KPMG

# Digital transformation

**How advanced technologies are impacting financial reporting and auditing**

Forbes insights

# Table of contents

# Foreword

The world is in the midst of a digital transformation that is changing the ways we work and live. Hundreds of millions of data points are shared every minute on the worldwide web alone, and billions upon billions more are shared within and between organizations around the globe. Yet 81% of CEOs believe that their organizations are not keeping up with the emergence of technologies that could help them make more informed decisions and run their businesses better.[1]

To learn how "must-have" advanced technologies are impacting financial reporting and external audit, KPMG, in collaboration with Forbes Insights, conducted a survey of CFOs, controllers and other financial executives in April 2017. We were specifically interested in knowing how organizations are dealing with the digital revolution and their plans for moving forward.

We found that virtually all (99%) of organizations believe that advanced technology can enhance external audit and 89% are using the cloud for financial reporting. However, we also found that many organizations have a long way to go, with only 26% saying advanced technologies are a "must-have" within the next one to two years.

This report, "Digital Transformation: How Advanced Technologies Are Impacting Financial Reporting and Auditing," details the key findings from this research and also includes commentary from senior executives who are experiencing these changes firsthand. As you review this report, you will learn what is top-of-mind with financial executives today and how they plan to leverage "must-have" advanced new technologies in the future.

We hope you find this report informative and thought-provoking.

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**99%**
**of organizations believe advanced technology can enhance the external audit**

**89%**
**of organizations are using the cloud for financial reporting**

**79%**
**of organizations say advanced technologies are a "must-have" within the next five years**

[1] *https://www.forbes.com/forbesinsights/kpmg_ceo_global_2016/index.html*

# Introduction

The explosion of data and unprecedented advances in computer processing power have dramatically increased the capacity to support decision making across multiple operations. The world has moved well beyond basic and enhanced process automation and is entering an era of cognitive automation. Some are calling this the "Fourth Industrial Revolution." The impact of advanced technologies touches virtually every industry and organization on many levels, from strategic planning and marketing to supply chain management and customer service. Financial reporting and external audit are no exceptions.

As Isabel Witte, vice president and controller of Siemens Healthcare Diagnostics North America, puts it: "Technology is becoming more and more important to financial reporting and audit. But it is really much bigger than that. Beyond financial reporting, technology is an enhancement for identifying market trends, process improvement and other metrics that help us run our business and serve our customers better."

To learn more about the role of technology in financial reporting, Forbes Insights and KPMG surveyed 261 senior financial executives. We found that regardless of industry, organization size or geographic location, advanced technology is playing an increasing role in corporate financial reporting and external audit.

Although some organizations are moving at a faster pace than others, the vast majority agree that enhancing their technological capabilities in the financial function is a priority now and in the future. Twenty-six percent say that advanced technologies will be a "must have" capability for their organization in the next one to two years, and 55% say advanced technology will be a "must have" in three to five years. Given the speed of technological advancements, the latter may need to reconsider their sense of urgency on this issue.

This report analyzes areas in which organizations excel in adopting advanced technologies and where there is still room for improvement. It also examines challenges organizations face in introducing new technologies and maintaining data security in a cloud-based world.

# Advanced technologies are transforming the business landscape

Innovation in technology is growing at an increasingly rapid pace. We have moved well beyond the management of structured data and manual analysis to much larger data sets and automated analysis of unstructured data.

Today, through cloud-based applications, robotics, workplace automation, cognitive technology and other advances, organizations can manage information more effectively than ever before. These new innovations can recognize patterns, identify outliers and anomalies and perform predictive analysis with greater speed, accuracy and efficiency than technologies that were available just a few years ago.

Cognitive systems, for example, use a range of highly advanced capabilities to process data, including natural language processing, artificial intelligence, machine learning, text analysis, image recognition and voice recognition. Cognitive technology and data and analytics are highly complementary and, when used together, can generate greater analytical depth, broader perspectives and more effective decision making than ever before. While data and analytics help organizations do things right, cognitive technologies help organizations do the right things.

