



by
Philip Morris
International

WSJ INTELLIGENCE

The Cognition Index Research Report



This content was created by WSJ Intelligence, a unit of The Wall Street Journal Advertising Department.



Human cognition has always driven innovation, creativity and business performance. But as artificial intelligence redefines the way we work, that core driver faces an unprecedented shift. How do we ensure human capabilities that underpin progress continue to evolve alongside AI?

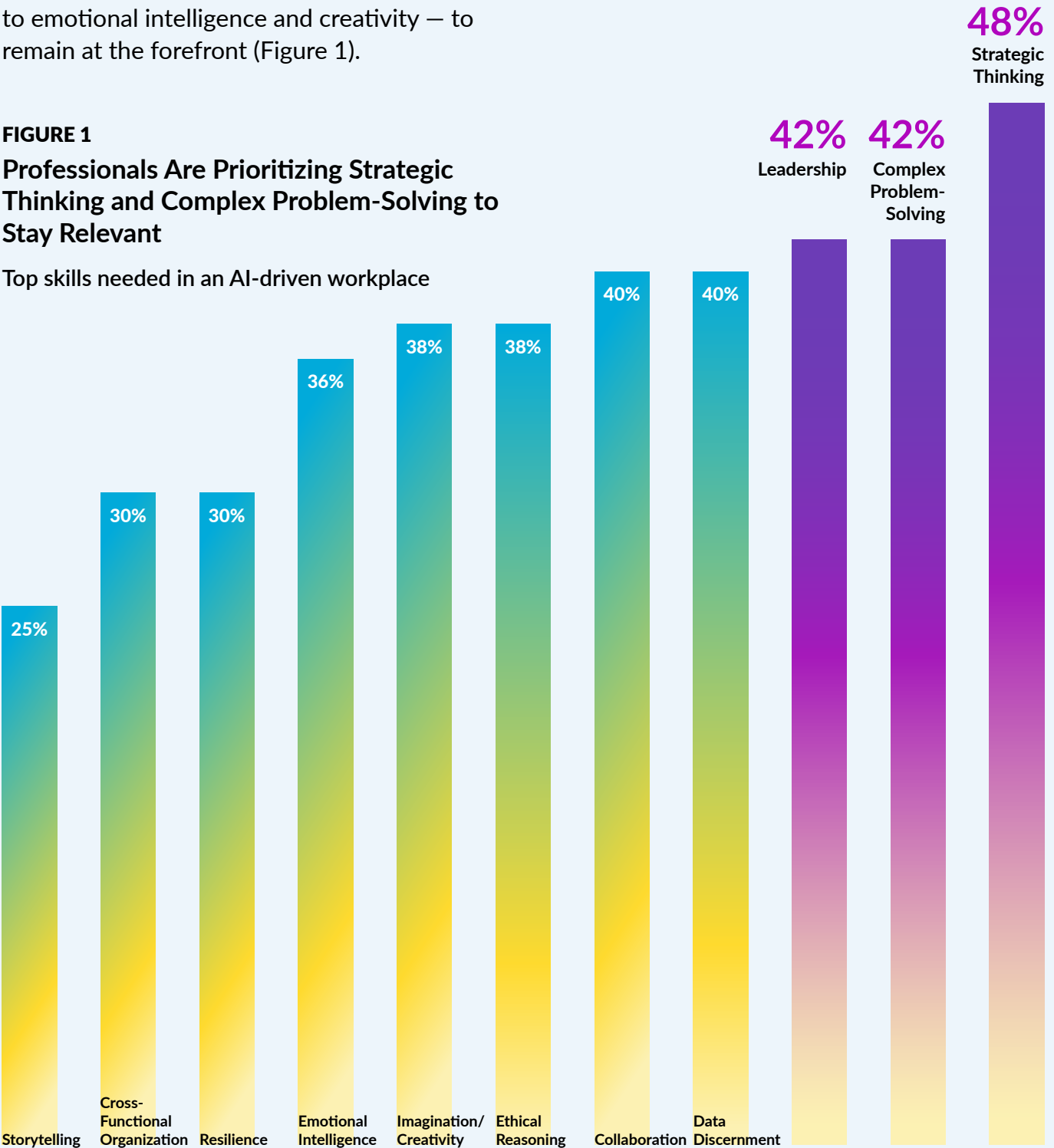
The questions to consider at this pivotal moment are universally complex, no matter where you sit in an organization. How do we maintain independent thinking and creativity in the face of easily automated output? What support systems must be implemented to ensure essential human skills stay agile? And as AI handles an increasing share of tasks, how can we ensure our organizations stay accountable to people and grounded in human values?

To help understand the new era of human cognition in the workplace, Philip Morris International (PMI) partnered with WSJ Intelligence to survey more than 2,500 business professionals across five countries: the U.S., U.K., Italy, South Africa and Brazil. Respondents came from a wide range of industries, including technology, financial services, manufacturing and media, and represented all organizational levels, ensuring everyone from the CEO to an entry-level associate had a voice.

The primary takeaway? Human capabilities remain vital to organizational success. Even as AI integrates into everyday workflows, individuals want distinctly human skills — from critical thinking and ethical judgment to emotional intelligence and creativity — to remain at the forefront (Figure 1).

