Investment Office Roadmap and Target Operating Model Update

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Investment Committee

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INVO 2020 Vision

2020 Focus:

- ✓ Reduce cost, complexity, and risk
- ✓ Fewer, but more strategic partnerships with external managers.



Mission

Manage the CalPERS investment portfolio in a **cost- effective**, **transparent** and **risk-aware** manner in order to generate returns to pay benefits.

Vision

- The Investment Beliefs and CalPERS Core Values are the guiding principles underlying our investment decisions.
- We operate with a focus on repeatable, predictable, and scalable portfolios and practices.
- We seek alignment of interests with our primary stakeholders, our business partners, and ourselves.
- We use clearly articulated performance, risk, and cost metrics to evaluate our value-add to the funds.
- Our investment and business activities are supported by a solid platform of effective risk management and controls.

920 ¥20 Vision

INVO 2020 Vision Steps

Enhanced
Governance and
Organizational
Structure
2016-17

Improved Trust-level Decision Making

2017-18

Factor-based Portfolio and Investment Process

2019-20

Refined Strategic Objectives

2015-16

More Formal <u>Trust</u> <u>Level Investment</u> <u>Decision Making</u>

Disciplined Risk and Attribution Review

Review Benchmarks, key unintended risks, asset class roles Refine Trust-level Capital Allocation

Better Exploit Structural Alpha

Asset Allocation aligned with liabilities (Risk Factor work)

Legacy Portfolio Mgmt.

More <u>flexible</u> portfolio structure (unitized)

Scalable,

Repeatable, and

Reliable

Processes

2018-19

Begin to implement new private asset business models, if appropriate

Legacy Portfolio Mgmt.

<u>Reduced risk</u> and improved sustainability

Active Leverage Management

Fewer, but more strategic, partners

Better alignment with goals of the broader organization

New Mission and Vision statements

More active Liquidity management





2015-17 Roadmap Strategic Objectives

Capital Allocation

Enhance the Capital
Allocation framework
through improved
risk factor modeling
and greater
understanding of
trust-level
investment risk
and performance
attribution

Business Effectiveness

Enhance cost
effectiveness,
resource
allocation, and
efficiency of the
investment
program to
increase net
returns on assets

Investment Beliefs & ESG

Integrate Investment
Beliefs and
environmental,
social, and
governance (ESG)
risk considerations in
to the investment
decision-making
process

Investment Platform & Controls

Enhance the investment platform and internal controls environment to achieve optimum efficiency

Investment Risk
Management

Build effective risk review and decision processes within and across asset classes to ensure risks are fully understood, intended, and compensated

36 Initiatives in progress that support the Strategic Objectives





TOM Risk Assessment Process

Initiate Risk Assessment Gather Data and Intelligence

Identify, Assess, and Respond Monitor and Report Risks to Senior Leadership

Report to Investment Committee

Criteria

- Change in external environment
- Significant Operating Event
- Completion of mitigation strategy (Roadmap initiative)
- All TOM functions reviewed on 12 month rotation, with prioritization by Operating Committee

Review External / Internal Factors

- Legislative / Regulatory changes
- Technology, business, and economic changes
- Best practices / Peer benchmarking
- Operating Events
- Audit findings

Risk Analysis

- Validate key risk drivers
- Develop risk score and success criteria
- Develop mitigation strategies and assign ownership

Management and Oversight

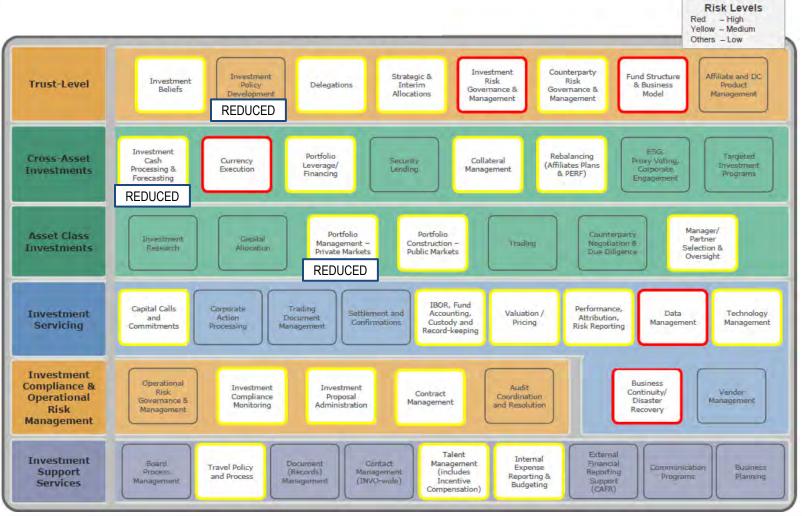
- Update TOM Model and risk reports
- Validate through Strategic Planning Subcommittee
- Report quarterly to INVO Operating Committee

