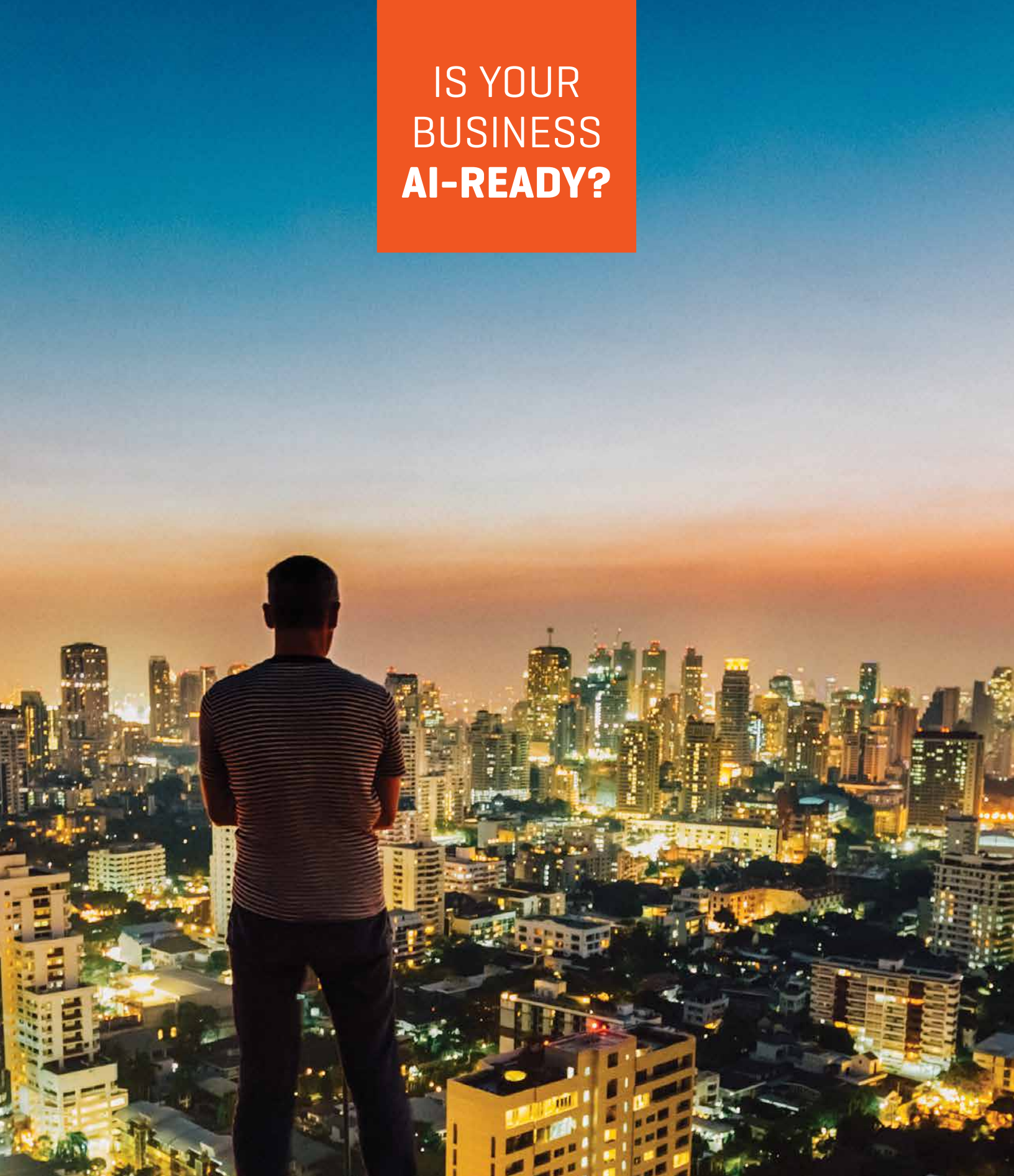


IS YOUR  
BUSINESS  
**AI-READY?**



### **ABOUT THE SURVEY**

In June 2017, Genpact and FORTUNE Knowledge Group conducted a survey of 300 senior executives [C-suite and one level below] from around the world, seeking insights into the strategies respondents and their companies use when adopting artificial intelligence (AI) technologies. Fifty-one percent of the respondents report annual revenues of US\$1 billion to \$5 billion; 28 percent between \$5 billion and \$10 billion; 17 percent between \$10 billion and \$25 billion; and 5 percent between \$25 billion and \$50 billion. One-third of the respondents are based in North America, and the remaining two-thirds are evenly split between Europe and the Asia-Pacific region. The study also differentiates between “AI leaders”—respondents who achieve strong positive business outcomes from AI, scoring 9 or 10 on a 10-point scale—and “AI laggards,” who score 1 to 6 on the same scale.

