

A full-page background image showing two surfers riding a large, curling wave. The surfer in the foreground is a woman in a black wetsuit, leaning forward on her surfboard. The surfer in the background is a man, also leaning forward. The water is a deep blue-green, and the sky is a pale blue with some light clouds. The overall mood is dynamic and energetic.

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of **INTERNAL AUDITING**

*It's time for internal audit leaders to stand up and ride their own wave of transformation and innovation*

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Innovation and transformation require more than just a series of discrete activities. They necessitate a fundamental rethinking of the design and capabilities of internal audit. Granted, most internal audit functions don't have the luxury of starting from scratch. But that does not preclude them from being innovators; it just means they have to be open to new ideas. Innovation in internal audit is driven by a next-gen, trailblazer mindset, along with a willingness to make bold decisions, learn from mistakes and never stop asking, 'How can we get even better?'

— Brian Christensen, Executive Vice President, Global Internal Audit

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**NEXT GENERATION**  
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## Foreword: Internal Audit Perspectives on a Global Pandemic

*COVID-19 has compelled organizations to innovate – and internal audit has been no exception.*

For several years, we've advocated for internal audit functions to adopt a **next-generation internal audit mindset** and to embrace the wave of transformation and innovation underway in their organizations and the overall market. In fact, for the past two years we have structured our annual internal audit survey around these very principles. Little did we know that a global pandemic of historic proportions would alter the very foundations of business operations, practices and processes, as well as bring to light new views and ways for internal audit to perform its critical assurance and advisory work.

We conducted our 2020 Next Generation Internal Audit study in the fourth quarter of 2019 and completed this report in the first quarter of 2020, before the onset of the COVID-19 global pandemic. Of course, the world changed in March 2020, when we had planned to release these results. We elected to put our plans on hold while businesses worldwide reacted and adjusted to this new reality.

So much has changed in our society and for businesses large and small during this transformative period. Efforts by organizations worldwide pivoting to remote workforces and transitioning operations on the fly have been well documented. Internal audit certainly has not been immune to the effects on their organizations, with audit plans shifting dramatically and assurance and compliance activities requiring multiple changes and adjustments to meet objectives and deadlines in this new status quo.

It would be glib to point out the relevancy of our survey results and how they will be beneficial to internal audit departments in today's environment. But I do believe this pandemic has raised questions among CAEs and internal audit leaders about how they can best support management and their organizations in navigating the many changes underway. To illustrate just a few examples, most organizations have transitioned their workforces to work remotely. They have implemented new tools and technologies to facilitate communication and collaboration internally and externally. They have adjusted or even transformed supply chains to avoid interruptions of goods and services for their operations and for customers and clients. These and numerous other initiatives have introduced new risks that haven't been contemplated, and because these were ramped up relatively quickly, they may not have been vetted to the level and extent of previous process and system implementations. Such issues clearly are on the minds of CAEs and their teams.

The foundation of next-generation internal auditing lies in principles such as agility, real-time risk and controls monitoring, dynamic risk assessment, and the effective leveraging of data and advanced technologies. The advantages a next-generation internal audit mindset and approach deliver have become further magnified during this global crisis. Consider risk assessments, as just one example. The catastrophic effects of this pandemic are bringing in a whole new look and examination at the risk assessment process, particularly if this is something typically conducted on an annual or even less-frequent basis. Risk assessment should be structured to respond to risks as quickly as they change. This requires agile methodologies supported by a more in-depth understanding of risks, as well as the ability to quantitatively measure and monitor those risks. Next-generation internal audit functions have moved beyond annual or quarterly risk updates to obtain a real-time view on changes to risks, their impact to the organization and the impact on the assurance needed from internal audit.

We continue to advocate for the embrace of a next-generation internal audit mindset and the adoption of the governance, methodology and enabling technology competencies that will position the internal audit function to support the organization as it continues to transform amid this pandemic and in the years to come.

In closing, I want to acknowledge and thank the countless healthcare professionals and first responders who continue to battle this terrible disease, as well as the millions of frontline workers keeping businesses running during these challenging times. I wish you and your families good health and hope you are staying safe. Take care.

**Brian Christensen**  
**Executive Vice President – Global Internal Audit**  
**Protiviti**  
**August 2020**

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# Executive Summary — It's Time to Stand Up and Move Forward

In recent years, mammoth waves of disruption have both buffeted and ignited organizations in their drive to change and stay relevant. Not surprisingly, internal audit functions have seen the effects. It's now time for internal audit leaders and their teams to take the initiative, stand up and ride their own wave of transformation and innovation.

Becoming a next-generation internal audit function shares more than a few similarities with big-wave surfing. Both require overcoming trepidation and committing completely. There are also different forms of knowledge to acquire, unfamiliar challenges to navigate, and new skills and competencies to develop.

Also of note: Successful surfers don't thrive by simply hopping on the first giant swell they see. Instead, they become adept at reading deeper water, avoiding shallow reefs, developing different techniques and honing their skills on longer boards. To build and manage a next-generation function, internal audit leaders and teams have a host of their own governance, methodology and enabling technology competencies to hone. The results of our latest Internal Audit Capabilities and Needs Survey show that most audit functions need to quickly improve their acquisition and development of next-generation auditing skills.

In fact, in rating their competency levels for different areas of next-generation internal audit governance, methodology and enabling technology, chief audit executives (CAEs) and internal audit professionals provided scores that are among the lowest levels in our entire survey.

These findings should serve as a wake-up call for internal audit leadership. Next-generation auditing capabilities, processes and tools — from strategic vision, agile auditing and dynamic risk assessment to artificial intelligence (AI), machine learning and process mining, among others — should be pressing priorities for the internal audit function to build and grow as their organizations continue to transform and stakeholder expectations for these capabilities rise. Our results show that audit committees certainly hold this to be true. At present, too many internal audit teams are not adequately prepared to commit to difficult but necessary transformation.

