



# AI for Risk Management in Pension Funds

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## **AGENDA**

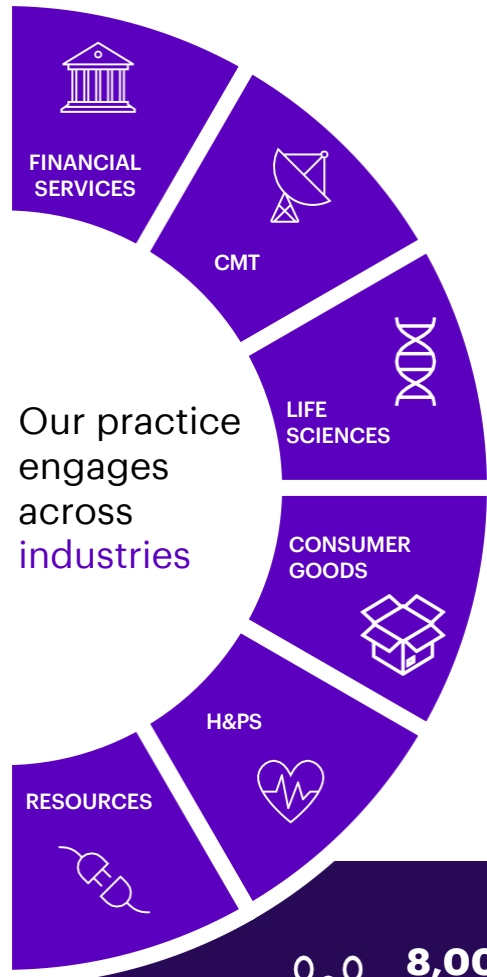
- 01 Introduction – Accenture Risk Team**
- 02 Understanding AI Fundamentals**
- 03 AI Implementation and change in Risk Management**
- 04 Q&A**

01

# Introduction: Accenture Risk Team

# Our Core Capabilities Help Navigate Today's Risks

Our expertise and accelerators enable us to provide end-to-end risk and compliance services across all industries, to meet the speed, scale and complexity that modern organizations demand.



## Regulatory Change

Creating sustainable processes to keep a pulse on new or changes to regulations and readying your business for its impact



## Risk & Compliance Transformation

Scaling through automation, resource and process optimization while managing costs.



## Controls Transformation

Establishing streamlined and automated control environments to enable proactive risk identification



## Risk & Regulatory Data and Reporting

Delivering accurate and timely financial, regulatory and risk reporting in a sustainable manner.



## Fraud

Building scalable and adaptable enterprise fraud capabilities that proactively reduce fraud risk, mitigate losses, and protect against reputational harm.



## Model Risk Management

Developing and validating fit for purpose models to help organizations increase their comfort levels with model outputs.



## KYC/AML

Driving KYC/AML transformation through technology to improve customer experience, reduce costs and maintain regulatory compliance.



## Credit Risk Management

Executing pilot use cases on AI-enabled platforms, enabling a sophisticated analysis and enhancement of credit frameworks.



**8,000+** Risk & Compliance experienced professionals



bringing expertise from **40+ countries worldwide**



Engaged with **Senior Regulators and Industry Bodies**

## NL RISK TEAM OVERVIEW

Our risk team is a diverse, international group of experts specialized in **regulatory adherence, risk strategy, and loan origination**. We have successfully partnered on small- and large-scale project with some of the biggest banks and asset management companies in the Netherlands.

We leverage our **global network of experts from across the world** with risk knowledge, proven capabilities and solutions, and combine this with deep local knowledge to enable and deliver tailored solutions, ensuring compliance and optimizing risk management for our clients.

Supported by Accenture's global risk practice, we are focused on guiding and supporting our clients in this rapidly changing world.



