

# Global CIO AI Indicator Report:

Leading Your Organization into the AI-Enabled Future



## Table of Contents

---

Introduction	3
This Is Not the Usual Brief on AI and ML	4
The Four Key Opportunities	5
Lessons from Early Adopters: Who Are the AI Pioneers?	6
Opportunity One: Innovate Business Operations	8
Generate More with Generative AI	9
Opportunity Two: Upskill and Empower IT Teams to Upskill and Empower Others	11
Ready or Not, Here It Comes	11
Opportunity Three: Seize the Moment to Get Data in Order	13
Opportunity Four: Be an Agent of Change for the Organization	14
Align, Align, Align	14
This Is Your Moment. Seize It!	15
Workday and AI: Natural Partners	16
About Our Research	17
AI Pioneers: AI Adoption Index Methodology	18
Definitions of Terms in Our Research	19

---

# Introduction

In times of change, great possibilities often come with great pressures.

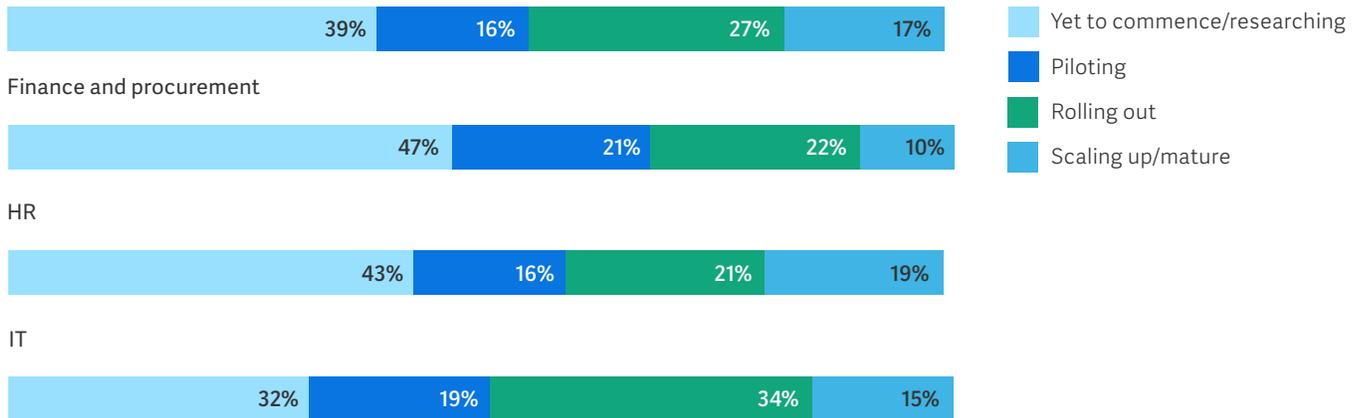
Nowhere is this truer than in the office of the CIO with the progression of AI and machine learning (ML). IT will be closest to these technologies at almost every stage—from selection to deployment and assessment—which makes them the best people to gauge whether the organization is ready for AI and ML. It also makes IT the natural architects of business changes that promise to completely alter the world of work.

IT leaders' pressure extends beyond the technology itself. We now understand clearly that the office of the CIO has—like it or not—evolved into a cultural change agent of the organization. CIOs must prepare the organizational culture for broad-scale advances, all while making sure those advances work and deliver value as advertised.

Fortunately, they don't have to do it alone.

## IT leads in AI adoption within the organization.

Organization\*



\*Survey question: Which of the following best describes your organization's current level of AI and ML adoption? (All respondents; n=2,355.) Respondents selected one response option.

Survey question: Which of the following best describes the current level of AI and ML adoption in your team? (All respondents; finance and procurement n=640; HR n=640; IT n=640.) Respondents selected one response option to reflect AI and ML adoption within their own team.

## This is not the usual brief on AI and ML.

Most IT leaders no longer need lessons about how AI and ML are “on the horizon.” They’re here, and, as illustrated throughout this report, decision-makers are consistent in their enthusiasm for, and understanding of, these technologies. What today’s CIOs need is a pathway forward as they balance several daunting priorities at once:

- Instituting dramatic technological changes while supporting an organizational culture that will accept these changes
- Expanding IT’s role as a value-creator in the business without neglecting its traditional technological responsibilities
- Preparing teams across the business to change how they work—integrating generative AI and other new tools—while ensuring the work still goes on

The “Global CIO AI Indicator Report” is the start of that pathway.



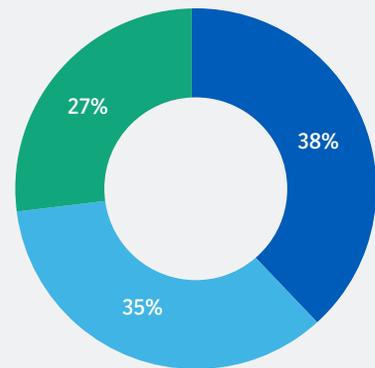
### The “Global CIO AI Indicator Report” in brief.

The data in this report is based on findings from a global survey of 2,355 cross-functional senior business executives. In addition to quantitative research, we interviewed 11 global senior business leaders from finance and procurement, IT, and HR to get their insights into the research findings. This report collates responses from the 640 IT leaders surveyed to provide leaders and decision-makers with a current view of the AI landscape in IT. More detail is included on [page 17](#) of this report.

