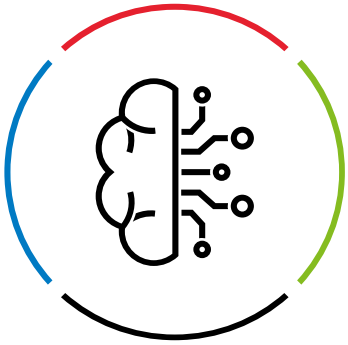
Solving the riddle:

Harnessing Generative AI for internal audit activities

Wolters Kluwer

Internal Audit FOUNDATION

Executive summary



Organizations around the world are scrambling to solve the riddle of artificial intelligence (AI). The introduction of easy-to-use generative AI (GenAI) models, such as ChatGPT, DALL-E, and Microsoft Copilot, created an unprecedented level of rapid adoption. The lure of improved efficiency, productivity, and competitiveness promised by such tools is too enticing to pass up. Effectively integrating AI into operations and strategies is the goal. If done right, it can deliver transformative results to any organization.

The benefits of effectively applying GenAI across all operations are unmistakable as organizations leverage the powerful tool's ability to quickly analyze data, revolutionize customer engagement, and automate repetitive processes. Meanwhile, its drawbacks and limitations are becoming clear.

For internal auditors, the AI challenge is twofold in that they must not only understand and help guide the use of AI within their organizations, but also leverage the technology to benefit and enhance the work they do. As with any riddle, the secret to its solution involves applying ingenuity, curiosity, and resourcefulness.

"It's not like we're looking at AI as a replacement of humans," said Jim Pelletier, a senior product manager for Wolters Kluwer TeamMate. "We're looking at it as an augmentation to help humans be better, to be more efficient, to be more productive, to be better at things that you do day-to-day. The collaboration or interaction between human intelligence and AI leads to the best results. "

The Internal Audit Foundation (the Foundation) and Wolters Kluwer TeamMate (TeamMate) have collaborated on a research project that explores the use of GenAI in internal auditing. This report presents the findings of this research, detailing how GenAI is utilized at the individual, organizational, and internal audit function levels. Additionally, it provides information on GenAI's applications across various internal audit activities and its governance.

Research Methodology

The Foundation and TeamMate employed a survey aimed at providing an up-to-date snapshot of the use of GenAI within organizations and internal audit functions. The survey targeted internal audit leaders around the world, and its findings provide valuable insight into how internal audit is currently leveraging this revolutionary technology as its influence over modern business strategies grows. The survey, which took place in May 2024, received a total of 924 responses.

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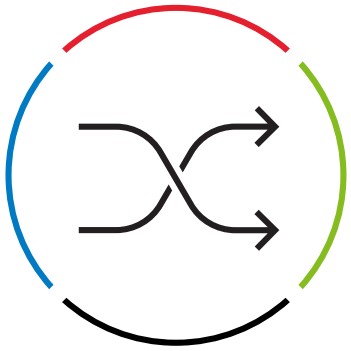
Part I:

How GenAI is transforming business



The introduction of OpenAI's ChatGPT, a publicly available and user-intuitive generative pre-trained transformer, in the latter part of 2022 marked a momentous event in the ongoing digital revolution. Its record-setting user base has been widely reported. Today, more than half (55%) of organizations already report limited or aggressive adoption of AI into business operations, according to one industry report.[1] What's more, AI market value is predicted to more than double from $184 billion in 2024 to $415 billion by 2027.[2]

The ways GenAI can benefit operations are limited only by the imagination of executives focused on efficiency and productivity. However, three areas have emerged as those most likely to be improved by GenAI:

- **Visualization and Monitoring**
  Developing and measuring Key Performance Indicators (KPIs) is essential to modern business. For the most part, interpreting just what KPIs are telling us is left to humans. However, the benefits of KPIs come from accessing the right data and asking the right questions. GenAI can improve the process by turning huge datasets into visualizations that are easily interpreted and understood. Once in place, other advanced technology, such as robotic process automation (RPA), can be used to monitor key metrics and alert managers when anything goes awry.

- **Insights Into Consumer Behavior**
  Capturing data on customer behaviors and preferences is fundamental to today's e-commerce platforms. Knowing what makes online consumers most likely to fill their electronic shopping carts is retail gold. As with KPIs, leveraging customer data to boost sales depends on human interpretation and lead generation. Missteps can easily lead to customer burnout and churn. With AI analyzing data more efficiently and effectively than humans, customer outreach can be delivered at the right times and reduce churn.

- **The Human Factor**
  Simply put, AI can perform better than humans in certain areas, whether it's crunching terabytes of data or executing mind-numbing, repetitive tasks without tiring or making mistakes. While there are legitimate concerns about how this could impact some jobs, the trade-off between keeping jobs focused on minutia or allowing them to focus on higher-level tasks is an easy call.[3]

1 Source: CompTIA IT Industry Outlook 2024 report.
2 Source: Artificial Intelligence – Worldwide, Statista.com, accessed June 2024.
3 "How Artificial Intelligence Impacts Business," Online Business Blog, Raymond A. Mason School of Business, William & Mary, April 2024.

