-written and re-platformed in 2010. The new internally-developed system uses a *Sequel* data base and has a desktop UI. The system pulls in timesheets (i.e., data entered from the mainframe) into the *Sequel* database. It also pulls in *AP* transactions. The cost accounting system allocates some direct and all indirect costs. Posted receipts go to specific funds. *Cost Accounting* uses cost centers and activity codes (project funding source related) and functions, i.e. type of activity. Costs incurred by the 52 cost centers are charged to the 12 major grants and other smaller funding sources. There are seven users of *Cost Accounting*. The system has extensive reporting capabilities such as ad-hoc reports and federally required reports. Data from *Cost Accounting* is keyed into several federal systems for reporting and drawdowns. *Cost Accounting's* strengths are its ability to get reports on labor charges, allocations, and to track information to detail including accruals and reversals.

For budget control budgets from spreadsheets are uploaded to *STARS*.

The cash management process is manual; this could be integrated if the federal agency could provide the data electronically, i.e. need to get a pdf into an *Excel* file. Actual time spent in the federal system to request grant funds is minimal, most of the time is spent determining how much to draw.

For requesting federal payments, the Department follows requirements of the Cash Management Act.

The Department's Unemployment Insurance system was implemented in September 2014. Implementation took several years and a significant expenditure. The Department is now fine tuning the system and is planning another round of enhancements. UI payments are made via direct deposit or debit card. Summary payment information is entered into *STARS* monthly. Monies from UI (employer contributions) come through employers and intercepts. These are entered into *STARS* by SCO and Department staff. Department staff enter monies that come directly to the agency or intercepts from several sources. On a monthly basis, balances from the UI system are reconciled with *STARS*. The Department's UI system uses specific UI fund accounting information and generates federal reports and is used internally to track activity.

The Department does not have a separate grant management system, but uses the *Cost Accounting* system to manage grants. The Department has an internally-developed *Management Information System* to manage participant information for training programs. The Department is in process of implementing *America's Job Link Alliance* – a 15-state consortium hosted in KS. This system will interface with other Department systems.

The *Workforce Investment Act Fiscal* system (a subsystem of cost accounting) takes participant payment and contract payment information and administrative costs and allocations and performs allocations required of the grant and produces information for federal reports.

For asset management, the Department has a capital property management system developed in *Visual Basic*. The Facilities unit is responsible for 60 vehicles and leased/owned buildings (mostly leased). The unit uses spreadsheets to track and manage these assets.

The Department anticipates significant turnover in accounting over the next several years.

In the Procurement arena, the Department uses an internally developed on-line purchasing system (Order system). It is a client-server application written in *Visual Basic* deployed in 2000. Cost center managers have a \$2,500 spending authority if the goods/services are not on a statewide contract. If the purchase exceeds \$2,500 the request is submitted to the on-line system where the purchase is authorized. Any employee can create a request, but the system has an authorization table of who can approve at what level. This is synced to organizational structure. After the request is created the system checks an approved items table. The request is assigned to the buyer or purchasing agent. The Department has \$50K purchasing authority. If the purchase is greater than \$10K and less than \$50K a request for quote is required. Formal procurements are posted to the web and emails are sent to proposers. For professional services contracts (rare) the Department has spending authority of up to \$100K for a one-year contract. When PO is issued, Accounts Payable receives a copy and may accrue or obligate. The PO is generated through the system and copies are given to the staff receiving the product and to Accounts Payable. IT purchases are initiated by and routed through the IT staff. The staff mentioned that with only two purchasing positions timely actions can be challenging.

The purchasing system does not interface to *Cost Accounting*. Transactions are coded at the payment level. Cost center and project activity code are used. AP keeps a copy of the order pending delivery. Three –way matching is done by AP. The asset is tagged for capital based on statewide guidelines.

Within the Human Resources / Payroll environment, the Department does not use *EIS* as their HR system of record. They have an internally written system called *HRIS* which was written by their internal IT department in 2007. The system supports tracking all personnel data about an employee. However, since payroll is performed on the *EIS* system, the HR Department performs duplicate entry of Personal Action Forms.

Currently, Department employees fill out paper timesheets and the time is entered manually by staff into the Department's *Time Distribution System*, maintained by Accounting. The Department plans to start using *I-TIME* in the near future.

The Department uses an off-the-shelf learning management product called *Learning Central*, a third party product developed in the Ukraine. Basic employee data is uploaded from the *HRIS* to *Learning Central*. Coursework that contributes to an employee's position is either manually input by Training personnel into *Learning Central* or automatically uploaded, depending on the course registration. The Department creates their own learning materials and classes and then uploads them to *Learning Central*. Coursework is then distributed to employees via *Learning Central*. The employee can go in and

view course catalogs and department specific procedure as well as agency wide training opportunities. After an employee can subscribes for a course, their supervisor goes into the system and approves it.

Performance reviews and discipline events are prepared manually and filed in the employee's file. Applicant tracking is managed through *ATS*. Safety training is also manually tracked. Employees fill out a paper incident report and submit it to their supervisor who in turn submits it to Human Resources. HR then sends the documentation to the State Insurance Fund. Once sent, it is filed in the employee's medical file.

The Department and SCO keep track of what PCN's employees are in. The Department may "double fill" - have two employees in one PCN for up to six months. The system does not alert HR when two employees are in the same PCN. The Department is able to search both *HRIS* and the SCO HR systems to confirm if a PCN is available.

Benefits are managed in *IPOPS* and are consistent with the State's benefits programs.

When there is a reduction in force, the HR department manually calculates retention points by a combination of the *HRIS* system and pulling information from the employee's file. If needed, DHR has a spreadsheet with specific formulas to calculate retention points that can be used as a resource.

Department of Lands

The Department of Lands has a multi-dimensional mission. The Department manages more than 2.4 million acres of state endowment trust land; provides regulatory oversight of forestry practices and the State's mining industry; provides assistance to local governments through forestry and fire protection programs; and provides administrative support to the Idaho Oil and Gas Conservation Commission. The Department has approximately 575 staff. Their 2014 budget is approximately \$62M. The Department generates significant revenue (from industries' use of public lands) for beneficiary agencies.

Within the Fiscal arena, the Department relies heavily on *NAVISON* as the entry point for most AP and A/R transactions. The Department has approximately 30-40 *NAVISON* users. *NAVISON* was last updated in 2010. *NAVISON* was configured to use the STARS' coding blocks. It stores detailed transaction data which is interfaced to STARS on a daily basis. AP interfaces between *NAVISON* and *STARS* are bi-directional. For managing receivables, *NAVISON* has been highly configured/customized to track and report on the numerous and unique revenue generating activities, e.g. timber sales, grazing. *NAVISON* supports leasing and permitting activities some of which carry outstanding balances and are charged interest. *NAVISON* interfaces with *IMS* to create detailed billing records.

The Department relies on contractors to lease and provide property management services for the six commercial buildings owned and leased by the endowments. Revenue and expenditure data provided by the property management company is keyed into *Navision*. Project Codes are used to track revenue and expenditures by building. Billing statements to lessees for the commercial properties are generated by the property management company.

Intra agency billings (for vehicle use, chainsaws, etc.) are entered into *NAVISON*. Department labor charges associated with intra-agency activities are downloaded from STARS and manually entered into *NAVISON* to generate inter-agency billings. Fund transfers are exchanged through *NAVISON* and the intra-agency transactions are sent to *STARS*.

For reimbursements for fires by BLM, USDA, and private landowners, reports are extracted from *NAVISON* by project code (per fire). Expenses are accumulated (on a daily basis) from STARS and include operating and capital outlays. Payroll information is extracted from *ITime*. Federal agencies are billed for fire suppression services (by fire event) using *Excel*.

The most significant reporting requirements are met by on line *STARS* reports, *IBIS*, or custom queries in *NAVISON*. The Department also has 10 *IBIS* users. Accounting staff are becoming expert users of *IBIS* while staff in the area offices have difficulty performing accurate *IBIS* queries as they do not fully understand the data structures. On-line reports are available that provide budget information to area offices; this is customized IDL software that needs to be updated annually when the accounting structure changes. The reports take quite a while to run and are limited in scope.

The Department has over 400 vehicles as well as ATVs, fire trucks, and fixed wing aircraft. The Department would like to use a fleet management system that would track maintenance, operating costs, and mileage to enable performance analysis to optimize use of vehicles. IT assets are tracked in *HELP STAR* which links service history to the IT asset.

The Department receives grants from several federal agencies and is also a grantor to county governments. Where the Department is the grantee, federal grant matching requirements are met (and significantly exceeded) with Department labor from the three Bureaus in Coeur D'Alene. In the Department's grantor role, grant opportunities are posted on their website. Local governments review applications received under their jurisdiction. Once funding is known, the Department reviews

applications and makes awards. Counties request reimbursement by submitting invoices, supporting documentation, and progress reports. In some cases, the Department performs periodic inspections. Bureau staff reviews the invoices, approves and sends to fiscal staff for final review, approval, and entry into *NAVISION* for payment. The Department has several specialized systems for: tracking bonds (interest and disbursements); administering a Fire Mitigation Assurance fund; administering the Bond Assurance Fund for assuring remediation of mining sites; and oil and gas leases.

Travel expenses are managed with spreadsheets and hardcopies. A travel form is required to initiate travel. PCards are used to pay for travel expenses. The Department provides cash advances on a very limited basis by issuing State Warrants; cash advances are not allowed using PCard. The Department does not use *Travel Express* because the system does not support multiple destinations on a single expense report.

Areas identified for improvement include:

- Budget development – need linkage between appropriations and allocations which makes transferring the appropriate amount of funding challenging.
- Ability to project expenditures.
- Budget execution – variance reporting between appropriations versus project expenditures.
- Better integration between cash received by STO with Department receipts, i.e. an electronic matching process.
- On-line accounts payable.
- Integration between leases (beginning and end dates), invoices and receipts.
- Putting all leases into *NAVISION* (currently in spreadsheets) to simplify lease management.

The Department's IT staff is currently soliciting bids to upgrade the 2006 version software currently in place. While some business requirements analysis has been done on various business functions, additional *NAVISION* functionality is on hold until the *Navision* upgrade

Within the Procurement area, *NAVISION* is capable of generating a requisition which could electronically be routed to purchasing. , If the purchase is for an asset that meets the statutory threshold, the asset is entered into *FAS*.

Within the Human Resources / Payroll environment, the new hire / recruitment process begins with a manual approval request process. The requester fills out a "Pre-Requirement Worksheet" and justifies the request on the form. This applies to new and vacant position requests. The request is submitted to the Executive staff at the weekly Monday Executive Staff Meeting for review and approval. If approved, it is posted on the DHR website as a job announcement as well as the Department's public page and Intranet. All requests are considered public and not posted internally.

