

With the right foundation, AI can transform enterprises.

# Building the AI-enabled enterprise of the future



Artificial intelligence is fundamentally reshaping how the world operates. With its potential to automate repetitive tasks, analyze vast datasets, and augment human capabilities, the use of AI technologies is already driving changes across industries.

In health care and pharmaceuticals, machine learning and AI-powered tools are advancing disease diagnosis, **reducing drug discovery timelines** by as much as 50%, and heralding a new era of personalized medicine. In supply chain and logistics, AI models can help prevent or mitigate disruptions, allowing businesses to make informed decisions and enhance resilience amid geopolitical uncertainty. Across sectors, AI in research and development cycles may **reduce time-to-market by 50%** and lower costs in industries like automotive and aerospace by as much as 30%.

“This is one of those inflection points where I don’t think anybody really has a full view of the significance of the change this is going to have on not just companies but society as a whole,” says Patrick Milligan, chief information security officer at Ford, which is making AI an important part of its transformation efforts and expanding its use across company operations.

Given its game-changing potential – and the breakneck speed with which it is evolving – it is perhaps not surprising that companies are feeling the pressure to deploy AI as soon as possible: **98% say they feel an increased sense of urgency** in the last year. And 85% believe they have less than 18 months to deploy an AI strategy or they will see negative business effects.

Companies that take a “wait and see” approach will fall behind, says Jeetu Patel, president and chief product officer at Cisco. “If you wait for too long, you risk

## Key takeaways

- 1 **AI is already bringing transformative benefits across industries.** By streamlining processes, enhancing efficiencies, and augmenting the workforce, AI promises a whole new world of work. Organizations that invest now stand to reap the greatest rewards in the future.
- 2 **As workloads grow, secure, scalable, and modernized IT infrastructure is critical for the AI era.** Companies need to evaluate their compute, power, and data needs, prioritizing system resilience and security.
- 3 **Building a strong company culture and developing talent will drive successful AI adoption.** AI has the potential to boost the workforce many times over. Alleviating fears of job elimination and rewarding AI initiatives will bring employees on board and drive innovation.

becoming irrelevant,” he says. “I don’t worry about AI taking my job, but I definitely worry about another person that uses AI better than me or another company that uses AI better taking my job or making my company irrelevant.”

But despite the urgency, **just 13% of companies globally** say they are ready to leverage AI to its full potential. IT infrastructure is an increasing challenge as workloads grow ever larger. **Two-thirds** (68%) of organizations say their infrastructure is moderately ready at best to adopt and scale AI technologies. Essential capabilities include adequate compute power to process complex AI models, optimized network performance across the organization and in data centers, and enhanced cybersecurity capabilities to detect and prevent sophisticated attacks. This must be combined with observability, which ensures the reliable and optimized performance of infrastructure, models, and the overall AI system by providing continuous monitoring and analysis of their behavior. Good quality, well-managed enterprise-wide data is also essential – after all, AI is only as good as the data it draws on. All of this must be supported by AI-focused company culture and talent development.

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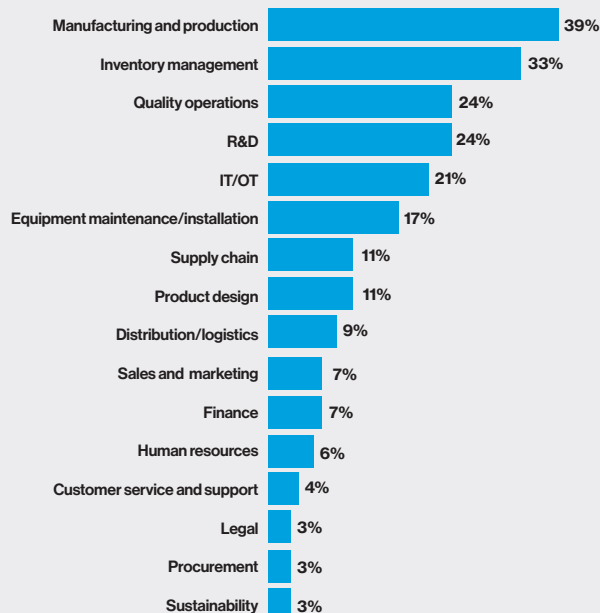
Jeetu Patel, President and Chief Product Officer, Cisco

### The AI-enabled company

As Ford looks to innovate faster, streamline processes, and boost profits, the company has turned to AI-powered tools to support its designers, speed up the vehicle design and engineering processes, and support manufacturing operations. Applications include **using AI models to run simulations and stress tests** on vehicles – processes that would usually be extremely time-consuming for engineers. Where one run of a computational fluid dynamic test – which simulates and analyzes airflow around a vehicle – would usually take 15 hours, an AI prediction can take just 10 seconds.