# Key findings

## 69%

of respondents rate their organization's use of new technologies as "advanced;" however, given how few organizations use technologies like robotics (38%) and natural language processing (35%), there is a clear disconnect between how companies self-assess and what their companies are doing in reality

## 77%

of executives say their finance team is using predictive analytics and 75% are using workflow automation

## 36%

cite increased data reliability, predictability and accuracy as the main benefits of advanced technology

## 89%

report using the cloud for financial reporting

## 36%

report they are concerned about unauthorized use of data

## 53%

of executives say advanced technology will be a "must-have" for their organization in three to five years

## 99%

of executives believe advanced technology can enhance the external audit

# Challenges of implementation

## 30%

Regulatory compliance

## 29%

Business disruption

Reduced risk is cited as the main benefit of advanced technology in external audit

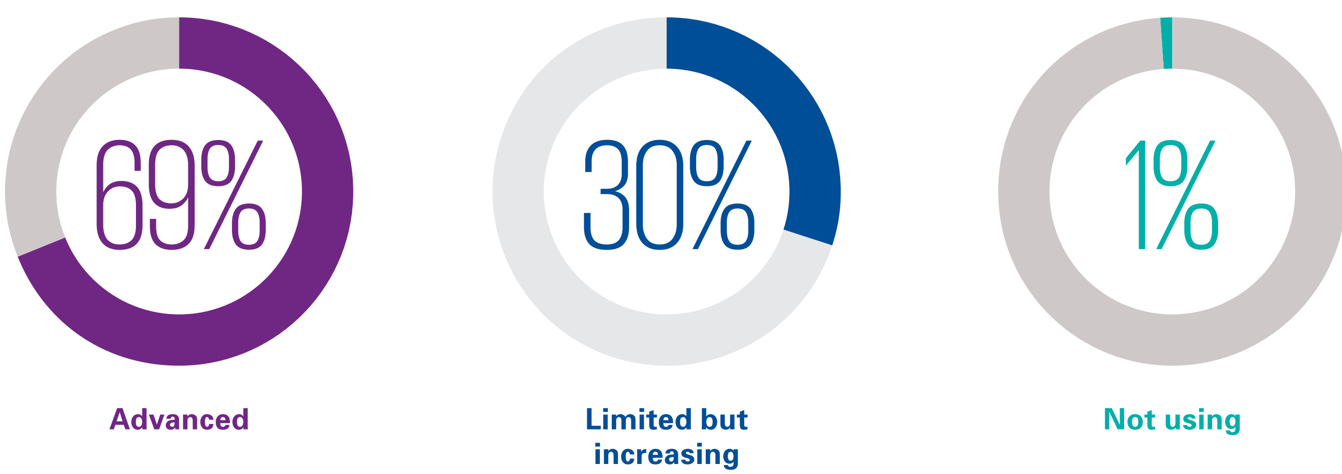
The main benefit of a technology-driven external audit is deeper insights into financial reporting, accounting, internal controls and businesses

# Advanced technologies are on the rise across all organizations

Regardless of industry, organization size or geographic location, the Forbes Insights and KPMG study finds that as corporate financial reporting continues to evolve, advanced technologies are playing a bigger role—both internally and for external audit—than ever before. Further, it is clear that the pace of change and its impact on financial reporting and external audit will only accelerate in the future, with 26% of respondents reporting that advanced technologies will be a "must-have" for their organization in the next one to two years and 32% saying advanced technologies will be a "must-have" for auditors in the same timeframe.

