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Face the Future with Confidence

Embracing the Next Generation of Internal Auditing

Most organizations have started their journey and anticipate significant progress over the next two years, according to the results of Protiviti's 2019 Internal Audit Capabilities and Needs Survey.

Internal Audit, Risk, Business & Technology Consulting

Executive Summary

Now is the time to commit to the journey to evolve into a next-generation internal audit function. While this may be a long journey marked with significant challenges and undoubted setbacks, it also will be an exciting transformation with great rewards for our internal audit teams and the stakeholders we serve.

We first issued this mandate in our white paper, *The Next Generation of Internal Auditing — Are You Ready?*, detailing why and how internal audit functions need to perform their work in a more agile manner and how they can leverage the proliferation of data combined with technology-enabling auditing solutions to deliver on this truly transformational objective.[1] As Brian Christensen, executive vice president, global internal audit for Protiviti, asserts: "There needs to be a fundamental rethinking of the design and capabilities of the internal audit function to be more forward-looking and help improve the business."

This mandate is underscored in the latest results of the Executive Perspectives on Top Risks survey from Protiviti and NC State University's ERM Initiative. Based on a global survey of board members and C-suite executives, the top risk for organizations in 2019 is concern about existing operations (of which internal audit is a key part) not meeting performance expectations and competing against "born digital" organizations.[2]

The results of our 2019 Internal Audit Capabilities and Needs Survey, in which we take an in-depth look at the adoption of next-generation internal audit competencies such as agile auditing, artificial intelligence (AI), machine learning (ML), robotic process automation (RPA) and continuous monitoring, among many others, provide a detailed assessment of how internal audit groups are progressing on their next-generation journeys. Our insights further amplify the call to action we broadcast in our white paper.

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[1] *The Next Generation of Internal Auditing — Are You Ready?*, Protiviti, 2018, www.protiviti.com/auditnextgen.

[2] *Executive Perspectives on Top Risks for 2019*, Protiviti and NC State University's ERM Initiative, www.protiviti.com/toprisks.

It's encouraging to see that most internal audit functions have launched innovation and transformation activities, starting their next-generation journeys. However, more substantive progress is needed in a number of areas if early-stage next-generation internal audit models are to mature and fulfill their massive potential. Undertaking this journey requires a recognition that transformation consists of more than a collection of discrete activities; becoming a next-generation internal audit function requires a new mindset and a commitment to continual evolution. Some internal audit groups are ahead of the game, including most of those that reside within companies considered "digital experts" and "digital leaders."[3] (See sidebar in the following section.) Among other practices, digital leaders are far more likely than other organizations to appoint internal audit innovation/transformation champions.

Also in this year's study, we take a broad look at overall priorities for internal audit functions, including their top audit plan priorities.

Our Key Findings

01 **Three out of four internal audit groups are undertaking some form of innovation or transformation effort —** While this finding is expected given what we've observed in the market, it also sends a clear message to the significant number of internal audit functions that have yet to begin their next-generation journeys: It's time to get started.

02 **Overall, the adoption of next-generation internal audit capabilities is in its early stage —** The implementation of the governance mechanisms, methodologies and enabling technologies that comprise the next-generation internal audit model has so far occurred in a predominantly ad hoc manner. Internal audit groups within organizations that are digital leaders have made substantially more progress with their innovation and transformation initiatives.

03 **Chief audit executives need to take the lead in getting the function's transformation on the audit committee agenda —** Fewer than one in five organizations report that their audit committee is highly interested in the internal audit group's innovation and transformation activities. It is incumbent on CAEs to convey the internal audit function's commitment to innovation and transformation to audit committee members through effective and efficient information-sharing practices and persuasive presentations.

04 **ERM, cybersecurity risks, vendor and third-party risk management, and fraud risk management are top audit plan priorities —** Internal audit groups are highly focused on these areas in their 2019 audit plans.

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[3] In this year's survey, we asked responding organizations 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. 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.

Innovation, Transformation and the Audit Process

I.   The Current State of Internal Audit Innovation and Transformation

What You Need to Know

- Three out of four internal audit organizations are currently undertaking digital transformation initiatives — a positive indicator that a majority are focusing on next-generation internal audit activities.

- Most internal audit organizations describe the maturity of their internal audit transformation activities as relatively low to date, which is to be expected given that most next-generation internal audit journeys have only recently commenced.

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There is a great path forward for internal auditors, provided that we are aligned to the right things and forgo our resistance to change. We need to adapt, we need to evolve, we need to transform.

— Brian Christensen, Executive Vice President, Global Internal Audit, Protiviti

"

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

	ALL RESPONDENTS	CAEs	DIGITAL LEADERS/EXPERTS
Yes	76%	72%	81%
No	19%	27%	13%
Unsure	5%	1%	6%

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

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

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

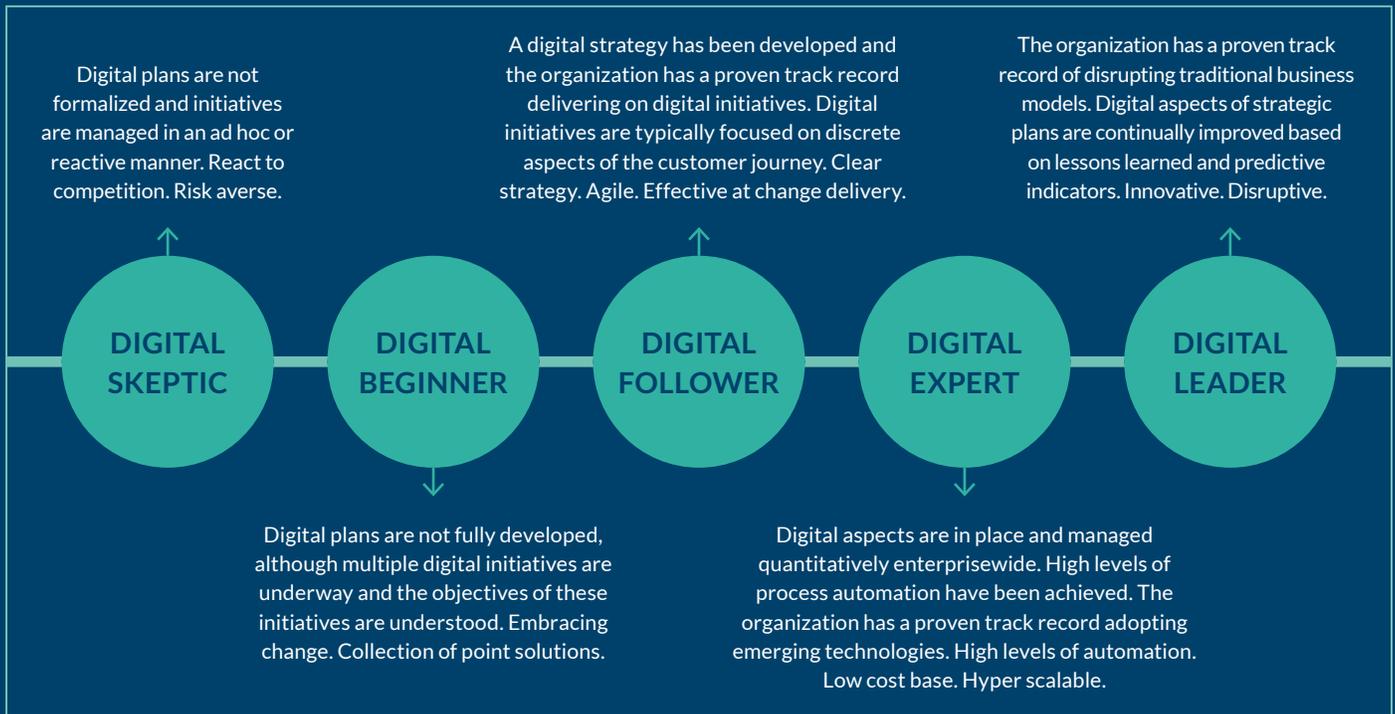|	ALL RESPONDENTS	CAEs	DIGITAL LEADERS/EXPERTS
Yes	63%	49%	74%
No	33%	49%	21%
Unsure	4%	2%	5%