Internal audit leaders need to clarify for their teams the high risks and costs of sticking with the status quo. If internal audit does not develop next-generation internal audit governance competencies, methodologies and advanced technologies, other organizational groups are poised to assume these responsibilities.

Finally, although internal audit should embrace new ways of thinking and operating, they should not do so recklessly. The discussions that follow depict leading practices, including those deployed by audit

groups with comparatively mature approaches to transformation (which we refer to as “Digital Leaders”), that demonstrate the value of pursuing transformation to achieve high-value benefits beyond efficiency gains. While many of our survey results underscore how much progress internal audit functions need to make on their next-generation journeys, the insights also provide useful guidance on the skills and techniques auditors need to ride the transformation wave successfully.

## Our Key Findings

01

**Next-generation internal audit competencies need to be prioritized rather than marginalized — especially enabling technologies.** CAEs and internal auditors report their competency levels in next-generation governance, methodologies and enabling technologies to be remarkably low at a time when these capabilities should be priority areas for growth and development.

02

**Fewer internal audit groups are undertaking some form of innovation or transformation, but the maturity of these capabilities has increased.** This progress is good news but makes it even more imperative for internal audit groups not currently undertaking some form of innovation or transformation to get moving — or risk falling too far behind.

03

**Audit committees want CAEs to communicate how their transformation and innovation efforts are resulting in more coverage of risks and deeper audit reviews.** As internal audit groups advance transformation activities, the audit committee’s interest in these efforts increases, which in turn requires audit leaders to enhance the risk relevance, visual appeal and conciseness of their communications to the board.

04

**In addition to next-generation internal audit competencies, top audit plan priorities include cyber threats, enterprise risk management, fraud and third-party risks.** Of particular note, internal audit strategic vision, a core next-generation competency, ranks among the top five audit plan priorities.

# Next-Generation Knowledge

## What You Need to Know

- Of the three next-generation competency areas, internal audit functions have demonstrated the most progress in implementing and advancing governance competencies. Yet it's vital that skills and capabilities in all three next-generation audit areas – governance, methodology and enabling technology – be developed to have a truly next-generation internal audit function. The maturity of these areas must be aligned so that they enable and support each other.
- In what should represent a red flag for CAEs, enabling technology skills and tools – which include AI/machine learning, process mining, robotic process automation (RPA) and advanced analytics – received some of the lowest competency level self-assessments in the entire survey.

## I. Governance

### • • • Overall Results, Next-Generation Governance Competencies\*

"Need to Improve" Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	Aligned Assurance	2.8
2	Internal Audit Strategic Vision	3.3
3	Resource & Talent Management	3.1
4	Organizational Structure	3.2

### • • • CAE Results, Next-Generation Governance Competencies\*

"Need to Improve" Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	Aligned Assurance	3.1
2	Resource & Talent Management	3.4
3	Internal Audit Strategic Vision	3.6
4	Organizational Structure	3.5

\* Respondents were asked to assess, on a scale of 1 to 5, their competency in different areas of next-generation governance, with "1" being the lowest level of competency and "5" being the highest. For each area, they were then asked to indicate whether they believe their level of knowledge is adequate or requires improvement, taking into account the circumstances of their organization and industry.

- • • **Governance competencies being undertaken to transform the audit process**

*2020 Results*

	Currently undertaking	Currently evaluating and planning to undertake within the next year	Currently evaluating and planning to undertake within the next two years	No plans to adopt
Aligned Assurance	33%	22%	23%	22%
Resource & Talent Management	37%	25%	19%	19%
Organizational Structure	35%	25%	18%	22%
Internal Audit Strategic Vision	41%	26%	18%	15%

*2019 Results*

	Currently undertaking	Currently evaluating and planning to undertake within the next year	Currently evaluating and planning to undertake within the next two years	No plans to adopt
Aligned Assurance	25%	33%	23%	19%
Resource & Talent Management	32%	28%	23%	17%
Organizational Structure	29%	26%	25%	20%
Internal Audit Strategic Vision	31%	30%	25%	14%



Next-generation internal audit helps organizations make better decisions not only by addressing and managing current risks, but also by illuminating the risks and unforeseen consequences inherent in their longer-term digital transformation and growth strategies.

— Michael Thor, Managing Director, North American Leader, Internal Audit and Financial Advisory for the Financial Services Industry, Protiviti



- • • **Primary reasons these activities are being undertaken to transform the audit process (multiple responses permitted)\*\***

*2020 Results*

	Deliver synergies across assurance activities	Align skills with strategic and emerging risks	Establish an innovation capability	Align resources to maximize potential	Currently evaluating/no plans to adopt
Aligned Assurance	48%	48%	15%	35%	6%
Resource & Talent Management	23%	49%	28%	43%	8%
Organizational Structure	32%	43%	21%	40%	7%
Internal Audit Strategic Vision	40%	52%	30%	37%	6%

*2019 Results*

	Deliver synergies across assurance activities	Align skills with strategic and emerging risks	Establish an innovation capability	Align resources to maximize potential	Currently evaluating/no plans to adopt
Aligned Assurance	30%	41%	20%	23%	8%
Resource & Talent Management	24%	38%	28%	29%	10%
Organizational Structure	23%	34%	26%	31%	10%
Internal Audit Strategic Vision	26%	42%	29%	29%	8%

\*\* Among organizations currently undertaking each competency or currently evaluating and planning to undertake each competency within the next year (aggregate)

## Commentary

- Internal audit strategic vision — which helps define a strategy that facilitates innovation and foster a culture that embraces new thinking — is the highest rated competency of all next-generation capabilities, indicating that internal audit teams are focused on establishing a clear strategic vision and innovation orientation to help lead and drive innovation throughout the function.
- Internal audit departments have achieved the most progress in next-generation governance, indicating improvements in their strategies and resources as well as their efforts to align resources to risks. This is a good start. However, it is important to ensure that strategy, organizational structures and skills are aligned with next-generation internal audit goals to ensure governance processes are enabling the strategic vision of the function, both in the short- and long-term.
- Overall, however, the relatively mediocre competency level assessments of all governance areas highlight the need for more attention, especially with aligned assurance — the correlation of risk, controls and a broader view of the control environment across the three lines of defense. Internal audit groups that achieve aligned assurance sharpen their focus on key and strategic risks, improve their visibility and credibility across the organization, and facilitate apples-to-apples comparisons of results across all lines of defense.
- Stronger governance competencies will help build a solid foundation for the future of the internal audit function, as well as help audit leaders structure their department in a way that is flexible, multidimensional and well-equipped to confront emerging risks. Yet it also is vital to align advancements across all three next-generation internal audit dimensions to enable the function to achieve its ultimate goals.



