Item 72: Public Employees Retirement System
Information Technology Modernization Program

Analyst: John Borden and Bob Cummings

Request: Increase Other Funds expenditure limitation by $4,490,000 and establish 18 permanent full-time positions and one limited duration position (3.92 FTE) for modernization effort.

Analysis: The Public Employees Retirement System (PERS) is requesting supplemental Other Funds expenditure limitation in the amount of $4.5 million and the establishment of 18 permanent full-time positions and one limited duration position (3.92 FTE) for the agency's proposed information technology modernization effort. The revenue source for the Other Funds would come from either investment earnings or, in years when such earnings are insufficient, through a direct charge to participating public employers.

Background
The overall PERS modernization proposal has yet-to-be approved by the Legislature; however, $800,000 of one-time Other Funds expenditure limitation was approved in the 2021 legislative session for the origination or planning phase of the modernization program, and consisted of initial funding for contracting for planning and Oregon Retirement Information Online Network (ORION) system assessment activities only. The agency focused these efforts only on the modernization of the ORION System, and not the whole breadth of the PERS modernization needs. The Emergency Board is not the proper venue for the approval for a large-scale information technology program, which is the role of the Legislature. The Emergency Board is, however, the venue to provide an agency with pre-planning funding for an information technology program.

The proposed PERS modernization program, if approved, would come on the heels of the agency's recent implementation of SB 1049 (2019), which is a three-biennia program that is currently scheduled to be completed in April of 2024 at an estimated cost $49.9 million Other Funds. While SB 1049 did include funding for technical information technology "debt" issues directly associated with the implementation, a broader modernization program would have to incorporate all aspects of the SB 1049 implementation. The PERS modernization program is viewed as being far more extensive of an initiative than the agency's implementation of SB 1049 and the agency's completion of the Production Data Center and Backup Data Center projects, that are deemed critical to the agency's disaster recovery and business continuity efforts. Absent the implementation of SB 1049, PERS likely would have embarked on a modernization effort prior to the 2021-23 biennium.

The PERS modernization program has to-date received only Department of Administrative Services - Enterprise Information Services (DAS-EIS) Stage Gate 1 endorsement for pre-planning purposes only. DAS-EIS has provided limited program-level oversight since July 2021 but expects all PERS projects within the overall modernization program to adhere individually to the full Stage Gate Review process. Once PERS has completed all Stage Gate pre-planning requirements, the modernization program, and its projects, will begin at Stage Gate 1 and be expected to progress through the remaining two Stage Gates. To-date, PERS has not retained a quality assurance vendor and no risk assessments or quality control reviews have been completed.

<u>Scope</u>
The proposed scope of PERS modernization is generally defined by PERS as focusing solely on an expansive effort to only modernize the agency's existing ORION System, as well as add new applications, functionality, and capabilities, via a new cloud-based architecture platform. This effort would also include non-information technology business process engineering (e.g., organizational change management), and is also expected to require changes to statute.

The current full scope of PERS's modernization needs is not clearly defined and should include far more than just the modernization of the ORION System and its supporting business processes. The effort should also include fully modernizing PERS's total business environment, technical infrastructure, network, security, desktop service, and data domains. Modernizing staff resources to be able to use, maintain, and support PERS's business and technical assets has also not been identified as a key component of PERS's overall modernization efforts. There also is no clear definition of PERS's modernization problem, nor the overall scope of the modernization program itself, nor the approach, steps, and efforts needed to address the full modernization problem. What exists primarily focuses on PERS's ORION System modernization needs.

The ORION-focused modernization effort, as proposed by PERS, and documented in their recently completed vendor-supplied "capabilities assessment," would be a program of 19 projects focusing on the ORION applications system and supporting business processes. This assessment and go-forward plan was prepared by a vendor who completed only an ORION-focused capabilities assessment. This high-level, non-integrated, study called for the development of modernized technology and business processes to be developed and implemented over an eight-year period (or four biennia). This ORION-focused modernization effort would include a six-year development and implementation effort, followed by two years of "stabilization." The period of "stabilization" would include costs associated with operating the newly implemented modernized ORION related system, including "re-design," "enhancements," and "improvements," to the ORION System and business processes. This assessment did not take into account the current state or desired future state of the remaining 5-6 areas of architectural domains that may also need modernization in the coming years. It is also worth noting, that one of 19 contemplated modernization projects, the insourcing of the Individual Account Program (IAP), was a failed agency project and was officially terminated in July of 2018 with the rescinding of all DAS-EIS stage gate approvals.

The initial PERS proposal for modernizing just the ORION System, has an initial cost estimate of $150.4 million, which includes $128.1 million for implementation and $22.3 million for five years of post-implementation operating costs. These estimates are expected to materially change as the program and projects are more fully developed and understood. No estimate was provided for ongoing operation and maintenance costs. In addition, PERS has not addressed the potential impact that modernizing deficiencies in other architectural domains (e.g. business, infrastructure, hardware, software, network, data, security, desktop, etc.) may have on this initially proposed ORION-focused modernization effort.

It is important to note, that the ORION-related capabilities assessment and the vendor-supplied deliverables that PERS procured this past year have not been reviewed by an independent quality assurance vendor. That said, these deliverables are not without value, but were done pretty much in a vacuum from PERS's other modernization needs, and they do imply a presumption that the PERS modernization program should be initially focused on modernizing the ORION System, and that the overall modernization effort has been approved, and that the proposed 19 projects are ready for

execution funding by the Legislature. This is not an accurate assumption. Nothing but the initial pre-planning funding ($800,000) for the capabilities assessment of the ORION System has been approved by the Legislature to date. Significant planning efforts still need to be completed and presented to the Legislature for approval.

In addition, it is also important to note, that at present, PERS has not identified any mission-critical systems or applications that are in urgent (i.e., highly likely to fail with significant impacts) need of upgrade or replacement. In addition, no formal risk assessment(s) has been conducted by the agency on its full range of business and technology architectural assets. Why this is noteworthy is that the stabilization of the current information technology infrastructure will need to take priority over any modernization effort, should a major failure occur within the existing PERS technical and business environment.

Risks and Areas of Concern
A modernization effort of the scale, scope, complexity, costs, risks, and immediacy proposed by PERS has a highly elevated risk profile. Oregon PERS is rated by some as the second most complex retirement system in North America. An interruption to the payment of benefits would have a direct economic impact to the retirees/beneficiaries as well as the state's economy. Therefore, to minimize such risks, a PERS modernization effort should be undertaken only after extensive pre-planning and modernization planning efforts, including active stakeholder participation, and the services of an independent quality assurance vendor. Such planning efforts are expected to take several years to complete and must be done prior to beginning any targeted modernization effort (e.g. the proposed modernization of the ORION System and related business processes).

The Legislative Fiscal Office (LFO), after consultation with DAS-EIS, a review of backup documentation provided by PERS, a review of modernization best practices with the information technology field, and after a review of and lessons learned from previous State of Oregon modernization efforts, thinks that PERS has not done the necessary pre-planning, nor modernization planning that is required and commensurate with the significant complexity and the extensive risks of such a major undertaking. LFO has identified many specific areas of concern with the agency's modernization proposal for the ORION System and supporting business processes as well as its overall plans for implementing an enterprise modernization program. With this said, a PERS modernization effort is viewed as being a needed state investment, if undertaken properly.

A summary of some of our major questions and concerns follow: (1) The modernization problem and its scope are not clearly defined, nor has a risk analysis been done on the full scope of agency assets; (2) The overall modernization approach so far has been poorly defined, and disjointed; (3) There's no overall plan that can be used to tell where the initiative is at, or where it is going; (4) There is not significant evidence that the stage gate process for a complex modernization effort that contains both programs, and ultimately many projects is clearly defined, and only a single Stage Gate 1 endorsement for the program itself has been completed; (5) The oversight methodology for the modernization effort is not clearly defined; (6) PERS does not have a clearly defined modernization program, plan, or strategies to help guide its modernization efforts; (7) PERS has completed an $800,000 assessment of its ORION application system and business environment, but the lack of a risk analysis and prioritization process of all architectural areas may limit the value (or completeness) of this work; (8) There is no detailed business case, schedule, or budget for the overall modernization program; (9) There is a lack of direct external stakeholder involvement and participation; and (10) the level of sophistication of some of the projects that PERS is proposing as part of the ORION Modernization effort could exceed the internal

capabilities of an agency with less than a fully mature information technology services section; (11) the agency appears to be suffering from fatigue due to its recent SB 1049 effort and the impacts of the COVID-19 pandemic (12) The execution of back-to-back, large, complex programs is highly problematic for any organization; (13) PERS's SB 1049 success to date, may have imbued an overconfidence in the agency's ability to execute both the four biennia PERS Modernization effort and the remaining SB 1049 work (which won't be completed until sometime in mid-2024); and finally, (14) The complete modernization of the technical, business, financial, operational, data, desktop, staff resources, and security environment of PERS is significantly different from, and much more complex, costly, and high risk, than the implementation of SB 1049.

Pre-Planning Recommendation
LFO would underscore the importance of PERS undertaking a comprehensive modernization initiative; however, a four-biennium program of projects of this size, scope, complexity, cost, and risks needs to be done in a deliberative fashion, and in alignment with both the Stage Gate process and Project Management Body of Knowledge (PMBOK) standards. LFO's recommendation, which is being made in consultation with DAS-EIS, would allow PERS to progress through a three-phase multi-biennium approach in alignment with the Stage Gate process, and would require a controlled release of program and project funding. The proposed three-phase approach would include the following phases: (1) pre-modernization planning (Stage Gate 1 only); (2) modernization planning (Stage Gate 1 and 2); and (3) modernization execution and implementation (Stage Gate 1, 2, and 3). Based upon the concerns identified above, and the need to follow this best practice three phase approach, LFO has identified the need for the following funding and staffing to be approved to undertake the required foundational planning required in Phase #1 - Pre-Modernization Planning.