Reporting

 Risks, trends, and mitigation strategies reported semiannually

O20 220 Vision

Revised TOM Status: April 2016



78% (28 of 36) of 2015-17
Roadmap
Initiatives
relate to High and Medium
risk functions.



Capital Allocation



Investment Strategy Group (ISG) Restructure

- Finalized charter, membership, deliverables, and timelines for ISG Subcommittees:
 - Trust-level Risk and Attribution
 - ✓ Portfolio Allocation
 - ✓ Trust-level Investment Review
 - ✓ Governance and Sustainability
- Subcommittees are functional and supporting ISG's understanding and ownership of Trust-level investment risk and performance

Business Effectiveness



Private Assets Legacy Portfolio Monitoring and Optimization

- Cross-asset class team developed and implemented management tool for legacy hedge fund, real estate
 and private equity assets that aids staff in the systematic monitoring and management of diverse assets
- Real Estate is in the process of liquidating nearly \$3B of Legacy Commingled Funds through a secondary sale





Business Effectiveness



Strategic Manager Selection and Monitoring Strategy

- Developed enhanced protocols and processes in assessing and engaging external managers

Investment Beliefs and Environmental, Social, and Governance (ESG)



Investment Beliefs Integration Assessment

- July 2015 Board Offsite Facilitated the Towers Watson Investment Beliefs Implementation Presentation
- September 2015 IC Meeting Presented an assessment and next steps of the Investment Beliefs integration. Key results are integrated into the ongoing Global Governance planning process.



Diversity and Inclusion Strategy

- Formed INVO D&I Steering Committee focused on three work streams:
 - Board of Directors
 - External managers
 - ✓ Internal staff
- Hosted the CalPERS Diversity Forum in September 2015; 350 investment and business professionals gathered to discuss diversity and inclusion in the workplace





Investment Beliefs and Environmental, Social, and Governance (ESG)



Private Markets Regulatory Compliance

• Engaged with various agencies (SEC, Treasurer's Office, ILPA) and key General Partners and Limited Partners to gain understanding and discuss opportunities for increased collaboration and disclosure



Execution Services Strategy

 Completing transition of equity FX execution responsibilities; integrated risk oversight process through colocation of risk personnel onto the trade floor

Investment Platform and Controls



Private Equity Portfolio Management Accounting & Data Services (PEARS)

- Release 1 went Live in October 2015
- Completed Release 2A scope (mgmt. fees, profit share information data capture and reporting) and schedule
- Completed Release 2B (short and long-term cash forecasting, QMR content, Fund of Fund performance, and other analytical reporting) detailed design





Investment Risk Management



Liquidity – Operations (initiative COMPLETE)

- Refined PERF Total Fund Liquidity Cash Flow Forecasting data model, resulting in greater accuracy in cash forecasting and improved data file delivery from program areas
- Established an ongoing governance structure with the Financial Office for liquidity reporting
- Eliminated volatility in PERF liquidity due to centralized OTC collateral support

Performance Measurement & Attribution



• Completed comprehensive program reviews that measure and communicate performance, risks, and exposures from a total fund perspective, within and across asset classes, to the ISG for Fixed Income, Private Equity, Total Fund, and Affiliate Programs



Next Steps Next Steps

- ✓ Continue to manage, report, and close-out 2015-17 Roadmap initiatives
- ✓ Develop and initiate 2016-17 Roadmap initiatives
- ✓ Continue progress on 2020 Vision
- ✓ Continue design for the "INVO 2035" Strategy discussion at the July Board Offsite

