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A report by the Deloitte AI Institute and the Deloitte Center for Technology, Media & Telecommunications

Thriving in the era of pervasive AI

Deloitte's State of AI in the Enterprise, 3rd Edition

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Executive summary

For the third straight year, Deloitte surveyed executives about their companies' sentiments and practices regarding AI technologies. We were particularly interested in understanding what it will take to stay ahead of the pack as AI adoption grows—and we wanted to learn how adopters are managing risk around the technologies as AI governance, trust, and ethics become more of a boardroom issue.

BY TAKING THE global pulse of AI, we uncovered the following key insights:

- **Adopters continue to have confidence in AI technologies' ability to drive value and advantage**. We see increasing levels of AI technology implementation and financial investment. Adopters say they are realizing competitive advantage and expect AI-powered transformation to happen for both their organization and industry.

- **Early-mover advantage may fade soon.** As adoption becomes ubiquitous, AI-powered organizations may have to work harder to maintain an edge over their industry peers. An indicator of a leveling of the playing field: Most adopters expect that AI will soon be integrated into more and more widely available applications.

- **Virtually all adopters are using AI to improve efficiency; mature adopters are also harnessing the technologies to boost differentiation**. Using AI for automation and optimization can provide significant benefits, but organizations should work to move beyond these objectives by leveraging AI to create new products and ways of working.

- **AI adopters tend to buy more than they build, and they see having the best AI technology as key to competitive advantage**. As options for platforms, solutions, and vendors proliferate and improve, becoming more astute consumers of AI technologies will likely become increasingly important for companies. Being able to integrate and scale those technologies, no matter where they come from, should also be critical.

- **Adopters recognize AI's risks, but a "preparedness gap" spans strategic, operational, and ethical risks**. As usage has grown, so has awareness of the various risks of AI—from unintended bias to determining accountability. What appears to have not grown enough is the adoption of specific actions to help mitigate those risks, even by the most skilled adopters.

By expanding conceptions about what AI can do, becoming better at selecting and evaluating new companies and technologies, and tackling AI risks head-on, current and future AI adopters can position themselves not just to survive but to thrive in the emerging era of pervasive AI.

Introduction

WE ARE ENTERING a new chapter in the adoption of the current generation of AI technologies: Capabilities are advancing, it is becoming easier to develop and implement AI applications, and companies are seeing tangible benefits from adoption. Governments have developed national strategies for AI and are making substantial investments in research and education. They are also crafting ways to better govern the use of AI technologies to protect and benefit society.

We have seen AI deployed across a wide spectrum of use cases to solve business problems—from managing and automating IT infrastructure, to gleaning new insights about customers, to identifying and responding to cyber threats, to helping guide medical decisions, to improving the hiring process. AI is increasingly being integrated into the fabric of business.

It is true that not everyone has adopted AI technologies yet—there are still barriers, and many are working to scale the benefits. However, it appears that AI's "early adopter" phase is ending; the market is now moving into the "early majority" chapter of this maturing set of technologies. In fact, IDC forecasts that spending on AI technologies will grow to US$97.9 billion in 2023—more than two and a half times the spending level of 2019.[1]

Key questions: *When AI becomes ubiquitous, what will it take to stand out in the market? How can AI adopters maintain their edge?*

This is the third edition of Deloitte's *State of AI in the Enterprise* survey. In this edition, we surveyed 2,737 IT and line-of-business executives from around the world (see sidebar, "Methodology").

The survey's goal has always been to understand the evolution of AI adoption across industries and countries. In prior editions, we detailed the bullish attitude of AI adopters and their increasing investments and deployments. We concluded that companies should balance their excitement with a strong ability to execute. We suggested that companies improve their risk- and change-management approach, apply AI outside of the IT function, and find the right blend of technical and business talent to accelerate their efforts.

METHODOLOGY

To obtain a global view of how organizations are adopting, benefiting from, and managing AI technologies, Deloitte surveyed 2,737 IT and line-of-business executives between October and December 2019. Nine countries were represented: Australia (108 respondents), Canada (300 respondents), China (300 respondents), France (203 respondents), Germany (201 respondents), Japan (203 respondents), the Netherlands (100 respondents), the United Kingdom (218 respondents), and the United States (1,104 respondents).

All participating companies have adopted AI technologies. Respondents were required to meet one of the following criteria: determine AI technology spending and/or approve AI investments; develop AI technology strategies; manage or oversee AI technology implementation; serve as an AI technology subject-matter expert; or make or influence decisions around AI technology.

Forty-seven percent are IT executives, with the rest line-of-business executives. Seventy percent are C-level executives: CEOs, presidents, and owners (35 percent); CIOs and CTOs (32 percent); and other C-level executives (3 percent). To complement the blind survey, Deloitte conducted in-depth telephone interviews with AI experts from various industries.

The leading edge of AI adoption

Who are the 'Seasoned' AI adopters?

To learn what's happening at the leading edge of AI, we grouped organizations into three segments, based on the number of AI production deployments undertaken and how respondents rated their enterprise's expertise across various measures (figure 1):

- **Seasoned** (26 percent) are setting the pace in terms of AI adoption maturity. They have undertaken a large number of AI production deployments and have developed a high level of AI expertise across the board—in selecting AI technologies and suppliers, identifying use cases, building and managing AI solutions, integrating AI into their IT environment and business processes, and hiring and managing AI technical staff.

