

# Investment Office Roadmap Update

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Investment Committee

May 18, 2015

# INVO Roadmap | Agenda

## Today's Objective

- To review with the Investment Committee the current state, two year, and 5 year strategic plan for the Investment Office

## Key Topics

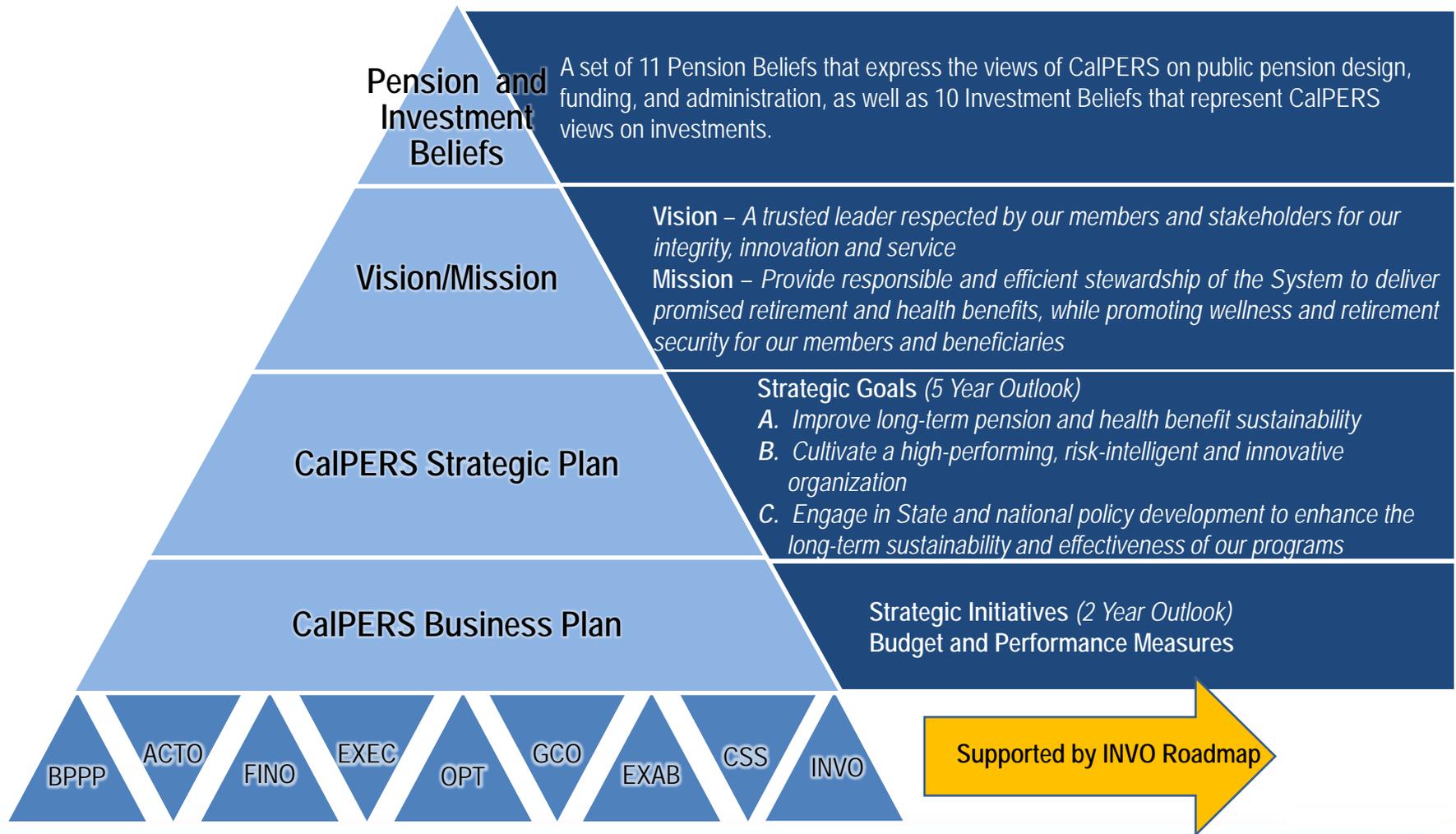
- Investment Office 2014-16 Roadmap Accomplishments
- Target Operating Model (TOM) Risk Assessment and Refresh
- INVO "2020 Vision"
- Investment Office 2015-17 Roadmap Highlights

# INVO Roadmap | Original INVO From – To (*circa 2009*)

Today (FROM)	Vision (TO)
Long-term, static asset allocation framework	More dynamic framework, responsive to market conditions
Risks not transparent & understood	Key risks understood & managed
Tactical, asset class-based approaches to building strengths & competencies	Clear sense of our strengths & competencies we want to develop
Bottom up approach to value creation	Integrated strategies for value creation that blend cross-asset class approaches
Lack of common systems, processes & analytics	Clear target operating model – strong operational data, governance, systems & controls
Inconsistent culture & employee experience	High performance culture & quality employee experience
Inadequate reporting systems & data for effective cost management	Automated expense tracking & reporting systems, & improved cost effectiveness



# INVO Roadmap | Ongoing Enterprise Integration



# INVO 2014-16 Roadmap | Current Fiscal Year Accomplishments

## INVO Roadmap Initiatives

### Investment Performance

- ✓ **Absolute Return Strategies (ARS) Program Closeout** - All ARS program funds received notices of withdrawal/redemption. Proceeds from the program balance when the Investment Committee made the decision to wind down are expected to be redeemed by the end of fiscal year.

### Asset Allocation

- ✓ **Affiliate Funds ALM Review** - In collaboration with ACTO, FINO, APSD, and CASD, completed an integrated asset-liability analysis to address the liabilities concurrently with the asset allocation selection in forming the recommended strategic asset allocations for the following Affiliate Funds - California Employers' Retiree Benefit Trust (CERBT) Fund, Judges' Retirement System(JRS) Fund, Judges' Retirement System II (JRS II) Fund, and Legislators' Retirement System (LRS) Fund.

### Cost Effectiveness

- ✓ **Cost Savings** - INVO realized a cost savings of \$140.2 million FYTD from improved fee structures negotiated on new commitments made by the Real Estate and Private Equity Programs, and the costs savings associated with the liquidation of the Absolute Return Strategies Program.

### Investment Risk Management

- ✓ **Terminated Agency Pool (TAP) Review** - In collaboration with ACTO and FINO, completed the TAP analysis and presented findings on the performance and rebalance of the TAP Program to the Investment Committee.

# INVO 2014-16 Roadmap | Current Fiscal Year Accomplishments

## INVO Roadmap Initiatives

### Environmental, Social and Governance (ESG) Strategy

- ✓ **Manager Expectations** - In March 2015, the Investment Committee approved Global Governance Program Policy, which provides a Policy framework for the forthcoming development of implementation procedures, including ESG Manager Expectations.
- ✓ **Manager Expectations** - Participated in the first annual Principles for Responsible Investment (PRI) Reporting and Assessment, which measures adherence to the principles of responsible investors. CalPERS received an overall grade of A.