# PREPARING FOR THE AI JOURNEY

**For many of us, artificial intelligence is already part of** our daily lives as we turn to Siri for our weather updates and have chatbots politely handle our customer complaints.

But, what about AI in the workplace? As this report from Genpact and FORTUNE Knowledge Group underscores, businesses that are leading in AI adoption are already seeing exponential benefit today and expect that to significantly increase tomorrow. In fact, AI leaders expect that the modern workforce will be comfortable working alongside robots by 2020.

Collaboration between humans and machines can enhance capabilities, create new job opportunities, and open the door to deeper, more accurate insights and foresight. But before businesses can see the benefits of better customer experiences, productivity, and revenue growth, they must first prepare their organizations for change.

This study combines insights from 300 senior executives from around the world with first-hand stories from experts and practitioners. The findings highlight some striking disconnects. While almost all executives have plans for AI in the next three years, only a fraction are reskilling employees to deal with today's technology disruption and prepare for what is ahead. The study also reveals what AI leaders are doing to make AI work. With the right approach and foundations in place—resourcing, training, process orientation, and a culture of innovation—they keep their organizations relevant and ahead of the field.

Wherever you are in your company's AI journey, I hope the pages that follow will guide your next steps toward digital transformation. Because, whether you're ready or not, that transformation is happening now.

**N.V. 'Tiger' Tyagarajan**  
*President and CEO, Genpact*

# INTRODUCTION

## **PLAN FOR DISRUPTION—AND TRANSFORMATION.**

For the general public, the words “artificial intelligence,” or AI, often conjure up images of robots, the sorts of robots that might someday take their jobs. But at the enterprise level, AI means something different. It has enormous power and potential: it can disrupt, innovate, enhance, and in many cases totally transform a business.

AI is a broad term. It refers to a group of technologies that include machine and deep learning, predictive analytics, process automation, speech recognition, biometrics, and natural language processing. These technologies allow businesses to mine data, generate insights, create operational efficiencies, provide stronger experiences, and close the gap between information and action in ways that were never possible before. As such, AI has applications in virtually every industry. This hasn't escaped investor attention: Forrester Research predicts a 300% increase in AI investment in 2017 from last year, and IDC estimates that the AI market will surge from about \$8 billion in 2016 to more than \$47 billion in 2020.

There's solid proof that the investment can pay off—if you adopt the right approach. A Genpact and FORTUNE Knowledge Group survey of 300 senior executives reveals that organizations that deploy AI strategically enjoy advantages ranging from cost reductions and higher productivity to top-line benefits such as increasing revenue and profits, richer customer experiences, and working-capital optimization. The survey shows that the companies winning at AI are also more likely to enjoy broader business success. More important, they share certain characteristics that other businesses can learn from so that they in turn become the disruptors, not the disrupted.

**Although 82% of all respondents plan to implement AI-related technologies in the next three years, only 38% say they currently provide employees with reskilling options.**

One critical element differentiates AI success from AI failure: strategy. AI cannot be implemented piecemeal. It must be part of the organization's overall business plan, along with aligned resources, structures, and processes.

How a company prepares its corporate culture for this transformation is vital to its long-term success. That includes preparing people by having senior management that understands the benefits of AI; fostering the right skills, talent, and training; managing change; and creating an environment with processes that welcome innovation before, during, and after the transition.

Companies are clearly optimistic about the value AI will bring in the near future. Nearly all survey respondents plan to implement AI-related technologies in the next three years, and most are aware that it will transform the workforce. Almost half agree that employees will become comfortable working with robots—a number that shoots up significantly among companies realizing the highest levels of impact from AI.

But few businesses are ready to overcome the barriers to preparing their organizations for such a radical change. For example, only 38% say they currently provide employees with reskilling and training opportunities in the face of technology disruptions. Organizations need to address this disconnect.


With the right pieces in place to align the organization, workforces can not only survive automation but thrive alongside it. And that is the real story behind the headlines.