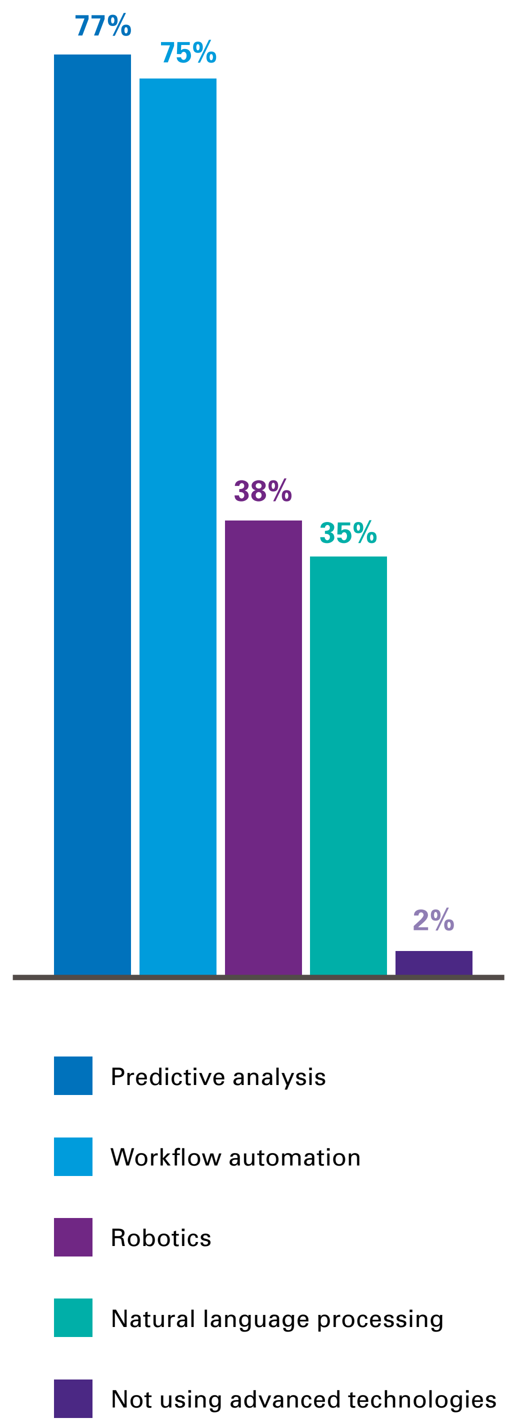
To stay relevant, organizations and their external auditors must constantly look ahead to be prepared for whatever comes over the horizon. Fortunately, most organizations are heeding the call—at least in part. More than two-thirds of executives rate their organization's use of new technologies in the financial reporting function as advanced. With a few exceptions, the remaining report the use of advanced technology is limited but increasing (Figure 1).

**Figure 1: Rate your organization's use of advanced technologies in the financial reporting function**




> However, how an organization defines "advanced" is highly subjective. As Witte explains, "Some people may be comparing themselves to industry peers or are using current technologies in 'advanced ways,' but are not necessarily using 'advanced technologies.'"

**Figure 2: What advanced technologies are currently being used in your finance function?**




There also seems to be a clear disconnect between how companies self-assess their use of advanced technologies and what they're actually doing. While many companies are using predictive analysis (77%) and workflow automation (75%), far fewer are using robotics (38%) and natural language processing (35%) (Figure 2).

What's more, financial executives we interviewed for this and an earlier report, "Financial Controllers and Technology: Evolving Roles," say they are not using cognitive technology in the financial function and are still looking into it.[2]

Siemens' Witte agrees. "I would say we are using traditional technologies, such as data and analytics, in advanced ways, rather than using advanced technologies. ERP systems, for example, are always evolving, and we try to maximize their use. Siemens may be using more advanced technologies, such as cognitive, in marketing and other areas, but we are not using them in financial reporting on a regular basis. As in many organizations, the financial areas tends to be fast followers rather than trendsetters in technology. We keep a close watch on technological developments, but we may not be the first to adopt them."

Again, this calls into question how advanced organizations really are when it comes to adopting new technologies. Most are making progress, but they could, and should, be doing more.