FIGURE 1
Professionals Are Prioritizing Strategic Thinking and Complex Problem-Solving to Stay Relevant

Top skills needed in an AI-driven workplace



Source: The Cognition Index Study, WSJ Intelligence and Philip Morris International, April 2026. Base: Total respondents n=2,507; Q. Which professional skills do you personally feel most motivated to strengthen in order to stay relevant and fulfilled in an AI-driven workplace?

“As Philip Morris International has fundamentally changed its business model to deliver a smoke-free future, we’ve seen firsthand that progress is ultimately a human endeavor. Technology is a powerful enabler, but lasting progress depends on people who are willing to challenge assumptions, adapt, learn and imagine better possibilities. As AI becomes more integrated into the workplace, those human capabilities will matter more than ever.”

— Jacek Olczak, Group CEO, PMI



The survey results reveal four key themes that highlight how companies can protect and develop human capabilities as they integrate AI into the workplace.



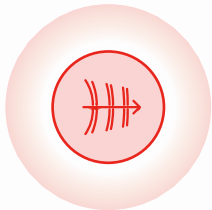
● Unlocking the Human Edge

AI is great at routine, repeatable tasks, leaving time for humans to focus on more complex endeavors. However, as AI takes on more of the day-to-day work, professionals expect traits like intuition, empathy and judgment to become even more valuable.



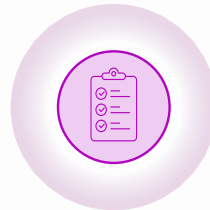
● Cultivating Creativity and Critical Thinking

To optimize the human-AI dynamic, companies must build environments that champion our strengths: critical thinking, creative ideation and meaningful collaboration. Fostering these skills can be a springboard for real innovation and original thinking as teams work alongside AI.



● Combatting Cognitive Atrophy

Overreliance on AI tools may lead to cognitive atrophy, reducing people's motivation to think independently and engage deeply with new ideas. Companies can cut this risk by prioritizing employees' long-term cognitive development and encouraging critical thinking in all areas of business.



● Bridging the AI Trust Gap

While senior leaders are optimistic about AI, younger professionals express concerns about its impact. Organizations can help close this gap by putting clear standards in place for how AI is used and reviewed, while encouraging employees to trust their own instincts and intuition.

“Our survey finds that while AI is rapidly transforming daily operations, professionals are leaning harder into uniquely human strengths like creative judgment and critical thinking. AI serves as an exceptional co-pilot, but long-term success relies on leaders who can actively nurture human insight and balance digital automation with human expertise.”

