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**Business Case for**  
*Statewide Human Resource Information System (HRIS)*  
**Executive Summary**

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Date: December 2014

Version: Final

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## Executive Summary

*What's the ratio of supervisors to employees by division across a state agency? Which agencies spend the most on administration? How do state compensation levels compare with other governments and the private sector?* Important questions, yet the state's current human resources information system (HRIS) makes finding answers to these, and other enterprise management questions, a daunting task. For more than two decades Oregon state government has relied upon antiquated green-screen data technology that requires agencies to employ paper processes and supplemental systems to get the job done.

The Oregon Department of Administrative Services (DAS) serves Oregonians by supporting the state agencies they rely on each day. DAS is charged with providing central services – including human resources (HR) support – to all state employees and state agencies (executive, judicial and legislative branches). The current outdated and inflexible HRIS limits DAS' ability to manage statewide HR, position management and budgeting processes. All agencies are using the current HRIS but must supplement it with manual or automated off-system (shadow) solutions when their current business requirements cannot be met. The proposed replacement HRIS would provide an integrated system that is agile, scalable, maintainable, and upgradeable – capable of serving the state for years to come by supporting the use of comprehensive enterprise-wide data for decision-making, allowing decision makers to more fully evaluate the human capital needs of the State of Oregon.

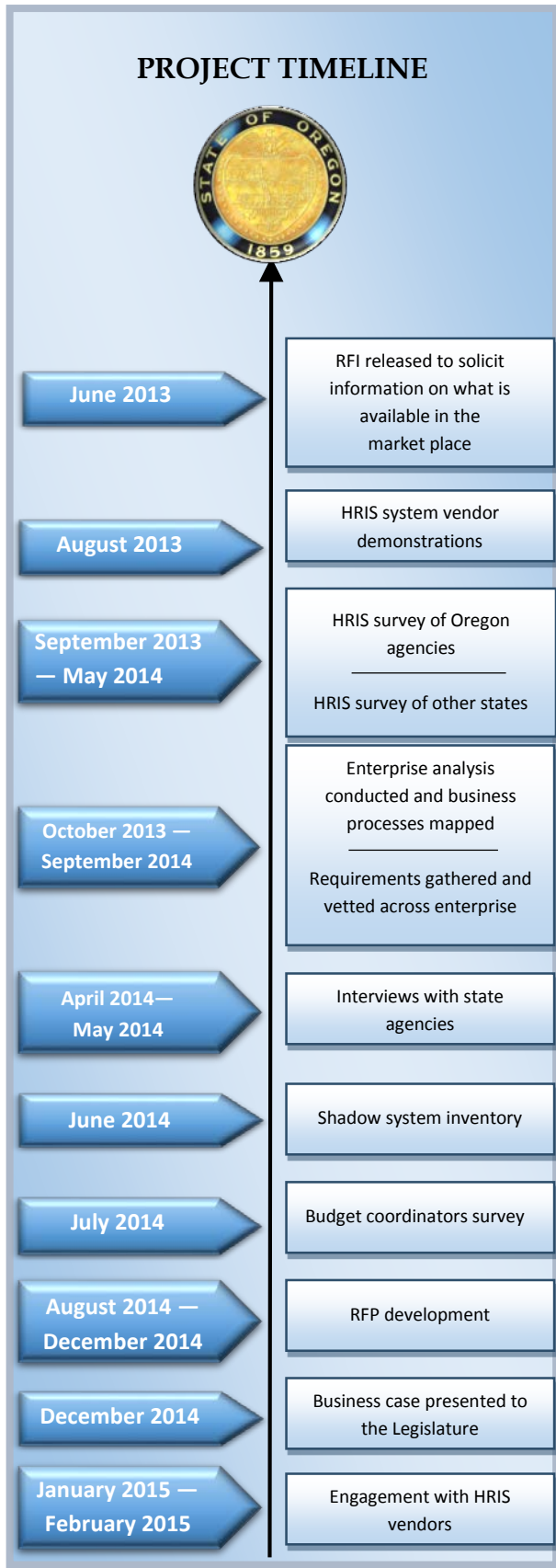
### Purpose

The project purpose is to replace the two statewide systems that compose the current HRIS: the Position and Personnel Data Base (PPDB) and the Position Information Control System (PICS). PPDB and PICS track approximately 45,000 permanent and seasonal positions, which equates to almost 38,000 full-time equivalents (FTEs). When asked to identify their pain points and greatest area of need for computing support, agencies identified PPDB and PICS as their highest priority for replacement from among the outdated enterprise-wide systems. This Business Case contains the in-depth analysis, cost estimates and other project-related items considered by the project team to determine the best approach to delivering a replacement HRIS that can provide an expandable foundation that could facilitate further system replacements.