#### IT respondent titles surveyed:

- Chief Information Officer
- Chief Technology Officer
- VP/Director IT
- Head of IT

### IT respondents by region.



IT leaders (n=640)

■ North America (n=240)

■ Europe (n=225)

■ APAC (n=175)

## The four key opportunities.

Workday commissioned the Global AI Indicator research to bring clarity and direction to CIOs who are leading their companies through this complex situation. Unsurprisingly, many such leaders—across the globe and across industries—are facing similar challenges, and they shared a great deal of information with us over several months of intensive data collection.

This data has given rise to four significant opportunities specific to IT leaders:

- 1 Innovate business operations.
- 2 Upskill and empower IT teams to deploy AI and ML.
- 3 Seize the moment to get data in order.
- 4 Be an agent of change for the organization.

These opportunities extend far beyond the traditional limits of “the job of the CIO.” The role is changing, as are the stakes in executing it well. This reality may strike IT leaders as refreshing or ominous, depending on their individual experiences and points of view—it is not, however, optional.

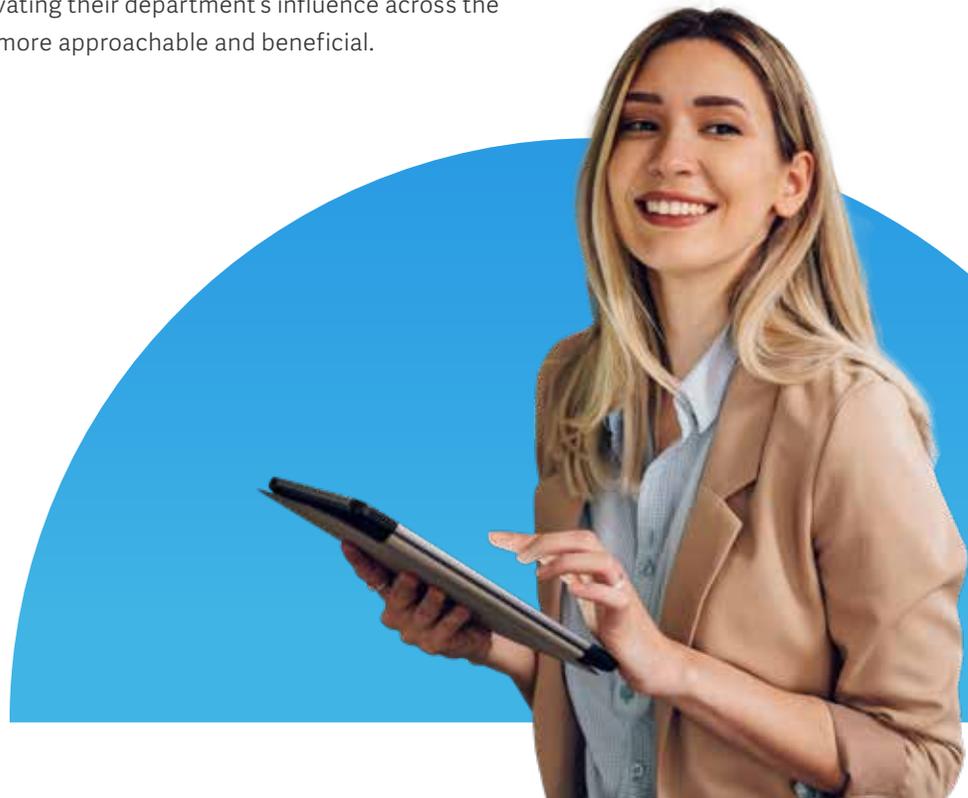
Thankfully, early adopters are finding ways to infuse AI into core business processes to truly scale the technology across the organization. With the proper strategy, today’s IT leaders can leverage these pivotal technologies into crucial business enablers, elevating their department’s influence across the business and making change more approachable and beneficial.

“

AI is a game-changing piece of technology. There will be winners and losers. If you’re an organization thinking that you’ll just sit this one out or wait and see, you might find yourself lagging behind very quickly.

**Dave Mackenzie**  
Managing Principal, Digital,  
Aurecon

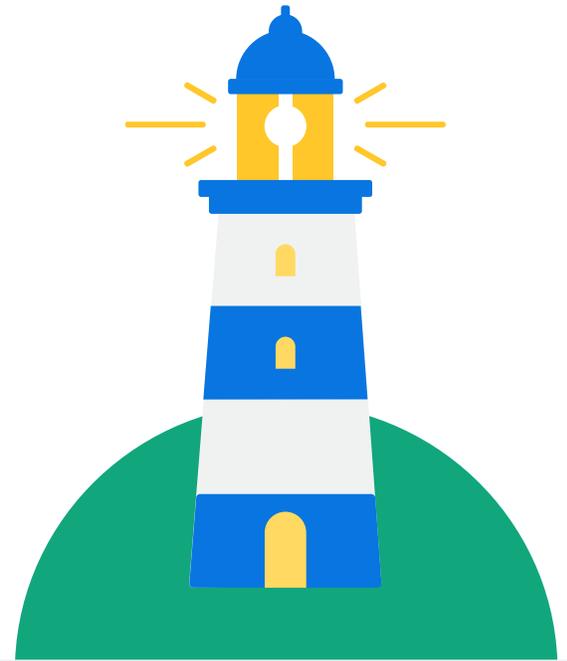
[More from this speaker](#)