— Carolyn Romano,
Director of Research, WSJ Intelligence



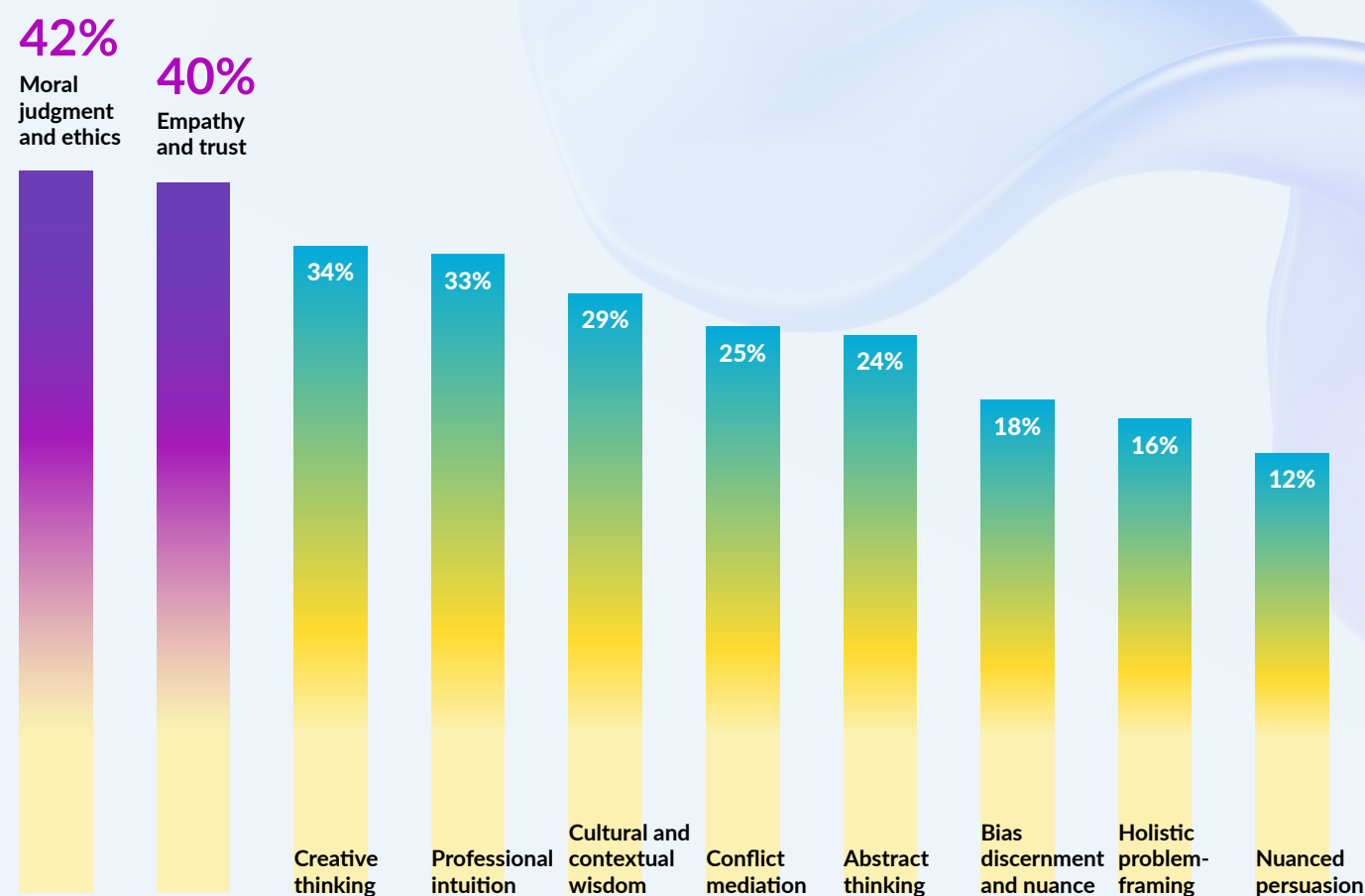
Unlocking the Human Edge

A clear signal from the survey: By taking on routine and repetitive tasks, AI can be a great enabler for human-centered creative work. A majority of those surveyed were excited to use the time freed by automation to perform higher-value and strategic work.

But producing that higher-value work is only possible when we can harness the uniquely human characteristics that continue to

give us an edge over machines. Attributes like moral judgment and ethics along with empathy and trust-building ranked highest among respondents in importance *and* least likely to be replicated by AI (Figure 2). These results show that it's critical to actively protect and develop these essential traits, particularly as new technologies are upending traditional workflows.

FIGURE 2
Moral Judgment and Empathy Deemed Most Unique Human Capabilities
Distinct attributes least likely to be replicated by AI



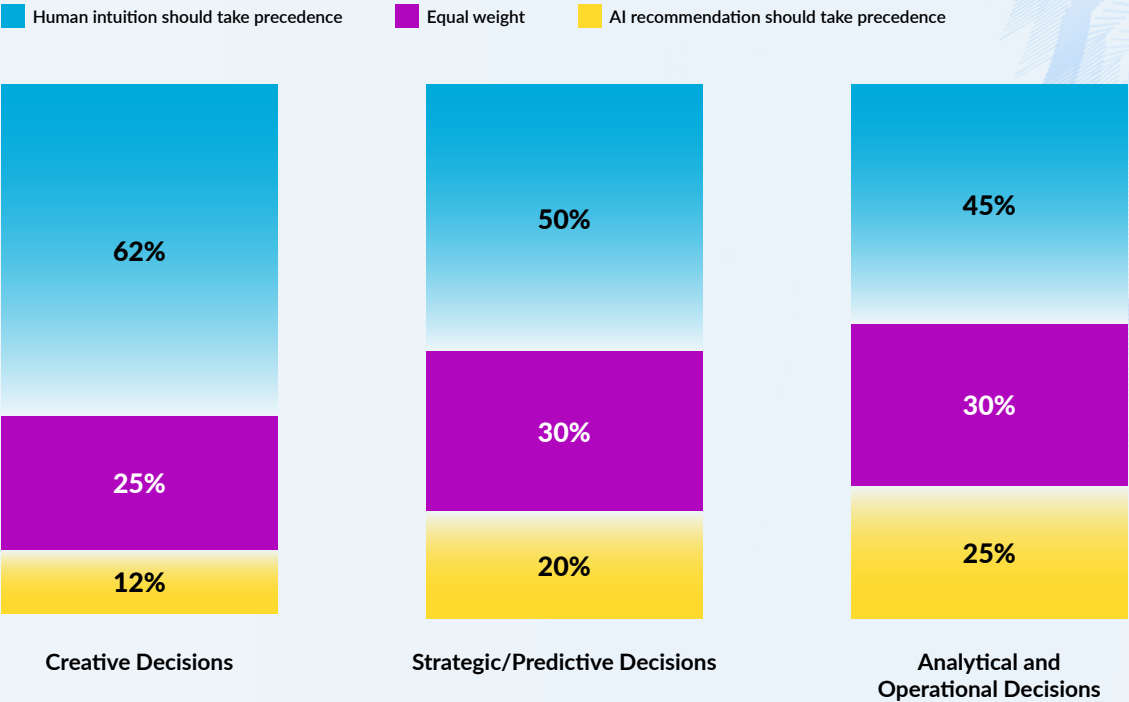
Source: The Cognition Index Study, WSJ Intelligence and Philip Morris International, April 2026. Base: Total respondents n=2,507; Q. Please select up to 3 most vital “human” capabilities that you believe are the least likely to be automated and replicated by AI in the future.

The survey underscored this point: Respondents are fiercely protective of the traits that are *uniquely* human. This is notably true when it comes to creative and strategic work. In fact, 62% say human intuition — particularly in creative work like branding, campaign concepts or product design — should take center stage. Only 12% of people in the survey say AI-generated work should outrank what people produce in these highly creative areas (Figure 3). That means companies should make space for discussion and dissent when deciding on creative ideas.

But even in more data-driven work — where AI tools can shave days or months off of

projects — keeping humans at the center of decision-making is critical. Respondents believe that people, not machines, should take the lead. Fifty percent still say human intuition should have priority over AI when it comes to tasks like market analysis. Only about 20% say AI should take priority over humans in this regard, while 30% say they should be equal (Figure 3). While AI can process and analyze information faster, it is human judgment that is essential for interpreting results, challenging assumptions and deciding what is relevant for the business.