Major information technology projects in executive branch agencies are under the oversight of the Office of the State Chief Information Officer (CIO). The State CIO is developing an overall strategy for incremental replacement of many of the legacy enterprise systems, thereby reducing the number of disparate systems supporting the enterprise from 12 to four or less. The replacement of the legacy HR systems is the first phase of the overall strategy. The State CIO's office provides oversight to all large IT projects through a Stage Gate Review process with four stages in each project's life cycle. The HRIS project is currently in Stage 2. This detailed Business Case and other planning artifacts are important aspects of Stage 2. Detailed Planning (Stage 3) and Execution (Stage 4) will follow.

The state issued a request for information (RFI) to assess the marketplace. The project team developed requirements, surveyed agencies, surveyed other states and reviewed product demonstrations. Exhibit 1 below presents the project timeline. There are several commercially available applications that provide the type of comprehensive functionality the state needs.

Several commercially available applications provide comprehensive solutions.



The project team reviewed multiple implementation models, considering agency readiness, priority of functionalities, potential scope, and project delivery methods, e.g., big bang (all at once) or phased implementation. Expandability and long-term post-implementation support were also considered and a detailed discussion is included in the Critical Success Factors section of the full business case.

### Problem

Oregon’s data needs have far outpaced the State’s capacity to capture, organize and analyze HR information. Current HR information technology (IT) requires the support of manual business processes, and does not address the essential HR requirements of today. Much of the information is manually entered into PPDB and PICS via paper forms, which is labor-intensive. PPDB and PICS are difficult to maintain, upgrade and support.

Agencies must use manual processes and multiple systems to meet current needs.

There also is a high risk of non-compliance with laws and regulations, leaving the state vulnerable to lawsuits. PPDB and PICS have been in place since the 1990s. Both systems are based Elion mainframe technology, where navigation is cumbersome, standard HR metrics are not readily available, and ad hoc reporting does not support strategic decision-making. PPDB and PICS are inflexible and difficult to maintain, upgrade and support. These realities force the state to use inefficient manual processes or develop costly supplemental systems to support basic business needs.

Multiple shadow systems are in use throughout the enterprise to fill the void of functionality agencies require to meet current HR business needs. The project team documented the current business processes in use with the legacy systems. This effort revealed that HR business processes are already reasonably standard across the State. However, they vary significantly around the use of agency shadow systems and workarounds developed to fill the functionality gap left by the legacy system. These business processes cannot be standardized until there is a system that provides this missing, essential functionality.

Gaps and variances in HR processes between agencies increase the state’s risk.

Workloads and inconsistent data collection throughout the state increases the probability of reporting errors, inaccurate information for decision-making and heightened potential for

adverse audit findings and/or penalties. It is difficult to secure confidential HR data between and among the various shadow systems and manual processes, which leaves the state vulnerable to data loss, perceived violations and potential legal action.

The skill sets required to support existing systems are increasingly hard to find, more expensive, and may not be available in the future. The knowledge of current staff is critical to a successful implementation. Many of the technical and business staff maintaining and operating the current systems are near retirement and could leave state service in the next five years, taking institutional knowledge with them and increasing the difficulty of training new staff. These hidden costs are important and increase the state's vulnerability and risk over time.

Loss of systems administration expertise and historical knowledge increase cost and risk.

The project team recognizes that the HRIS could be included in a commercially available Enterprise Resource Planning (ERP) solution, which is software that integrates financial, procurement and HR functions. However, DAS has decided to pursue a smaller and more manageable project scope in this first step. This decision is due to the history of difficulties with large IT projects in Oregon and other states. The smaller HRIS scope is achievable but still allows for future growth into a more integrated ERP system. The project scope includes the development of connections to remaining legacy statewide systems to build a solid foundation on which to build, while reducing this project's implementation risk to the state.