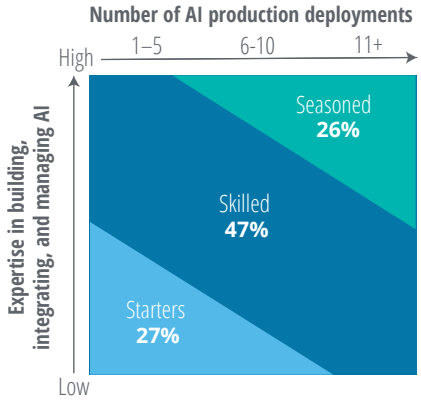
- **Skilled** (47 percent) have generally launched multiple AI production systems but are not yet as AI-mature as the Seasoned organizations. They lag on their number of AI implementations, their level of AI expertise, or both.

- **Starters** (27 percent) are just dipping their toes into AI adoption and have not yet developed solid proficiency in building, integrating, and managing AI solutions.

FIGURE 1

Adopters have various levels of maturity

"Seasoned" adopters have built multiple AI systems and shown a high level of maturity selecting appropriate technologies, identifying use cases, building and integrating AI solutions, and staffing



Source: Deloitte, *State of AI in the Enterprise, 3rd Edition*, 2020.

Competitive advantage may be harder to maintain

Our survey's AI adopters show confidence in their approach to AI and how they can benefit—through technology implementation, financial investment, competitive advantage, and expected transformative impact.

They believe, as in years past, that AI is key to market leadership—today and in the future. Ninety percent of our Seasoned adopters believe that AI is "very" or "critically" important to their business *today* (compared with 73 percent of all survey respondents). All adopters are embracing key AI technologies such as machine learning, deep learning, computer vision, and natural language processing at a high rate, with nearly universal

adoption of these technologies expected in the next year (see sidebar, "The AI technology portfolio").

Adopters are investing significantly, with 53 percent spending more than US$20 million over the past year on AI-related technology and talent. Seventy-one percent of adopters expect to increase their investment in the next fiscal year, by an average of 26 percent.[2] Seasoned AI adopters are investing even more, with 68 percent having spent more than US$20 million over the past year. Seasoned adopters also typically achieve payback on their investments in a shorter amount of time, with 81 percent reporting their payback period is less than two years.

It's clear that adopters are dedicating large amounts of energy and financial resources to their AI implementations. But what about results? Looking at competitiveness as a measure, 26 percent of all respondents said that AI technologies enable them to establish a *significant* lead over their competitors. For Seasoned adopters, this rises to 45 percent.

The majority of adopters believe that AI will substantially transform both their own organization and industry within the next three years (figure 2). It also appears that the window may be closing on early-mover advantage. In the survey's last edition, 57 percent said that AI would transform their organization in the next three years, and 38 percent said their industry would transform in the same time frame.[3] This 19-point gap suggests that adopters saw a small window of competitive advantage. In our latest survey, that window has closed further: The numbers grew to 75 percent expecting organizational transformation within three years (up 18 points) and 61 percent anticipating industry transformation in the same time frame (up 23 points), with the gap between industry and organizational transformation shrinking to 14 points.

THE AI TECHNOLOGY PORTFOLIO

Machine learning. With machine learning technologies, computers can be taught to analyze data, identify hidden patterns, make classifications, and predict future outcomes. Our survey shows 67 percent of respondents are using machine learning today, and 97 percent are using or planning to use it in the next year.

Deep learning. Deep learning is a subset of machine learning based upon a conceptual model of the human brain called "neural networks." It's called *deep* learning because the neural networks have multiple layers that interconnect. Among our respondents, 54 percent said they use deep learning and 95 percent are using or planning to use it in the next year.

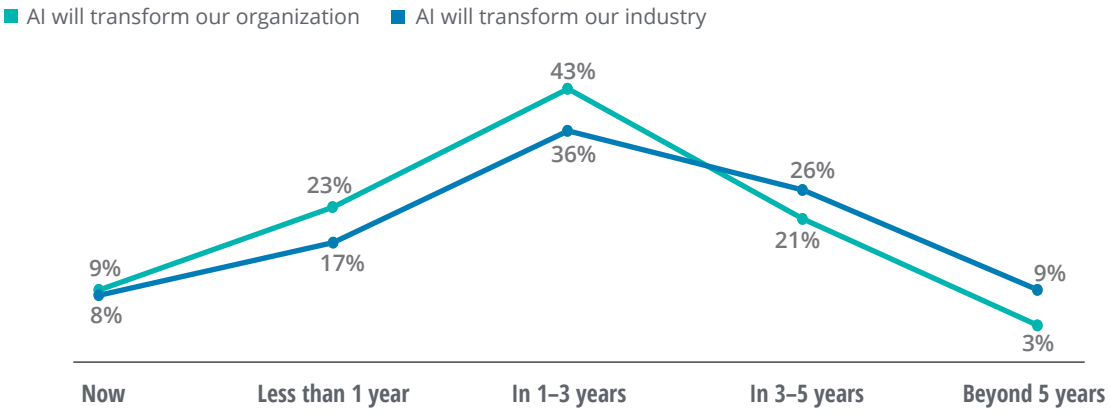
Natural language processing. NLP is the ability to extract or generate meaning and intent from text in a readable, stylistically natural, and grammatically correct form. Fifty-eight percent of global respondents have adopted NLP, and 94 percent are using or planning to use it in the next year.