In accordance with the State's hiring policies, an exam is included with each posting. After all applications are submitted and the opening closed, a cut list of the top 25 applicants is created. If the applicant is considered for next steps, then interviews are conducted. Points are assigned according several factors including five (5) points for veterans, ten (10) points for double diamond veteran, exam score, interview results (1-5 scoring system), applicant history, and other factors. Behavioral based interviews are centered on different competencies. However, the Department's behavior bank is outdated and they would like to update it with more appropriate position related characteristics. Once the exams are scored, they are posted in *ATS* where the applicant can look at their score.

The Department has an interview panel of three to five members. Early on in the process, there are suggested members for the interview process. After they interview, they email or hand deliver the

results of the top 1-2 candidates to HR. This process is delineated online but is also tracked on paper since the online system doesn't accommodate all the steps in the process.

Once a verbal offer is made, a background check is conducted and results documented on paper. The department uses an external background service (Inquire Hire) and pays \$40 per use on average. An offer letter is prepared in *Word* and sent to the applicant. Once all checks are complete and the offer accepted, the employee starts onboarding. The onboarding process consists of a manual checklist.

The employee gets a welcome packet with required information (e.g. Benefits, I-9, emergency contact, etc.). After the employee fills out the paperwork, it is entered into *IPOPS*. The State Controller starts the financial piece and assigns the employee a password. HR takes a photo for the employee's ID badge and creates an entry into the active directory.

SkillSoft is used for eLearning. *SkillSoft* is a third-party product purchased for all Department employees. The Department manager helps the employee build a training plan with both required courses and other supporting training based on the employee's needs and interests. Annually the employee meets with their manager to discuss their status on their goals where training plans can be enhanced or modified. Records of course work is not tracked with the employee's *EIS* record but is retained solely in *SkillSoft*.

IQS is the national training software for Fire employees. The Department requires "Red Card Qualifications" for Fire employees. This information is tracked in the Coeur D'Alene office.

I-TIME is used for time entry and approval.

Legislative Audits Division

Note: This agency write-up was not validated by the agency.

The Legislative Audits Division of the Legislative Services Office (Division) is responsible for auditing the State's CAFR and for performing the annual Federal Single Audit required by federal regulations. The Division is also required to perform management reviews of each Executive department of State government at least once in a three-year period. Management reviews generally include evaluation of internal controls over financial and program activities and other matters related to the department's operations. Management reviews and financial audits may also be performed for any entity created by, or that receives, an appropriation from the Legislature as directed by the Legislative Council. Several entities of State government are required by Idaho Code to have an annual audit. Many of these audits are performed by independent CPAs and these reports are reviewed by the Division to identify and follow-up on any issues.

Before an audit can begin the Division must obtain data. There are multiple sources of data (e.g., *STARS*, *IBIS*, agency systems) which must be reconciled to ensure that the correct data is being analyzed. In several agencies there is no "single source of truth" as payments generated in agency systems are aggregated into *STARS* summary transactions making traceability difficult. For example, Division staff mentioned HW Medicaid transactions that are interfaced from the *MMIS* to *Fiscal* to *STARS* which require the Division to view interface files to trace transactions. Division staff spend a significant amount of time requesting, receiving, and reviewing agencies' data. Division staff mentioned a similar issue with summarized transactions from the Department of Labor and the Tax Commission requiring Division staff to move between systems to reconcile data. A comprehensive central system with the minimal amount of interfacing would streamline the audit process and enable Division staff to spend more time on value-added analysis versus data collection and understanding the data.

Division staff also cited the need for a more modern and integrated enterprise-wide asset management system. Federal funds used by agencies to purchase capital assets are difficult to track through *STARS*. This requires Division staff to reach out to agencies and request data from agency systems. Also for construction assets, better distinctions between Construction in Progress (CIP) versus beneficial occupancy would be an enhancement to the State's asset management capabilities.

Adequate controls over Point-of-Sale (POS) systems used by agencies are also an audit challenge. For example, there are no detailed reconciliations of *Access Idaho* reversal transactions. Division staff mentioned that SCO's per transaction charge is a disincentive for agencies to enter detailed POS transactions into *STARS* which makes Division audit work more difficult.

IBIS is a critical source of data and is used by Division staff. However, *IBIS* data requires significant manipulation to support their analysis (e.g., in some cases, a query for a fiscal year must be merged with previous fiscal years [in *Excel*], then loaded into a pivot table and manipulated to get the data properly aligned for trend analysis). This is a time-consuming process and detracts from actual analysis. It was also mentioned that *FAS* data in *IBIS* is insufficient. Staff stated that *IBIS* works well but that they would like to have an integrated financial system linked to a more sophisticated data warehouse with automated drill down capabilities coupled with *IBIS*' frontend analysis tool.

In closing, Division staff expressed concern that some agencies may have business continuity vulnerabilities as many agency systems may not have adequate back-ups, data may not be stored at remote locations, etc.

Legislative Policy and Analysis Division

Note: This agency write-up was not validated by the agency.

The Legislative Services Office, Budget and Policy Division (Division) assists legislators with the State's budget making process and provides policy advice to individual legislators and legislative committees.

Note: The interview focused exclusively on the process and systems supporting creation of the Legislative budget.

The same basis budget development process has been in place since 1971; changes have primarily encompassed automating and updating the tools. The process of creating the budget book begins with receipt of agency budget requests that are submitted by agencies.

The primary system used by the Division is the "Budget Database" (Budget DB). The *Budget DB* is an internally-developed system with an *Access* front-end and an *Oracle DB*. The *Budget DB* application is internally-supported by the LSO IT Division. Primary functions of the *Budget DB* are compilation and development of the legislative budget, publication of the budget book, and appropriation bill development. The *Budget DB* contains 15 years of history. The *Budget DB* captures data from *STARS* at the level of personnel costs, operations, capital outlay, etc. The *Budget DB* can build up to six scenarios of each program. The *Fiscal Source Book* is produced from the same system.

To prepare the *Budget DB* for an upcoming budget cycle, the Budget Analysts run reports from *IBIS* to load actual expenditures from the past fiscal year which are manually input into the *Budget DB*. Division staff has limited access to *STARS* and *EIS* for topical research. There is a significant effort to reconcile from budget to accounting terms. *IBIS* is used to support research.

The Division receives agency budget requests at the same time as the Governor's office. (Forms are being automated to support the budget process.) Division staff reconciles employee costs by agency by fund. (DFM authorizes PCN and maintains the numbers and counts by agency. Division staff looks at agencies to see that Full-time Positions are not exceeded.)

Cost allocation detail is not stored in the system which makes data not transparent to the Division. Access to information is very important as the Division wants to insure adherence to statutory budget control and that agencies are following State law.

The *Fiscal Source Book* pulls data from *STARS*. Budget Unit is the key connection field from *STARS* to the Budget Database. The Division would like to see additional edits in *STARS*. For example, the various methods used for appropriation transfers make it difficult for the Division to determine whether the transfer rules were followed. This is further affected by differences in the way agencies approach their expenditure accounting (e.g., some agencies are Index oriented and others primarily work from PCA).

The Division gathers data from agencies by having Agencies complete a series of forms that are electronically submitted through the *Budget DB*. In the future, agencies could enter directly into the budget development system rather than forms. At this point in time, the Division is focusing on additional automation of forms to add consistency and reduce duplication of effort to gather and re-key agency data into the *Budget DB*.

For program descriptions, explanations, etc., which come from agencies, agencies provide responses in *Word* and/or *Excel* format. Budget analysts then enter and rewrite the text coming from agencies.

For drafting and tracking budget motions, the Legislature uses the *Motion Analysis* system to support the JFAC committee. Division staff can pull data from *Budget DB* to load the *Motion Analysis* system, but there is no interface back to *Budget DB* for approved appropriation bills.

The original agency budget request is not included in the Governor's recommended budget. The Division provides a view comparing the Governor's recommendations versus agencies' requests.

Division staff uses a bill development system called *GEMS*. *GEMS* is an *Oracle* database with a *Java* front-end.

(To create the Governor's budget, DFM contracts for a budget development system and support to create the Governor's Budget.)

Division staff indicated that their current system meets their needs (and that they like it), but staff identified several limitations of the current system and process:

- Lack of transparency of budget execution for agencies with a single source of funds.
- Appropriations bills are typically drafted by agencies.
- Division staff is challenged to answer questions regarding what was spent versus what was appropriated.
- Translation from legislatively approved appropriations to *STARS* is not too difficult to trace, but *STARS* is not loaded at the same level as appropriations are made.
- Division staff has difficulty with summary transactions with details maintained in agency systems.
- Transfers and reversions may not be accurately presented; while actual expenditures are correct, there can be questions regarding how they were originated.
- The tool provides spell check, but it is not rich text format.
- Some agencies may revise source of funding for payroll which may be paid initially from one source, but can be re-classed on the GL side and is not reflected back in payroll.
- *IBIS* has similar reports that produce different results negating the perception of a "single source of truth".
- Division staff needs to be able to query across agencies for funding sources.
- Staff only gets data every six months and could use a live feed of actuals.
- Division staff believes that SCO's cost recovery method for *STARS* transactions discourages agencies from recording detail in *STARS*.

Other challenges cited by Division staff include:

- Each agency has statutory requirements to track performance measures over 4-5 years; but this has not been a focus by the Executive branch.
- LSO cannot provide the Legislature with good numbers on University employment; payroll is paid by the Universities and the details are not included in *EIS*.

Military Division

The Military Division is primarily responsible for the State National Guard, Homeland Security, Public Safety Communications, E911 Commission, and hazardous waste spills and remediation. The Division has approximately 320 employees and a 2014 budget of \$64M.

Within the Fiscal arena, The Division's main financial system is an internally developed Windows-based application (HAL). For convenience and usability, HAL's primary function is to create batches that are transmitted to STARS. Underlying HAL is an SQL database that is refreshed every morning from STARS. Staff uses download data to perform internal reporting which is produced by MS SQL Reporting Services for standard HAL reporting, and Crystal Reports for ad hoc reporting of HAL data. Staff noted that beyond STARS' obvious usability issues, STARS does not allow adequate functional reporting to support their business requirements. There is an additional interface from the Integrated Engineering Management System (IEMS), i.e. the military purchasing system describe below, to HAL to load payables transactions that are batched and sent to STARS. The Division's IT staff is planning to update HAL by updating the Sequel database to the 2012 version. Future updates are needed to move HAL to a .net framework. HAL has been supported by sole programmer since the early 90's.