PHASE #1 PRE-MODERNIZATION (Program Stage Gate #1 only)	Key Actions & Deliverables	Positions/ FTE	Est. Cost
Program Establishment	Program Director, key staff, & team setup High-level 2022-23 schedule High-level Modernization Program roadmap(s)	6/2.75	$647,797
Program/Project Oversight	Stage Gate, Oversight, & Governance Approaches/Acquire Quality Assurance & Review Services	--	$250,000
Strategic Architectural Planning	Enterprise Architecture Plan & Roadmaps Business & Data Arch. Domain Definition Cloud Architecture Definition & Key Quality Reviews	--	$2,600,000
Development/Operations Lifecycle	Development and Operations Lifecycle Definition	--	$300,000
Total		6/2.75	$3,797,797

Recommendation: The Legislative Fiscal Office recommends that the Emergency Board increase Other Funds expenditure limitation by $3,797,797 and authorize the establishment of six limited duration positions (2.75 FTE) for the Public Employees Retirement System, the Core Retirement Systems Application Program, and the ORION Modernization Project.

Request: Increase Other Funds expenditure limitation by $4,490,000 to complete the comprehensive planning and design phase for the modernization of the Oregon Retirement Information Online Network (also known as ORION) and establish 19 positions (3.92 full-time equivalent).

Recommendation: Approve the request.

Discussion: The Oregon Retirement Information Online Network (also known as ORION) is the Public Employee Retirement System's (PERS) pension administrative system. ORION is a 16-year-old system, which is running on an outdated technology platform.

PERS initially requested to start the modernization planning process to replace ORION during the 2019-21 biennium; however, the Senate Bill 1049 (2019) Program, the Back-up Data Center project and the Production Data Center Migration (PDCM) project took precedence. PERS is in the final stages of the PDCM project, with the completion of the data and systems migration from the PERS data center in Tigard, Oregon to the State Data Center in Salem, Oregon. The Backup Data Center project remains on hold while resource constraints and network latency issues remain obstacles. The Senate Bill 1049 (2019) Program has completed four of the six projects and has an estimated completion date of April 2024.

PERS received $0.8 million Other Funds expenditure limitation in their 2021-23 Legislative Adopted Budget for the initial planning and assessment activities for modernizing ORION. PERS utilized the funding to obtain foundational documents that provided the following items:

- An assessment of the current ORION system limitations,

- A viable road map that illustrated a path to modernize the existing ORION system,

- An estimated project cost to modernize ORION,

- Identification of critical business needs, visions, goals, and objectives for the future architecture to support business capabilities that can be sustained over time, and

- Identification of resources needed to realize an agency Modernization Roadmap.

The request for an additional $4.5 million in Other Funds expenditure limitation for the 2021-23 biennium would allow PERS to engage in a comprehensive planning and design phase for modernizing PERS systems supporting a client service delivery model. Some of the key objectives with a new system design allow PERS to improve communications and transactions with PERS members and employers, address long-term technical debt issues, and eliminate as many manual processes used to administer benefits as possible. Technically, the resulting goal is to have a more flexible, scalable, and dynamic based system that is cost effective and works in a productive manner.

Included in the $4.5 million Other Funds expenditure limitation request, PERS is budgeting the following items they believe can be accomplished within the remainder of the 2021-23 biennium:

Other Funds Amount	Key component Descriptions
$865,000	Begin building the staffing for their modernization program team, which includes a phased approach to hiring 18 permanent positions and one limited duration position for a total of 3.92 FTE. • Two of the 18 permanent positions are anticipated to be hired in July 2022; a Program Manager to oversee the Modernization Program and an Operation Policy Analyst 3 to assist the new Program Manager in getting this phase of the modernization process moving. • One limited duration Human Resource 1 position would be hired before December 2022 to assist with the hiring of the remaining 16 permanent full-time positions. • The remaining 16 permanent full-time positions are expected to be hired between December 2022 and March 2023. An organizational chart illustrating where these positions will be specifically utilized is still in the planning and design phase.
Services to be delivered by Professional Contract Services	
$250,000	Define the future state architecture (blueprint for modernization).
$900,000	Architectural planning & design for a hybrid integration platform to connect services, systems, and applications supporting service delivery.
$800,000	Enhance DevOps capabilities—find ways to streamline software development, ways to increase developer productivity, methods to improve continuous delivery workflow to obtain better software faster.
$75,000	Independent Quality Management Services.
$250,000	Map current and future business processes to identify use cases to define and support the new modernization plan and design.
$450,000	Create a data management strategy, which includes an assessment of current state, future state, and provides recommendations allowing the Agency to manage data as a strategic asset.
$900,000	Plan and design for conceptual future solutions supporting Customer Relationship Management (CRM) to manage customer interactions and provide a better customer experience.
$4,490,000	**Total projects costs for planning and design phase of the modernization**

PERS would be required to work closely with the Department of Administrative Services, Enterprise Information Services and engage this comprehensive planning and design request through the Stage Gate and Oversight Process.

Legal Reference: Increase the Other Funds expenditure limitation established by chapter 145, section 1(6)(b), Oregon Laws 2021, for the Public Employees Retirement System, ORION Modernization Project by $4,490,000 for the 2021-23 biennium.

Public Employees Retirement System
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Oregon

Kate Brown, Governor

April 28, 2022

Senator Peter Courtney, Co-Chair
Representative Dan Rayfield, Co-Chair
Joint Emergency Board
900 Court Street
H-178 State Capitol
Salem, OR 97301

Dear Co-Chairs:

Please accept this letter as an agency request for Emergency Board action.

Nature of the Request

The Oregon Retirement Information Online Network (ORION) is PERS' mission critical pension administration system. ORION and jClarety, PERS' pension administration software, need to undergo significant modernization efforts that will ultimately allow PERS to administer benefits using a contemporary client service delivery model, reduce significant accumulated technical debt, and build a more flexible, scalable technical architecture that would allow PERS to administer benefits in a more cost-effective, productive and member-centric manner.

PERS is currently engaged in initial planning efforts related to modernization efforts, with an initial limitation of $800,000 established and expended through PERS' current Legislatively Adopted Budget (LAB). In order to continue with comprehensive planning and design efforts for the duration of this biennium, PERS requests $4,490,000 Other Fund limitation. PERS does not have sufficient Other Fund limitation to cover these costs in its operational budget.

Agency Action

PERS originally requested limitation to begin modernization planning efforts in the 2019-21 Governor's Recommended Budget. This request was set aside due to the passing of SB 1049 in the 2019 legislative session and the need for PERS to be fully engaged in SB 1049 implementation efforts. PERS then requested, in the 2021-2023 Governor's Recommended Budget $9,800,000 to begin modernization efforts. PERS was provided a $800,000 limitation to begin initial planning efforts in our LAB. These funds were expended by the agency and provided PERS with foundational documents including a Business Capabilities Assessment, Modernization Roadmap, Modernization Program Estimates and an As-Is technical architectural model.

While these foundational documents are very informative, PERS believes it is prudent and necessary to engage in a comprehensive planning and design phase. This phase would allow PERS the opportunity to more thoroughly prepare for a Modernization Program through targeted planning and design work. This would ensure our target architecture and technology solutions fully align with and enable our PERS modernization goals and vision. It would also allow PERS to begin staffing efforts to build out the Modernization Program, establish a formal governance framework including formal program and project governance plans and related reporting, engage with an independent Quality Assurance Service vendor, and progress through the Program and Project Stage Gating process. Engaging in this targeted planning and design work will, ultimately, reduce Program and Project risk in both the near and long-term.

A separate business case will be submitted as part of PERS' 2023-2025 Agency Request Budget that would fund initial modernization implementation work. Schedule and budget estimates will be refined and adjusted throughout the course of the program as final business and system requirements are fully articulated and the separate workstreams of the overall program evolve.

It is anticipated this will be a multi-biennium effort that will modernize how PERS redefines our client service delivery model in how we inform, interact, and transact with our members and employers, addresses significant long-term technical debt issues, reduces the amount of manual processes that PERS staff currently use to administer benefits and, ultimately, provides for a more flexible and scalable technology base that will allow PERS to administer benefits in a more cost-effective, productive manner.

Action Requested

PERS respectfully requests an increase in Other Funds limitation of $4,490,000 in the Core Retirement Systems Applications (CRSA) division, to continue the agency's modernization efforts. This limitation is requested in order to complete the comprehensive planning and design phase for the PERS Modernization Program without a significant gap in time between the initial planning phase just completed and the beginning of the 2023-2025 biennium. PERS received an initial limitation of $800,000 in package 102 under SB 5536. This request is an increase to section 1(6)(b) of SB 5536, which will fund the program for the remainder of the 2021-23 biennium. The funds will be used for the workstreams noted below. PERS will be addressing future funding needs in a policy package during the 2023 legislative session.

Build Program Team for Modernization (Staffing)	$	865,000
Define Future State Architecture	$	250,000
Architectural Planning & Design for Hybrid Integration Platform (HIP) .	$	900,000
Enhance DevOps Capabilities	$	800,000
Independent Quality Management Services	$	75,000
Map Business Processes & Identify Use Cases	$	250,000
Determine Data Analytics Strategy	$	450,000
Plan and Design for Conceptual Future Solutions (CRM)	$	900,000
TOTAL		$4,490,000

	POSITIONS	PERM	LD	FTE	TOTAL
PERSONAL SERVICES	19	18	1	3.92	865,000
SERVICES AND SUPPLIES					3,625,000
CAPITAL OUTLAY					0
TOTAL	19	18	1	3.92	4,490,000

Legislation Affected

SB 5536, Chapter 145, Section 1(6)(b)

Respectfully,

Kevin Olineck, Director
Public Employees Retirement System

Attachments:
Business Case for ORION Modernization Planning & Design

Business Case for
ORION Modernization- Planning and Design

Public Employees Retirement System (PERS)

Date: April 27, 2022
Version: 1.3

Authorizing Signatures

The person signing this section is attesting to reviewing and approving the business case as proposed.

This table to be completed by the submitting agency		
Agency Head and Executive Sponsor		
Kevin Olineck	(Date)	
	04/27/22	
Signature		
Agency Deputy Director and Business Co-Owner		
Yvette Elledge-Rhodes	(Date)	
	4/27/22	
Signature		
Agency Chief Information Officer (CIO) and Business Co-Owner		
Jordan Masanga	(Date)	
	4/27/2022	
Signature		
Business Analyst or Business Case Author		
Joli Whitney and Chris Stiles	(Date)	
Signature	4/27/22	
Signature	4/27/22	

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Executive Summary

PERS administers public employee benefit trusts that provide members with retirement benefits and services. PERS' customers include approximately 228,000 non-retired members, 157,000 retired members or beneficiaries, and over 900 public employers. PERS' strategic priorities align with the services needed by our stakeholders to ensure that we "pay the right person, the right benefit, at the right time."