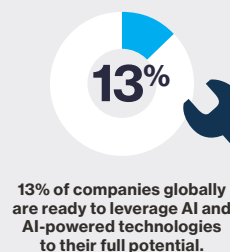
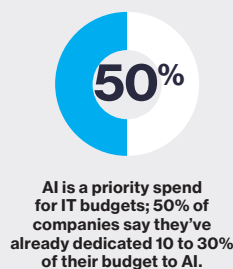
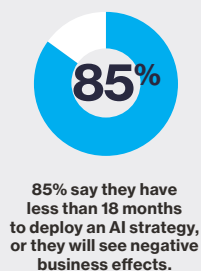
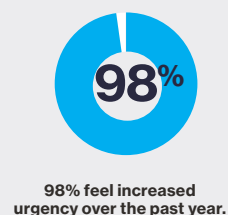
Across the manufacturing sector, AI can be used to make plants more safe, efficient, and adaptable. Deploying AI has already reduced costs and improved operational efficiency for **72% of manufacturers**, according to the National Association of Manufacturers. At Ford, on the manufacturing line, **AI-augmented vision systems inspect part kits** – components for a specific aspect of vehicle assembly – prior to installation. Using this system on one assembly line of squish tubes, the rubber seals in electric oil pumps that cool hybrid vehicle motors, has reduced the number of defects from a high of 63 per month, down to zero.

### Manufacturers are prioritizing the use of AI in production, inventory management, and quality operations



Source: Compiled by MIT Technology Review Insights based on data from the National Association of Manufacturers, 2025

### Companies around the world are feeling the pressure to adopt AI



Source: Compiled by MIT Technology Review Insights, based on data from Cisco, 2025



“We want to leverage AI across Ford’s operations to enable the most efficient and effective business we possibly can, whether that be day-to-day operations, subscription services, vehicle capabilities, or customer support,” says Milligan.

## Transforming work with agentic AI

Agentic AI is heralding a new era of productivity – and a step-change for the world of work as we know it. AI agents – or digital workers – could double the capacity of knowledge professionals and those in roles like sales and field support, **PwC predicts**. “Almost every workflow that you see within a business – whether for finance, HR, sales, marketing, product, coding, or customer support – will be completely reimagined because AI agents will augment the human capacity that already exists,” says Patel.

From handling routine customer inquiries to producing first versions of software code, transforming design ideas into prototypes, and even detecting and responding to cybersecurity threats in near real-time, agentic AI has the potential to transform speed to market, enhance operations, and automate rote or repetitive tasks. These sorts of repeatable knowledge chains occur in businesses everywhere and can truly benefit from the deployment of AI agents, says Liz Centoni, executive vice president and chief customer experience officer at

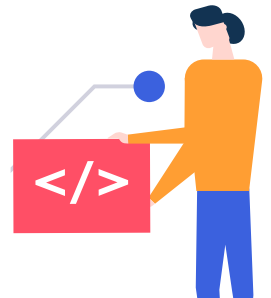
Cisco. “We’re looking at where we have a lot of people in repeatable workflows and we have a lot of data – where the process is very human-decision intensive – those things lend themselves to agentic AI,” she says. “It’s not about replacing roles. It’s about where we can give agency, with some human oversight and governance, to improve tasks within a workflow.”

More than 80% of organizations plan to integrate AI agents into their operations within the next one to three years, according to **research by Capgemini**. Customer experience (CX) is one area where agentic AI is expected to have a notable impact. **Two thirds (64%) of organizations** believe that AI agents will significantly improve customer service, leading to improved satisfaction. Good CX drives competitive advantage, with **customers 3.8 times more likely** to purchase again following a successful experience.