[2] https://www.forbes.com/forbesinsights/kpmg_controller_profiles/index.html

# Advanced technologies bring many benefits

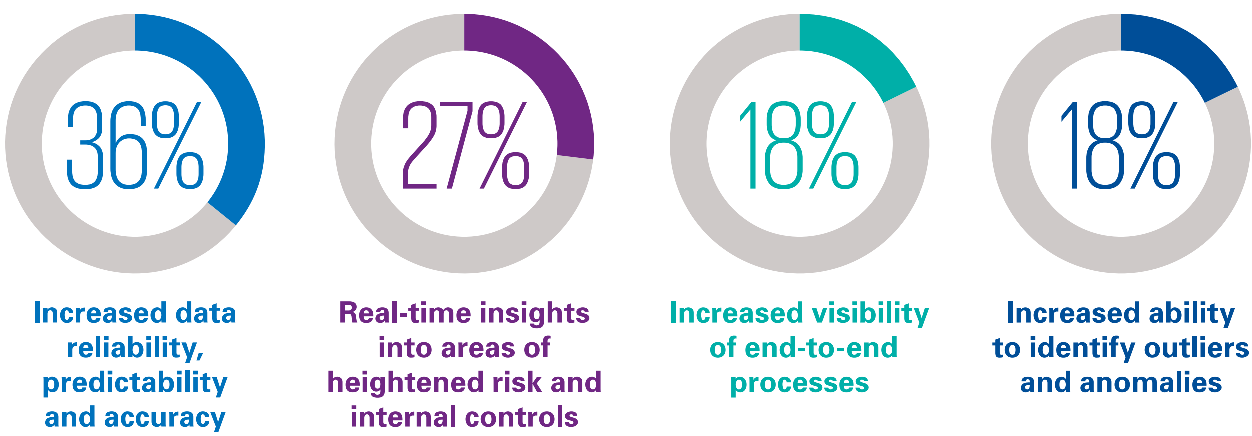
Advanced technologies provide many benefits to organizations of all shapes and sizes, so it is surprising that more organizations are not further along the innovation curve when it comes to the finance function. When asked to rank the benefits of advanced technology in order of importance, increased data reliability, predictability and accuracy is cited most frequently (36%), followed by real-time insights into heightened areas of risk and internal controls (27%) (Figure 3).

These findings are consistent with our earlier study, "The Transformative Controller: Adding Value, Insight and a Bridge to the Future," where we found that more than two-thirds (68%) of controllers agree that improved audit technologies enhance the quality, transparency and accuracy of the compliance and reporting process. This statistic, along with the others previously mentioned, demonstrates a growing appreciation of the role advanced technologies can play in managing data and providing organizations with one view of the truth for both reporting and operational purposes.

"Reliability, accuracy, accessibility and cost effectiveness are all key benefits," says Siemens' Witte. "But I particularly value technology for predictive forecasting. We use technology and data to forecast revenue trends and develop a predictive model for economic indicators and our revenue development. For example, if there is a statistical correlation between GDP growth or spending on capital investments and our revenue, I want to know that, so we can predict whether trends are going up or down."

The benefits of advanced technology are notable and important, and it is somewhat surprising that more organizations are not using this data more extensively. Those lagging behind should increase their investments in advanced technologies in order to take full advantage of the data they have on hand—otherwise, they risk falling behind.

**Figure 3: Most important benefits of using advanced technologies in the financial reporting process**




Note: Respondents ranked each option in order of importance; numbers do not add to 100% due to rounding.

# The role of the cloud in financial reporting

Along with other advanced technologies that improve and enhance the financial reporting process and audit, the cloud offers many benefits for managing data. Nearly 90% of those surveyed say they use the cloud in their financial reporting processes, and many consider it essential to timely and accurate reporting.

Sarah Broderick, chief financial officer of VICE Media, says, "Investors are increasingly looking for financial information in real time—they don't want to wait two or three weeks after the close of a quarter to see your results. They can log on to their bank accounts or brokerage accounts and get up-to-date information on a daily basis, and they expect the same from companies they invest in. Technology and the cloud can make this happen. It's simply a matter of making the right investments to bring your systems up to date."

But using the cloud does not come without concerns. Of those using the cloud, 36% say their top concern is unauthorized access to their data, and 26% say they are concerned about cloud vendor or internet outages leaving their data out of reach. Almost one-quarter are apprehensive about relying on third parties to run their financial reporting systems, and these issues dwarf worries about costs (Figure 4).

**Figure 4: Top concerns of those using the cloud in their financial reporting process**

**36%**
**Unauthorized access of data**

**26%**
**Cloud vendor or internet outage**

**24%**
**Reliance on third parties to run your financial reporting systems**

**13%**
**Anticipated cost savings may not be available**

Note: Does not add to 100% due to rounding

# Top challenges to implementing new technologies

For all of the benefits that advanced technologies offer, implementing them does not come without its challenges, both internally and externally. When asked about their top challenges, executives cite regulatory compliance and business disruption/change management (Figure 5).

**Figure 5: Top challenges to implementing new technologies to support financial reporting**

**30%**
**Regulatory compliance**

**29%**
**Business disruption/ change management**

**26%**
**Implementation cost**

**15%**
**Lack of relevant skills**

These findings resonate with VICE Media's Broderick who also sees change management as a great challenge, particularly in the areas of talent and infrastructure. "In a smaller, high-growth company, you don't always have the in-house talent, organizational infrastructure and communication rhythms to execute on larger projects and global systems. So the challenge is to simultaneously redesign your organization in anticipation of the systems you're deploying, or plan to deploy, while also putting in place the people who can run projects of this scale."

