

Arizona State Retirement System PIJ Presentation



Payroll Calculation Re-Engineering

Arizona State Retirement System

June 16, 2021

Agency Vision

For the benefit of our members, the Arizona State Retirement System will be a top performing benefit plan administrator with a solid reputation and sustainable plan design

Agency Mission

Arizona's Revised Statutes § 38-712 outlines the purpose of the ASRS:

- Provide an incentive in the recruitment and retention of employees of the highest possible quality.
- Contribute toward providing a total compensation package that is generally equivalent to comparable employment in other public and private organizations in this state.
- Provide a retirement system that encourages employees to remain in service for periods of time that will provide public employers with the full benefit of the training and experience gained by the employees.
- Provide an orderly method of promoting and maintaining a high level of service to the public through an equitable separation procedure.
 - Provide a base retirement benefit that is less than one hundred per cent of a member's postretirement income requirements, recognizing that personal savings and social security also contribute toward total post-retirement income requirements.

Project Introduction

Problem Statement:

- Modernize the old pension payroll calculation system: The pension calculation module was written more than 20 years ago on outdated technology in a batching system that now takes days to complete, while requiring heavy user interaction for quality assurance and step-by-step reviews. This payroll calculation system accounts for about 2% of overall code in the custom-built Pension Administration System (PAS) that has otherwise been recently modernized by two prior ASRS PIJs.
- Should not be built as a stand-alone SaaS (Software as a Service) in new technology: The new 'to be' will be maintained by ASRS personnel after implementation, so the build and deploy technology must be the same as the other 98% of the PAS.
- Data should not be shared with a third party: Adding new processing and storage locations (if the solution were a SaaS) would add significant security risk. A prior PIJ (to bring disbursements in-house) reduced ASRS risk profile by not sharing ASRS pension data with a contracted vendor.

Benefit of a New System:

- Improves efficiency and reduces risk of failure to pay pensions to Arizona retirees.
- Provide real time adjusted pension data to members and ASRS employees after each change to key demographic data.
- The pension payroll and new retiree payroll payment calculation processes will be re-engineered to use Java code, like the rest of the ASRS PAS so that it can be supported by any of our salaried Java developers.
- Eliminate the batching concept for calculating payments so we are no longer tied to two very stressful payroll runs that require the business to stop their day to day activities while payroll is running.
- Calculate and disburse New Retiree payments daily instead of the current once a month process.

Proposed Solution

Procurement / The ASRS Project Team

- RFP was issued for a vendor to provide the development services on-site at ASRS. The bids came in significantly higher than the cost for an existing ASRS development team to complete the project in-house with minor staff augmentation of temporary workers through a contracted vendor. See following pages for details.
- The ASRS will assign an existing development team to complete this work. The core application development team size is 5 members – a project manager/scrum master, technical lead, 2 developers and a QA tester – consisting of a mix of salaried and hourly/temporary staff with extensive institutional business knowledge of ASRS processes and existing tools and code base. The completed code will reside among the rest of the PAS code base so that ASRS can maintain the entire application going forward with salaried staff.
- Methodologies: ASRS staff use proven Project Management Professionals (PMP), DevOps, Agile Scrum methodologies on NIST and FedRamp-compliant framework to successfully complete development projects for the ASRS PAS.

Technology

- The purpose of this Payroll Calculation Re-engineering project is to tackle the space in between the pension maintenance system and the pension payment distribution process (previously completed PIJs). This new effort is the smallest of the three -- about 2% of the overall PAS code maintained by ASRS staff -- aimed at converting the payment calculation system from a batch to a real-time calculation engine using modern and sustainable technology.
- We will use Java as the programming language because it provides a great amount of flexibility and functionality with the available open source frameworks with no annual cost and all of our current staff have Java expertise.

