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# MEMORANDUM

Legislative Fiscal Office  
900 Court St. NE, Room H-178  
Salem, Oregon 97301  
Phone 503-986-1828  
FAX 503-373-7807

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**To:** Joint Ways and Means Information Technology Subcommittee  
Joint Committee on Ways and Means

**From:** Robert L. Cummings, Principal Legislative Analyst (IT)  
John Borden, Principal Legislative Analyst

**Date:** May 28, 2015

**Subject:** Public Employees Retirement System: HB 5034 – POP #104 – Technology Maintenance and Enhancements Project  
LFO Analysis and Recommendations

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**Agency Request:** Within HB 5034 - Policy Option Package (POP) #104, the Public Employees Retirement System (PERS) has made a 2015-17 request for Other Funds expenditure limitation in the amount of \$3,281,250 (OF – services and supplies), to provide much needed upgrades to existing technical architecture/infrastructure and its jClarety related application system's capabilities. POP #104 includes two key components: 1) "technical debt" - \$1,771,875 in Other Funds limitation; and 2) Oregon Public Service Retirement Plan (OPSRP) application system enhancements - \$1,509,375 in Other Funds limitation.

The purpose of this proposed project is twofold. First, to upgrade and enhance the jClarety application system software architecture, which was designed over a decade ago. Foundational architectural components of jClarety need to be updated to keep the system technologically current, scalable, maintainable, and in alignment with industry technology standards, thereby extending the system's useful "life-span" until 2020. The current jClarety system, as installed and utilized (primarily for internal PERS users only), cannot provide a number of key capabilities, including the support of mobile web browsers, or even updated versions of Microsoft Internet (IE) Explorer beyond version 10. The current system architecture also does not allow PERS business users to produce system generated correspondence in anything but rich text format (.rtf). Currently, jClarety also does not support .pdf, Microsoft Word, or Microsoft Exchange (for email integration) capabilities.

The second key purpose for the proposed project within POP #104 is to add some important basic membership support functions that were not addressed in the original implementation, but are now emerging as important needs as the retirement population served by PERS grows. A half-dozen or more key missing functionalities have been identified by PERS as needing to be added to the current jClarety application system's capabilities. Two of the more important missing automated functionalities include the inability to process divorce decrees utilizing "alternate payees," and the inability to handle administering "loss of membership," when non-vested members leave employment. Currently, these processes must be done manually, outside of jClarety. In addition, these missing functionalities also create the need for a shadow record-keeping process for any workflows outside of jClarety.

The high-level proposed schedule, phases, and associated costs for the two key components in POP #104 are provided in the diagram below:

2015					2016												2017						
J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
<b>Package 104 ORION M&amp;E: \$3,281,250</b>																							
Technical Debt: \$1,300,000: 7/1/15 – 2/28/17																							
Initiation/Elaboration: \$390,000; 7/1/15 – 12/31/15					Construction: \$650,000; 1/4/16 – 9/30/16							Transition: \$260,000; 10/3/16 – 2/28/17											
OPSRP Functionality: \$1,981,250: 7/1/15 – 6/30/17																							
Initiation/Elaboration: \$396,250; 7/1/15 – 11/30/15					Construction: \$1,188,750; 12/1/15 – 3/31/17							Trans: \$396,250; 4/3/17 – 6/30/17											

#### A. LFO Analysis

The documentation in support of POP #104 includes a high-level business case, architectural design document, a high-level budget, a high-level schedule, and a high-level resource plan. LFO agrees POP #104 describes real problems and issues. These types of problems are common as systems age technically, and also when tough decisions are made at implementation time, when decisions have to be made as to which systems capabilities can be included in the original implementation of a “new system,” and which ones must be handled either with an existing system (or manually), or be addressed at a later date. Each year that a system stays technically “stagnant,” new technical capabilities are created that did not exist when the legacy system was designed and implemented. At this time, the more important questions that should be asked include:

1. How serious are these technical obsolescence and architectural issues? Can PERS live with doing business “as-is?” What are the consequences of doing nothing?
2. jClarity was just installed 3-4 years ago for a cost exceeding \$30,000,000. Is jClarity so obsolete in its architecture and capabilities that PERS needs to spend \$3,000,000-\$5,000,000 more in the 2015-17 biennium, just to extend jClarity’s “lifespan” until 2020?
3. Is the cost of upgrading the existing jClarity System worth the effort, or should PERS simply continue to use existing manual procedures to deal with system “deficiencies?”
4. Might it be better to invest in other options, including completely replacing jClarity, bringing in another state’s more current solution, or investigating SaaS options for replacing jClarity?

The business case and options analysis that PERS has developed doesn't sufficiently address these questions, nor does it make the case that the problems that PERS is facing with the obsolescence of the jClarity architecture, and the absence of key system capabilities are sufficiently problematic to require at least \$3,281,350 to correct, and then only for an additional three years of system life.