Understanding GenAI's strengths and weaknesses

Before blindly embracing GenAI as the solution to every problem, organizations must have a clear-eyed view of what it can accomplish effectively and where it may fall short. A recently published working paper from the Harvard School of Business took on the issue of how GenAI affects worker productivity and came to a mixed conclusion. The authors of *Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality* tested the premise that three factors — the surprising abilities of Large Language Models (LLMs), their ability to do real work with virtually no technical skills required, and their opacity and unclear failure points — create a jagged frontier, "where tasks that appear to be of similar difficulty may either be performed better or worse by humans using AI."[4]

"Some unexpected tasks (like idea generation) are easy for AIs, while other tasks that seem to be easy for machines to do (like basic math) are challenges for some LLMs. This creates a 'jagged frontier.' Due to the 'jagged' nature of the frontier, the same knowledge workflow of tasks can have tasks on both sides of the frontier. The future of understanding how AI impacts work involves understanding how human interaction with AI changes depending on where tasks are placed on this frontier, and how the frontier will change over time."[5]

An analysis of AI use in business by online finance and investment publication Investopedia identifies integration and compatibility of AI use as fundamental factors for success.

"Companies that have successfully implemented AI solutions have viewed AI as part of a larger digital strategy, understanding where and how it can be instrumentalized to great advantage. This requires considering how it will integrate with current software and existing processes — especially how data is captured, processed, analyzed, and stored. Another important factor is the structure of a company's technology stack — AI must be able to flexibly integrate with current and future systems to draw and feed data into different areas of the business."[6]

The analysis concludes AI can support businesses in three categories: automating processes, analyzing data to gain insights, and engaging customers and employees. "Firms that apply AI strategically in these ways have much to gain in terms of productivity, efficiency, and potential cost savings and growth."[7]

The Harvard working paper and Investopedia analysis provide valuable insights into what can be referred to as the AI/HI line, where AI interacts with human intelligence (HI). To date, the key differentiator is HI's ability to generate novel and creative ideas and provide context, whereas AI is limited to the data it has been trained on. This factor should remain top of mind as organizations and their internal audit functions consider how to integrate GenAI into their processes.

AI Resources

The following is a list of AI-related resources to explore. These materials offer valuable insights and information on the latest developments in artificial intelligence use, regulation, and ethics.

IIA Resources

IIA (Institute of Internal Auditors):

- Artificial Intelligence Knowledge Center. This online resource provides abundant articles, podcasts, papers, guides, webinars, events, and tools to better understand AI. (Please note, some items are exclusive to IIA members.)
- Artificial Intelligence Auditing Framework (IIA members only). This framework supports internal auditors' understanding of risk and identifies best practices and internal controls for AI.

Us Government Resources

NIST (National Institute of Standards and Technology, U.S. Department of Commerce):

- Artificial Intelligence Risk Management Framework (AI RMF 1.0).
- Artificial Intelligence Risk Management Framework Playbook.
- Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile.

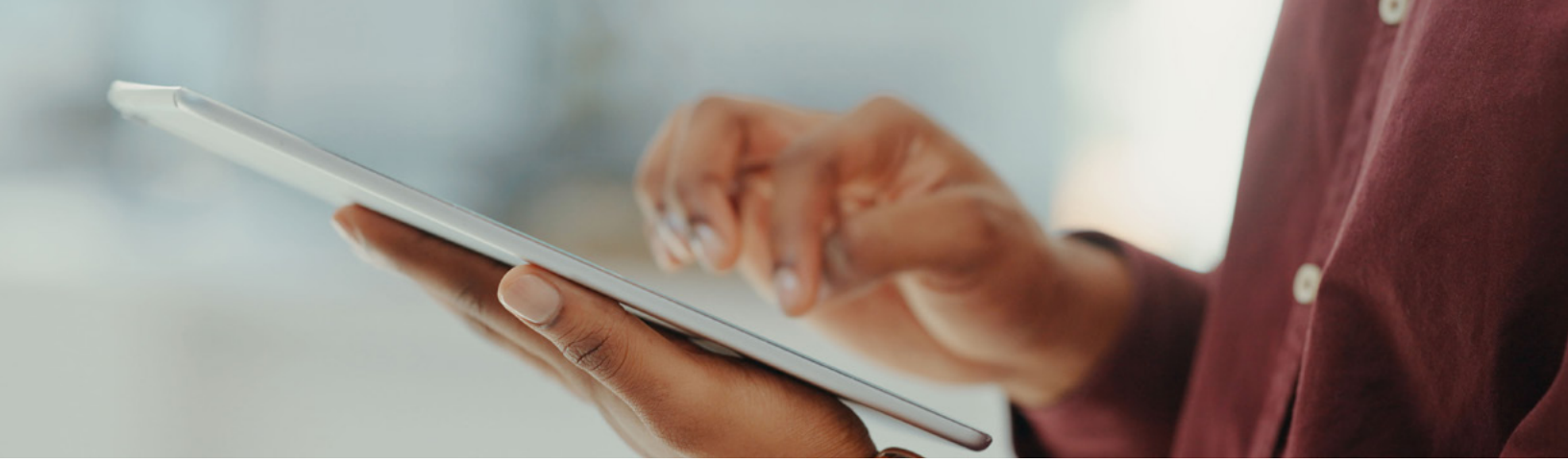
European Union Resources

- AI Innovation Package – This series of documents provides measures to support European startups and SMEs in the development of trustworthy AI that respects EU values and rules.
- Artificial Intelligence – Questions and Answers – Provides extensive information on the EU's AI Act, who it applies to, and its goal of addressing AI-related risks to health, safety, and fundamental rights.