ASSESSING DIGITAL MATURITY

We asked responding organizations (more than 1,100 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**.

• • • **Digital Maturity Scale**

Digital plans are not formalized and initiatives are managed in an ad hoc or reactive manner. React to competition. Risk averse.

A digital strategy has been developed and the organization has a proven track record delivering on digital initiatives. Digital initiatives are typically focused on discrete aspects of the customer journey. Clear strategy. Agile. Effective at change delivery.

The organization has a proven track record of disrupting traditional business models. Digital aspects of strategic plans are continually improved based on lessons learned and predictive indicators. Innovative. Disruptive.

DIGITAL SKEPTIC   **DIGITAL BEGINNER**   **DIGITAL FOLLOWER**   **DIGITAL EXPERT**   **DIGITAL LEADER**

Digital plans are not fully developed, although multiple digital initiatives are underway and the objectives of these initiatives are understood. Embracing change. Collection of point solutions.

Digital aspects are in place and managed quantitatively enterprisewide. High levels of process automation have been achieved. The organization has a proven track record adopting emerging technologies. High levels of automation. Low cost base. Hyper scalable.

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

1 — Digital Skeptic	6%	6 — Digital Follower +	19%
2 — Digital Skeptic +	6%	7 — Digital Expert -	13%
3 — Digital Beginner	13%	8 — Digital Expert	10%
4 — Digital Beginner +	14%	9 — Digital Expert +	1%
5 — Digital Follower	17%	10 — Digital Leader	1%

• • • **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
There is no formal innovation agenda with internal audit and no programs in place to otherwise drive or encourage innovative thinking and pursuits	18%	12%	11%
Even if an innovation agenda does not exist, ideas are encouraged and often evaluated and explored	23%	26%	25%
While no formal innovation structure exists, the internal audit function has run innovation challenges to generate ideas and pursue proposed solutions	27%	22%	22%
The entire internal audit function understands the importance of innovation and innovation contributions are measured as part of performance appraisals	28%	35%	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	4%	5%	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
Increased significantly	10%	17%	11%
Increased somewhat	38%	32%	40%
No change	50%	50%	48%
Decreased somewhat	2%	1%	1%
Decreased significantly	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
Far behind most competitors	14%	10%	13%	7%	13%	11%
Moderately behind most competitors	27%	19%	26%	18%	28%	14%
About the same as most competitors	33%	31%	37%	32%	22%	31%
Moderately ahead of most competitors	18%	28%	18%	31%	26%	29%
Far ahead of most competitors	8%	12%	6%	12%	11%	15%

Commentary

- Overall, three out of four internal audit groups are currently undertaking some form of innovation or transformation initiative. While it is good news that internal audit groups have commenced this journey, those that have not should get started as soon as possible.

- Roughly six out of 10 internal audit groups — and approximately seven out of 10 groups within "Digital Leader" organizations — have appointed innovation/transformation champions. This structural mechanism is a critical enabler of sustained commitment to transformational initiatives.

- Close to two-thirds of internal audit functions currently host activities that foster transformation initiatives; these events include RPA development, hack-a-thons to develop new and creative approaches to business activities, and innovation challenges. Additionally, 63 percent of internal audit groups that have yet to host activities that foster transformation

initiatives plan to begin doing so within the next 24 months or sooner. This is promising — unless you work within an internal audit group that does not currently host transformation-fostering activities and that has no plans to do so within the next two years. Those internal audit functions risk falling behind and losing relevancy in a short period of time.

- Most internal audit organizations describe the maturity of their internal audit transformation activities as relatively low to date, which is to be expected given that most next-generation internal audit journeys have only recently commenced. Relatively few organizations indicate that their entire team understands the importance of innovation, that innovation contributions are measured as part of performance appraisals, or that innovation is defined as a core value for their function. As these activities become more mature, we expect those benefits to take hold in more internal audit functions.

- Relatively few organizations report their focus on innovation/transformation initiatives to support audits has increased significantly in the past year. Such "grassroots" activities are valuable in that they foster a mindset that encourages the escalation of new ideas and the sharing of new approaches and innovative solutions. Our results suggest that in most organizations there has been either no change or modest increases in the focus on these initiatives. This is surprising given the notable progress we have seen in many companies, although we do see a higher percentage of CAEs reporting a significant increase in the focus on these activities. It is possible CAEs are more actively engaged in transformation activities. Overall, we expect these numbers to rise 12 months from now as more internal audit groups adopt a mindset of transformation.

- Internal audit organizations appear concerned that they trail other companies when it comes to advancing their function's innovation and transformation activities. On the other hand, many of these organizations are confident that, over the next two years, they will make significant strides in internal audit transformation compared to peer companies. Concerns regarding a perceived current lag in innovation and transformation may be misplaced: The majority of internal audit functions remain in a relatively early stage of transformation. The two-year expectation is a welcome development as it indicates there is a long-term commitment to internal audit transformation.

- Above all, it's important to remember that the transformation to a next-generation internal audit function is not about one or a series of projects, but rather a culture and mindset focused on continuing innovation and seeking ways to do things better by leveraging new processes and the latest technologies. As part of this, internal audit leaders should obtain buy-in from their team members and encourage new ideas and solutions to be developed and shared.