MCM is a stand-alone system that provides microwave communication for other State agencies and creates invoices for services provided. MCM supports the Public Safety Communications Group. Invoices from MCM are batched through HAL to generate the revenue transactions. MCM includes work tickets, inventory, project management, and reporting. Payables for purchases are entered into Payment Services. Public Safety Communications as a group is tracked with a dedicated fund (0450) in STARS for both revenues and expenses; the Group has their own Budget Unit.

Equipment Tracker is a system created by the Division to track sub-grants of Homeland Security funds. The system is used to track public safety equipment on behalf of local governments that might not be able to cover the initial purchase from their local budgets. Reimbursement is done through traditional processes and tracked through SPARRS grant system.

For grants, SPARRS is a grants life cycle management system that the Division makes available to Idaho counties to apply for and report on public safety grants. SPARRS provides three main functions:

1. Grant Application – SPARRS collects grant application data down to project level, which can be rolled into an application. If the application is approved, the Division can designate the application into an award status.
2. Grant Accounting – The counties receiving public safety grants reimbursement requests through SPARRS. The counties enter their expenditure information and request reimbursement based on the terms of the grant award. All such reimbursement requests are batched in HAL and sent to STARS for payment.
3. Grant Reporting – Counties enter performance measures and outcomes through SPARRS. This allows the Division to summarize the data in SPARRS and pull a single report for federal reporting purposes.

The Division uses QuickBooks for 501c3's for other duties as assigned for non-state funds. The Division also uses QuickBooks to generate checks on the Rotary fund.

Below is a summary of key Division fiscal business processes and supporting systems:

- Accounts Payable – The Division uses Payment Services for items going through the State purchasing applications and IEMS for purchases which go through HAL.

- Assets – The Division uses *FAS*. Communications uses *MCM* to track radio equipment; equipment greater than \$5K is also recorded in *FAS*. Public Safety uses *Equipment Tracker* to track assets by grant and equipment type.
- Accounts Receivable – The Division manages hazardous materials spills and clean-ups and attempts to get reimbursement from spiller. To support these processes the Division uses the AR function in *STARS*.
- Cost Accounting – Support of central personnel are included in the cost allocation. Also cost allocations are generated from SWCAP. Queries from *STARS* are loaded into *Crystal Reports* and spreadsheets to create cost allocations.
- Budget Development – The Division has data from multiple funding years showing State and federal expenditures; this includes special time periods for other grants. Staff uses reports of historical data. The Division tracks the state match and federal spending authority to develop funding for grants. The Division uses *Excel* templates to summarize branch budgets into an agency budget.
- Reporting – The Division use downloads from *SQL Reporting Services* and *Crystal* to generate reports and uses *IBIS* for payroll and for reconciliation.

Other miscellaneous comments from Division staff are documented below.

The Division is PCA driven vs. Index.

Disaster Recovery (Response) – If the Governor declares a State disaster, workers are paid out of State disaster account. If later the situation is declared a federal disaster, then the federal government reimburses the State disaster fund. A similar accounting process is followed as with project accounting.

The State's 911 Commission is also part of Division and collects fees from 911 calls and distributes these monies to funds relating to 911.

Within the Procurement area, the Division uses SCO systems for payment of purchases, i.e. *PCard*, *Payment Services*, and *Travel Express*. All Division of Defense (DOD) purchases are done through *IEMS*. *IEMS* was developed by Military Affairs, and has become a de facto standard for purchasing for other state's military affairs organizations. *IEMS* includes requisition and purchase order functionality and tracks every expense to a facility. The detail captured in *IEMS* facilitates collection of the federal portion of Division's expenditures. Encumbrances created in *IEMS* are batched in *HAL* each day and loaded to *STARS*. *IEMS* and *STARS* are reconciled each day. The Division uses a 3-way matching process where the invoice is scanned and attached to the *Payment Services* transaction. For vendor management *STARS* is used as the source system. Some receiving is performed in *IEMS* for Public Safety and Military Operations.

Within the HR/Payroll environment, the Division uses *ITIME* and *IPOPS* systems for time entry and personnel transactions, respectively. *SPARRS* tracks personnel side of payroll and tracks additional info needed for military data. *IPOPS* stores actual personnel actions, and *SPARRS* helps with management of data and helps track backfill for anyone that is inactive. (Deployments are allowed to be backfilled indefinitely and *SPARRS* tracks these details.)

Reporting on payroll transactions/expenditures is accomplished through *IBIS* and is keyed off of PCN. Staff mentioned that *SPARRS* needs more agency-specific fields (i.e., up to 15 additional fields) as Military's reporting requirement for DOD and other federal grant purposes requires additional employee-level data that is not captured in *EIS*. *SPARRS* tracks current employees and historical data. HR staff use *SPARRS* to forecast the timing of employees' next step increases and to keep track of

credited state service. For example, DFM may ask a basic question such as the number of temporary employees that do or do not get benefits, but the Division tracks much more information such as the purpose of a temp, who is backfilling whose position, etc. *SPARRS* is also used to track reimbursable costs for co-op agreements.

Below is a summary of key Division HR/Payroll processes and supporting systems:

- Timekeeping – The Division uses *I-TIME* for employee self-service time entry; employees can split time through cost accounting function in *I-TIME*. Once time is approved by the supervisor of each branch it is released for the Agency and goes to *EIS* for payroll processing.
- Recruiting – The Division accepts paper applications and uses a manual process for screening.
- Class & Comp – The Division has no classified employees. Rate tables are maintained in *SPARRS*.
- Benefits – Employees use *IPOPS* self-service to update to benefits.
- Payroll Calculation – The Division submits timesheet batches.
- *IPERFORM* – The Division does not plan to use *I-PERFORM*, as initial reviews of the system indicated that they have too many individuals who are considered supervisors in their current organization structure to be accommodated in *I-PERFORM*. Additionally, the Division has a large number of federal employees that are also considered supervisors but are not represented in the established organizational chain in *IPERFORM*. The Division's current performance criteria are built off the federal models, but the Division tries to combine federal and State requirements to satisfy both purposes in one performance review process.
- Grievance and disciplinary actions are all paper based.
- If the Governor activates the National Guard and for a natural disaster Guard employees are paid through *EIS* under one PCN. Calculation of pay is done by the Division to determine a daily rate of pay that is sent to *EIS* to perform withholdings and payment. In a disaster, this compensation is FICA exempt, otherwise, FICA applies. W-4 information is also sent to *EIS*. *Timeforce* is a system that tracks time entry for disaster response. Time is summarized in reports from *Timeforce*, which are manually entered into *I-TIME* to show funding split at the PCA detail. The Division would like to see from/to times, actual hours, showing ins/outs. Federal auditors are requesting to see the ins/outs. This would be a future enhancement to capture actual times for punch in / punch out.

The Division would like to see an HR/Payroll system that includes proactive notifications, workflow, etc. to indicate when employees are approaching a threshold (e.g., performance review date, limits on hours worked).

Bureau of Occupational Licenses

The Idaho Bureau of Occupational Licenses (IBOL) was created, within the Department of Self-Governing Agencies, to serve the needs of 29 of the self-governing Boards and commissions. The IBOL provides administrative, investigative, fiscal, and legal services. This arrangement allows several Boards to share resources and the costs of operation while maintaining each Board's independence. The IBOL operation depends solely on dedicated funds generated through renewals, applications, and examination fees. Neither tax dollars nor other funds from Idaho's General Fund are used for the operation of the IBOL. The IBOL provides each Board with an annual budget based on IBOL's annual appropriation from the Legislature. That appropriation is distributed among the Boards based on historical needs and new programs & requests. IBOL internally tracks revenues and expenditures for each Board. IBOL has only one appropriation in *STARS*. IBOL has approximately 35 employees and 121 Board members and a 2014 budget of approximately \$3.3M.

In the Fiscal area, the Bureau has an *IBOL* system developed in 2002 by a local vendor. It is currently running on *Access 2010*. *IBOL* manages the following business functions: 1) administrative, 2) licensing, 3) fiscal, 4) investigative, and 5) legal.

IBOL is a transaction code based system. *IBOL* sends at least 3 files every day. The system receives a download after each payroll. Each Board has a separate fee schedule built into the application.

Below is a summary of which systems support the Bureau's key business processes:

- For the General Ledger, *STARS* is used to track direct and indirect costs for each Board.
- For A/P, *IBOL* is used for all payment transactions for each group. Warrants are issued through *STARS*. Staff creates a batch which is released by the supervisor in *IBOL*. If there is an error it is corrected in *STARS* then released.
- Fixed assets are maintained in *IBOL* which is uploaded to *FAS*. Assets are tracked in *IBOL* to each person and area in *IBOL*. If a capitalized item exceeds \$5,000 the Bureau assigns a tag in *IBOL*. After payment file is sent to *STARS* the asset is then manually moved into *FAS*.
- *IBOL* has an A/R function which permits tracking claims from investigations. Renewal notices are sent from *IBOL* and fees are generated on the basis of the data. *IBOL* is also used to track bad checks; the system reverses fees collections and records amounts due.
- Cost Accounting is done internally in *IBOL*. Originally, *STARS* could not distribute costs to enough different categories. Cost accounting includes direct and indirect charges which are rolled up to unique chartfields. There are four different indirect allocations.
- For Budget Development, appropriations are loaded into *STARS*. All other budget development activities are done in *Excel*.
- For Reporting, the Bureau downloads from *IBIS* into *Excel* and uses *Excel* as the query tool. The Bureau uses the State's report distribution tool instead of printing. Web reports are generated/pulled from *IBOL* monthly.
- Cash deposits are entered daily. Payments are received either: 1) via mail or walk-in, 2) credit cards in-house, or 3) credit cards online thru *PayPal*.
- Travel is managed in *IBOL*. The Bureau does not use *Travel Express*. Staff mentioned that *Travel Express* does not adequately capture Board travel details.

The *IBOL* system enables the Bureau to maintain direct and indirect costs for each Board. Board revenues are mainly fees or recovery of costs from the investigative processes.

The Bureau would be interested in direct use of a new system. However it is unlikely that *IBOL* could easily be replaced as it has considerable programmatic information and configurations that may not be easy to replicate in an ERP, i.e. it may be difficult to replace *IBOL* without the Bureau losing some system capabilities. Further analysis would be required. If *IBOL* is retained, interfaces between a new SCO system and *IBOL* would need to be built. The Bureau also needs to maintain financial reporting for 29 Boards.

Staff commented that they are very satisfied with *IBOL* and SCO systems including improvements in reporting packages.