Computer vision. Computer vision is the ability to extract meaning and intent from visual elements, whether characters (in the case of document digitization) or the categorization of content in images, such as faces, objects, scenes, and activities. Among our respondents, 56 percent said they use computer vision; 94 percent are using or planning to use it in the next year.

Although adopters are still bullish on AI, their advantage may wane as barriers to adoption fall and usage grows. One potential reason for this narrowing is that organizations are finding it easier and easier to employ AI technologies. Data science and machine learning platforms have proliferated; AI-optimized hardware is providing greater compute power. It is now easier to train algorithms

FIGURE 2

Both organizations and industries are poised for transformation in the near future



Note: Percentages may not total 100 percent due to a small number of respondents who answered "Don't know."
Source: Deloitte, *State of AI in the Enterprise, 3rd Edition*, 2020.

through self-service data preparation tools, synthetic data, "small data," and pretrained models. An indicator of this: 74 percent of adopters agree that AI will be integrated into all enterprise applications within three years. It is increasingly clear that we are on the path toward an era of pervasive AI, and that both adopters and nonadopters should seek to develop new capabilities to ensure that they can prosper in this era.

"One of the things that I'm most excited about is the proliferation of AI platforms so that everybody starts off not at ground zero but in a place where another researcher has ended. That is going to be one of the fundamental reasons why we will have rapid progress over the next few years."

— ***Manohar Paluri, AI researcher***

Thriving in an era of pervasive AI

Over the past few years, more and more companies have been experimenting with AI, advancing their data-related capabilities, acquiring new technologies and talent, and integrating AI into their business processes. In coming years, AI will likely become even more pervasive. Just as we no longer talk about isolated mobile strategies (they're just part of doing business), AI will soon become standard and routine—maybe even faster than we expect.

As a result, companies that already have an AI-powered edge should continue differentiating themselves. Companies that haven't yet adopted AI technologies should begin to accelerate efforts across their products, processes, and talent.

As late entrants begin to catch up with industry leaders, AI adopters should consider focusing on three actions to maintain their edge (see figure 3):

- **Pursue creative approaches**: unlocking value beyond efficiency and *becoming more creative* with their AI applications, balancing evolution and transformation
- **Become a smarter consumer**: with more AI vendors, platforms, and technologies available, *becoming better at evaluating buying options*
- **Actively address risks**: not allowing the perceived risks of AI to derail efforts by *becoming more conscientious about how AI gets used, and by building trust* with customers and partners

"Many pharma executives are thinking about AI in terms of cost savings and efficiency. When you're running a massive organization that has hundreds of active clinical trials costing millions of dollars, there are low-hanging fruit that are not necessarily scientifically complex where AI can save the organization hundreds of millions of dollars."

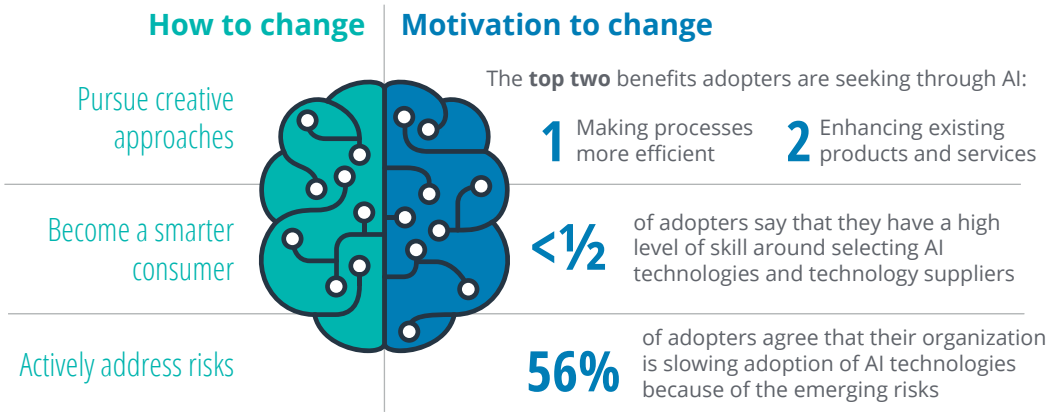
— ***Ron Alfa, senior VP of translational discovery, Recursion Pharmaceuticals***

Pursue creative approaches

In an era of pervasive AI, with capabilities readily available to anyone, businesses should look to push the boundaries of what they can do with AI. In the current wave of adoption, we found that many seem focused more on improving what they have than on creating something new. This is unsurprising, as AI adoption offers many efficiency-related benefits—including automating processes to enable people to focus on higher-value tasks, improving supply chains, using predictive maintenance to reduce downtime, optimizing advertising buying and placement, and speeding hiring.

