

modernization projects including the new Pension Administration System and the Financial Management System.

The next planned IAS project is the issuance and evaluation of Requests for Information. This project will begin to provide the additional detail necessary for more accurate budgeting and scheduling of the actual implementation.

SCERS staff will present plans and budget for the next phase of the investment accounting system project at the February 2018 Board meeting.

BACKGROUND

The SCERS Strategic Plan 2014-2018 identifies the need for modernization of IT systems to improve efficiency and reliability of business processes in the benefits and accounting operations and to improve self-service for members and benefit recipients.

The Investment Accounting System (highlighted in the blue box on the diagram below) is one of the components of the IT Modernization Program.

IT Modernization Program Plan

Project Description	FY2017-2018				FY2018-2019				FY2018-2019	FY2019-2020	FY2020-2021	FY2021-2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
IT Modernization Projects												
IT Modernization Consultant (Linea)	[Gantt bar spanning all quarters from Q1 2017 to Q4 2021]											
Pension Administration System												
Design												
Build												
Support/Maintain												
Data Conversion (ICON)	[Gantt bar spanning all quarters from Q1 2017 to Q4 2021]											
Website Modernization												
Replace												
Enhance												
Investment Accounting System												
Requirements/Solution Strategy												
Request for Information												
Request for Proposals												
Implementation												
Financial Reporting System												

The procurement of new financial systems, including investment accounting, was initially part of the consulting agreement with Linea Solutions. After Linea began work further discussions revealed a level of subject matter complexity beyond Linea’s in-house skill base and it was decided to remove the financial systems from the Linea scope.

Castle Peak Associates was engaged by SCERS to assist with the Investment Accounting Systems project(s). Their initial engagement is to identify system requirements and alternative solution strategies.

ATTACHMENTS

Presentation by Chris Spurrell, Castle Peak Associates

Prepared by:

Reviewed by:

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Stephen Hawley
Chief Strategy Officer

Eric Stern
Chief Executive Officer

Investment Accounting System

Requirements and Solution Strategy Project

Chris Spurrell, Principal
CASTLE PEAK ASSOCIATES



SCERS

SACRAMENTO COUNTY
EMPLOYEES' RETIREMENT SYSTEM

Agenda

- Background
- Project Objectives
- Project Approach
- Project team
- Current State
- Risks Constraints and Capabilities
- Solution Options
- Next Steps



Background

IT Modernization Program Plan

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IT Modernization Consultant (Linea)	[Bar spanning all quarters from FY2017-2018 to FY2021-2022]											
Pension Administration System												
Design			[Bar]	[Bar]	[Bar]	[Bar]						
Build						[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	
Support/Maintain												[Bar]
Data Conversion (ICON)	[Bar spanning all quarters from FY2017-2018 to FY2021-2022]											
Website Modernization												
Replace		[Bar]	[Bar]									
Enhance				[Bar]	[Bar]	[Bar]	[Bar]					
Investment Accounting System												
Requirements/Solution Strategy	[Bar]	[Bar]										
Request for Information			[Bar]	[Bar]								
Request for Proposals					[Bar]	[Bar]						
Implementation							[Bar]	[Bar]	[Bar]	[Bar]		
Financial Reporting System			[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]			



Background

- SCERS' Strategic Goals (from Strategic Plan 2014 – 2018)
 - Goal Four: Fiscal Responsibility includes the following:
 - Assure high quality fiscal analysis and reporting, and make that information readily accessible to SCERS' stakeholders.
 - Evaluate opportunities to update financial systems and tools to enhance analysis and reporting to internal and external customers.
 - Establish, where appropriate, SCERS' capability to address its own financial management and operational needs
 - Goal Five: Risk Management includes the following:
 - Enhance SCERS' investment risk management by developing an investment operational due diligence capacity, independent of SCERS' investment consultant and strategic investment partners.

Project Objectives

- Document Current State Process
- Define Requirements for Investment Accounting
- Identify Risks and Constraints
- Develop Solution Alternatives
- Determine a Preferred Solution Alternative and Target Operating Model