CAEs and internal audit leaders need to develop both a mindset and skillset oriented toward becoming more technology- and data-enabled. Those that fail to focus on incorporating analytics, RPA and other emerging technologies into their auditing practices will fall behind not only their counterparts in the profession, but also the business stakeholders they advise and support. As organizations continue to pursue digital transformation with increasing urgency, they expect a similar level of data and technology enablement, as well as skills and capabilities, within internal audit to drive the delivery of more efficient audits, deeper insights and increased risk assurance.

— Andrew Struthers-Kennedy, Managing Director, Global Leader, IT Audit Practice, Protiviti



## II. Methodology

- • • Overall Results, Next-Generation Methodology Competencies\*

“Need to Improve” Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	Agile Audit Approach	2.7
2	Dynamic Risk Assessment	2.8
3	High-Impact Reporting	2.8
4	Continuous Monitoring	3.1

- • • CAE Results, Next-Generation Methodology Competencies\*

“Need to Improve” Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	Agile Audit Approach	2.8
2	High-Impact Reporting	2.9
3	Dynamic Risk Assessment	2.8
4	Continuous Monitoring	3.1

\* Respondents were asked to assess, on a scale of 1 to 5, their competency in different areas of next-generation methodology, with “1” being the lowest level of competency and “5” being the highest. For each area, they were then asked to indicate whether they believe their level of knowledge is adequate or requires improvement, taking into account the circumstances of their organization and industry.

- • • **Methodology competencies being undertaken to transform the audit process**

*2020 Results*

	Currently undertaking	Currently evaluating and planning to undertake within the next year	Currently evaluating and planning to undertake within the next two years	No plans to adopt
Continuous Monitoring	36%	24%	24%	16%
High-Impact Reporting	30%	31%	20%	19%
Agile Audit Approach	24%	30%	23%	23%
Dynamic Risk Assessment	24%	35%	23%	18%

*2019 Results*

	Currently undertaking	Currently evaluating and planning to undertake within the next year	Currently evaluating and planning to undertake within the next two years	No plans to adopt
Continuous Monitoring	29%	32%	23%	16%
High-Impact Reporting	29%	33%	22%	16%
Agile Audit Approach	22%	33%	24%	21%
Dynamic Risk Assessment	23%	33%	25%	19%

- • • **Primary reasons these activities are being undertaken to transform the audit process (multiple responses permitted)\*\***

2020 Results

	Real-time risk view	Reduced audit fatigue	Improved stakeholder experience	Reduced time-to-value	More risk-aligned audit activities	Currently evaluating/ no plans to adopt
Continuous Monitoring	59%	25%	38%	32%	42%	5%
High-Impact Reporting	21%	21%	63%	26%	26%	5%
Agile Audit Approach	36%	37%	41%	43%	35%	5%
Dynamic Risk Assessment	54%	19%	38%	21%	49%	5%

2019 Results

	Real-time risk view	Reduced audit fatigue	Improved stakeholder experience	Reduced time-to-value	More risk-aligned audit activities	Currently evaluating/ no plans to adopt
Continuous Monitoring	30%	26%	33%	22%	24%	7%
High-Impact Reporting	20%	21%	46%	19%	19%	9%
Agile Audit Approach	25%	24%	28%	30%	25%	14%
Dynamic Risk Assessment	30%	21%	32%	20%	28%	11%

\*\* Among organizations currently undertaking each competency or currently evaluating and planning to undertake each competency within the next year (aggregate)

## Commentary

- More internal audit groups are undertaking next-generation methodology competencies this year compared to 2019. Among these competencies, continuous monitoring is being used and improved by the largest percentage of internal audit functions. Continuous monitoring also received the highest self-assessment rating of all next-generation methodology competencies.
- The primary reasons audit groups invest in next-generation methodology competencies are to improve the stakeholder experience and achieve a real-time view of risk.
- Of the four next-generation methodology competencies, agile auditing has the lowest self-assessment rating and the highest “need to improve” rank. This needs to change. Next-generation audit functions deploy agile audit approaches to work collaboratively with stakeholders on a series of mini-projects and continuous audits in which feedback is shared early and often to add value to the audit. This allows the internal audit function to focus on stakeholder needs, accelerate audit cycles, drive timely insights, apply risk-based principles, reduce wasted effort and generate less documentation.
- Capabilities in dynamic risk assessment and high-impact reporting also need to improve. A dynamic risk assessment approach enables internal audit groups to be increasingly precise in assessing and adapting to emerging risks. This capability, in turn, helps the organization identify changing risk trends in real-time, quantitatively measure and prioritize risk, and drive the most effective use of assurance coverage. High-impact reporting occurs when audit groups optimize their risk assessments, audit execution methodology, use of data and more aesthetically visual components to deliver timely communications that are relevant, risk-informed, concise and insightful.



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Next-generation internal audit methodologies are designed to equip organizations with increasingly revealing insights into real-time risks. Agile and advanced data management and analysis approaches represent key enablers of this real-time view.