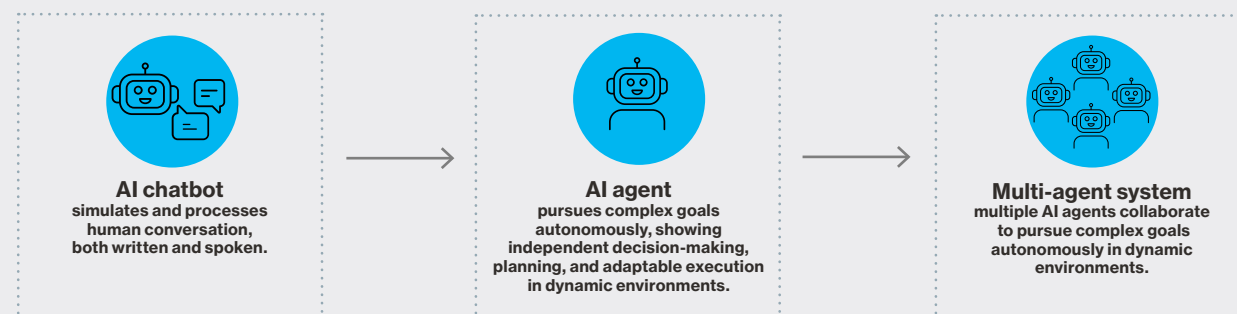
“We have support agents, but customers expect the support to be very tailored, not just a great knowledge base, and they want it to be customized to their environment,” says Centoni, outlining how Cisco has created a personalized agent, which can intelligently anticipate problems and provide solutions that customers may not even know they needed. “I believe that an agentic-led CX will significantly change the nature of how we engage with our customers and how they

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Liz Centoni, EVP and Chief CX Officer, Cisco



## The transition from AI chatbots to agents to multi-agent systems



Source: Compiled by MIT Technology Review Insights based on data from [Capgemini](#), 2025

engage with their end customers as well, across every touchpoint that we have.”

## Getting the foundations right

Regardless of where organizations are on their journey, to reap the full rewards of AI’s vast potential now and into the future, they must first get the foundations right.

**Strategy:** Creating a well-thought-out, clearly defined AI strategy is the first step to ensure **AI readiness**. This will define all other aspects of preparation and allow companies to measure return on investment in alignment with overall business strategy. Building an AI strategy is an iterative process that may evolve in line with an organization’s changing priorities and the emergence of new AI technologies.

Companies should create a detailed plan to adopt AI, with agility, security, and resilience at its core.

**Infrastructure:** Organizations should evaluate their network and assess if it is ready to process AI workloads securely and effectively. Considerations include network capabilities, compute, energy, data, and security.

Scalable infrastructure provided by third parties can help companies meet their needs now and adapt as they evolve in the future. Technologies like cloud can also drive efficiencies and accelerate AI deployment. But there is now also a reaccelerating of investment in the private data center for organizations of all types, prompted by the need for data sovereignty, economics, and overall criticality to the business.

## AI and security

### How AI is transforming cybersecurity

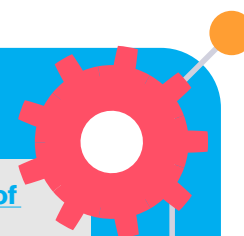
AI is having a profound impact on cybersecurity at all levels. In the hands of bad actors, AI-powered tools are increasing the volume and complexity of cyberattacks, making them more aggressive, numerous, and targeted. But organizations are also able to use AI as a powerful tool for defense. Algorithms can enhance threat detection, for instance, by analyzing vast amounts of data and identifying patterns and anomalies. Agentic AI tools can then automate responses to detected threats, isolating infected systems or blocking malicious traffic — all in near real-time.

### Securing AI systems: Fundamentals and best practices

To ensure attackers cannot take control of AI systems and agents, while also guaranteeing that their outputs are safe and appropriate, security measures must be integrated at all levels, on both the models themselves and the underlying infrastructure. Given the ever-increasing complexity of organizations’ networks and systems, which may include many cloud platforms, locations, or third-party providers, security becomes further complicated by extended software supply chains. But without these measures, proper deployment will not be possible. “Safety and security are fundamental, because they’re one of the big fears impeding adoption for AI technologies today,” says Jeetu Patel, president and chief product officer at Cisco. “So if you don’t trust something, you’re not going to use it. It’s that simple.”

