



Towards a Data-Driven Future

STATE OF INTERNAL AUDIT 2020





The Age of Data is Upon Us

The bedrock of internal auditing does not change. However, no profession operates in isolation, and just as technology continues to revolutionize the way we do business in the 21st century, audit is not immune from disruption. Indeed, it is one of the fields most affected by it, and in today's business climate it all comes down to one operative word: data.

We do not have to look far to see that the global business environment is changing rapidly in the face of the data revolution. Read any recent business blog, analyst brief, or annual report, and it is not hard to find some reference to the omnipresence of data in our daily lives. And it is only becoming more present: [IDC predicts](#) that worldwide data will increase 61% to 175 zettabytes by 2025. Data affects all businesses, for what organization is not touched by data in some way?

What is new is the ubiquity and volume of data. From big data to data science to predictive analytics, data is everywhere. Data may not be [the New Oil](#), as is sometimes proclaimed, but those who have made the comparison are wisely underscoring the importance of data in today's economy.

But internal audit is one of the professions where developments affecting data (data availability, data sources, data analysis, etc.) are particularly resonant and impactful. To that end, data is a key focus throughout this report, just as it was an underlying theme in the findings of our State of Internal Audit 2020 Survey, upon which this report is based.

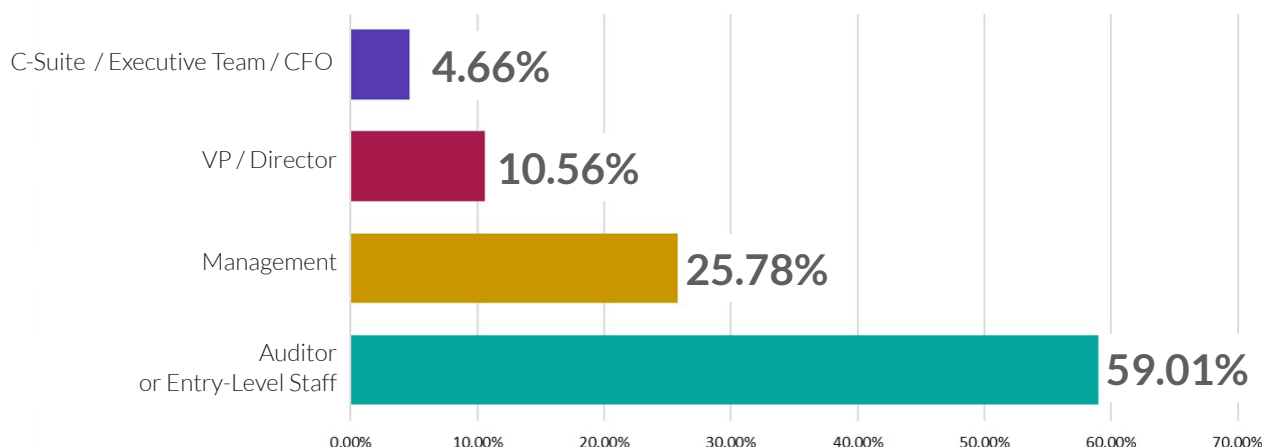
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About the Survey

To get a better sense of the current state of internal audit, we turned to those who know it best: internal auditors themselves. In late 2019, we asked internal audit professionals from around the globe to respond to a number of questions on their approach to auditing as the year drew to a close. The survey was active for one month, during which time we collected responses from internal audit professionals from around the world. This paper takes a high-level look at the findings of that survey. We will be looking at each of the addressed areas in greater depth throughout 2020.