— Mark Peters, Managing Director, Protiviti



### III. Enabling Technology

- • • Overall Results, Next-Generation Enabling Technology Competencies\*

“Need to Improve” Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	Robotic Process Automation	2.1
2	Machine Learning and Artificial Intelligence	2.0
3	Process Mining	2.2
4	Advanced Analytics	2.6

- • • CAE Results, Next-Generation Enabling Technology Competencies\*

“Need to Improve” Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	Process Mining	2.3
2	Machine Learning and Artificial Intelligence	2.0
3	Robotic Process Automation	2.1
4	Advanced Analytics	2.7

\* Respondents were asked to assess, on a scale of 1 to 5, their competency in different areas of next-generation enabling technology, with “1” being the lowest level of competency and “5” being the highest. For each area, they were then asked to indicate whether they believe their level of knowledge is adequate or requires improvement, taking into account the circumstances of their organization and industry.

- • • **Enabling technology competencies being undertaken to transform the audit process**

*2020 Results*

	Currently undertaking	Currently evaluating and planning to undertake within the next year	Currently evaluating and planning to undertake within the next two years	No plans to adopt
Machine Learning/Artificial Intelligence	7%	15%	25%	53%
Process Mining	10%	21%	28%	41%
Robotic Process Automation	12%	17%	24%	47%
Advanced Analytics	25%	29%	28%	18%

*2019 Results*

	Currently undertaking	Currently evaluating and planning to undertake within the next year	Currently evaluating and planning to undertake within the next two years	No plans to adopt
Machine Learning/Artificial Intelligence	17%	32%	18%	33%
Process Mining	20%	27%	24%	29%
Robotic Process Automation	19%	25%	26%	30%
Advanced Analytics	23%	29%	28%	20%

- • • **Primary reasons these activities are being undertaken to transform the audit process (multiple responses permitted)\*\***

2020 Results

	Continuous auditing	Real-time risk view	Identify unknowns	Drive efficiency	Enhance coverage	Quantify expectations	Identify root cause	Currently evaluating/ no plans to adopt
Machine Learning/ Artificial Intelligence	53%	34%	36%	45%	29%	14%	23%	10%
Process Mining	36%	30%	43%	50%	45%	23%	32%	10%
Robotic Process Automation	46%	27%	26%	64%	41%	17%	11%	10%
Advanced Analytics	53%	42%	51%	59%	57%	34%	38%	5%

2019 Results

	Continuous auditing	Real-time risk view	Identify unknowns	Drive efficiency	Enhance coverage	Quantify expectations	Identify root cause	Currently evaluating/ no plans to adopt
Machine Learning/ Artificial Intelligence	16%	19%	28%	29%	20%	14%	12%	11%
Process Mining	16%	23%	25%	21%	22%	15%	14%	10%
Robotic Process Automation	20%	24%	19%	34%	24%	18%	11%	11%
Advanced Analytics	26%	25%	30%	30%	36%	23%	16%	11%

\*\* Among organizations currently undertaking each competency or currently evaluating and planning to undertake each competency within the next year (aggregate)

## Commentary

- Internal audit groups have taken a step back in implementing enabling technologies. Far too few internal audit functions are undertaking initiatives involving AI, machine learning, process mining and RPA. Moreover, far too many internal audit groups indicate they have no plans to adopt them. Each of these advanced technologies received some of the lowest competency level self-assessments in the entire survey.
- While these advanced technologies represent only one leg of the next-generation model (along with governance and methodologies), they are key tools in the modern internal auditor's toolkit. Machine learning techniques include clustering and classification (enabling enhanced review of large data sets and improved risk-based analyses), predictive modeling (to help anticipate areas of risk), and natural language processing (to parse through, classify and analyze large volumes of unstructured data). Process mining can deliver data-driven automation of walkthroughs and assessments of control design, providing a complete picture of how processes are actually being performed. And RPA offers a lengthy, and proven, list of benefits to internal audit, including extraction and preparation of data and audit artifacts, rapid analysis of larger data sets and full populations, automation of controls testing, automation of interactions with audit management software and GRC systems, and automation of various administrative processes and activities.
- Thus far, internal audit functions have achieved the most progress with advanced analytics: More than half are currently undertaking advanced analytics projects or planning to do so in the coming year. As audit groups leverage data-driven insights to deliver more proactive, effective and efficient assurance, audit leaders should recognize and make the case that machine learning/AI, process mining and RPA deliver similar benefits. In fact, as we look at the responses addressing the primary reasons technologies are being used, it is apparent that internal audit functions have a much clearer view about where and why these technologies should be applied to deliver value.
- While the adoption of AI/machine learning, process mining and RPA remain low, the reasons that respondents cite most frequently for investing in these enabling technologies offer cause for optimism — enhancing audit coverage, enabling continuous auditing, driving efficiency and identifying unknowns. The substantial year-over-year increases in the reasons being cited suggest growing awareness of the benefits of these technologies, which deliver more and longer-lasting value and are therefore likely to help make the case for additional next-generation investments.

# Innovation, Transformation and the Audit Process

## I. The Current State of Internal Audit Innovation and Transformation

### What You Need to Know

- Six out of 10 internal audit organizations are currently undertaking digital transformation initiatives, a decrease compared to the number of companies that reported conducting such initiatives in 2019.
- On a positive note, a comparatively high percentage of respondents describe the maturity of their audit transformation and innovation activities in favorable terms, such as: “The entire internal audit function understands the importance of innovation and innovation contributions are measured as part of performance appraisals,” and “Innovation is defined as a core value for the internal audit function, with an appreciation and focus on continuous reinvention to long-term success.”

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For internal audit leaders, finding new and effective ways of delivering on internal audit’s core objectives while meeting growing demands from management, the board and other stakeholders for strategic-level insights is a significant challenge. Traditional organizational structures and cultures, along with the need to keep up with business-as-usual responsibilities and the fear of failing or taking risks, are just a few hurdles that can stand in the way of innovation.

