



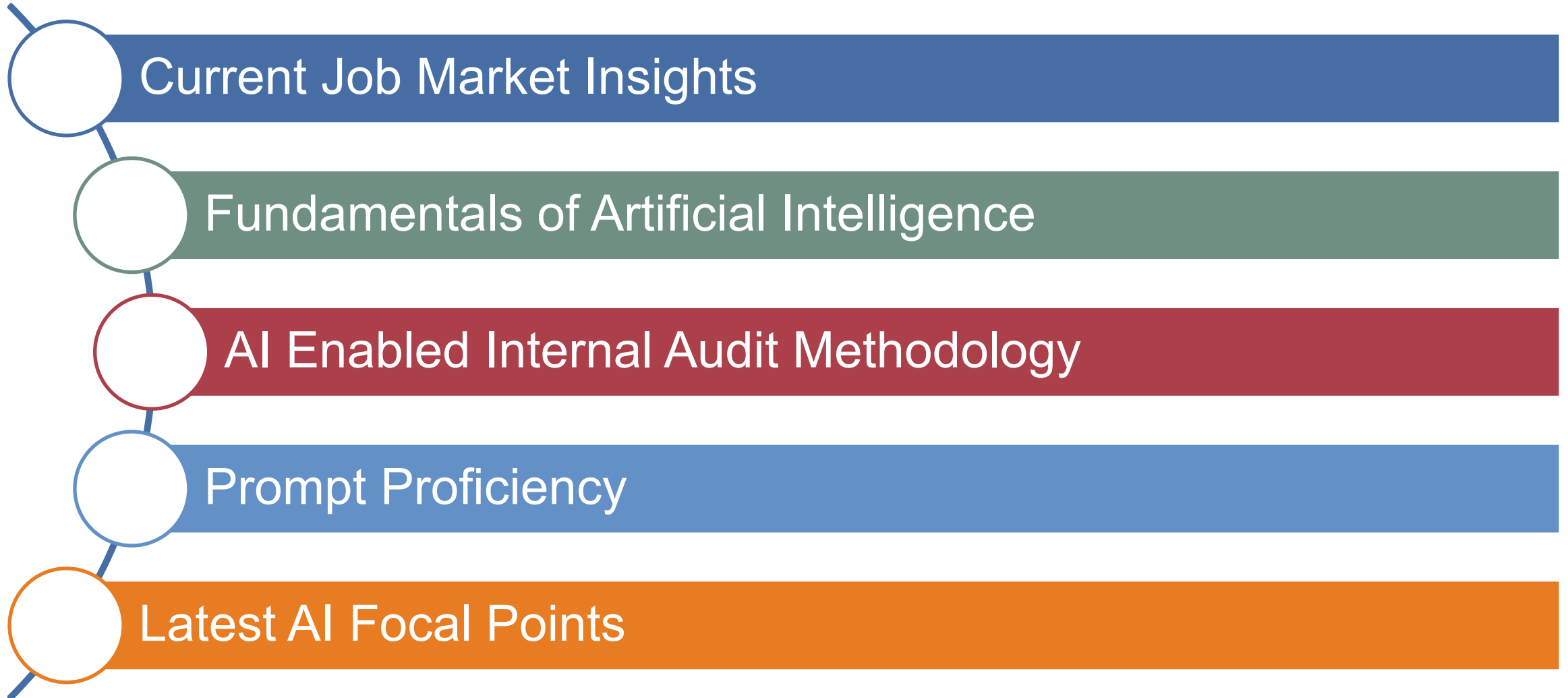
# Enabling Internal Audit through AI

Denver IIA Chapter  
Meeting

April 30, 2025



# Agenda



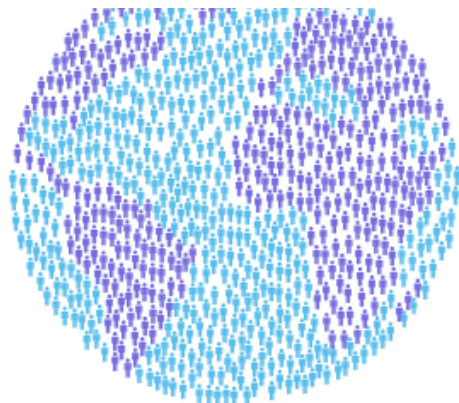


# 2Q'2025 Job Market Insights

# 2Q'2025 MEOS Highlights

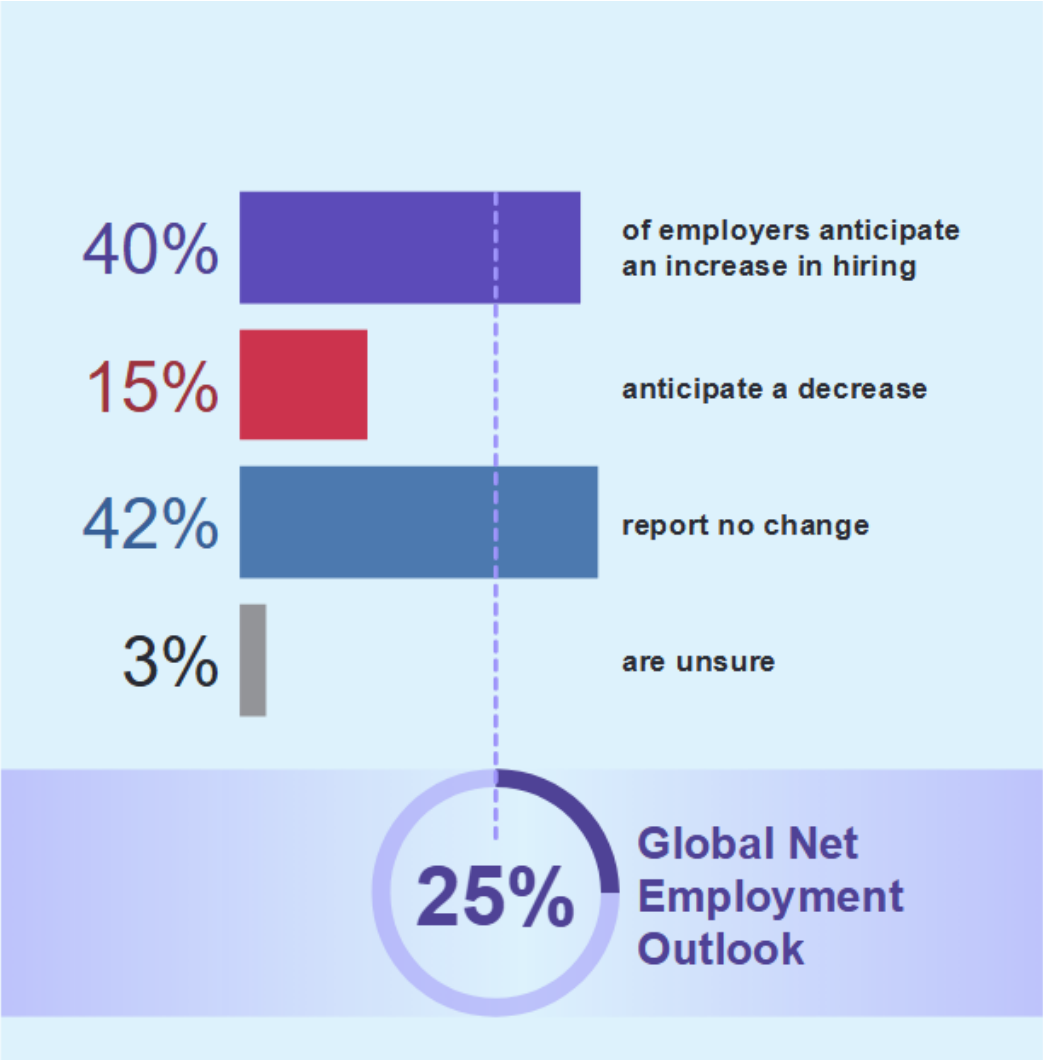


# 2Q'2025 MEOS Highlights



## Global Employment Outlook for Q2 2025

Used internationally as a bellwether of labor market trends, the Net Employment Outlook – calculated by subtracting the percentage of employers who anticipate reductions to staffing levels from those who plan to hire – **stands at 25%.**



# 2Q'2025 MEOS Highlights

## Hiring Expectations for April – June by Country

### Seasonally Adjusted, Net Employment Outlooks (NEO)



**43%** India  
Strongest NEO



**25%** Global  
Average NEO



**0%** Argentina  
Weakest NEO

<b>India</b>	<b>43%</b>
U.S.A.	34%
Mexico	33%
Canada	32%
China	32%
Costa Rica	32%
U.K.	31%
Guatemala	29%
The Netherlands	27%
Norway	27%
Singapore	27%
Brazil	26%
Switzerland	26%
Ireland	25%