Other Resource

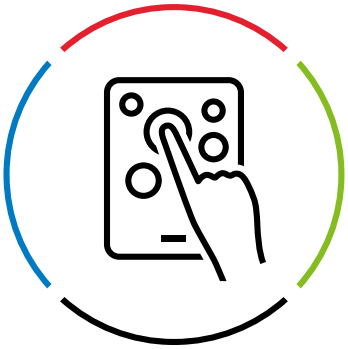
UNESCO (United Nations Educational, Scientific, and Cultural Organization): Ethics of Artificial Intelligence.

4 "Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality," Fabrizio Dell'Acqua, et al, Working Paper 24-013, Harvard Business School, Boston, MA, 2024.
5 Ibid.
6 "How AI Is Used in Business," Elysse Bell, et al, Investopedia, 2024.
7 Ibid.



Part II:

Updating the GenAI picture



GenAI's current state is akin to the opening chapters of a mystery where the characters are identified, and the plot is set. However, just how the story will unravel is unknown. Several valuable clues are provided by the TeamMate and Foundation global survey of internal auditors about GenAI use. Responses from more than 900 internal auditors about GenAI use in their organizations and within their audit functions offer encouraging news for practitioners who have yet to embrace GenAI: **You are not alone**.

Pelletier, who has spent more than 20 years in internal auditing, including 10 years as a thought and guidance leader at The Institute of Internal Auditors, has a simple but powerful message to practitioners.

"It's time to get moving," he said. "Learn about it. Take some online courses. Start using it. If you can't use it at work yet, start using it at home so you can learn what these tools can and can't do."

The IIA approaches AI by examining it through various domains that help group related aspects of AI use within the organization and within internal audit. For example, one option is to create one domain for AI as an audit topic and another for AI as an auditing tool. **Domain 1** would include providing assurance and advisory services in areas such as AI strategy, governance, model risk, and model controls. **Domain 2** would focus on AI tools available for internal auditors, such as GenAI tools, machine learning, and robotic process automation.

Domain #1
AI as an Audit Topic

Domain #2
AI as a Tool for Internal Auditors

This framework provides a structured approach to understanding and managing AI. Organizing AI into two distinct focus areas helps identify:

- where resources are allocated,
- where attention is focused,
- where resources and attention should be directed in the future.

How GenAI is being used

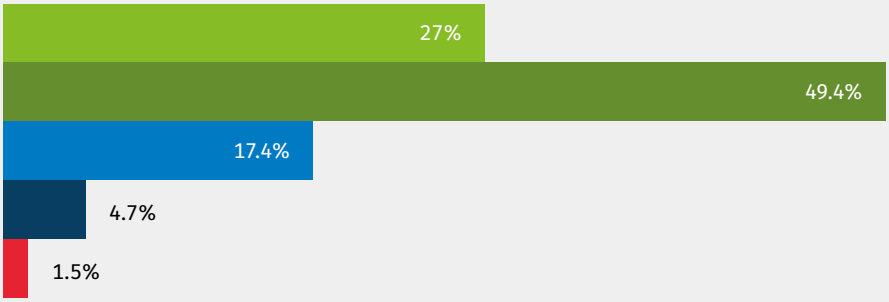
Key data points from the TeamMate and Foundation global survey suggest there is a significant opportunity for internal auditors to provide relevant and impactful influence on adoption and use of GenAI within their organizations. This should provide a level of encouragement for practitioners to act boldly in supporting this budding business bonanza.

Individual knowledge and use of GenAI (Figure 1)
Across every represented role and region, more than 3 in 4 survey respondents rate themselves as either novices, possessing limited knowledge of GenAI, or as beginners with minimal knowledge and application of GenAI, in relation to their use and proficiency of GenAI.

Adoption within the organization (Figure 2)
A vast majority of respondents (92.7%) indicate their organization's adoption of GenAI is in initial exploration or partial implementation.

Figure 1. Individual proficiency and personal use of GenAI

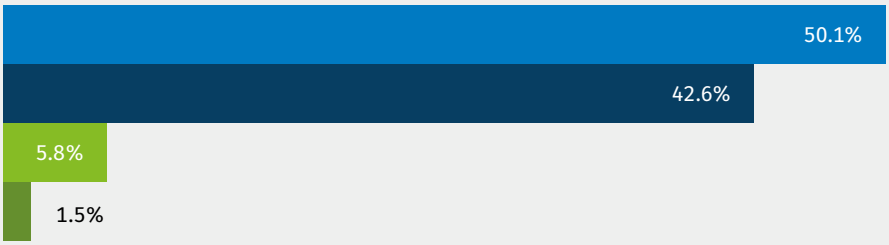
Q. How would you rate your proficiency and personal use of GenAI in your professional role? (n=878).



- **Novice:** Limited to no knowledge of GenAI and its applications
- **Beginner:** Some basic familiarity but minimal practical application
- **Intermediate:** Moderate level of experience, with some application
- **Advanced:** Proficient in GenAI, with use to perform work-related tasks
- **Expert:** Highly skilled, with extensive experience leading use cases

Figure 2. Organization maturity level of GenAI adoption

Q. How would you rate your organization's GenAI maturity level in terms of adoption and implementation? (n=775).



- **Initial exploration:** Exploring but not yet implemented
- **Partial implementation:** Some pilot projects or implementation but not widespread
- **Advanced implementation:** Integrated into core business processes
- **Full implementation:** Fully integrated into all aspects of the organization

GenAI and internal audit are inevitable partners

While survey data reflect that GenAI adoption by internal audit is in a nascent stage, the application of the technology to internal audit processes is easily envisioned. Indeed, comments from early adopters among survey respondents reflect use across all aspects of audit engagements. What's more, internal audit is well-positioned to provide supporting advisory services on AI adoption, governance, and controls.