— Barbi Goldstein, Managing Director, Global Innovation Leader, Protiviti

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- • • **Is your internal audit department currently undertaking any transformation or innovation initiatives?**

	ALL RESPONDENTS		CAEs		DIGITAL LEADERS/EXPERTS	
	2020	2019	2020	2019	2020	2019
Yes	60%	76%	66%	72%	65%	81%
No	30%	19%	30%	27%	20%	13%
Unsure	10%	5%	4%	1%	15%	6%

- • • **Is your internal audit department currently hosting activities that foster transformation initiatives (for example: RPA development, hack-a-thons, innovation challenges, etc.)?**

	ALL RESPONDENTS		CAEs		DIGITAL LEADERS/EXPERTS	
	2020	2019	2020	2019	2020	2019
Yes	27%	63%	25%	49%	34%	74%
No	63%	33%	72%	49%	47%	21%
Unsure	10%	4%	3%	2%	19%	5%

- • • **If “No”: Does your internal audit department have plans to undertake any transformation or innovation activities?**

	ALL RESPONDENTS		CAEs		DIGITAL LEADERS/EXPERTS	
	2020	2019	2020	2019	2020	2019
Yes, we plan to do so within the next year	17%	24%	24%	27%	12%	24%
Yes, we plan to do so within the next two years	40%	40%	42%	42%	48%	41%
No, we have no plans to implement transformation or innovation activities	43%	36%	34%	31%	40%	35%

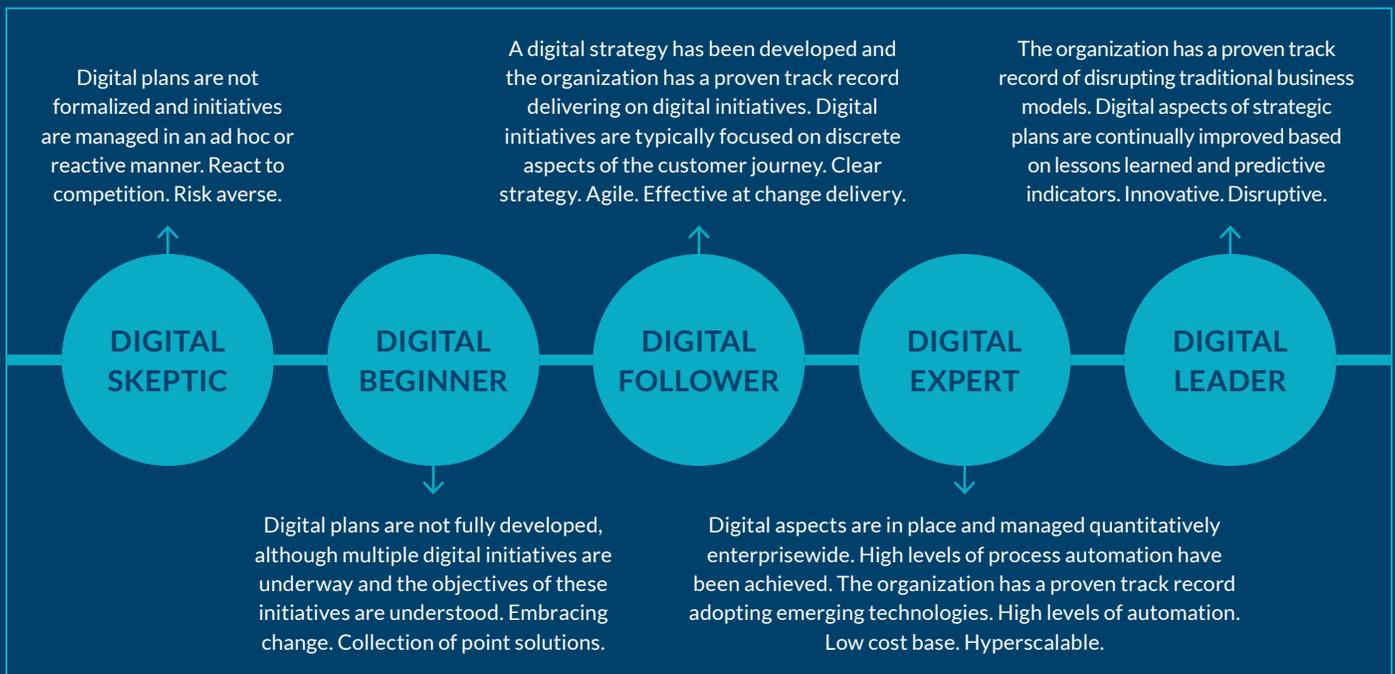
# ASSESSING DIGITAL MATURITY

We asked our respondents (777 globally) to rank their overall digital maturity on a 10-point scale defined in Protiviti’s Digital Maturity Model, a spectrum based on the sophistication of digital strategy and related indicators within organizations. See definitions below. Throughout our report, we refer to the “Digital Leader” category of organizations that

we define as those who ranked their digital maturity at a level of “7” or higher.

Protiviti offers an online Digital Maturity Self-Assessment tool that organizations and leaders, including CAEs, can use to assess their organizations. This complimentary tool is available at [www.protiviti.com/digital](http://www.protiviti.com/digital).