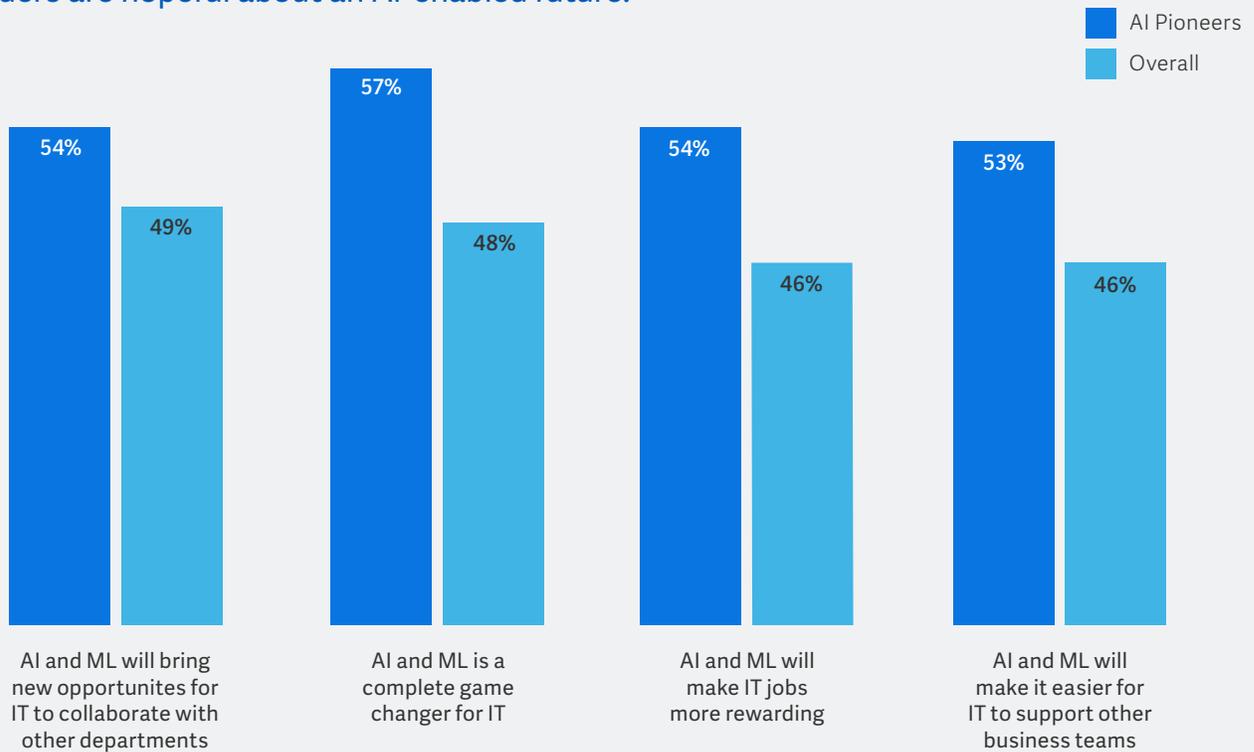
## Lessons from early adopters: who are the AI Pioneers?

In our research, we uncovered a group of IT leaders who are particularly advanced in their digital maturity journey compared to the overall sample. Our research finds a correlation between the level of an organization's AI maturity and the benefits it is realizing, and this advanced cohort—which we call the AI Pioneers—is working faster and more efficiently, finding more opportunities to reduce risk and deliver significant strategic value to the business.

For example, a majority of this cohort (53%) say that their organization's data is accessible, compared to 41% of organizations overall. Perhaps as a result of this, 58% of AI Pioneers say AI and ML will enable them to deliver more strategic value to their organization, compared to 48% of IT leaders overall.



### IT leaders are hopeful about an AI-enabled future.

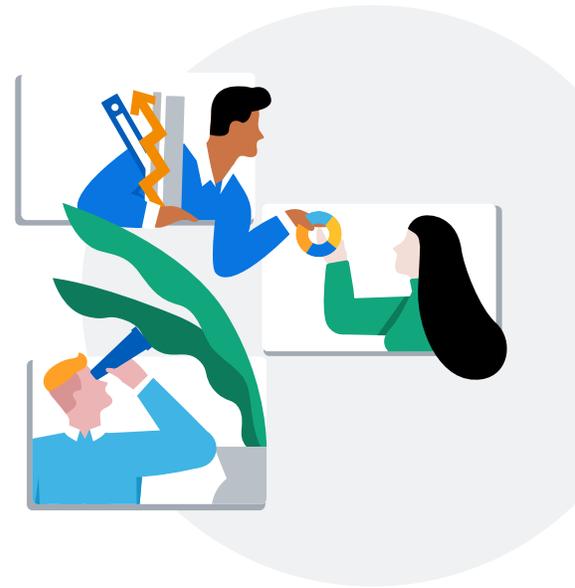


**Survey question:** To what extent do you agree or disagree with the following statements about the impact of AI and ML on IT? (IT respondents; n=640.) Respondents selected one option per statement on a scale from 1 (strongly disagree) to 5 (strongly agree). Chart represents respondents who selected 4 or 5 on this scale.