KEY FACT

Percentage of internal audit departments with designated "innovation/transformation champions"

62%

All Organizations

71%
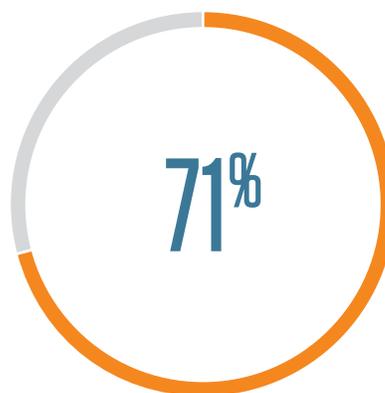
Digital Leaders

II. Audit Committee Engagement

What You Need to Know

- Audit committees currently have low or moderate levels of interest in internal audit innovation or transformation activities.

- CAEs need to take the lead in ensuring that internal audit innovation and transformation is one of the audit committee's core agenda items.

• • • **How much interest has the audit committee shown in internal audit's plans to undertake transformation or innovation activities?**

	ALL RESPONDENTS	CAEs	DIGITAL LEADERS/EXPERTS
No interest/low level of interest from the audit committee	47%	53%	43%
Medium level of interest from the audit committee	27%	29%	23%
High level of interest from the audit committee	16%	14%	25%
Don't know	10%	4%	9%

• • • **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.)?**

	ALL RESPONDENTS	CAEs	DIGITAL LEADERS/EXPERTS
No information/low level of information shared with the audit committee	11%	22%	5%
Medium level of information shared with the audit committee	28%	31%	20%
High level of information shared with the audit committee	52%	45%	66%
Don't know	9%	2%	9%

• • • **Relationship between audit committee interest in internal audit innovation/transformation activities and level of information shared with the audit committee about these activities**

	No interest/low level of interest	Medium level of interest	High level of interest
No information/low level of information shared with the audit committee	16%	9%	2%
Medium level of information shared with the audit committee	6%	67%	33%
High level of information shared with the audit committee	77%	21%	60%
Don't know	1%	3%	5%

Commentary

- CAEs need to take the lead in ensuring that internal audit innovation and transformation is one of the audit committee's core agenda items. Given all of the strategic risks competing for their attention, audit committees are unlikely to proactively advocate the need for the internal audit group to develop next-generation capabilities.

- Most CAEs say they share a medium to high level of information with the audit committee concerning their group's plans to undertake innovation and transformation activities. Sharing this information with audit committee members will increase the committee's interest in, and engagement with, the internal audit function's ongoing transformation — as long as the right type and amount of information is conveyed in a persuasive manner. This may not be occurring in a surprising number of cases, however. Only 16 percent of organizations indicate that the audit committee is highly interested in the internal audit group's innovation and

transformation activities. A significantly higher portion (25 percent) of internal audit executives with Digital Leaders indicate that their audit committees are highly interested in innovation and transformation activities.

- These combined findings show reason for optimism while pointing to key opportunities for growth. CAEs need to determine which facets of internal audit innovation to share with the board, as well as how to present this information in the most effective manner. Is the information summarized and clear? Or is it buried in a 300-page slide deck? As CAEs contemplate improvements in this area, they should focus on the board's information needs, ensure their information addresses business and risk impacts (as opposed to focusing only on technology-related measures), identify and manage audit committee members' expectations for their briefings, and keep their presentations pithy.

III. Next-Generation Governance Competencies

What You Need to Know

- Among the three categories of the next-generation internal audit model (Governance, Methodologies, Enabling Technologies), internal audit groups have achieved the most progress addressing Governance competencies.

- Less than one in three internal audit groups currently have a roadmap in place to guide their innovation and transformation journeys. However, a majority plan to formulate this vision within the next two years.

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

	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%

• • • Current level of value*

	High level of value	Medium level of value	Low level of value	Currently evaluating/ no plans to adopt
Aligned Assurance	47%	35%	11%	7%
Resource & Talent Management	43%	36%	12%	9%
Organizational Structure	39%	38%	14%	9%
Internal Audit Strategic Vision	51%	30%	11%	8%

* Among organizations currently undertaking each competency

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

	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%

- • • Based on current resources, do internal auditors in your organization have the right skills?**

	Yes, our resources are equipped with these skills	No, but plans are in place to train resources in this area	No, and no current plans are in place to train resources in this area	Unsure
Aligned Assurance	34%	37%	16%	13%
Resource & Talent Management	38%	34%	16%	12%
Organizational Structure	47%	28%	14%	11%
Internal Audit Strategic Vision	41%	35%	12%	12%

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

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We have to continue to find innovative ways of doing our work in order to make sure we are keeping pace with our business partners.

— Chief audit executive, public technology company, North America

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Commentary

- Next-generation internal audit governance covers the internal audit function's strategy, structure and skills — including how those skills are developed and sourced. Among the three broad categories of the next-generation internal audit model, internal audit groups have achieved the most progress addressing governance competencies. In addition, they currently are deriving the greatest value from governance-related innovation and transformation initiatives (versus next-generation methodologies and enabling technologies). These findings underscore that it is not always the latest technology tools that drive value (at least not alone) but often people-focused items.

- Of note, less than one in three internal audit groups currently have a roadmap in place (internal audit strategic vision) to guide their innovation and transformation journeys. However, a majority of internal audit organizations (55 percent) plan to formulate this vision within the next two years or sooner.

- "Aligning skills with strategic and emerging risks" is the most frequently identified reason internal audit groups cite for undertaking governance-related initiatives to transform audit processes.

- Most internal auditors believe they either have the right skills in place to perform each of the four governance competencies or have plans in place to deliver the training needed to upskill their people. This could be an optimistic assessment, although some may be including their third-party advisers and consultants. Overall, ongoing training, communication and resource assessments are key components of a next-generation internal audit function.

- A significant portion of internal audit groups do not have plans in place (or are unsure if they do) to train resources in important governance capabilities. Organizations should address these skills and training shortcomings sooner rather than later.

> "
> *Why is a next-generation internal audit approach an imperative? Why do we need to change audit? Because the business is changing. We can't have the same constructs, the same approaches to internal audit to address new and emerging risks our businesses are facing.*
> "

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

IV. Next-Generation Methodologies

What You Need to Know

- Improving the stakeholder experience is the most frequently identified reason internal audit groups cite for undertaking methodology-related initiatives to transform audit processes.

- Internal audit functions with Digital Leader organizations are significantly more likely to have adopted continuous monitoring and high-impact reporting.

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

	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%

• • • Current level of value*

	High level of value	Medium level of value	Low level of value	Currently evaluating/ no plans to adopt
Continuous Monitoring	49%	33%	12%	6%
High-Impact Reporting	53%	26%	11%	10%
Agile Audit Approach	52%	28%	12%	8%
Dynamic Risk Assessment	51%	24%	14%	11%

* Among organizations currently undertaking each competency

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

	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%

- - - **Based on current resources, do internal auditors in your organization have the right skills?****

	Yes, our resources are equipped with these skills	No, but plans are in place to train resources in this area	No, and no current plans are in place to train resources in this area	Unsure
Continuous Monitoring	47%	36%	8%	9%
High-Impact Reporting	41%	35%	12%	12%
Agile Audit Approach	38%	35%	14%	13%
Dynamic Risk Assessment	39%	34%	14%	13%

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

Commentary

- Next-generation internal audit methodologies are designed to equip organizations with more efficient, flexible, risk-focused, real-time and impactful ways of conducting their activities. These methodologies, which also apply to reporting and collaboration activities, generally include continuous monitoring, high-impact reporting, an agile audit approach, and dynamic risk assessment.