Two other factors slowing down the implementation of new technologies in some organizations are implementation costs—one quarter of respondents report that costs are among their top concern—and an unprecedented amount of data. Organizations today are faced with a flood of information from all areas of the enterprise—sales, operations, finance, accounts payable, vendors, customers, human resources and more. Just identifying the right technologies to capture and organize this vast amount of information is a challenge, but what's more challenging, and arguably more critical, is developing a strategy for effectively using this data once it has been gathered and analyzed.

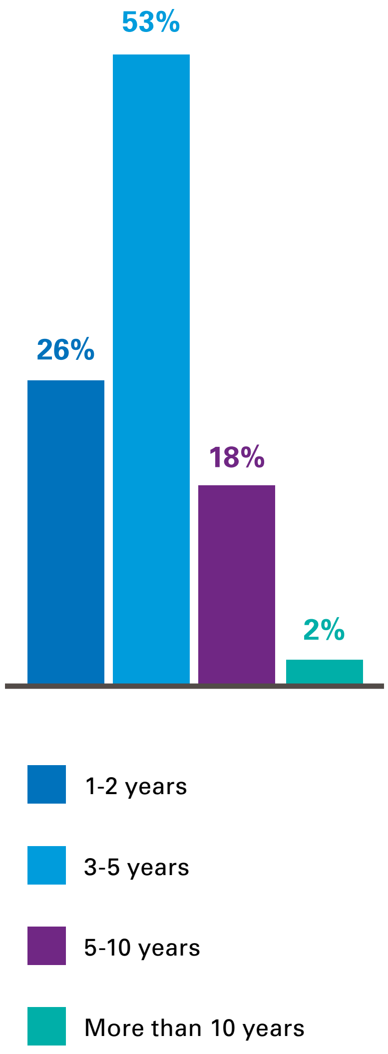
Big data, when properly managed, can provide the finance department and auditors with a clearer and more precise view of the organization. With the right information, company executives can drill down on various metrics, gain greater insight into operations, identify and manage potential risks, and also analyze trends that can impact their organization either negatively or positively.

Yet whether it's data, regulatory compliance or change management slowing down the implementation of new technologies, executives agree that technological advancements in corporate financial reporting and external audit produce a number of important benefits.

"There are certainly many benefits to using technology in financial reporting, but beyond that, it can give you a competitive advantage," says Witte of Siemens. "Companies that use new technologies either have a better cost position because their financial reporting is more cost effective or they use technology in more advanced and predictive areas, which can help them manage their organization to account for future trends. If an organization is not using technology in these ways, they will miss opportunities to get costs down and revenues up."

**Isabel Witte**
Vice President and Controller
Siemens Healthcare Diagnostics
North America

**Figure 6: When do you see advanced technologies becoming a "must-have" in your corporate financial reporting?**




Note: Does not add to 100% due to rounding

# Advanced technologies are a "must-have" for financial reporting and the external audit

New technologies are becoming a "must-have" for corporate financial reporting, but only a minority are acting quickly to introduce advances. Most organizations seem to be moving slowly when it comes to introducing new technologies internally, but some expect their external auditors to move more quickly.

Just a little over a quarter of respondents say advanced technologies will be a "must-have" within one to two years in their corporate financial reporting, while more than half are looking at a three- to five-year horizon (Figure 6).

Meanwhile, nearly a third of respondents say advanced technologies will be a "must-have" for external auditors in one to two years. But still, nearly half say they expect their auditors to adopt "must-have" technologies in three to five years (Figure 7).

Taking up to five years to adopt new technologies is not acceptable, especially given the pace of change in financial reporting and the benefits adoption can bring.

> "It is a very big benefit if our audit partners use more and more technology to do checks and balances," says Siemens' Witte. "This gives us a better comparison between audit periods, a more automated process that's less disruptive for the business, and a broader view of the data. I push very hard for this."

# Enhancing audit quality

Given these survey findings, more organizations should raise their expectations for themselves and their external auditors. While there is almost universal agreement that advanced technologies can enhance external audit quality, with 99% of respondents sharing this belief, there seems to be a way to go to fulfill this goal.