PERS' Oregon Retirement Information Online Network (ORION) is mission-critical and jClarety, PERS' pension administration software, is an essential part of it. JClarety provides critical functions enabling the agency to provide pension administration and service to members, employers, and other stakeholders.

PERS is undergoing initial planning efforts to engage in a multi-biennia Modernization Program. There are six primary goals of the proposed Modernization Program:

TRANSFORM BUSINESS PROCESSES — Provide a digital self-service experience for both members and employers

AUTOMATE PROCESSES AND CALCULATIONS — Automate processes and calculations, where possible, to improve efficiency and reduce risk

ENGAGE MEMBERS IN THEIR RETIREMENT PLANNING AND EDUCATION

INTEGRATE LINES OF SERVICE — Incorporate all benefit plans and functionality into one integrated system, including online services, for a seamless experience for members, employers and staff

CREATE AN ADAPTABLE ENVIRONMENT — Build system on a platform which can be modified, in an efficient and cost-effective manner to reflect future needs and legislative changes

PROTECT MEMBER DATA — Ensure the confidentiality, integrity, availability and privacy of member and employer data are protected.

PERS received approval to implement the first phase of the ORION Modernization planning project through the approval of Policy Option Package (POP) 102 which increased Other Funds expenditure limitation by $800,000 on a one-time basis to begin planning for a Program to modernize the Oregon Retirement Information Online Network (ORION). PERS received Stage Gate 1 approval on September 14, 2021, for planning needs related to the ORION system and associated business support, to further understand the scope of an agency modernization.

PERS initiated procurement activities and intended to return to the Emergency Board in December 2021 with these planning needs completed. Ultimately, contracting took longer than planned and an agreement was reached with Accenture in late October. Accenture informed PERS that there was not enough time for completion of all the requested deliverables to meet the Emergency Board's document submission deadline. PERS continued to develop a Business Case for submission for the June Emergency Board as it was recognized there would still be considerable planning work needed for the remainder of the biennium. Following discussions with our legislative fiscal analysts after reviewing the original Business Case draft, PERS decided to defer submission of a Business Case,

incorporate the feedback received from LFO, await the outcomes of the Accenture engagement, and submit a refined Business Case for the next meeting of the Emergency Board. Following the Accenture engagement, PERS received a Business Capabilities Assessment, Modernization Roadmap, and Modernization Program Estimates. These documents are included in the appendix of this business case. In consultation with Accenture, PERS realized that more planning for modernization as a "Planning and Design" phase was required to fully prepare the agency to initiate a Modernization Program for the 2023 legislative session.

The ORION Modernization - Planning and Design Business Case incorporates the feedback received from LFO, CFO and EIS; the outcomes of our engagement with Accenture; meetings and discussions about Modernization efforts with Oregon Department of Employment, Oregon Public Utilities Commission; and other state pension organizations including Teacher Retirement System of Texas, Michigan Office of Retirement Services, and the Pension Benefit Guaranty Corporation.

A separate Business Case, requesting that a PERS Modernization Program will be developed and submitted and defines the initial phase of development activities, will form part of the Agency's Request Budget 2023-2025.

PERS considered the following alternatives in this request:
1. Status Quo/Do nothing
2. Establish Business Process Mapping and Data Definition Workgroups
3. Initiate Comprehensive Planning and Design Activities

The recommended solution, Initiate Comprehensive Planning and Design Activities, allows PERS the opportunity to thoughtfully prepare for a Modernization Program ensuring our target architecture and technology solutions align with and enable our business strategies.

|	POSITIONS	PERM	LD	FTE	TOTAL
PERSONAL SERVICES	19	18	1	3.92	865,000
SERVICES AND SUPPLIES					3,625,000
CAPITAL OUTLAY					0
TOTAL	19	18	1	3.92	4,490,000

Overview

PERS received approval to implement the first phase of the ORION Modernization planning project through the approval of Policy Option Package (POP) 102 in PERS LAB, which increased other funds expenditure limitation by $800,000 on a one-time basis to begin planning for a Program to modernize the Oregon Retirement Information Online Network (ORION). PERS received Stage Gate 1 approval on September 14, 2021, for planning needs related to the ORION system and associated business support, to further understand the scope of an agency modernization. PERS contracted for services with public pension IT strategists to work under the direction of PERS to:

- Identify critical business needs, vision, goals, and objectives for the future
- Determine the next-generation architecture that can support viable business capabilities that can be sustained over time; and
- Identify resources needed for realizing the initial project(s) of the Modernization Roadmap.

PERS engaged Accenture for these services in November 2021. Accenture introduced a Logical Operating Model to organize the enterprise business operations into a process-based structure for the purposes of assessing the current state capabilities and the potential improvements in capabilities which could be realized with the benefit of modernization.
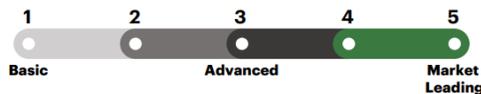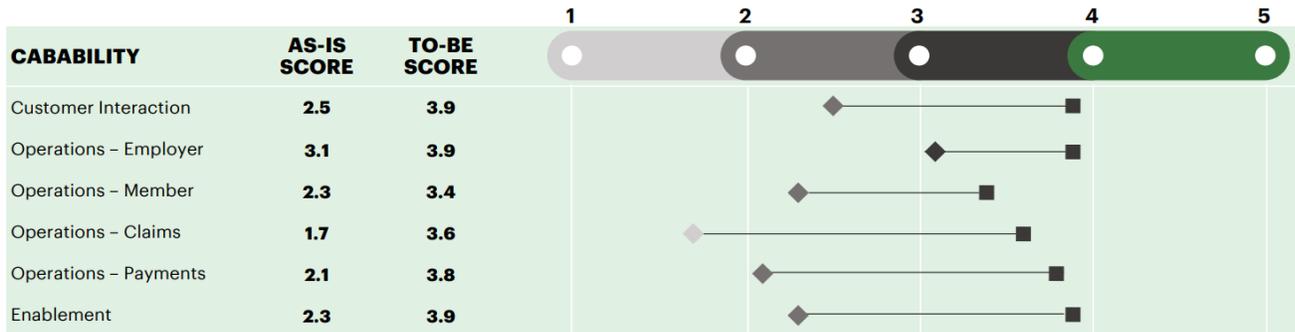
PERS Logical Operating Model
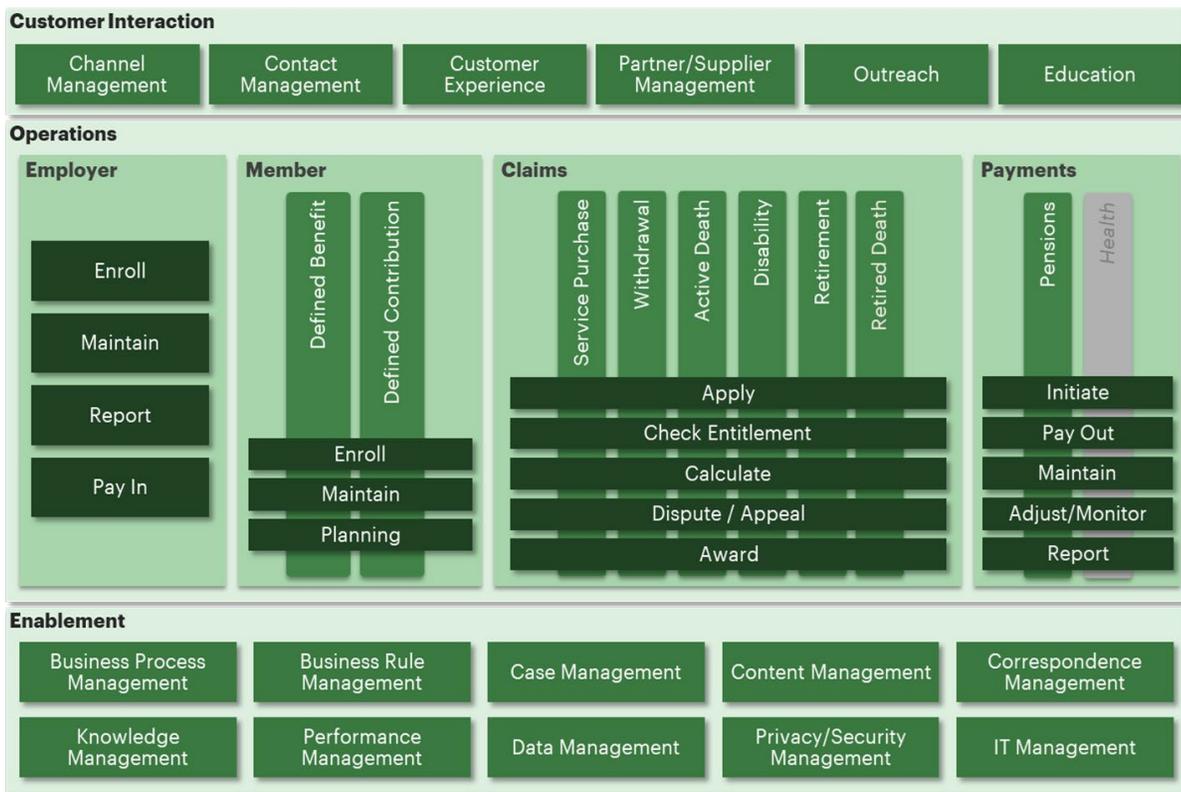
This operating model was tailored to fit PERS' operations to benchmark PERS capabilities within Accenture's Public Retirement High Performance Capability Assessment Model. This proprietary model developed specifically for retirement systems evaluates an organization using more than 120 criteria over 33 business areas. The assessment was conducted at 16 workshops over the course of three weeks in December 2021. Sixty-three PERS staff were involved in these workshops where Accenture led focused discussions to capture details on both current processes as well as to identify pain points within these processes. Staff were also engaged to share their thoughts regarding future improvements to processes which contributed to the overall future state model.

EXECUTIVE SUMMARY

In general, PERS is a high-functioning pension administration organization. In several areas, PERS ranked higher than 'Basic,' however there are various improvements PERS should consider to achieve its organizational goals to better serve its members and improve efficiency across the organization.