RFP Results

Company	P&OS Cost	ASRS FTE Operational Cost	Total Cost	% increase over ASRS	Timeline	Location	RFP Evaluation Score (1000)
ASRS	\$ 998,000	\$ 512,000	\$ 1,510,000	0%	24 months	Arizona	
Bid 1	\$ 2,000,700	\$ 261,600	\$ 2,262,300	50%	18 months	Arizona	709
Bid 2	\$ 2,815,842	\$ 261,600	\$ 3,077,442	104%	18 months	Arizona	665
Bid 3	\$ 1,415,664	\$ 261,600	\$ 1,677,264	11%	18 months	Arizona	502
Bid 4	\$ 2,600,000	\$ 261,600	\$ 2,861,600	90%	18 months	Washington DC	590
Bid 5	\$ 1,447,806	\$ 261,600	\$ 1,709,406	13%	18 months	Washington DC	798

RFP Results

CONSENSUS EVALUATION SCORECARD

Criteria (Order of Relative Importance)	Possible Points	Bid 1	Bid 2	Bid 3	Bid 4	Bid 5
Experience/Expertise/Resources	400	275	325	100	325	275
Experience / Ability to Perform	200	150	175	75	150	150
Microservice architecture expertise	100	75	75	25	100	75
Demonstrated similar work and key personnel	100	50	75	0	75	50
Method of Approach	300	240	240	140	150	265
Methodology follows agile principles with appropriate demos.	100	100	75	25	100	100
Ability to work on site at ASRS and use ASRS technologies economically.	100	90	90	90	25	90
Maintainability of delivered code and availability of development team after delivery.	100	50	75	25	25	75
Cost/Value	300	194	100	262	115	258
Total	1,000	709	665	502	590	798