FIGURE 3
Human Judgment Prioritized Over Conflicting AI Recommendations
Decision-making should be driven by intuition and experience first and foremost



Source: The Cognition Index Study, WSJ Intelligence and Philip Morris International, April 2026. Base: Total respondents n=2,507; Q. When making the below business decisions, how should a professional's personal intuition and experience and an AI's recommendation be weighted if they suggest different courses of action?

Key Takeaways to Consider

Automation Can Lead to Innovation

As AI takes over routine tasks, respondents were excited to use the reclaimed time on more strategic work. It's important for leaders to be incredibly transparent with communication during this workflow transformation, so workers have a clear understanding of where they can add value.

People Are the Change-Makers

Human intuition wins out in almost all areas of work. Whether it's creative brainstorming or data analysis, empowering team members to trust their instincts in the face of AI output can have an outsized impact on business outcomes.

Human Connection Can Help Build Strategy

Empathy and trust-building are essential human traits that can't be replicated by AI. Elevating these traits as the cornerstone of AI deployment is not just a strategic choice; it's a fundamental necessity for leaders as they future-proof their organizations.





“Human cognition is a bit like a muscle: use it or lose it. AI can help us work more efficiently, but we need to be careful not to outsource our thinking to technology. The real opportunity is to use AI to think better, not think less. That means continuing to nurture curiosity, critical thinking and active engagement, even as these tools become part of everyday work.”

— Dr. Moira Gilchrist,
Chief Global Communications Officer, PMI

Cultivating Creativity and Critical Thinking

The survey unearthed a surprising tension: Even as people recognize AI's potential to transform work, they are increasingly protective of the distinctly human capabilities that give work its value. However, these are also the same uniquely human skills that many fear are the most at risk of being devalued in an AI-driven world.

Three survey questions exposed this critical insight.

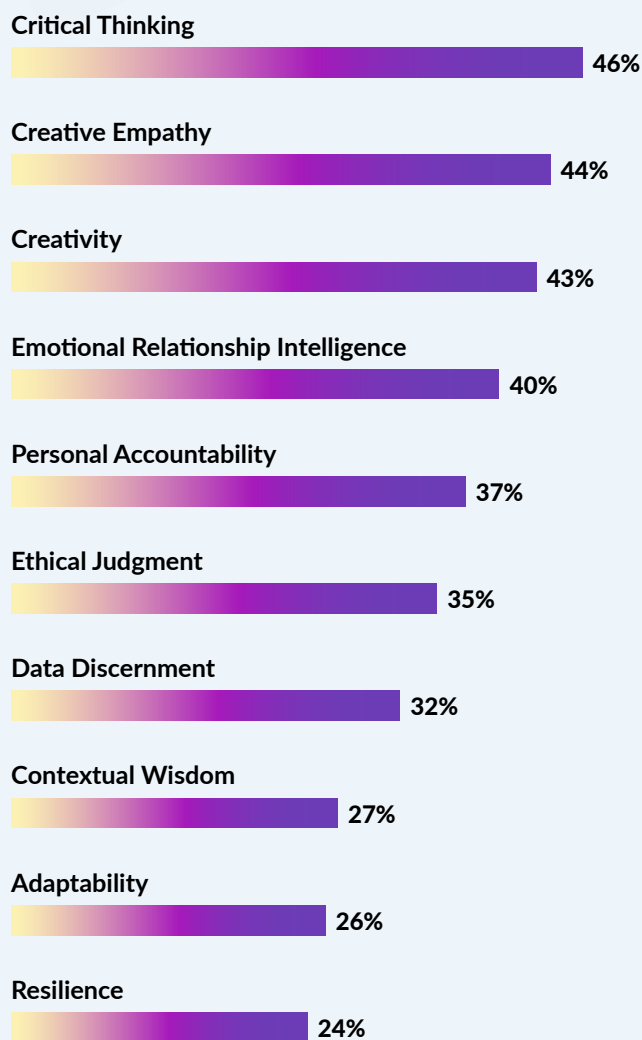
First, the survey asked people to rank the importance of human attributes — such as contextual wisdom and creative empathy — now and in the future. The results were revealing. Virtually every single human attribute highlighted was named as increasing in importance over the next three years. Creative empathy topped the list with a 13% increase from now until 2029. That was followed by adaptability, resilience and personal accountability.

The survey also asked respondents to share what human traits they believed were most at risk of being eroded or undervalued in an AI-driven world. Critical thinking was ranked as most at risk followed by creative empathy and creativity (Figure 4).

Finally, respondents were surveyed about their confidence in adapting and strengthening human traits like judgment and creativity. While 59% overall say they could adapt, only a minority of entry-level respondents (48%) were confident in their abilities. That exposes both an opportunity and challenge to protect and cultivate these human attributes.

FIGURE 4
Critical Thinking and Creative Empathy Are at Risk

Attributes most vulnerable to being eroded as AI scales in the workplace



Source: The Cognition Index Study, WSJ Intelligence and Philip Morris International, April 2026. Base: Total respondents n=2,507; Q. Which human attributes do you think are at greatest risk of being undervalued or eroded in an AI-driven work environment?

How can leaders champion the skills deemed most important to teams across their organization? A first step is designing environments that prioritize abstract reasoning, original ideation and collaboration. In doing this, leaders can transform AI from a simple efficiency tool into a powerful springboard for innovation. According to those surveyed, that vision is brought to life through tried-and-true management practices. Forty-two percent of respondents believed mentorship through technological transitions should be a priority in an AI world. A laser focus on factual accuracy and group problem-solving were also seen as imperative in this new age of work.