CABABILITY	AS-IS SCORE	TO-BE SCORE	1	2	3	4	5
Customer Interaction	2.5	3.9					
Operations – Employer	3.1	3.9					
Operations – Member	2.3	3.4					
Operations – Claims	1.7	3.6					
Operations – Payments	2.1	3.8					
Enablement	2.3	3.9					

1 Basic   2   3 Advanced   4   5 Market Leading

6

Following the Business Capabilities Assessment, Accenture collaboratively developed a Modernization Roadmap to provide PERS a path to achieve the desired future state. Key opportunities for improvement were identified in the following areas:

- Improving claims processes and interaction with members through increased **Member-Self Service c**apabilities

- Creating a One-Stop-Shop for member data, documents, communications and interactions with a **CRM** System

- Enhancing operational efficiency, performance management, reporting, and insights using **Data Analytics**

- Consolidating and streamlining internal policies, procedures, and training materials into a centralized **Knowledge Management** System

- Complete the project to **Insource IAP** to address a fragmented member experience, segmented member data, and manual workarounds (next 2 slides)

Accenture also developed an implementation plan designed in tactical phases to quickly deliver value for stakeholders while minimizing impact on staff and operations.

The recommended first stage proposed on the Modernization Roadmap is a comprehensive Planning and Design stage. The key focus of the activities included in the Planning and Design stage prepares the organization and sets the foundation for a future Modernization Program. The Modernization Program request will be presented in a business case for consideration in the 2023 Legislative Session as part of our Agency Request Budget. This business case seeks authorization to add scope to our

ORION Modernization Planning project to continue to plan and design the future of PERS for the remainder of the 2021-2023 biennium.

Background

PERS administers public employee benefit trusts that provide members with retirement benefits and services. PERS' customers include approximately 228,000 non-retired members, 157,000 retired members or beneficiaries, and over 900 public employers. PERS' strategic priorities align the services needed by our customers to ensure that we "pay the right person, the right benefit, at the right time."

PERS' efforts to modernize are driven not only by internal recognition of the need to modernize but also by member and employer feedback. Additionally, as an Executive Branch agency, PERS is guided by direction coming from both the Governor's Office as well as DAS EIS.

Strategy Two, of the *Governor's Action Plan for IT* states: "Optimize service delivery to the public and internally by modernizing agency-specific and cross-agency systems and creating a statewide cloud strategy." A tactic within that strategy is to: "Require agencies to develop IT modernization plans: Each agency must work with OSCIO and the new Chief Business Technology Officer in their agency grouping to develop multi-year IT modernization plans for retiring legacy systems and improving service delivery."

As is noted in the DAS EIS *Modernization Playbook: An Agency Guide to Digital Transformation – version 1.0*: "Modernization offers the potential to fundamentally transform how state agencies deliver services to the people of Oregon. It encompasses more than planning, assessment, and specific application migrations. It represents a change in culture, a new way of doing business, and a means to ensure alignment between business and IT leadership. In short, modernization is not an IT initiative, rather it is an opportunity to reimagine how the state delivers services to the people of Oregon. This playbook supports the objectives outlined in the *Governor's Action Plan for IT* and the *EIS Strategic Framework 2020-2023*. Additionally, it provides guiding principles to align agency modernization programs to a common vision for modernization and digital transformation."

The Modernization Vision within the Playbook states: "Optimizing essential services that the people of Oregon rely on through resilient, adaptive, secure and customer-centered digital transformation."

Guided by both the *Governor's Action Plan for IT* and the Modernization Playbook and Vision, PERS has adopted the following Modernization Vision:

"As PERS emerges from its 75th year as an agency, we recognize that we must re-imagine how we evolve and deploy our business capabilities via our people, processes, and technologies. This evolution is necessary to meet our member and employer needs into the future. Members and employers have a desire for more personalized and updated service delivery such that they can be informed, interact, and transact with PERS at the time of their choosing using the channel of their choosing. This re-imagining of our service delivery model will be accomplished, in alignment with our Strategic Plan, via an overarching Modernization program that, ultimately, ensures that we are meeting those future stakeholder needs in the most effective and efficient means to do so."

PERS' Oregon Retirement Information Online Network (ORION) is mission-critical and jClarety, PERS' pension administration software, is an essential part of it. JClarety provides critical functions enabling the agency to provide pension administration and service to members, employers, and other stakeholders.

jClarety was implemented more than 18 years ago and it was built to administer PERS Tier One, Tier Two and OPSRP Pension Plan functionality. jClarety consists of many sub-systems:

- jClarety (core line of business application)
- Contact Management (custom built-in)
- Correspondence Management – Forms/Letters generation (custom built-in)
- Online Member Self-Service (custom built-in)
- Online Member Self-Service Security (custom built-in)
- Hyperion Reporting Technology (out of support technology)

jClarety's strength is the core line of business functionality and it still does this well - even though PERS is rated as one of the most complex pension administrations systems in the country. It has a strong extendable and flexible application architecture, and was tailor made to administer complex business rules such as PERS Tier One, Tier Two and OPSRP functionality. The core jClarety application is built on Java and SQL Server, and it does not have any vendor specific code. These technologies are current and are compatible in a Cloud environment. It is not at risk of end-of-life.

Business growth, complexity and plan changes have increased many fold in the last 15-20 years and custom-built, non-line of business capabilities (i.e., Contact Management, Correspondence Management, Identity and Access Management for OMS, Reports by Brio/Hyperion) are outdated and have not kept up with the pace of the changing technical landscape.

In addition to the custom-built jClarety sub-systems, PERS also utilizes a Production Batch System that is slowly deprecating. The batch system is 1980's technology that shuts-down jClarety every day at 10:00pm through 6:00am so that batch jobs can run. This prevents users from accessing their Online Member Services during these times. Also, the batch job uses a scheduler that have dependencies, so if one job fails, the rest of the remaining jobs cannot run. As result, there is always an IT resource that is on-call to resolve job failures to ensure jClarety is back online by 6:00am.

Problem and Opportunity Definition
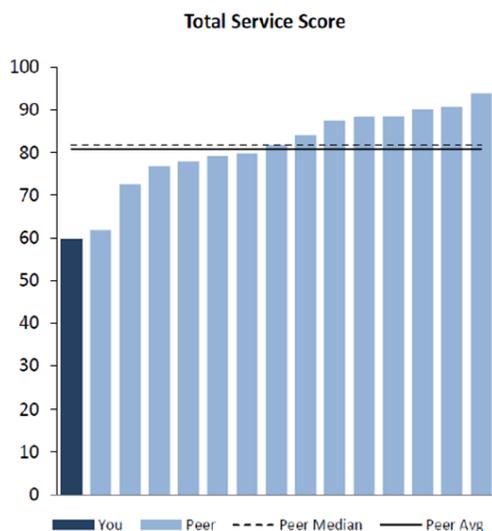
Current State

Since 2005, PERS has administered our benefit programs on ORION and jClarety, integrated with other compatible components in a system architecture that was designed over twenty years ago. During the implementation of ORION, new provisions to the PERS plan were made (House Bill 2020 in August 2003) which established the Individual Account Program (IAP). A decision was made at the time to outsource this new provision to a Third-Party Administrator (TPA). This mitigated the risk this new system change had to the complex ORION implementation project which was in progress. IAP is still managed by the TPA to this day causing a myriad of challenges, delays, and manual handoffs for PERS to manage this component of members' benefits given that approximately 80% of all IAP processes are manual in nature.

Data volume and transactions have increased, while member and employer business needs have evolved; accordingly, ORION's limitations, flaws, and inefficiencies have become more apparent. These limitations have had a direct impact to our members and stakeholders, including:

- Missing pension functionality for certain aspects of the OPSRP Pension Program;
- Reduced system availability as batch processes and other maintenance increasingly requires taking the system off-line;
- When providing service to members, staff navigate multiple systems or screens to fully understand a member's situation:
  - Contacts with beneficiaries and third parties – power of attorney, medical doctors – are not explicitly tracked except with textual notes under the member's account;

- o A complete snapshot of member's needs is unavailable because information is stored in; separate systems: jClarety, FileNet, EPSA, Voya, and BHS; and
  - o Member interactions with third party vendors are unknown and unreported to PERS.
- Inflexible system update capabilities and enhancement of tools which leads to significant time spent in implementation efforts including both development and testing;
- Lack of understanding and/or documentation of current business processes and underlying rules
- Difficulty in maintaining, sustaining, and enhancing system architecture and technologies; and
- Difficulty in migrating ORION from the PERS Data Center to the SDC (managed host) or Cloud solutions due to tightly coupled, outdated technology that is sensitive to updates and has dependency on other services.

To illustrate the impact of current state operations on PERS members, an excerpt from a recent CEM Benchmarking Report shows PERS received a Total Service Score of 60 compared to 15 peer organizations. This was the lowest service score of the group. In the past seven years, PERS' service score has only increased by three points, from 58 to 60.

Total Service Score

Service is defined from a member's perspective. Higher service means more channels, faster turnaround times, more availability, more choice, better content and higher quality.

Higher service is not necessarily cost-effective. For example, the ability to answer the telephone 24 hours a day is higher service, but not cost effective.

Service Scores by Activity

| Activity	Weight	You	Peer Median
1. Member Transactions			
Pension Payments	10.0%	100	100
Pension Inceptions	7.4%	9	92
Refunds, Withdrawals, and Transfers-out	1.3%	5	95
Purchases and Transfers-in	3.1%	70	88
Disability	3.8%	82	86
2. Member Communication			
Call Center	21.0%	41	77
1-on-1 Counseling	7.4%	68	90
Member Presentations	6.5%	100	100
Written Pension Estimates	4.7%	25	93
Mass Communication			
Website	21.3%	77	82
News and Targeted Communication	2.8%	68	81
Member statements	4.7%	57	88
3. Other			
Member Experience Surveying	5.0%	10	35
Disaster Recovery	1.0%	74	99
Weighted Total Service Score	100%	60	82

Based on CEM service score data, the peer average time to answer a call is 266 seconds, whereas PERS currently averages 984 seconds to answer a call due to a lack of modern telephony and a CRM system. As noted above, our Call Center service score was 41 as compared to a peer average of 77. Our CRM capability score was 31, whereas the peer median was 90.

Our service score for pension inceptions was 9 compared to a peer median of 92 as our time to set up an initial pension payment is significantly slower than our peers. On average, we pay only 5.8% of members without an interruption of income, whereas the peer average was 87.7%.