Project Approach

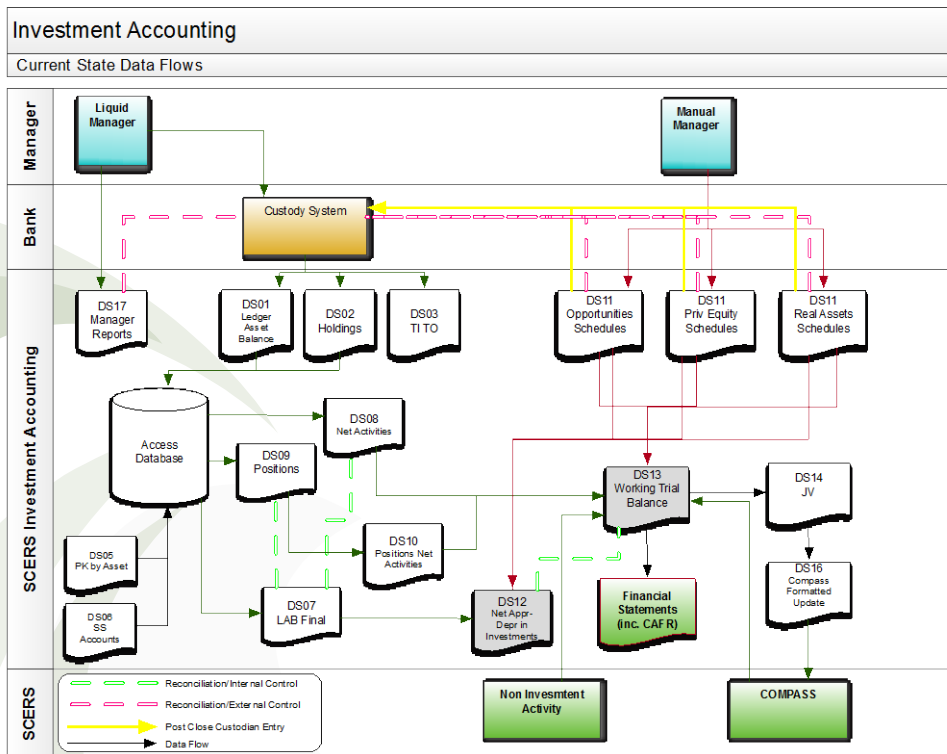
- Analyzed and documented investment holdings, account structures, accounting processes, data and systems.
- Developed requirements and scope.
- Identified risks, constraints and capabilities.
- Developed 4 options as candidate target operating models
- Researched vendors
 - Identified representative vendors.
 - Researched capabilities.
 - Held demonstrations.
 - Solicited tentative non-binding pricing.
- Conducted solution analysis
 - Identified advantages and disadvantages of each approach
 - Created high level tentative cost estimates for each approach
 - Developed Recommendation
- Developed suggested future state target operating model

Project Team

Name	Organization	Role
Chris Spurrell	Castle Peak Associates	Core Team: Consultant
Thuyet Dang	SCERS	Core Team: Primary Investment Accounting Subject Matter Expert
Steve Davis	SCERS	Core Team: Primary Investment Management Subject Matter Expert
Steve Hawley	SCERS	Core Team: Program Management Oversight
Brian Miller	SCERS	Core Team: Investment Management Subject Matter Expert
Xee Vang	SCERS	Investment Accounting Subject Matter Expert
Joycy Escobar	SCERS	Investment Accounting Subject Matter Expert