Belgium	24%
Germany	22%
Finland	21%
France	20%
Panama	20%
Peru	20%
Taiwan	20%
Türkiye	20%
Colombia	19%
Portugal	19%
Sweden	19%
Italy	18%
Australia	17%
Poland	17%

Spain	15%
Japan	14%
Puerto Rico	14%
Chile	13%
Austria	12%
Israel	12%
Slovakia	12%
Hong Kong	11%
Czech Republic	10%
Hungary	8%
Greece	7%
Romania	6%
<b>Argentina</b>	<b>0%</b>



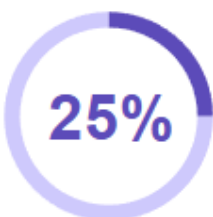
# 2Q'2025 MEOS Highlights

## Economic Challenges Influence Workforce Reductions

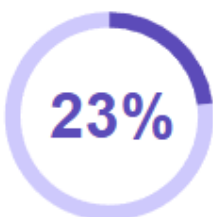
For employers anticipating a staffing decrease in the second quarter, **economic uncertainty is cited as the main challenge**, followed by adapting to market changes.



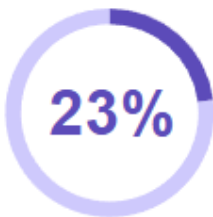
Economic challenges impacting staffing



Market shifts lowering job demand



Restructuring or downsizing



Adjusting to current demand



Automation has reduced some roles



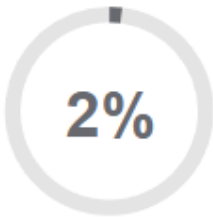
Process improvements are consolidating roles



Project-based roles are ending



Skill changes have reduced certain roles

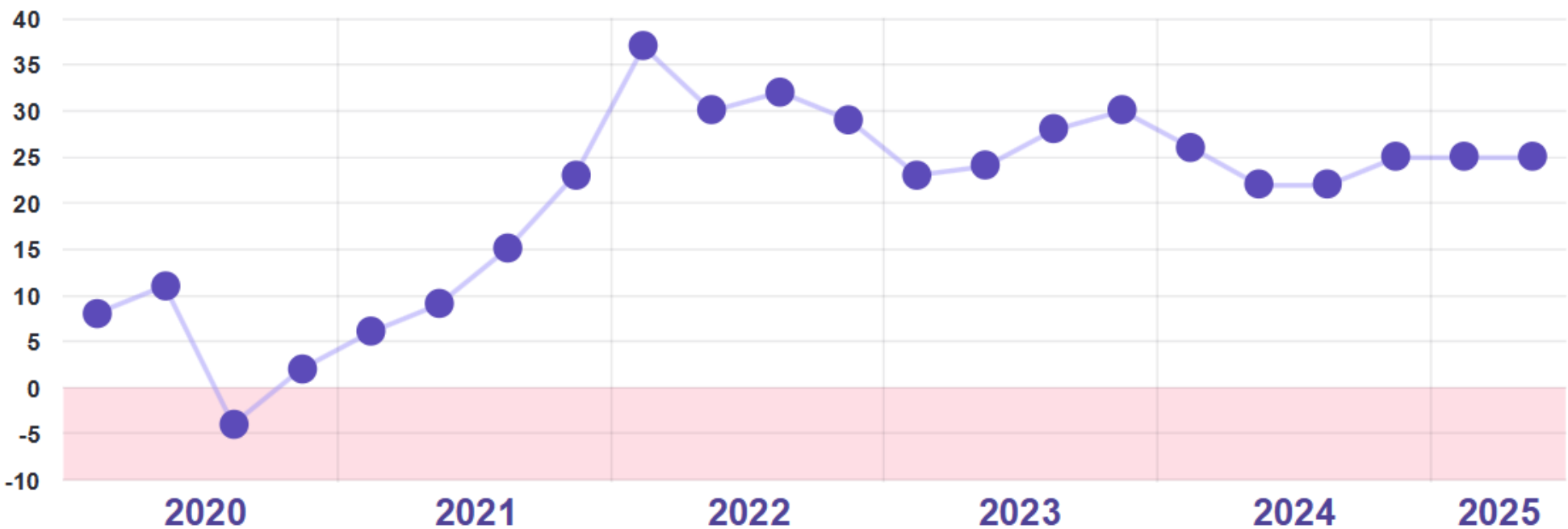


Other reasons

# 2Q'2025 MEOS Highlights

## Changes Over Time

**Global Outlooks** have remained unchanged since the previous quarter and improved when compared to the same time last year, increasing by 3 points.