## Opportunity

Implementing a modern HRIS provides the State the opportunity to improve employee productivity, reduce operational complexity and increase internal controls by enabling standardization and automation of business processes. It will also better support the State's decision-making by providing a robust repository of data available to all users for analysis and reporting through modern user-friendly tools. The integration of positions, people, and funding through a replacement HRIS will be a positive paradigm shift for the state, with two significant impacts:

- The focus of the HR function will transform from data entry and systems reconciliation to data analysis and strategic management. For example, employees will be able to maintain their personal information directly with a self-service function, allowing HR staff to complete higher-level tasks.
- Many processes can be conducted simultaneously, eliminating lag times, redundancies, and reducing the potential for errors and omissions. For example, current systems cannot process new user ID requests until a new employee arrives on site on Day 1. A new HRIS will have effective dating, allowing new employee records to be added into the system prior to an employee's first day at work. That's an increase in efficiency that can be realized across the enterprise. Another example, a new HRIS will support budget preparation using multiple versions. This allows budget preparation activities to occur simultaneously with daily data management activities, eliminating the current "PICS roll" process, which freezes position tables to begin budget preparation and forces mass manual "data catch-up" after budget preparation is completed.

This paradigm shift will be the focus area for the organizational change management team, and will include other changes including new functionality that doesn't currently exist for agencies, such as employee self-service.

## Assumptions and Constraints

The alternatives analysis included the following assumptions:

- The State will adequately resource the project team. This assumption is incorporated in the cost estimates for each alternative.
- The State will employ the services of an organizational change management firm early on in the implementation phase. This assumption is incorporated in the cost estimates for the COTS alternatives analyzed.
- The State will enforce a stringent scope management effort to eliminate or minimize system customizations. This assumption is reflected in the implementation schedule and cost calculations for each alternative.

Each alternative analysis assumes an implementation period that has been common for that alternative in other implementations. The project team assumes the State will negotiate an appropriate implementation period with the successful bidder taking into consideration adequate time for data conversion, testing and training with the resources available from both the State and the vendor.

The traditional funding model employed by the state of Oregon for large IT projects is bonding, which is a risk, as all IT projects must compete against each other for available funds that are dependent on the State's economy. The state is assessing other possible options, including vendor financing and agency assessments, but has not made a funding determination for this project at this time.

## Goals and Measures

The main goal of the HRIS project is to provide a robust HR system that meets the business needs of the users. The new system should fill the functionality gaps of the current system eliminating the need for the shadow systems built out of necessity. In addition, it should facilitate efficiencies and the reduction of paper-based functions. We have gathered metrics on the time it currently takes to perform many paper-based HR functions with the current system (Appendix N). After the system has been in production for a few months and users have become accustomed to the new business processes, we will re-measure the same processes with the new system to determine if efficiencies were indeed gained. We will also survey agencies regarding their satisfaction with the new system and inquire on their shadow systems to see if they still have a need for them. This will provide a measure on how well the new system meets business needs and how well of a job we did re-engineering business processes and training employees.

## Critical Success Factors

With a project of this scale, identifying and monitoring critical success factors throughout the project will reduce overall risk. The project team surveyed other state governments and held discussions with Gartner, Inc. and Deloitte Consulting LLP. Three key factor groups were identified and the following exhibit lists the various strategies that can be taken to support the successful replacement of PPDB and PICS:

**Exhibit 2: Critical Success Factors and Supporting Strategies**

Critical Success Factor	Supportive Strategies
Establish and follow a strong governance model	<ul style="list-style-type: none"> <li>• Name an experienced project manager</li> <li>• Establish a project steering committee and technical advisory board to guide the project team</li> <li>• Establish a change control board and use standard processes and criteria for evaluating change requests, holding firm to configuration solutions rather than customization</li> </ul>
Provide adequate resources	<ul style="list-style-type: none"> <li>• Staff the project with the best from your organization</li> <li>• Recruit experts from targeted agencies</li> <li>• Backfill for your project team</li> <li>• Create a realistic schedule</li> <li>• Conduct a pilot implementation</li> </ul>
Make change management a critical part of the implementation solution	<ul style="list-style-type: none"> <li>• Prepare agencies for the paradigm shift using the services of an experienced organizational change management firm</li> <li>• Get visible, consistent and frequent demonstrations of top management support</li> <li>• Keep stakeholders informed</li> <li>• Tap agency-specific project team members as change agents for their agency</li> </ul>

A summary of the identified risks categorized under critical success factor groups, recommended approaches and potential responses can be found in Exhibit 13. The project team has also developed a risk register that groups identified risks by critical success factor group. The full risk register is provided in Appendix B.