Given that these AI Pioneers are relatively far along with AI and ML, their approaches and shared characteristics tell us not just about the potential of these tools, but also about their real-world success once organizations begin to embrace these powerful technologies. Our research finds that AI Pioneers are typically harnessing AI and ML in the following four areas:

- 1 Data and tools.** AI Pioneers are better at making data accessible to everyone within the business who needs it.
- 2 Employee productivity.** AI Pioneers are using AI and ML more to improve ways of working and enable employees to add more strategic value.
- 3 Human skills and machine capabilities.** AI Pioneers say that AI and ML will significantly augment people's skills in parallel with technology.
- 4 Organizational culture.** AI Pioneers are particularly optimistic about what AI and ML can do for sustainability and diversity, equity, and inclusion.

Unsurprisingly, these four areas echo the four opportunities for IT leaders highlighted in this report.

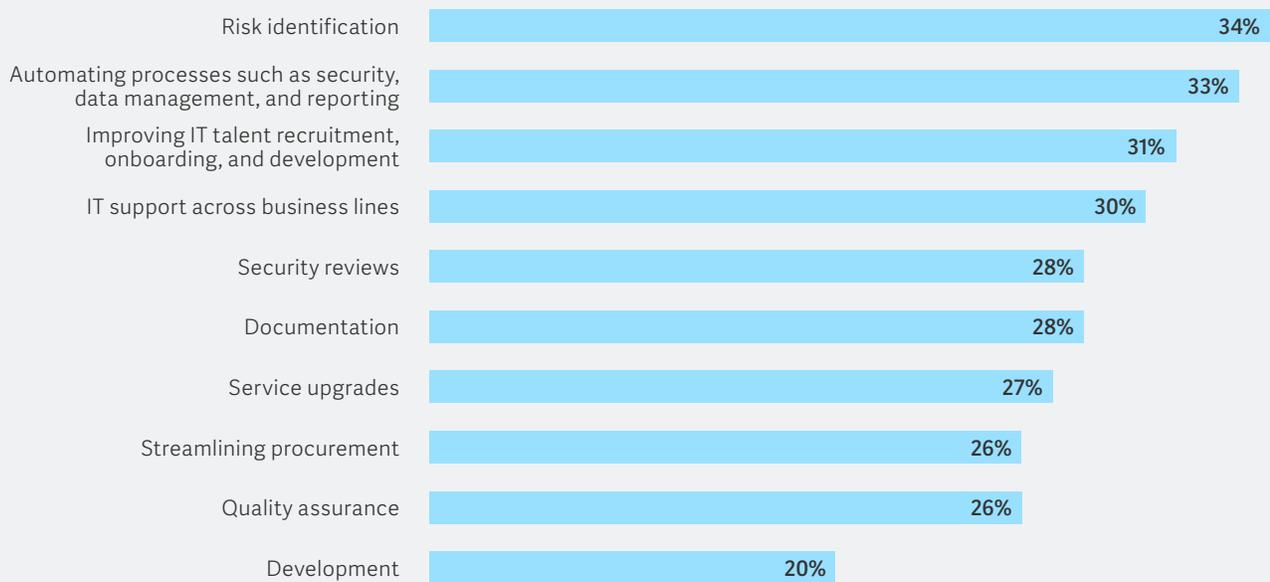


## Opportunity one: innovate business operations.

AI and ML are revolutionizing the way businesses operate and innovate, starting with the core processes and tools that take place every day.

While the application of AI and ML will vary between industries, the IT leaders in our research are especially optimistic about applying AI to core business functions including risk identification, security, data management, and reporting.

### Where's the value? IT's top 10 benefits from AI and ML:



**Survey question:** Where do you believe the IT team can derive the most immediate value from AI and ML technology applications? (IT respondents; n=640.) Respondents selected one to three options from a list of possible responses. This chart represents all responses provided, which point to a benefit from AI and ML. An additional 2% of respondents selected "I don't believe there are any immediate gains to be made from AI and ML in IT."

Perhaps unsurprisingly, IT is the function that reports the highest level of AI and ML adoption, with more than two-thirds reporting that they have at least piloted these technologies. IT is also the most likely to see these technologies as major game changers for their role: 48% of IT leaders describe AI and ML this way, compared to 33% of HR leaders and 39% of finance leaders.

Nearly half of IT leaders (46%) think AI and ML will make their jobs more rewarding, and one-third say AI and ML will improve talent recruitment, onboarding, and development.

These results suggest that as business leaders get more fluent with AI and ML—likely with the help of IT—they also get more comfortable with them.

# 48%

of IT leaders believe AI will be a complete game changer for their industry.

## Generate more with generative AI.

Generative AI has captured people’s attention and imagination, and has caused some IT leaders to wonder: Are we replacing our own people here, or are we making our people better?

Our survey results seem to indicate that generative AI is most useful to business not because it replaces people, but because it offloads tasks that typically consume substantial resources in time, energy, and attention. This, of course, makes people work better.

### Increased productivity is a top benefit.



**Survey question:** As AI and ML become more integrated with IT, what do you believe the biggest benefits will be? (IT respondents; n=640.)