In the Procurement arena, the Bureau purchases off of State contracts and the agency is billed directly. The Bureau limits their use of PCards. Most items purchased are office furniture and computer equipment. The Bureau uses paper processes with internal reviews and approvals for budget. To track purchasing actions the Bureau uses an internally developed *Excel* system. The process starts with a requisition entered into the PR log; this is routed for approval (paper based). After approval the requisition is routed to staff where the PR becomes the PO number. PRs are manually tracked against payments. Encumbrances are recorded at year-end.

Within the Human Resources / Payroll environment, the Bureau uses *ITIME* for time entry for employee self-service. *ITIME* is used to allocate to each Board using the *ITIME* cost allocation and Index. *IBOL* does indirect cost allocation. All personnel actions are paper based. Staff does Board payrolls through *IPOPS*. When file is downloaded the detail is loaded into *IBOL*.

Hiring is all done through DHR's processes. New personnel are manually entered into *IPOPS/EIS*.

Employee timesheets are approved by the supervisor. Payroll calculations are approved by the Chief Payroll Officer. Pay corrections are handled through *IPOPS*.

Grievances and disciplinary actions are paper-based.

The Bureau uses I-PERFORM.

Bureau staff cited the need for better ad-hoc HR/Payroll reporting capabilities and would like more pre-developed reports as well as interactive reports.

Idaho State Police

The Idaho State Police (ISP) provides law enforcement services to citizens of the State of Idaho. The ISP consists of Patrol, Investigations, Commercial Vehicle Safety, Alcohol Beverage Control, Regional Communications Centers, Forensic Services, Brand Inspector, and Bureau of Criminal Identification including the Idaho State Sex Offender Repository, and the Peace Officer Standards and Training (POST) as a division of ISP with oversight by the POST Council. Non-law enforcement services include the Racing Commission (licensing and regulation), Planning, Grants and Research, Crime and Statistics, Fingerprinting and Background services, Alcohol Beverage Licensing, and Livestock Brand Registration. Additionally, the ISP maintains criminal history records, a number of registries required by law, the statewide Public Safety and Security Information System (ILETS), and connectivity to national criminal justice databases. ISP also issues concealed weapons permits. ISP has six Districts. ISP has Forensic Laboratories in Coeur d' Alene, Meridian, and Pocatello. ISP also has two Regional Communication Centers (RCC), RCCN - Coeur d' Alene, and RCCS - Meridian. ISP has a training unit hosted in Meridian responsible for advanced training of recruit troopers and in-service/refresher training all staff. The Idaho Criminal Intelligence Center (Fusion Center) is hosted and overseen by ISP. ISP has a staff of approximately 548 and a 2015 budget of approximately \$68M.

Within the fiscal arena, ISP primarily uses *NAVISION* which is an ERP Solution designed for small to mid-sized businesses. The system was deployed in 2003 and is supported by eSoftware Professionals from Portland, OR. This system serves as an entry point for *STARS*. Currently ISP exports transactions on a daily basis to *STARS* and transaction information is returned from *STARS* the next morning. *NAVISION* contains the same level of detail as in *STARS* for the General Ledger, and more detailed payroll transactions for *EIS*.

In addition, *NAVISION* performs the following administrative and programmatic functions:

- Receipting for licensing for alcohol retail outlets.
- Invoicing and receipting for the FBI.
- Invoicing and inter-agency transfers.
- Contract based transactions.
- Support for the sex offender registry.
- Homeland security support.

For Accounts Receivable, customer “cards” are used for maintenance expenditures. A/R is done by fund and fund details (POST, tow truck drivers, etc.). General cash receipts are tracked by District offices. Most receipts are appropriated back to ISP. Ninety-five percent (95%) of funding is either dedicated or federal. Fines go into the General Fund. County receipts for POST funds are entered into *NAVISION* to store fund details to keep funds separate.

For payables, AP staff reviews the PO and invoice, and compares to the receiving document, with adjustments to the invoice made at that time. Warehouse personnel can enter receiving information into *NAVISION*, adjusting quantities, etc., to match with PO and invoice. After payment approval, a payment file is interfaced to *STARS*; the next morning the payment information is sent back to *NAVISION*. There are internal controls in *NAVISION*, i.e. routing, threshold amounts, budget checking and rejects if funds are not available. Budget checks can be done manually at multiple stages in the workflow and are date sensitive.

No Assets are stored in *NAVISION*; assets are stored in *FAS* and any assets needing a tag are tracked through *FAS*. Assets with values greater than \$500 are capitalized and depreciated.

The *POST* System and Bureau of Criminal Identification (BCI) uses *Access Idaho* to receive credit card payments. Payments are processed and deposited to STO. ISP then pulls reports from *Access Idaho* to manually key receipts into *NAVISION*.

For grants, *NAVISION* contains awards and sub awards. *STARS* contains information on the Grant (highest level) and Project (sub level). The team also has an in-house *Grants Management System* (GMS) which sends the accounting information to *NAVISION*. Sub recipients use *GMS* to do their draws, submit reports, etc. *GMS* has been approved by ISP's Federal Partners and it has won a national award. All grant reporting is generated by *NAVISION*. The Department of Justice is the primary grantor. Payroll is kept at a PCN level & the *EIS* file is loaded back into *NAVISION* at a lower level, which is needed for grant billing. For grants, ISP uses an indirect cost rate per task which is updated annually as there is a low fluctuation rate.

For Cost Accounting ISP uses an approved indirect cost rate. *NAVISION* has internal allocation processes to allocate cost based on a user's time study information. Based on ISP's PCN there is a default allocation in the *IPOPS* system that flows through *EIS*.

Inventory is considered consumed when it goes into inventory. The warehouse staff logs into *NAVISION* to enter items into inventory when received. Costs are charged to programs when items come out of inventory. ISP uses cycle counts and makes adjustments throughout the month. There are approximately 1,200 items in inventory, which includes safety equipment. Inventory balances are submitted as part of the closing package at the end of the year for the CAFR.

Contracts are manually monitored. There are approximately 500 internal contracts in place, and more at Department of Purchasing (DOP). ISP intermittently monitors DOP contracts because they are not consistently notified of upcoming expirations.

For budget development, ISP loads the budget into *NAVISION* at the Object level – by program, fund, and object. ISP creates financial reports for budgets, using *NAVISION* which has Requisition (Pre-Encumbrance)/POs (Encumbrances). ISP performs numerous processes to support budget development (e.g., balance to *STARS*, prior year by object and program transfers – which are all manual). Program managers make budget requests via *Word*, and then use *Excel* spreadsheets, to go through Governor's budget development process. Budget request data is summarized into the central budget system. *EIS* runs a wage personnel report for input by fund for splits using the B6 form. The budget is tracked in *NAVISION*, and ISP creates financial reports for managers to monitor their budgets.

For the Procurement area, ISP tracks encumbrances in *NAVISION* for both requisitions and purchase orders. Requisitions go to Purchasing where they are reviewed for a state contract and proper process, and always reviewed if at the PO stage the contract is over \$100K. ISP has delegated authority for purchases up to \$100k for formal competitive bidding. (ISP has delegated authority due to CPPO certification – Certified Public Purchasing Officer, a Federal Certification). Most solicitations are done through *IPRO*, but this system is not used for POs by ISP. The requisition is then rolled to a PO that is assigned to a Buyer. PO dispatch can be fax or electronic. Ninety-nine percent (99%) are dispatched electronically via scanned documents and email. *NAVISION*'s automated dispatch is not used. Bids in *IPRO* are posted and responses come back to ISP, if below the \$100k threshold. When over \$5K, at least 3 bids are required.

NAVISON supports routing of requisitions and POs for review and approval. It also performs budget checks at the entry of the requisition and can re-check budget along the way. ISP can also purchase items (on Grants) that are paid by Federal partners (via GANS), which does not encumber funds.

PCards are used in the field by officers for fleet maintenance. There is a \$500 limit on the PCard for capital outlay.

The receiving process uses a 3-way match process with the majority of inbound items received in the warehouse.

ISP adds vendors into STARS through the SCO website. New vendor information comes back from STARS to establish a new vendor in NAVISION. ISP requests vendors to become EFT capable as they work with them.

In determining which fiscal system to use for information requests and reporting, ISP stated that it depends upon the person and they may go into three different systems (i.e., IBIS or STARS or NAVISION). ISP would like to have a document management system to tie documents to contracts which is currently done using links in Excel. A monthly download of STARS reports are stored electronically.

Within the Human Resources / Payroll environment, when a job opening occurs, the HR department creates the job specification consistent with position classification codes used in the ATS and EIS system. ISP currently uses ATS for posting new position openings that can be accessed by the public on the State of Idaho website – DHR.Idaho.gov. They also use ATS for applicant testing. They have written specific exams that are related to police positions that applicants have to take online in order to be considered for a position. Once an applicant applies for a position and takes the exam, the exam results are graded by a Subject Matter Expert. The HR Department audits the results and assigns a final score based on minimum criteria being met, passing score, type of position (full time, part time, shift, graveyard, etc.), and job location.

Once all applications are received and scored, the department takes the top 25 scores, taking into account veterans' status, laid off status, transfers from other departments, and exam score for further consideration. If it's a reinstatement for the same position, the former employee is offered the job first. These top 25 applicants are then further considered by the hiring manager. Any documentation associated with applicant communications (i.e. 'sent an email') are documented in a comments box in ATS.

Once interviews are held, interview dates are tracked in ATS. There are no placeholders in ATS to track who the interviewer was, interview notes, and names of panel members who participated in the interviews, the time of the interview, assessment results, and other information. These documents are filed in a paper folder. Any confidential information is also stored in the paper file. Once an applicant makes the short list, additional testing is performed including a polygraph, a background check, fingerprinting, drug test, and NCIC national test. The final candidate is given a conditional offer letter in paper format. This information is not tracked in either ATS or EIS but in the employee's paper folder. Once the final candidate accepts the position, ATS is closed and the hiring list is archived.

Once the employee is hired, their new hire information is rekeyed into IPOPS from ATS including personal information, position control number, FLSA code, leave balance (if applicable), W4, contact information, city assigned, voluntary deductions, and other data. All new hires and promotions are subject to 1040 hours of probation or 2080 for commissioned officers. Employee time entered in I-TIME is tracked in EIS to monitor probation hours. After the probationary period ends, an evaluation for the

employee is completed on paper by their supervisor. The dates of the evaluation are manually entered into *EIS* by the HR Department. The agency does not use *I-Perform*.

For grievances, when an employee or group of employees have an issue that cannot be resolved between the immediate supervisor and the employee(s), a form is completed by the employee(s) and filed with both the supervisor and the Human Resource Officer. The Deputy Director makes the appointment of a second-level reviewer and the HR Director makes the final decision. HR then files the initial form and the decision in a file separate from the employee's personnel file.