### Talent Management

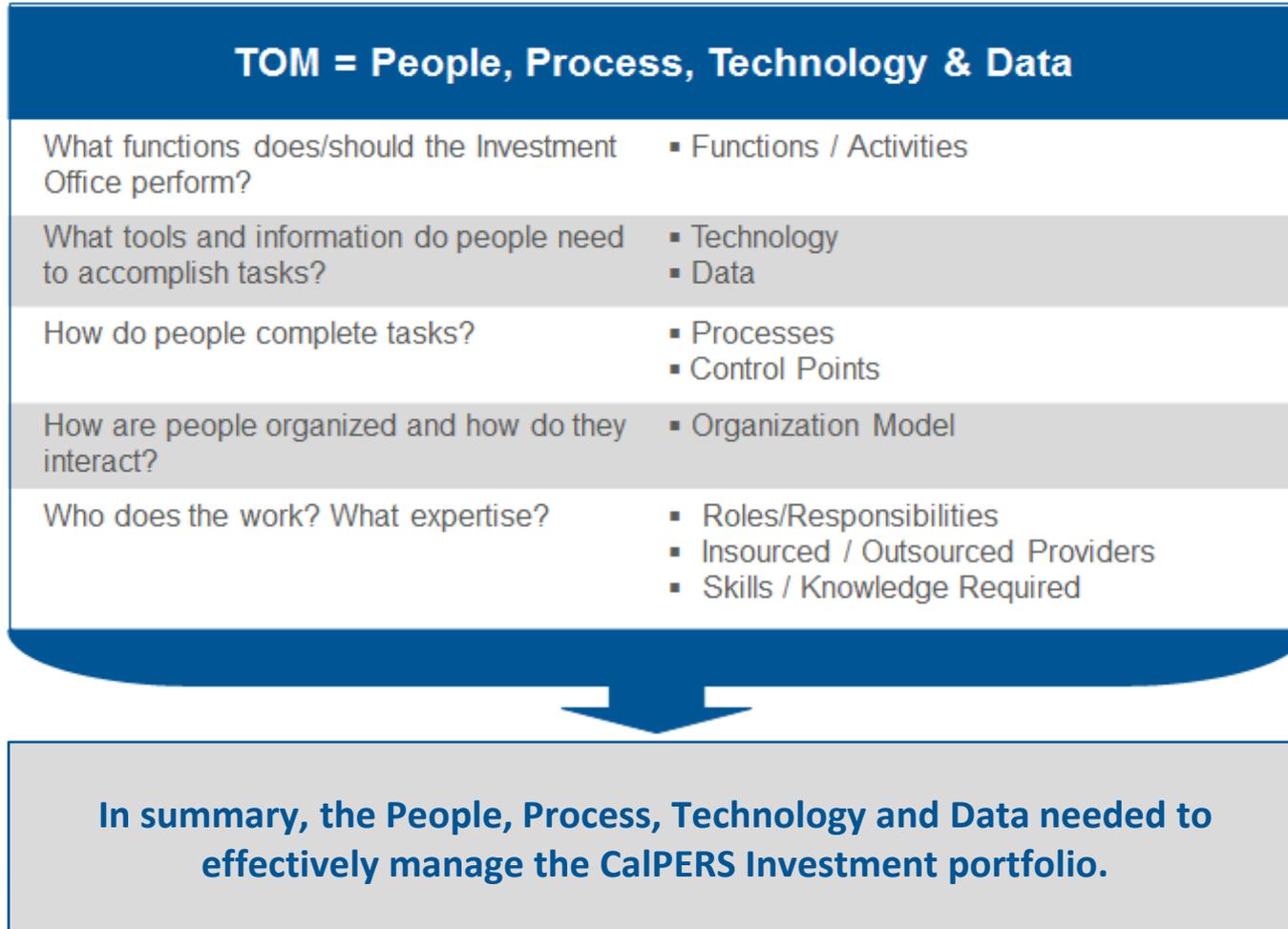
- ✓ **INVO Classification Study** - Partnered with HRSD to submit a Classification Proposal to the California Department of Human Resources and the State Personnel Board, designed to strengthen INVO's hierarchical and classification structures.

# INVO 2014-16 Roadmap | Current Fiscal Year TOM Accomplishments

## Target Operating Model (TOM) Initiatives

- ✓ **PM2: Public Markets Portfolio Management System (TOM # 1)** - Reported to IC in Dec 2014 – Implemented an Internal Equity Investment Book of Record service and Charles River Portfolio Construction functions.
- ✓ **Affiliate Investment Program - Process and Technology (TOM # 24)** - Completed development and began User Acceptance Testing for Artemis, an enhanced portfolio management system to be used within the Affiliate Investment Program for processing cash flows, rebalancing, communicating trades and reporting.
- ✓ **PEARS (TOM #2)** - Accepted the User Acceptance Testing milestone and begun Parallel Monitoring in partnership with FINO, in order to validate the PEARS system, data, and business processes. Once validated, CalPERS will decommission the current PrivateEdge solution.
- ✓ **Manager Selection and Monitoring** - Created the External Manager Monitoring Guidelines in order to establish minimum standards for manager monitoring across all asset classes.
- ✓ **Investment Policy Review (TOM #19)** - Phase 1 that revised the Total Fund Investment Policy Statement, obtained approval for adoption by the Board of Administration and implemented the policy at the total fund level, including removal of corresponding repealed policies
- ✓ **INVO Expense Management & Reporting (TOM #3)** - Designed and implemented an internal INVO Executive Expense Summary that includes Net Value Add Reporting metrics for each program in order to more effectively understand and manage total costs of the portfolio

# INVO 2014-16 Roadmap | Target Operating Model (TOM)



# TOM Refresh | Prior TOM Status, December 2014

**Risk Levels**  
 Red – High  
 Yellow – Medium  
 Others – Low

<b>Trust-Level</b>	Investment Beliefs	Investment Policy Development	Delegations	Strategic Asset Allocation	Investment Risk Governance & Management	Counterparty Risk Governance & Management	Fund Structure Design & Maintenance	Affiliate and DC Product Management	
<b>Cross-Asset Investments</b>	Liquidity and Cash Management	Currency Management	Portfolio Leverage/Financing	Security Lending	Collateral Management (Optimization)	Rebalancing (Affiliates Plans & PERF)	ESG, Proxy Voting, Corporate Engagement	Targeted Investment Programs	
<b>Asset Class Investments</b>	Investment Research	Capital Allocation	Portfolio Management - Private Markets	Portfolio Construction - Public Markets	Trading	Counterparty Negotiation & Due Diligence	Manager/ Partner Selection & Oversight		
<b>Investment Servicing</b>	Capital Calls and Commitments	Corporate Action Processing	Trading Document Management	Settlement and Confirmations	IBOR, Fund Accounting, Custody and Record-keeping	Valuation/ Pricing	Performance, Attribution, Risk Reporting	Data Management	Technology Management
<b>Investment Compliance &amp; Operational Risk Management</b>	Operational Risk Governance & Management	Investment Compliance Monitoring	Investment Proposal Administration	Contract Management	Audit Coordination and Resolution	Business Continuity/ Disaster Recovery	Vendor Management		
<b>Investment Support Services</b>	Board Process Management	Travel Policy and Process	Document (Records) Management	Contact Management (INVO-wide)	Talent Management (includes Incentive Compensation)	Internal Expense Reporting & Budgeting	External Financial Reporting Support (CAFR)	Communication Programs	Business Planning