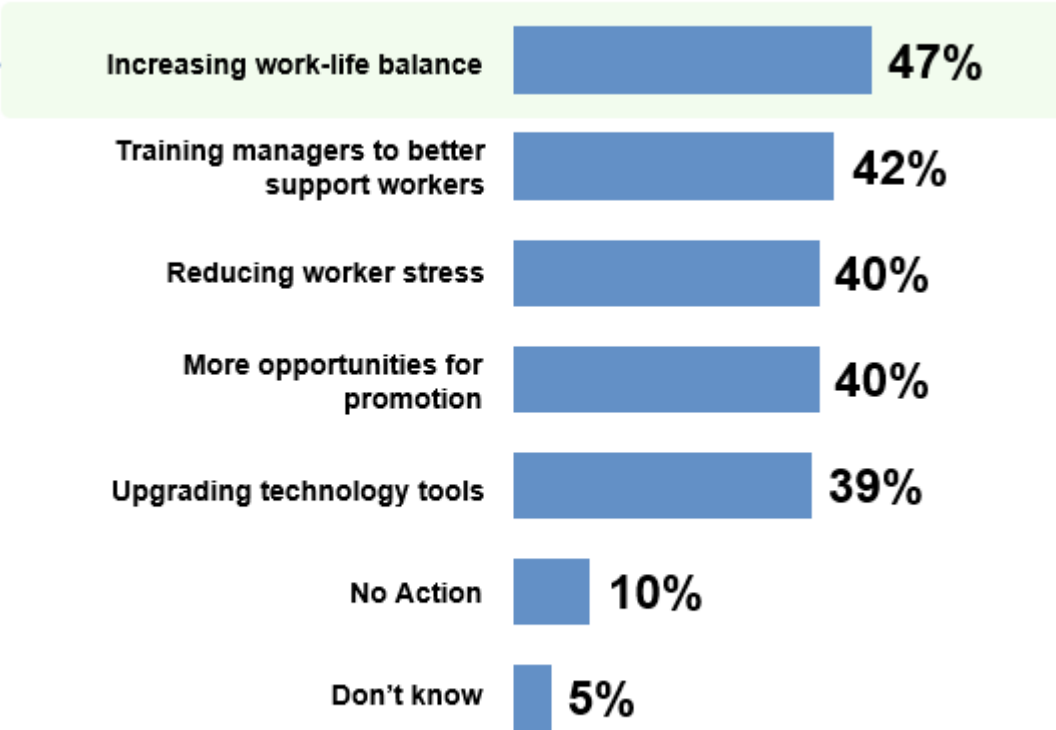




# Employer Strategies for Workforce Retention

Increasing work-life balance is the top priority for employers as they focus on increasing worker retention. This is especially true for organizations in the Northeast.

Increasing work-life balance 47%





# Fundamentals of Artificial Intelligence

# Basics of Generative AI

Generative AI defined as: Techniques, approaches and applications used to enable computer systems to perform tasks that require human intelligence.

Examples include:



Machine learning is a subset of AI constituted by the algorithms and modes that enable learning, prediction and making decisions without being specifically programmed for these tasks.

# Tool Selection Considerations

## Current Challenges

- Data set limitations
- Ability to standardize processes

## Expected Benefits

- Increase productivity and sample sets to keep pace with industry standards.
- Create subject matter expertise

## Primary Use Case

- Research, project planning, audit program development, aid in the completion of fieldwork, results analysis, report generation.