**“AI will impact the HR function more than any other company function. Redeployment is going to be a huge factor that the better companies will learn how to handle.”**

**— Gianni Giacomelli, senior vice president and business leader, Digital Solutions, Genpact**



# INVESTING IN AI CAN YIELD POSITIVE BUSINESS OUTCOMES



**While the full impact of AI won't be felt for some years,** the technology is already having a large positive influence on the businesses that invest in it heavily, says Genpact chief digital officer Sanjay Srivastava, because it “allows us to solve problems we have not yet been able to solve.”

All respondents to the survey are keenly aware that AI is likely to have a transformative impact. They are nearly unanimous that their firms plan to implement AI-related technologies in the next three years (82%). However, few organizations are ready to take full advantage of these technologies. AI leaders, who make up 25% of the total survey sample, generate the highest levels of positive business outcomes from their use of AI. By contrast, respondents realizing low levels of impact are AI laggards. Besides succeeding with digital technologies, companies identified as AI leaders are also more likely to be top performers in productivity (55% vs 9% of laggards), profitability (51% vs 21%), and the ability to adapt to evolving market conditions (55% vs 16%).

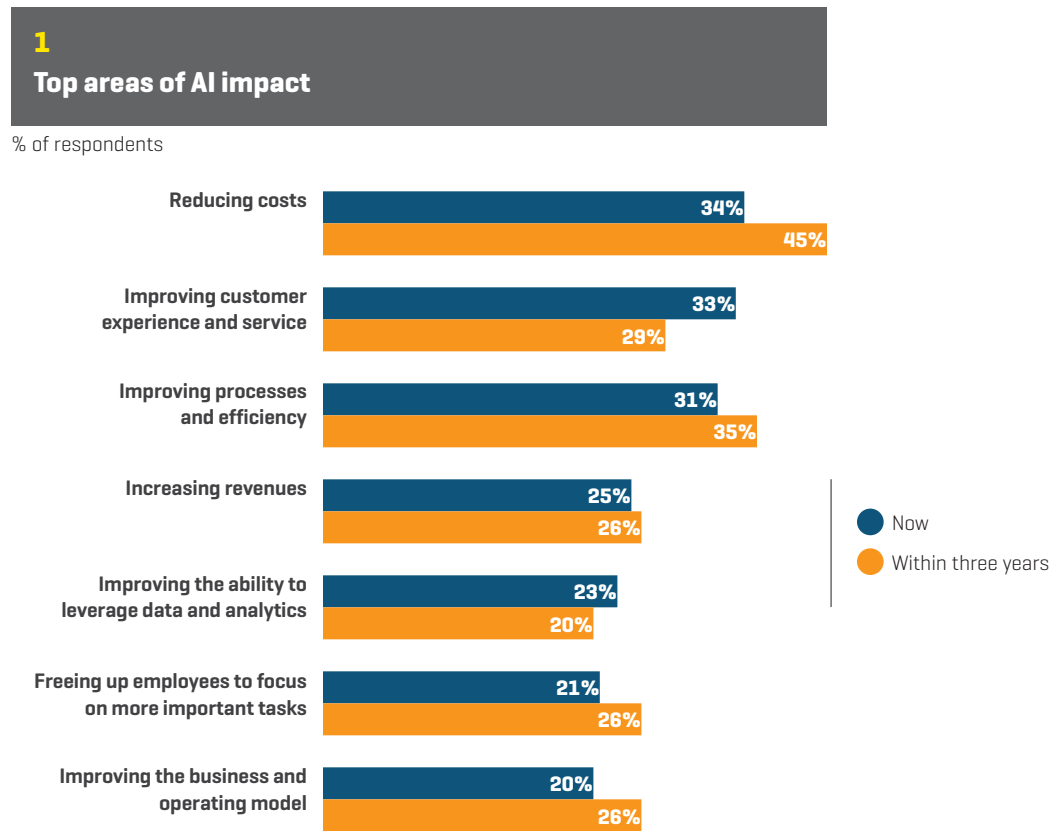
## **LEADERS USE AI FOR COMPETITIVE ADVANTAGE.**

The return on investment from AI is considerable. Overall, survey respondents cite cost reductions as the leading outcome, but that's no surprise. What might be more interesting is that improvements in the customer experience show almost the same result (Figure 1). But for AI leaders, top-line impact is more prevalent as they cite improved processes, increased revenues, and better customer experiences as their top three areas of impact.