From an individual perspective, respondents are preparing for the future by leaning into their complex cognitive abilities. Those surveyed believe to stay relevant in an AI world they must hone uniquely human abilities, such as building high-trust human partnerships and fine-tuning discernment and judgment skills, while leaning into more strategic work made possible by AI-enabled time savings (Figure 5).

FIGURE 5
Partnerships and Discernment Essential for Future Relevance

Essential/Very Important actions to remain relevant and high-value:	C-Suite and Board	Executives (EVP/SVP/GM)	Mid-Level and Dept. Heads	Directors and Managers	Entry-Level and Associates
Building high-trust partnerships	81%	81%	79%	80%	80%
Exercising discernment and judgment	78%	75%	79%	80%	78%
Reinvesting AI-saved time into strategic work	76%	74%	74%	78%	74%
Mentoring others' core skills	74%	71%	73%	77%	69%
Upskilling in AI	73%	75%	68%	70%	66%
Upskilling outside of AI	71%	68%	68%	73%	63%
Applying contextual nuance	70%	66%	65%	69%	64%
Human synthesis and storytelling	70%	67%	64%	68%	66%

Source: The Cognition Index Study, WSJ Intelligence and Philip Morris International, April 2026. Base: Total respondents n=2,507; Q. As AI becomes a standard workplace tool, how important are the below actions for a professional to remain relevant and high-value? *Most Senior Level vs. Entry Level differences are statistically significant at 95% for upskilling in AI and upskilling outside of AI.

Key Takeaways to Consider

Professional Development Gets an AI Makeover

AI adoption is motivating respondents to proactively strengthen cognitive capabilities to maintain a human edge in an AI world.

Human Attributes Will Only Become More Important

Respondents across every demographic say the value of all measured human skills is projected to climb significantly in the years ahead. Exercising creative empathy and resilience both ranked as essential in the workforce today — and in the future.

What's Old Is New Again

C-suite leaders can create stronger teams to work alongside AI by remembering what's always been true: Practices like mentorship, group problem-solving and attention to detail create confidence and needed collaboration.

Combating Cognitive Atrophy

Throughout the survey, respondents expressed a deep respect for all distinctly human qualities. But the findings also expose a concern about just how much we’ve come to depend on AI. Simply put, cognitive atrophy is a credible threat to business.

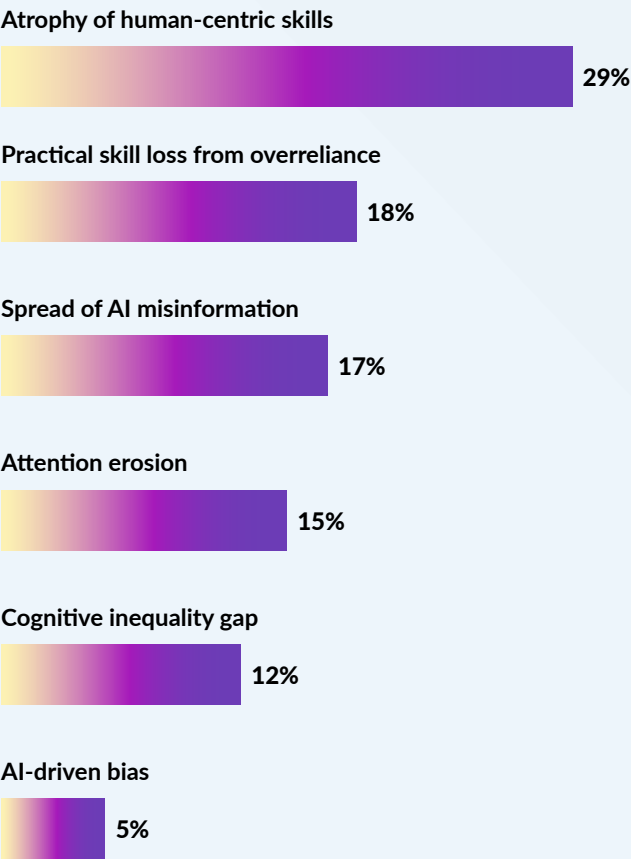
Atrophy occurs when a skill or trait goes unused, and it is already seeping into our day-to-day workflows. In fact, this threat of cognitive atrophy appears throughout several areas of the survey. Respondents voiced specific concerns about a decline in critical thinking, judgment and creativity, which they deemed most at risk due to reliance on AI. Other top concerns include the loss of practical skills (such as writing and coding), the spread of AI-generated misinformation and attention erosion that could lead to shallow processing and poor decisions (Figure 6).

“It is a human tendency to take the path of least resistance. If a tool delivers a polished answer in seconds, it’s understandable that fewer people will stop to question it or look for an alternative view,” Gilchrist says. “As leaders, we need to deliberately create environments where people are expected to question, challenge and add their own thinking.”

Most respondents in the survey agree that relying too much on AI can quietly erode their ability to think independently and challenge assumptions, a significant concern given the risk of AI hallucinations and inaccuracies going unchecked.