Where internal audit currently fits in (Figure 3)
The majority of AI work being done by internal auditors remains within their functions, with 62% reporting either using GenAI within internal audit activities or researching future use of GenAI.

Advisory services on organization-wide policies relating to GenAI and pre-implementation on GenAI projects is reported by about 19% of participants. Only about 1 in 10 respondents (12.4%) report actual auditing of GenAI within their organizations. Based on The IIA's classification of AI activities, the results shown in Figure 3 highlight that most are currently focused on viewing AI as a tool for internal auditors (**Domain 2**), rather than as a subject of an audit (**Domain 1**).

AI use by internal audit (Figure 4)
According to survey respondents who use or are researching GenAI for future use in their work, GenAI can be applied to all phases of internal audit engagements. The percentage who said they use/will use GenAI "extensively" or "often" is highest for planning (35.6%) and reporting (31.2%).

This subgroup of early adopters provided valuable insights for those who are looking to get started by offering numerous use case examples for all phases of a typical engagement.

"Folks are thinking across the spectrum of the internal audit process, like all the things that we do and where can we apply this tool," Pelletier said. "It's important for internal audit, and all functions, to keep in mind that GenAI is a tool."

Figure 3. Internal audit function: GenAI activities

Q. GenAI in Internal Audit: Is your internal audit function involved in any of the following activities related to GenAI? Select all that apply (n=460).

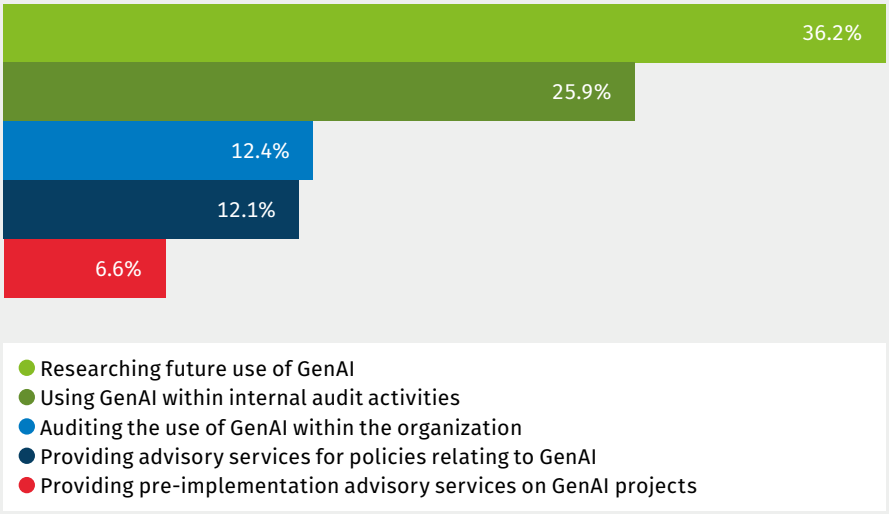
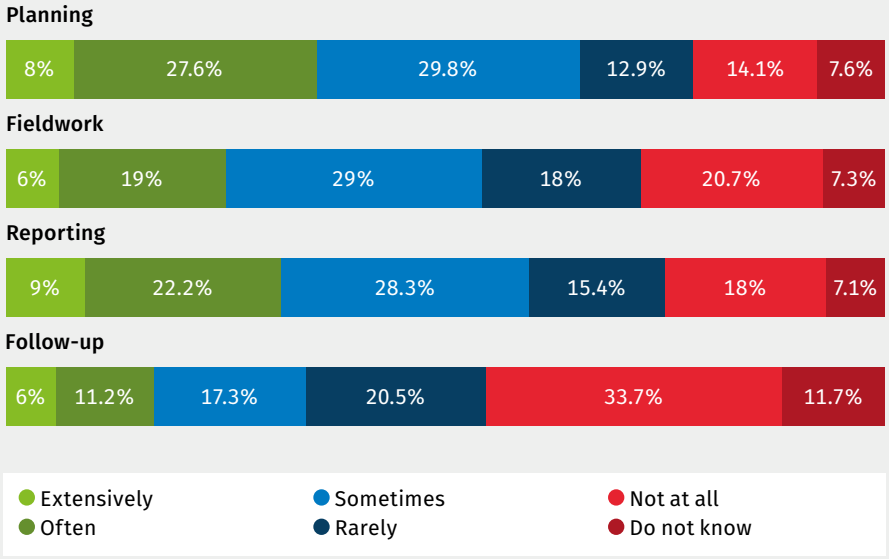


Figure 4. Use of GenAI to support audit activities

Q. You mentioned that your internal audit function is using or researching the future use of GenAI to support audit activity. Please identify the ways it is being used or planned to be used to support audit activities. Select a response for each process (Planning, Field Work, Reporting, Follow Up). (n=410).



GenAI lacks governance

Governing policy for GenAI use (Figure 5)
More than half of respondents said there is no GenAI governance policy at their organization, or they are unsure if one exists.

Governing policy for GenAI use by organization size (Figure 6)
With fewer than 2 in 10 (17%) reporting clear, organization-wide guidelines for GenAI use, the need for internal audit advisory services is obvious.

"We [TeamMate] know a lot of organizations haven't established good governance practices yet," Pelletier said. "So, the opportunity is ripe for internal audit advisory services to step in to help the organization understand the risk."