## INDUSTRIES SERVED

- Banking
- Pensions
- Asset Management
- Insurance
- Leasing



## CORE CAPABILITIES

- ❖ Regulatory Adherence
- ❖ Material Change Assessment
- ❖ Model Development & Validation
- ❖ Credit risk lifecycle topics
- ❖ Portfolio Monitoring
- ❖ Integrated Risk Management
- ❖ Data Management
- ❖ Reporting
- ❖ Collections



## STRATEGIC PILLARS

### Risk Operating Model

- Outlines the organization and governance of Risk Management, collaboration of the Risk function with other lines of Defense and support business operations, detailing how policies and processes are executed

### Regulatory Transformation

- Addresses how banks respond to evolving regulatory requirements in risk management, while also exploring how regulation drives transformation in operating models, technology, and strategic direction

### Risk Analytics

- Utilizing data, advanced analytics, and emerging technologies to generate actionable insights that inform decision-making and support regulatory reporting



## FACTS & FIGURES RISK & COMPLIANCE NL



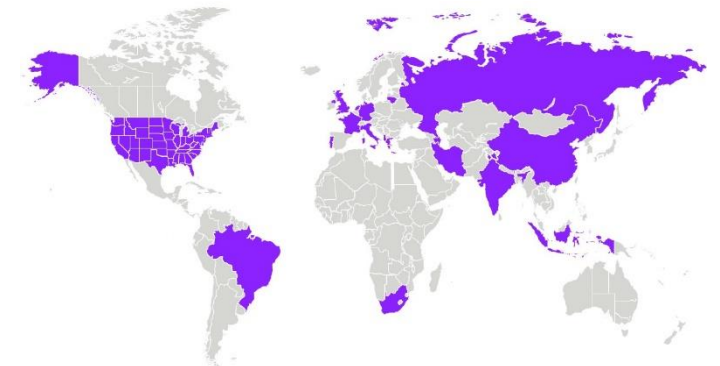
**30+** consultants



**15** nationalities



**50%** female, **50%** male



**Amsterdam, The Netherlands**

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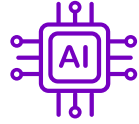
# Understanding AI Fundamentals