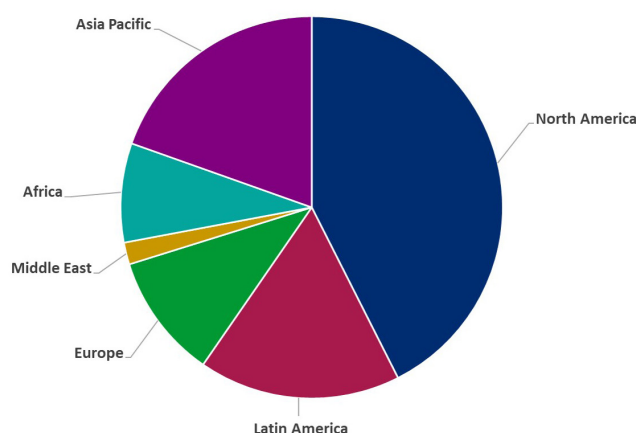
Who Was Surveyed?

We surveyed nearly 400 internal audit professionals from junior auditors to the C-Suite. Over half (59%) of respondents indicated they were auditors or entry-level staff, and the rest indicated they were at the management, VP/Director, or C-Suite level. A number of respondents indicated they were students or consultants, but we excluded their feedback from this report.



Geographic Distribution

The survey was promoted globally across multiple channels. Although a plurality (42%) of respondents operate out of North America, the survey results reflect the views of audit professionals from all major global geographic regions, including Asia Pacific (20%), Latin America (17%), Europe (11%), Africa (8%), and the Middle East (2%).



Disclaimer: It is important to note that although CaseWare IDEA conducted the survey, participation was extended to a broad audience of audit professionals, regardless of whether they use IDEA solutions or not.

Survey Findings

Executive Summary

Our survey findings suggest that individuals and leadership within the internal audit profession are aware of the unique opportunities afforded by new technologies and data analytics, but are struggling to:

- Embrace and adopt these new technologies.
- Train internal audit staff on technology tools.
- Move from traditional, manual processes to data-driven auditing processes.

Compliance demands – a perennial challenge for internal audit – continue to rank as one of the top priorities for auditors, and data ethics is taken seriously by most respondents. The year ahead for internal audit will be marked by:

- The adoption of data analytics technology.
- The optimization of existing audit technology.
- Training auditors on audit technology.

Many of these challenges and priorities are interconnected, and together they represent a global movement towards the data-driven audit.

It is important to note that we approached this project from a vendor-agnostic standpoint. At no point in the survey or this report do we address specific technology vendors or solutions, because our intent is to offer an unbiased assessment of the state of internal audit in 2020.

Topics Covered

We asked respondents for feedback on the following areas:

- Current and planned elements of internal audit approaches
- Most significant internal audit challenges
- Compliance demands
- Data analytics in internal audit
- Artificial Intelligence and machine learning in internal audit activities
- Cloud technology in internal audit
- Training and adoption of audit technology
- Priorities for 2020, and much more

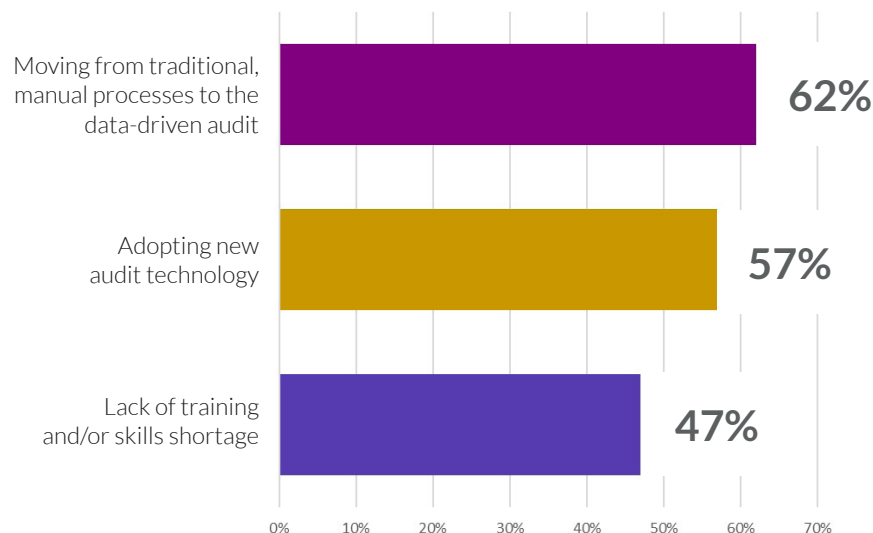
Challenges Overview

In the survey, audit professionals were asked to address their biggest audit challenges currently, and the answers reflect the views of respondents as they stood at the close of 2019. When asked to name their top internal audit challenges, three clear priorities emerged as the top challenges faced by auditors, regardless of role or geographic location.