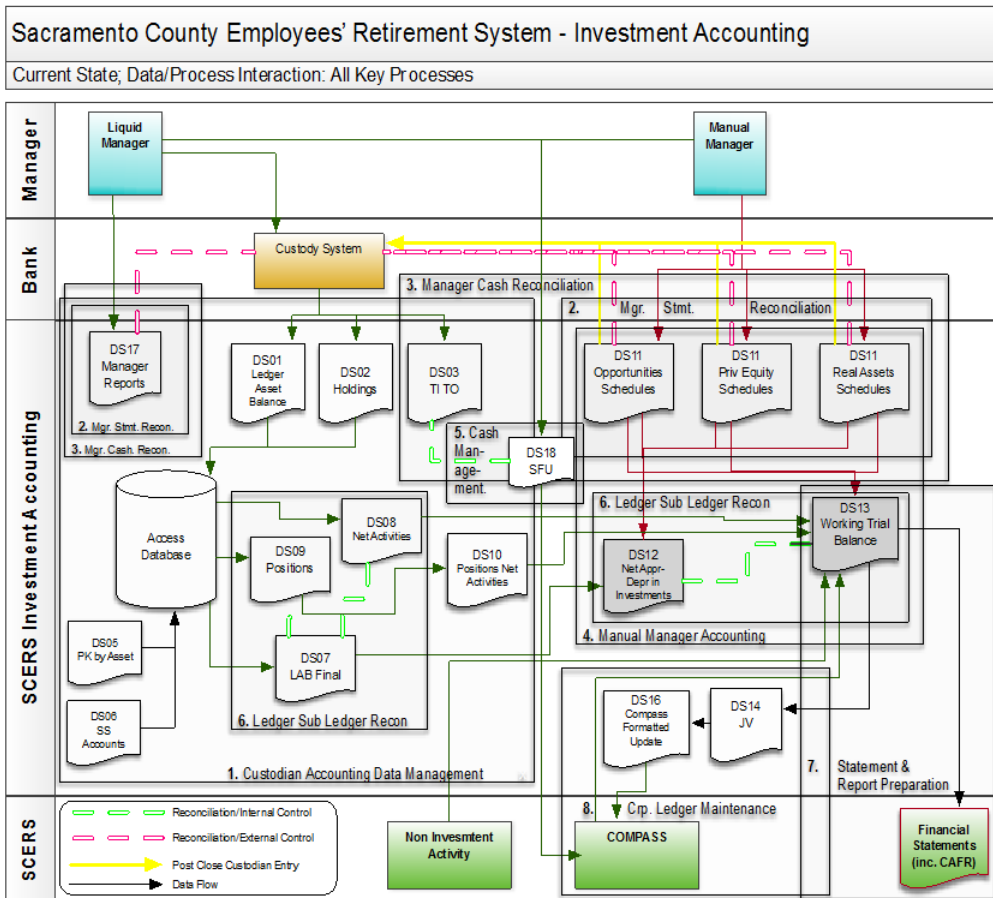
Current State System and Data Flow



- Separate flows for public(liquid) and private(manual) managers
- Public (Liquid) manager data flows to and through custodian
- Private (Manual) manager accounting performed in spreadsheets by SCERS and fed back to custodian
- SCERS Workflow provides:
 - Bank and ledger account mapping/reclass
 - Consistent security classification
 - Consolidation across quarterly reporting period
 - Basis for internal (ledger/subledger) reconciliation
- Drawbacks:
 - Labor intensive manual process
 - Dependent on MS Access database and multiple linked spreadsheets that require quarterly partial rebuild and update
 - Cumbersome and challenging to maintain
 - Limited ability to respond to change
 - Limited ability to provide timely and accurate information



Current State Process Overlay



Processes are generally distributed over multiple system components, providing a graphical illustration of the complexity of SCERS Investment Accounting process.

Drawbacks:

- Labor intensive manual process
- Dependent on MS Access database and multiple linked spreadsheets that require quarterly partial rebuild and update
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Risks Constraints and Capabilities

The following table summarizes the key findings from that exercise.

Primary Constraints	<ol style="list-style-type: none">1. Limited staffing.2. Limited in-house technology capability.3. Limited data availability from manual managers and limited ability of the custodian to record private market activity to SCERS' requirements.
Primary Risks	<ol style="list-style-type: none">1. Accounting function for Private Manager (private market) Assets based on complex set of spreadsheets.2. Custodian limitations mean that Manual Manager (private market) entries are provided to them by SCERS staff.3. Heavy reliance on a complex set of spreadsheets and a MS Access Database to support investment accounting and necessary controls.

These constraints and risks leave SCERS at risk relative to the accuracy, timeliness, scope and depth of its Investment Accounting and Reporting. It also leaves SCERS poorly positioned to respond to the needs of Senior Management, the Board and the Investment Office as SCERS continues to develop its strategies to meet required rates of return.

Solution Options

Option	Key Points	Tentative ¹ Annual Cost	Order of Preference
Shadow Accounting	<ul style="list-style-type: none"> ▪ Leverages expertise and capabilities of a Managed Services partner. ▪ Provides appropriate reconciliation & control. ▪ Improves capabilities and capacity for growth. 	\$350k - \$800k	1. Potentially complete solution at reasonable cost.
Warehouse Plus	<ul style="list-style-type: none"> ▪ Replaces current infrastructure with robust industry standard warehouse. ▪ Solves for Manual Manager (private market) accounting. ▪ Solves for some technical risks. ▪ Only supports current process capabilities. ▪ Requires integration and maintenance. ▪ Requires a reconciliation tool. 	\$400k-\$750k	2. Less complete solution at similar cost – akin to re-platforming the current process.
Best of Breed	<ul style="list-style-type: none"> ▪ Potentially solves for all asset classes and fund types. ▪ Requires multiple systems. ▪ Requires integration and maintenance. ▪ Requires a data integration platform. ▪ Requires a reconciliation tool. 	\$500k-\$1.8m+	3. Better functionality at higher cost with higher integration and maintenance demands.
Custom Development	<ul style="list-style-type: none"> ▪ Best case replicates current state at low cost using better technology ▪ Worst case creates uncontrollable cost and ongoing maintenance requirement. 	\$200k-\$1.5m+	4. Assessed as highest risk and potentially highest cost.

¹ Vendors were approached for tentative and non-binding pricing these estimates combine those prices with estimates of additional costs for support and maintenance.



Next Steps

- Engage with vendors that can meet SCERS' preferred solution requirements.
- Issue an Request for Information (RFI) and conduct further due diligence to ensure that vendors can meet requirements for all asset classes and account structures.
- Reassess and confirm the preferred solution alternative.
- Issue Request for Proposal (RFP) and evaluate responses.
- Recommend a vendor to the Board.