Some progress but still some heavy lifting

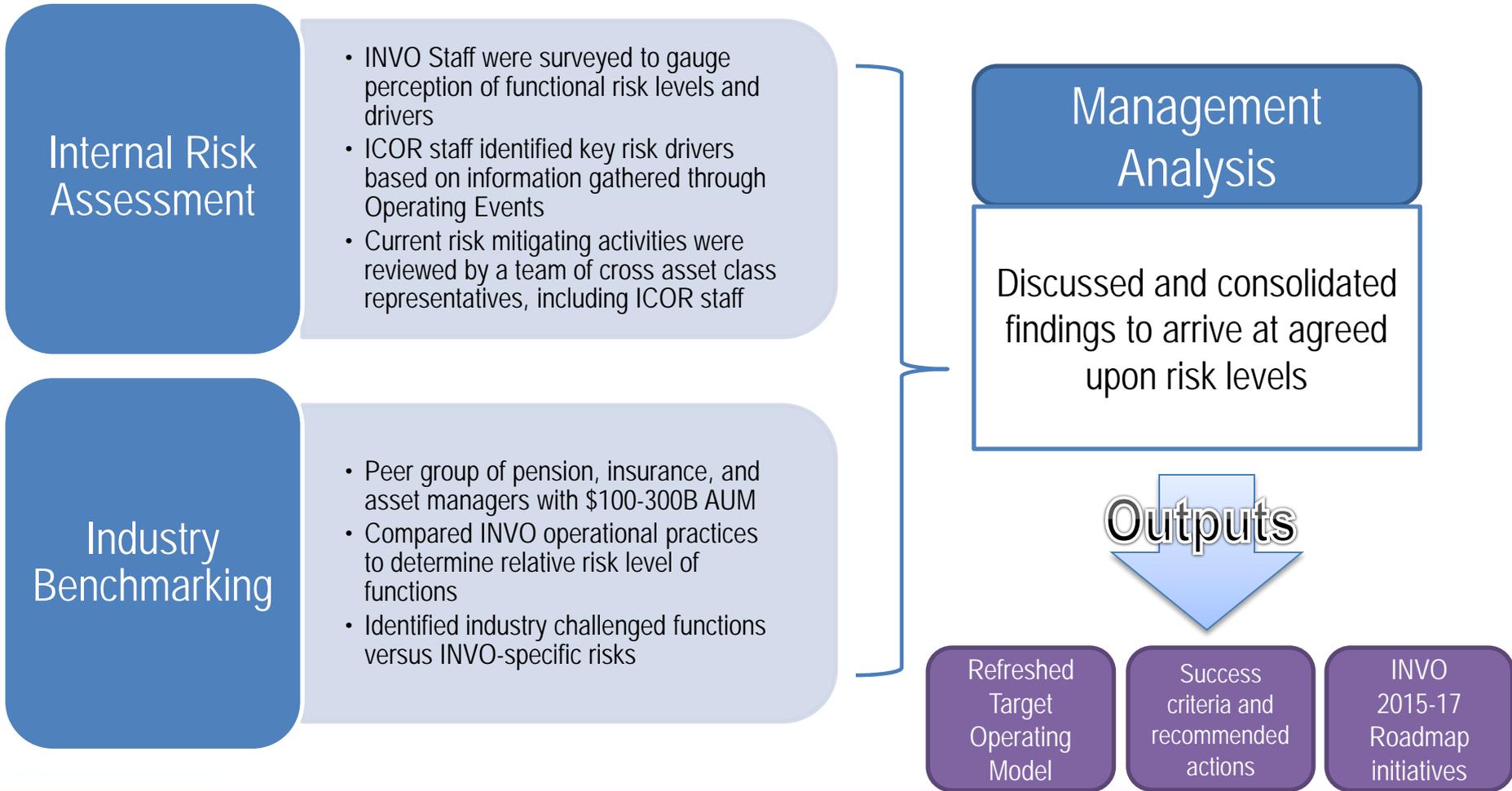
Significant progress in platform

• 48 discrete functions  
 • 5 high risk, ≈ 10%

## TOM Refresh | Purpose

- Every two years TOM function risk levels are re-assessed
- Risk levels are updated based on findings; success criteria for lowering risk during the next refresh are defined
  - Recommended actions for lowering risk are integrated into INVO Roadmap as initiatives
- Began current Risk Assessment work in late 2014 and completed Refresh in April 2015
  - For the first time, Investment Office staff conducted internal Risk Assessment
  - Cutter Associates performed industry benchmarking

# TOM Refresh | Methodology



## TOM Refresh | Key Insights

- ✓ Trailing peers in two critical areas:
  - *Business Continuity / Disaster Recovery*
  - *Data Management*
- ✓ Complex Business Model - Over 500 manager relationships with associated complexity, costs and risks
- ✓ Trust-level risk governance requires further development
- ✓ Performance attribution also requires further development, particularly in Global Fixed Income and Private Equity

# TOM Refresh | Key Changes

## ✓ Revised functional titles, risk levels, and remediation plans

- Red/ High Operational Risk Level:  Overall # Increased to Seven (7) Functions

 Three (3) functions were elevated to Red - Noted below

 One (1) function was lowered to Yellow – *Manager/ Partner Selection & Oversight*

### Fund Structure and Business Model *(Formerly Fund Structure)*

- Current business model has evolved, creating potential complexity and inefficiencies
- Complex account structures/relationships require significant manual processes and create inefficiencies for unitized pools

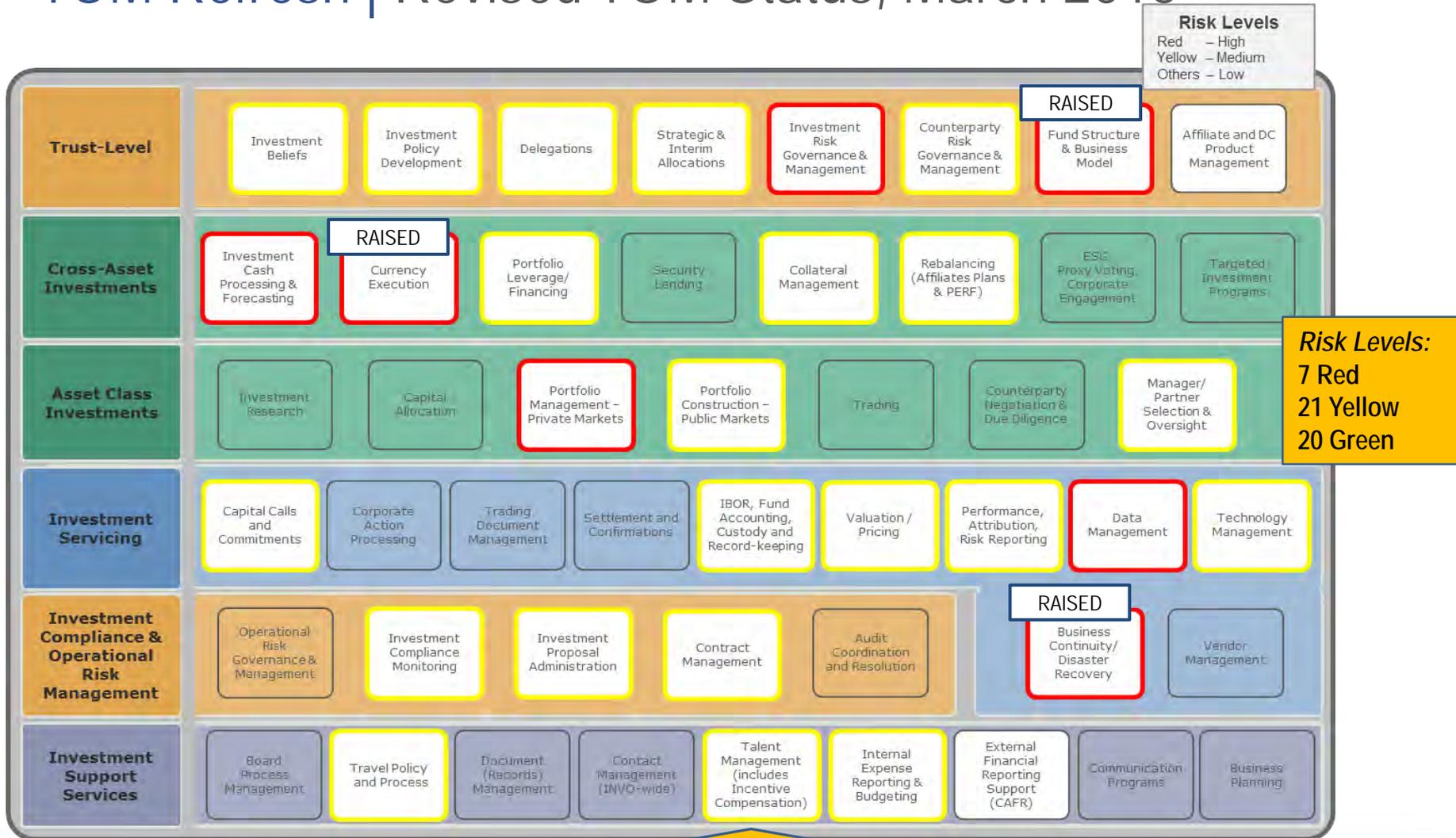
### Currency Execution *(Formerly Currency Management)*