## • • • Digital Maturity Scale



## • • • Where does your organization rank on the following Digital Maturity Scale?

	ALL RESPONDENTS			ALL RESPONDENTS	
	2020	2019		2020	2019
1 – Digital Skeptic	4%	6%	6 – Digital Follower +	20%	19%
2 – Digital Skeptic +	5%	6%	7 – Digital Expert –	5%	13%
3 – Digital Beginner	17%	13%	8 – Digital Expert	6%	10%
4 – Digital Beginner +	20%	14%	9 – Digital Expert +	2%	1%
5 – Digital Follower	18%	17%	10 – Digital Leader	3%	1%

- • • **If “Yes”: Which one of the following statements best defines the current maturity of your internal audit transformation or innovation activities?**

	ALL RESPONDENTS		CAEs		DIGITAL LEADERS/EXPERTS	
	2020	2019	2020	2019	2020	2019
There is no formal innovation agenda with internal audit and no programs in place to otherwise drive or encourage innovative thinking and pursuits	4%	18%	3%	12%	3%	11%
Even if an innovation agenda does not exist, ideas are encouraged and often evaluated and explored	32%	23%	44%	26%	18%	25%
While no formal innovation structure exists, the internal audit function has run innovation challenges to generate ideas and pursue proposed solutions	17%	27%	24%	22%	9%	22%
The entire internal audit function understands the importance of innovation and innovation contributions are measured as part of performance appraisals	31%	28%	16%	35%	40%	32%
Innovation is defined as a core value for the internal audit function, with an appreciation and focus on continuous reinvention to long-term success	16%	4%	13%	5%	30%	10%

- • • **Compared to one year ago, how has the focus on innovation/transformation initiatives to support audits within your organization changed?**

	ALL RESPONDENTS		CAEs		DIGITAL LEADERS/EXPERTS	
	2020	2019	2020	2019	2020	2019
Increased significantly	16%	10%	16%	17%	23%	11%
Increased somewhat	50%	38%	52%	32%	48%	40%
No change	32%	50%	31%	50%	27%	48%
Decreased somewhat	1%	2%	1%	1%	2%	1%
Decreased significantly	1%	0%	0%	0%	0%	0%

- • • **How does your internal audit department compare with others in your industry in your overall level of employing innovation/transformation?**

	ALL RESPONDENTS				CAEs				DIGITAL LEADERS/EXPERTS			
	Today		In 2 years		Today		In 2 years		Today		In 2 years	
	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019
Far behind most competitors	11%	14%	6%	10%	11%	13%	5%	7%	3%	13%	3%	11%
Moderately behind most competitors	27%	27%	16%	19%	26%	26%	16%	18%	14%	28%	7%	14%
About the same as most competitors	42%	33%	39%	31%	43%	37%	37%	32%	43%	22%	29%	31%
Moderately ahead of most competitors	17%	18%	30%	28%	18%	18%	34%	31%	30%	26%	42%	29%
Far ahead of most competitors	3%	8%	9%	12%	2%	6%	8%	12%	10%	11%	19%	15%

### Commentary

- When evaluating the current state of internal audit transformation and innovation, CAEs should recognize that building a next-generation culture requires their team members, as well as C-suite colleagues and board members, to understand and buy into a mindset of continuing audit innovation. In light of this, the significant decrease in the frequency of activities that foster transformation (e.g., RPA development, hack-a-thons, innovation challenges) is troubling. These “hearts and minds” experiences serve double duty by cultivating next-generation skills and familiarity while reinforcing the commitment and progress of internal audit’s transformation.
- It is positive to see that a majority (three out of five) of internal audit groups are currently undertaking some form of innovation or transformation initiative. However, this represents a decrease from 2019, when three-quarters of respondents indicated that

their functions were conducting a transformation or innovation endeavor. Additionally, significantly more organizations this year indicate that their audit teams are not conducting any transformation or innovation activities. CAEs and “Digital Leader” organizations are more likely to report that transformation and innovation initiatives are underway.

- CAEs should keep in mind that internal audit staff, not to mention potential candidates for internal audit teams, want to innovate, and these individuals may choose to go elsewhere (either within or outside their current organization) if they are not provided the opportunity to do so. Our survey results suggest the possibility that one-time training may tend to be performed for next-generation audit areas, after which organizations fall back into old habits. This needs to change.

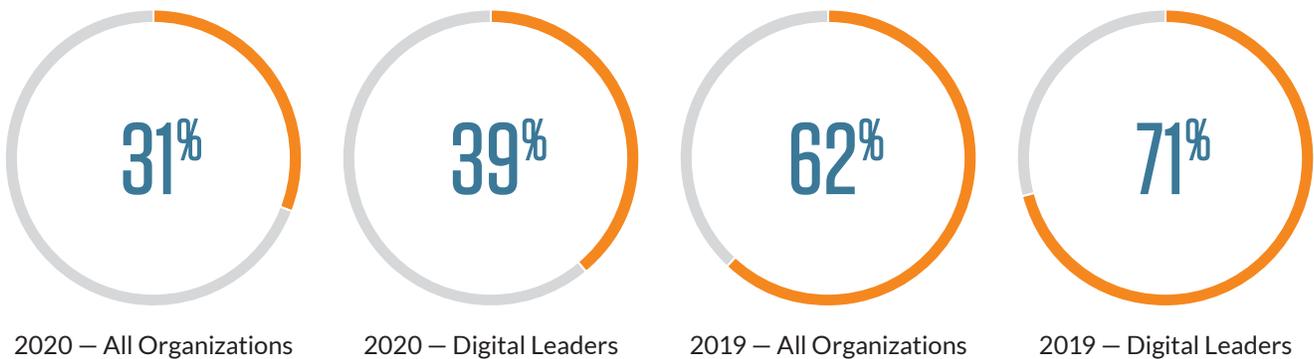
- Just one in four internal audit functions are currently hosting activities that foster transformation initiatives, though more Digital Leader organizations are engaged with these activities.
- While maturity levels for internal audit transformation activities still hover at low levels, far more internal audit departments view these activities as mature this year compared to our 2019 findings. At a high level, this is promising news in that it points to next-generation progress. However, as noted earlier in our report, we also see that competency levels for specific next-generation internal audit capabilities (governance, methodology, enabling technology) are relatively low, which should be cause for concern. Also of note, fewer CAEs identified their internal audit transformation and innovation activities as mature this year compared to 2019.
- More Digital Leaders (seven out of 10) define their internal audit transformations as mature — a

significant increase compared to our prior year results. Even more encouraging: Three times as many Digital Leaders indicated that their internal audit transformations attained the highest maturity level this year compared to those that did so last year.