Looking forward three years, 87% of all survey respondents say it is at least possible that AI will bring their firms better customer experiences, with 60% saying that scenario is at least somewhat likely to occur. Companies are, for example, recognizing the role of chatbots, an AI technology, as 44% expect their customers to be served by a chatbot rather than a call center agent within three years. Challenges

“Ultimately, the combination of humans plus computers is more powerful than humans alone, and certainly more powerful than computers alone.”

— Jody Kochansky, head of the Aladdin Product Group, BlackRock



may lie ahead, however, as 38% of respondents think that customers will prefer this innovation.

AI leaders are also consistently more likely to have a range of positive expectations from AI-related technologies, including reallocating human work to more complex activities, improving processes, and transforming products and services (Figure 2).

But before they can get there, companies need to understand what the future of AI means to their businesses and how to prepare their people and processes to be receptive to a markedly different operating environment.

# I, ROBOT

The interplay between machines and humans, and how automation will ultimately affect this relationship, are the main issues companies are grappling with. One outcome is certain: people will no longer work the same way.

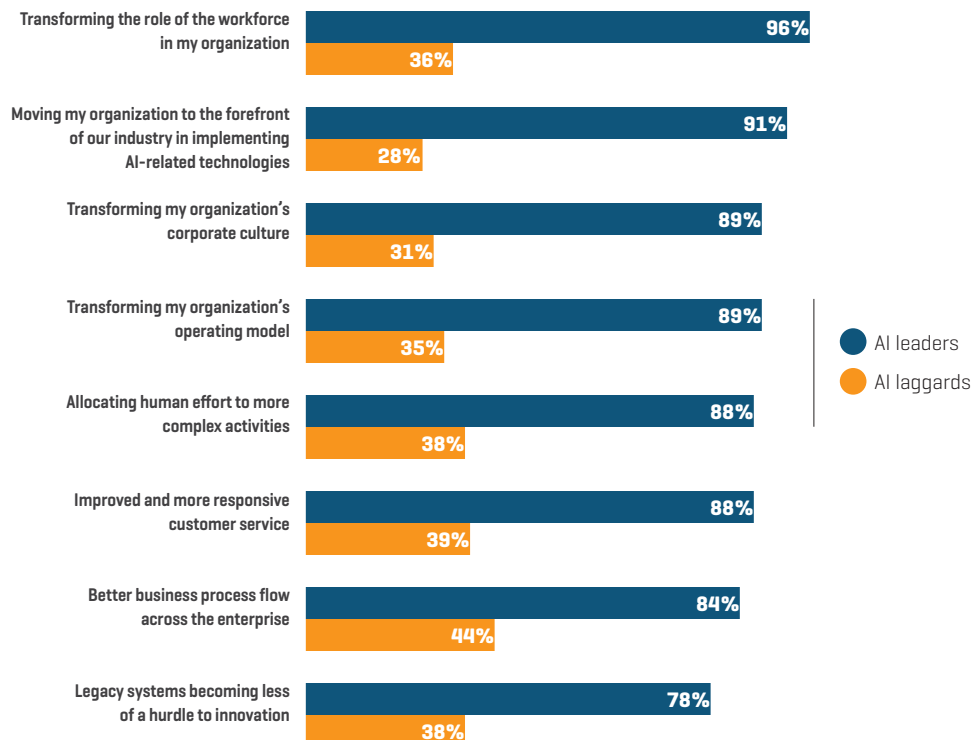
## WHILE LAGGARDS RESIST, LEADERS BELIEVE IN HUMAN/ROBOT COLLABORATION.

An overwhelming majority of AI leaders say it is very likely that AI will transform the role of their workforce. Almost half of all respondents agree that employees will be comfortable working with robots within three years. Notably, this number rises to 79% among AI leaders, while remaining very low among laggards (Figure 3).