Disciplinary actions for employees are tracked on a manual spreadsheet in addition to the documentation in each employee's file. This is done in order to have the information readily available for salary decisions. For example, an employee who is currently under disciplinary action might not be eligible for a merit increase. Disciplinary documents include letters of reprimand, suspension, etc., and are filed in the official personnel file.

Administrative Investigations are handled by the Idaho State Police Office of Professional Standards (OPS). When an employee is put on administrative leave with pay for investigative purposes, the OPS Coordinator sends a copy of the letter putting the employee on leave to the Human Resource Officer. HR tracks this information to insure that the leave on employee's timesheet is coded appropriately.

Other documents included in the personnel files comprise all medical information and NOCA related documents.

The agency has a custom-developed system to track employee training. Data from the system is also shared with *POST*, a program followed by the Idaho State Police to ensure that Idaho law enforcement professionals model the highest level of integrity and service through Excellence in standards and training. ISP uses *POST* for tracking all state law enforcement – city, state, or county – if an individual carries a gun or a badge.

ISP also has a requirement for annual medical exams for certain employees, such as exposed workers. These exams are currently not tracked in the system but on paper. In addition, random drug testing is performed for commissioned, dispatch, and control center employees and is tracked manually as well.

ISP uses *I-TIME* for time reporting and *EIS* for payroll processing. FMLA and Workers Comp time is tracked manually as well as reported in *I-TIME* given that there is a two week delay between the time events occur and are documented and the time payroll is run to update the employee's leave and time records. Job Accident Time is also tracked on timesheets and is reported to the State for the State Insurance fund.

Transfers and promotions surveys are handled in *Survey Monkey*. ISP can use the information entered into the survey about why a person is leaving, for example, for future analysis of employee turnover. *EIS* supports specific separation codes as well and ISP runs reports in *IBIS* to track voluntary and non-voluntary separation codes. Once an employee leaves the agency, a separation paper is completed and filed in the employee's file. Electronic copies of the letter are also stored on the network. Any equipment that the employee has (badge, gun, handcuff, etc.) is also documented on a form by the supervisor and is collected upon termination if the employee has less than 16 years tenure. If over 15 years, the employee may keep the equipment providing the supervisor completes a related form and has it approved by the Board of Examiners.

Idaho Supreme Court (Judicial)

The Supreme Court of Idaho is the State's court of last resort. The Court hears appeals from final decisions of the district courts, as well as from orders of the Public Utilities Commission and the Industrial Commission. It has original jurisdiction to hear claims against the state and to issue writs of review, mandamus, prohibition, and habeas corpus, and all writs necessary for complete exercise of its appellate jurisdiction. The Court may also review decisions of the Court of Appeals upon petition of the parties or its own motion. The Supreme Court is also responsible for the administration and supervision of the trial courts and Court of Appeals, as well as the operations of the Administrative Office of the Courts. The Court's 2014 budget is \$66M. Approximately eighty plus percent of expenditures is for personnel with the remainder spent on travel and operations. The Court has 167 staff and 143 elected judges.

Within the Fiscal arena, *STARS* is the primary system for Judicial's financial transactions. Payable transactions are entered directly into *STARS* and *Payment Services* by central (fiscal) staff. Judicial does very little billing and a minor amount of receipting (for the law library). Judicial has a large number of recurring payments.

Judicial receives grant funding from the Department of Justice and Health and Human Services and disburses funds to counties and to various vendors for services. These are managed using *STARS* grant control table and standard *STARS* reports. Also using *Excel* and *IBIS* to support the grant tracking.

Other aspects of Judicial's administrative processes and supporting systems include:

- Judicial uses *STARS* for appropriation control.
- Allocations are done internally and tracked through *Excel*.
- Judicial is a heavy user of *IBIS* reporting. There are seven *IBIS* users who generate revenue and expenditure reports including mass downloads from *IBIS* into *Excel* to do management reporting.
- Judicial provides a closing package to SCO to support the CAFR.
- Judicial uses *Travel Express* for travel authorization and reimbursement.
- To develop its budget, Judicial uses *BDS* and standard *STARS* and *IBIS* reports.
- Judicial uses PCards very minimally.

Staff mentioned that in the future they would like a system that is compatible with a large number of devices so judges and staff could more easily perform some of their duties remotely.

Within the Procurement area, the Court has sole purchasing authority and handles all aspects of purchasing. The Court uses the SCO *ReqPO* system and uses a 3-way matching process.

Within the Human Resources / Payroll environment, in 2013, the Court deployed an on-line HR Software-as-a-Service application call *Criterion*. The system tracks positions, manages HR actions, and has a self-service module for timesheets, timesheet approvals, leave submittals, and look-up for leave accruals. The Court purchased a module for personnel hiring that will be deployed in January 2015.

Judicial uses *IPOPS*. Staff mentioned that they have had to create a written procedure for using *IPOPS*; if the Department of Administration's HR Division had one then that would be helpful.

There was concern raised regarding Judicial's monthly payroll cycle versus the rest of the State's bi-monthly cycle. Accordingly, the inability of *IPOPS* and *EIS* to manage multiple payroll cycles is a major

deficiency. Changes made by SCO at year-end and throughout the year can adversely impact Judicial. Also, before the beginning of each fiscal year, Judicial's HR staff must manually re-enter every employee's salary. Some employee records must be "touched" as many as four times. There is a significant amount of dual data entry between *Criterion* and *IPOPS*.

IPOPS has improved significantly over the past 12 years, but there are still anomalies of Judicial's payroll, part-time judges, contracts, and other special HR/payroll requirements. Printing data from *IPOPS* is problematic; monthly salary for judges only enables the user to print a screen at a time for a particular report, so these have to be copied into *Excel* and concatenated to generate the full report. To make a change in *IPOPS*, the user has to go into each section and go out then back in to perform a new function (e.g., salary, and new contract amount, W-2 (tax side), 401K changes). Nearly all judges are paid exactly the same, and even though *IPOPS* recognizes a class code, the HR Office still must enter each judge's salary at the start of each fiscal year.

IBIS reports are used occasionally by the HR staff but *IBIS* does not have current data.

HR staff stated that SCO has become more aware of how system changes will impact Judicial and have been more pro-active in soliciting input to avoid creating problems.

A new ERP system with integrated financials/HR/Payroll would be able to alleviate the issues caused by different payroll cycles across the State and alleviate the need for a separate HR/payroll system.

Idaho State Treasurer

The Idaho State Treasurer (STO) operates as the chief financial officer and banker of monies collected by Idaho. Duties include receiving all state monies, redeeming warrants, accounting for the receipt and disbursement of public funds, investing idle state monies, issuing state tax anticipation notes, investing local government and agency monies, and acting as custodian for worker's compensation insurance securities on deposit with the state and custodian of the Endowment Public School Income Fund. STO is the administrator of Idaho's Unclaimed Property Program, the 529 College Savings Program, the Idaho Bond Bank, the Idaho School Bond Guaranty Program and the Small Business Assistance Program. STO has 26 staff and a 2014 budget of approximately \$3.2M. Approximately seven years ago STO made a strategic decision to develop their own software applications. STO found that commercial products needed significant customizations to meet their business needs; made STO too dependent on commercial vendors; and maintenance fees made the economics of commercial products disadvantageous.

In the Fiscal arena, STO primarily uses the SCO systems and has not built frontend applications to change usage of *STARS*. STO have 7-8 staff that use *STARS*. Staff makes direct entry into *STARS* for batches created for agencies that don't use *STARS*. STO also uses *Payment Service*. Staff enters receipts from State agencies that come through the bank. *STARS* sends 4-6 files per day to the STO's *AS400* system (below) of all payments issued and warrants disbursed and for investment information. When warrants clear the bank they go back to SCO to be marked as "redeemed".

Other aspects of STO's administrative processes and supporting systems include:

- Vendor payments are made through *Payment Service*.
- Budget transactions are entered through the SCO system.
- PCard transactions are processed through SCO system.
- Fixed assets are entered into *FAS*; capital asset information is also entered directly into the Department of Administration's Risk Management system.
- STO develops their budget through DFM's budget development process and system.
- STO likes *IBIS* but is not a heavy user; staff is able to create the reports needed or they request SCO to develop the report(s); *IBIS* has been a major improvement to *STARS*.

STO commented that their financial reporting needs require accrual basis accounting and that their systems are based on accrual accounting standards. Staff also mentioned that they would like to interface with modern technology.

Other STO business processes and supporting systems are summarized below.

- Unclaimed property is managed through a Xerox system called *Wagers*. *Wagers* interfaces into a *STARS* fund which stores the transaction details associated with unclaimed warrants, bank accounts, stocks, bonds, mutual funds, uncashed payroll checks, utility deposits, traveler's checks, contents from deposit boxes, etc.
- Treasury's "banking" functions are accomplished through two in-house legacy systems:

- Treasury Accounting Transaction Reporting System (*TATRS*) was built internally on a .Net platform for portfolio tracking and investment management. STO formerly used QED's COTS solution before moving to their internally developed system. STO staff commented that they are aware of what products are in the market and that it is unlikely that there would be a replacement for *TATRS* as part of an ERP implementation. Debt management is also managed in *TATRS*.
- Another system for bank ledgers is on the IBM AS400. The AS400 is being migrated to .NET and integrated into *TATRS* as part of the statewide mainframe migration. This system tracks what is flowing in and out of the bank and is used to reconcile w/ *STARS*. STO sends SCO a file with funds and cash balances and SCO generates a report that shows the balances/ differences every month. (The report may be off due to timing.) STO reconciles with the bank statement every other week. STO works with Wells Fargo (WF) for warrants cleared; Key bank for depository; US Bank for depository and clearing warrants; US Bank for the Rotary accounts (all in the State); BoA for PCard vendor; WF provides merchant services, e.g. *Access Idaho*. The system is reconciled monthly with *STARS*. STO sends a file to *STARS* that is loaded with paid warrants.

Note: There was a treasury application within *STARS* that Idaho did not purchase. STO uses some portfolio functions within *STARS* to track agency balances. It was commented that *STARS* does not accommodate portfolio tracking very well.

- Another system of note is that STO is the custodian for workman's comp payments from employers. These funds are put into securities on deposit in the bank. STO is notified by the bank; information is transmitted to STO and stored in *TATRS*. STO provides reports to the Industrial Commission. This system would not be replaced in an ERP project.
- STO manages the Idaho Bond Bank which pools the borrowing needs of local governments and school bond programs; these agreements and associated transactions are all managed within *TATRS*.