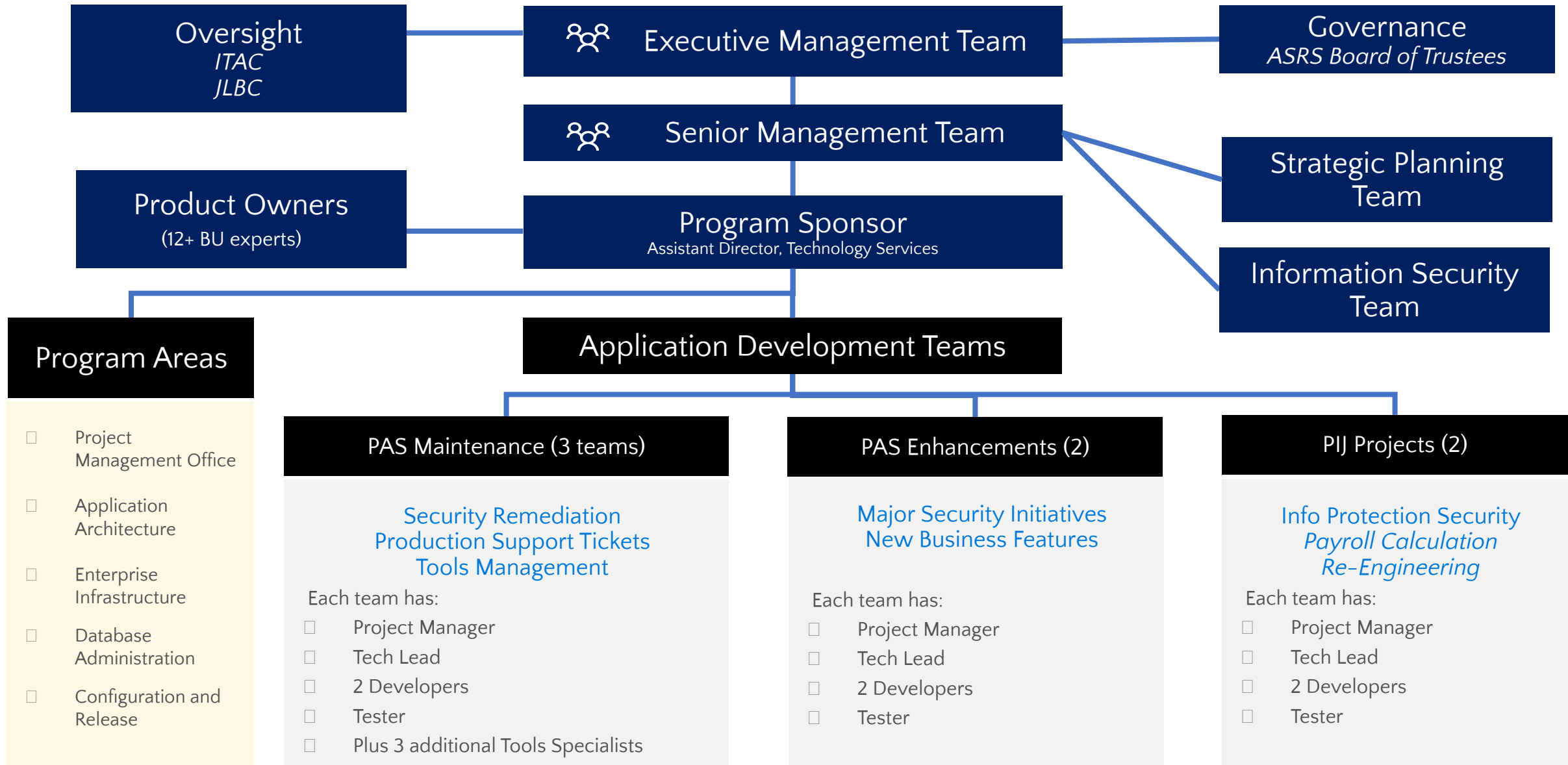
RFP Results

ASRS FTE costs if we outsource 18 months implementation				
	effort	weeks	hours	Cost
TL Oversight	25%	19.5	780	\$ 49,920
PM Oversight	40%	31.2	1,248	\$ 79,872
QA and CM Oversight	25%	19.5	780	\$ 49,920
Implementation Dev		8	320	\$ 20,480
Impelementation QA 1		8	320	\$ 20,480
Impelementation QA 2		8	320	\$ 20,480
Implementation PMBA		8	320	\$ 20,480
		ASRS Total		\$ 261,632