FIGURE 3

What is needed to compete and win in a future where AI is ubiquitous?



Source: Deloitte, *State of AI in the Enterprise, 3rd Edition*, 2020.

When asked to identify the top two benefits they were seeking from AI technologies, our respondents' top choices were *making processes more efficient* and *enhancing existing products and services* (figure 4). Surveyed executives indicated that their companies are achieving these two outcomes to a higher degree than other AI objectives.

As in this survey's previous editions, we found that companies are still using AI technologies mostly in IT- and cybersecurity-related functions. Forty-seven percent of respondents indicated that IT was one of the top two functions for which AI was primarily used. This could mean that companies are using AI for IT-related applications such as analyzing IT infrastructure for anomalies, automating repetitive maintenance tasks, or guiding the work of technical support teams.[4] Or it could mean that IT departments are leading AI implementations across the business.

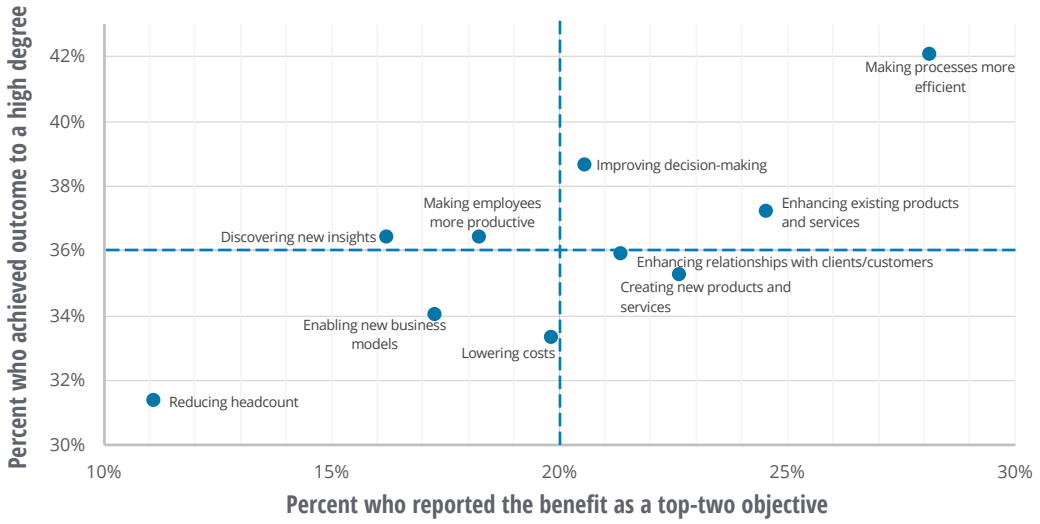
As top functions for AI applications, IT was followed by cybersecurity, production and manufacturing, and engineering and product development. Business functions such as marketing, human resources, legal, and procurement ranked at the bottom of the list. Across all functional areas, roughly two-thirds of implementations are used for automation or optimization versus enhancing the capabilities of individuals (see sidebar, "Goals for using AI").

While automation and optimization are certainly worthy of pursuit, it will take more for organizations to differentiate themselves as AI becomes commonplace. Once businesses gain experience through more evolutionary improvements, leaders shouldn't shy away from more transformational endeavors. They should look to create new AI-powered products and services, and leverage AI to discover new insights and enable new business models.

There are signals that AI implementations may be beginning to expand beyond efficiency. One indicator of this: Respondents rated *creating new products and services* as the third-highest overall

FIGURE 4

Process efficiency tops the list of benefits achieved with AI



Note: Blue dotted lines represent the average of each dimension.
Source: Deloitte, *State of AI in the Enterprise, 3rd Edition*, 2020.

GOALS FOR USING AI

Automate a process or function that would normally be done by a human—for example, automating back-end operations, managing cloud and IT networks, or detecting patterns in video.

Optimize the efficiency of a process or function—for example, preventing fraud, identifying defective products, finding errors in software code, or personalizing advertising placement.

Enhance the ability of individuals to accomplish tasks or enable them to do something they typically could not—for example, forecasting demand, improving compliance, augmenting threat detection by security analysts, diagnosing a patient, identifying a problem with a mechanical system, or drawing out new customer insights.

AI objective. The Seasoned adopters are even more focused on this than the other maturity segments (figure 5). Starters rank cost reduction higher.

Seasoned adopters' approach could be a natural evolution based on more experience, or it could be because they have an inherent strategic mindset around AI. No matter the reason, it appears that a greater understanding of AI drives an expanded view of the possible.