## Estimated Productivity Gains

- Develop standard prompts
- Provide a higher-valued end product for auditees
- Productivity gains

## Key Metrics & ROI

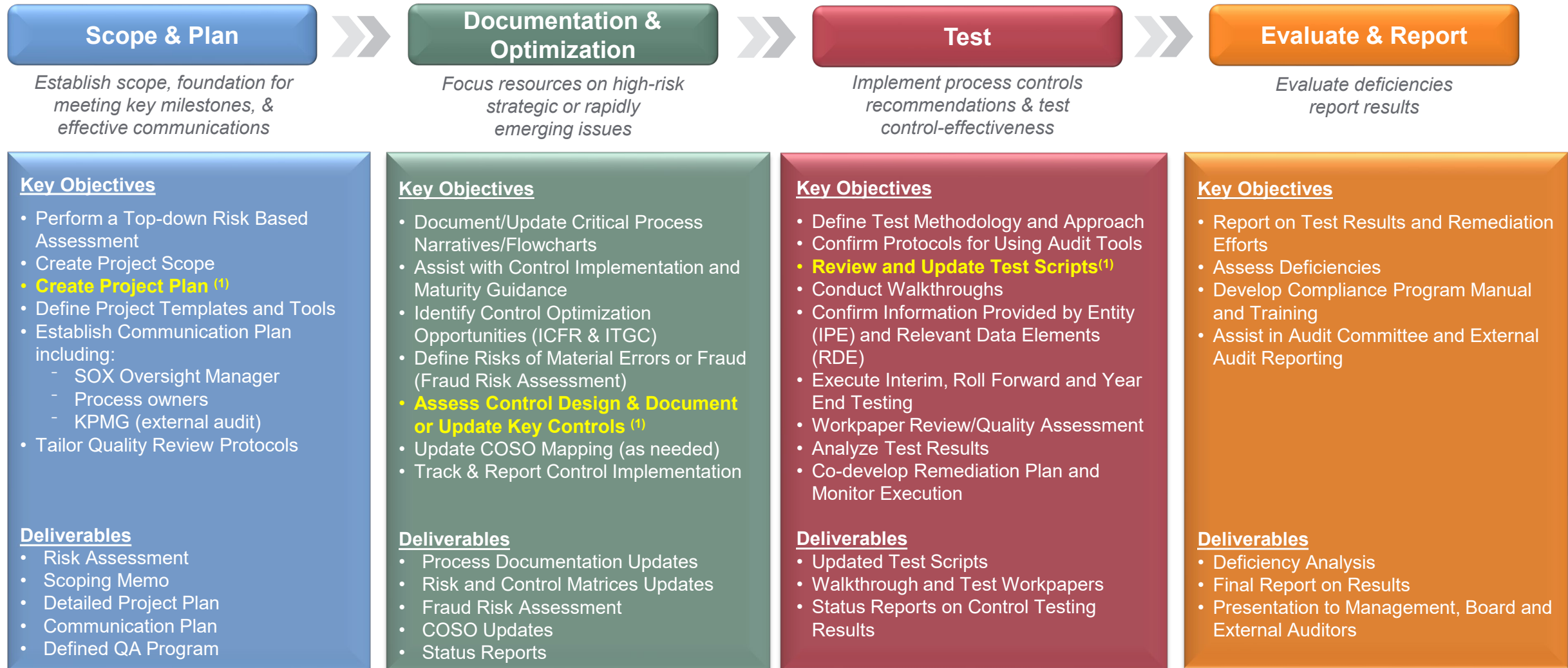
- Data Security
- Ability to take on more projects.
- Operational Efficiency
- Streamlined processes
- Reduction in administrative overhead and manual tasks.
- Competitive Advantage
- Enhanced ability to offer innovative solutions and services.
- Risk Mitigation
- Improved ability to identify and address potential risks and anomalies
- Talent attraction and retention



The left side of the slide features a series of overlapping, semi-transparent geometric shapes, primarily diamonds and triangles, in various shades of blue and white. These shapes are arranged in a vertical column, creating a modern, abstract background element.

# AI Enabled Internal Audit Methodology

# Common Audit Approach



<sup>(1)</sup> Reference Slides 11-13 for prompt examples

# IA Methodology: AI Considerations

Activities		1. Can the task be supported by AI?	2. What AI tool would be best suited for the task?	What approach and prompts should be considered in the design of AI solution for the task?	Challenges / Risks	Next Steps
Scope & Plan	Project Management / Oversight / Reporting					
	Kickoff / Scoping / Planning					
Document & Optimize	Risk Assessment / Scoping					
	Process Walkthroughs and Controls Documentation Updates					
Test	Interim Controls Testing: ITGC, ELC, and BP					
	Roll Forward Control Testing: ITGC, ELC, and BP					
	Q4 and Year-End Controls Testing					
Evaluate & Report	Reporting					
	Control Deficiency Remediations <i>(if necessary)</i>					
Com.	Communications with Audit Committee, Governance Committee and Executive Leadership Team					

AI Implementation Plan





# Prompt Proficiency

# Writing Prompts

“Prompt” illustrates a query that can be presented to the AI model to assist with a certain audit activity.