Figure 5. Governing policy for GenAI use

Q. Does your organization have a comprehensive policy governing the use of GenAI? (n=878).

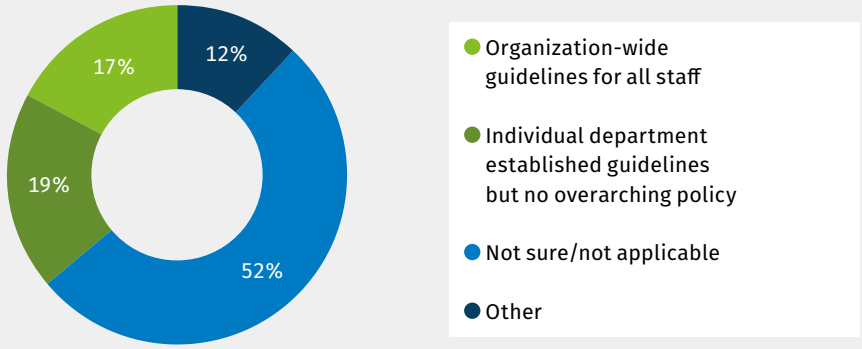
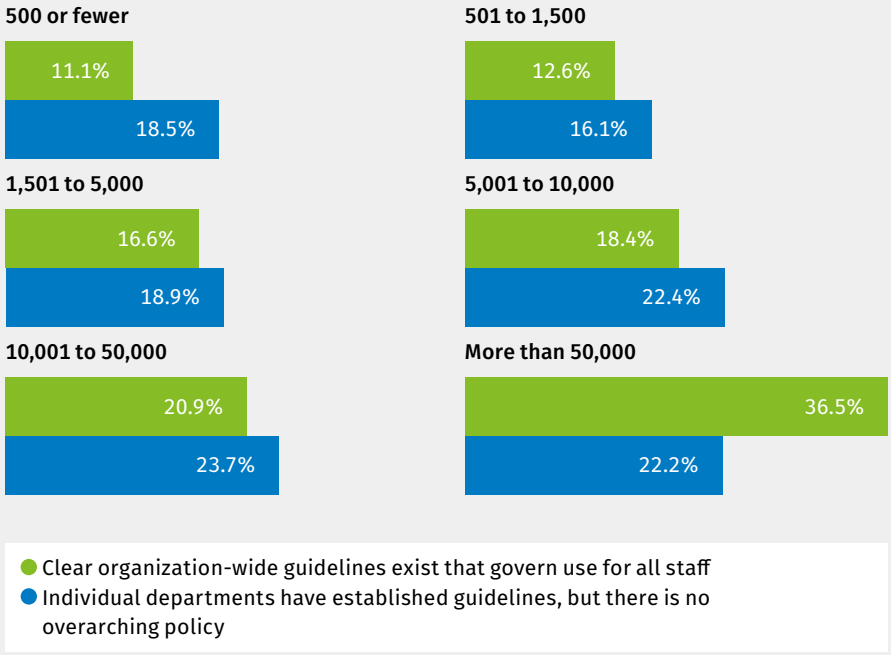


Figure 6. Governing policy for GenAI use by organization size

Q. Organization size: Choose the range that best describes the current number of full-time equivalent employees (FTEs) at your current organization. Does your organization have a comprehensive policy governing the use of GenAI? (n=878).



Prompt writing best practices

By all accounts, GenAI models represent an impressive technological leap. However, users must remember it is just another tool, and its benefits depend largely on how well the tool is used, underscoring the importance of human intelligence to overall success. Understanding how to effectively query these models through prompts is fundamental. Below is a list of prompt writing key concepts and best practices adapted from a video from Dr. Marc Eulerich and the Mercator Audit and Artificial Intelligence Research Center. IIA members can access the full video, **Prompt Engineering for Internal Audit**.

Key Concepts and Best Practices

- **Clarity**
  Ensure that prompts are clear, concise, and unambiguous. Use specific language and avoid vague or open-ended prompts.

- **Context**
  Provide relevant context to guide the model's understanding and generation of accurate responses. Include necessary information and specify desired output formats if applicable.

- **Examples**
  Include examples or demonstrations of the desired output. Show both positive and negative examples to reinforce desired outputs. Direct the model to behave as a type of person, process, or object.

- **Iteration**
  Iterate and refine prompts based on model responses. Evaluate and adjust prompts to improve the quality of outputs.

- **Evaluation**
  Evaluate model performance by collecting user feedback and analyzing outputs to identify areas for improvement.

- **Adaptation**
  Adapt prompts to different use cases or domains. Consider specific requirements or constraints of the given task or application to optimize prompt strategies.

Common Mistakes

- **Overcomplicating prompts**
  Avoid using complex language or unnecessary details. Keep prompts concise and straightforward.

- **Lack of clarity**
  Make sure prompts clearly communicate a desired outcome. Use specific instructions and examples.

- **Insufficient context**
  Provide sufficient context to help the model understand what you are looking for.

- **Inconsistent formatting**
  Consistent formatting helps ensure consistent output. Headings, bullet points, or numbered lists can help improve organization.

- **Neglecting revision**
  Make sure to review and revise generated content. Refining prompts iteratively improves the quality and accuracy of outputs.

Advanced Prompting Techniques

- **Context expansion**
  To generate more complex or nuanced outputs, consider providing additional context or specifying desired formats.

- **Creative prompts**
  Don't be afraid to experiment with writing styles, tones, or perspectives to encourage more imaginative or creative outputs.

- **Zero-shot prompting**
  As the name implies, this technique allows models to generate responses without being trained on specific examples; in other words, **zero** examples. This can be useful for outputs to novel or unexpected prompts.