- Improving the stakeholder experience is the most frequently identified reason internal audit groups cite for undertaking methodology-related initiatives to transform audit processes. While improvements to the stakeholder experience are a welcome benefit, continuous monitoring and other next-generation methodologies can deliver other, higher-magnitude benefits, such as a real-time view of risk.

- Of note, our results indicate internal audit functions with Digital Leader organizations are significantly more likely to have adopted continuous monitoring and high-impact reporting.

- A relatively larger portion of organizations do not have a plan in place to ensure that internal auditors have the right skills and expertise related to next-generation methodologies. This should be rectified quickly given that competition for these skills continues to intensify.

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Internal audit needs to recognize that change is already here, meaning there is an imperative and a mandate for internal audit to explore and undertake better ways of completing its activities.

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

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V. Next-Generation Enabling Technologies

What You Need to Know

- Internal audit groups have made less progress implementing next-generation enabling technologies.

- Among the technologies assessed in our study, internal audit groups have deployed advanced analytics most frequently.

• • • Enabling technologies being employed to transform the audit process

	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%

• • • Current level of value*

	High level of value	Medium level of value	Low level of value	Currently evaluating/ no plans to adopt
Machine Learning/Artificial Intelligence	38%	35%	18%	9%
Process Mining	40%	30%	17%	13%
Robotic Process Automation	49%	28%	14%	9%
Advanced Analytics	50%	27%	13%	10%

* Among organizations currently undertaking each competency

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

	Continuous auditing	Real-time risk view	Identify unknowns	Drive efficiency	Enhance coverage	Quantify expectations	Identify root causes	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%

- - - **Based on current resources, do internal auditors in your organization have the right skills?****

	Yes, our resources are equipped with these skills	No, but plans are in place to train resources in this area	No, and no current plans are in place to train resources in this area	Unsure
Machine Learning/ Artificial Intelligence	28%	44%	16%	12%
Process Mining	43%	32%	15%	10%
Robotic Process Automation	35%	38%	15%	12%
Advanced Analytics	34%	38%	16%	12%

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

Commentary

- Not surprisingly, internal audit groups generally have demonstrated more progress adopting next-generation governance and methodology competencies than they have implementing next-generation enabling technologies. Internal audit groups within Digital Leader organizations are more likely to have adopted enabling technologies, particularly artificial intelligence, machine learning and process mining.

- Among the enabling technologies assessed, advanced analytics have been deployed with the greatest frequency. In addition, internal audit functions are deriving the highest relative value from this investment.

- Internal audit functions with Digital Leader organizations derive notably higher value from their use of next-generation enabling technologies, especially with regard to machine learning, artificial intelligence and process mining.

- Currently, more internal audit groups identify efficiency improvements as the primary reason for deploying next-generation enabling technologies. While efficiency gains are beneficial, internal audit's use of advanced technologies can yield a range of more transformational — and higher-value — benefits, such as generating a real-time view of risk, identifying unknowns, quantifying expectations, identifying root causes and enabling continuous auditing. As internal audit innovation and transformation initiatives mature, we expect more groups to point to these types of benefits as primary drivers of their investments in enabling technologies.

- Access to enabling technology skills and expertise remains a pervasive challenge, as expected, and one that internal audit groups appear likely to address via outsourcing and co-sourcing models.

> " *Analytics and AI is the future; however, these depend on the organization's technology platforms and data matters, which are always challenges to make such innovative initiatives successful.* "
>
> — Chief audit executive, financial services organization, Middle East

VI. The Next-Generation Game Plan: It Starts with Commitment, Culture and an Agile Mindset

In our white paper, *The Next Generation of Internal Auditing — Are You Ready?*, we offered a call to action and roadmap for internal audit organizations to begin their next-generation transformation journey.[4] As this guidance remains highly relevant and links closely to the results of our survey, we are pleased to republish our recommendations here.

To get started on the journey to become a next-generation internal audit function, you'll need a clear roadmap. But the very first step, in our view, is establishing the mindset and commitment to:

- Transform your internal audit group's governance, methodologies and enabling technology capabilities needed to address emerging business risks.

- Increase internal audit's effectiveness and efficiency while fulfilling the function's core mission to protect organizational value.

- Start thinking differently.

- Reassess the design and capabilities of internal audit, striving to become an agile next-generation internal audit function that embraces the benefits of technology and transformation.

We believe internal audit groups need to be ready and need to get started now. And they need the right commitment and mindset. This transformation is mission-critical but it won't be easy.

Key Success Factors:

01	Establish an agile mindset
02	See the forest
03	Empower your people to innovate
04	Seek quick wins
05	Recognize two sets of ripple effects
06	Integrate adaptability into the design

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[3] *The Next Generation of Internal Auditing – Are You Ready?*, p. 14, www.protiviti.com/auditnextgen.

Internal audit groups should approach this objective in an agile manner. Identify areas where change is needed, assign resources and make ongoing incremental improvements. Above all, be flexible and maintain a mindset of, "How can we be agile and innovative and do this better?" Look to take small steps but focus on taking those steps quickly and immediately. The "assess-design-implement-reassess" approach has become dated. Rather, adopt a more iterative approach and be flexible to make continual changes as the business evolves and new innovative approaches emerge.

While the specific design of next-generation governance, methodology and enabling technology elements varies according to an organization's unique risk environment and business objectives, there are common considerations and actions that have proven valuable in the growing number of internal audit transformation efforts underway.

For example, CAEs as well as the group responsible for designing the next-generation function need to appreciate the difficulty of the endeavor. In most cases, developing a next-generation internal audit function requires changes to every major component of the function — from processes, to enabling technologies, to the skills and resources within the function, to how the function is structured and managed. What's more, an individual organization's vision for next-generation internal audit will change over time as new business objectives, risks and technologies materialize once the new function begins to take form. For this reason, an effective next-generation audit function must be adaptable — that is, flexible enough to respond to disruptions that are unforeseen today.

Adaptability is among several key success factors CAEs and innovation teams should consider as they move forward. The others include the following actions.

- **Establish an agile mindset.** To succeed, next-generation efforts require an internal audit culture that embraces change and the need to be agile. Instilling this mindset throughout the function calls for a clear message from the CAE that continued long-term success requires change. This enabler is not unique to internal audit groups, but it represents a formidable hurdle for many of them to overcome.