FIGURE 6
Cognitive Atrophy Is Single Biggest Concern in the AI Age

Human capabilities most at risk due to AI overreliance



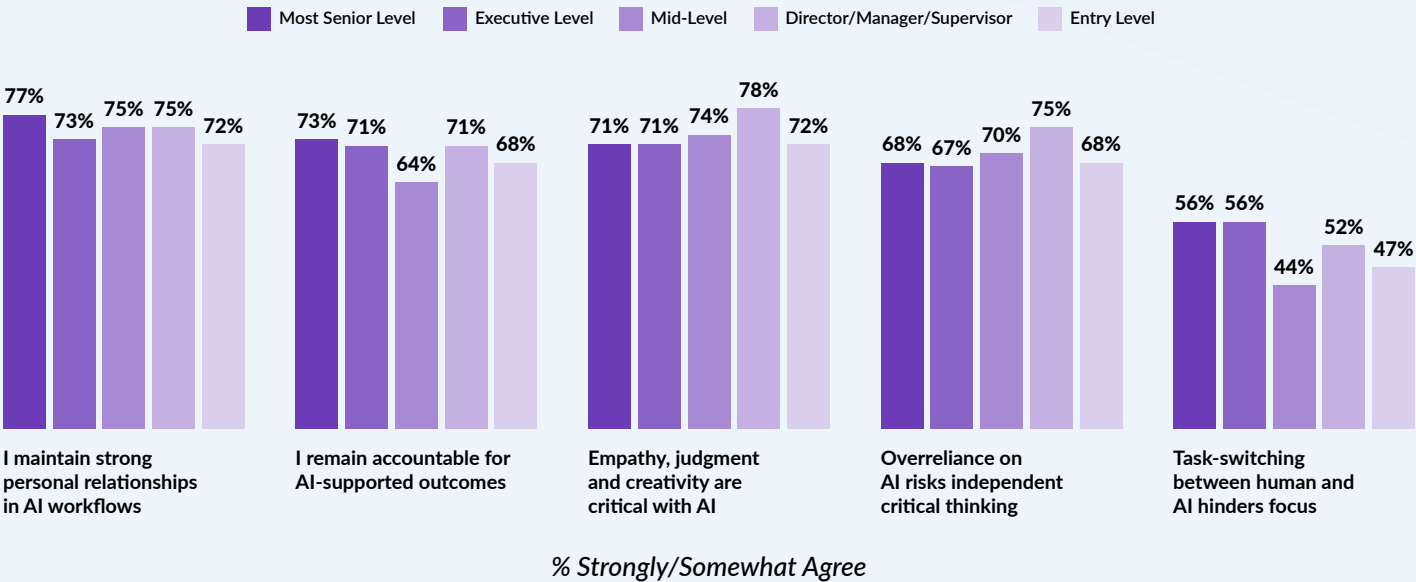
Source: The Cognition Index Study, WSJ Intelligence and Philip Morris International, April 2026. Base: Total respondents n=2,507; Q. From a societal perspective, what is your single biggest concern about the future of human capabilities in an AI-enhanced world?

While everyone in the survey was concerned about overreliance on AI, entry-level workers are sounding the loudest alarm. Seventy percent of these workers fear being unable to write or even articulate their thoughts, compared to 61% of the most senior-level executives.

Perhaps exacerbating this issue is the deep inconsistencies in the frequency of fact-checking and review of AI-generated data. While 49% of survey respondents said fact-checking and review happens very often or often, another 28% said it happens only sometimes, 16% said it happens rarely and 7% said it never happens. To combat the verification void in ways that can also stave off cognitive complicity, 42% of C-suite respondents highlight the need to reinforce accountability for AI-assisted work, while 35% say they are focusing on cultivating nuance and deeper analysis across their organization.

Concerns over AI overreliance can act as a call to action for leaders charting this new era of work. By strengthening human traits, both in strategic skills and practical applications, companies can put systems in place that guard against atrophy while building confidence in the quality of AI-informed output. In the survey, the majority of respondents say they are responsible for the quality of AI-generated work. More than three-quarters say their empathy, judgment and creativity are critical when they are collaborating with AI. And three-quarters also say they are maintaining strong personal relationships even as they work with machines (Figure 7). By supporting and promoting these human-centered behaviors, companies can preserve those capabilities *and* hold AI outcomes accountable.

FIGURE 7
Impact of AI Integration on Accountability and Relationships



Source: The Cognition Index Study, WSJ Intelligence and Philip Morris International, April 2026. Base: Total respondents n=2,507; Most senior level n=1,203; Executive level n=325; Mid-level n=326; Director/Manager/Supervisor n=327; Entry level n=326; Q. How much do you agree or disagree with the following statements?

Key Takeaways to Consider

Critical Thinking Is Extremely Important ... and at Extreme Risk

Critical thinking ranks highest as a key human skill, but it's the most at risk of erosion in an AI-dominated world.

Vulnerability in Discernment

The ability to verify AI-generated facts ranks as one of the lowest self-assessed proficiencies and is exacerbated by highly inconsistent internal fact-checking processes.

To Stop Atrophy, Keep People Engaged and Accountable

Leaders can support and protect critical thinking in their organization by giving people the power to demand quality from AI tools and push back on the outcomes.