### 2

#### Expectations from AI-related technologies

% of respondents who say these outcomes are very or somewhat likely in three years





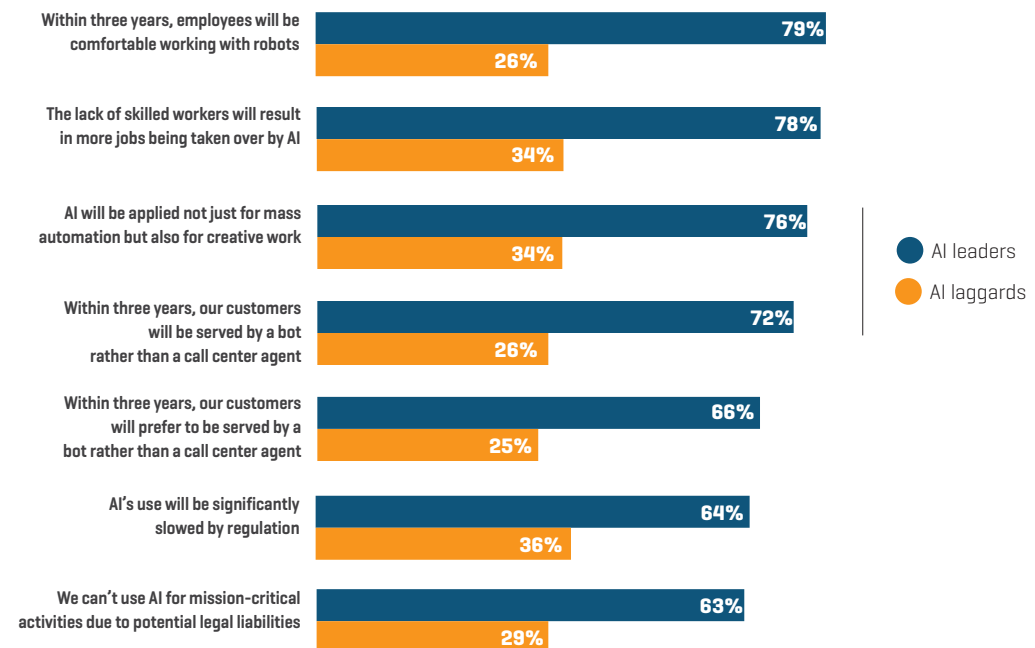
AI leaders have invested time, effort, and resources into embracing the future, and preparing their employees for a profound change in the way they work and the kind of jobs they do. Most respondents, however, do not show the same level of readiness and are potentially resisting or fearful of an AI-enabled future.

“I think that AI will impact the HR function more than any other company function,” says Gianni Giacomelli, senior vice president and business leader of Digital Solutions at Genpact. “HR and corporate management as a whole will need to figure out new jobs for people to do. Redeployment is going to be a huge factor that the better companies will learn how to handle.”

One of the biggest challenges to digital transformation is resistance to change. The survey found that upper management is the group most strongly opposed to AI implementation. C-suite executives may not have warmed up to it either. “There is such a lack of understanding about the benefits which the technology can bring that the C-suite or board members simply don’t want to invest in it, nor do they understand that failing to do so will adversely affect their bottom line and even cause them to go out of business,” says Kay Firth-Butterfield, executive director of AI-Global, an organization dedicated to the practical and

### 3 Future applications of AI

% of respondents who strongly agree/somewhat agree



responsible use of artificial intelligence. She adds that regulatory uncertainty about AI, rough experiences with previous technological innovation, and a defensive posture to better protect shareholders, not stakeholders, may be contributing factors.

## **LEADERS USE MACHINE LEARNING TO ELEVATE HUMAN LEARNING.**

The question of job losses is a sensitive one, most often played up in news headlines. But AI also creates numerous job opportunities in new and different areas, often enabling employees to learn higher-level skills. In healthcare for example, physicians are learning to work with AI-powered diagnostic tools to avoid mistakes and make better decisions. AI technologies in the renewable energy sector will open up a plethora of new jobs in installing and monitoring energy-efficient devices and retrofitting older buildings.

Given the potential of AI to complement human intelligence, it is vital for top-level executives to be educated about reskilling possibilities, Firth-Butterfield says. She notes that it is in the best interest of companies to “train workers who are being moved from jobs that are automated by AI to jobs in which their work is augmented by AI.”

AI is a natural progression of technology trends that have occurred over the past 40 years, says Jody Kochansky, head of the Aladdin Product Group at financial services firm BlackRock, which uses AI-enabled risk analytics in its operating system for investment managers to test thousands of potential scenarios every day.

“In many respects, with all the data that’s out there, you could argue we’re using machine learning to accelerate human learning,” Kochansky says. “It’s not so much that it takes away the role of the researcher, but that it makes the researcher’s job easier. Ultimately, the combination of humans plus computers is more powerful than humans alone, and certainly more powerful than computers alone.”