**Alternative Analysis**

The project team identified key selection criteria against which to measure alternatives:

- Degree of fit with functional requirements
- Long-term support
- Provides for incremental expandability and flexibility, aligned with the DAS COO Legacy Systems Upgrade Plan
- Life cycle costs , and
- Degree of risk.

Dye Management Group, Inc. (DMG) used the selected criteria to determine viable HRIS solution alternatives. The project team identified several alternatives to analyze. A do-nothing alternative was included to establish a baseline for the analysis.

- **Alternative A:** Do nothing and continue to use the existing core human resource and budgeting systems
- **Alternative B:** Build a custom HR application to replace PPDB and PICS



- **Alternative C:** Acquire a commercial off the shelf (COTS) HRIS solution to replace PPDB and PICS

Market research revealed three options for Alternative C:

- **Alternative C1:** Acquire a COTS HRIS solution to be housed in the Oregon State Data Center (SDC) and operated by either state or vendor staff
- **Alternative C2:** Acquire a COTS HRIS solution to be housed in a vendor data center and operated by vendor staff
- **Alternative C3:** Acquire a COTS HRIS solution in a Software as a Service (SaaS) model that is housed in the cloud and made available via the Internet

DMG developed a project scenario for each alternative, which includes an evaluation and ranking by key criteria, project schedule and estimated costs for state and vendor implementation teams, change management sub-team, ten-year operational costs, and long-term support options. The cost estimates for the COTS alternatives were blended and leveled based on the vendor responses and product demonstrations.

Cost benefits are the elimination of current PPDB and PICS costs. Potential cost savings from replacement or elimination of shadow systems are not included in the cost model of this business case. The decision to eliminate or change a shadow system resides with the individual agency. These and other benefits are considered intangible, non-financial benefits for the purposes of this business case. Potential process efficiencies that could be gained from integrated HRIS functionality are illustrated in the Could-Be process maps contained in the HRIS Gap Analysis, and are available from the HRIS project team upon request.

Alternative A costs are comparable to other alternatives but it provides few benefits, tangible or intangible. This alternative poses no threat to the status quo and therefore requires no change management effort and no significantly visible cash outlay. However, this alternative will force the state to divert resources from mission-critical activities to address an ever-increasing need to create and maintain data manually, by costly enhancements to PPDB and PICS, or to the development of individual agency shadow systems to address changing business requirements.

Alternative B, custom development by state resources, gives the highest level of control over the proposed solution but has the highest cost. This alternative presents the most risk and is the same model that has resulted in significant State project failures in the recent past, i.e., a recent large new development project missed its implementation deadline and was ultimately scrapped for an existing solution. Alternative B also creates a continuing burden on state resources for both system administration and development of upgrades to accommodate changing requirements.

All three Alternative C delivery models provide an opportunity to establish best practices, quickly align future practices with regulatory and statutory changes and provide a path for expansion with other parts of the vendor's portfolio. In order to realize the most benefit from a COTS solution, the State must change business processes to use the standard product rather than customizing the solution, which results in lower total costs compared to Alternatives A or B since less expensive change management efforts replace costly software customizations.

The intangible benefits the improved technology of a COTS solution can deliver further add to the potential benefits. The enhanced data capture and data management capability, the automation of currently manual processes, and increased reliability of enterprise data for statewide reporting and decision making support will provide improvements in processes in HR and other business areas. The technology underpinning COTS solutions also supports future expandability as well as easier integration to other systems. While similar benefits should reasonably be expected with Alternative B's custom system, developing IT systems is not usually a mission critical, priority activity for a

governmental organization. It is critical the state balance the higher risk of a custom solution, as evidenced by similar past endeavors, against the specialized technological expertise of a commercially-successful HRIS vendor.

Alternative C1 has a lower total cost than Alternatives A or B. Alternative C2 is a higher-cost alternative than C1 because an off-premise solution assumes a higher cost for the vendor's resources to maintain and upgrade the product.

Alternative C3, the SaaS delivery model, has the lowest total costs and can be implemented in the shortest amount of time, thereby delivering important intangible benefits sooner than other alternatives. The SaaS model enforces standardization in HR processes since the product is shared between multiple customers.