- **See the forest.** Keep in mind that the purpose of this transformation effort is to fundamentally change and seek to continually improve how all internal audit work is performed. While many initiatives within the larger effort will produce swift efficiency gains, those short-term benefits should not distract from the bigger picture. It is incumbent on the leader of the innovation effort to sustain the long-term vision so that the focus on incremental improvements does not result in the implementation of point solutions versus more holistic change required to bring about much larger benefits.

- **Empower your people to innovate.** Regardless of whether your internal audit function is 1,000 strong or a team of five, you must encourage and empower every member of the internal audit group to pursue innovations and work with the team to implement them. Encourage your team not only to adopt a mindset of innovation, but also to submit ideas for improvements and innovations. In addition, be sure to reward their experimentation. The key is to drive innovation throughout the internal audit function — innovation should not be a top-down exercise.

- **Seek quick wins.** While the internal audit innovation team should keep the big picture in mind (in other words, becoming a next-generation internal audit function), it is helpful to start the implementation of the plan with a single project that is carefully selected for its high potential to demonstrate visible success — in other words, generate a quick "win" rather than take on too much at once. For example, as the function begins to implement agile auditing, it makes sense to do so in a part of the business already familiar with agile methodologies (e.g., software development within IT). On the other hand, launching the implementation effort by introducing new technologies and/or methodologies to a complex auditing area — such as, in financial services, Comprehensive Capital Analysis and Review (CCAR) stress testing and Dodd-Frank Act Stress Testing (DFAST) — can bog down the effort at a point where it is crucial to demonstrate success and progress.

- **Recognize two sets of ripple effects.** As internal audit teams innovate and implement changes to auditing processes, they must recognize two after-effects. First, any change to one phase of the auditing lifecycle is likely to affect other phases. For example, changes to how a particular audit is executed may alter the volume and nature of information that the audit work produces, which may create the need for essential changes to how the audit work is reported. Second, changes throughout the auditing lifecycle may necessitate related changes to processes, enabling technologies and skill sets within the organization's two

other lines of defense. Auditors tasked with designing the next-generation function should understand and continually assess how their work affects operational management as well as risk management and compliance. Finally, a key to addressing both of these after-effects is active and open dialogue with internal and external stakeholders. Data- and technology-enabled auditing can help here, driving greater efficiencies in auditing and communications with stakeholders.

- **Integrate adaptability into the design.** Given the current pace and magnitude of change, the notion of defining how the internal audit function should look and operate can be an intimidating proposition. Clearly, it is impossible to anticipate (1) every change that will materialize in the near and long term; and (2) how those shifts will affect auditing operations. For this reason, it is useful to develop an adaptable internal audit function, one that is routinely experimenting with new technologies and approaches and can, relatively easily, incorporate new technologies, risk management techniques, and other business processes as they emerge and as the broader organization evolves as part of its own transformation efforts and in response to rapidly changing external forces. This is where a culture of innovation, embedded in the audit function and among all team members, becomes so important. Every team member can have good ideas and should be encouraged and empowered to develop and share them.

Assessing Internal Audit Capabilities — 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. 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 2019 audit plan.

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

Top 10 Audit Plan Priorities for 2019

OVERALL	CAEs
Enterprise risk management	Cybersecurity risk/threat
Cybersecurity risk/threat	Enterprise risk management
Vendor/third-party risk management	Fraud risk management
Fraud risk management	Vendor/third-party risk management
COSO Internal Control — Integrated Framework	COSO Internal Control — Integrated Framework
Agile risk and compliance	Revenue Recognition Standard (Financial Accounting Standards Board (FASB) Accounting Standards Update No. 2014-09)
Lease Accounting Standard — Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842)	AICPA'S Criteria for Management's Description of an Entity's Cybersecurity Risk Management Program (Exposure Draft)
AICPA'S Criteria for Management's Description of an Entity's Cybersecurity Risk Management Program (Exposure Draft)	Lease Accounting Standard — Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842)
Cloud computing	Evaluating SOC reports
Revenue Recognition Standard (Financial Accounting Standards Board (FASB) Accounting Standards Update No. 2014-09)	Cloud computing

Cybersecurity

"Need to Improve" Rank	Areas Evaluated by Respondents	Competency Score (5-pt. scale)
1	AICPA'S Criteria for Management's Description of an Entity's Cybersecurity Risk Management Program (Exposure Draft)	2.6
2	ISO 27000 (information security)	2.8
3	Cybersecurity risk/threat	2.9
4	Vendor/third-party risk management	3.0
5	Auditing IT — security	2.9

"

Most organizations lack a high level of confidence in their organization's ability to prevent, monitor, detect or escalate security breaches by a well-funded external attacker or by a company insider. However, there is a benefit to not being overconfident: It can stave off complacency while helping to sustain a commitment to continually adapt and improve current practices as cyber attacks grow more sophisticated.
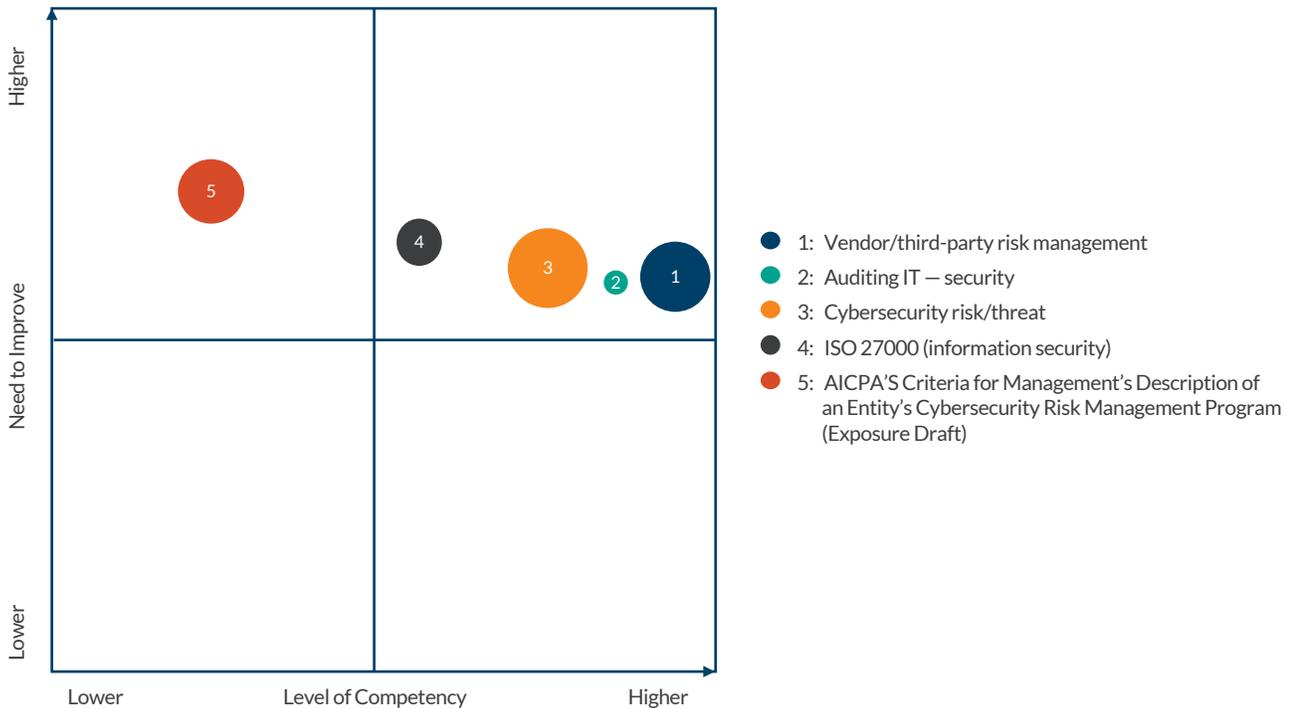
— Scott Laliberte, Managing Director, Global Leader, Security and Privacy Practice, Protiviti