Leading the charge was the need to move from traditional, manual processes to the data-driven audit, a priority 62% of respondents named a top audit challenge. Close behind were the need to adopt new audit technology (57%) and addressing the skills shortage (47%).

Top Internal Audit Challenges

62% of survey respondents said moving from traditional, manual processes to the data-driven audit is a top challenge



These key challenges map well to respondents' key priorities for 2020, which we present in the paper ahead. It is notable that all three of these challenges are deeply intertwined: moving away from manual processes is almost always linked to adopting new audit technology. Adopting new audit technology means having the right audit personnel trained on the right technology, hence the lack of training and skills shortage being identified as two of the most critical challenges faced by the profession.

These challenges are distinct, which is why they were presented as unique options for survey respondents. But their close relationship in combination with their position as the top three challenges internal audit faced in 2019 (and continues to face in 2020) is very telling: the profession is aware of the need for digital transformation but also contending with a poor alignment of people, processes, and technology.

For comparison, the fourth item auditors collectively ranked as a top challenge in 2019 was the need to make sense of massive amounts of data, which scored at a comparatively low 39% – high enough to register as a popular challenge, but eight points below the third largest challenge. It is also worth noting that this challenge is also linked directly to the technology factor, as “making sense of massive amounts of data” almost always involves technology broadly and data analytics solutions specifically.

The background of the slide features a complex financial visualization. At the top, there's a bar chart with several bars of varying heights in shades of blue and purple. Below this, a line graph with multiple lines in orange, white, and blue is plotted against a grid. At the bottom, a portion of a data table is visible, showing columns for days of the week (Sun, Mon, Tue) and rows of numerical values, some labeled 'High' and 'Low'.

On the Data-Driven Audit

Since it is so central to the conversation on the state of internal audit in 2020, it is worth clarifying what we mean when we refer to the “data-driven audit”. Increasingly used by the Big Four global audit and accounting firms (Deloitte, Ernst & Young, KPMG, PricewaterhouseCoopers), the data-driven audit leverages technology, big data, data analytics, and even predictive analytics to shift the internal audit from a manual exercise to a data-centric, risk-sensitive, technology-enabled, continuous activity.

In the words of Peter Russel, KPMG’s Audit and Data Analytics Lead for Australia, although the data-driven audit is rooted in technology, it is ultimately about redefining the relationship between auditor and client.

“Data-driven audits can mitigate your risks today by showing back to you how your business is performing against your risk framework that you’ve set,” he explains. “Are you obtaining the sorts of loans, the sorts of customers, the sorts of business that you’ve wanted in accordance with your strategy and in accordance with your risk appetite? This changes the relationship between auditor and client from a reactive to a proactive one.”

In short, data-driven auditing is an approach marked by:

- The use of data analytics technology.
- A decreased reliance on manual tools and processes (e.g., traditional spreadsheets and sampling).
- Results-based decision making that enables both the auditor and client to find more value in an audit.
- Using these approaches to enable management to minimize risk.

The data-driven audit shirks conventional, manual approaches to auditing to realize a future of data-based decision making.

The data-driven audit uses technology, big data, data analytics, even predictive analytics to make auditing a data-centric, risk-sensitive, technology-enabled, continuous activity.