#### Cisco has identified a **series of fundamentals** for ensuring AI solutions are safe and reliable

- Take time to understand AI security and safety taxonomy
- Identify vulnerabilities in AI models, software, and hardware code
- Secure vector databases
- Use an established set of security best practices as a foundation for AI training environments
- Establish AI security as an ongoing practice; identify the unique needs of each phase of the system’s lifecycle
- Use reference architectures to reduce exposure to security risks in large language models
- Select secure embedding models for content creation



**Data:** Good quality, company-wide data is imperative. To get the most value out of their data, companies must use advanced data integration and management tools to break down silos. AI tools can also help to query unstructured data and synthesize new outputs.

**Governance:** Organizations must ensure responsible AI use by strengthening data governance in line with local and global regulations, promoting ethical AI practices at all levels of the company, and reviewing and updating policies on a regular basis. Companies that get this right at the outset will accelerate the deployment and expansion of AI in their organization.

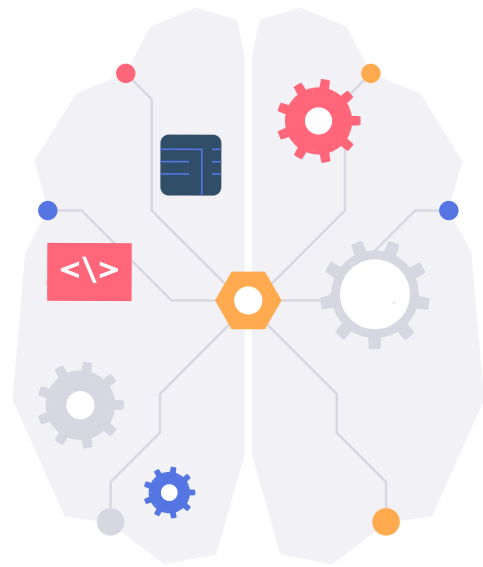
**Culture and talent:** The skills for tomorrow's workforce must be developed today. Training and career development are critical for cultivating an AI-proficient workforce, for allaying fears about job displacement, and for building a company-wide culture that embraces AI. This must be paired with efforts to incentivize adoption, encourage collaboration, and reward successful initiatives.

A successful culture shift may include changing the way the workforce thinks or operates too. At Cisco, the mental shift to AI remains challenging, says Centoni. "We're good in terms of computer science and deconstructing a problem and looking to solve," she says. "But a lot of us think in terms of a mental model that has a start and finish, and with AI, it's iterative – there's no such thing as, 'Oh, we've perfected it.' And that's a shift in the way we think about business processes and tasks."

### A roadmap for success

To get up to speed in good time, organizations cannot sit on the sidelines, says Patel. Instead, they must simultaneously build out their infrastructure and immerse themselves in specific projects. The pilot stage allows organizations to ensure training data is securely curated, models are vetted and tested, and outputs are monitored.

As with any seismic technology shift, it is important not to focus too much on the short-term impact of AI – or underestimate its impact in the long term. The gains could be so great that companies may even see a ten-fold increase in productivity, says Patel. "Our 8 billion global population will feel like it has the throughput capacity of 80 billion," he says. "We will live in a world of abundance, and the constraining factors right now are compute power, availability of bandwidth, and then the level of trust that people have with these systems."



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Patrick Milligan, Chief Information Security Officer, Ford

### AI agents promise more streamlined automation, greater productivity, and better CX

AI agents will help us drive higher levels of automation in our workflows

71%

AI agents will significantly improve customer service, leading to improved satisfaction

64%

AI agents would help me focus on more value-added activities

64%

The potential of AI agents to improve productivity outweighs its risks

57%

Source: Compiled by MIT Technology Review Insights based on data from Capgemini, 2025

“Building the AI-enabled enterprise of the future” is an executive briefing paper by MIT Technology Review Insights. Virginia Wilson was the editor of this report, and Nicola Crepaldi was the publisher. MIT Technology Review Insights has independently collected and reported on all findings contained in this paper.

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