# When to use which AI technique

From automation, to creation and autonomy



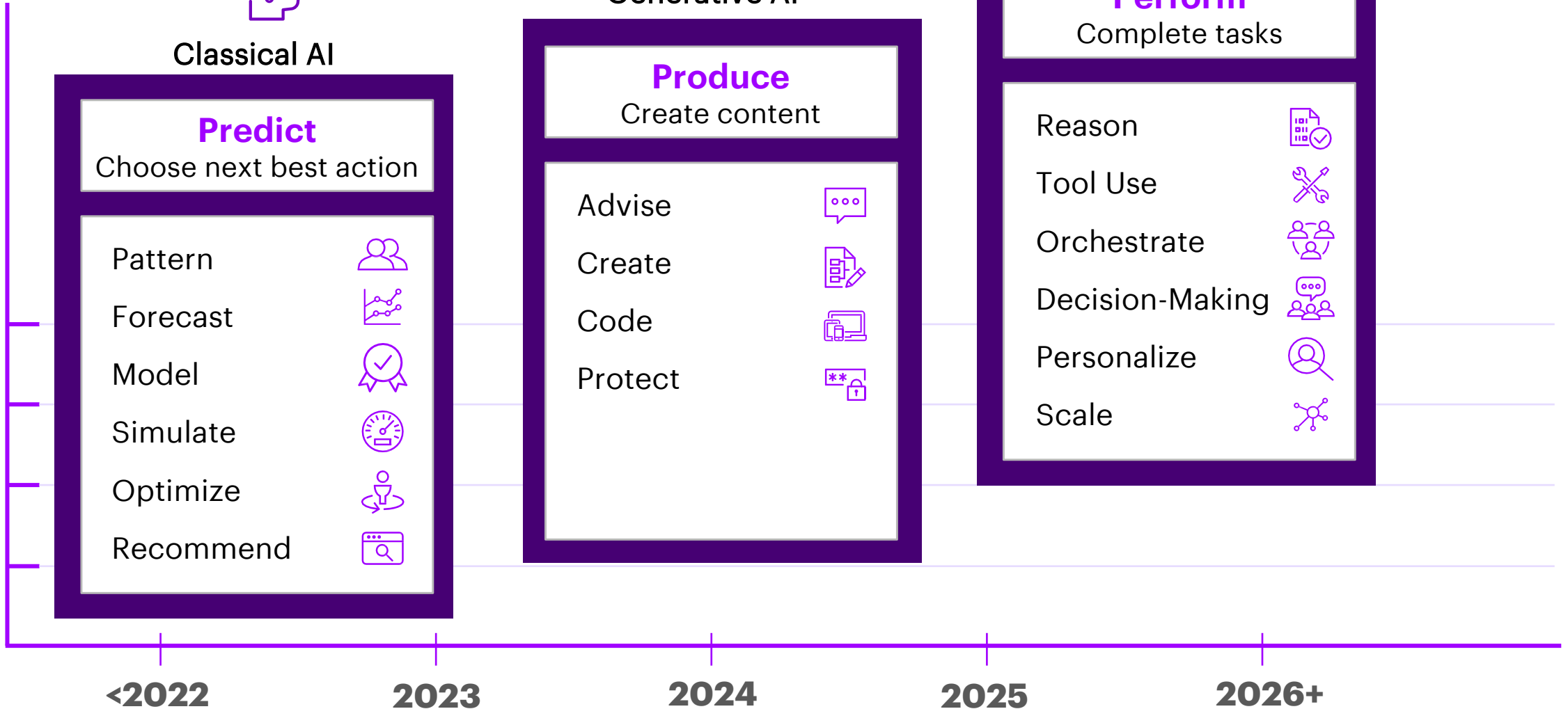
Agentic AI



Generative AI



Classical AI



# Choosing the Right AI for Pensions


## New AI techniques ensure future-proof pensions

**Classical AI & Machine Learning**

- **Structured, stable data environments**
- Risk modeling and funding ratio forecasting
- Fraud detection and anomaly monitoring
- **Predictive pattern recognition**
- Defined rule interpretation

**Examples in pensions:**

- Funding ratio forecasting
- ALM modeling
- Fraud detection
- Predictive analytics

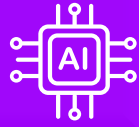


**Generative AI**

- **Document interpretation** and summarization
- Knowledge **retrieval across policy libraries**
- Drafting regulatory responses or participant communications
- **Natural language interaction**

**Examples in pensions:**

- Policy interpretation
- Member communications
- Regulatory drafting
- Knowledge base access




**Agentic AI**

- Cross-system orchestration
- **Exception-heavy administrative processes**
- Goal-oriented case resolution
- Multi-step validation workflows
- **Context retention across interactions**

**Examples in pensions:**

- Exception-heavy pension administration
- Multi-step eligibility validation
- Coordinated rollover processing
- Cross-system case resolution



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**High reliability in controlled environments.**

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**Handles unstructured information and language-heavy tasks.**

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**Struggles with ambiguity, evolving documents, and multi-system coordination.**