The Road Ahead

As readers will see in the survey findings presented throughout these pages, the road ahead for internal auditing in 2020 will be defined by the following considerations:

- **Data analytics:** As organizations move towards the data-driven audit, they will continue to adopt and exploit the great potential presented by data analytics tools.
- **Training and adoption:** Auditors are acutely aware of the promise offered by data analytics solutions but struggle to adopt and exploit such tools due to skills and training deficiencies. Expect to see this addressed throughout 2020 through new training approaches and programs, but also through talent acquisition strategies that focus on technology skills as a key consideration.
- **Compliance:** Just as it has been a priority in the last 18 years, namely since the passage of the Sarbanes–Oxley Act in 2002, compliance will continue to rank as a top priority in 2020 and the years ahead.

Read on for our breakdown of some of the key findings of the State of Internal Audit 2020 Survey.



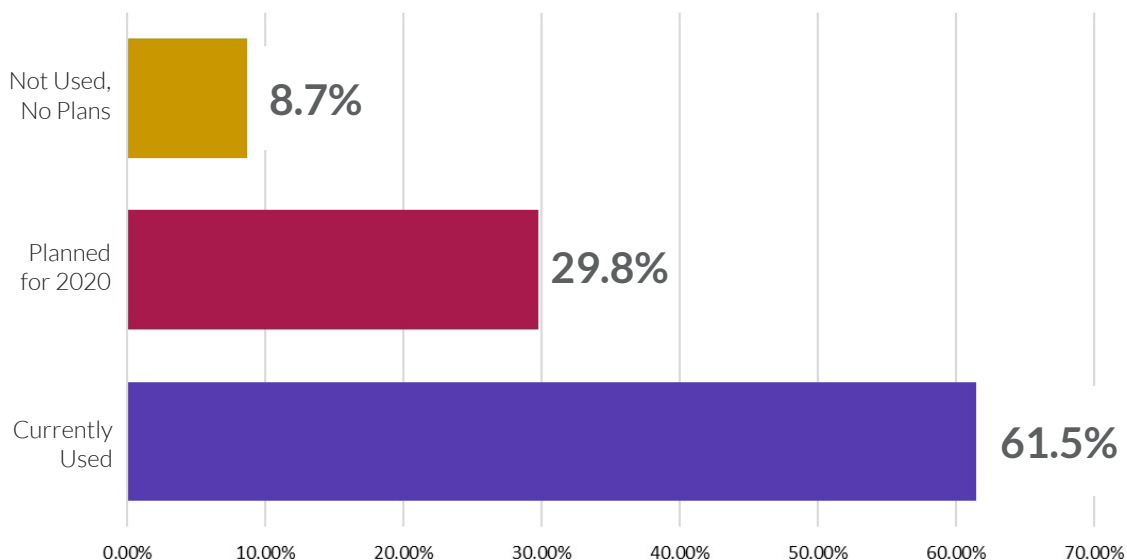
Data Analytics

Just as there is no escape from the seismic technological changes affecting business in the 21st century, references to data analytics are abundant. The internal audit profession is affected accordingly, and data analytics has become a must-have tool of audit in 2020. Though data analytics tools have been available for years, internal audit is becoming increasingly aware of possibilities presented by related technologies.

In our survey, we found that most respondents around the globe had either already incorporated data analytics into their internal audit approach or were planning to adopt data analytics in 2020. This suggests that 92% of respondents identify the value of data analytics in their audit approaches and have either adopted it or plan to adopt it this year – a good indication for the profession at large.

A small percentage of respondents indicated that they do not use data analytics in auditing and had no plans to use it in the future. On a maturity scale, these respondents would be categorized as laggards; they have not yet ‘seen the light’ and data analytics are not in their near-term plans.