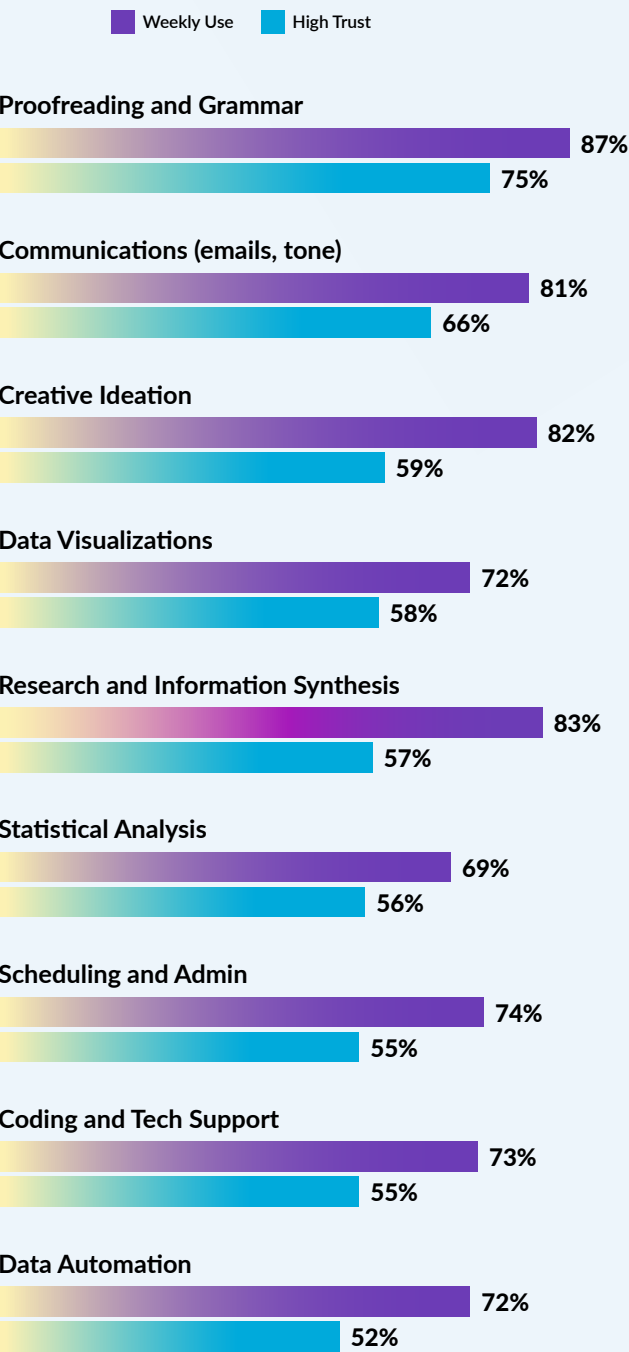
Bridging the AI Trust Gap

The survey brings to light two distinct trust gaps: one between people and the AI tools they use, and another separating executive leadership from the broader workforce regarding confidence in AI-driven decisions and output.

Most people – about 7 out of 10 – believe AI will have positive impacts on the quality of business decisions in five years. But that optimism hasn’t translated into confidence in the AI tools used today.

In fact, the survey reveals a striking pattern: While more people use AI, they’re not as confident in what it delivers. Consider people who use AI to make sense of research. While a vast majority (83%) say they use AI tools to analyze data, only a little over half (57%) trust the findings (Figure 8). That gap between use and trust exists across a wide range of tasks from coming up with creative ideas to coding and writing.

FIGURE 8
AI Use vs. Trust Deficit



Source: The Cognition Index Study, WSJ Intelligence and Philip Morris International, April 2026. Base: Total respondents n=2,507; Q. Whether you are currently relying on AI for the below or not for work-related tasks, how much do you personally trust the output of AI tools for the below without a thorough human review?

A second trust divide is emerging within organizations themselves, specifically between the C-suite and entry- and mid-level employees. Senior-level executives trust AI more than others in their companies (Figure 9).

Consider these gaps in trust: a 12-point trust gap between senior-level employees and entry-level people when using AI for creative inspiration, a 14-point gap when it comes to trusting AI-generated code. Even among the most common of tasks — scheduling and organization — there’s a 14-point gap between the C-suite and entry-level workers.

What could explain this difference in trust levels? The answer may lie in how upper management sees their AI skill level versus professionals in lower organizational levels. According to the survey, C-suite respondents were twice as likely as entry-level workers to report advanced or expert AI skills. Twelve percent of the C-suite say they are experts in AI compared to just 3% for entry-level workers and mid-level managers.

The survey results indicate that a clear approach for fact-checking AI results could help bridge that gap. Only 1 in 4 respondents say their companies have clear processes to verify AI results.

FIGURE 9
AI Trust Highest Among Senior Leadership

AI Tool Complete/High Trust:	C-Suite and Board	Executives (EVP/SVP/GM)	Mid-Level and Dept. Heads	Directors and Managers	Entry-Level and Associates
Proofreading and grammar	76%	79%	69%	77%	73%
Communications (emails, tone)	69%	66%	61%	58%	67%
Data visualizations	60%	58%	52%	61%	52%
Creative ideation	63%	58%	51%	63%	51%
Research and information synthesis	61%	55%	52%	58%	51%
Scheduling and admin	61%	56%	49%	51%	47%
Statistical analysis	59%	60%	49%	55%	47%
Coding and tech support	59%	54%	49%	57%	45%
Data automation	58%	50%	45%	49%	44%

Source: The Cognition Index Study, WSJ Intelligence and Philip Morris International, April 2026. Base: Total respondents n=2,507; Most senior level n=1,203; Executive level n=325; Mid-level n=326; Director/Manager/Supervisor n=327; Entry level n=326; Q. How much do you personally trust the output of AI tools for the below without a thorough human review? *Most Senior Level vs. Entry Level differences are statistically significant at 95% with the exception of proofreading and communications.