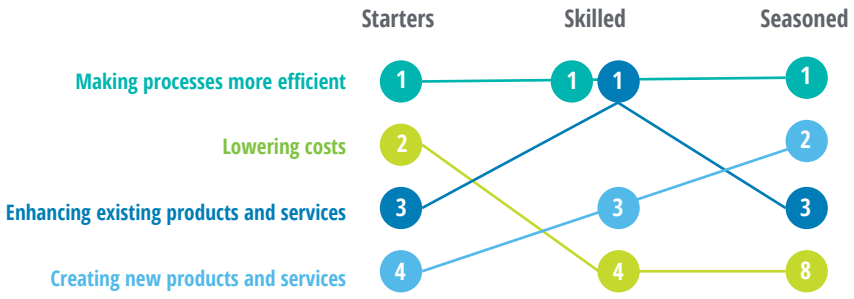
Novel uses for AI are growing—everything from creating the rules for new sports to composing music to finding missing children.[5] Here are two real-world examples of companies pushing boundaries and taking AI applications to the next level:

- Recursion Pharmaceuticals is using AI as a microscope to quickly and inexpensively ascertain the difference between large data sets of healthy and diseased cells in order to discover new compounds for drugs.[6]
- Florida Power & Light is deploying AI across its operations to ensure a more reliable and efficient electric grid. The goal is to better manage the utility's increasingly complex networks and incorporate more renewable energy sources.[7]

FIGURE 5

Seasoned adopters emphasize creation of new products and services

Rank of top desired outcomes of AI efforts (from list of 10 outcomes)



Source: Deloitte, *State of AI in the Enterprise, 3rd Edition*, 2020.

"Once you get used to automating business processes with technologies such as RPA, AI, and machine learning, you're not going to go back. It changes the way you do business. As much as doing things faster and better, it allows you to do things that were not possible before. If you can take a three-week-long mortgage application process and reduce that task to five minutes, how can you go back? You have changed the business model. Suddenly, it has become a differentiator for you."

— ***Prince Kohli, CTO, Automation Anywhere***

Become a smarter consumer

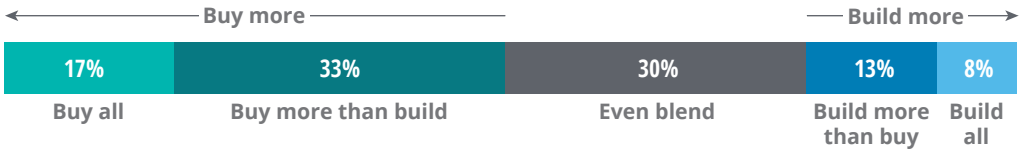
Thousands of companies currently provide general and industry-/function-specific AI solutions. This complex vendor landscape exists alongside major cloud providers that also offer a variety of AI-related technologies on their platforms. This volume will not likely wane soon—in the United States, AI companies received a record amount of venture capital funding in 2019, reaching nearly US$18.5 billion.[8] Globally, the trend is the same: From 2014 to late 2019, VCs made 15,700 investments in AI startups.[9] In this dynamic marketplace, companies need to choose the right AI technologies.

Highlighting this need, we found that our surveyed AI adopters tend to buy their capabilities rather than build them. About 50 percent are buying more than they build, and another 30 percent use an even blend of buying and building from scratch (figure 6). Seasoned (53 percent) and Skilled (51 percent) adopters are more likely than Starters (44 percent) to buy the AI systems they need. This suggests that many organizations may go through a period of internal learning and experimentation before they know what's necessary and then seek it from the market.

AI adopters view "being a smart consumer" as critical to boosting competitive advantage. When asked to select the top initiative for increasing their competitive advantage from AI, adopters picked "modernizing our data infrastructure for AI" as their top choice, closely followed by "gaining access to the newest and best AI technologies" (figure 7).

FIGURE 6

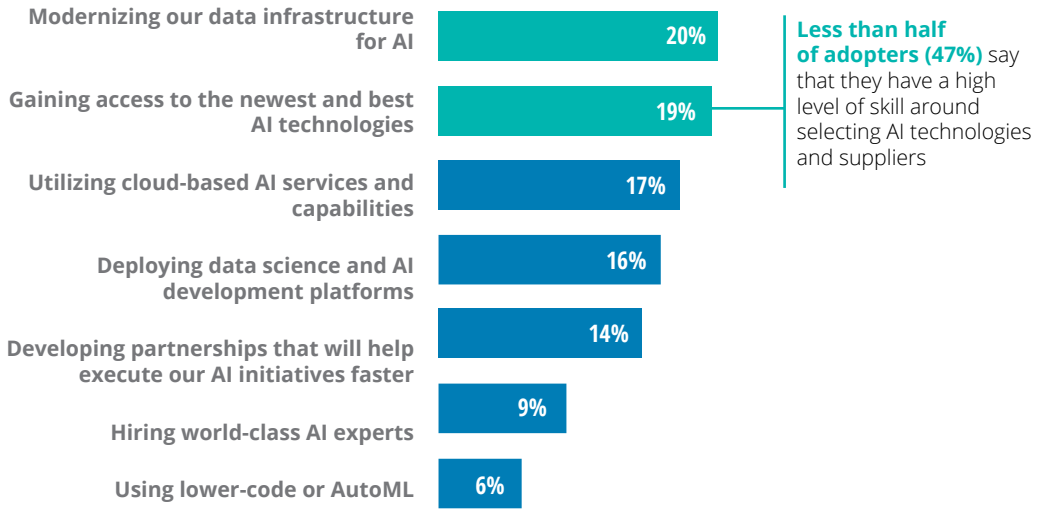
Build or buy?



Source: Deloitte, *State of AI in the Enterprise, 3rd Edition*, 2020.