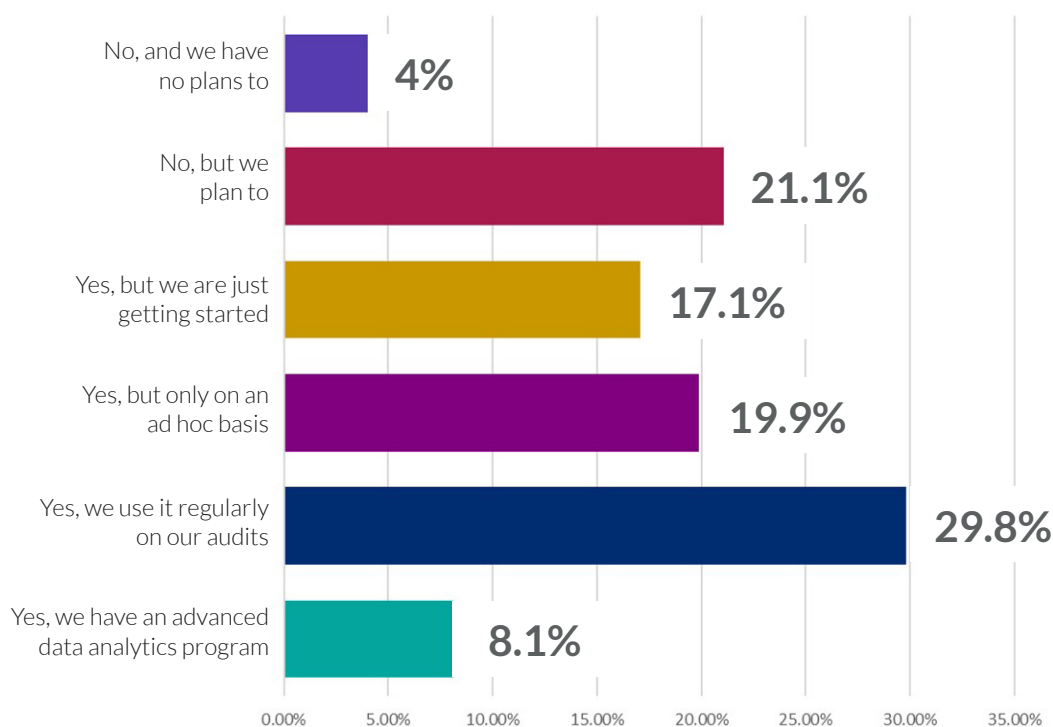
Current or planned elements of internal audit: data analytics





When asked to characterize the degree to which they used data analytics within their audit program, respondents' answers varied, showing some had adopted a fairly robust, mature, and comprehensive data analytics approach (8.1%) while others indicated they were just getting started (17.1%).

Does your organization use data analytics in your internal audits and to what degree?



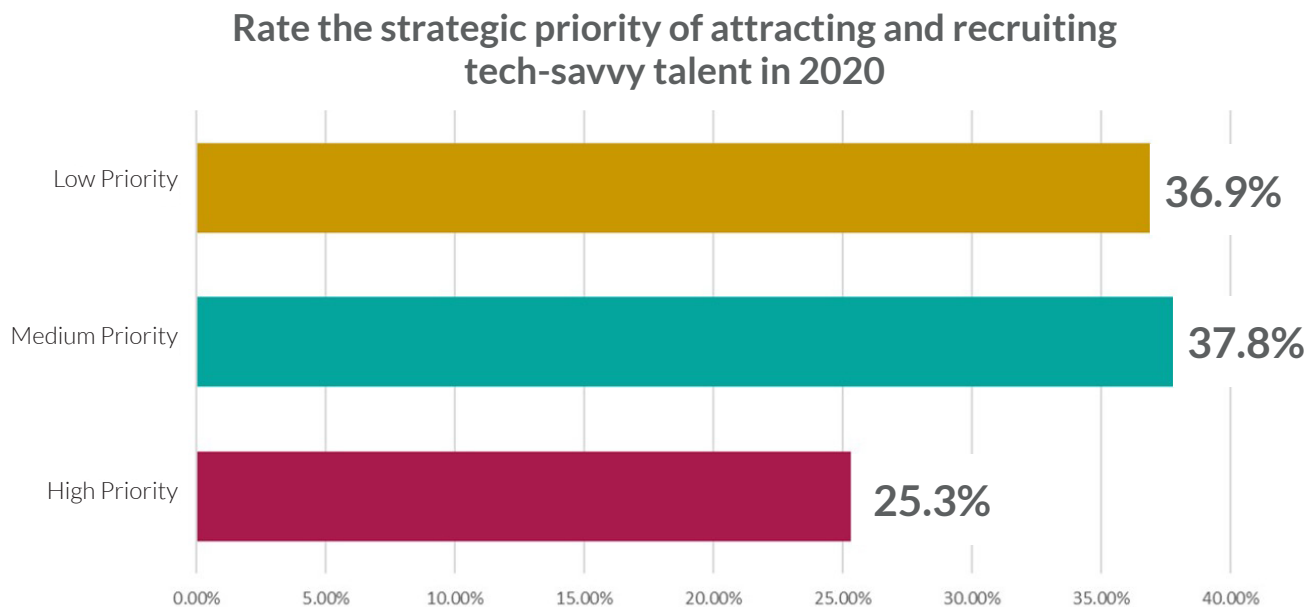
A positive takeaway from this is that, while the degrees of maturity vary, most of these respondents have begun their journey towards a data analytics-informed future.

