



Evolve or Fall Behind

Visionary Internal Audit practices are charging ahead with advanced Generative AI solutions

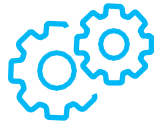


Generative AI (GenAI) is a powerful tool, but it's not a catch-all solution. As a component of a broader technology strategy, it joins the likes of analytics, automation, and audit management in the innovative auditor's toolkit.

Many – if not most – Internal Audit teams today have access to GenAI tools in their enterprise environments that are approved for routine use. Yet, visionary Chief Audit Executives (CAEs) have blazed past standard out-of-the-box solutions. These leaders understand the revolutionary nature of this technology and are seeking transformational outcomes that have impact beyond incremental personal productivity enhancements.

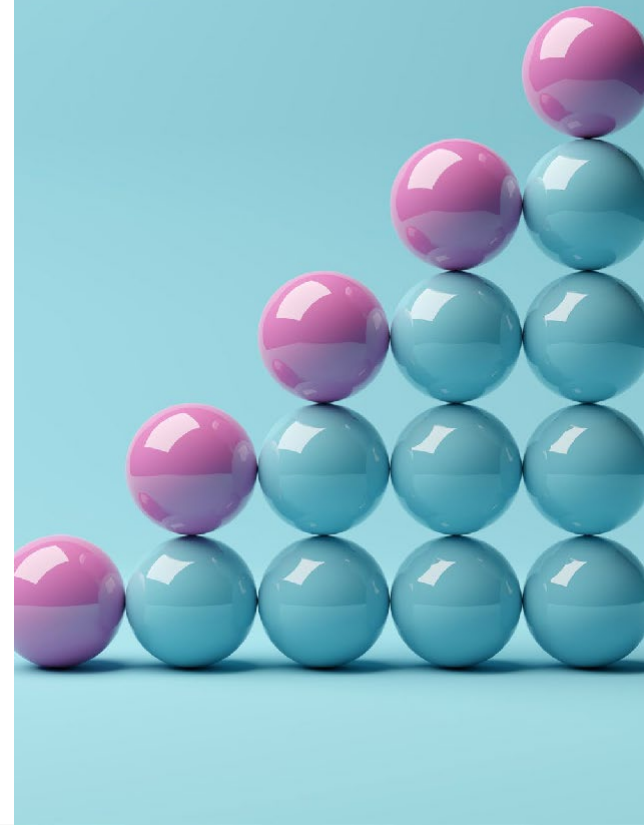
This article sheds light on GenAI's role in Internal Audit and demystifies how top auditors harness multiple technologies to fulfil ambitious objectives. Let's explore the cutting-edge techniques that are reshaping the audit landscape.

Selecting the right objective is essential



The first and perhaps most essential element of any technology-enablement program is to have a clearly defined target outcome. The deployment of GenAI is no exception. It is common for Internal Audit functions to use metrics as goals, such as ‘using analytics on x% of audits’, or – on the other hand – to have impossibly vague goals, such as ‘more insightful audit risks but. These approaches typically lead to unimpressive results and frustrated team members. Audit executives should understand that targeted outcomes must be prioritized and that trade-offs must be made.

Analytics may provide a relatively complete picture of business risks but require more time and cost to deploy. Automation may reduce completion times for tasks but can be costly to develop and maintain. Each Internal Audit function will have to evaluate their organizational context to determine how to position themselves within the triple constraint of time, scope, and cost. **Define your targeted outcomes clearly—ambiguity leads to mediocrity. Visionary CAEs make strategic trade-offs for maximum impact.**



Align technology with organizational objectives



After clearly defining outcomes, the next element is ensuring that your technology deployment is aligned with the organization’s broader objectives. Technology should not be implemented in isolation but integrated with Internal Audit’s strategy to deliver tangible business value.

This requires collaboration with other functions and stakeholders to understand organizational priorities, risk tolerance, and resource availability. Focusing on the alignment between GenAI initiatives and business goals will prevent misallocation of resources and ensure that the Internal Audit function remains a strategic partner.

Innovative CAEs ensure that their Internal Audit technology strategies are both flexible and adaptable to shifting organizational needs.