"

• • • **CAE Results, Cybersecurity Competencies**

"Need to Improve" Rank	Areas Evaluated by Respondents	Competency Score (5-pt. scale)
1	AICPA'S Criteria for Management's Description of an Entity's Cybersecurity Risk Management Program (Exposure Draft)	2.5
2	ISO 27000 (information security)	2.7
3	Cybersecurity risk/threat	3.0
4	Vendor/third-party risk management	3.1
5	Auditing IT — security	3.0

• • • **Cybersecurity Perceptual Map — Assessing Audit Plan Priorities and Competency Gaps**

1: Vendor/third-party risk management
2: Auditing IT — security
3: Cybersecurity risk/threat
4: ISO 27000 (information security)
5: AICPA'S Criteria for Management's Description of an Entity's Cybersecurity Risk Management Program (Exposure Draft)

This perceptual map visualizes a comparison between "Competency" and "Need to Improve" ratings. The size of each bubble indicates the overall frequency with which the area is included in the annual audit plan, with larger bubbles indicating greater likelihood the area is in the audit plan.

Analytics and Technology

• • •   **Overall Results, Analytics and Technology Competencies**

"Need to Improve" Rank	Areas Evaluated by Respondents	Competency Score (5-pt. scale)
1	Auditing process automation/robotic process automation	2.7
2	Big data/business intelligence	2.8
3	Data analytics	2.9
4	Mobile applications	2.8
5	Using/mastering new technology and applications	2.8

"

Advanced technology solutions, including but not limited to analytics and artificial intelligence, can be leveraged to drive efficiency, effectiveness and other benefits into the audit lifecycle. One of the most significant challenges CAEs and internal audit leaders face is a shortage of talent with the knowledge and expertise to advance the use of analytics and technology-enabled auditing and approach it in a more sophisticated manner.
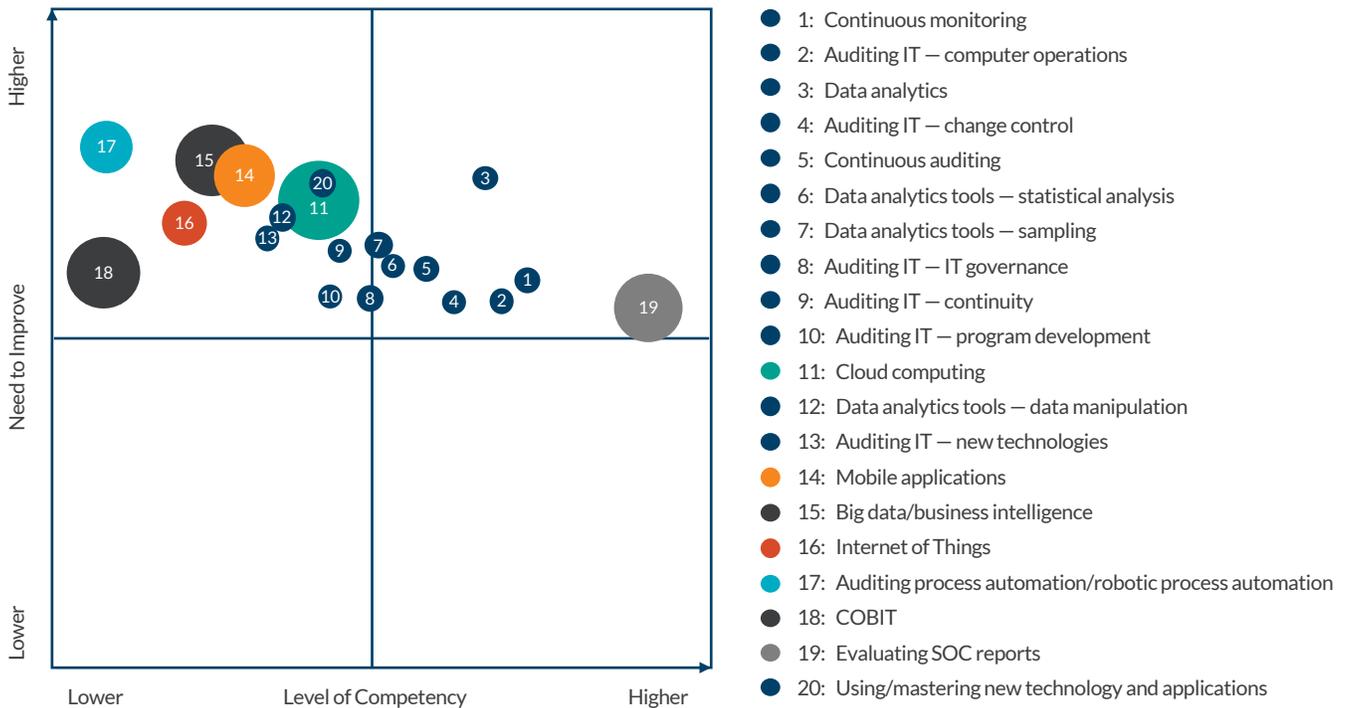
"

— Christine Fitzgerald, Director, Internal Audit and Financial Advisory, Protiviti

● ● ● CAE Results, Analytics and Technology Competencies

"Need to Improve" Rank	Areas Evaluated by Respondents	Competency Score (5-pt. scale)
1	Data analytics	3.0
2	Data analytics tools — data manipulation	2.7
3	Auditing process automation/robotic process automation	2.6
4	Mobile applications	2.8
5	Big data/business intelligence	2.8

● ● ● Analytics and Technology Perceptual Map — Assessing Audit Plan Priorities and Competency Gaps

- 1: Continuous monitoring
- 2: Auditing IT — computer operations
- 3: Data analytics
- 4: Auditing IT — change control
- 5: Continuous auditing
- 6: Data analytics tools — statistical analysis
- 7: Data analytics tools — sampling
- 8: Auditing IT — IT governance
- 9: Auditing IT — continuity
- 10: Auditing IT — program development
- 11: Cloud computing
- 12: Data analytics tools — data manipulation
- 13: Auditing IT — new technologies
- 14: Mobile applications
- 15: Big data/business intelligence
- 16: Internet of Things
- 17: Auditing process automation/robotic process automation
- 18: COBIT
- 19: Evaluating SOC reports
- 20: Using/mastering new technology and applications

This perceptual map visualizes a comparison between "Competency" and "Need to Improve" ratings. The size of each bubble indicates the overall frequency with which the area is included in the annual audit plan, with larger bubbles indicating greater likelihood the area is in the audit plan.