From a modernization perspective, CEM also shows that traditional (i.e., paper-based transactions) are decreasing and digital transactions are increasing. Our alternative channel service score was 19,

whereas the peer median was 100. To this point, sixty percent of our CEM peer group have enabled online retirement application processing.

An added concern regarding current service levels is the sheer volume of members currently eligible to retire. An event which triggers a surge of retirement applications cannot be supported within our current staffing and systems. The following graph illustrates the distribution of members which are eligible to retire as of June 30, 2021. This is nearly 30% of PERS' members and is equivalent to nearly nine times the annual number of new retirements processed.

66,691 MEMBERS ELIGIBLE TO RETIRE BY AGE OR SERVICE
(29.2% of all active/inactive members)
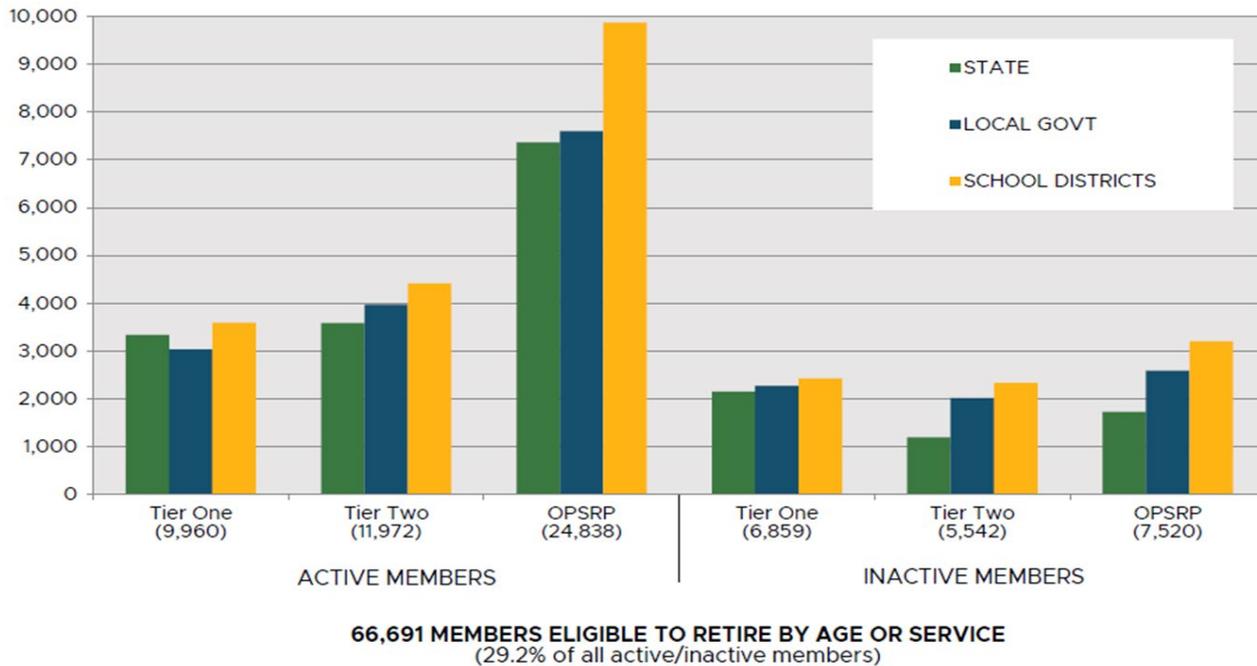
Recent changes to PERS' Plans continue to add complexity to ORION, specifically SB 1049 from the 2019-21 legislative session (Member Redirect, Member Choice, Work After Retirement, Salary Limits and Employer Programs). Implementing these significant changes to an already aging and quickly deprecating system, and on an architecture that is not conducive to change, added further burden maintaining ORION, which directly affects our ability to provide adequate services to our members and employers. Regardless of who they are, all agency stakeholders need PERS, the agency, to be more efficient, effective, and focused.
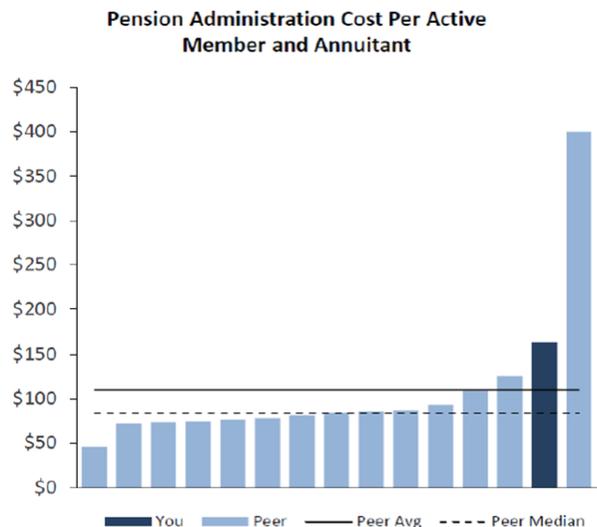
The complexity of PERS is reinforced by the CEM Benchmarking Report. In this case, a higher score was not reflective of a positive position. PERS ranked the second most complex amongst peer pension plans prior to SB 1049, with our complexity score further increasing because of SB 1049.

Total Complexity

Legend: You | Peer | All | ---- Peer Median | —— All Median
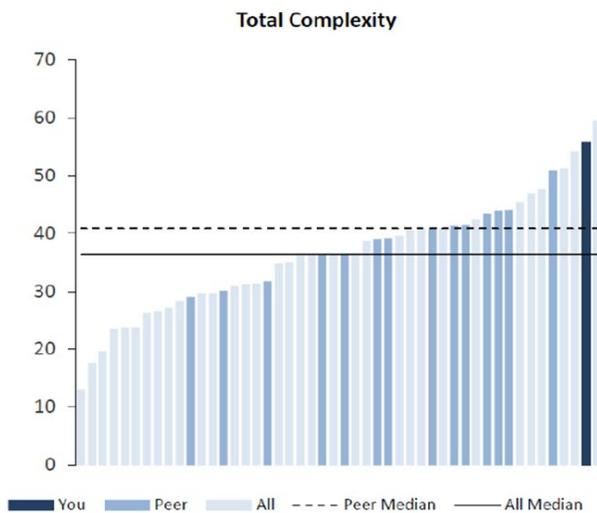
Complexity Score by Cause
(0 least - 100 most)

Cause	You	Peer Avg
Pension Payment Options	46	39
Customization Choices	26	14
Multiple Plan Types and Overlays	75	32
Multiple Benefit Formula	70	52
External Reciprocity	0	31
COLA Rules	57	31
Contribution Rates	64	38
Variable Compensation	100	81
Service Credit Rules	48	46
Divorce Rules	100	60
Purchase Rules	67	59
Refund Rules	24	43
Disability Rules	83	66
Total Complexity	56	40

Your plan complexity score increased from 54 to 56 as a result of SB 1049.

The cost per member of administering PERS is much higher than our peer group, due to the lack of automated processes and associated lower comparable productivity of staff due to the excessive use of manual processes.

Pension Administration Cost Per Active Member and Annuitant

Legend: You | Peer | —— Peer Avg | ---- Peer Median

Category	$000s You	$ per Active Member and Annuitant You	$ per Active Member and Annuitant Peer Avg
Front office			
Member Transactions	4,969	15	16
Member Communication	6,636	20	20
Collections & Data Maintenance	5,738	17	7
Governance and support			
Governance and Financial Control	2,504	7	8
Major Projects	10,677	32	8
Information Technology	13,143	39	27
Building	1,174	3	6
HR	845	3	3
Actuarial	809	2	1
Legal	2,063	6	5
Audit	1,205	4	4
Other Support Services	4,822	14	4
Total Pension Administration	54,584	163	110

Your total pension administration cost was $54.6 million. This excludes the fully-attributed cost of administering healthcare, and optional and third-party administered benefits of $15.6 million.

CEM data shows that PERS has 5.6 FTE per 10,000 members which is 48% above the peer average of 3.8. PERS complexity and associated costs due to manual processes to perform calculations shows that our refunds, withdrawals, and transfer-out costs per transaction was $141.49, which was $105.68 per transaction above the peer median of $35.81. PERS efforts to track money and data from employers cost $18.91 per active member which was $15.01 above the peer median of $3.90. Overall, PERS total pension administration cost is $163 per active member, which is $53 above the peer average of $110 per member.

Opportunities

The lack of a fully developed and integrated system, due to successive legislative changes, fabricated upon an outdated architecture, has led to the need to take immediate steps towards modernizing both existing processes and supporting technologies. PERS needs to do more than just address the underlying technical debt that has accumulated over these past few decades if it is to continue to function appropriately. PERS needs to modernize.

As we look to the future and assess how to provide our core services, we recognize that we must be able to meet our members' desire for personalized and updated service delivery and be flexible and adaptable to changing needs and requirements. Engaging and supporting our members in making informed retirement decisions engenders a broader role for PERS as a retirement education and planning resource. To be that resource, we must support members by providing the information and easy-to-use tools to track their retirement benefits. We want to engage members throughout their careers, so they are better prepared for retirement while providing members with tools that assist them in journey at different life and career stages.

We also would like to take advantage of opportunities to improve how we share data and interact with our partners, particularly employers, while managing access to protect data, ensure confidentiality, and respond to security threats. Our ability to make these improvements, as well as the ability to sustain our current services while making changes to our system based on policy or legislative changes, is significantly constrained by our current aging tools and technology.

Global trends in pension administration identified by CEM include:

A customer experience focus:
- Organizing communication, service, work and staff by customer journeys. Collection of satisfaction and effort metrics by journey as well as channel
- More segmentation, data mining, focus groups, targeted messaging, personas, branding

Improved cost effectiveness:
- Improving processes through business process re-engineering
- Straight through processing
- Maximizing online transactions, eliminating paper
- Belief that online is the highest service channel if done correctly

The risk to both PERS the agency as well as PERS the System are substantial given the aged administration systems exacerbated by the complexity of the overall legislative framework. As of December 2021, the PERS System had assets under management of approximately $100 billion. As per the 2021 Annual Comprehensive Financial Report, PERS the agency is responsible for administering seven distinct trusts that make up PERS, the System. On an annual basis, PERS accounts for approximately $2.3 billion in employer and member contributions and $5.3 billion in payments, with most of these payments made monthly to our 157,000 retirees. This cashflow does not include investment gains or losses.