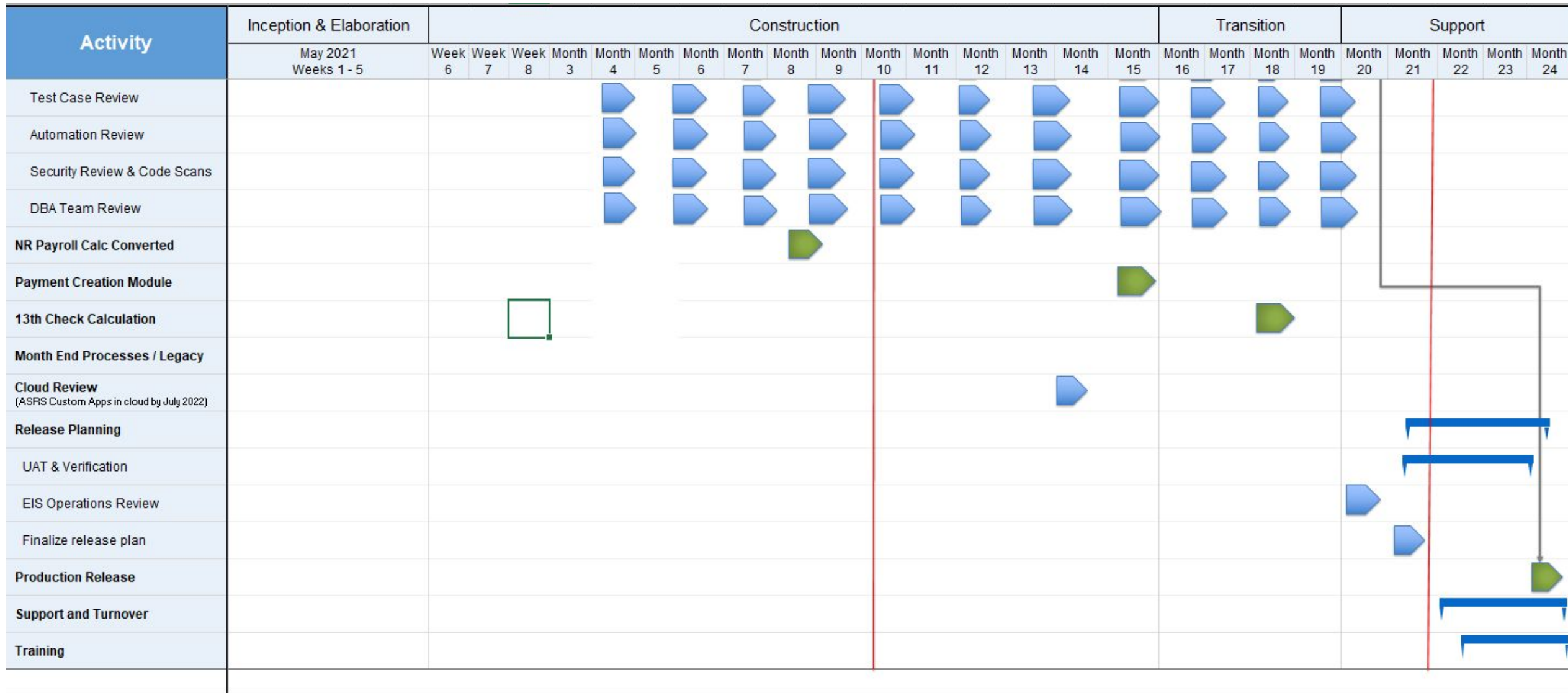
RFP Results

Company	% increase over ASRS	Score (out of 1000)	Other comments on these bids
Bid 1	50%	709	No Java experience. Bidder will provide oversight, actual work to be done by another vendor who is not on state contract. We are paying a lot for them to be middlemen. Well thought out response but based on Microsoft .NET and C#.
Bid 2	104%	665	Will use Oracle Consulting Services, lots of Gov experience. Located in Scottsdale, mentions spring and microservices, mentions eliminating PLSQL, seem to have good Java background. The Oracle Unified Method is similar to waterfall.
Bid 3	11%	502	Unclear what they are estimating and no rates are provided. Not fixed cost. Unclear if on site or off site. Lots of CRM experience. No mention of scrum, agile, microservices which is not good.
Bid 4	90%	590	Based in Washington DC, NC and TN. Will bill us for travel for 8 people, no hourly rates provided. Wants to push for cloud and FaaS and noSQL. Fixed price, good proposal. Wants to use a tool to convert code and make adjustments afterwards which in our experience does not work well. We require new/fresh code.
Bid 5	13%	798	Mobile app focused company which is not what we are looking for, based out of Washington DC, team has microservice experience. Will use agile, mentions UI/UX too much. Their price includes working on site at ASRS.

Technology Services Structure – Application Development



Pension Calculation Project Timeline- Page 2



Project Costs

Project Costs by Category	FY20	FY21	FY22	FY23	FY24	Total
Professional & Outside Services (Contractors)		\$83,170	\$499,000	\$415,830		\$998,000
Hardware						
Software						
Communications						
Facilities						
License & Maintenance Fees						
Other Operational Expenditures		\$42,660	\$255,940	\$213,280		\$511,880

Financial Impact

Project Development Funding

Base Budget - Available	-
Base Budget - To Be Requested	-
APF Budget - Available	-
APF Budget - To Be Requested	-
Other Appropriated - Available	\$998,000
Other Appropriated - To Be Requested	-
Federal - Available	-
Federal - To Be Requested	-

Operational Delta

Current 3-Year Operational Cost (Avg)	
Proposed 3-Year Operational Cost (Avg)	
Financial Impact of New System	

Total Development Project Funding

Available Budget	\$998,000
To Be Requested Budget	\$0

Total Operational Funding - Project

To Be Requested Budget	\$0
------------------------	-----

What Success Looks Like

Change Management

- Project Milestones
 - Microservice Architecture Approval
 - New Retiree payroll calculation and conversion
 - Cloud migration review
 - Pension payroll calculation conversation
 - Bulk recalculation (PWEB/rate/insurance plan changes etc)
 - Payment creation module
 - 13th check calculation conversion
 - Replace Modules locked check
 - Month end processes
 - Eliminate Pension Payroll benefit calculation batch process
 - Parallel Payroll testing completed without errors.
 - Release Plan Finalized
 - Production Release
 - Turnover Support and Training

Measures of Success

- Zero PLSQL expertise required to support any of our payroll runs.
- New Retiree payments calculated and sent daily.
- When a member makes a change on our secure website that affects their pension the result is shown to them in real time.
- When an employee makes a change within our PAS on a member's account that affects the pension amount the result is shown in real time.
- The new payroll calculation does not impact daily business process
- All development teams agree that testing payroll is significantly easier (Survey)

Q & A Session