Who		What		Why		When		How
-----	--	------	--	-----	--	------	--	-----

A well-written, complete, and actionable prompt typically includes the following elements:

- 1. **Clarity:** The prompt should be clear and unambiguous. Avoid vague language and ensure that the instructions are easy to understand.
- 2. **Specificity:** Provide specific details about what you want to achieve. This includes the desired outcome, the scope of the task, and any particular requirements or constraints.
- 3. **Context:** Offer enough background information to help the reader understand the context of the task. This can include the purpose, the audience, and any relevant history or prior work.
- 4. **Actionable Steps:** Break down the task into actionable steps or guidelines. This helps the reader know exactly what actions to take to complete the task.
- 5. **Examples:** Provide examples to illustrate what you are looking for. This can help clarify your expectations and provide a reference point.
- 6. **Tone:** Use a tone that is appropriate for the audience and the task. Whether formal or informal, the tone should be consistent and suitable for the context.
- 7. **Flexibility:** Allow for some flexibility to encourage creativity and problem-solving. While being specific, avoid being overly prescriptive.

# Example: Planning and Scoping

## Audit Step:

### Planning and Scoping

**Prompt:** You are an internal audit executive for \$5B global original equipment manufacturer. Please create an annual, risk-based audit plan. The plan should consider a total of 10,000 hours of internal controls testing work covering the following areas: revenue, accounts payable, inventory, payroll, IT general controls, and fixed assets. The audit plan should allocate work to a total of 4 business process auditors and 2 IT audit professionals. Each audit will require project management and administrative time.

## CoPilot Output

Creating an annual, risk-based audit plan for a \$5B global original equipment manufacturer involves careful allocation of resources and consideration of risk factors. Here's a structured plan:

### Annual Risk-Based Audit Plan Total Hours: 10,000

#### Audit Areas and Hours Allocation:

- 1.Revenue:** 2,000 hours
- 2.Accounts Payable:** 1,500 hours
- 3.Inventory:** 1,500 hours
- 4.Payroll:** 1,000 hours
- 5.IT General Controls:** 2,000 hours
- 6.Fixed Assets:** 1,000 hours
- 7.Project Management and Administrative Time:** 1,000 hours

This plan ensures a balanced distribution of hours and resources, focusing on high-risk areas while allowing for adequate project management and administrative support.

### Detailed Breakdown:

1. Revenue (2,000 hours)
  - a. Testing: 1,800 hours
  - b. Project Management/Admin: 200 hours
  - c. Auditors: 2 Business Process Auditors
2. Accounts Payable (1,500 hours)
  - a. Testing: 1,350 hours
  - b. Project Management/Admin: 150 hours
  - c. Auditors: 1 Business Process Auditor
3. Inventory (1,500 hours)
  - a. Testing: 1,350 hours
  - b. Project Management/Admin: 150 hours
  - c. Auditors: 1 Business Process Auditor
4. Payroll (1,000 hours)
  - a. Testing: 900 hours
  - b. Project Management/Admin: 100 hours
  - c. Auditors: 1 Business Process Auditor
5. IT General Controls (2,000 hours)
  - a. Testing: 1,800 hours
  - b. Project Management/Admin: 200 hours
  - c. Auditors: 2 IT Audit Professionals
6. Fixed Assets (1,000 hours)
  - a. Testing: 900 hours
  - b. Project Management/Admin: 100 hours
  - c. Auditors: 1 Business Process Auditor
7. Project Management and Administrative Time (1,000 hours)
  - a. Allocated across all audits: 1,000 hours

# Example: Risk and Control Documentation

## Audit Step:

### Planning and Scoping

**Prompt:** We are planning a compliance audit for regional health network that is headquartered in Washington and operates in Oregon and Idaho. What are the core elements of a Department of Justice and Health and Human Service OIG compliance audit?