- **Few-shot prompting**
  Similarly, this technique allows models to generate outputs with **few** or **limited** training examples. This can be useful for outputs to new or uncommon prompts.

- **Chain-of-thought prompting**
  This technique allows model outputs following a sequence of prompts. It can be useful for outputs to complex or multi-step prompts.

Part III:

Use cases

Input from early adopters on current or planned usage was grouped by the four phases of a typical internal audit engagement. Analysis of those comments found four categories in each phase where GenAI can help:

- **Learning**
  GenAI can help practitioners learn about potential audit subjects and issues.

- **Brainstorming**
  With effective prompting, GenAI can deliver impressive ideation for audit work in all engagement phases.

- **Building**
  GenAI can help build frameworks, questionnaires, and other commonly used tools.

- **Writing**
  GenAI can readily improve communication of issues and recommendations by assuring that emails, information requests, reports, follow-ups, and other communications are concise and accurate, relay the proper tone, and remain consistent across the audit team.

A fifth use case category, **Performing**, is anticipated. This considers the possibility of automating aspects of engagements by allowing GenAI to perform part of the work. Because current GenAI use by internal audit remains limited, it is not surprising that survey respondents provided few specific examples of this. However, it is an easily envisioned eventuality as internal audit continues its adoption and use of the technology.

Use case matrices

The following use case matrices illustrate how internal audit functions are utilizing GenAI across the four key activities: Planning, Fieldwork, Reporting, and Follow-up.

Planning phase
The planning phase of an internal audit engagement is a crucial step where the groundwork for the audit is established. The following matrix demonstrates how GenAI can assist with the learning, brainstorming, building, writing, and performing aspects of this internal audit activity.

Learn	Brainstorm	Build	Write	Perform
Identify potential risks (risk assessment)	Audit objectives, scope, and risk assessment	Create frameworks	Audit objectives	Automate initial data collection and risk assessment
Understand new technology	Planning ideas	Develop planning memoranda	Work programs and Risk Control Matrices (RCMs)	Automate information requests and reminders
Summarize regulations	Planning frameworks	Develop audit programs	Policy, regulation, and controls summaries	
Research industry standards, trends, regulations, and best practices	Generate ideas for audit objectives, scope, and risk assessments	Create risk assessment frameworks and audit planning documents	Consistent and comprehensive audit plans and charters	
Identify risks and controls from process documents	Test procedures and analytics	Build risk profiles	Generate audit programs and interview questionnaires	
General data analysis	Guidance for best practices	Build customized audit programs		
Identify location of relevant information	Suggest key risk areas, audit tests, usual controls, and emerging risks	Implement an AI prompt library		
Analyze prior information to define new review objectives		Develop Key Risk Indicators (KRIs)		

Fieldwork phase

The fieldwork phase of an internal audit engagement is a key period where auditors gather and evaluate evidence to assess the effectiveness and efficiency of an organization's processes. The following matrix demonstrates how GenAI can assist with the learning, brainstorming, building, writing, and performing aspects of this internal audit activity.

Learn	Brainstorm	Build	Write	Perform
Specialized field research	Best practices	Control objectives	Control objectives	Automate data analysis, transaction testing, and anomaly detection using AI-driven tools
Data gathering and interrogation	Suggest data analytics	Audit testing	Script for audit/testing	
Learn about specific controls, processes, and IT systems	Potential issues or areas of concern to focus on during testing	Develop detailed audit programs, test plans, and sampling methodologies	Clear and consistent workpapers and documentation for testing procedures	
Sample or compare audit programs		Evidence analysis for insights, tends, and exceptions	Code/scripts to simplify testing of repeatable tasks	
Contract reviews for conformance to guidelines			Summarize documents by topics	

Reporting phase

The reporting phase of an internal audit engagement involves compiling and presenting the findings from the audit in a clear, structured, and actionable format. This phase is essential for communicating the results to stakeholders and providing recommendations for improvements. Review the following matrix to discover how peers have incorporated GenAI into this internal audit activity.

Learn	Brainstorm	Build	Write	Perform
Study effective regulatory reporting requirements and reporting techniques	Scope of work	Automate creation of draft reports	Initial drafts and reports	Generate preliminary findings and recommendations based on analyzed data
Research how others are reporting and providing support for conclusions	Brainstorm recommendations for control improvements, efficiency gains, and risk mitigation strategies	Build templates for audit reports, management letters, and executive summaries	Review/edit drafts for clarity, length	Comprehensive and structured audit reports, including findings, recommendations, and management responses
	Planning ideas	Standardize report formats	Evaluate tone on issues drafts	Prepare baseline draft reports
	Issue criteria and development	Experiment with AI video reporting	Strengthen findings with industry facts	Create audit report summaries based on detailed findings
		Create vivid presentations	Summarize and find alternative phrasing	
		Provide inputs and trend analysis of issues and control gaps		

Follow-up phase

The follow-up is crucial for verifying that corrective actions have been taken and improvements have been made. The following matrix demonstrates how GenAI can assist with the learning, brainstorming, building, writing, and performing aspects of this internal audit activity.