We will unpack these findings for insights throughout 2020, in future reports and articles, but in the meantime, we can assert with confidence that the age of data analytics in internal audit is upon us and organizations that are either slow to adopt data analytics solutions or, worse yet, unaware of the potential data analytics offers, ought to take heed and shape their strategic plans accordingly.

Audit Technology Adoption and Training

As indicated in the introduction to this report, the adoption of new audit technologies is a key challenge and top priority for internal auditors around the world. But adopting new technology across a large global organization is no small feat, especially when it is challenging enough to train a workforce on existing audit technology.

And that is exactly what our findings pointed to. When asked to rate the top strategic priorities for 2020, respondents overwhelmingly named training their workforce on audit technology either a medium priority (45%) or high priority (41%).



As the third-largest strategic priority for 2020, training is undeniably an organizational concern. And at least some auditors are looking at the problem through the training and recruitment lenses. Among the many strategic priorities identified by respondents, attracting and recruiting tech-savvy talent was named as either a high priority (25.3%) or medium priority (37.8%) for 2020.

Most audit organizations know they have to address the skills shortage in internal audit, and a combined 63% are addressing the challenge by hiring the right talent in 2020. That is not to say that existing staff are being ignored. It simply shows that organizations are taking a multifaceted approach to address the problem.

One insight here is that leaders in internal audit realize that, in order to adopt, implement, and exploit the power of data analytics and other audit technologies, they first need a workforce that is capable of using the tools from a skills perspective. The adoption problem within the audit profession is a far-reaching and longstanding issue we explored in a [recent article](#) and one we will continue to discuss throughout 2020.

Artificial Intelligence and Machine Learning

Just as data analytics is all around us today, AI is driving the conversation in just about every area of business around the globe. Businesses worldwide are investing heavily in the promise of AI: a scant four years ago, only 10% of respondents to Gartner's sweeping [CIO survey](#) indicated they had deployed AI solutions, a number that has swelled by 270% in just four years. As Gartner's Research VP Chris Howard noted when survey results were published in 2019, "If you are a CIO and your organization doesn't use AI, chances are high that your competitors do and this should be a concern."