FIGURE 7

Top AI initiative to increase competitive advantage



Source: Deloitte, *State of AI in the Enterprise, 3rd Edition*, 2020.

The perceived importance of possessing a robust data infrastructure is unsurprising, as it is foundational to every AI-related initiative. Having the newest and best technologies to take advantage of that robust infrastructure can be equally important. However, less than half of adopters (47 percent) claim to possess a high level of skill for selecting AI technologies and technology suppliers.

Adopters suffer a lack of maturity in another area: Less than half (45 percent) say that they have a high level of skill around integrating AI technology into their existing IT environment. This could include data science and machine learning platforms, enterprise applications powered by AI, tools for developing conversation interfaces, and low-code/no-code tools. Across all these different technology areas, 93 percent are using cloud-based AI capabilities, while 78 percent employ open-source AI capabilities. For example, online marketplace Etsy has shifted its AI experimentation to a cloud provider to dramatically increase its computing power and number of experiments.[10] Learning how to manage and integrate these disparate tools and techniques is fundamental for success.

"To the customer, it is not AI that matters—it's the fact that magically, the business process got done. People don't buy AI. What they buy is the solution to a real problem that they have. If it happens to use AI, then it happens to use AI, but that doesn't matter to them in the end as long as the task is completed on time and with accuracy."

— ***Prince Kohli, CTO, Automation Anywhere***

To become smarter consumers, companies should be able to survey the landscape, find the most advanced AI technologies, and integrate those technologies into their infrastructure. They also should be able to effectively leverage cloud and open-source. Although there are nuances, AI deployment strategy shouldn't differ from that for implementing other IT technologies—it is a means to an end.

Here is a suggested vendor-selection checklist for becoming a smarter AI consumer:

- Make sure the problem you're trying to solve requires AI—don't just blindly use the technologies because of overeagerness. If you do need to use AI technologies, make sure the vendor you select honestly represents its capabilities.
- Try to pick a vendor that will be around in the future (there are a lot of startups in the market).
- Because many companies are looking to apply AI in more innovative areas of their businesses, find a vendor that is flexible.
- Provide vendors with clearly articulated needs and a business case. In prior reports, we have noted that the most mature AI adopters seek nontechnical as well as technical talent.[11] That talent is necessary to help the organization and vendor communicate.
- Look to build trust through transparency—from training to testing the AI-powered solution.
- Finally, ensure that the vendor can provide adequate support for your users and developers.

One practice that may help: taking a centralized approach to AI technology and vendor selection. Seasoned adopters tend to do this more often (40 percent) than less-experienced Starters (28 percent).

Actively address risks

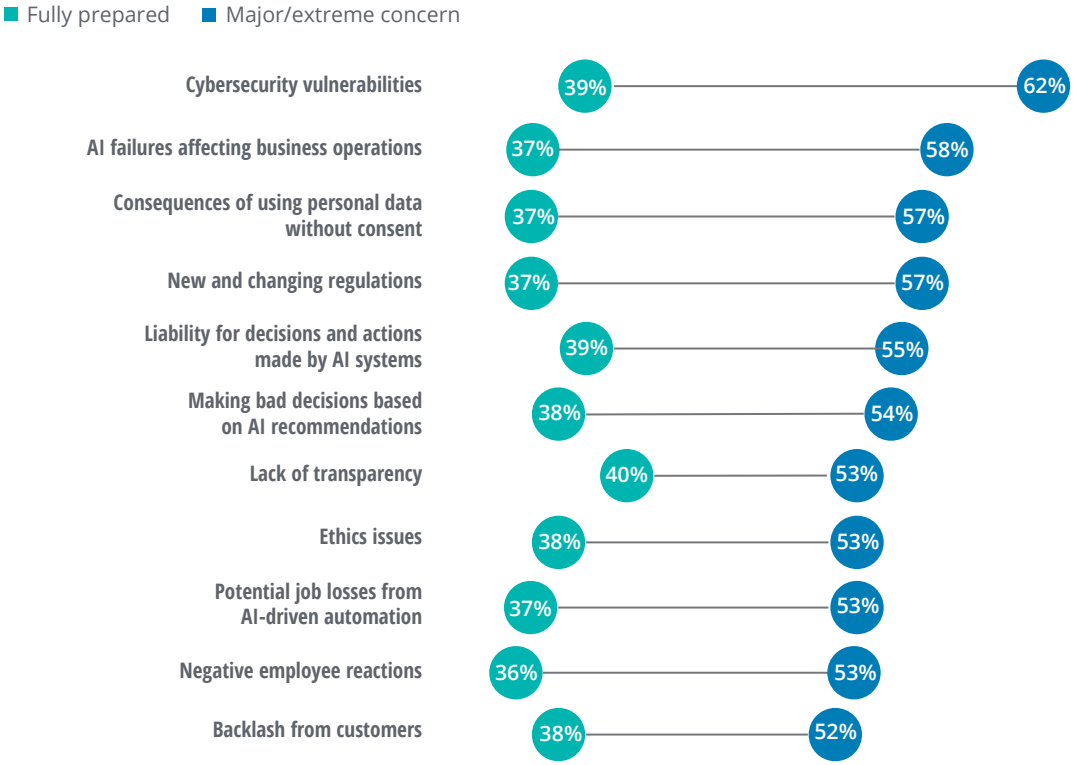
Despite strong enthusiasm for their AI efforts, adopters face reservations as well. In fact, they rank managing AI-related risks as the top challenge for their AI initiatives, tied with persistent difficulties of data management and integrating AI into their company's processes. Additionally, a troubling preparedness gap exists for adopters across a wide range of these potential strategic, operational, and ethical risks. More than half of adopters report "major" or "extreme" concerns about these potential risks for their AI initiatives (figure 8), while only four in 10 adopters rate their organization as "fully prepared" to address them.[12]