A lot of new roles are going to emerge in the next couple of years as some of the existing roles become less important. There has to be an ongoing focus on making sure that your talent is continuously learning and developing.

**Prashant Nema**

EVP, Global CIO, Arch Capital Services Inc.



“This is really the future of knowledge workers: human intuition, generative AI, and some domain expertise,” says Dave Mackenzie, managing principal of digital at engineering consultancy Aurecon. “That confluence of understanding is where the magic and real opportunity is. It’s a new way of thinking, a new way of working, and we’ve all got to lean into it.”

Workday is deploying generative AI to increase productivity, grow and retain talent, streamline business processes, and drive better decision-making. More specifically, generative AI can be used to:

- Generate job descriptions in minutes vs. hours
- Analyze and correct contracts
- Create personalized, relevant written content, such as internal policy updates
- Create customized employee growth plans

Notably, all of these advances require human experts to validate and adopt what’s generated by the AI. This is as it should be, since no current technology can replace the contextual, interpersonal, and strategic awareness that great human talent brings. The technology can, however, clear the way for that talent to flourish.

Like any AI, generative AI relies on a clean, robust dataset. Otherwise, the outputs will suffer, and the technology’s value will fall short of expectations. This data foundation issue is discussed more below.



Building governance is important, and having clear guidelines around how we use AI and ML means you have to make some investments.

**Nathalie Carruthers**  
EVP & CHRO, Blue Yonder



## Who governs AI governance?

Responsible AI (RAI) principles are mandatory considerations for any business embarking on AI and ML deployments. Fortunately, Workday discovered early on that RAI can be a highly effective way to create alignment and shared investment among many business stakeholders.

In our experience, RAI governance is based on several key principles:

- Human review of outputs
- Transparency and disclosure
- Fairness and bias management
- Explainability and interpretability

Workday has also developed an RAI risk evaluation tool that product managers use at the ideation stage of any new AI and ML project, helping the human innovators build solutions responsibly from the outset instead of reactively adjusting their solutions after the fact.

Learn more about [how Workday leads RAI](#).

## Opportunity two: upskill and empower IT teams to upskill and empower others.

Through well-defined preparation and alignment, every business division—and the people within them—can benefit dramatically from successful AI and ML adoption. Often, much of that preparation falls on IT leaders.

“We believe in the power of AI to unlock human potential,” says Chandler Morse, vice president, corporate affairs, at Workday. “We know how these technologies can benefit economic opportunities for people—that’s our business. But people won’t use technologies they don’t trust.”

The IT team’s knowledge and expertise make them uniquely placed to guide other departments into a new AI-driven way of working. To avoid the pressure of being solely responsible for AI and ML, the IT team must take a leading role—educating line-of-business peers, developing skills to be more collaborative, and immediately addressing staffing and resource needs. As the key drivers behind AI and ML adoption, IT will always play a crucial role in educating others on how to use AI responsibly.

### Ready or not, here it comes.

IT leaders are often the ones who can see these challenges in the distance, and many anticipate being put in difficult positions by other functions. Along with the expected pressure to find a trustworthy approach to AI and ML for their organization, one-third of IT leaders raise the possibility that other departments will hold IT accountable for the accuracy of AI and ML.

They also worry about various business pressures affecting the organizational introduction of AI and ML. For example, 35% of IT leaders are concerned they will be pressured to make difficult decisions about where to apply these technologies, even when their team doesn’t have the expertise.

For some IT leaders, these pressure points are leading to hesitation: 37% say they will adopt a “wait and see” approach to AI and ML, compared to only 28% of CEOs.

“

We believe in the power of AI to unlock human potential. But people won’t use technologies they don’t trust.

**Chandler Morse**  
Vice President, Corporate Affairs,  
Workday



[More from this speaker](#)

# 35%

of IT leaders are concerned they will be pressured to make difficult decisions about where to apply these technologies.

## IT leaders are concerned about their role in AI and ML adoption.

IT leaders will be under pressure to make difficult decisions about where to apply AI and ML, even if IT may not have domain expertise

35%

IT will be under pressure to find a trustworthy approach to AI and ML for the organization

33%

IT will be held accountable for accuracy of AI and ML by other departments

33%

IT employees will not have capacity to support the maintenance of AI and ML models across the entire organization

29%

Non-IT employees will not have the technical skills required to work effectively with AI and ML

24%

**Survey question:** To what extent are you concerned about the following issues as AI and ML become more integrated with IT? (IT respondents; n=640.) Respondents selected one option per statement on a scale from 1 (not at all concerned) to 5 (highly concerned). Chart represents respondents who selected 4 or 5 on this scale.



IT leaders' expertise in AI and ML means they're also acutely aware of the potential risks, and our research tells us that many don't feel confident that teams across the business are prepared for AI and ML. They worry they will be held responsible for the accuracy and effectiveness of deploying these technologies—and they're right.

### The greatest risks, ranked by CIOs:

- 1 Potential errors
- 2 Potential bias
- 3 Security and/or privacy
- 4 Lack of transparency/accountability

**Survey question:** What are the greatest risks to integrating AI and ML with IT at your organization? (IT respondents; n=640.) Respondents stack-ranked their top 3 choices in order of priority.