Recognition of these risks were identified by legislators during discussions, which ultimately led to SB 1049 in the 2019 legislative session. Senator Betsy Johnson, in a Capitol Construction Committee meeting, asked PERS Director Olineck "if PERS has reached a "legislative fatigue wall" where our systems and processes are not able to keep up with legislative directives". The response by Director Olineck was: "the simple answer is, if we're not there, we are very close to it." Senator Courtney then asked the Director to respond in writing to elaborate more on his answer (letter attached). The response letter goes on to state: "While the agency has been able to continue to administer the programs it is responsible for, from an enterprise risk management perspective, there is a risk that any future changes to the plan that aren't given the appropriate time and resources for

implementation could negatively impact the agency and its ability to function in a cost effective, efficient and risk-mitigated fashion."

As noted above, the implementation of SB 1049, added yet another layer of complexity to an already complex system while delaying the agency's desire to address the deepening technical debt and risk of system failure. Due to the complexity of the changes required as well as the monolithic architecture of the system made implementation efforts both costly and time-consuming. To put this into context, SB 1049 will ultimately take five years to implement with $62 million in external costs. As of March 2021, PERS had consumed additional internal resources on SB 1049 efforts with an additional cost of $7.2 million.

Simply stated, PERS has reached the point where it is incumbent upon all stakeholders to support PERS modernization efforts before the current technical infrastructure can no longer support ongoing business and, potentially, impact income continuity for our members.

Scope of Request

Development work is explicitly **out** of scope for this request.

In line with the Accenture Modernization Roadmap, PERS requests to continue with comprehensive planning in preparation to establish a full Modernization Program as part of our 2023-2025 ARB. While we look to design the blueprints for our future, we know that many of our goals cannot be realized without foundational pieces in place. We recognize addressing all gaps and pain points in our current processes will not be achieved quickly. This will be a multi-phase, multi-biennia process to fully achieve a comprehensive solution to our challenges.

By engaging in comprehensive and detailed planning now, PERS can focus on delivering member facing improvements earlier in the future. This will provide continued momentum for the existing planning project team and enable a future Modernization Program to quickly provide value to PERS members, employers, and staff.

The Accenture Modernization Roadmap was evaluated by the PERS Enterprise Architecture Team (PEAT) to identify any constraints or concerns from a technical architecture perspective and to provide feedback with respect to impacts to the remaining activities in the SB 1049 Implementation Program. This feedback provided a refined view of the sequencing of future projects. In line with the Accenture Modernization Roadmap, which was a primary deliverable in the first phase of planning, PERS seeks support to focus Planning and Design efforts in the following areas:

Address Critical Business Needs
Identification and documentation of our critical business needs, alignment of goals and visioning for the future

- Map Business Processes and Identify Use Cases
  - Several business processes of our primary benefits administration functions are inconsistently documented or are completely undocumented or not well understood.
  - This package will engage a consultant to work with staff, evaluate our needs, define standards, and deliver templates for future business process documentation efforts. The first area of focus will be areas related to the CRM. The process flows will be "swim lane" documents with a lane for the modernized system, each PERS department, and outside entities. The focus will be to redesign the business functions from the member and retiree centric viewpoint by evaluating and improving the process from an outside-in perspective.
  - While the process flows are being redesigned, the project team will work to capture system requirements as user stories, written in a standardized way, that lends itself to an agile software development approach.

- The deliverables from this effort will be
  - Business Process Map Standards and Recommended Best Practices
  - Accepted Business Process Map Template
  - Skill Assessment and Staff Training
  - CRM User Stories
    - o The cost estimate for this budget request is: $250,000

- Determine Data and Analytics Strategy
  - Responsibility for member data is shared between PERS, Employers and Members. Data is the cornerstone to PERS' mission to "pay the right person the right benefit at the right time." Good, reliable, and high-quality data can be compromised by many factors including but not limited to; changes in determinations of service credit, contributions, and other key retirement data elements over a member's career; changes in employer reporting and recordkeeping systems, as well as retroactive changes to member data by employers; and changes in technology. All these drivers behind the quality of this data can influence said data to the point of it being incomplete, inconsistent and at times, even missing. Because of these existing data issues, adverse impacts can occur such as misinformed member retirement decisions, increased workload for PERS/employer staff and financial impacts to both members and employers.
  - There are opportunities to improve this data journey which would reap multiple benefits- more efficient processing of retirement applications through automation and reduction of time-consuming manual data validations. For example. PERS has an entire team dedicated to manually validating all member accounts. Approximately 25% of all retirement applications require manual data adjustments. By increasing field-level data validations and improving or making available new tools for staff to work collaboratively with employers to resolve errors, significant time and effort spent cleaning member data at retirement would be saved. Additionally, building process improvements or exploring new tools for auditing member accounts and data would allow PERS to be more connected with current members and provide more opportunities to engage through multiple channels.
  - This investment will build a workgroup with data specialists to identify business pain points and recommend a data management strategy. This team will develop business requirements to help identify possible options and draft a future RFP to acquire and implement a technical solution to resolve data challenges.
    - o The cost estimate for this budget request is: $450,000

Architectural Assessment
Define the future state and determine next-generation architecture can support viable business capabilities and will be sustained over time

- Define Future State Architecture
  - Future state architecture is the "blueprint" for modernization. Effort is required to determine "what" is needed to provide capabilities to the business and to our members, as well as "how" with solutions that align with agency strategies and industry trends. The future state architecture will be built with TOGAF (The Open Group Architecture Framework), an industry standard framework. The PERS Enterprise Architect Team (PEAT) is responsible for defining the future state architecture, working closely with the line-of-business stakeholders and Information Services Division (ISD). The PEAT will utilize Accenture's Capability Assessment and Roadmap as the basis for the future state architecture for modernization.
  - As the roadmap to the future is planned, all available options will need to be evaluated for feasibility and mapped to ensure the technical solutions will integrate with existing various components in the expected manner and optimize systems for future efficiencies
  - PERS lacks the in-house architectural resources to fully evaluate solutions from a jClarety perspective. This effort will augment the team with experienced resources with the necessary knowledge base to help develop informed recommendations for decision makers.

- Within the TOGAF framework, there are specific domains that need to be defined based on the outcomes of CAM and Modernization Roadmap. The Future State Architecture will deliver the following models:
    - Business Reference Model (BRM)
    - Information Systems Reference Model (ISRM)
    - Technology Reference Model (TRM)
    - Security Reference Model (SRM)
    - The cost estimate for this budget request is: $250,000

- Architecture Planning and Design for Hybrid Integration Platform (HIP)
    - According to Gartner: "The Hybrid Integration Platform (HIP) is an architectural framework that defines integration and governance capabilities and enables differently skilled personas to tackle multiple integration use cases across hybrid, multi-cloud setups. A HIP implementation typically consists of an assembly of diverse integration tools, from one or more providers, which are managed as a cohesive, federated, and integrated whole, typically by an integration strategy empowerment team." Accenture has stated that HIP is strategic and core to Modernization, a necessary means to extend to the Cloud and to transition away from Customized to Configurable solutions. As PERS continues to pursue digital and composable business initiatives, the HIP becomes more important to address the integration of growing complexity and quantity of solutions, data, and ecosystems.
    - In this early phase of Planning and Design, the work planned will provide data and understanding of the architecture needed to support HIP for security, API's, web and data services, and governance as the underpinning foundation for Modernization.
    - The PEAT and architect contractors will identify various real-world use cases between business and IT, establish an environment in the Cloud, and initiate a Proof-Of-Concept (POC) with tangible and measurable outcomes.
    - As result, the POC will provide PERS with the information and requirements it will need to develop and post an RFP to acquire and implement the desired solution. This investment will produce a validation report of real-world Use Cases in the HIP to ensure that the technology can support the business capabilities and modernization roadmap. This effort will also provide a rough order of magnitude of the cost for acquiring and implementing a HIP solution for Modernization.
        - The cost estimation for this budget request is: $900,000.

- Plan and Design for Conceptual Future Solutions (CRM)
    - Today, PERS is utilizing numerous disparate applications, tools, and systems to capture and track member information that is very difficult to manage, error-prone, inefficient and ineffective. This results in poor or negative customer service outcomes and delayed delivery of services. PERS recognizes that Customer Relationship Management (CRM) is one of the most important and vital business capabilities for Modernization but does not have the data developed to create a Request for Information or Request for Proposal.
    - In this early phase of Planning and Design, the work planned will provide data and understanding of the architecture needed to support CRM from both business and IT standpoints. As a benefit for business, establishing a Proof-Of-Concept would assess and validate business needs and expectations, and as a benefit to IT, it would ensure CRM communication between applications, databases and security via the HIP would meet performance and architectural standards.
    - The PEAT and architect contractors will identify various real-world use cases between business and IT, establish an environment in the Cloud, and initiate a Proof-Of-Concept (POC) with tangible and measurable outcomes. As result, the POC will provide PERS with the information and requirements it will need to develop and post an RFP to acquire and implement the desired solution.
    - The deliverables of this effort will result in a validation report of real-world Use Cases in the CRM to ensure that the technology can support the business capabilities and modernization

roadmap. The data collected will also provide a rough order of magnitude of the cost for acquiring and implementing a CRM solution for Modernization.

- o The cost estimate for this budget request is: $900,000.