## CoPilot Output

A compliance audit by the Department of Justice (DOJ) and the Office of Inspector General (OIG) for a health network or hospital system typically involves several key elements. These audits are designed to ensure that the organization adheres to federal laws and regulations, particularly those related to fraud, waste, and abuse in healthcare. Here are the main elements:

**1.Compliance Program Infrastructure:** This includes the establishment of a compliance program with clear policies and procedures, a designated compliance officer, and a compliance committee

**2.Risk Assessment and Management:** Regular risk assessments to identify potential areas of non-compliance and the implementation of measures to mitigate these risks

**3.Training and Education:** Ongoing training programs for employees and contractors to ensure they understand compliance requirements and the importance of adhering to them

**4.Internal Monitoring and Auditing:** Continuous monitoring and periodic audits to detect and correct non-compliance issues

**5.Reporting Mechanisms:** Establishing confidential reporting systems for employees to report suspected non-compliance without fear of retaliation

**6.Response and Prevention:** Procedures for responding to detected offenses, including corrective actions and preventive measures to avoid recurrence

**7.Enforcement and Discipline:** Consistent enforcement of compliance standards and disciplinary actions for non-compliance

These elements are part of the General Compliance Program Guidance provided by the OIG, which serves as a reference for healthcare organizations to develop and maintain effective compliance programs

# Example: Testing

## Audit Step:

Testing

**Prompt:** Our internal audit team is planning for an audit to substantiate the accuracy of information and data in an annual sustainability report issued by US based health food chain. The report includes greenhouse gas data, sustainability accomplishments and community impact efforts. Please design a detailed testing plan for this audit and estimate the total hours it would take to perform.

## CoPilot Output

Certainly! Here's a detailed testing plan for auditing the sustainability report of a US-based health food chain, along with an estimated timeline.

### Testing Plan for Sustainability Report Audit

#### 1. Planning and Scoping

Objective: Define the scope and objectives of the audit.

Tasks:

Review the sustainability report.

Identify key areas: greenhouse gas data, sustainability accomplishments, community impact efforts.

Develop audit criteria and methodology.

Estimated Hours: 10 hours

#### 2. Data Collection

Objective: Gather relevant data and documentation.

Tasks:

Request and review supporting documents (e.g., GHG inventories, sustainability project reports, community impact assessments).

Conduct interviews with key personnel.

Collect data from internal systems and external sources.

Estimated Hours: 30 hours

#### 3. Greenhouse Gas Data Verification

Objective: Verify the accuracy of reported GHG emissions.

Tasks:

Review GHG calculation methodologies1.

Cross-check reported data with actual emissions records.

Validate data against industry standards (e.g., Greenhouse Gas Protocol3).

Estimated Hours: 25 hours

#### 4. Sustainability Accomplishments Verification

Objective: Substantiate sustainability accomplishments.

Tasks:

Review project documentation and outcomes.

Verify implementation of sustainability initiatives (e.g., energy efficiency, waste reduction).

Assess alignment with sustainability goals and benchmarks5.

Estimated Hours: 20 hours

#### 5. Community Impact Efforts Verification

Objective: Validate community impact efforts.

Tasks:

Review community engagement and impact reports6.

Conduct surveys and interviews with community stakeholders7.

Analyze qualitative and quantitative data on community programs8.

Estimated Hours: 20 hours

#### 6. Analysis and Evaluation

Objective: Analyze collected data and evaluate findings.

Tasks:

Perform data analysis to identify discrepancies and areas for improvement.

Evaluate the effectiveness of sustainability initiatives and community programs.

Estimated Hours: 15 hours

#### 7. Reporting and Recommendations

Objective: Prepare a detailed audit report.

Tasks:

Compile audit findings and conclusions.

Provide recommendations for improving data accuracy and sustainability practices.

Present the report to management and stakeholders.

Estimated Hours: 20 hours

**Total Estimated Hours: 140 hours**



# Auditing AI

# Internal Audit Involvement

## Understand AI Architecture

- Data Collection
- Data Processing
- Model development (algorithm/ black box)
- Training / Tuning / Bias / Fairness
- Model Deployment – Where? Processes?
- Inventory of Tools – Each approved for use?
- All properly tested – By whom? Results validated and documented?
- Data sources?
- Monitoring and Maintenance – Schedule in place? Who performs?