Establish metrics for success



The final element is to establish clear metrics to measure success and provide ongoing feedback. Without well-defined KPIs, even the most advanced technologies can fail to deliver meaningful impact.

These metrics should be directly tied to the Internal Audit function’s objectives. Regularly reviewing and adjusting these metrics ensures continuous improvement and the sustained relevance of technology investments. Forward-thinking CAEs view technology implementation as an iterative process, using data to drive future decisions and refine their strategies over time.

With a clearly defined outcome and supporting elements in place, Internal Audit teams can now begin to explore specific applications of GenAI that align with their strategic objectives.



Prompt engineering is a starting point

Making GenAI responses more relevant to Internal Audit generally starts with prompt engineering, which is the practice of creating tailored prompts that will improve the quality of model responses. Most users learn the basics of prompt engineering early in their experience with GenAI applications. However, prompt engineering has become very sophisticated and may require additional training and education to master. Some common prompt engineering approaches are shown below.

Verbose prompting provides more detailed context to the prompt with the goal of making the outputs more useful. Some common elements and examples include:

- **Role:** "As an internal auditor for a large manufacturer..."
- **Context:** "... I am preparing for an audit of the company's payroll process..."
- **Task:** "...draft an email to a control owner requesting the following documents..."
- **Additional information:** "...the control owner should provide the documents within ten business days to audit@company.com..."
- **Tone:** "The email should be written in concise, professional English."
- **Constraints:** "Limit the email to 500 words."

Few-shot learning is an approach that includes giving examples as part of the prompt. This allows the GenAI application to match the pattern of its response to the examples provided by the user. This can be used along with verbose prompting to further improve the results. For instance, a user might expand on the example above to include some representative document request emails from previous audits.

Depending on the capabilities of your GenAI model, the examples may be included as text in the prompt or as files that are uploaded as part of the prompt.

Persona-based prompting is an approach where Internal Audit teams will create prompts that ask GenAI applications to take on specialized roles to provide specific perspectives. To that end, a prompt is developed that describes a persona, what questions they are focused on, what industry frameworks they may consider, etc. Auditors can start a GenAI conversation by establishing the persona via prompts and proceed to asking that persona to provide insights such as proposing revisions to documents. Combining these different perspectives can improve the quality and relevance of the outputs to stakeholders. Some examples include:

- **"CEO"** is focused on how this will impact the organization and its strategy.
- **"CFO"** wants to know about the budgetary impact and compliance with IFRS.
- **"CISO"** considers impact in the context of the NIST cyber security framework.
- **"Editor"** suggests improvements to the writing to improve grammar, tone, and structure.

Other prompting techniques are available to accomplish specific tasks. **'Chain of Thought'**, for example, enhances outputs that require human-like reasoning by adding intermediate steps into prompts. **'Tree of Thoughts'** prompts improve reasoning quality by guiding the model to evaluate multiple response paths. **'Chain of Density'** prompts help condense large volumes of information into clear, concise summaries.

These and other techniques hold valuable potential for Internal Audit. We encourage practitioners to explore and experiment with these advanced prompting strategies.

Prompt libraries allow everyday users to harness powerful prompts



With so many techniques available, leading Internal Audit functions have begun creating prompt libraries. These libraries are a repository for prompts that all Internal Audit team members can use.

This approach provides many advantages. It reduces the amount of time spent by individual auditors on engineering prompts for tasks they perform frequently.

They can serve as a collection of 'best practices' to achieve improved, more consistent results. After all, a big hurdle to the effective use of GenAI is a lack of imagination by a user.

Prompt libraries will give auditors access to complex prompting approaches that they might otherwise not be familiar with or able to use without support.

It can also enable the transition from an execution mindset to a transformation mindset.

Prompts to be added to the prompt library are typically harvested from Internal Audit team members that have been successful using GenAI to perform an audit task. These prompts are often refined with the help of an experienced prompt engineer before being included in the library.

Prompt libraries generally provide some degree of documentation that explains the function of the prompts and uses key words, audit phases, and other cross-references that make it easier to find as the library gets larger.