Build the Foundation
Identify resources and skills needed for realizing Modernization through adding new positions and up-leveling skills of current staff to prepare for implementation of modern technologies

- Build project team for Modernization
  - The Modernization Program will be a new team established within our strategic and operational planning section to provide strategic leadership and direct the future of the modernization program. The leader of this team should be engaged as early as possible to build the foundation for this new program.
  - This request represents the staffing package for the initiation of a new program. The first key roles to be filled are the Modernization Program Director as well as the Member Product Owner. Following this recruitment, other roles will be filled in priority order in a phased approach. Several roles in the second wave are those who will help to develop business requirements for future modernization efforts. We anticipate it will take time to fill these positions and want to provide an opportunity to integrate new staff into the complex world of PERS.
    - o The cost estimate for this budget request is: $865,000

- Enhance Dev Ops Team Capabilities
  - PERS initiated DevOps a few years ago but have primarily focused on building the DevOps pipeline with jClarety on-premises processes. Even then, DevOps at PERS have only scratched the surface by automating legacy tools that have been in place for the past 15 years. These legacy tools are NOT compatible with a hybrid cloud model that is planned for modernization. Without a hybrid-based DevOps, modernization would be severely hindered and would take two-or-three times longer.
  - This effort to enhance DevOps capabilities will allow the Information Services Division to migrate to modern tools and automate a hybrid pipeline that includes both on-premises and cloud continuous integration (CI) and continuous deployment (CD) processes. This capability is required to support Modernization during the implementation, as well as sustaining post-modernization.
  - PERS will engage with a consultant to lead phased workshops for the DevOps team to learn
    - o Phase 1 – Agility and DevOps Discovery & Immersion- The DevOps team will learn the benefits of agile and DevOps best practices applied to cloud-first architecture and modern data analytics and insight.
      The benefits of agile processes and DevOps best practices can be applied to cloud-first architecture and modern data analytics and insight.
    - o Phase 2 – Pilot Toolchain and DevOps Process Design & Implementation - In this phase, the consultant will develop a DevOps Toolchain Reference Architecture overlaying current state tooling on top of required functionality to determine overlaps and gaps.
      The benefits of this implementation roadmap will enable PERS DevOps team to fine-tune their tooling and increase efficiency through training and reduced cost.
    - o Phase 3 – Platform Maturity and Operating Model - In this phase, the consultant will help PERS DevOps team build an Operating Model to enable successful delivery of production applications at scale.
      The outcomes from Phases 1 & 2 sets-up Phase 3 for operationalizing DevOps for modernization.
    - o Phase 4 – DevOps Dojos and Developer Onboarding - In this final phase, the consultant will utilize Dojos for accelerated training by using hyper-sprints and embedded coaching. The outcomes of this phase help the PERS DevOps team gain hands-on

experience with modern tools and concepts – merging agile practices and DevOps – on to pilot projects for modernization.

- o The cost estimate for this budget request is: $800,000

- Independent Quality Management Services
  - PERS will procure and engage an independent quality management services vendor to conduct an initial risk assessment of the program and provide a report evaluating the agency's readiness to engage in the Stage Gate process for a future Modernization Program.
    - o The cost estimate for this service is $75,000

Below is a summary of the elements contained within this request

ORION Modernization Planning and Design Package	
Architectural Planning & Design for Hybrid Integration Platform (HIP)	$ 900,000
Build Program Team for Modernization (Staffing)	$ 865,000
Define Future State Architecture	$ 250,000
Determine Data & Analytics Strategy	$ 450,000
Enhance DevOps Team Capabilities	$ 800,000
Independent Quality Management Services (iQMS)	$ 75,000
Map Business Processes & Identify Use Cases	$ 250,000
Plan and Design for Conceptual Future Solution (CRM)	$ 900,000
TOTAL	**$ 4,490,000**

The following is the timeline for the Planning and Design work as it fits within the PERS Modernization Roadmap. The PERS Modernization Program request will be submitted as a separate Business Case that defines the initial phase of development activities will form part of the Agency's Request Budget 2023-2025.
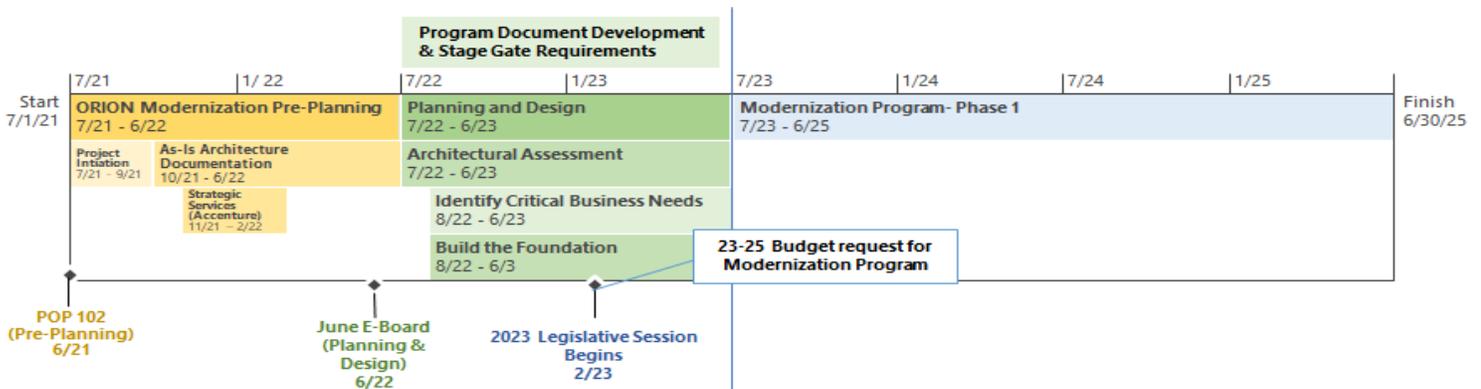
Measurable Business Benefits

**Anticipated business benefits for planning and design activities**
- Alignment on technologies to be implemented and the anticipated impact on current systems
- Transparent decision making for stakeholders
- Risk Mitigation
- Increased accuracy in future budget requests
- Opportunity for business goals to be factored in while planning new technologies
- Identify and establish clear process ownership
- Reduction of threat of identity risks
- Reduction of security risks or data breaches
- Enabling future business capabilities through integration services for self-service, virtual assistant, and robotic process automation
- Alignment of to-be process flows with business, security, and technology architectures
- Identification of gaps and resultant system requirements
- Defined end to end target processes for optimization
- Identification of opportunities to consolidate, automate, and industrialize

Many of these metrics will be able to be measured by PERS member and employer survey results, PERS POBMS scores, as well as CEM Benchmarking results using 2022 results as the baseline measurement.

Alignment with the PERS Journey Map

PERS has developed a journey map, which sets out pension life events that a typical member may encounter over the course of time in their career. This journey map illustrates opportunities for PERS to modernize and redefine how we may inform, interact, and transact with members at the time of their choosing using the channel of their choosing.

PERS Member Journey: Key moments in your career and life to engage with PERS
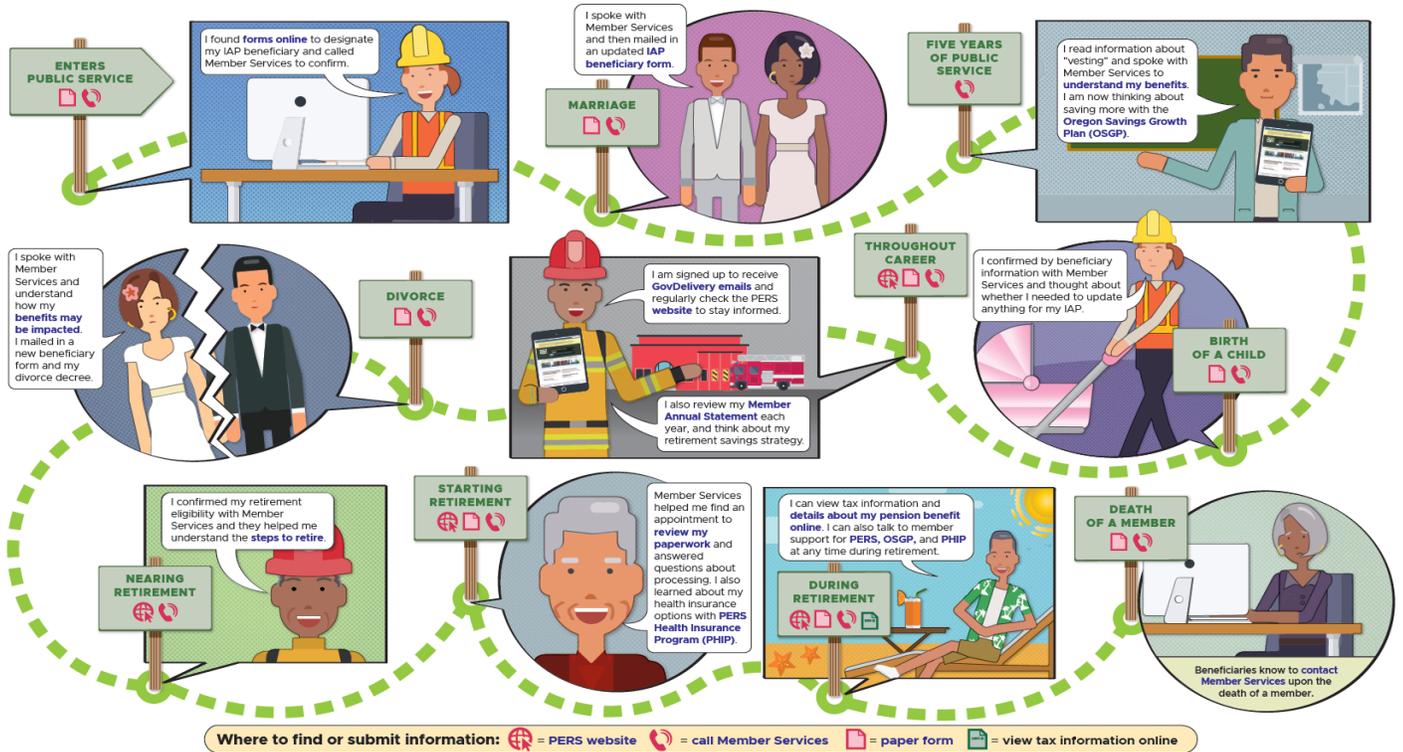
Alignment to the Governor's Action Plan for IT

This initiative is in complete alignment with the Governor's Action Plan for IT. Planning and design work will provide PERS with the necessary information to make the changes to our technology architecture that will eventually make the work of PERS more effective and efficient and meet the evolving needs of our stakeholders.

Alignment to with EIS Strategies and Stage Gate Requirements

This initiative is also in alignment with the EIS Cloud Forward Strategy, as well as the EIS Modernization Playbook. PERS has worked closely with EIS throughout the current pre-planning initiative and will continue to regularly engage for feedback.

Alignment with PERS 2018-2023 Strategic Plan

There are six strategic pillars within the current PERS Strategic Plan. Of these six, four have distinct ties to modernization efforts.