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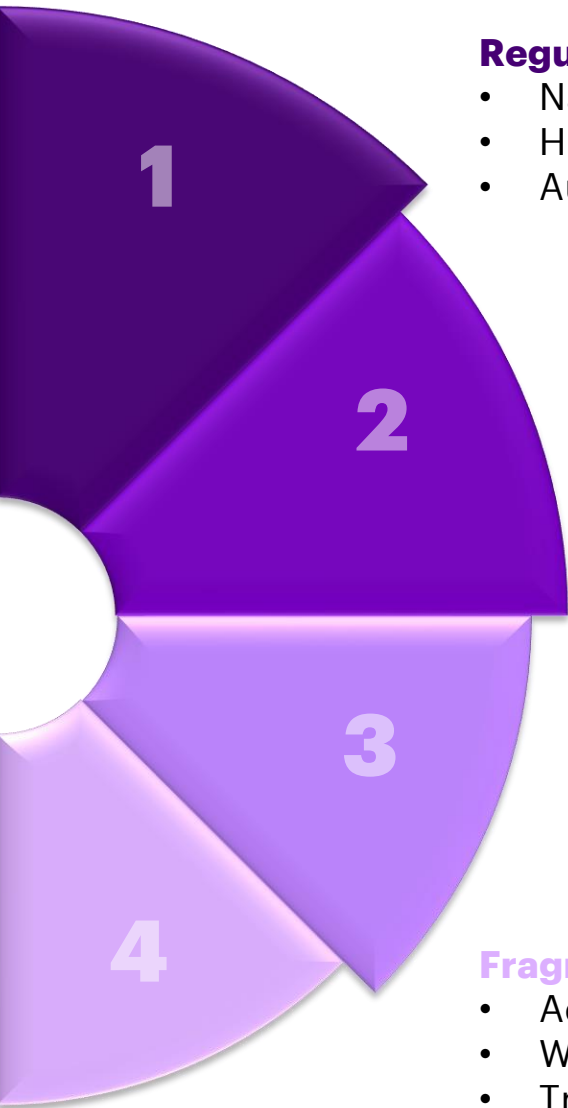
**Does not inherently manage multi-step process completion.**

**WHY AGENTIC**

**Combines reasoning, tool usage, memory, and autonomous decision support.**



# Structural Complexity in Pensions



## Regulatory Density

- National and cross-border mandates
- High sensitivity to interpretation
- Audit and transparency expectations

## Plan Level Customization

- Sponsor-specific rules
- Benefit structures
- Contribution logic
- Vesting variations

## Exception-Driven Work

- Special Case Eligibility
- Documentation gaps
- Tax and compliance nuance

## Fragmented Technology Landscape

- Administration platforms
- Workflow tools
- Treasury systems
- Knowledge repositories

# How AI Addresses Complexities



## Regulatory Density

- Applies plan and regulatory logic within predefined governance thresholds
- Escalates high-impact or ambiguous decisions automatically to human oversight
- Maintains full decision traceability to support audit and review



## Plan-Level Customization

- Dynamically applies sponsor-specific contribution, vesting, and benefit rules
- Ensures consistent rule interpretation across cases and administrators
- Retains contextual memory to avoid variability in similar scenarios



## Exception-Driven Work

- Pre-validates eligibility and documentation before execution
- Identifies and triages likely “not in good order” cases early
- Preserves case context across interactions to prevent rework



## Fragmented Technology Landscape

- Assembles real-time case context across multiple platforms
- Orchestrates multi-step workflows without rigid scripting
- Reduces manual cross-system reconciliation and handoffs



# New AI techniques in Pension Funds

## Unlocking the next level of productivity



### Traditional AI enablement

1. Rule-based validation engines for eligibility and compliance
2. Statistical risk models for ALM and funding ratio forecasting
3. Process automation to reduce manual steps
4. Reporting dashboards for regulatory transparency
5. Batch-based decision support cycles



### What AI now augments in Pension Funds

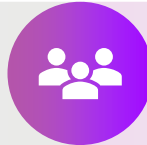
1. Context-aware interpretation of plan rules and documentation
2. Cross-system exception detection with embedded governance controls
3. Coordinated multi-step workflow orchestration under human oversight
4. Adaptive, data-driven communication with participants and intermediaries
5. Structured feedback loops to improve model sensitivity over time

# An Illustrative Example : *Withdrawal Processing*

Enabling processing and increased efficiency to unlock capacity for greater volume and growth