- Technology and capacity not optimized to handle increased volume of currency transactions

### Business Continuity/ Disaster Recovery

- Business priorities during an event have not been established in order to assess mission critical capabilities, understand impacts from various threats and address increasing risk of “cyber-attacks”

# TOM Refresh | Revised TOM Status, March 2015



# TOM Refresh | Additional Changes

Investment  
Cash  
Processing &  
Forecasting

## Investment Cash Processing and Forecasting *(Formerly Liquidity and Cash Management)*

- Refined objective to include better defined roles and responsibilities related to liquidity management for benefit programs and investment related cash processing and forecasting

Strategic &  
Interim  
Allocations

## Strategic and Interim Allocations *(Formerly Strategic Asset Allocation)*

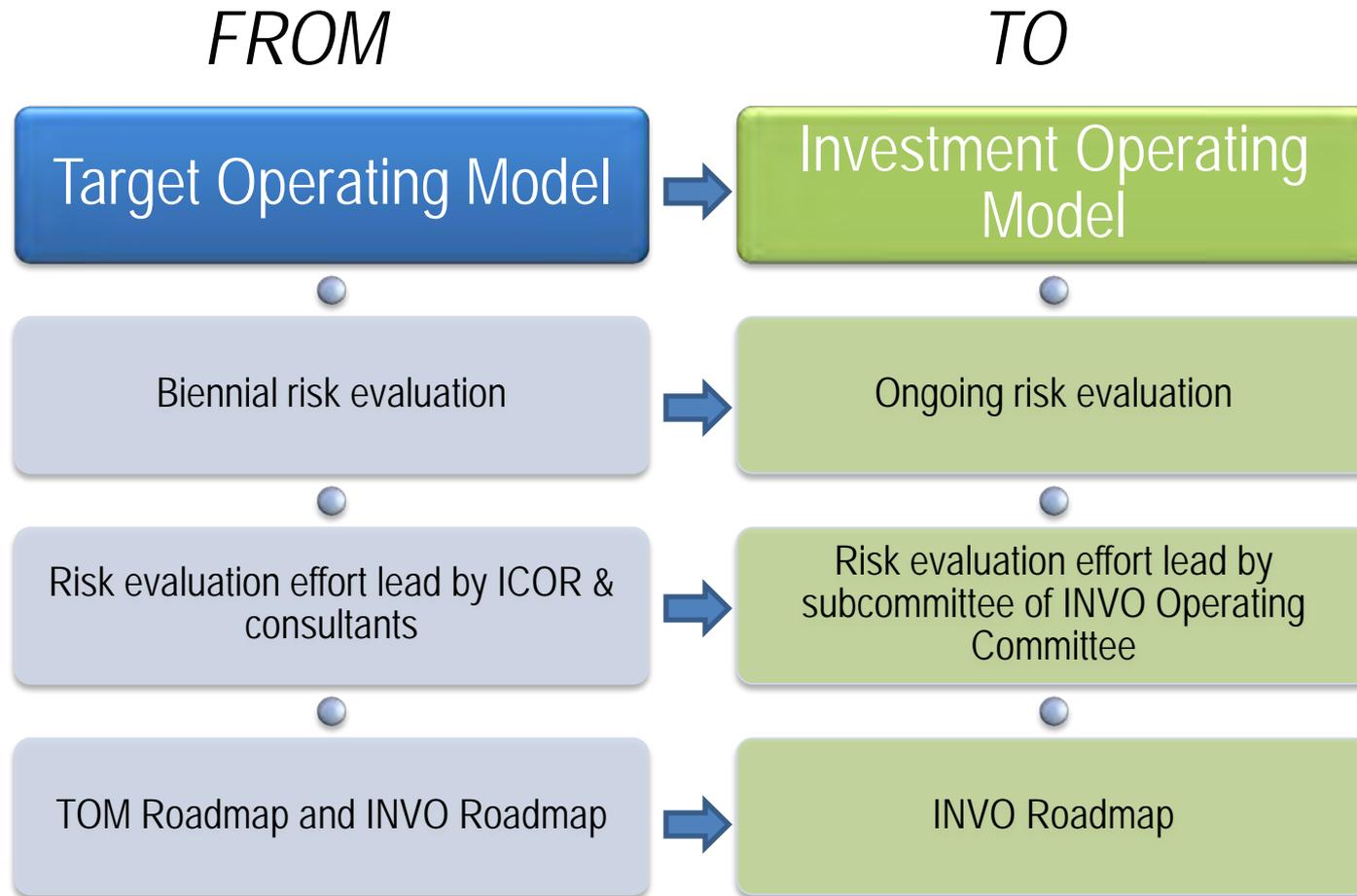
- Refined objective to address increased level of attention to all trust (fund) level investment policies, decisions and risks such as managing strategic and interim allocation, liquidity, currency hedging programs and leverage