## Audit Activities

- AI Usage P&P's – Roles and Responsibilities
- Risk Assessment – monitor growing AI risks
- Audit and Assurance
- AI Governance implementation and monitoring
- Data security of org data being used by AI
- Security Operations and Compliance
- Vulnerability Management
- Training
- Documentation
- Third-party use of AI and your data



# Internal Audit Involvement: ISACA AI Audit Toolkit

ISACA’s Artificial Intelligence Audit Toolkit is a control library designed to facilitate the assessment of the governance and controls over the AI system in an enterprise. The toolkit is aimed at assisting auditors in verifying that AI systems adhere to the highest standards of governance and ethical responsibility. Serves as a framework for audit professionals when planning and executing audits and can also be useful and beneficial for other lines of defense.

Artificial Intelligence (AI) Audit Toolkit Workbook Overview		
Workbook Tab Name		Description
Assessment Spreadsheets	AI Audit Toolkit Instructions	Explains the columns that comprise the six explainability dimensions
	1) Rationale	Provides the AI Control guidance based on the Rationale explainability dimension
	2) Responsibility	Provides the AI Control guidance based on the Responsibility explainability dimension
	3) Data	Provides the AI Control guidance based on the Data explainability dimension
	4) Fairness	Provides the AI Control guidance based on the Fairness explainability dimension
	5) Safety & Performance	Provides the AI Control guidance based on the Safety & Performance explainability dimension
	6) Impact	Provides the AI Control guidance based on the Impact explainability dimension
	Aggregate AI Control Library	Provides the AI Control guidance for all six explainability dimensions

# Internal Audit Involvement: NIST Framework



The NIST AI Risk Management framework offers a resource for organizations designing, developing, deploying or simply using AI to help manage risk.

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# Internal Audit Involvement: MIT

The MIT AI Risk Repository is a comprehensive, living database of AI risks, categorized by their cause and risk domain, designed to help researchers, policymakers, and industry professionals better understand and address the risks associated with AI.



Key features of the AI Risk Repository:

- **Comprehensive Database:** 700 AI risks extracted from 43 existing frameworks
- **Causal and Domain Taxonomy:** It classifies how, when, and why these risks occur and segments risk by the area in which they occur (privacy, misinformation, or AI system safety)
- **Living Document:** Plans to add new risks and documents as the AI risk landscape evolves
- **Collaborative:** MIT researchers have compiled the initial database, but contributions are encouraged
- **Purpose:** Provide a common foundation for constructive engagement to understand and address risks from AI
- **Sponsors:** Sponsors include Microsoft, Google, and the National Science Foundation



# Latest AI Focal Points

# Recent AI Developments

- Significant investment in AI by companies today – where is ROI?
- Regulation slow to develop
- Powerful tools in the hands of employees who might not fully understand them
- Third Party usage of AI and your data
- **Audit Committee Concerns:** Source: Harvard Law School Forum & PwC
  - Who owns oversight? Management accountability and routine Board updates
  - Evaluate resource investment and ROI
  - Ensure responsible AI implementation within the organization
  - Management updates on how organization will stay compliant with regulations
  - Understand management's human capital strategy – culture shift, skills needed, training provided, internal communication

# AI News – Last 7 Days

- CA Bar Exam – 23 out of 171 scored multiple choice questions were AI generated
- Epic hospital system and MyChart portal
  - 295M patients with 15B healthcare encounters – using data to research a cure for Alzheimers. Used AI to reveal a hidden disease-causing function in the PHGDH protein and ID a potential drug target that improved memory in mice
  - Future AI analysis of this database could spot disease indicators four years ahead of time.
  - Training predictive models – spot deteriorating patients
  - Applying AI can uncover patterns and insights humans miss – revolutionize how we understand and treat diseases

SOURCE: The Neuron

# Some Fun.....

## Copilot Prompt:

*“Please create an image of your best guess of what the average audience attendee looks like for the Denver, CO Institute of Internal Auditor Chapter Meeting on April 30, 2025. Make them look professional and have a Colorado Mountain professional look to them.”*



# Some Fun.....

## Copilot Result:



The bottom-left corner of the slide features a cluster of overlapping geometric shapes, including squares and diamonds, in various shades of blue and light gray. These shapes are layered, creating a modern, abstract design.

## References

# Key IA References

Start here...

- IASACA AI toolkit ( Reference ISACA Store )
- NIST AI Risk Management Framework ([www.nist.gov/itl/ai-risk-management-framework](https://www.nist.gov/itl/ai-risk-management-framework))
- MIT AI Risk Repository (<https://airisk.mit.edu/>)
- EU AI Act (<https://artificialintelligenceact.eu/>)

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