FROM  TO

**100** FTEs (illustrative)



**40 (60%)** efficiency

**99%** Accuracy



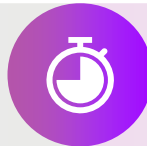
**99.9%** Accuracy

**20%** Straight through processing



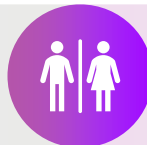
**50%** Straight through processing

**2-3 days** per transaction cycle time  
(request to disbursement / rollover)



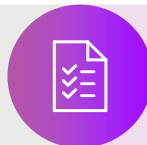
**Minutes to hours** via automation

**Delay in Work Allocation**



**Up to 30% improvement in Work Allocation**

**Manual Regulatory compliance**



**Automated monitoring and alerts**

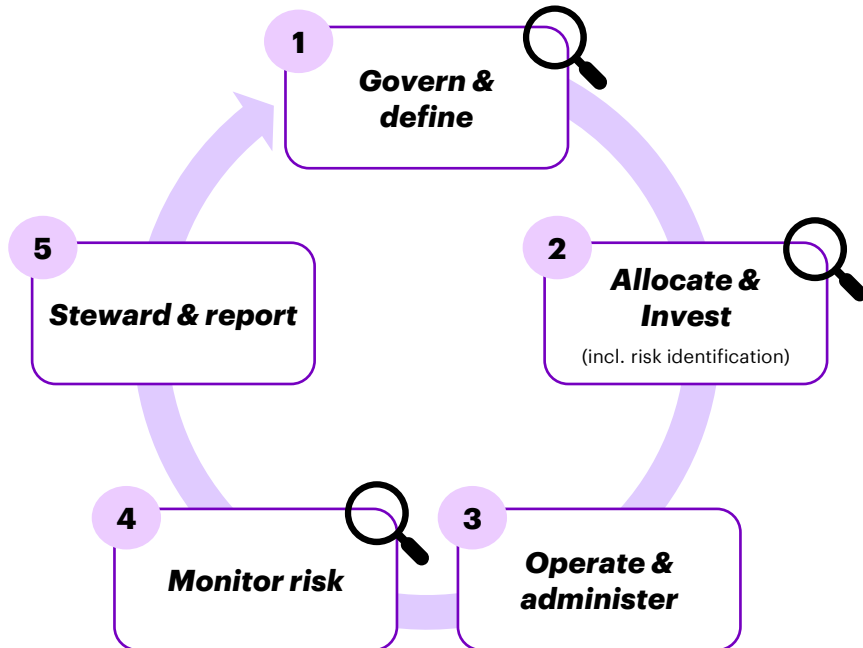


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# AI Implementation and Change in Risk Management

# AI across the pension fund lifecycle

When governed properly, AI becomes a fiduciary advantage across the entire lifecycle



## Lifecycle Stage

### 1. Govern & define

- Ensure fiduciary accountability and responsible AI oversight

### 2. Allocate & invest

- Translate liabilities into sustainable, risk-adjusted returns

### 3. Operate & administer

- Deliver accurate member outcomes efficiently and securely

### 4. Monitor & manage risk

- Proactively detect financial and operational vulnerabilities

### 5. Steward & report

- Strengthen ESG integration, transparency and regulatory compliance








## Illustrative AI applications

- AI risk inventory, model validation, EU AI Act alignment
- ML-enhanced ALM, adaptive scenario generation
- Early warning signals, drift detection
- Anomaly detection in benefit calculations
- NLP on CSRD reports, automated ESG KPI extraction

# Govern & define

## Embedding responsible AI into fiduciary oversight and decision governance

This stage defines risk appetite, fiduciary responsibilities and the governance frameworks that guide investment and risk decisions. AI requires clear oversight of models, data and decision boundaries - embedding transparency, traceability and responsible innovation into the fund's operating model.