In the Procurement arena, STO has their own purchasing process which is built into *TATRS*. STO tries to follow Department of Administration procurement rules and use Statewide contracts to get the best rates.

In the Human Resources / Payroll environment, STO uses *ITime* for time entry. Time reporting is interfaced to *EIS* for payroll processing. STO used *I-Perform* last year for the first time for annual evaluations only and not the advanced functions. Leave requests are processed through *TATRS*.

Idaho Transportation Department

The Idaho Transportation Department (ITD) is the State of Idaho agency responsible for overseeing the state's multi-modal transportation network including aviation, highways, and public transit. Idaho's state transportation system consists of more than 12,200 lane miles of roads, more than 1,800 bridges, and 31 state owned public-use airports. ITD disburses federal and state funds for transportation projects within Idaho and is responsible for planning, designing, constructing, and maintaining the State highway system. ITD is also responsible for driver licensing and vehicle registration services through its Division of Motor Vehicles. ITD receives no state General Funds, instead relying on federal funds and dedicated funds that come from a combination of state fuel taxes, driver license and vehicle registration fees and other user fees.

ITD has 1,724 employees and an annual budget for Fiscal Year 2015 of \$517M. It is governed by the Idaho Transportation Board, consisting of seven members (appointed by the Governor and confirmed by the Idaho Senate) which is responsible for providing policy oversight and direction for the department. ITD is organized at the headquarters level into seven program areas and four support offices. ITD delivers services regionally through six districts located throughout the State.

ITD's seven program areas include:

- The Administration Program develops long-range budgetary plans; develops legislation and operates the Department's information systems; provides employee services, financial services, and facilities management; and coordinates research activities.
- The Motor Vehicles Program manages driver's licenses, vehicle registrations, license plates, and vehicle titles. Driver and vehicle services are provided across the state in partnership with county clerks who act as agents for ITD in the delivery of driver and vehicle services.
- Highway Operations directs statewide highway maintenance and highway improvements; administers federal-aid safety improvement projects and safety tasks; manages the issuance of oversize/ overweight/over dimension permits; and develops projects to improve state and local highway systems.
- Capital Facilities administers the design, building, and maintenance of ITD facilities.
- Contract Construction and Right-of-Way Acquisition accounts for the funds necessary for highway construction projects that maintain and improve the state's highway system.
- Aeronautics assists Idaho municipalities in developing their general aviation airports and operates the State's air fleet.
- Public Transportation manages the federal transit grant programs and works to plan for and implement coordinated transportation services.

To meet its diverse mission, ITD has implemented CGI's *Advantage* ERP Suite to support all or parts of its agency-level financial management, procurement, human resource management and timekeeping business processes. CGI *Advantage* ERP is a commercial off the shelf ERP software suite developed specifically for the government market.

ITD initially deployed what was then known as *AMS Advantage*, version 3.4, in 2006 to replace an implementation of Oracle *eBusiness Suite* that had originally gone live in the late 1990s. Since then, ITD has implemented two significant system upgrades – version 3.7 in September 2008 and the current version 3.9 in March 2013.

ITD has also implemented *AgileAssets*, a best of breed work and asset management solution within the transportation and infrastructure management market, as its *Transportation Asset Management System (TAMS)* to provide maintenance management, pavement management and fleet management capabilities. The *TAMS* solution has several key integration points with CGI's *Advantage* ERP Suite in the areas of inventory management and employee timekeeping.

Exhibit 31 depicts ITD's systems environment. It shows both the interrelationships between ITD's systems at the agency level and the interactions between the various ITD systems and the statewide financial and human resource management systems.

A brief overview of the systems supporting ITD's financial management, procurement and human resource management and timekeeping business processes is provided below.

In the Fiscal arena, ITD's implementation of CGI's *Advantage Financials* provides a comprehensive solution for the accounting and financial management requirements of the Department. CGI's *Advantage Financials* provides ITD with the full range of agency-level financial management capabilities including:

- General Ledger.
- Accounts Payable.
- Accounts Receivable and Billing.
- Fund Management.
- Project Accounting.
- Grant Accounting.
- Cost Allocation.

ITD implemented its chart of accounts structure within *Advantage Financials* to mirror the State's chart of accounts, while providing the additional lower level of cost capture detail required to support ITD's operations. ITD also configured *Advantage* so as to have ITD as the second level in the chart of accounts structure, with the first or State level left blank. ITD implemented the chart of accounts structure in this way in order to provide the flexibility to use CGI *Advantage* as the statewide solution with less reconfiguration needed or to more easily allow other state agencies to potentially adopt the CGI system for their own use at the agency-level in the future. Likewise, ITD's implementation of CGI *Advantage Financials* has been designed to mirror and fully support the department's project centric business model. All transaction activity entered into CGI *Advantage Financials* is charged to one or more specific cost accounting codes.

CGI *Advantage Financials* automates the billing of the Federal Highway Administration (FHWA) for the reimbursement for the federal share of eligible expenses associated with the State's highway construction program. ITD bills FHWA weekly for reimbursement of eligible construction contractor payments and other third party payments and every other week in conjunction with the payroll cycle for reimbursement of eligible employee payroll expenses. CGI's *Advantage Financials* also supports billing of other federal partners including the Federal Transit Administration (FTA) and Federal Aviation Administration (FAA).

CGI *Advantage Financials* is integrated with *STARS* to facilitate processing of vendor payments. Accounts payable invoices are entered into and approved for payment within *Advantage Financials* and then interfaced to *STARS* to generate the warrant for the vendor.

The breadth and depth of functionality implemented within ITD's CGI *Advantage Financials* environment is consistent with documented best practices for financial management systems in state departments of transportation. The functionality is also similar to the financial management capabilities which have been or are being implemented by other state departments of transportation nationally through either a statewide financial management system or a standalone agency level implementation.

In the Procurement area, CGI's *Advantage Procurement* module provides purchasing and inventory functionality for the acquisition of commodities and services other than engineering and construction services procured by the Department. It should be noted that *Advantage Procurement* and *Advantage Financials* are tightly integrated modules that share data.

CGI's *Advantage Procurement* function is not currently integrated with the state's *I PRO WebProcure* electronic procurement solution; however it could be integrated to avoid duplication between the two systems. As a result, ITD staff is required to do duplicate entry of purchase requisitions into both CGI *Advantage Procurement* and *I PRO* and then enter vendor responses from *I PRO* into CGI *Advantage Procurement*. ITD does not enter vendor responses in both systems. The vendor enters their response in *I PRO* and ITD enters the encumbrance based off of the awarded contract or PO. ITD attaches a copy of the finalized contracts in *Advantage* for our documentation/tracking purposes but does not necessarily have to as it is always available in *I PRO* for printing or review if needed.

The management of the acquisition of engineering consulting services is supported by an in-house application known as *Professional Agreement Tracking System (ePATS)*, which is currently being rewritten. ITD does not interface *ePATS* with CGI *Advantage Financials*. Payment requests are double entered into both systems. Similarly to *I PRO*, *ePATS* could be relatively easily integrated with *Advantage Financials*.

Online bidding for highway construction contracts is provided by *Bid Express*, a transportation industry best-of-breed hosted solution utilized by a large number of state departments of transportation. The detailed day-to-day management of highway construction contracts is provided by AASHTOware *SiteManager*[™] a module within the AASHTOware[™] Project suite licensed from the American Association of State Highway Transportation Officials (AASHTO). There is currently no automated interface between *SiteManager* and CGI *Advantage Financials* to support invoice processing for construction contractor payments. This type of interface previously existed between CGI *Advantage Financials* and the ITD in-house developed system that was utilized prior to the implementation of *SiteManager* and it is expected that this interface will be redeveloped in the future.

ITD's utilization of CGI *Advantage Procurement* for commodity purchases in conjunction with other solutions to manage the procurement and contract management of engineering services and construction contracts is similar to how these functions are supported in a number of state departments of transportation. Nationally, it is not unusual to see the procurement module of the ERP suite utilized to manage the procurement of commodities and non-professional services, with the procurement and contract management of engineering services and construction contracts managed in separate systems that are interfaced with the financial modules of the ERP solution for payment processing and potentially management of contract encumbrances. Thus, while the separate systems utilized by ITD for different types of procurements is not unusual, in terms of best practices, there is an opportunity for

greater integration between the various ITD procurement applications, the financial modules of the ITD CGI ERP suite and the statewide procurement system.

ITD is in the process of creating an interface between *Site Manager* (used to manage construction) and *Advantage Financials*; then there will be two interfaces. One to load the contract (CTC) data and one to automate the majority of the payment process current used to make payments against those CTC's.

Within the Human Resources / Payroll environment, ITD has implemented CGI *Advantage Human Resources* to support employee timekeeping and the collection of some additional agency-level employee information not captured in *IPOPS*.

ITD uses a paper-based process for the internal routing of approvals for hiring an employee. Once the required internal approvals have been obtained, the examination and hiring process is managed within the *ATS*. Once an employee has been hired, ITD Human Resources enters the required new hire information in both *IPOPS* and *Advantage Human Resources*.

ITD enters wage, address, W-4, FTE Class Code, PCN, Leave Code, benefits eligibility, deductions and direct deposit information in *IPOPS*. The rest of the employee information is maintained in CGI *Advantage Human Resources* including position, default project for timekeeping and labor distribution purposes and other demographic information. New Hires, promotions, separations, etc., are entered in *IPOPS* and all of these actions are also entered in *Advantage*, i.e. double entry.

In addition, certain employee information is interfaced to *TAMS* to support time collection for highway maintenance staff. There is a nightly interface between CGI *Advantage Human Resources* and *TAMS* that updates employee data for changes including rates, new hires, and terminated employees as well as employee-specific employee and employer benefits costs once a year. Once employee information has been entered into *IPOPS*, the employee gets a user ID and password mailed to them. The employee can then go into self-serve *IPOPS* and sign up for their benefits. An interface to *IPOPS* has also been developed so that if an employee changes their address in *IPOPS*, a document with the new address information is generated in *Advantage* which HR reviews and approves by manually hitting submit.

Entries are also entered into *IPOPS* and *Advantage* for PCN changes.

ITD employees enter time for payroll purposes in one of two ways. Most employees record their time online into CGI *Advantage Human Resources* through a custom time sheet front end where it is then reviewed and approved by their supervisor. A subset of employees who are field-based and perform highway maintenance activities record their time through the "day card" function in *TAMS* where the employees report the specific work activities performed and the labor effort, materials and equipment utilized to perform each work activity. Time reporting for highway maintenance staff is either performed directly by an employee into *TAMS* or by a timekeeper in each maintenance organization based on time reported by a crew member on paper. Time entered into *TAMS* is then interfaced into CGI *Advantage Human Resources* for sign-off by the employee and approval by their supervisor.