In addition to these questions and concerns, LFO found the supporting documentation provided by PERS to be insufficient in detail and quality to support unconditional funding of the project at this time (without significant upgrades to the supporting project documentation and addressing the questions identified above). A brief discussion of some of the challenges and concerns that LFO has identified related to the proposed project and any funding approval for POP #104 follows:

1. Business case and supporting documents – the high-level business case does an adequate job of describing a number of the problems facing PERS with respect to the aging technology of jClarity and weaknesses in its current system capabilities, but as it stands, it does not clearly address the “four questions and related issues” identified above. The full scope of the problems relative to technical obsolescence and missing system capabilities is not clear. The PERS-submitted business case does not follow the business case standards that both DAS and LFO require (as identified in the “DAS/LFO Business Case Checklist”). Solution options (including the baseline option) are not adequately defined nor compared. High-level solution requirements are not adequately defined, and the methodology for selecting the best solution to solve both the “technical debt” and missing jClarity system capabilities is not documented in the business case. In addition, the “consequences of failure to act” are not defined adequately.

“Total cost of ownership” (TCO) and “return on investment” (ROI) are also not available to help determine what value the \$3,281,250 one-time expenditure (plus ongoing biennial support costs) will provide to the state. The high-level workplan (i.e., schedule, resource plan, financial plan, and risk analysis) and a number of the other POP #104 supporting documents are also of insufficient quality and detail to adequately support POP #104.

2. Scope of work - It is not clear that the problems identified in the business case are all that is wrong with the current jClarity environment, or merely a subset of the existing challenges facing PERS. How many of the total problems facing PERS in the jClarity environment will be “fixed” by POP #104, is simply not known. The severity of the existing problems identified by PERS and their real impact on business operations is not fully understood from the materials that have been provided to DAS and LFO.
3. jClarity lifespan – PERS has stated that POP #104 will allow jClarity’s “life-span” to be extended to 2020. With the proposed two year effort (2015-17) to implement the recommended upgrades and changes to jClarity and its environment, it appears that the funds expended in POP #104 will only provide jClarity three additional years of useful life (after all proposed upgrades are completed). When the ongoing support costs (ranging from 0.5 to as much as 3.0 times the one-time development costs) are added to the \$3,281,250 proposed one-time costs for POP #104, the overall costs of this POP package through 2019, could balloon up to \$5,000,000+ (at a minimum), depending upon the actual ongoing annual maintenance and operational support costs.

4. Overall workload demands – in recent weeks, court decisions that directly impact PERS and its supporting information technology (IT) organization, have added a significant amount of new, unplanned, critical work for both the PERS business and IT units. It is not clear at this time, the magnitude of this new work, its impact on PERS and the internal IT organization, nor whether PERS can handle all the critical work that is potentially on its “platter” for 2015-17 (i.e., including new work required by the recent Supreme Court decision related to PERS reform, the Individual Account Program in-sourcing proposed by POP #102, and the disaster recovery upgrades proposed in POP #105).

## **B. LFO Recommendations**

LFO recognizes the importance of POP #104 to PERS, and the need to keep jClarety technologically current. It also is aware that there are a number of needed enhancements/capabilities that were not put into place during the initial jClarety implementation. However, the following issues and questions: 1) the weaknesses in the supporting POP #104 documentation; 2) questions regarding the overall “health” of the jClarety application system; 3) questions regarding the real magnitude and impact of jClarety deficiencies on PERS business operations; 4) questions related to the wisdom of spending \$3-5,000,000 for a gain of only three years in the overall lifespan of jClarety; and 5) serious questions about PERS’s ability to handle all of the proposed major IT work that is currently on its platter in 2015-17, all make it difficult for LFO to recommend full unconditional funding approval at this time. There simply are too many unknowns.

As such, LFO recommends that the funding for Policy Option Package #104 in HB 5034, not be approved. In addition, LFO recommends that some amount of expenditure limitation be provided for the planning work needed to complete a detailed assessment of the current jClarety environment, in order to determine its current state and how best to proceed in dealing with the problems identified in POP #104. Specifically LFO recommends that PERS:

- Conduct a “system health assessment” and “needs assessment” via an independent private sector vendor, highly experienced in state retirement systems, to determine the true status of the current jClarety application system “environment,” including its level of technical obsolescence, and its current systems capabilities versus critical PERS customer needs.
- Depending upon the findings of the “system health and needs assessments,” if it is determined that the current jClarety system is so unable to meet PERS needs that either significant funds must be spent to upgrade it, or even replace it, then PERS must have a robust business case and options analysis developed by an independent private sector vendor (again, highly experienced in state retirement systems), to determine the best options for proceeding.
- The “results” of the health assessment, the needs assessment, any business case/options analysis, and associated go-forward plans that are produced should be provided by PERS to the Legislature in the 2016 session.

- Motion on the LFO recommendations

## **C. Final IT Subcommittee Action**

Transmit the Information Technology Subcommittee recommendations to the General Government Subcommittee of the Joint Committee on Ways and Means.