	 <b>Fiduciary oversight &amp; risk appetite</b>	 <b>Model &amp; decision governance framework</b>	 <b>Data governance &amp; decision traceability</b>
 <b>What is it?</b>	<p>Definition of fiduciary objectives and risk appetite, including boundaries for AI-supported decisions.</p>	<p>Formal governance over models influencing ALM, risk forecasting, ESG scoring and operational processes.</p>	<p>Governance of data quality, lineage and documentation supporting investment and reporting decisions.</p>
 <b>Before</b>	<ul style="list-style-type: none"> <li>Risk appetite defined for financial and operational risks only</li> <li>Limited clarity on acceptable AI-driven decision support</li> <li>Board visibility focused on outcomes, not decision mechanics</li> </ul>	<ul style="list-style-type: none"> <li>Validation performed but not consistently tiered by materiality</li> <li>Limited cross-functional visibility into model dependencies</li> <li>Monitoring largely periodic</li> </ul>	<ul style="list-style-type: none"> <li>Data quality checks largely manual</li> <li>Limited traceability from input data to Board-level decisions</li> <li>ESG and risk metrics sourced from fragmented systems</li> </ul>
 <b>After</b>	<ul style="list-style-type: none"> <li>Explicit AI risk appetite embedded in the enterprise risk framework</li> <li>Clear human-in-the-loop boundaries for critical decisions</li> <li>Board transparency on where AI influences funding, hedging and member outcomes</li> </ul>	<ul style="list-style-type: none"> <li>Central model inventory linked to funding, liquidity and member impact</li> <li>Risk-tiering based on materiality and decision criticality</li> <li>Ongoing performance and drift monitoring embedded into governance reporting</li> </ul>	<ul style="list-style-type: none"> <li>Automated data quality controls across critical data domains</li> <li>Traceable lineage from raw data → model output → decision</li> <li>Clear documentation supporting regulatory disclosures and audits</li> </ul>
 <b>What does AI change</b>	<ul style="list-style-type: none"> <li>✓ The Board knows where AI matters</li> <li>✓ Accountability becomes explicit</li> <li>✓ Innovation stays within guardrails</li> </ul>	<ul style="list-style-type: none"> <li>✓ Models are monitored, not just approved</li> <li>✓ Dependencies become visible</li> <li>✓ Oversight becomes consistent</li> </ul>	<ul style="list-style-type: none"> <li>✓ Decisions are traceable</li> <li>✓ Data issues surface early</li> <li>✓ Reporting becomes defensible</li> </ul>



# Allocate & invest

## Dynamic, AI-enabled allocation aligned to liabilities and evolving market regimes

This stage determines how assets are allocated to meet long-term liabilities under changing market conditions. AI strengthens forecasting, stress testing and ALM by uncovering nonlinear dependencies, expanding scenario analysis and enabling more adaptive, data-driven allocation decisions.








	 <b>Risk forecasting</b>	 <b>Scenario Analysis</b>	 <b>Strategic Asset Allocation (ALM modelling)</b>
 <b>What is it?</b>	<p>Ongoing assessment of market risk exposures (interest rate, inflation, credit, equity) and their impact on funding ratio and LDI hedges.</p>	<p>Stress testing funding ratio and liquidity under predefined macroeconomic scenarios (base / adverse / severe).</p>	<p>Design of long-term asset mix aligned to liabilities, funding objectives, downside constraints and liquidity limits.</p>
 <b>Before</b>	<ul style="list-style-type: none"> <li>• Parametric or historical models (e.g., EWMA, GARCH)</li> <li>• Stable correlation assumptions</li> <li>• Periodic sensitivity updates</li> </ul>	<ul style="list-style-type: none"> <li>• Fixed scenario sets refreshed infrequently</li> <li>• Heavy reliance on expert judgement</li> <li>• Limited exploration beyond regulatory narratives</li> </ul>	<ul style="list-style-type: none"> <li>• Deterministic/stochastic ALM models run periodically</li> <li>• Allocation updated on fixed governance cycle</li> <li>• Limited feedback loop to real-time market signals</li> </ul>
 <b>After</b>	<ul style="list-style-type: none"> <li>• ML models capturing nonlinear cross-asset dependencies</li> <li>• Regime detection (e.g., low-rate vs inflation shock environments)</li> <li>• Continuous re-estimation of funding sensitivities</li> </ul>	<ul style="list-style-type: none"> <li>• Data-driven clustering of historical stress regimes</li> <li>• Generative expansion of plausible but unseen scenarios</li> <li>• Broader funding and collateral resilience testing</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous evaluation of allocation trade-offs</li> <li>• Funding trajectory assessed under multiple evolving conditions</li> <li>• Faster iteration across return-risk-liability constraints</li> </ul>
 <b>What does AI change</b>	<ul style="list-style-type: none"> <li>✓ Risks are identified earlier</li> <li>✓ Regime shifts are spotted faster</li> <li>✓ Hedging decisions become more responsive</li> </ul>	<ul style="list-style-type: none"> <li>✓ Scenarios reflect today's reality, not last year's</li> <li>✓ More stress combinations are tested</li> <li>✓ Resilience becomes clearer before shocks hit</li> </ul>	<ul style="list-style-type: none"> <li>✓ Allocation adapts as conditions change</li> <li>✓ Trade-offs are clearer in committee discussions</li> <li>✓ Liability impact is more visible in decisions</li> </ul>