In the end, implementing AI successfully involves combining new technology and processes in a balanced manner, along with effective change management and reskilling to enable successful human/machine collaboration.

As with any transformation, the change is not easy. There are many barriers a company may have to contend with if it turns to an AI-based digital strategy. These include information security concerns; bridging company silos; integrating legacy systems; and a lack of skills to design, implement, and maintain AI solutions. A major issue is knowing where AI works best. This is the biggest challenge for AI laggards, but, in contrast, it lies toward the bottom of leaders’ list of barriers.

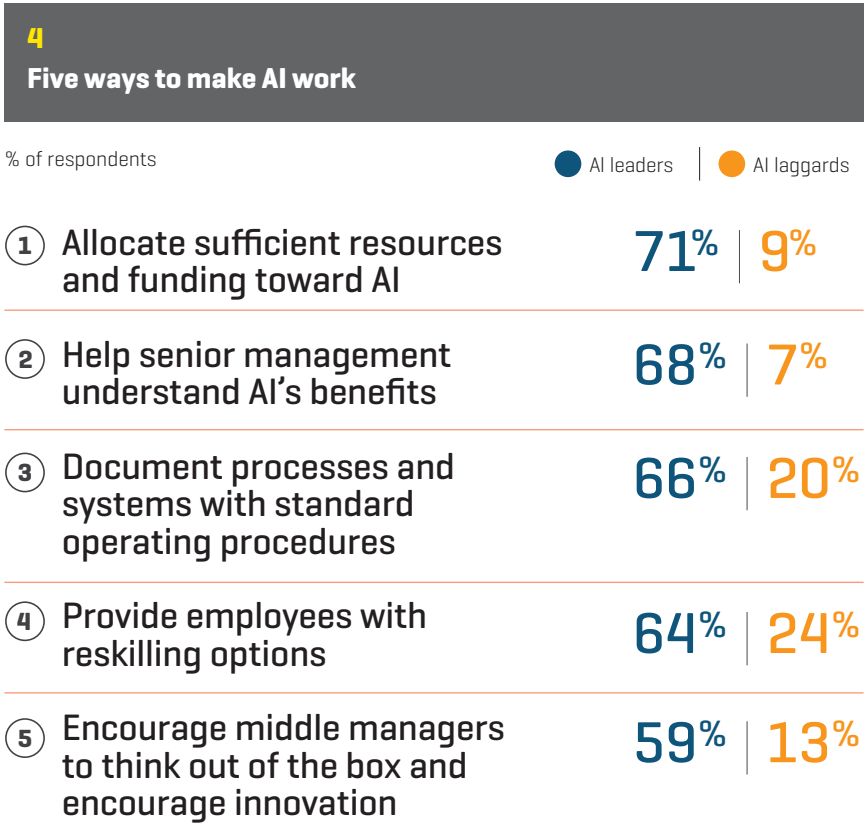


# MAKING AI WORK MEANS GETTING THE FOUNDATIONS RIGHT

Only a fraction of the survey respondents have cracked AI: just one quarter of organizations say they are getting significant impact from it. But these leading businesses have taken clear, practical steps to get the results they want. Here are five of their key strategies (Figure 4):

- Dedicate sufficient resources and funding to AI
- Gain senior management support
- Focus on process, not function
- Reskill your teams and foster a learning culture
- Encourage innovation

As with any project that creates significant organizational change, having the fundamentals in place is essential: budget and resources, and support from the top. For example, 71% of AI leaders—but only 9% of



laggards—strongly agree that their firm allocates sufficient resources or funding toward AI technologies. More specifically, over one-quarter of leaders invest at least \$50 million in AI development annually (compared to 8% of laggards), and the majority of AI leaders (58%) invest at least \$10 million (compared to 24% of laggards).

Pursuing AI without senior management support is difficult. Here the numbers again speak for themselves. The majority of leading AI companies (68%) strongly agree that their senior management understands the benefits AI offers. By contrast, only 7% of laggard firms agree with this view. Curiously, though, the leading group still cites the lack of senior management vision as one of the top two barriers to the adoption of AI.