> Broderick of VICE Media agrees: "Auditors must look at more than technology. They need to be employing the latest technologies, but they also need to hire people who know how to use technology and have the skill sets to leverage it. They cannot just bring on people who can 'check the box.' They need analytical thinkers who can think outside the box and get up from their desk and ask questions and show they understand the business. They must make a human capital investment as well as investments in technology."

While executives cite different enhancements, the primary benefits of auditors using advanced technologies are almost evenly split among increased ability to identify areas of heightened risk and control weaknesses, increased data coverage and increased ability to identify data outliers and anomalies. Eighteen percent say auditors' use of advanced technologies allows them to benchmark KPIs across processes, business units and industries (Figure 8).

**Figure 7: When do you see advanced technologies becoming a "must-have" for your external auditors?**

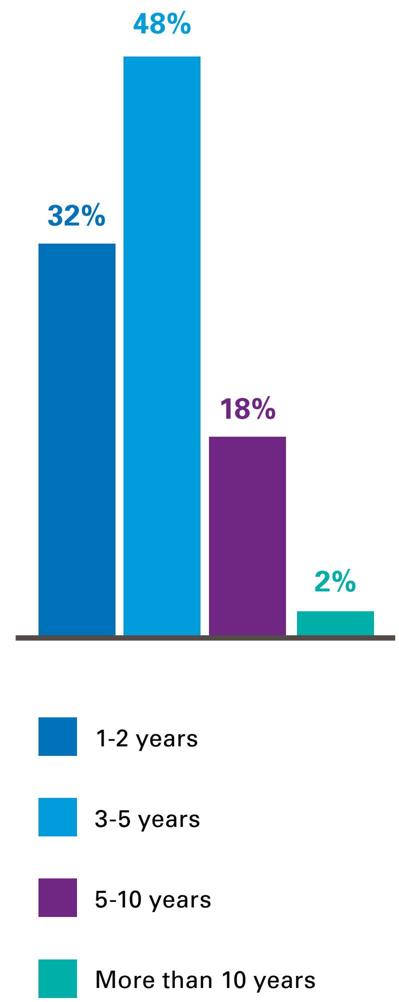


**Figure 8: What benefits does your organization derive from your external auditor's use of advanced technologies?**

28%

**Increased ability to identify areas of heightened risk and control weaknesses**

28%

**Increased data coverage**

25%

**Increased ability to identify data outliers and anomalies**

18%

**Benchmarking KPIs across processes, business unit and industries**

Note: Respondents ranked each option in order of importance; numbers do not add to 100% due to rounding.

But, as Witte points out, technology alone cannot enhance financial reporting and the audit; there is also the human factor to consider. "Auditors must have that cross skill set," says Witte. "There are experts that are good in finance, and there are experts that are good in technology. But to find an auditor that is good in both and understands the interdependencies is tough. But that is what we really need."

# Technology-driven audits reduce risks, provide deeper insights and help lower costs

Among the many benefits of a technology-driven external audit, the Forbes Insights/KPMG survey finds that organizations most value deeper insights into their financial reporting, accounting, internal controls and businesses, followed by reduced risk and costs (Figure 9).

**Figure 9: What value does your external auditor's use of advanced technologies bring to your organization?**


Technology is clearly playing a major role in enabling external audit to provide information and insights that can be used across an enterprise, and the vast majority of organizations not only expect their external auditors to adopt advanced technologies, but they demand it.

Considering that a full 100% of respondents agree that the use of advanced technologies can strengthen the audit profession's ability to meet the requirements of an evolving financial reporting landscape, it is clear that the bar will only get higher going forward.

"Auditors must look at more than technology. They need to be employing the latest technologies, but they also need to hire people who know how to use technology and have the skill sets to leverage it."