Strategy and Culture

Overall Results, Strategy and Culture Competencies

"Need to Improve" Rank	Areas Evaluated by Respondents	Competency Score (5-pt. scale)
1	Agile risk and compliance	2.8
2	Business/digital transformation	2.8
3	Auditing corporate culture	2.8
4	Fraud — fraud detection/investigation	2.9
5	Fraud — fraud risk	3.1

"

It may seem obvious to everyone that culture is important, and that the risks associated with an unhealthy organizational culture can derail operations, damage the brand, drive away customers and put a sizable dent in the bottom line. Yet for many organizations, culture continues to be a buzzword in boardroom discussions but is given short shrift as an operational priority. 'Doing the right thing' is a key performance indicator that doesn't appear as a line item on any balance sheet but contributes considerably to the 'goodwill' capital of a company, and its loss or erosion presents a significant risk. Culture assurance then becomes something much more specific and necessary.
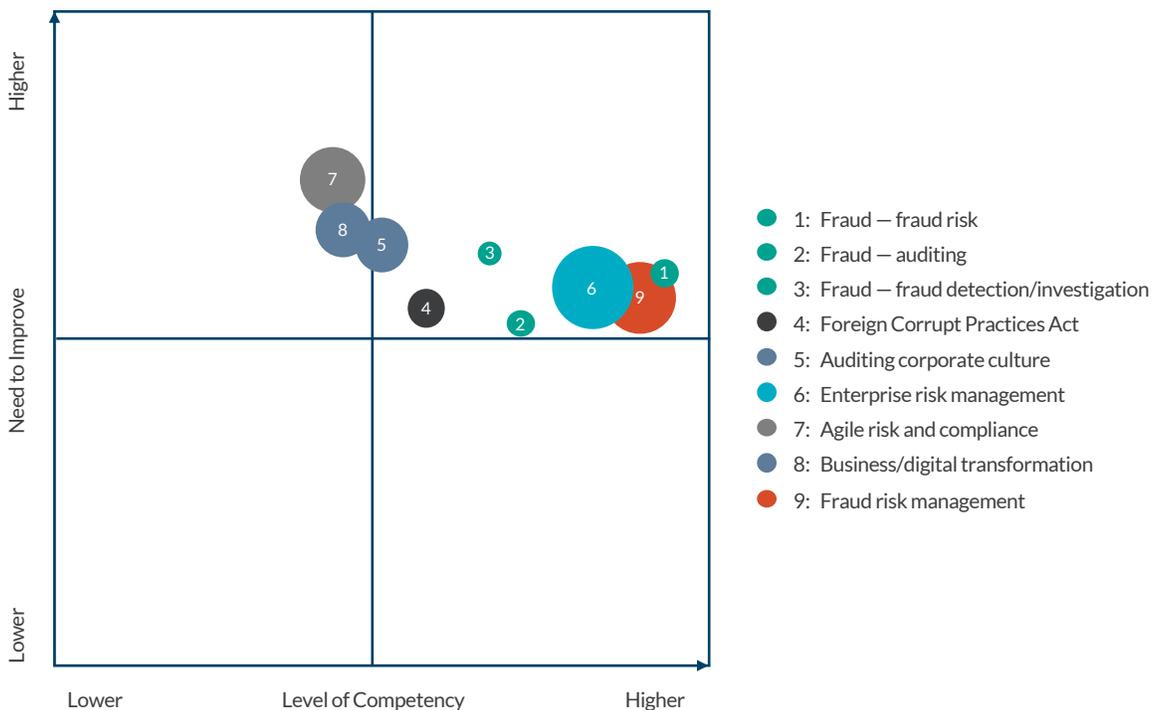
— Brian Christensen, Executive Vice President, Global Internal Audit, Protiviti

"

• • • CAE Results, Strategy and Culture Competencies

"Need to Improve" Rank	Areas Evaluated by Respondents	Competency Score (5-pt. scale)
1	Agile risk and compliance	2.7
2	Business/digital transformation	2.8
3	Auditing corporate culture	2.7
4	Fraud — fraud detection/investigation	3.2
5	Enterprise risk management	3.4

• • • Strategy and Culture Perceptual Map — Assessing Audit Plan Priorities and Competency Gaps

- 1: Fraud — fraud risk
- 2: Fraud — auditing
- 3: Fraud — fraud detection/investigation
- 4: Foreign Corrupt Practices Act
- 5: Auditing corporate culture
- 6: Enterprise risk management
- 7: Agile risk and compliance
- 8: Business/digital transformation
- 9: Fraud risk management

This perceptual map visualizes a comparison between "Competency" and "Need to Improve" ratings. The size of each bubble indicates the overall frequency with which the area is included in the annual audit plan, with larger bubbles indicating greater likelihood the area is in the audit plan.

Financial Reporting, Accounting and Controls

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

"Need to Improve" Rank	Areas Evaluated by Respondents	Competency Score (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)	2.6
2	Derivatives and hedging — Update No. 2017-12 (Topic 815)	2.5
3	Lease Accounting Standard — Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842)	2.8
4	International Financial Reporting Standards (IFRS)	2.7
5	Quality Assurance and Improvement Program (IIA Standard 1300): Ongoing Monitoring (IIA Standard 1311)	2.9

"