## Opportunity three: seize the moment to get data in order.

Across any role—from the CEO to the CIO, CFO, CHRO, and others—one constant is the need for high-quality, accessible data. AI is only as good as what it's fed, and many organizations are facing significant shortfalls in supplying quality data due to lacking data management processes.

This is a significant struggle, according to our study. For example, almost 60% of the sample conceded that their company's data is somewhat or completely siloed. This means, unfortunately, that it is not ready to fully leverage AI and ML.

“Our biggest blocker to unleashing the power of AI is uncertainty over the integrity of the dataset it's working from,” says Dan Cohen, chief information officer and director of operations at U.S. lifestyle services and hospitality company The Amenity Collective. “Our internal data and adherence to process is where our focus is, and we don't necessarily want to leap ahead until we feel like we have a stable footing there.”

Despite variances in industry and level of adoption, data quality and reliability showed up consistently in the top three barriers IT leaders face for moving forward with AI and ML.



### Siloed and insecure? Here are IT's top three current concerns:

- 1 Security, compliance, and regulation
- 2 Inability to collaborate
- 3 Unreliable/unusable data

**Survey question:** What are the greatest barriers to achieving your current IT aims? (IT respondents; n=640.) Respondents stack-ranked their top 3 choices in order of priority.

AI and ML depend on a strong, unified data foundation. It's no accident that the AI Pioneers who are reaping AI's rewards are also the ones with the best data management and accessibility practices in place. In fact, 53% of AI Pioneers across all functions reported that their organization's data is accessible, in comparison to 41% of all respondents surveyed. This is in keeping with our findings that 58% of AI Pioneers say AI and ML will enable them to deliver more strategic value to their organization, compared to 48% of IT leaders overall, suggesting a better data foundation has prepared AI Pioneers to take full advantage of AI's capabilities for business value.

Today, all companies need real-time intelligence that enables them to not just respond quickly, but also to anticipate disruptive events, such as changes in interest rates or impacts from geopolitical conflicts. This intelligence must be derived from external data, of course, which is distinct from operational data. Therefore, these disparate data sources must be understood, combined, and put to use intelligently and with significant automation.

# 60%

of IT leaders conceded that their company's data is somewhat or completely siloed.

# 53%

AI Pioneers across all functions reported that their organization's data is accessible.

## Opportunity four: be an agent of change for the organization.

For many organizations, the IT team will naturally take center stage when it comes to the deployment and daily operation of AI and ML, giving IT the opportunity to redefine its role. To exploit this opportunity and set the entire organization up for success, CIOs must promote collaboration across business lines and align closely with their CEO and fellow department heads, such as the CFO and CHRO.

### Align, align, align.

For CEOs, the need for operational efficiency is the top source of pressure to adopt AI and ML, but, ironically, it is precisely the lack of existing operational efficiency that's a big concern for IT leaders. Many are bothered by their team's heavy load of administrative tasks, the lack of tools available to complete their work, and the lack of readiness for service changes or upgrades. IT leaders can rightfully be viewed—and trusted—as the digital orchestrators of the company, but that doesn't mean they can do things alone or under improper conditions.

To overcome this challenge, explains Matt Peters, CTO of CAI—a U.S.-based technical professional services firm that offers a range of services to clients in both the commercial and public sectors—CIOs must ensure they have CEO buy-in at an early stage in their AI and ML adoption journey. This buy-in can filter down through other important departments. “If you have a CEO who doesn't get it and isn't able to appreciate the value [of AI and ML], then socializing it there is the right place to start,” says Peters. “You need support for these kinds of initiatives [and] even when you want to start [at the] grassroots in an organization, that can only take it so far.”

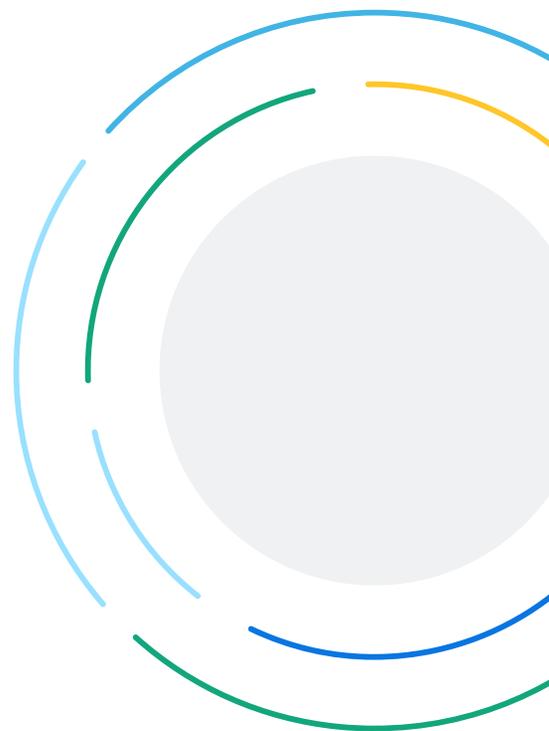
“

There's an element where every AI deployment, if you're doing it safely, is organizational cultural change.

**Matt Peters**

Chief Technology Officer, CAI

[More from this speaker](#)



## This is your moment. Seize it!

### Conclusion

AI and ML aren't the only change stories going on here. Perhaps just as significantly, the role of IT itself is changing—in ways few would have anticipated a couple years ago.