- Another positive note: Two-thirds of internal audit departments indicate that the focus on innovation/transformation initiatives to support audits within the organization has increased in the past year — far more than 2019. Furthermore, the numbers for CAEs and Digital Leaders are even higher.
- Finally, when it comes to benchmarking their audit transformation advances against other companies, most respondents, including Digital Leaders, believe they have achieved similar progress or lag only moderately. Digital Leaders are more confident that their audit transformation development will outpace the competition in the future.

### KEY FACT

Percentage of internal audit departments with designated “innovation/transformation champions”



## II. Audit Committee Engagement

### What You Need to Know

- Audit committees are showing significantly more interest in internal audit innovation and transformation activities as internal audit groups advance these activities to more mature levels.
- CAEs should focus on the quality of transformation and innovation information they share with the board by ensuring these insights are relevant, risk-informed, concise and insightful.

- • • **How much interest has the audit committee shown in internal audit's plans to undertake transformation or innovation activities? (Shown: CAE results)**

	2020	2019
No interest/low level of interest from the audit committee	40%	53%
Medium level of interest from the audit committee	35%	29%
High level of interest from the audit committee	17%	14%
Don't know	8%	4%

- • • **How much information do you share with the audit committee about internal audit's plans to undertake transformation or innovation activities (for example: advanced analytics, agile reporting, RPA, agile assurance, etc.)? (Shown: CAE results)**

	2020	2019
No information/low level of information shared with the audit committee	29%	22%
Medium level of information shared with the audit committee	48%	31%
High level of information shared with the audit committee	19%	45%
Don't know	4%	2%

- • • **Relationship between audit committee interest in internal audit innovation/transformation activities and level of information shared with the audit committee about these activities (Shown: CAE results)**

	NO INTEREST/LOW LEVEL OF INTEREST		MEDIUM LEVEL OF INTEREST		HIGH LEVEL OF INTEREST	
	2020	2019	2020	2019	2020	2019
No information/low level of information shared with the audit committee	58%	33%	9%	11%	2%	0%
Medium level of information shared with the audit committee	38%	10%	68%	67%	47%	32%
High level of information shared with the audit committee	3%	56%	22%	21%	51%	68%
Don't know	1%	1%	1%	1%	0%	0%

### Commentary

- It makes sense that audit committee interest in internal audit transformation and innovation activities is rising. The ability to compete with “born digital” competitors continues to rank as a top-five strategic risk among board members, likely making internal audit’s transformation and innovation activities one of their top-of-mind concerns.<sup>1</sup>
- As audit committees receive more detailed information about internal audit transformation, their interest in these initiatives increases. CAEs should bear in mind that the quality of information they share — and their communication approaches — are just as important as the quantity of information they deliver, if not more so.
- To that end, CAEs need to craft relevant board-level updates on next-generation activities that are linked to strategic risks, based on dynamic risk assessments and other next-generation audit methodologies and technologies, and delivered with compelling visual appeal.

<sup>1</sup> Executive Perspectives on Top Risks for 2020, Protiviti and NC State University’s ERM Initiative, [www.protiviti.com/toprisks](http://www.protiviti.com/toprisks).

# Assessing Internal Audit Capabilities — Research Methodology

For the following four sections, respondents were asked to assess, on a scale of 1 to 5, their competency in different areas of knowledge important to internal auditing, with “1” being the lowest level of competency and “5” being the highest.

1. Cybersecurity
2. Analytics and Technology
3. Strategy and Culture
4. Financial Reporting, Accounting and Controls

For each area, they were then asked to indicate whether they believe their level of knowledge is adequate or requires improvement, taking into account the circumstances of their organization and industry. In addition, for applicable areas, respondents were asked to indicate whether they are included in the organization’s 2020 audit plan.

• • • **Top 10 Audit Plan Priorities for 2020**

OVERALL	CAEs
Fraud risk management	Cybersecurity risk/threat
Enterprise risk management	Fraud risk management
Cybersecurity risk/threat	Enterprise risk management
Vendor/third-party risk management	Vendor/third-party risk management
Internal audit strategic vision	Internal audit strategic vision
COSO Internal Control — Integrated Framework	Advanced analytics
Continuous monitoring	Resource & talent management
Resource & talent management	Continuous monitoring
Advanced analytics	COSO Internal Control — Integrated Framework
Dynamic risk assessment	Aligned assurance

# Cybersecurity

- Overall Results, Cybersecurity Competencies

“Need to Improve” Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	AICPA’S Criteria for Management’s Description of an Entity’s Cybersecurity Risk Management Program (Exposure Draft)	2.0
2	Cybersecurity risk/threat	2.8
3	ISO 27000 (information security)	2.4
4	Auditing IT – security	2.9
5	Vendor/third-party risk management	3.2

- CAE Results, Cybersecurity Competencies

“Need to Improve” Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	AICPA’S Criteria for Management’s Description of an Entity’s Cybersecurity Risk Management Program (Exposure Draft)	2.1
2	Cybersecurity risk/threat	3.0
3	ISO 27000 (information security)	2.5
4	Auditing IT – security	3.0
5	Vendor/third-party risk management	3.3

# Analytics and Technology

- Overall Results, Analytics and Technology Competencies

“Need to Improve” Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	Auditing process automation/robotic process automation	2.2
2	Big data/business intelligence	2.5
3	Cloud computing	2.4
4	Internet of Things	2.4
5	Data analytics tools – data manipulation	2.6

- CAE Results, Analytics and Technology Competencies

“Need to Improve” Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	Auditing process automation/robotic process automation	2.3
2	Cloud computing	2.5
3	Auditing IT – new technologies	2.5
4	Big data/business intelligence	2.5
5	Data analytics tools – data manipulation	2.7