We continue to see the updated lease accounting standard among the top priorities for internal auditors as well as finance personnel to address. This is particularly important because the external audit firms continue to focus on the SOX compliance implications of the new standard and also the process by which companies are approaching it.
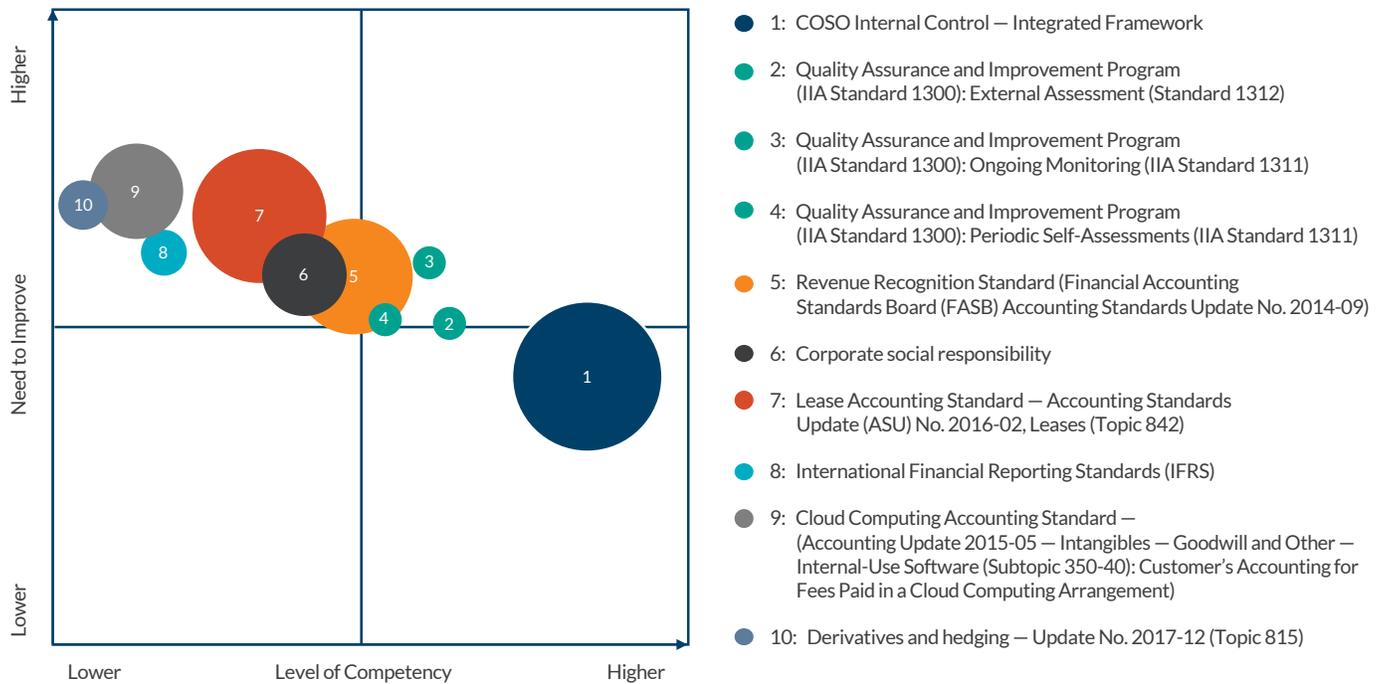
— Christopher Wright, Managing Director, Leader, Business Performance Improvement Practice, Protiviti

"

"Need to Improve" Rank	Areas Evaluated by Respondents	Competency Score (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)	2.5
2	Lease Accounting Standard — Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842)	3.0
3	Derivatives and hedging — Update No. 2017-12 (Topic 815)	2.4
4	International Financial Reporting Standards (IFRS)	2.6
5	Quality Assurance and Improvement Program (IIA Standard 1300): Ongoing Monitoring (IIA Standard 1311)	3.2

• • • Financial Reporting, Accounting and Controls Perceptual Map — Assessing Audit Plan Priorities and Competency Gaps

- 1: COSO Internal Control — Integrated Framework
- 2: Quality Assurance and Improvement Program (IIA Standard 1300): External Assessment (Standard 1312)
- 3: Quality Assurance and Improvement Program (IIA Standard 1300): Ongoing Monitoring (IIA Standard 1311)
- 4: Quality Assurance and Improvement Program (IIA Standard 1300): Periodic Self-Assessments (IIA Standard 1311)
- 5: Revenue Recognition Standard (Financial Accounting Standards Board (FASB) Accounting Standards Update No. 2014-09)
- 6: Corporate social responsibility
- 7: Lease Accounting Standard — Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842)
- 8: International Financial Reporting Standards (IFRS)
- 9: 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)
- 10: Derivatives and hedging — Update No. 2017-12 (Topic 815)

This perceptual map visualizes a comparison between "Competency" and "Need to Improve" ratings. The size of each bubble indicates the overall frequency with which the area is included in the annual audit plan, with larger bubbles indicating greater likelihood the area is in the audit plan.

Methodology and Demographics

More than 1,100 respondents (n = 1,113) completed questionnaires for Protiviti's 2019 Internal Audit Capabilities and Needs Survey, which was conducted online in the fourth quarter of 2018.

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	15%
Director of Auditing	12%
IT Audit Director	8%
Audit Manager	16%
IT Audit Manager	9%
Corporate Management	2%
Audit Staff	16%
IT Audit Staff	9%
Audit Services Contractor	6%
Other	7%

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

$20 billion or more	11%
$10 billion - $19.99 billion	11%
$5 billion - $9.99 billion	13%
$1 billion - $4.99 billion	25%
$500 million - $999.99 million	20%
$100 million - $499.99 million	16%
Less than $100 million	4%

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

More than $250 billion	13%
$50 billion - $250 billion	19%
$25 billion - $50 billion	12%
$10 billion - $25 billion	23%
$5 billion - $10 billion	14%
$1 billion - $5 billion	14%
Less than $1 billion	5%

• • • Organization Headquarters

North America	53%
Europe	15%
Asia-Pacific	15%
Latin America	14%
Middle East	2%
India	1%

● ● ● Industry

Financial Services (U.S.) — Banking	9%		Mining	3%
Government/Education/Not-for-profit	6%		Media	2%
Manufacturing (other than Technology)	6%		Financial Services (U.S.) — Broker-Dealer	2%
CPA/Public Accounting/Consulting Firm	5%		Hospitality	2%
Healthcare (U.S.) — Provider	5%		Consumer Packaged Goods	2%
Insurance (excluding healthcare payer)	4%		Automotive	2%
Financial Services (U.S.) — Asset Management	4%		Financial Services (Non-U.S.) — Broker-Dealer	2%
Construction	4%		Technology (Software/High-Tech/Electronics)	2%
Distribution	4%			
Oil and Gas	4%		Financial Services (Non-U.S.) — Asset Management	2%
Financial Services (U.S.) — Other	3%		Retail	1%
Biotechnology/Life Sciences/Pharmaceuticals	3%		Transportation and Logistics	1%
Financial Services (Non-U.S.) — Banking	3%		Power and Utilities	1%
Chemicals	3%		Telecommunications	1%
Financial Services (Non-U.S.) — Other	3%		Services	1%
Healthcare (U.S.) — Payer	3%		Real Estate	1%
Healthcare (Non-U.S.)	3%		Other	3%

● ● ● Type of Organization

Private	33%
Public	32%
Government	18%
Not-for-profit	16%
Other	1%

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. Protiviti and our independently owned Member Firms provide consulting solutions in finance, technology, operations, data, analytics, governance, risk and internal audit to our clients through our network of more than 75 offices in over 20 countries.

We have served more than 60 percent of *Fortune* 1000® and 35 percent of *Fortune* Global 500® companies. We also work with smaller, growing companies, including those looking to go public, as well as with government agencies. Protiviti is a wholly owned subsidiary of Robert Half (NYSE: RHI). Founded in 1948, Robert Half is a member of the S&P 500 index.

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