IT faces an unprecedented opportunity to be an agent of change in the organization—to shepherd the company into an uncertain, but incredibly promising, future. It's a tall order for any IT department, but it also underscores the major opportunity that underlies each of the four we've discussed so far in this report: the opportunity to take the entire business somewhere it's never been.

But IT leaders won't have to face the future of AI and ML alone. More and more data is arriving, which, like this report, will inform AI and ML strategies and deployments. And AI Pioneers have already led the way, setting a firm example for CIOs to follow in leading change within their own organizations.

Ideally, CIOs can also lean on their partners within the business. Each function may offer a different perspective, but it's in everyone's best interest to get it right. We've entered a business era of significant co-ownership, particularly when it comes to technological transformation.

“There is pressure to act, and I do get the sense that there's a bit of an arms race between competing organizations,” says Aurecon's Mackenzie. “There are opportunities for organizations to lead, and there will be opportunities for organizations to follow. Those that lead will have an innate competitive advantage.”

**Lead on.**

“

There are opportunities for organizations to lead, and there will be opportunities for organizations to follow. Those that lead will have an innate competitive advantage.

**Dave Mackenzie**  
Managing Principal, Digital,  
Aurecon



## Workday and AI: natural partners.

In the world of AI, a decade is a long time. Workday has pioneered AI and ML for that long, and the experience pays off. What makes us different?



**Data.** Workday leverages the most reliable data on an organization's people and finances, built on a uniform data model so that the data that feeds AI use cases is always up to date and reliable. With huge amounts of structured, accurate data to train the models, IT is free to focus on other key business transformation initiatives. And, since the quality and value of AI compounds with experience, this data-driven head start is unique and indispensable.

Learn more with our guide: [The CIO's Guide to Data and Analytics Innovation](#)



**Platform.** Since AI and ML are built into the core Workday architecture rather than bolted on after the fact, we can scale the delivery of various AI and ML solutions freely to all of our customers across the entire application portfolio. In practice, this means increased agility, quick time to value, and proven strategies that put our customers a step ahead. In addition, IT does not need to procure or manage a separate AI and ML stack or data integration.

Learn more with our guide: [Workday Innovations in Machine Learning](#)



**Trust.** Our responsible approach to securing customer data extends to AI and ML. We provide transparency by documenting each AI and ML model. We keep people at the center of everything by ensuring no decision is ever fully controlled by Workday AI and ML technology. Humans are kept in the loop at all the right places and are the final decision-makers.

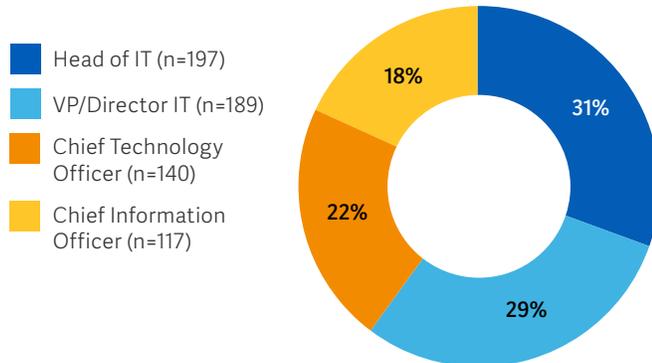
Learn more with our whitepaper: [Empowering Innovation Through Responsible AI Governance](#)

To learn more about how Workday can help organizations intelligently and responsibly deploy AI and ML, visit: [workday.com/ai](https://workday.com/ai)

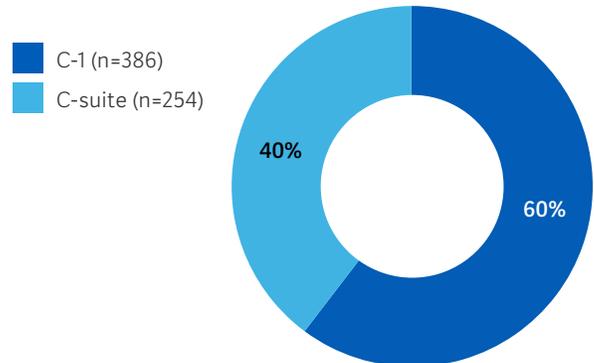
## About our research.

The data in this report is based on findings from a global survey of 2,355 cross-functional senior business executives conducted in May and June 2023. In addition to the quantitative research, we interviewed 11 global senior business leaders from finance and procurement, IT, and HR to get their insights into the research findings. IT and technology made up 27% of the total sample of the research.