### **THE HUMAN FACTOR: KNOW HOW TO EMBRACE CHANGE.**

There is an element of psychology that plays a large part in AI implementation, says Genpact's Giacomelli, and that means paying attention to the human factor by fostering “a culture of innovation and openness to change, with a primary emphasis on training and development.”

This is where organizations' expectations from AI do not always match their ability to generate impact. Although 82% of all respondents plan to implement AI-related technologies in the next three years, and 57% believe it is likely to transform the workforce, only 38% say they currently provide employees with reskilling options. To achieve success from AI, organizations must address this mismatch.

AI leaders are more likely to provide employees with reskilling options (64% vs 24% of laggards) and say that their employees understand how automation will impact their jobs (62% vs 13%). This group also understands the importance of change management (Figure 5) to generating positive business outcomes and agrees that their employees are willing to embrace change.

It's critical to understand, however, what training and reskilling mean in practical terms. “The organizations that invest in training have to be continually monitoring where the market is, what the competition is doing, what the new skills and technologies are, and implementing training programs with that in mind,” says Mark Fox, professor of industrial engineering at the University of Toronto and one of the pioneers of AI development. “It's really more of a ‘monitor and adapt’ situation as opposed to a wholesale prediction of what's going to happen 10 or 20 years down the road.”

As some job areas may become less relevant, others are becoming more relevant and useful. Workers who have top-tier analytical skill sets will become more valuable than ever, says Jace Kim, who is responsible for global digital strategy for Samsung Electronics' e-commerce business. For any business, having highly skilled analytical personnel offers "a huge edge in an AI-dominant environment," Kim says. "Anybody can store data, but few can analyze it properly and insightfully."

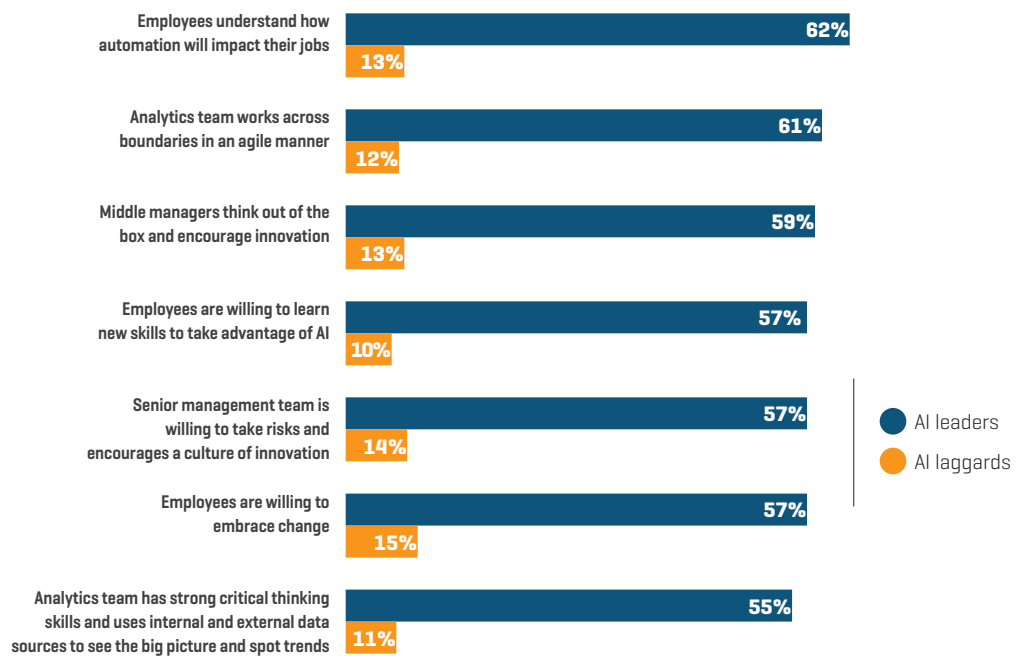
## THE PROCESS OF SUPPORTING INNOVATION

Besides developing capabilities among employees, an organization's culture and processes must also support new approaches and technologies.

"Innovation waves take a lot longer because of the human element," says Giacomelli. "You can't just put posters on the walls and say, 'Hey, we have become an AI-enabled company, so let's change the culture.' The way it works is to identify and drive visible examples of adoption.