Prompt libraries at various Internal Audit functions take different forms, from simple spreadsheets to interactive dashboards or applications. In at least one instance, an Internal Audit team made their prompt library resemble recipe cards.

Advanced prompt engineering can streamline the user experience



As prompts become more sophisticated, innovative Internal Audit teams are moving beyond the traditional approach of manually entering prompts. For tasks auditors frequently handle, teams can create user-friendly applications as front-ends to the GenAI system. Here, users fill out forms with checkboxes, dropdowns, text fields, and attachments, which are then used 'behind the scenes' to generate prompts based on predefined templates.

These templates may include style guides, methodology tips, or other specifications to optimize performance. By offering these applications, Internal Audit teams can simplify training needs and deliver expert prompt engineering as a consistent, seamless experience.

Developing these applications is feasible with common technologies already in place in many organizations and usually requires only moderate development and integration capabilities, keeping costs manageable.

Examples include applications that support detailed document reviews for style and tone, extract data from large documents or collections, synthesize meeting notes, and perform translations. Additionally, voice-to-text applications are emerging, enabling auditors to answer predefined questions verbally, which are then converted to text and integrated into prompts for GenAI responses. This feature will likely evolve as tools become more conversational and interactive.

Embeddings improve factual output and add proprietary information



Prompt engineering is critical to improving the relevance of GenAI responses, but this discipline alone has significant limitations for Internal Audit teams. Chief among them is the fact that GenAI applications typically do not have access to information inside the organization.

The names of specific people, places, and products; documentation of your processes; and access to your data will never be accomplished through prompt engineering alone. To get access to specific information about your enterprise, you must turn to embeddings.

Embeddings help to identify information about your enterprise that is relevant to your prompt. Essentially, they serve as a knowledge repository for a GenAI application. This knowledge repository may be a single document, such as a methodology, system document, or regulation.

It could also be a group of documents, such as purchasing contracts or historical Internal Audit reports.

It could be a database or even a collection of images. Regardless of the type of data in the knowledge repository, embeddings work in a similar fashion.

The language model in the GenAI application generates the language and reasoning to be used in the answer with information drawn from the knowledge repository. The most common technique used with embeddings is called Retrieval Augmented Generation (RAG).

RAG solutions pave the way to more automated auditing



RAG solutions vastly improve the usefulness of GenAI to Internal Audit teams. The 'retrieval' part of RAG typically leverages embeddings to find information that is relevant to the user's prompt.

That information is then passed along to GenAI to better answer the user's request. The fact that GenAI can ingest enormous amounts of text information and to parse that information semantically, creates the ability to execute

several tasks commonly performed by auditors, especially the 'stare and compare' tasks associated with many internal control tests.

So, questions like "does this number match that number" or "did activity X happen before activity Y" can be answered at scale using RAG solutions.



The rise of Knowledge Assistants

RAG solutions also enable the creation of knowledge assistants, chatbots that have access to domain-specific data and information. For example, innovative Internal Audit teams create knowledge assistants to facilitate access to their Internal Audit methodology. In that case, when an auditor has questions about sample sizes or testing approaches, they can interact with the chatbot rather than searching for the information on their own or waiting for an answer from a human.

While some types of knowledge assistants, such as data analytics assistants, regulatory assistants, or business process assistants, may require more complex engineering, the result is often just as intuitive for users. These capabilities are being actively deployed or developed by forward-thinking Internal Audit teams and technology vendors.

While the underlying technology that enables these knowledge assistants is impressive, the level of effort for end users to create knowledge assistants is minimal. These GenAI applications can be configured to use any combination of documents in a set of folders on a computer or collaboration site.

At KPMG, for example, our teams can put all of the documents from an internal audit into a collaboration site, then interact with those documents via a conversational GenAI interface. This allows any team member to create a knowledge assistant on virtually any topic for which information is available.



Combining prompt engineering with embeddings will yield impactful results

Some of the most powerful applications to emerge from leading Internal Audit practices over the past year, involve combining prompt engineering with RAG capabilities.

One of the most popular examples developed by multiple leading Internal Audit teams is a 'findings writer'. The essential idea is that by using verbose prompts, working paper references, findings language, and methodology documents to generate factual findings in a style consistent with the Internal Audit team's preferences.