Employee time is processed during each payroll cycle through the payroll engine in CGI *Advantage Human Resources* to generate a payroll file for transmission to SCO's Payroll Department. ITD processes voluntary payroll deductions and codes payroll leave associated to FMLA and Worker Comp; however, only a portion of the payroll functionality available within the CGI *Advantage Human Resource* suite is actually utilized. Once the payroll has been processed by SCO, a file is sent back to ITD where it is uploaded to CGI *Advantage Human Resources*. The payroll engine within CGI *Advantage* then performs

the labor distribution process allocating the actual payroll dollars, along with the appropriate cost allocation, to each project.

In terms of other HR functions, all employee reviews are managed in *IPOPS*. Once a review is completed, it is signed and scanned and stored in *File 360*, a third-party document management system utilized by ITD. Separate medical files and separate I-9 files are also maintained. *Ralph* (the safety system) stores vehicle accident information. Workers compensation claims are managed through the state's insurer. ITD also maintains a separate database for workers compensation claims internally.

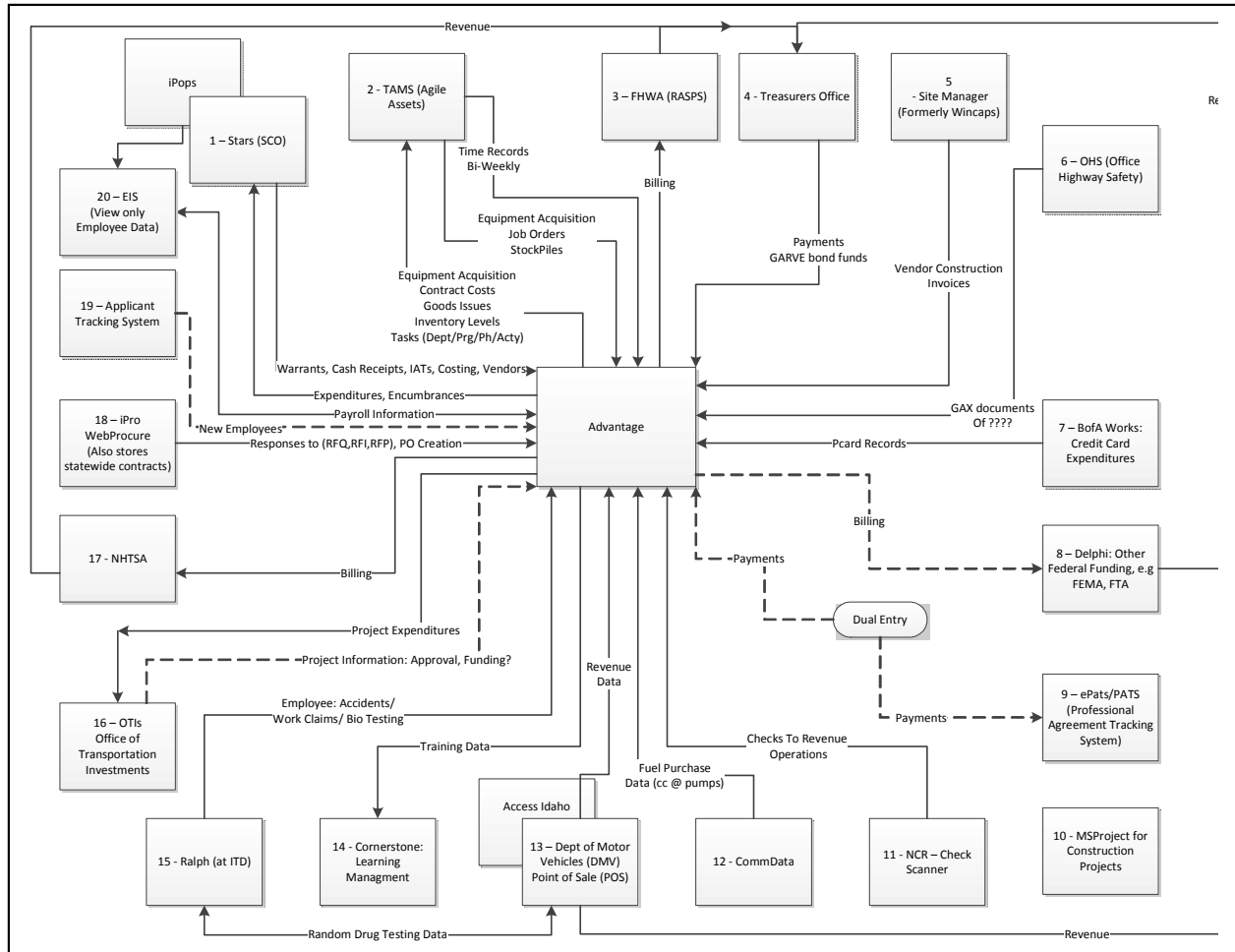
ITD utilizes *Cornerstone* as its learning management system. It is interfaced to CGI *Advantage* through *Microsoft Active Directory* to retrieve employee information. Discipline actions are written, scanned, and tracked in *File 360*. If the employee is suspended, then that action is documented in *IPOPS* and CGI *Advantage*. Grievances are tracked through a case file function on a secure *SharePoint* site.

In contrast to financial management and procurement, ITD's human resource management and timekeeping functions are supported by a variety of statewide and agency-specific applications. The number of disparate systems leads to the need for duplicate entry of information and creates an additional layer of complexity in terms of administering the department's HR management functions. This complexity is partly the result of the need to support a shadow agency-level human resource management system in CGI *Advantage* in order to have the minimum level of human resource information required to support the timekeeping function within CGI *Advantage*.

Overall, ITD has developed a number of power users across all components of the CGI *Advantage* ERP suite utilized by the department. These power users have a very strong knowledge of the functionality of the CGI *Advantage* ERP suite and the application of this functionality to ITD's business processes. ITD also either directly manages or oversees third-party contractors who manage the technical infrastructure utilized to operate the CGI *Advantage* ERP suite.

In terms of application and technical support, ITD Executive management decided at the time of the initial implementation of the ERP application to rely primarily on external partners for technical support versus building in-house capacity. Because CGI does all of their own system implementations, there is a limited source of supply in terms of experienced CGI resources in the marketplace. Consequently, ITD has very few options in terms of contracting for ongoing support of the system and as a result ITD has to continue to rely primarily on CGI staff for most application and technical support.

Exhibit 31 ITD's Systems Environment



Division of Veteran's Services

The mission of the Idaho Division of Veterans Services (Division) is to: provide advocacy and benefit assistance for all Idaho veterans and their families; provide long-term care and enhanced quality of life for all Idaho State Veterans Home residents; provide interment services; ensure education and training opportunities for Idaho veterans; and to operate with efficiency, innovation, and adaptability. The Division has approximately 350 staff. The Division's 2015 budget appropriation is approximately \$30.1M.

In the fiscal arena, there are approximately 25 *STARS* users in the Division Headquarters, Idaho State Veterans Homes in Boise, Lewiston and Pocatello, and the Cemetery. The Division does not use the *Payments Services* because it is cumbersome as users must approve individual line items and cannot approve as a batch. In addition, there are extra steps that require scrolling to check transaction coding. *STARS* is used for Accounts Payable, Cash Receipts, Budget, Grant tracking, and Fixed Assets. No other systems are used for general financial processing.

In the Accounts Receivable and project/grant billing processes, revenue is received from a variety of funding sources. These administrative processes and related systems are briefly described below.

- Medicare payments are electronic fund transfers to the STO. When the Division is notified by the STO via batch headers Division staff makes *STARS* adjusting entries to allocate revenue into the correct Veterans Services fund(s).
- Private pay. Bills are issued at the facilities; the facility writes receipts; money is deposited in bank. The Division is notified by the STO via batch headers in *STARS* when the funds are received and then Division staff makes *STARS* adjusting entries to allocate revenue into the correct Veterans Services fund(s).
- Medicaid. Funds are issued through the SCO when Department of Health and Welfare is issued a warrant; Division staff take it to STO and then Division staff enters transactions to the correct funds in *STARS*.
- VA Payments. A batch header is entered by the Division in *STARS* to notify the STO that incoming funds are pending; upon receiving the funds the STO posts the batch headers in *STARS*.
- The VA Cemetery. This entity uses an internally developed *SharePoint* system to track internments with respect to what is owed and what has been paid. Normally, a check is received from the VA and deposited. The payments are processed similarly to the private payment process described above.
- Nursing Homes. Each of the three nursing homes uses their own system, called *Point Click Care*, which is a system for both financial management and clinical patient care. The nursing homes manage their billings and resident trusts in this system. This system does not interface to *STARS*. The process for billing/receipting is as follows: after generating a bill, the money is received from the patient or other source; then entered in *Point Click Care*; then deposited into US Bank or Key bank; the STO provides a batch header with overall amount which Division staff makes adjusting entries into *STARS*. *STARS* fund balances are reconciled with *Point Click Care*.
- Education Department Grant. There is one grant internally from the US Department of Education. The grant is reimbursement of Division expenses for oversight and compliance of schools. The reimbursement payments are processed similarly to the VA Payments described above.

- Resident Trust EFT payments from the VA and SSA (retirements, etc.). These monies go into a trust fund where residents can access these funds managed on their behalf. For disbursements, there is a petty cash source or the residents are issued a check. Petty cash is replenished by a ROTARY check.

ChargeTracker, an inventory management system, for consumables is used at the State Veterans Nursing Homes but this is closely coupled with the *Point Click Care* patient billing system and would not be replaced by a statewide system.

Contracts for \$10,000 or more, such as staffing agency services, are posted as a (purchasing) request to *IPRO*. When a vendor is selected, a service contract is created. Funds are not encumbered. Contracts are normally paid monthly or as stated in the contract. Contract documents are maintained by Headquarters and at each facility as appropriate. Each Veterans Nursing Home monitors various requirements of their contracts through *Excel*. For example, the transaction amounts paid through *STARS* for the contract period, insurance expiration date, etc.

The Division has five *IBIS* users. Staff indicated that *IBIS* is not user-friendly and cited as examples: 1) reports cannot be generated that use cross reporting groups; 2) complex reports are difficult to create and staff must make requests to SCO to have new reports created; 3) security is not granular enough to permit each program to view only their data; 4) LSO's use of the data for auditing is problematic as LSO queries must be reconciled with staff queries and different filters may have been used which causes confusion and distrust of the data.