Investment  
Risk  
Governance &  
Management

## Investment Risk Governance and Management

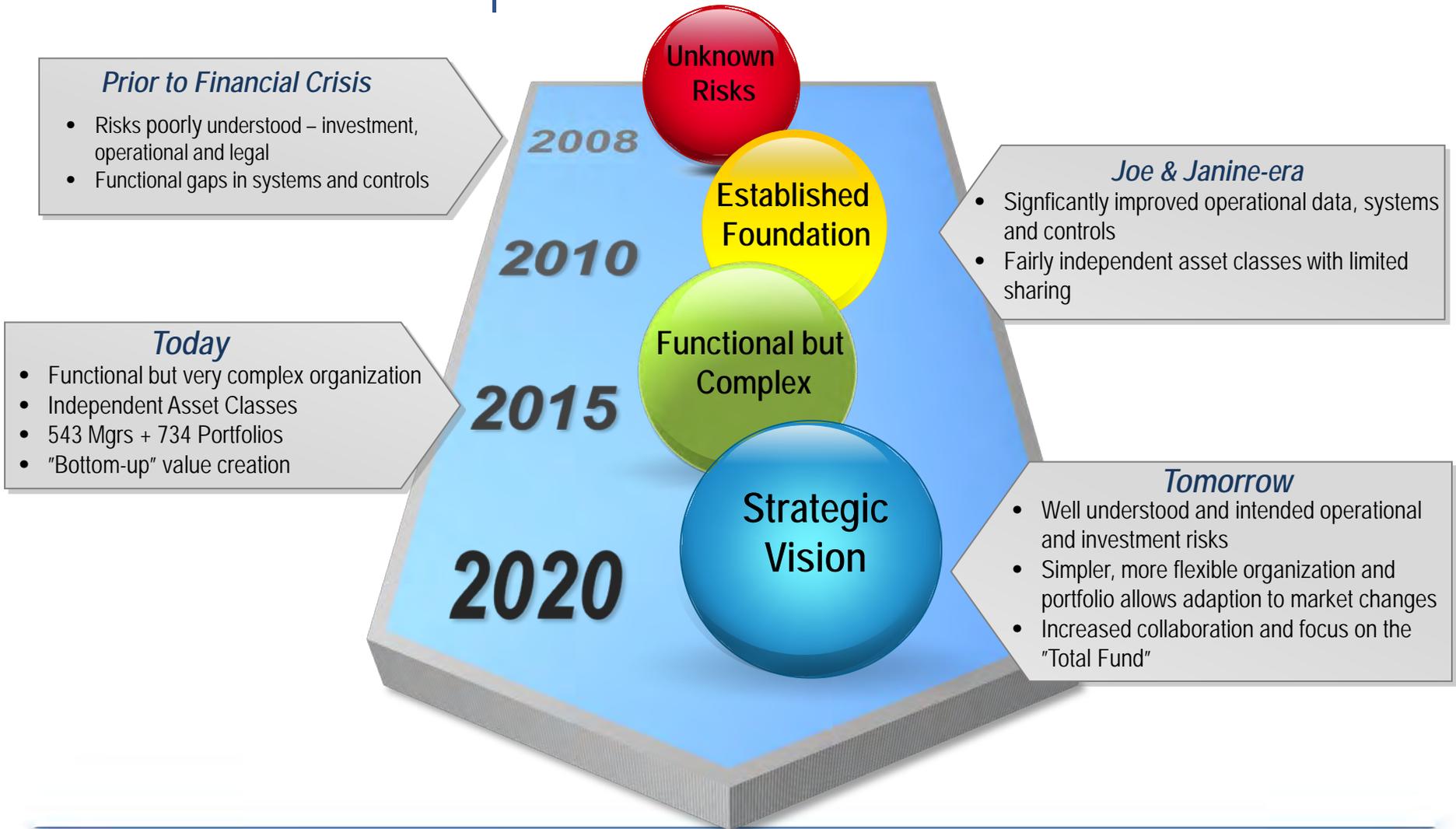
- Refined objective to strengthen investment risk monitoring and management functions, more robust portfolio analytics (performance, attribution, risk reporting)

# TOM | Future State



# INVO 2020 Vision

# INVO 2020 Vision | Evolution of the Investment Office



# INVO 2020 Vision | Understanding Today's Environment

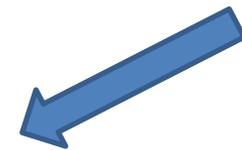
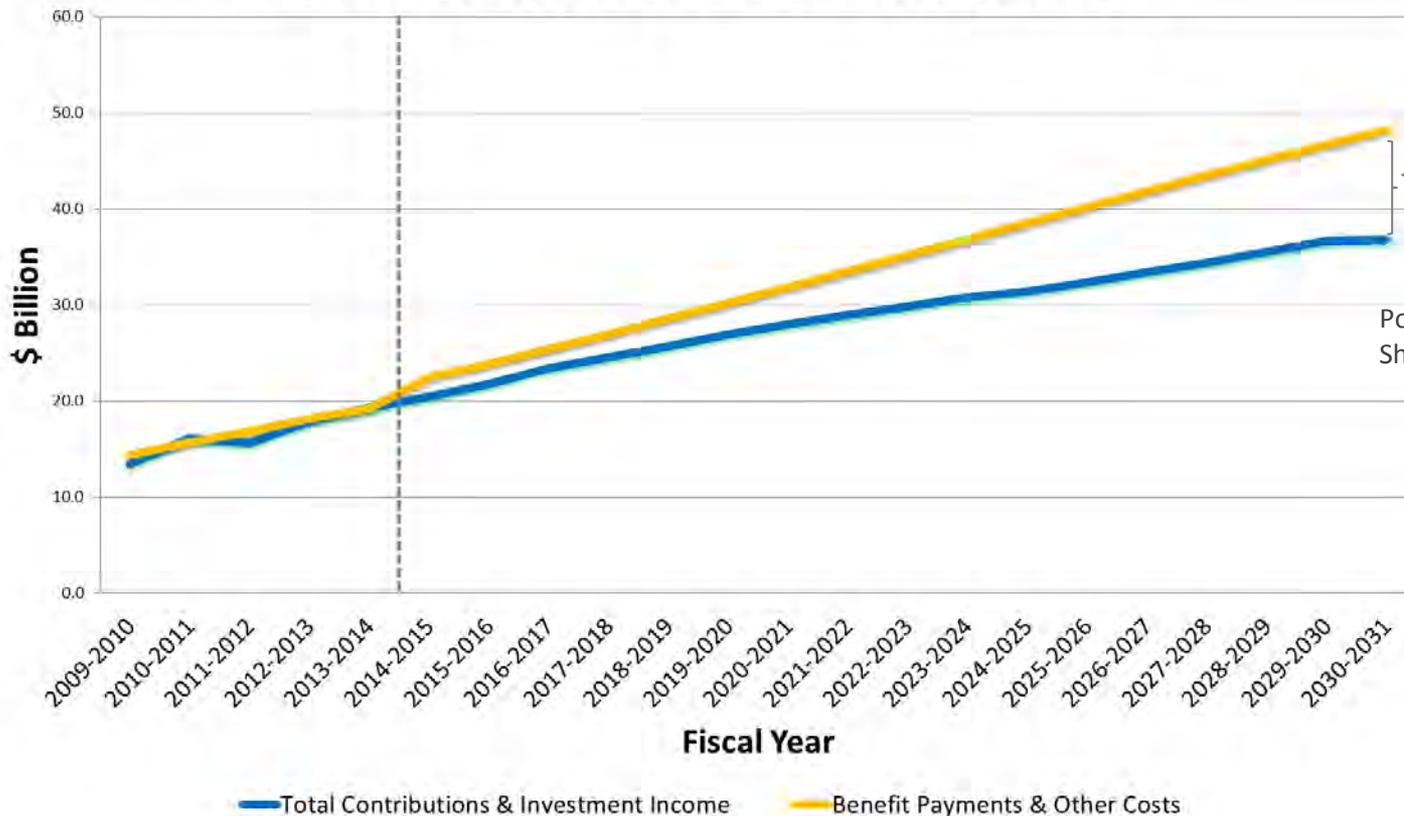
*Gravity Issues:  
Where we are today*



- Continued focus on cost and transparency
- \$1.5B/ 50-60bps in asset management fees
- Increasing focus on Liquidity and Income
  - *Liquidity is a key attribute required to manage risk through crisis periods*
- Benefit payments exceed contributions and investment income
- Very challenging 7.5% Return Target
- Existing Market Opportunities “Set” and low (or negative) interest rates