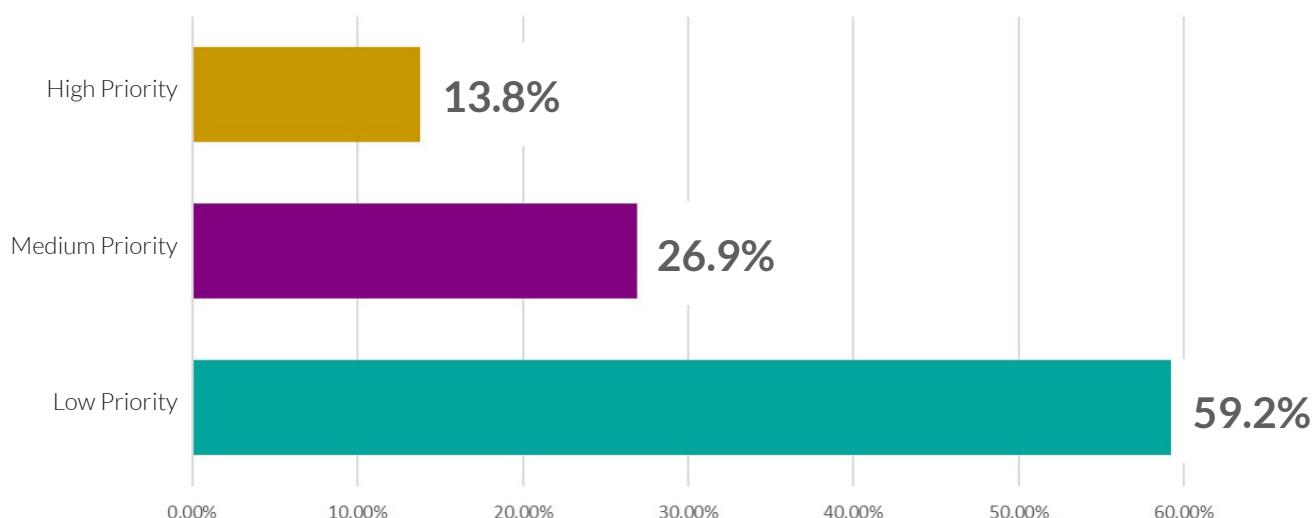
"If you are a CIO and your organization doesn't use AI, chances are high that your competitors do and this should be a concern."

Chris Howard,
VP of Research,
Gartner

The same survey results also indicate that by 2021, 80% of new technologies will feature foundations in AI, suggesting AI will only become more relevant and pervasive in the years ahead. A [2019 IT Audit survey](#) by Protiviti and ISACA bolsters the idea that the AI transformation can fuel long-term growth, but Protiviti's recent [global AI survey](#) also shows many companies are still at square one when it comes to figuring out how to measure ROI, determine use cases, and define analytics capabilities.

In internal auditing, the possibilities presented by AI are considerable. From contract review to [unstructured data analysis](#) to supporting fraud investigations, AI is poised to transform internal audit. But in accordance with some of the results found by Gartner and Protiviti, many in the industry have no plans to incorporate AI into their internal audit approaches, or do not know where to begin.

Rate the strategic priority of building AI and Machine Learning into your audit process in 2020