**Sarah Broderick**
Chief Financial Officer
VICE Media

**100%**

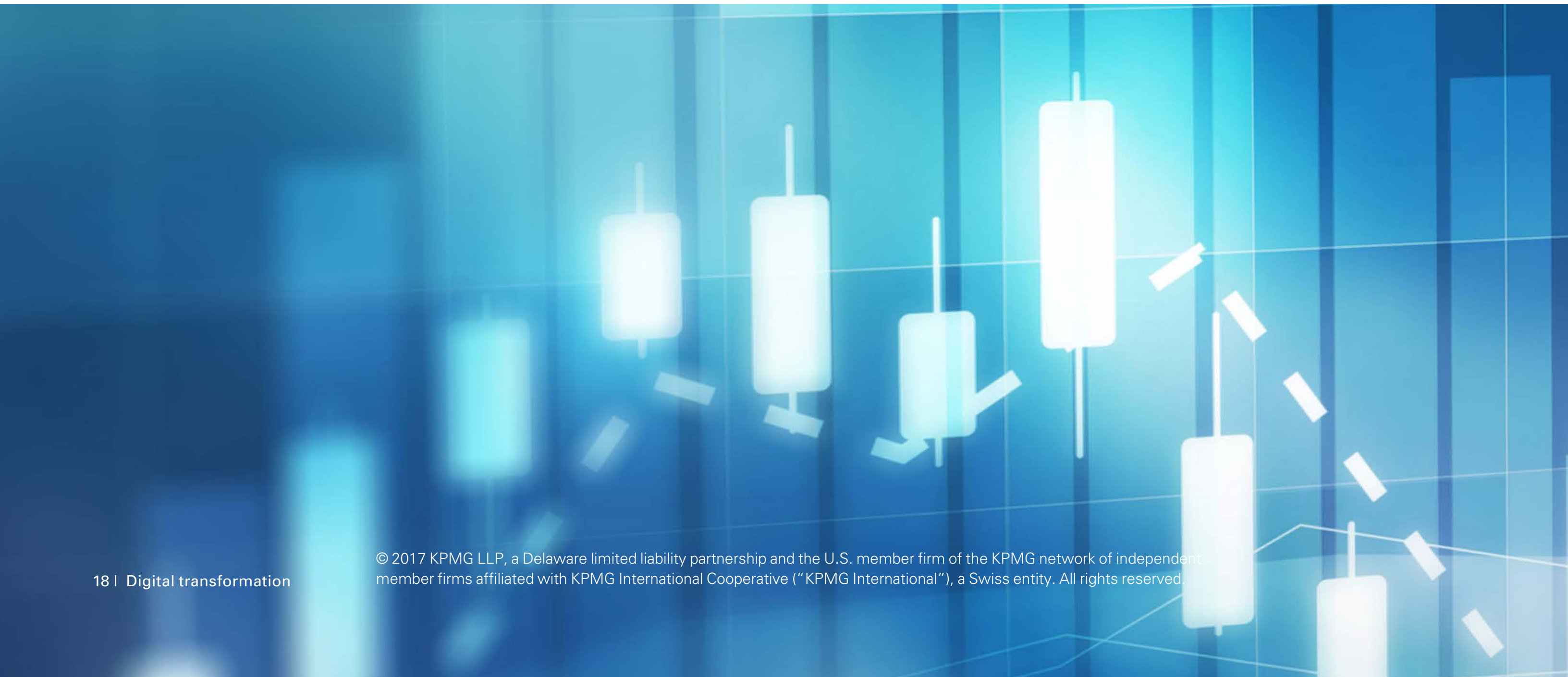
**agree that the use of advanced technologies can strengthen the audit profession**

# Harnessing advanced technologies is key to remaining competitive in today's digital age

As the digital revolution marches on, it presents both new challenges and opportunities for organizations and their financial reporting processes. While most organizations are sensitive to this new dynamic on some levels, some are lagging behind the pace of change. Nearly one-third say their use of advanced technologies is limited but increasing, and less than two in five report using robotics (38%) or natural language processing (35%). This could prove costly down the road.

The Forbes Insights/KPMG study also finds that barely a quarter of all organizations are working to stay ahead of the curve as financial reporting requirements and technology evolve, with only 26% reporting that advanced technologies will be a "must-have" in the next one to two years. Even more concerning, over half say advanced technologies will not be a "must-have" for three to five years, and 18% say five to 10 years. Those with such long horizons for adopting advanced technologies will likely fall behind as the pace of change in today's dynamic business environment is faster than ever before.

Despite the very real challenges, disruptions and costs associated with introducing advanced technologies, many companies must accelerate their efforts, not just for regulatory and compliance reasons, but to remain nimble and competitive in today's environment. Joining the digital revolution cannot wait until tomorrow, which will be here in the blink of an eye. Those serious about harnessing the full benefits of the new digital age must begin today.