Exhibit 3 below summarizes the criteria rankings by alternative and Exhibit 3 compares the alternatives across the various cost estimates. The full analysis for each alternative is presented in Appendix A.

**Exhibit 3: Alternative Criteria Ranking Summary <sup>(1)</sup>**

Alternatives	Degree of Fit with Requirements	Long-Term Support	Incremental Expandability and Flexibility	Life Cycle Costs	Degree of Risk	Total Ranking
A: Do nothing and continue to use the existing core HR systems	1	1	1	1	1	5
	No change	Increases over time	No improvement	Higher	High, increases over time	
B: Build a custom HR application to replace PPDB and PICS	3	2	2	1	1	9
	Custom build	State only	Dependent on state resources	Higher	High, state resource dependent	
C1: Acquire a COTS HRIS solution, housed on premise (DAS SDC)	3	2	3	2	2	12
	Readily available functionality	State and vendor options	Readily available add-ons	Medium	Medium, state ownership required	
C2: Acquire a COTS HRIS solution, housed off premise (vendor site)	3	2	3	2	2	12
	Readily available functionality	Vendor options, costly	Readily available add-ons	Medium	Medium, state ownership of hardware required	
C3: Acquire a COTS HRIS SaaS solution, housed in the cloud	3	3	3	3	3	15
	Readily available functionality	Vendor options, low cost	Readily available add-ons	Lowest	Moderated, no product ownership	

<sup>(1)</sup>Total Rating: (8 or less): Low - Does not meet criteria, (Between 9 and 12): Medium - Meets a majority of criteria, (12 and above): High - Fully meets criteria



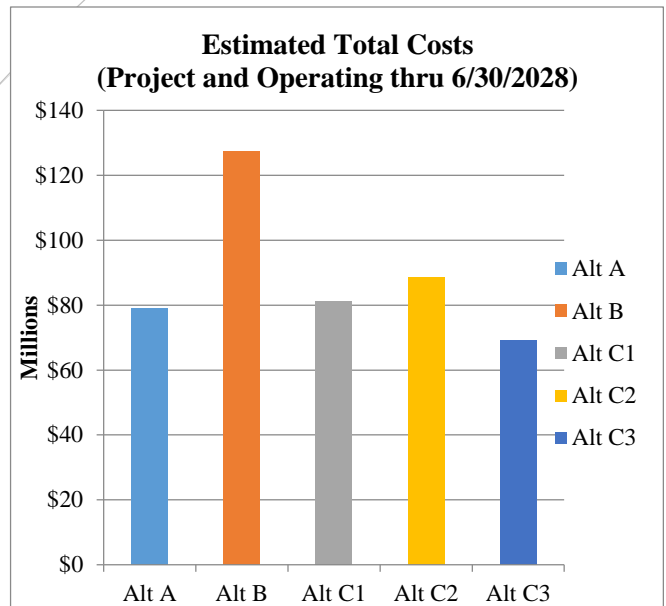
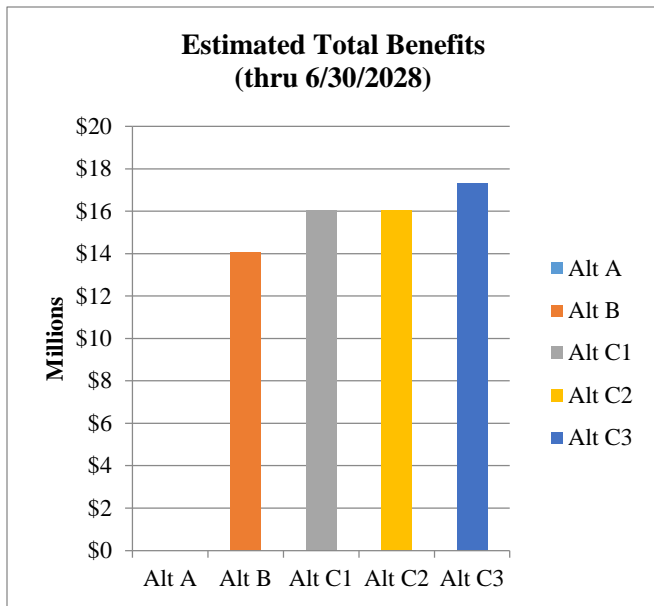
**Exhibit 4: Summary Comparison of HRIS Alternatives**