# Strategy and Culture

- • • Overall Results, Strategy and Culture Competencies

“Need to Improve” Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	Agile risk and compliance	2.6
2	Auditing corporate culture	2.8
3	Fraud risk management	3.3
4	Fraud – fraud detection/investigation	3.2
5	Fraud – fraud risk	3.3

- • • CAE Results, Strategy and Culture Competencies

“Need to Improve” Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	Agile risk and compliance	2.6
2	Auditing corporate culture	2.9
3	Fraud – fraud detection/investigation	3.4
4	Fraud – fraud risk	3.5
5	Fraud risk management	3.5

# Financial Reporting, Accounting and Controls

- • • Overall Results, Financial Reporting, Accounting and Controls Competencies

“Need to Improve” Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	Cloud Computing Accounting Standard – (Accounting Update 2015-05—Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Fees Paid in a Cloud Computing Arrangement)	1.9
2	Current Expected Credit Losses Accounting Standards Update No. 2016-13, Topic 326 (CECL)	1.9
3	Derivatives and Hedging – Update No. 2017-12 (Topic 815)	1.8
4	Quality Assurance and Improvement Program (IIA Standard 1300): Ongoing Monitoring (IIA Standard 1311)	2.9
5	Quality Assurance and Improvement Program (IIA Standard 1300): External Assessment (IIA Standard 1312)	2.9

- • • CAE Results, Financial Reporting, Accounting and Controls Competencies

“Need to Improve” Rank	Areas Evaluated by Respondents	Competency Level (5-pt. scale)
1	Cloud Computing Accounting Standard – (Accounting Update 2015-05—Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Fees Paid in a Cloud Computing Arrangement)	1.9
2	Current Expected Credit Losses Accounting Standards Update No. 2016-13, Topic 326 (CECL)	2.0
3	Derivatives and Hedging – Update No. 2017-12 (Topic 815)	1.9
4	Corporate Social Responsibility	2.7
5	Lease Accounting Standard – Accounting Standards Update No. 2016-02, Leases (Topic 842)	2.7

# Methodology and Demographics

More than 775 respondents (n = 777) completed questionnaires for Protiviti's 2020 Internal Audit Capabilities and Needs Survey, which was conducted online in the fourth quarter of 2019.

The survey consisted of a series of questions grouped into three divisions:

- Internal Audit Innovation and Transformation
- General Technical Knowledge
- Audit Process Knowledge

Participants were asked to assess their skills and competency by responding to questions concerning nearly 200 topic areas. Respondents from the manufacturing, U.S. financial services and U.S. healthcare industries were also asked to assess

industry-specific skills (these findings are available upon request). The purpose of this annual survey is to elicit responses that will illuminate the current perceived levels of competency in the many skills necessary to today's internal auditors, and to determine which knowledge areas require the most improvement.

Survey participants also were asked to provide demographic information about the nature, size and location of their businesses, and their titles or positions within the internal audit department. These details were used to help determine whether there were distinct capabilities and needs among different sizes and sectors of business or among individuals with different levels of seniority within the internal audit profession. All demographic information was provided voluntarily by respondents.

## • • • Position

Chief Audit Executive	27%
Director of Auditing	14%
IT Audit Director	2%
Audit Manager	22%
IT Audit Manager	4%
Corporate Management	3%
Audit Staff	15%
IT Audit Staff	4%
Audit Services Contractor	1%
Management Consultant	2%
Other	6%

- • • **Size of Organization (outside of financial services) – by gross annual revenue in U.S. dollars**

\$20 billion or more	8%
\$10 billion – \$19.99 billion	6%
\$5 billion – \$9.99 billion	12%
\$1 billion – \$4.99 billion	29%
\$500 million – \$999.99 million	13%
\$100 million – \$499.99 million	12%
Less than \$100 million	17%
N/A	3%

- • • **Size of Organization (within financial services industry) – by assets under management in U.S. dollars**

More than \$250 billion	12%
\$50 billion – \$250 billion	13%
\$25 billion – \$49.99 billion	9%
\$10 billion – \$24.99 billion	12%
\$5 billion – \$9.99 billion	9%
\$1 billion – \$4.99 billion	21%
Less than \$1 billion	24%

- • • **Organization Headquarters**

North America	62%
Middle East	12%
Europe	9%
Asia-Pacific	6%
India	5%
Africa	4%
Latin America	2%

- • • **Industry**

Financial Services (U.S.) – Banking	10%
Government/Education/Not-for-profit	9%
Insurance (excluding healthcare payer)	6%
Manufacturing (other than Technology)	6%
Technology (Software/High-Tech/ Electronics)	5%
Financial Services (Non-U.S.) – Banking	4%
CPA/Public Accounting/Consulting Firm	4%
Oil and Gas	4%
Healthcare (U.S.) – Provider	4%
Power and Utilities	4%
Retail	3%
Telecommunications	3%
Transportation and Logistics	3%
Services	3%
Financial Services (Non-U.S.) – Other	2%
Financial Services (U.S.) – Other	2%
Healthcare (U.S.) – Payer	2%

Real Estate	2%
Automotive	2%
Biotechnology/Life Sciences/ Pharmaceuticals	2%
Consumer Packaged Goods	2%
Chemicals	1%
Construction	1%
Financial Services (U.S.) – Asset Management	1%
Healthcare (Non-U.S.)	1%
Distribution	1%
Hospitality	1%
Media	1%
Mining	1%
Financial Services (U.S.) – Broker-Dealer	1%
Financial Services (Non-U.S.) – Broker-Dealer	1%
Other	8%

- • • **Type of Organization**

Public	42%
Private	38%
Government	10%
Not-for-Profit	7%
Other	3%

## ABOUT PROTIVITI

Protiviti is a global consulting firm that delivers deep expertise, objective insights, a tailored approach and unparalleled collaboration to help leaders confidently face the future. Through its network of more than 85 offices in over 25 countries, Protiviti and its independent and locally owned Member Firms provide clients with consulting solutions in finance, technology, operations, data, analytics, governance, risk and internal audit.

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