As part of Affordable Care Act and the IMPACT Act, in the future, the Division will be required to report staffing as "necessary & sufficient" and provide dates & times for each position staffed. This will include reporting by shift of who was actually there. These are new requirements which cannot be supported by *I-Time* and the Division has no funding (or systems) to support these requirements. A labor-intensive process is will be used to support this new requirement which involves manually accessing individual *I-Time* records – pay location, etc. Presently, there is no "system" to store and report this information. The Division recently lost its single IT programming resource, who had started work on this report, but left the Division before it was finished. The Division currently has no IT programming staff.

Veterans Services owns a *SharePoint* site which stores training videos, forms, etc.

For budget development, the Division receives a packet from the Governor's office and DFM forms. Information is downloaded from *STARS*. Data is compiled packaged and submitted. In March, the Division receives the official appropriation; Headquarters allocates the budget to its Programs. The Division finds the process challenging as forms change and the window to comply is short.

For budget control, budget vs actuals are entered into *Excel* worksheets. Staff runs month-end *STARS* reports once per month. Staff manually enters expenses and breakdowns by sub object & discipline (nursing, volunteers, etc.) into *Excel* which can take up to 3 to 4 hours per month. Each Program receives a budget execution spreadsheet. The Division has created sub objects to a lower level of detail for example, chargeable or non-chargeable medical supplies, prescription or over-the-counter drugs, etc. required by Medicare/Medicaid cost reporting purposes and for reimbursement. Staff then generates cost reports to assist Medicare/Medicaid in documenting allowable expenses.

In the Procurement area, there are different processes for purchasing depending on thresholds. For purchases expected to exceed \$10K, the Division uses *IPRO* (which they began using in August 2014) for bidding purposes. When goods are received and the invoices received, the accounts payable person enters the payment into *STARS*, then a second individual reviews the payment for accuracy and a third

individual approves the payment. Payments are keyed into *STARS*. Most programs process their own payables. If it is the purchase of a fixed asset it is entered into *FAS*.

Within the Human Resources / Payroll environment, the Division uses *IPOPS* for personnel and payroll entry but recognizes some limitations with the system. The users cannot export any detailed or summary data to *Excel* for analysis. Nor can they copy and paste within the system. The system does not operate on mobile devices or *Macs*. No notifications of approvals are provided forcing supervisors to check their queues when data is waiting for them.

The agency uses *EIS* for general HR and noted its limited functionality such as the inability of users to search by groups, only individual code selections by position, etc. The process for Central approvals sometimes delays payments of bonuses because of the lack of automated notifications.

The agency uses *I-TIME* for time reporting. The Division is a 24/7 facility and *I-TIME* shuts down each evening preventing some employees from entering time during their shifts. The system has limited functionality on mobile devices or does not operate on *Macs*.

Reporting is limited, restricting output to only one employee at a time versus a set of employees. Additionally, leave reporting does not always correctly match to the employee's work schedule which can shift at times. The Division has detailed reporting requirements for different aspects of personnel data (hours actually worked, Administrators' salary and benefit information, etc.) for Medicare/Medicaid cost reports which currently requires manual time consuming processes to obtain the necessary data.

Required employees' professional licenses are tracked in an *Excel* spreadsheet which is audited by the several regulatory agencies (VA, DHW License and Certification, Medicare/Medicaid) and LSO.

Every pay period, the Division receives a labor distribution report via an FTP site from SCO. Headquarters sorts by pay location, PCA, etc. The purpose of the report is to make sure correct staff is charged to the correct location. The report also assists the programs with reconciliation requirements for Medicare/Medicaid cost reports.

Appendix E: Terms and Acronyms

Below are listed terms, acronyms, and their respective definitions that are specific to the State of Idaho business processes.

Term or Acronym	Description
AASHTO	American Association of State Highway and Transportation Officers. A national consortium that offers software used by ITD for management of materials and construction.
Access Idaho	The public website where Idahoans can pay taxes, register vehicles, apply for licenses online or complete other transactions that previously required sending or delivering a check.
Advantage	ITD financial management system - see AMS below.
Agency	General purpose term referring to Departments, Divisions, Bureaus, Commissions, and Offices within Idaho State government.
America's Job Link Alliance (AJLA)	An association of state workforce agencies dedicated to providing workforce development systems. Idaho is one of fifteen member states.
AMS	American Management Systems – Company offering the Advantage ERP suite prior to acquisition by CGI in 2004.
AP	Accounts Payable - An accounting entry that represents an entity's obligation to pay off a short-term debt to its creditors; the accounts payable entry is found on a balance sheet under the heading current liabilities.
AR	Accounts Receivable – An accounting entry that represents money owed by customers (individuals or corporations) to another entity in exchange for goods or services that have been delivered or used, but not yet paid for.
ATS	Internal Applicant Tracking System
BOE	Board of Examiners
CAFR	Comprehensive Annual Financial Report
CARS	Vehicle tracking system used by Health and Welfare primarily for tracking mileage
CGI	A Canadian software company and system integrator
CIS	Career Information System. Part of the SIDES offering described below.
Classified Employee	Any person appointed to or holding a position in any department of the State of Idaho which position is subject to the provisions of the merit examination, selection, retention, promotion, and dismissal requirements of Idaho Code Chapter 53 Title 67
Cornerstone	External learning management system used by ITD.

Term or Acronym	Description
DAFR Reports	STARS accounting reports beginning with the letters 'DAFR' and a unique number. Payroll/EIS reports start with the letters 'AU'.
DEQ	Division of Environmental Quality.
DFM	Division of Financial Management.
DHR	Division of Human Resources.
DHW	Department of Health and Welfare.
Domino	A Lotus Notes based system that the State used to write I-Time and IPOPS. Notes represents the client and Domino is the server component.
DSP	Division of Statewide Payroll.
EIS	The State's internally developed Employee Information System providing position control, personnel, benefits, and payroll functionality.
Exempt Employee	Employees not eligible for overtime pay (except for Executives, comp time may be accrued).
FAS	Fixed Asset Subsystem. A component of STARS.
FHWA	Federal Highway Administration.
File 360	A third party on premise document management system developed by Hershey Systems LTD. Several ITD agencies use it for managing HR related paperwork. It provides content capture, data entry automation (bar code reading, OCR, etc.), routing, and security. It also supports archiving, records management, email management, and Integration with other systems.
FMLA	Family Medical Leave of Absence - entitles eligible employees of covered employers to take unpaid, job-protected leave for specified family and medical reasons with continuation of group health insurance coverage under the same terms and conditions as if the employee had not taken leave.
HRIS	Home grown .net human resource system used by the Department of Labor
IA	An internal system used by the Idaho State Police to track grievances.
IBIS	Idaho Business Intelligence Solution. A data warehouse and reporting application allowing state agencies to have secure, organized access to FAS, EIS, and STARS data. Reporting can be accomplished using COGNOS ReportNet, Query Studio, Report Studio, or COGNOS PowerPlay.
IDL	Idaho Department of Land
Inquire Hire	Third party agency that the state uses for background checks on prospective employees.

Term or Acronym	Description
I-Perform	An online application that supports a statewide performance management system for state agencies. In addition to the ability to document, create, review, finalize, and retrieve employee evaluation records, supervisors have the ability to document day-to-day performance.
IPOPS	Idaho Paperless Online Personnel/Payroll System –A web-based application that allows State of Idaho agencies to create personnel, payroll, and position and control documents on-line.
IPRO	Procurement ePurchasing website that allows vendors to respond to solicitations online or download non-interactive bids or proposals, update their company information and contacts, see bid results, and receive purchase orders and contracts online.
IQS	Incident Qualification System – learning management software used by the Idaho Department of Land. IQS allows the user to track incident qualifications, experience, tasks books, and fitness levels of employees.
ISP	Idaho State Police.
ITA	Idaho Technology Authority.
ITD	Idaho Transportation Department.
I-TIME	A web-based employee self-service time entry system.
JFAC	Joint Finance-Appropriations Committee – Joint House and Senate legislative committee whose main job is to craft the annual state budget.
LSO	Legislative Services Office – Created in 1993 to consolidate the nonpartisan staff support to Idaho’s citizen legislators.
NCIC	NCIC is a computerized index of criminal justice information (i.e. criminal record history information, fugitives, stolen properties, and missing persons). It is available to federal, state, and local law enforcement and other criminal justice agencies and is operational 24 hours a day, 365 days a year.
OCIO	Office of the Chief Information Officer with the Department of Administration.
OGI	Office of Group Insurance within the Department of Administration.
ORP	Optional Retirement Plan – used by Faculty only who do not participate in the State’s retirement plan
OSC	Office of Species Conservation - Coordinating policies and programs related to the conservation of threatened, endangered, and candidate species in Idaho. Part of the governor’s office.
OTIS	Office of Transportation Investments System

Term or Acronym	Description
PCard	Procurement Card
PCA	Program Cost Account – One element of the STARS chart of accounts
PCN	Position Control Number
PERSI	The State’s retirement system (except for Faculty)
PO	Purchase Order is a commercial document and first official offer issued by a buyer to a seller, indicating types, quantities, and agreed prices for products or services
POST	Peace Officer Standards and Training, a program followed by the Idaho State Police to ensure that Idaho law enforcement professionals model the highest level of integrity and service through Excellence in standards and training.
Pre-Audit	An audit made prior to the final settlement of a transaction.
Post Audit	An audit made subsequent to the final settlement of a transaction.
Rotary	One time ad hoc check or warrant-on-demand capability in STARS.
SCO	State Controller Office.
SIDES	State Information Data Exchange – a service provided to Idaho employers from the Department of Labor website. A service open to Idaho employers and job seekers as applicable.
Skillsoft	Third party learning management software including capabilities for leadership development, IT training and certification, compliance and risk management, talent management, and state and federal government reporting.
SISMA	State of Idaho System Modernization Assessment.
STARS	Statewide Accounting and Reporting System.
STO	State Treasurers Office.
Supervisor Academy	Sponsored by DHR, a program related to the courses required of employees to become a supervisor after which they have the option to take the Certified Public Manager course.
TAMS	Transportation Asset Management System used by ITD to track buildings, bridges, highways, fleet and equipment - based on AgileAssets software system. Also used to capture time for all Transportation employees involved in activities like repaving a highway or painting a bridge.
TEL	Time Entry Location – used within the I-Time application.
Non-classified Employee	State employees defined in Idaho Code Section 67-5303 and not subject to Idaho Code Section 53, Title 67.

Term or Acronym	Description
Warrant	A written order to pay that instructs the State Treasurer to pay the warrant holder on demand. A warrant differs from a check in that the warrant is not drawn on a checking account.