# Monitor risk

## Strengthening oversight & early warning

This stage ensures the fund continuously identifies, measures and escalates funding, market, operational and counterparty risks. AI enhances this oversight through real-time monitoring, early warning indicators and predictive insights that surface vulnerabilities before they become material issues.

	 <b>Funding &amp; market risk monitoring</b>	 <b>Outsourcing &amp; third-party risk</b>	 <b>Internal controls &amp; compliance risk</b>
 <b>What is it?</b>	Ongoing monitoring of funding ratio, hedge effectiveness and market sensitivities.	Oversight of custodians, administrators and service providers, including SLA monitoring and concentration risk.	Testing of key controls across payments, trade booking, reconciliations and override governance.
 <b>Before</b>	<ul style="list-style-type: none"> <li>• Monthly or quarterly dashboard reporting</li> <li>• Breaches identified after deterioration</li> <li>• Escalation triggered reactively</li> </ul>	<ul style="list-style-type: none"> <li>• Reactive SLA breach tracking</li> <li>• Limited predictive insight into service degradation</li> <li>• Oversight spread evenly rather than risk-based</li> </ul>	<ul style="list-style-type: none"> <li>• Annual or semi-annual sampling</li> <li>• Manual override reviews</li> <li>• Compliance drift identified late</li> </ul>
 <b>After</b>	<ul style="list-style-type: none"> <li>• Real-time monitoring of funding sensitivities</li> <li>• Early-warning indicators for regime shifts</li> <li>• Automated escalation thresholds</li> </ul>	<ul style="list-style-type: none"> <li>• Predictive modelling of SLA breach risk</li> <li>• Network analysis of vendor dependencies</li> <li>• Risk-based prioritization of oversight resources</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous control testing across full data populations</li> <li>• Detection of unusual override patterns</li> <li>• Scenario simulation for ALM and liquidity stress</li> </ul>
 <b>What does AI change</b>	<ul style="list-style-type: none"> <li>✓ Funding pressure is visible earlier</li> <li>✓ Escalation happens faster</li> <li>✓ Fewer surprises for the Board</li> </ul>	<ul style="list-style-type: none"> <li>✓ Problems are flagged before they escalate</li> <li>✓ Oversight becomes risk-based</li> <li>✓ Vendor risk becomes measurable</li> </ul>	<ul style="list-style-type: none"> <li>✓ Controls are monitored continuously</li> <li>✓ Anomalies are detected immediately</li> <li>✓ Audit conversations become simpler</li> </ul>





# The Future of Risk is Human-Led, AI-Enabled.

The goal is not to achieve the same with fewer people.  
It is to achieve materially more with a more capable workforce.

# AI and the workforce

CHROs will need to lead the GenAI pivot and set the agenda for how organisations reinvent

87%

Executives surveyed believe **employees are more likely to be augmented than replaced** by generative AI.

40%

**Workforce will need to reskill** as a result of implementing AI and automation over the next three years.

76%

HR leaders believe that adoption and implementation of AI solutions, such as Gen AI, in the next 1-2 years will be **key to developing competitive advantage**

32%

HR Leaders are open to **implementing generative AI with their existing provider** at no cost

**38.1%**

Global enterprise adoption of Gen AI is projected to grow at a compound annual growth rate of 38.1% between 2022 and 2030

## Primary Goal of Generative AI for Processes