Learn	Brainstorm	Build	Write	Perform
Learn about follow-up procedures and best practices	Brainstorm strategies for ensuring management implements recommendations	Create follow-up frameworks, tracking mechanisms, and dashboards on agreed action items	Follow-up reports and status updates, clearly documenting progress on remediation efforts	Automate the tracking of remediation efforts and follow-up testing to confirm the implementation of recommendations
Research IIA Standards and best practices		Combine management responses in various audit weaknesses to provide patterns and thematic insights	Craft emails and send notes to business lines for follow-up	Schedule follow-ups and monitor audit recommendations
		Escalate overdue recommendations not yet implemented	Generate reports on the status of unresolved issues	Monitor progress of action plan status and validate issue closure evidence
		Track undisclosed issues	Follow-up responses	
		Client response assessment		
		Application of validation testing		
		Track follow-up dates and remediation		
		Send automated reminders		

Part IV:

Next steps

Caution is not an excuse for inaction

Concerns about GenAI bias and fraud risks were articulated in comments from several survey respondents. These are legitimate concerns (see sidebar, AI Limitations and Pitfalls). The risks associated with GenAI use include cybersecurity; data protection; lack of transparency; and unknown bias, discrimination, and ethical questions about AI algorithms. All provide ample reasons to pause. As with any new technology, costs, data quality, and organizational resistance to change pose additional challenges to its use. What's more, internal audit's general resistance to being early adopters of new technology poses a barrier.

However, waiting is not an option, particularly at a time when the dynamic risk landscape is evolving at an ever-increasing pace. "Making the perfect the enemy of the good," as one respondent commented, is not an option.

GenAI is a next-level tool that can create efficiency and boost productivity within internal audit and across the organization. "It's time to be bold," Pelletier urged. "Internal audit leaders need to embrace this opportunity, learn about AI, and adopt its use in their audit processes for the benefit of their function and the organizations they support."

Beyond its ability to enhance efficiency and productivity, GenAI holds great promise for improving internal audit quality, Pelletier said. For example, large teams that struggle with alignment on writing can leverage AI to make reports consistent in their language, brevity, and tone.

"It's not like we're looking at AI as a replacement of humans," he said. "We're looking at it as an augmentation to help humans be better, to be more efficient, to be more productive, to be better at things that you do day-to-day. The collaboration or interaction between human intelligence and AI lead to the best results. "

Becoming comfortable with the technology also positions internal audit to provide relevant and timely advice as organizations develop strategies to integrate AI into business operations and processes.

"Auditors are naturally curious; leverage that to become knowledgeable enough so that you are part of the conversation, and not sitting on the sidelines," Pelletier said.

One of the principal challenges faced by practitioners is overcoming an ingrained resistance to risk-taking. Often, leaders in internal audit who are averse to risk prefer to wait and observe the evolution of new trends. Unfortunately, this can lead to internal audit functions consistently having to play catch-up. What's more, this approach could contribute to other areas of the organization pushing ahead without proper controls in place or otherwise accounting for AI pitfalls. Ironically, in such instances, internal audit could be contributing to AI risks instead of helping to minimize them.

The recommendation is to avoid waiting and instead be proactive. For instance, reassess hiring strategies to incorporate diverse skill sets, enhance the capabilities of the existing team through training, and engage external partners to address any gaps.

Gen-AI limitations and pitfalls

The opportunities AI presents are abundant and clear, but they come with attendant ills, including concerns about cybersecurity, data privacy, ethics, its potential to displace workers, and more. Additionally, the current technology carries with it inconsistencies and glitches that if not recognized and considered can create significant risks.

The following provides a partial list of AI downsides and pitfalls.

The Black Box Dilemma
AI models are built on complex algorithms that can be difficult to understand, even for those who are experts on the technology. This lack of transparency is often referred to as the "Black Box" aspect of AI. Not knowing how algorithms are designed opens a Pandora's box of questions about bias, ethics, and potential unknowns that could have negative impacts on AI's outputs. For example, one study found that error rates of facial recognition technology were significantly higher for darker-skinned women than for light-skinned men.

- **Corrective actions**
  Ensure executive management and the board are aware of this shortcoming by making sure internal audit's voice is heard and represented on any organizational AI task force. If one does not exist, recommend its creation.

Hallucinations
The strength of GenAI models is that they can tap into vast amounts of online data to analyze, synthesize, and generate impressive outputs. That also has proven to be a pitfall. There are abundant examples of GenAI responses incorporating false or incorrect information from questionable sources. This could lead to significant problems should faulty AI outputs be used in publicly facing content or for strategic decision making.

- **Corrective actions**
  Validate findings, especially for critical initiatives, with known SMEs. Leverage both internal and credible external resources. Following prompting best practices also will help reduce erroneous results.

Data Protection
Another strength of GenAI models that is also a pitfall is its ability to incorporate all the data it is fed into its store of resources. Well-intentioned workers can unwittingly put out sensitive or proprietary information into the online ether by using publicly available GenAI tools. This makes strong governance policies critical for any organization looking to use GenAI.

- **Corrective actions**
  Develop and disseminate AI governance policies and controls (wherever possible). Consider developing and implementing in-house GenAI tools with restricted access.

Cybersecurity
The wonders of GenAI to improve efficiency and productivity also make it a valuable tool for hackers looking for innovative ways to breach cyber protections and steal or hold hostage valuable data.

Conclusion

The introduction of user-friendly GenAI models stunned the business world out of its post-pandemic torpor. Indeed, its ease of use, practical applicability across a wide range of business processes, and near zero cost for implementation was the perfect antidote for the nearly two-year slowdown in operations. What's more, it quickly became evident that beyond its energizing impacts, the tool's ability to automate repetitive, mundane work and help manage ever-growing expanses of data had genuine potential to transform how business is done.