While a findings writer is a first step, these innovative Internal Audit teams aspire to progress to full report writing capabilities. This is a clear leap forward, and there are no major barriers to achieving this objective with current technology.



Parameter adjustment improves responses in more technical domains

Large Language Models (LLMs), the underlying technology at the heart of GenAI applications, use a complex set of weighted probabilities to compute which words should be used in which order. These weights can be adjusted for most LLMs. There are multiple approaches to adjust the weights, but the most common approach is referred to as **fine tuning**. The impact of adjusting the weights of these models is that the usage of

language changes. It is a classic LLM fine tuning exercise in academia to adjust the parameters of the model to speak in Shakespearean language. Such a change does not significantly impact the facts included in the response, merely the language used to express those facts.

In some industries and domains, discipline-specific language is important for clarity and credibility. A GenAI solution that uses everyday language to describe technical phenomena will require significant editing. For example, in the Internal Audit profession words like *'significant deficiency'* and *'material weakness'* carry specific meanings that English language synonyms will not convey.

Currently, fine tuning LLMs is not being pursued by many Internal Audit teams, largely because advanced prompt engineering and embeddings are lower cost and higher impact in the short term. It is worth noting, however, that newer approaches to fine tuning, such as retrieval augmented fine tuning (RAFT) may decrease the cost and expertise required for such solutions in the future.

We expect that the most relevant and impactful GenAI solutions in the future will rely on a combination of advanced prompt engineering, embeddings, and parameter adjustment to perform internal audit tasks.



Small language models will likely play a role in the future of Internal Audit

LLMs may be stealing the spotlight, but there's a strong case for the impact of Small Language Models (SLMs) in Internal Audit. Unlike LLMs, SLMs lack broad, generalized abilities but bring unique advantages. They are far more affordable to train and deploy, easier to fine tune for specific tasks, more sustainable in energy use, and potentially more secure. While implementing an SLM might not be the first step on your GenAI journey, it's a valuable tool for any forward-thinking Internal Audit leader to consider.



The future of AI is now

The techniques covered in this article are already empowering the most forward-thinking CAEs and their teams to enhance their effectiveness and efficiency. They are leveraging GenAI to align control matrices with industry standards, create audit program guides, document process narratives, test controls, draft findings, and more.

If your Internal Audit function isn't yet focused on harnessing GenAI, now is the time. This capability is being embedded across major technology platforms, with LLM-driven applications delivering rapid business value. Internal Audit leaders must adopt these technologies to maintain credibility, meet professional demands, and attract top talent.

KPMG can help



KPMG has been recognized as the top provider for quality in AI advice and implementation services globally. Microsoft named KPMG the Supplier of the Year in 2024. Moreover, KPMG's Google Cloud Center of Excellence has been created to accelerate adoption of GenAI technologies. KPMG is the premier partner for GenAI in Internal Audit. We offer the following GenAI services for Internal Audit teams:

GenAI/Technology enablement strategy for Internal Audit or SOX teams: We can help you design clear goals and a roadmap to achieve your vision for a more technologically enabled Internal Audit function. We can also assist with building the business case for investment in this capability.

GenAI use case development: We can help you develop GenAI tools, prompt libraries and other enablement tooling to get the most out of your GenAI strategy.

GenAI enabled audits: We conduct audits using GenAI capabilities and our global network of leading subject matter professionals.

AI governance audits: We can perform audits of your enterprise AI governance program.

Wherever you are in your AI journey, our 15,000+ risk professionals can tailor our vast experiences, field-tested approaches, and advanced solutions to your organization, helping you navigate GenAI with confidence.

A note about GenAI risks

All GenAI models and applications have inherent risks related to security, accuracy, safety, integrity, and other domains. These risks can be effectively managed with appropriate mitigations, including contracts, configurations, training, and other internal controls. Our KPMG Trusted AI framework provides a more comprehensive view of GenAI risks and risk management approaches. We encourage all Internal Audit teams to read our materials on Trusted AI to gain an understanding of these risks. For the purposes of this article, we assume that those interested in implementing the concepts herein will take precautions appropriate to their organization's GenAI governance policies.

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