While cybersecurity is adopters' most worrisome AI risk, AI failures, misuse of personal data, and regulatory uncertainty are also top areas of concern. With many adopters feeling underprepared, these risks may impede their AI efforts. In fact, 56 percent agree that their organization is slowing adoption of AI technologies because of the emerging risks, and the same proportion believe that negative public perceptions will slow or stop adoption of some AI technologies.

Delving into regulatory uncertainty, 57 percent of adopters have "major" or "extreme" worries about how new and changing regulations could impact their AI initiatives. Adopters are anticipating the effects of factors such as the European Union's "A European strategy for data," Canada's "Directive on automated decision-making," and proposed legislation concerning facial recognition.[13] It is not that they disagree with regulatory efforts—62 percent think that AI technologies should be heavily regulated by the government (with some countries' respondents believing it more strongly than others). Instead, many fear that ineffective or regressive regulations will hamper research, innovation, and competitive advantage (62 percent agree that new government regulations will hamper companies' ability to innovate in the future).

FIGURE 8

Adopters face gaps between their concern and preparedness for AI risks



Source: Deloitte, *State of AI in the Enterprise, 3rd Edition,* 2020.

Even the most experienced adopters have room to improve their management of AI-related risks (figure 9). All adopters would do well to undertake a spectrum of risk-management practices to address their fears, build confidence, and manage uncertainty:

- **Knowing where AI exists is a prerequisite to managing its risks**. One key step for mitigating risk is to keep a formal inventory of all of the organization's AI models, algorithms, and systems. It can be difficult for companies to track all uses of AI—one bank "made an inventory of all their models that use advanced or AI-powered algorithms and found a staggering total of 20,000."[14]
- **Aligning organizational efforts**. AI does not exist in a vacuum. Adopters can increase their preparedness by instituting strategies that ensure AI risks are understood and addressed throughout an organization. Forty-three percent of Seasoned adopters say that they're aligning their AI risk management with their organization's broader efforts. While just over a quarter of Seasoned adopters have put a single executive in charge of AI risks, a far greater number (43 percent) are training practitioners at the front lines of AI development to identify and resolve ethical issues.
- **Establishing procedures for auditing and testing AI systems**. Whether conducted internally or by an independent vendor, these

FIGURE 9

Activities to manage the risks of AI implementations

		Starters	Skilled	Seasoned
Improved knowledge	Keeping a formal inventory of all AI implementations	32%	35%	35%
Better alignment	Aligning AI risk management with broader risk management efforts	32%	37%	43%
	Having a single executive in charge of AI-related risks	22%	27%	28%
Auditing and testing	Conducting internal audit and testing	39%	38%	43%
	Using outside vendors to conduct independent audit and testing	32%	37%	36%
Addressing ethics	Training practitioners how to recognize and resolve ethical issues around AI	36%	39%	43%
	Collaborating with external parties on leading practices around AI ethics	31%	35%	43%
	Ensuring that our AI vendors provide unbiased systems	29%	32%	39%
	Establishing policies or a group/board to guide AI ethics	35%	34%	37%

Source: Deloitte, *State of AI in the Enterprise, 3rd Edition*, 2020.

"Our customers care very much about transparency and explainability. Often, it's not that they care how the model works—it's just that they want to be able to correct it. We found that implementing very clear feedback mechanisms is a way to do that."

— ***Kevin Walsh, AI product group lead, HubSpot***

procedures are essential to ensure alignment with societal, government, and corporate values.[15] They are critical not only for homegrown AI-powered systems but for commercial systems. Is the AI solution free of bias? Can AI-powered decisions be adequately explained to the humans who will take actions based on them? Are there adequate measures in place to safeguard personal data?