Alternative	Project Length and Period	Estimated Total Cost (Millions)	Estimated Benefits (Millions)	Estimated Life Cycle Cost (Millions)	Net Present Value (Millions)
<b>A:</b> Do nothing and continue to use the existing core HR systems	None	(\$79.15)	\$0	(\$79.15)	(\$59.88)
<b>B:</b> Build a custom HR application to replace PPDB and PICS	42 months, Go-live Jan 2018	(\$127.37)	\$14.09	(\$113.27)	(\$93.80)
<b>C1:</b> Acquire a COTS HRIS solution, housed on premise (DAS SDC)	36 months Go-live Sep 2017	(\$81.23)	\$16.03	(\$65.20)	(\$54.72)
<b>C2:</b> Acquire a COTS HRIS solution, housed off premise (vendor site)	36 months Go-live Sep 2017	(\$88.78)	\$16.03	(\$72.76)	(\$60.81)
<b>C3:</b> Acquire a COTS HRIS SaaS solution, housed in the cloud	24 months Go-live Sep 2016	(\$68.60)	\$17.32	(\$51.27)	(\$43.13)

The following exhibits identify the summary costs, benefits and net present values graphically:

**Exhibit 5: Estimated Total Benefits by Alternative**

**Exhibit 6: Estimated Total Cost by Alternative**



## Recommendations

### **The project team recommends the state of Oregon pursue the procurement and implementation of Alternative C3: Acquire a COTS HRIS solution in a SaaS model.**

The project team recommends implementing the core HRIS functionality in Phase 1 with manager and employee self-service options implemented in Phase II. The recommended scope includes development, testing, and deployment of automated interfaces such as those to the statewide payroll, benefits administration, budgeting, recruitment and learning management systems; and a pilot implementation of full functionality to DAS Enterprise Human Resource Services (EHRS) Shared Services and one or more targeted agencies. Specific details on delivery platform, interface development, pilot participation, and training delivery should be finalized during the project implementation phase.

The project team recommends the formation of a chartered project management team with a PMP-certified and experienced project manager, authorized to deliver the chosen solution in accordance with project management best practices, as embodied in the *PMBOK*. This includes a documented scope statement, documented project plan, and an organizational change management sub-team to conduct enterprise readiness activities, such as assessing for resistance and conducting early outreach activities. In addition, DMG recommends the current governance structure for the project be strengthened by the formation and engagement of a business advisory committee, a change control board, and a technical steering committee. The purpose of these committees is to guide and support the project team in a successful implementation.

The intent of the project team is to have one point of responsibility for vendor resources regardless of the composition of vendor teams. The project team considered the use of an independent systems integrator; however, in the COTS market, the COTS vendor is sometimes the only implementer of their product. Regardless of the number or source of vendors involved in the project, all vendors should be managed by a state project manager who is experienced and employs best project management practices.

The state should develop a binding legal vehicle with the winning vendor that explicitly addresses the data ownership rights of the state with procedures for continuing operations and disaster recovery, including but not limited to any potential for discontinuation of vendor services. The state should also develop a service level agreement with the vendor incorporating specific system availability levels, maintenance schedules and issue response times.

Detailed project recommendations are included in the body of this document and summarized in Critical Success Factors section.

### **Consequences of the Failure to Act**

Agencies have sent a clear message – PPDB and PICS do not meet their needs. Current HR requirements are strategically important, and when possible, agencies will continue to dedicate other resources to systems development to meet these requirements. Failure to act timely unquestionably results in continued high levels of risk for non-compliance and cost, and further perpetuates inefficient use of current resources and the inability to respond quickly and consistently to future needs at an enterprise level.

Failure to act on this project will continue to deny the enterprise the benefits of a single HR and position budgeting solution, leaving the state still unable to answer those enterprise-wide questions that provide the information needed to manage HR resources at the strategic level. A continuation of the current state will further encourage development of single-owner solutions, and continue to increase the state's burden of risk.

Failure to pursue an integrated HR solution also denies the state the opportunity to reap additional efficiencies in other business processes that employ HR data as well as to modernize the IT environment to support future efforts. A delayed decision will leave the state at risk of increased cost for any solution.

By choosing to pursue this HRIS project, with its limited scope for building a foundation for future expansion, state managers and executives are responding as good stewards of the public trust to address the increasingly urgent need to replace legacy systems in balance with the economic and political realities.