### 5 How AI leaders enable change

% of respondents who strongly agree

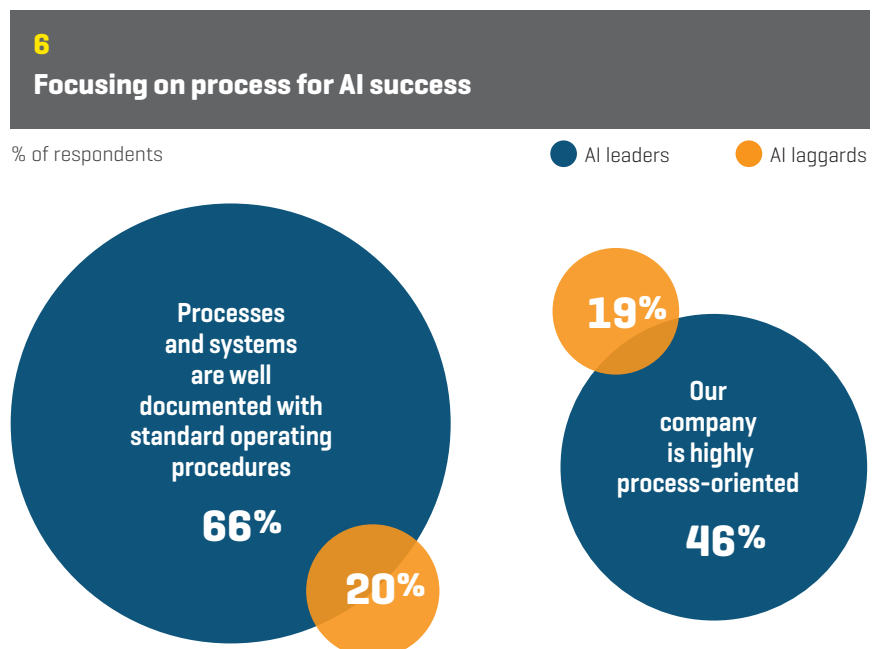


“There are many business processes attached to the usage of artificial intelligence. The best way to change the culture is to work on the processes and the people who handle the processes to make them understand how this would complement their work and the reskilling they need. You then make them the poster children for the effort.”

In fact, AI requires a rigorous focus on process and related skills: in the survey, respondents who say AI has a high impact on their business also report that they are more focused on process than function, and are more likely to have processes and systems that are well documented with standard operating procedures (Figure 6).

“If you think about this as just a technology challenge, you’re missing out on the best opportunities,” says George Westerman, a principal research scientist with the MIT Sloan Initiative on the Digital Economy. “What you want to do is rethink how you can do business in this digital age. Then AI becomes a tool to get you there. So don’t be the hammer looking for nails. Look for the completed project and find the right hammers for it.”

It’s important to not view AI as “a magic box that just spits out answers,” Westerman cautions. “It’s critical to have an understanding of why the machine did what it did, even if you can’t trace the whole reasoning path. You’re going to get more value out of a model when you understand how it works because then you can apply the next step. You can do a better job of improving it or using it to augment humans.”





“It’s critical to have an understanding of why the machine did what it did, even if you can’t trace the whole reasoning path.”

— *George Westerman, principal research scientist, MIT*

As Genpact’s Srivastava says, “The challenge of AI isn’t just the automation of processes—it’s about the up-front process design and governance you put in to manage the automated enterprise.”

Respondents are aware of this need, with 63% saying that the ability to trace the reasoning path AI technologies use to make decisions is important. This visibility is crucial in financial services, where auditors and regulators require firms to understand the source of a machine’s decision.

# TRANSFORMING THE ENTERPRISE

**The theme of “robots versus humans” is a staple of science fiction, and how humans will cope when the cyborgs arrive has always been a concern of socially transformative technology. The key factor to keep in mind, however, is the potential of human and artificial intelligence to create combined systems and ways of collaboration that are smarter than either one alone. This is already apparent in many consumer applications, but at the enterprise level, AI is much more than a cool app: it can make companies more efficient and productive, transform customer experiences, create new and different jobs in new and different industries, and allow human workers to use and benefit from sophisticated tools that improve both business and society.**

It’s also important to remember that AI is part of a much bigger process of re-engineering enterprises. That is the major difference between the sci-fi robots of yesteryear and today’s AI: the technologies of the latter are completely integrated into the fabric of business, allowing private- and public-sector organizations to transform themselves and society in profound ways. You don’t have to turn to sci-fi. The story of human/machine collaboration is already playing at an enterprise near you. ●

About

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