# INVO 2020 Vision | Today's Environment: Decreasing Cash Flow

## Historic & Projected PERF Cash Flow Analysis



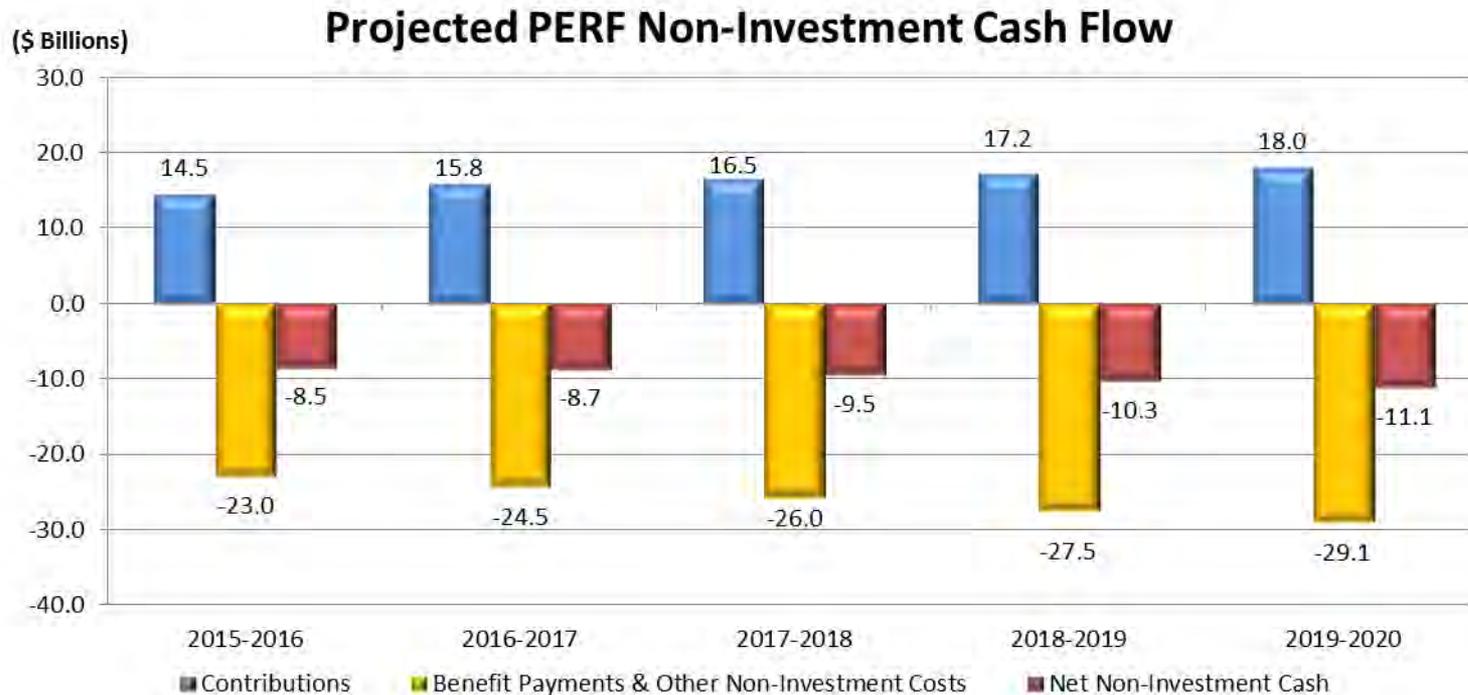
Potential Shortfall

- We can't "wait out" market downturns as easily
- Capital Allocation vs. Capital deployment

Notes:

Other Costs include refunds, administrative costs of retirement, and investment base fees

# INVO 2020 Vision | Today's Environment: Decreasing Cash Flow

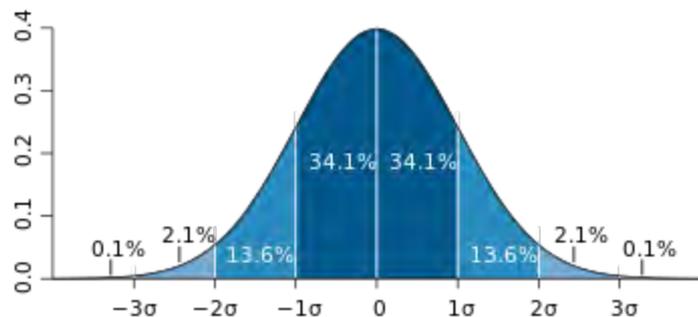


Notes:

Other Non-Investment Costs include refunds and administrative expenses

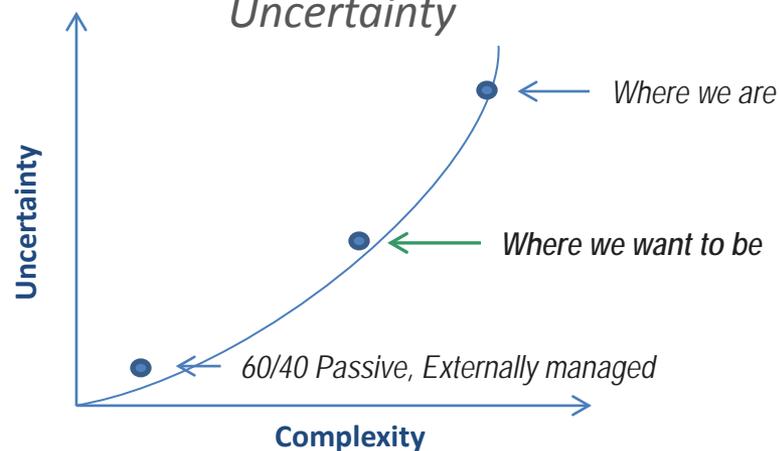
# INVO 2020 Vision | Multi-faceted Risk:

*Investment Risk*



- Investment risk based on a probability distribution of returns, based on history
- Estimable, though highly variable
- Predictable, within a given probability
- Includes a significant element of uncertainty as well (“Black Swans”)
- Can and should be actively influenced

*Uncertainty*



- Uncertainty has no estimable probability distribution
- Uncertainty can be influenced by avoiding uncompensated complexity and “fragility” in your investment portfolio and operations

# INVO 2020 Vision | Translating Today's Beliefs into Actions

## INVO Mission Statement

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

## INVO Vision Statement

- 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.

# INVO 2020 Vision | Building Tomorrow's Investment Model

- ✓ Similar to a mutual insurance company-model
- ✗ Not that similar to an Asset Manager or "Asset Gatherer"

- Asset management decisions must be made in collaboration with actuaries/ liabilities
  - *Investment Belief #1: Liabilities must influence the asset structure*
- Risk is key driver of portfolio and organization
  - *Investment Belief # 7: CalPERS will take risk only where we have a strong belief we will be rewarded*
- Elements are similar to a family office or endowment due to long-term outlook and inter-generational wealth transfer
- Positions are demanding and competitive; but can have reasonable hours/ balance/ compensation
  - *Investment Belief #10: Strong processes and teamwork and deep resources are needed to achieve CalPERS' goals and objectives*
- High degree of oversight and transparency

# INVO 2020 Vision | Addressing Risk and Complexity

## Change in Environment

- *Increased Risk and Complexity*
- *Increasing focus on Liquidity and Income*

## Change in Cash Flow

- *Decreasing cash-flow, increasing benefits payments*

## Change in Strategy

- *Fewer, but more strategic, partnerships*
- *Reduced Complexity*
- *Lower Management Fees*
- *Enhanced Governance & Manager Expectations*

# INVO 2020 Vision | Addressing Risk and Complexity

## *Where We Are Today - External Relationships*

- ✓ Decreasing Cash Flow
- ✓ Main driver of fees
  - FY 2013/14: 1.6M/ 92% of Total Expenses
- ✓ Large # of Accounts
  - Increased complexity
  - Significant Workload/ Resources