C-suite respondents were most confident in their company's AI verification process, with 30% stating their organization already had a clear fact-checking protocol in place. Other parts of the organization were less sure, with only 17% of mid-level employees and 19% of entry-level associates indicating they felt confident in their company's AI verification process.

Open conversations about AI can also play an important role bridging the trust gaps across organizations. It's clear from the survey

most people are worried about what comes next in this AI-shaped era. In fact, 60% or more of employees at each organizational level are uneasy about how to navigate AI "hallucinations" and the fact that AI outcomes can lack cultural nuance (Figure 10).

Airing and sharing those concerns, along with implementing a fact-checking process that everyone believes in, could mitigate the trust gap before AI becomes too entwined in daily work.

FIGURE 10
Widespread AI Concerns Across Job Levels

% Very/Somewhat Concerned:	C-Suite and Board	Executives (EVP/SVP/GM)	Mid-Level and Dept. Heads	Directors and Managers	Entry-Level and Associates
AI inaccuracies and hallucinations	62%	65%	66%	62%	65%
Decline in core writing skills	61%	62%	67%	63%	70%
Loss of subtle nuance and anomaly detection	61%	63%	60%	63%	63%
Erosion of critical thinking via AI summaries	61%	65%	65%	68%	66%
Outputs lacking human/cultural nuance	60%	61%	64%	63%	63%
Automated data prioritized over intuition	57%	51%	60%	57%	57%
Stifling creative growth due to AI inspiration	56%	62%	63%	60%	62%

Source: The Cognition Index Study, WSJ Intelligence and Philip Morris International, April 2026. Base: Total respondents n=2,507; Most senior level n=1,203; Executive level n=325; Mid-level n=326; Director/Manager/Supervisor n=327; Entry level n=326; Q. To what extent are you concerned about the below? *Most Senior Level vs. Entry Level differences are statistically significant at 95% for decline of core writing.

Key Takeaways to Consider

The Widening Trust Gap

While professionals across organizations are utilizing AI tools at record numbers, there's a noticeable deficit between use and trust in key areas such as statistical analysis, research and information synthesis, and creative ideation.

Finding Common Ground

Senior leaders say they are good at using AI and more inclined to trust it, while entry- and mid-level employees trust AI less. This disconnect can be remedied through more transparent conversation across organizational levels.

Trust and Verify

By implementing rigorous fact-checking protocols and listening to people outside the C-suite, companies can bridge the trust gap to better use AI — and with a lot more confidence in its results.



Looking Ahead

The findings of The Cognition Index illuminate a compelling paradox: As AI tools evolve, distinctly human capabilities become more vital, not less. Across industries, geographies and organizational tiers, professionals consistently view critical thinking, judgment, creativity, empathy and adaptability as nonnegotiable for future success. Yet a key tension remains: The risk that overreliance on automation could erode the very cognitive muscles organizations depend on most. The strategic imperative, then, is not whether to adopt AI, but how to architect its rollout while actively cultivating the human qualities that empower innovation, sound judgment and long-term progress.

For executive leadership, this dynamic introduces pivotal questions. As AI assumes routine execution and analytical heavy lifting, how will organizations safeguard and stimulate curiosity, independent reasoning and critical judgment? As efficiency dividends free up bandwidth, where will that reclaimed human capacity be reinvested?

Ultimately, tomorrow's business success stories will be those that engineer environments where technology amplifies human intellect rather than eclipses it — treating AI not as a substitute for human capability, but as a catalyst that makes it indispensable.



About This Study

Credits and Methodology

This report presents the key findings of a survey conducted by WSJ Intelligence and PMI between February 26 and April 13, 2026.

Survey Demographics: Sample Size: 2,507 global business professionals.

Geographic Scope: Universally balanced across five distinct global markets: United States (20%), United Kingdom (20%), Italy (20%), South Africa (20%) and Brazil (20%).

Tier Demographics: Heavily represented by senior leadership: C-Suite/President/Chairperson (35%), Board Level/Managing Director (13%), EVP/SVP (13%), Vice President/Dept. Head (13%), Manager/Supervisor (13%) and Entry-Level Associate (13%).

Corporate Scale: Broad representation of massive enterprise, averaging an annual organizational revenue of \$4.7B, with 33% representing firms generating \$5B+ annually.

About WSJ Intelligence

The WSJ Intelligence team is responsible for delivering best-in-class intelligence and insights to support The Wall Street Journal, Barron's, MarketWatch, Mansion Global and Investor's Business Daily. We tell compelling and clear narratives using original thought leadership, syndicated research studies and secondary research. Team members act as experts in support of our advertising sales client partners, product and integrated marketing teams, advertising clients and commercial partners.

About PMI

Philip Morris International (PMI) is a leading international consumer goods company, actively delivering a smoke-free future and evolving its portfolio for the long term to include products outside of the tobacco and nicotine sector. The company's experience of reinventing its business has reinforced a critical lesson: progress depends not only on science and technology, but also on people's ability to think critically, challenge assumptions, and make informed choices. This underpins PMI's interest in the future of human cognition and its role in how organizations adapt, decide and lead amid accelerating change.

[Read more](#) about PMI's work in defining the new frontier of human-machine collaboration.



WSJ INTELLIGENCE

The Cognition Index Research Report