- **Attending to the ethical risks of AI.** Safety concerns are paramount, chosen by a quarter of respondents as the single biggest ethical risk. Other concerns include lack of explainability and transparency in

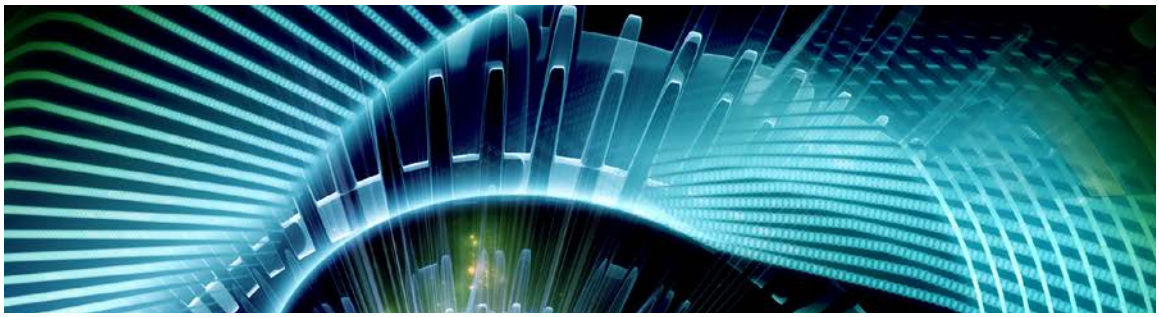
AI-derived decisions, the elimination of jobs due to AI-driven automation, and using AI to manipulate people's thinking and behavior. Despite these worries, only about a third of adopters are actively addressing the risks—36 percent are establishing policies or a board to guide AI ethics, and the same portion say they're collaborating with external parties on leading practices.[16] Given the high level of concern, more adopters should consider creating their own ethics policies or adopting those that are broadly supported.[17]

Although there is still a long way to go, a growing number of organizations are tackling AI-related risks head-on:

- As a founding donor for The Council on the Responsible Use of Artificial Intelligence at Harvard's Kennedy School, Bank of America has embraced the approach of collaborating on AI ethics.[18] It has also created a new role—enterprise data governance executive—to lead AI governance for the firm and collaborate with the chief risk officer on AI governance.

- The German engineering firm Robert Bosch GmbH, which plans to embed AI across its products by 2025, is training 20,000 executives and software engineers on the use of AI, including a recently developed AI code of ethics.[19]

- Workday, a provider of cloud-based enterprise software for financial management and human capital management, is employing a broad spectrum of practices. It has committed to a set of principles to ensure that its AI-derived recommendations are impartial and that it is practicing good data stewardship.[20] Workday is also embedding "ethics-by-design controls" into its product development process.[21]



Conclusion

How to keep your edge

AI SOLUTIONS ARE proliferating, from custom solutions to enterprise applications to devices with embedded AI. There is concern that emerging risks and regulations may slow down overall adoption and innovation efforts. Additionally, adopters don't want to lose their advantage as their industry peers catch up. In order to keep an edge, there are three things that both current and future adopters can do.

Pursue creative approaches

Improving efficiency and automation is a laudable goal, but businesses will likely soon need to go beyond and use AI technologies to differentiate themselves. Take inspiration from inventive use cases to develop solutions that are both useful *and* novel.

- **Push boundaries**. Expand your view of what may be possible to accomplish with AI technologies. Try to pursue a more diverse portfolio of projects that could potentially enhance multiple business functions across the enterprise.
- **Create the new**. Look to develop new AI-powered products and services that take

FIGURE 10

How to keep your edge

Source: Deloitte, *State of AI in the Enterprise, 3rd Edition,* 2020.

advantage of the technologies' ability to learn and solve problems that humans can't.

- **Expand the circle**. Move AI beyond the IT department by involving more of the business in AI efforts. Look for new vendors, partnerships, data sources, tools, and techniques to advance your efforts.

Become a smarter consumer

As more AI-powered capabilities become available from partners and vendors, organizations should become more savvy and scrutinize vendors best equipped to provide access to the latest and greatest technologies.

- **Leverage a diverse team**. Include both technical and business experts in selecting AI technologies and suppliers. Having a broad perspective from developers, integrators, end users, and business owners can help ensure organizational alignment and a focus on business outcomes.

- **Take a centralized approach**. A portfolio approach can sometimes lead to duplication of effort, competing methods, and multiple vendors. Coordinate experiments, implementations, selection of AI technologies, and vendors across your business; consider using working groups, dedicated leaders, or communities of practice.

- **Focus on integrating and scaling**. Ensure that your vendors and partners can help you integrate AI solutions into your broader IT infrastructure—whether on-premises or cloud-based, proprietary or open-source. Verify that their solutions can grow with your needs.

Actively address risks

With experience comes better awareness of AI's risks. Over the past few years, needed conversations concerning bias, transparency, and safety have become more common. Developing a set of principles and processes to actively manage the range of AI risks can help build trust within your business and with customers and partners.

- **Align risk-related efforts**. Many of the risks associated with AI are not unique. Because of this, it is important to integrate AI-related risk management with broader risk efforts. This should include appropriate training and coordination of efforts through an AI specialist.

- **Challenge your vendors**. While it is important to build trust and transparency with providers of your AI-powered systems, it can be equally essential to ensure that what they provide is aligned with your organization's ethical principles.

- **Monitor regulatory efforts**. There are increasing numbers of frameworks, government policies, and legislative action around the world regarding AI technologies. Make sure that legal, risk, compliance, and IT leaders stay informed, and encourage them to try their best to future-proof systems.

Endnotes

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Acknowledgments

The authors would like to thank **Sayantani Mazumder** and **Shreyas Waikar** for their invaluable data analysis efforts and support in creating this report. We also thank **Jeanette Watson** and **Karthik Ramachandran** for their thoughtful suggestions and counsel.

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