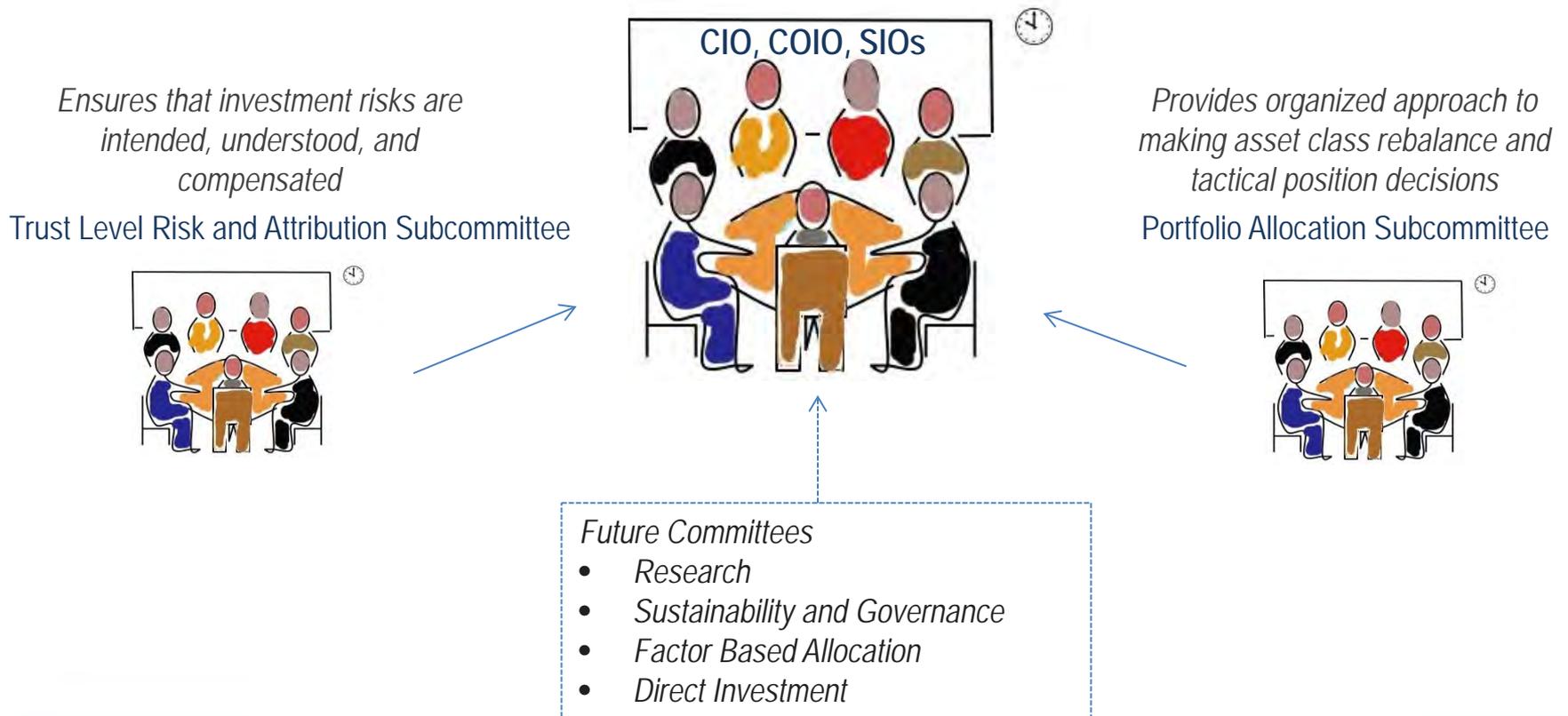
Program	Direct	Direct / Indirect
Global Equity	44	61
Global Fixed Income	13	13
Private Equity	98	352
Real Estate	51	61
Infrastructure	6	6
Total	212	493

# INVO 2020 Vision | Enhanced Investment Office Governance

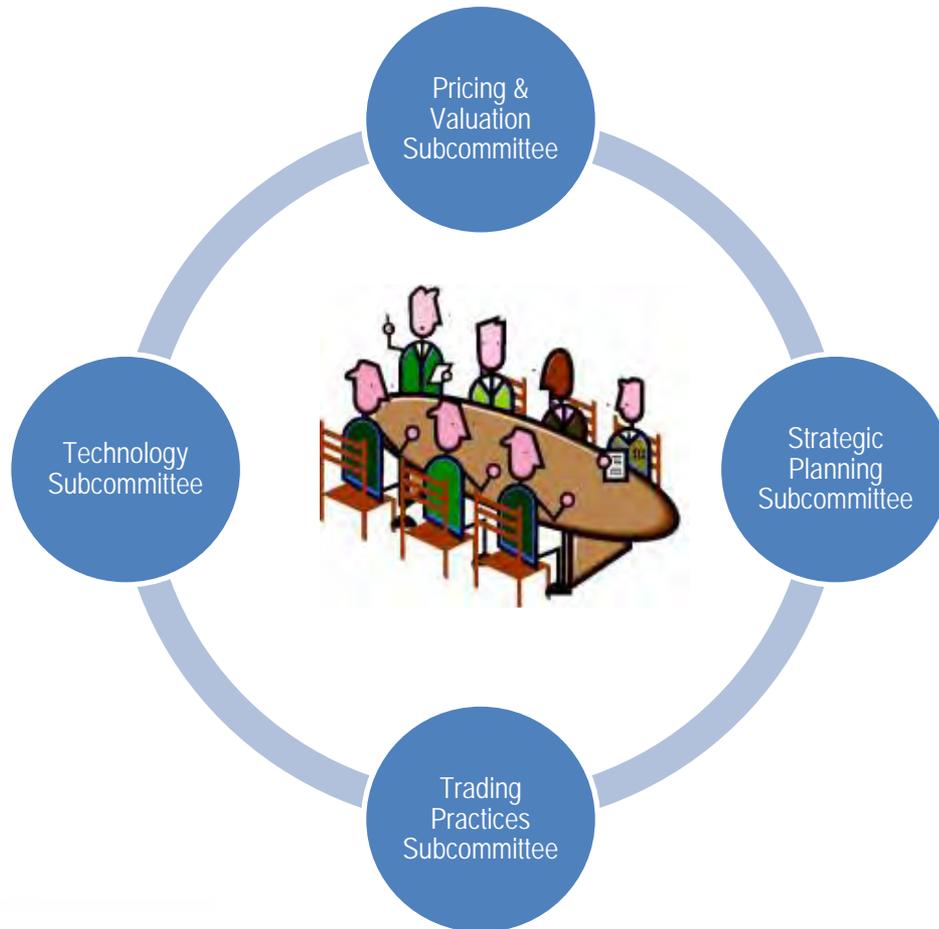


# INVO 2020 Vision | Investment Strategy Group

*Manages the holistic investment portfolio for the PERF and any other separate trusts for which CalPERS is the primary fiduciary*