### IT respondents by job title.

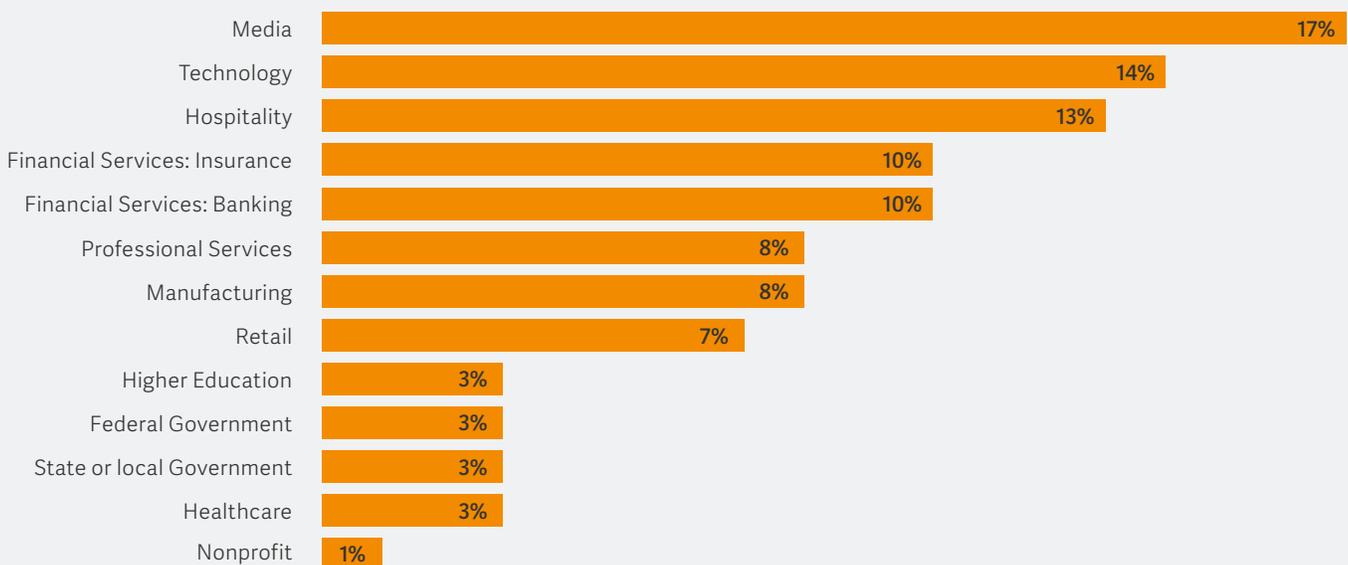


### IT respondents by seniority.



**Survey question:** Which of the following best describes your department? Which of the following best describes your job role? (IT respondents; n=640.) Respondents selected one response per question.

### IT respondents by industry.



**Survey question:** In which sector does your company primarily operate? (IT respondents; n=640.)

## AI Pioneers: AI adoption index methodology.

To track levels of AI adoption maturity and understand how organizations are benefiting from AI and ML, we analyzed the adoption scores\* and respondents fell into three strata:

- Top third with an average adoption score of 89
- Middle third with an average adoption score of 54
- Bottom third with an average adoption score of 12

The top third are AI Pioneers. Of this top stratum, IT leaders make up the biggest proportion of respondents (32%), followed by HR (26%), finance and procurement (24%), and CEOs (18%).

\*The adoption score reflects an organization's level of investment in AI and ML technologies, its progress using AI and ML to improve workforce capacity, and its level of AI and ML adoption maturity.

To arrive at the adoption score, three core questions were analyzed from the survey and assigned a weighting to each response option as follows:

- **Q2\_1:** Please use the scale to indicate the degree of progress made in your organization. Respondents were asked to select one response option on a scale from 1 (no progress made) to 5 (significant progress made).
- **Q4\_1:** Which of the following best describes your organization's current level of AI and ML adoption? Respondents were asked to select one response option on a scale from "yet to commence" to "mature."
- **Q5\_1:** What percentage of your organization's annual budget is currently invested in AI and ML? Respondents were asked to select one response option on a scale from "0%" to "more than 50%."

Based on the above responses, the average adoption score across the complete cohort of 2,355 respondents was 54. Among the top stratum of respondents (AI Pioneers), the average adoption score is 89. Among the bottom stratum of respondents, the average adoption score is 12.

This is standard for index methodology.

## Definitions of terms in our research.

**Artificial intelligence (AI):** The ability of machines to perform tasks that have traditionally required human intelligence, such as problem-solving, decision-making, and understanding language. AI systems analyze and learn from data, recognize patterns, and make predictions to support the automation of processes and more intelligent decision-making.

**Digital maturity:** The alignment of “an organization’s people, culture, structure, and tasks to compete effectively by taking advantage of opportunities enabled by technological infrastructure, both inside and outside of the organization.”

**Digital transformation:** Continuously deploying technology at scale with the goal of creating value. Usually a long-term effort to rewire how an organization changes and evolves.

**Generative AI:** Artificial intelligence that learns to identify patterns and structures from existing data in order to generate new and original content.

**Human in the loop:** AI or ML systems in which human and machine performance jointly contributes to improving the overall results and accelerates the learning process, achieving what neither human nor machine would be able to achieve alone. Other advantages include data quality assurance and training and testing algorithms.

**Machine learning (ML):** A subdiscipline of AI that uses data and mathematical methods to learn and make predictions based on outcomes on which the model has already been trained. It allows digital systems to automatically process data and analyze it for insights without being programmed explicitly.



1 Wallich Street, #08-02 Guoco Tower | Singapore 078881  
Workday | Singapore: +65 6800 0600 | [www.workday.com/en-sg](http://www.workday.com/en-sg)

---

© 2023. Workday, Inc. All rights reserved. Workday and the Workday logo are registered trademarks of Workday, Inc.  
All other brand and product names are trademarks or registered trademarks of their respective holders.  
20231110-cio-global-ai-indicator-report-ENSG