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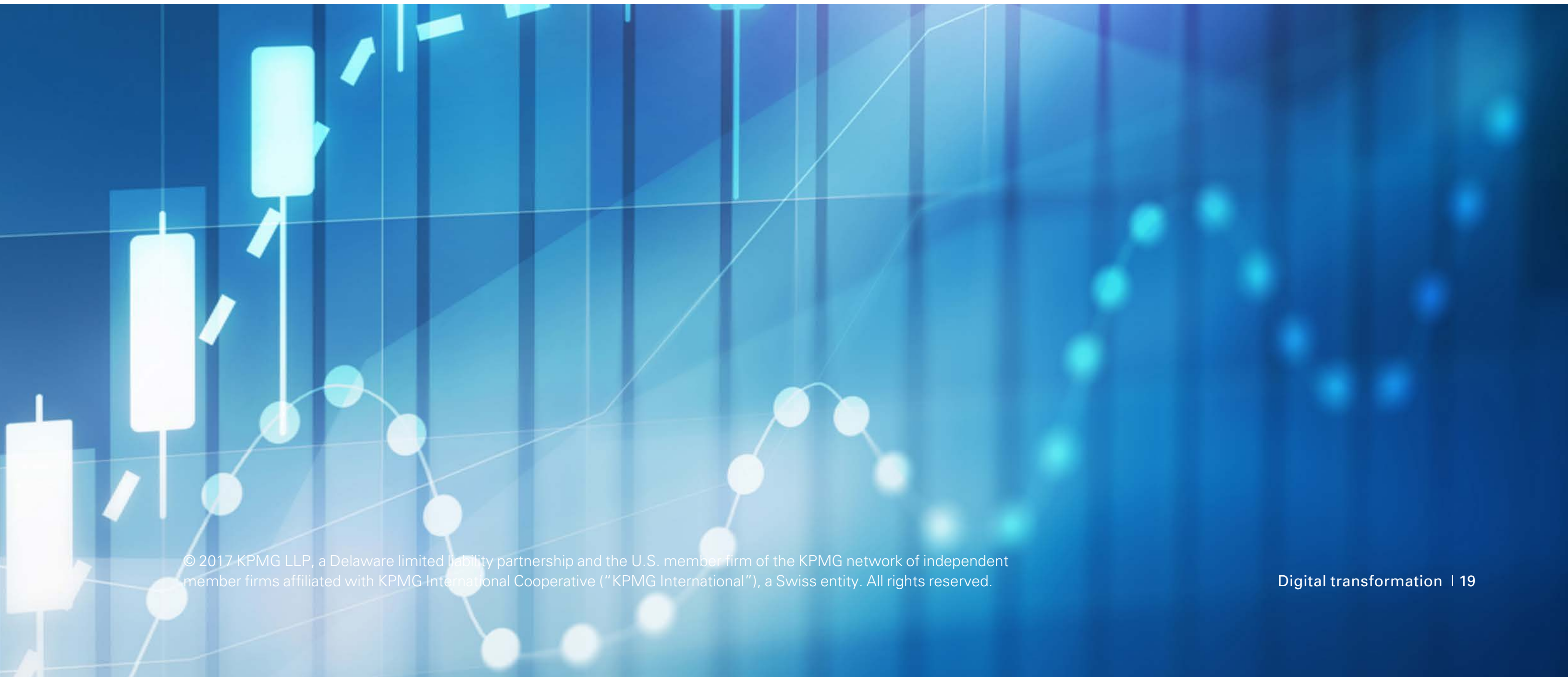
**Sarah Broderick,** Chief Financial Officer, VICE Media
**Isabel Witte,** Vice President and Controller, Siemens Healthcare Diagnostics North America

# Methodology

The data in this report is based on a survey of 261 respondents from the U.S., Europe and Asia Pacific in April 2017. Respondents included 76 CFOs, 59 controllers, 52 vice presidents of finance, 49 chief audit executives and 24 vice presidents of audit. Responses came from a broad range of industries including, but not limited to, automotive, banking, energy and utilities, healthcare, insurance, investment management, manufacturing, real estate, retail and technology. All came from organizations with $1 billion or more in annual revenue.



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