Information Governance and Technology

- 🏛 Information Governance Practices
- 🗄 ORION Business Modernization
- 💻 IT Digital Transformation

Member Services & Communications

- 🤝 Member Relations
- ⛑ Quality Delivery Methods

Financial Management

- 🗄 Technology Upgrades and System Integration
- 🔀 Financial Management Resource Development

Data Reliability

- 👤 Member Accountability
- 🗄 Data Trust and Constancy
- 🗄 Agency Data Warehouse

Organizational Management & Development

- 👥 Workforce Development
- 💬 Organizational Communication
- 📊 PERS Outcome Based Management System

Enterprise Risk Management

- 🌐 Enterprise Risk Management

Alignment with PERS IT Plans

This initiative is in alignment with both the PERS IT Strategic Plan and the PERS IT Cloud Strategy.

Assumptions & Constraints

Assumptions

- EIS Stage Gate processes and approvals will be required
- Stage Gate approvals will be delivered in a timely manner once required documentation has been received.
- The budget is sufficient for all required project activities
- Most of the projects from the current SB1049 Implementation Program have been completed and are operational in the agency.
- No new major mandates from the state legislature have been passed that impact the operations of the agency.
- No significant changes to ORION will be implemented prior to the adoption of an agreed-upon solution

Constraints

- Multiple initiatives competing for budget within the state.
- Competing initiatives within PERS impacting key resources.

Alternatives

Alternatives Identification

1. Status Quo/Do nothing
2. Establish Business Process Mapping and Data Definition Workgroups
3. Initiate Comprehensive Planning and Design Activities

Alternatives Analysis

The following is an analysis of each alternative listed above:

1) Status quo/Do nothing

Maintain ORION in the current state with current staffing resources. This does not assume any future system changes. As was experienced with the implementation of SB 1049, any system changes are a massive   undertaking and are not included in this analysis.

Benefits and Risks of Status Quo Alternative

Benefits	Risks
Staff are familiar with current systems and processes	Current systems do not meet stakeholder expectations
	Current systems are deprecated and unsupported
	Current systems require manual processes and off-line tools to maintain
	Current systems and staffing levels cannot accommodate a large surge in retirements. Nearly 30% of PERS members are eligible to retire.
	Unable to sustain current Operational and Supporting Service Level Agreements due to inefficiency of the system
	Maintaining ORION will become more unpredictable over time as the volume of data increases
	Disenfranchising our members as their ability to be informed, interact or transact through other channels is only limited to the desktop web interface of OMS

2) **Establish Business Process Mapping and Data Definition Workgroups**

Through our business capabilities assessment and documenting our As-Is architecture, PERS has gained a better understanding of gaps in our current documentation and lack of alignment of to-be processes at all levels of the organization. An agency initiative to vision, define our challenges, agree on goals, and map our next steps with our existing resources will provide a start to collect this necessary documentation and will assist with a unified approach to launch a future modernization program.

This solution will only satisfy a portion of the preparation work to begin modernization efforts. There is significant technical research and prototyping which needs to occur before we can make recommendations for future solutions. The technical research will be added to the 2023- 2025 Modernization Program request and add more length to our timeline before we can deliver value to our staff, members, and employers. With limited capacity of our current resources there will be limited outputs.

Estimate for this effort: This proposal would not require any additional funding as it would utilize existing resources.

Benefits and Risks of Alternative 2

Benefits	Risks
Will provide PERS with valuable information to prepare for future modernization efforts	Only satisfies a portion of the preparation work needed to begin modernization efforts
Will only require existing staff	Limited resources available

Allowing the identification of opportunities for consolidation and automation	Timing: as-is process maps should be aligned with as-is information systems architecture
Discovery of inefficient business processes or gaps through mapping will lead to optimized solutions	
Will identify ways to measure business processes that will help measure success of modernization	
Will help ensure alignment between business and IT	

3) **Initiate Comprehensive Planning and Design Activities**

Following the expert advice of Accenture, our public pension IT strategists, and further review from our Enterprise Architecture Team, we propose to initiate the following planning and design efforts from the modernization roadmap: Define Future State Architecture, Architecture Planning and Design for a Hybrid Integration Platform (HIP), Enhance Dev Ops Team Capabilities, Map Business Processes and Identify Use Cases, Determine Data and Analytics Strategy, Plan and Design for Conceptual Future Solutions (CRM). Also included in this request is a staffing package to establish Program leadership and a risk review from an independent quality management services vendor.

Estimate for this effort: $4,490,000

Benefits and Risks of Alternative 3

Benefits	Risks
Validation of Accenture's Modernization Roadmap through detailed planning and discovery	No significant improvements delivered for members in this biennium
Long-term risk reduction via comprehensive planning	Length of return on investment
Opportunity to tighten scope to potentially reduce cost or time	Timing: planning & design is needed before any implementation can start
Increased planning and design activities will lead to better estimations for future budget requests and a better understanding of the resources need to undertake a modernization program.	
Aligning all teams on technologies that will be implemented, and the impact that will cause on current systems	
Ensuring transparency of decisions being made	
Allows to factor in business goals while planning new technologies, ensure a member-oriented future state	

In summary, Option #3, Initiate comprehensive planning and design activities would enable PERS to approach a launch of a full modernization program armed with the necessary information to make informed decisions and proceed as efficiently as possible. PERS is recommending Option #3.

Conclusions

Recommendations

PERS wishes to utilize the time remaining in this biennium to conduct planning and design initiatives to prepare for future Modernization.

By comprehensive planning and design now, PERS will be ready to realize future benefits such as:

Setting the foundation for the future state
- Enable Member Centric Communication
- Reduce In-Person Touch Points through Self Service
- Reduce financial risk by reducing the number of manual processes
- Increase staff productivity by reducing the number of manual processes
- Reduce transactional turnaround times
- Increase Member and Employer satisfaction with services offered by the agency

*Many of these metrics will be able to be measured by PERS member and employer survey results, PERS POBMS scores, as well as CEM Benchmarking results using 2022 results as the baseline measurement.

Provide a scalable solution
- Compartmentalized Architecture
- Hybrid Cloud Environment

Utilize a flexible system design
- Allow modular components to be built on and around jClarety
- Enable jClarety to focus on its core competency of retirement calculations and bring in more capable, newer technology to support other business practices

Focus on industry-friendly products
- Increased consultant impact and efficiency
- Greater ability to use "Commercial Off the Shelf" solutions

Consequences of Failure to Act

Some of the consequences facing PERS if modernization does not occur are illustrated in answering the following question:

What happens if we do not modernize our pension administration system?

- Continue to support our outdated pension administration system, which represents a large portion of the IT budget.
- Continue to offer sub-standard services to our members, employers, and stakeholders. We will continue to incrementally increase our risk profile as time goes by and system capabilities continue to degrade.
- Continue to add staff to maintain current service levels and add workarounds of processes and/or tools.
- Unable to address both changing member and employer expectations resulting in deterioration in both the member and employer experience and trust with our stakeholders. This will impact achieving our mission as an agency.
- Continued inefficiencies and related costs due to numerous manual workarounds. We will continue to lag in capabilities compared to our peers while limiting our opportunities to achieve excellence as a public sector pension provider. Lag in what our online systems can offer both our members and employers as compared to our peers.

Impacts from Avoiding Modernization - Failing to modernize can lead to a host of negative impacts. Unless the problem is addressed, these outcomes are likely to increase in severity:

- Increasing costs
  - Many agencies continue to rely on aging and obsolete infrastructure, systems, and business applications. Along with high costs due to significant duplication, redundant solutions and increased manual efforts, agencies face further budgetary and resource constraints due to excessive maintenance and enhancement (M&E) and technology costs. Older systems will become increasingly difficult to manage and maintain, due to an aging workforce and loss of institutional knowledge, attrition challenges, increasing lack of resources with the requisite skills in legacy technologies, continuing technology obsolescence, and ever-increasing demands to deliver new mission capabilities more rapidly and cost effectively.
- Security and privacy concerns
  - Cybercrime is one of the most worrying trends in technology, both for the amount of damage that can be done per incident and the number of incidents. Unfortunately, the age of public-sector technology and the sheer number of obsolete systems, coupled with inconsistent upgrades and patches, represent a huge vulnerability to state government. Government needs to be proactive in preparing for and preventing cyberattacks, both to pro-tect mission operations and because it makes good financial sense to do so.
- Lack of access to advanced technologies
  - Currently, many public-sector agencies lack the ability to leverage their own data to support decision making. Today, organizations must deal with vast amounts of information, often obtained from numerous sources, and distributed across multiple non-integrated platforms and repositories. The information is not currently accessible in an integrated fashion that would enable informed decision-making needs. Furthermore, the information (structured and unstructured) is often not consistent in a way that allows agencies to identify trends by doing predictive analysis, data visualization, statistical analysis, or patterns and correlations. Large volumes of data also require automated mechanisms for preparation, transformation, refinement, and management. Thus, effectively implementing technical innovations such as analytics and AI at scale are simply still out of reach across much of the government.

Diversity, Equity, Inclusion, and Accessibility

The Modernization planning and design project will intentionally make diversity, equity, inclusion, and accessibility a priority in change management, customer service, leadership development, and community engagement. The investment in this project will demonstrate and incorporate diligence in employment, from hiring to retention, promotion, and succession planning. PERS plans to work with Procurement on COBID certified firms, where applicable. Project substantially benefits underserved communities-including rural communities, low-income communities, or communities of color.

PERS currently adheres to the Governor's Office of Diversity, Equity, Inclusion/Affirmative Action mission, and objectives. PERS has processes in place ensuring Oregon's government develops, maintains, and embeds a diverse and inclusive culture throughout state systems, institutions, and deliverables and plan to incorporate them into this investment. Lastly, PERS is ensuring that ORION meets the Oregon Accessibility Standards.

Conclusions

Modernization is critical to the agency's ability to provide enhanced services to our members and employers, and to support future legislative or policy changes to the plans quickly and efficiently. An ever-changing landscape of public pension administration, along with workplace and workforce changes as result of changes in technology, or pandemics such as COVID-19, requires a flexible and

resilient ORION architecture. Current risks to core agency functions will continue to increase, including the continuation of structural limitations on the agency's ability to provide excellent customer service to its members and employers due to its lack of a system based on modern architectural standards including customer relationship management (CRM) capabilities within its communications platform.

Appendixes and References

Appendix
Business Capabilities Assessment
Modernization Estimates
Modernization Roadmap
Hybrid Integration Platform Presentation
PERS IT Strategic Plan
PERS Cloud Strategy
PERS 2018-2023 Strategic Plan
Letter to Senator Peter Courtney re: System Fatigue February 20, 2019