# INVO 2020 Vision | Operating Committee

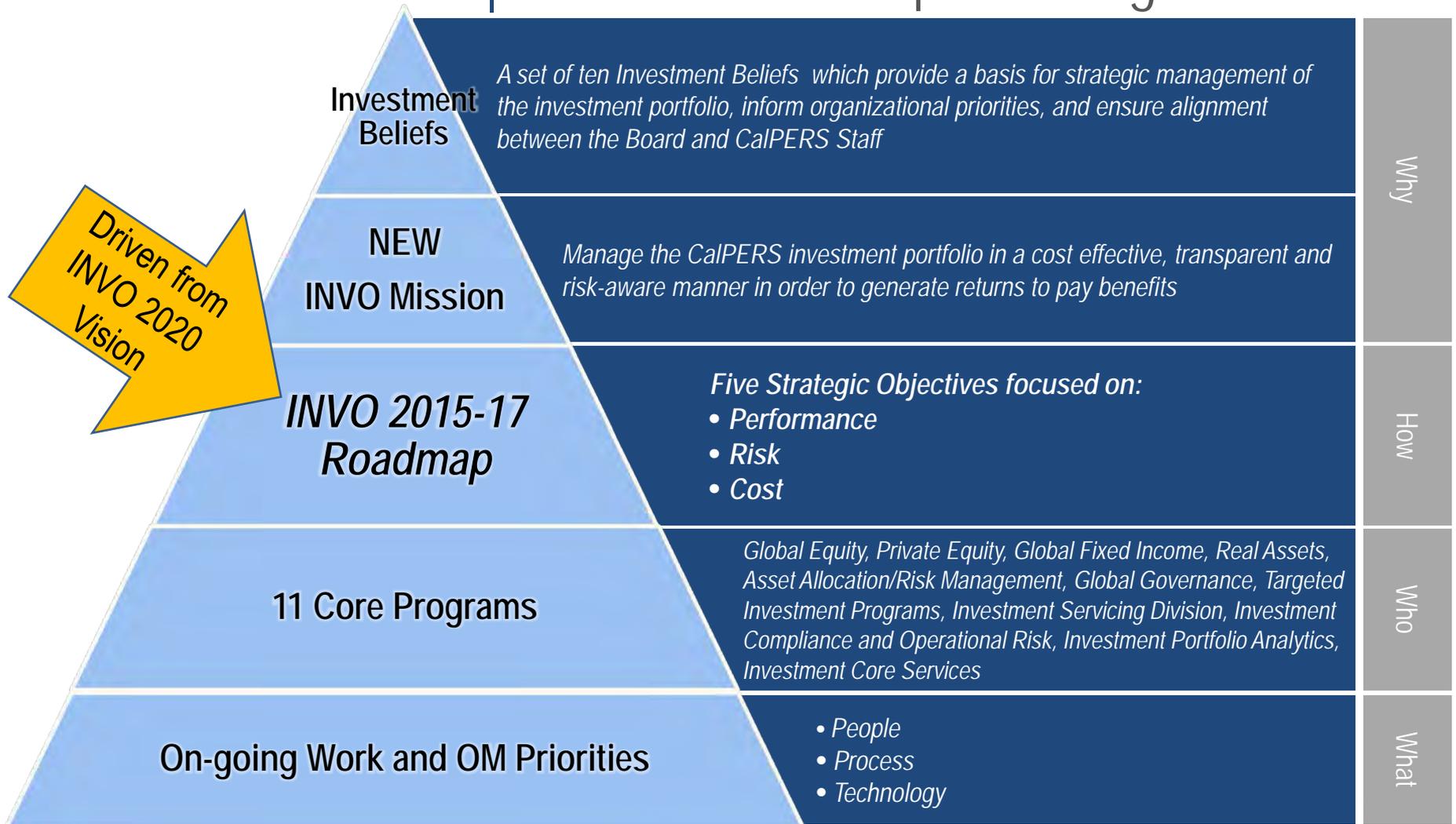


- ✓ *Governs efforts to identify, prioritize and mitigate significant operational risks related to our end-to-end investment process*
- ✓ *Oversees Investment Operating Model*
  - *Ongoing risk assessment and refresh process*

## INVO 2020 Vision | 2015-17

- ✓ Continue to build a strong and consistent investment model
- ✓ Understand and begin to address risk and complexity
- ✓ Focus time, intelligence, and resources on the most relevant and critical topics impacting Total Fund risk and return
  - 2015-17 Roadmap

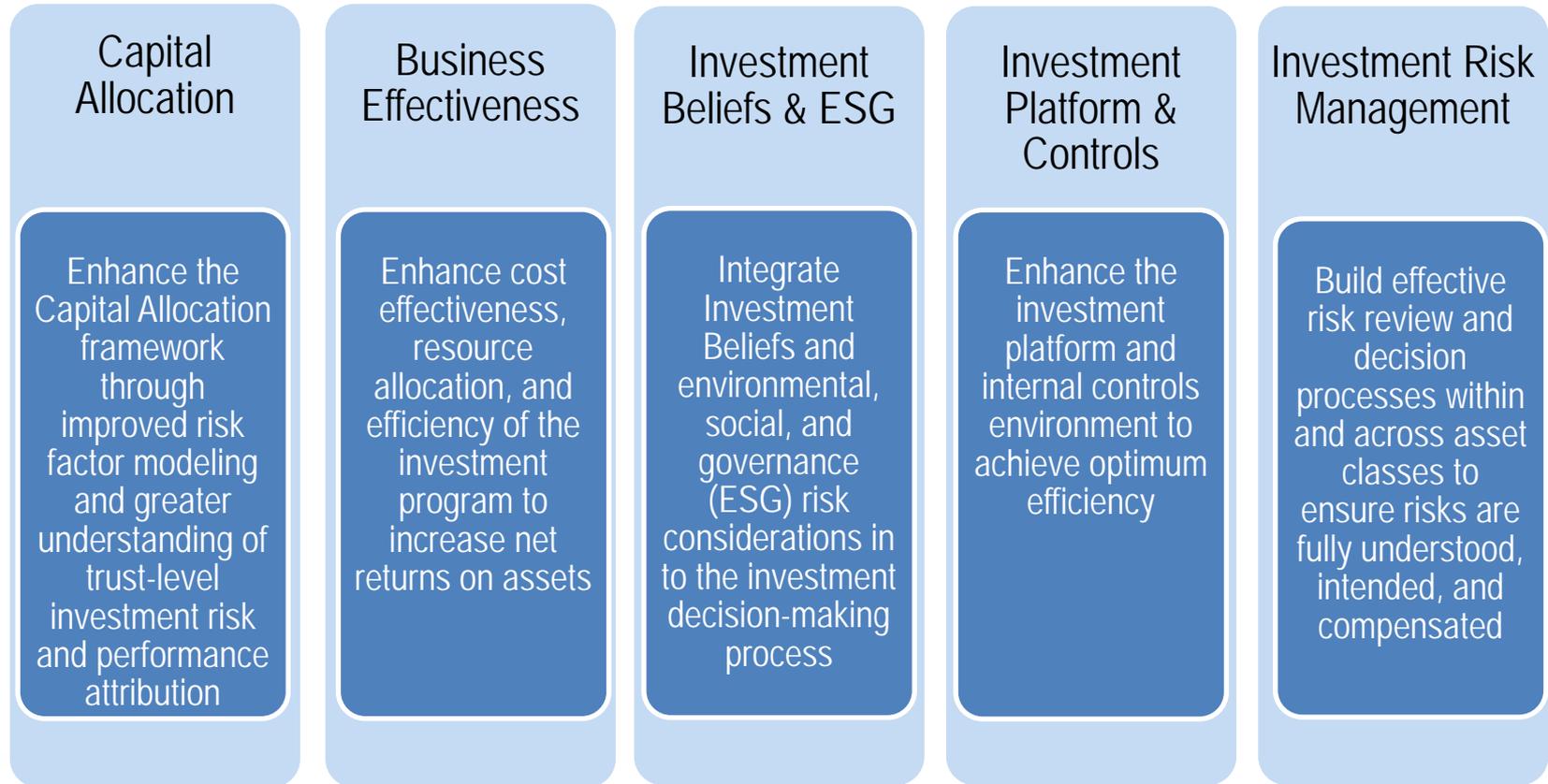
# INVO 2020 Vision | 2015-17 Roadmap Planning



Driven from INVO 2020 Vision

# INVO 2015-17 Roadmap | Strategic Objectives

Risk, Performance, Cost Strategic Measures



## INVO Roadmap | Next Steps

- ✓ Continue to address Red and Yellow Risk Level Functions
- ✓ Finalize 2015-17 Roadmap initiatives and success measurements
- ✓ Operationalize INVO Governance structure
- ✓ Finalize External Relationship strategy
- ✓ Finalize path forward on INVO 2020 Vision

## INVO Roadmap | Summary

- ✓ We have made significant progress, particularly in Operations, Systems and Controls
  - ✓ Transitioning from Target Operating Model to Investment Operating Model
- ✓ Our vision is to:
  - Reduce risk and complexity
  - Focus on repeatable, predictable, and scalable investment strategies and processes
  - Focus time, intelligence, and resources on the most relevant and critical topics