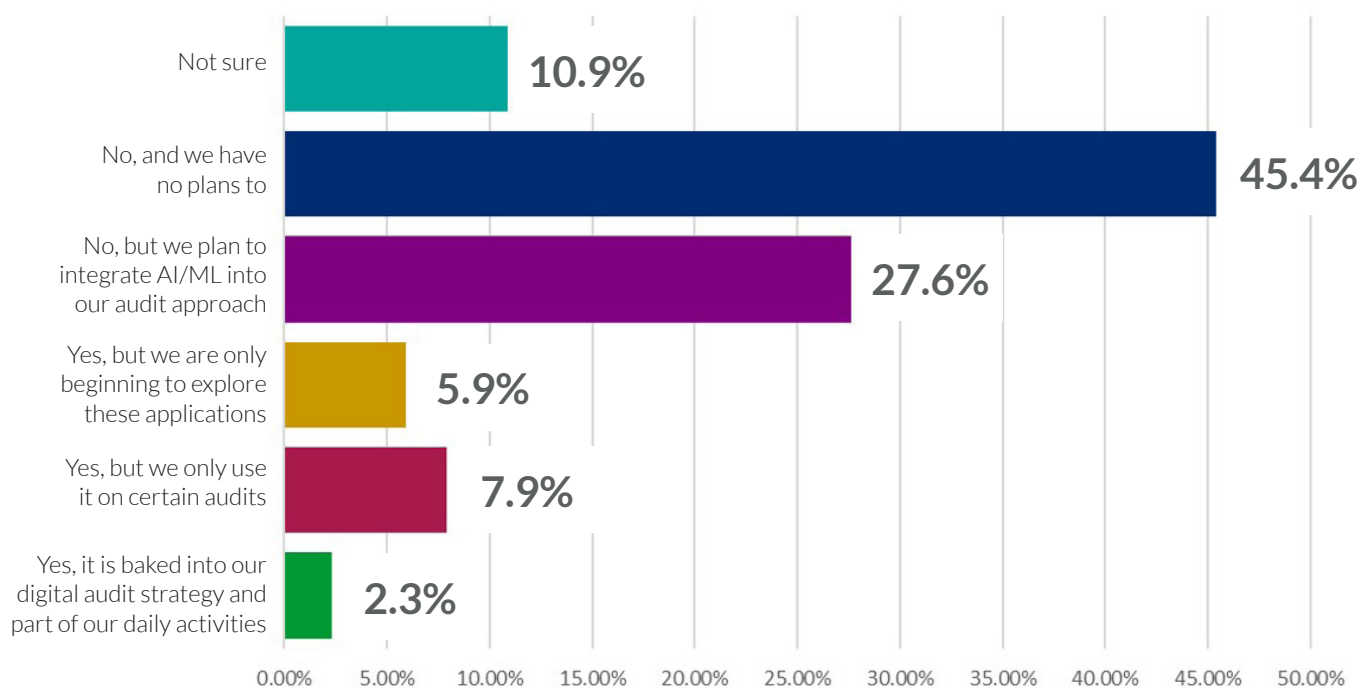




In our survey, most individuals responding (59.2%) ranked building AI and machine learning into audit processes as a low priority. This shows that while 13.8% view it as a high priority, there is still much room to grow.

When asked to characterize the extent to which they used AI in their audits, a small fraction of respondents said AI was baked right into their audit strategy and is a part of their daily activities.

Are AI and Machine Learning currently incorporated into your audit processes, and if so, to what extent?



These results show that only a handful of internal auditors are using AI in a committed and organized way, and nearly half have no plans to incorporate AI into their internal auditing processes. Since most other businesses globally are investing in AI at an increasing rate, the comparative disinterest in these technologies by organizations within internal auditing is an area of concern.

As the year unfolds, expect to see awareness of the role of AI in internal audit expand especially as examples of its use among maturity leaders are illustrated through example.

Towards the Data-Driven Future

Like many industries, the world of internal audit today is very much defined by new technologies, barriers to adoption, and the promise of a data-driven future.


Compliance demands will continue to play a key strategic role in the priorities of any audit organization. SOX compliance and other emerging and new compliance requirements will also play a large role as electronic record management will ever be under the microscope, and any auditor will need to maintain compliance simply to do business and avert the monumental costs of noncompliance.

But alongside addressing compliance requirements, leading audit organizations will spend 2020 in pursuit of the data-driven audit through a combination of addressing the current skills shortage, acquiring tech-savvy talent and optimizing their use of existing audit technology solutions.

Though the potential of AI and machine learning has not been fully embraced by the industry, many leaders have already adopted AI in their audit approaches and many others are aware of its potential, in spite of the fact they do not expect to adopt AI this year. Also, recall that while the value of data analytics in internal audit wasn't universally apparent 20 years ago, the organizations that 'saw the light' early are among the global success stories today. Early adopters often graduate to become top performers and global leaders, so expect to see the same dynamic emerge in the AI conversation throughout 2020.

If the data-driven audit is the destination (as survey findings indicate) and audit technology is the vehicle, then it stands to reason an optimal alignment of people, processes, and technology is the way that will bring the profession to the promised land of a data-driven future.

Report by [Paul Leavoy](#), who writes on internal auditing and data analytics with CaseWare IDEA.



Begin your journey towards the data-driven audit by engaging with our team today. We will assess your current state and define a simple, achievable plan to help you realize a results-based, data-driven future.

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