The cutting-edge technology will irrevocably change any profession that relies on data and data analysis, including internal auditing. While the ultimate solution to the AI riddle remains somewhat clouded, clues are emerging as to how it can be applied to improve internal audit efficiency, productivity, and quality.

The future of internal auditing will inevitably involve a mix of AI tools, technological aids, and human expertise. AI offers unique applications and a promising outlook for modern internal audit functions. However, the one factor that remains unclear is whether internal audit can overcome its past reticence to embrace new technology and effectively incorporate AI into its processes.

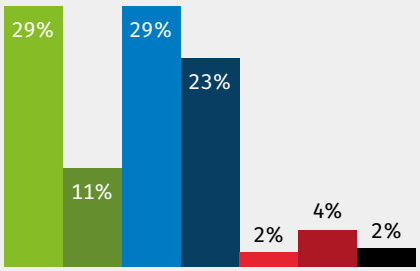
The findings from the TeamMate and Foundation global survey provide a valuable snapshot into the current state of adoption and use of GenAI. What it reveals is a business world on the precipice of a technological paradigm shift. Internal audit functions that can quickly, safely, and effectively integrate AI into their digital processes will hold a huge advantage over those who delay. **The time to act is now**.

Appendix: survey demographics

The charts below provide information on the characteristics of the respondents who participated in a survey.

Role

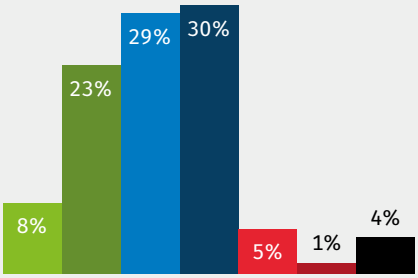
Q. Which of the following best describes your role in your current organization's internal audit function? (n=924).



- Chief audit executive or head of internal audit
- Director or equivalent
- Senior manager/manager
- Staff
- Service provider
- Other
- Not an internal auditor

Organization type

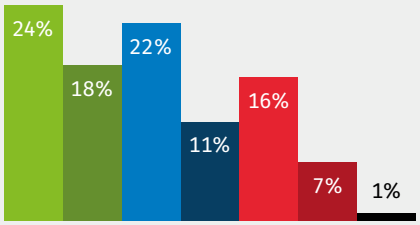
Q. What type of organization do you currently work for? (If you are a service provider, please answer based on your primary client.) (n=889).



- Nonprofit
- Privately held
- Public sector (government)
- Publicly traded
- Service provider/consultant
- Not sure/not applicable
- Other

Organization size

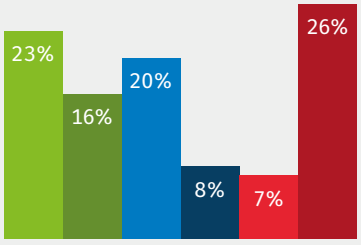
Q. Choose the range that best describes the current number of full-time equivalent employees (FTEs) at your current organization. (n=924).



- 500 or fewer
- 501 to 1,500
- 1,501 to 5,000
- 5,001 to 10,000
- 10,001 to 50,000
- More than 50,000
- Not sure/not applicable

Region

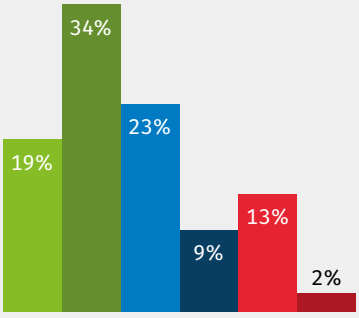
Q. In what region is your current organization based? (n=924).



- Africa
- Asia Pacific
- Europe
- Latin America and the Caribbean
- Middle East
- North America

Internal audit function size

Q. How many full-time equivalents (FTEs) are in your internal audit function? (If you are a service provider, please answer based on your primary client.) (n=924).



- 1 to 3
- 4 to 9
- 10 to 24
- 25 to 49
- 50 to 50+
- Not sure/not applicable

About The Institute of Internal Auditors and the Internal Audit Foundation

The Institute of Internal Auditors (The IIA) is an international professional association that serves more than 245,000 global members and has awarded more than 200,000 Certified Internal Auditor® (CIA®) certifications worldwide. Established in 1941, The IIA is recognized throughout the world as the internal audit profession's leader in standards, certifications, education, research, and technical guidance. For more information, visit theiia.org.

The Internal Audit Foundation is an essential global resource for advancing the internal audit profession. Foundation-funded research provides internal audit practitioners and their stakeholders with insight on emerging topics and promotes and advances the value of the internal audit profession globally. In addition, through its Academic Fund, the Foundation supports the profession's future by providing grants to students and educators who participate in The Institute of Internal Auditors' Internal Auditing Education Partnership program. For more information, visit theiia.org/Foundation.

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As part of the CP & ESG division of Wolters Kluwer, TeamMate delivers award-winning internal audit and analytics solutions to corporate internal audit departments and public sector audit organizations around the world. As internal audit teams evolve to deliver deeper insights, greater risk assurance, and improve efficiency, they require purpose-built and future-ready solutions. TeamMate provides expert solutions internal auditors rely on to drive value into their organizations.

Digital
Harness the latest technologies to demonstrate confidence in your coverage, improve productivity, and boost agility to address business changes.

Integrated
Connect critical business systems and key stakeholders to eliminate siloed decision-making and improve organizational performance.

Analytical
End reliance on incomplete, fragmented evidence. Implement integrated analytics to uncover hidden risks and obtain objective, comprehensive results.

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