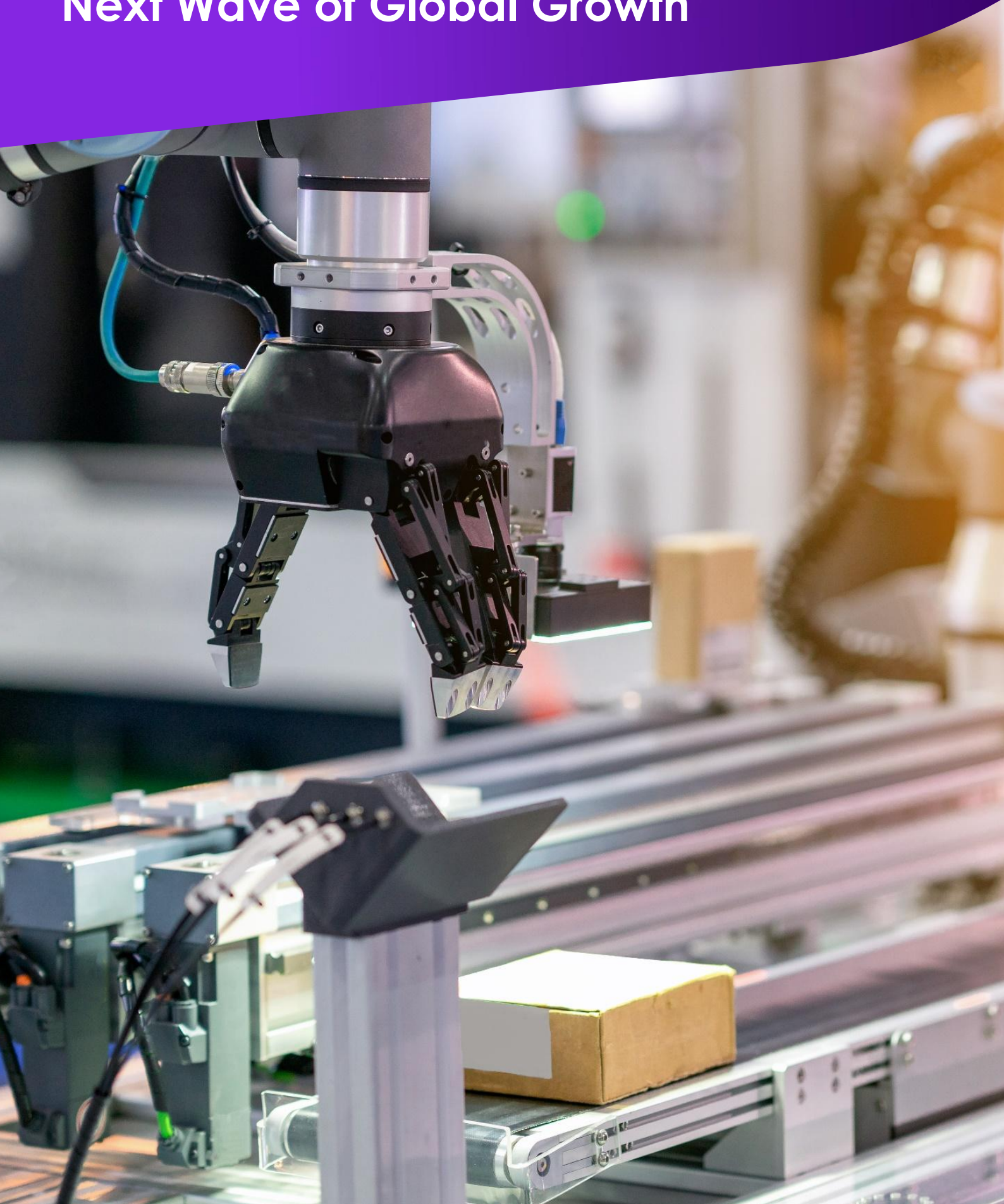
The Invisible Revolution: How Industrial AI Is Powering the Next Wave of Global Growth



An AI Tipping Point Few Are Ready For

AI is everywhere, but its most profound disruption is unfolding in the industrial world. The transformation sweeping industries isn't loud or theatrical; it's quiet, systemic, and happening far faster than anyone expected. Welcome to the Invisible Revolution.

According to a new global study by IFS of over 1700 senior executives from around the world in Aerospace & Defence, Construction & Engineering, Manufacturing, Energy, Utilities and Resources, Telecoms and Service Industries, the adoption of AI, especially Industrial AI that reshapes operations, processes, and strategy, is accelerating at breakneck speed. For example, in the US, 90% of senior decision makers plan to increase AI investment in 2025 compared to 2024. This is not blind optimism: 81% of US respondents report higher-than-expected returns on their AI investments, compared to a strong 70% average globally.

The shift in organizational AI maturity is even more dramatic. Today, just under one-third of businesses (32%) claim to be "AI First," meaning AI is deeply embedded into workflows and decision-making. But within a year, nearly 60% expect to achieve this level of integration. The number of companies still "experimenting" with AI is expected to plummet from 24% to just 7%.

This isn't a gradual shift; it's a high-velocity pivot redefining how industries operate. It signals a movement beyond consumer productivity tools aimed largely at white collar workers, toward Industrial AI, the large-scale deployment of AI across asset management, field service, supply chain optimization, manufacturing, and continuous improvement. For example, a manufacturer uses AI-driven optimization to automate production planning, enabling faster responses to external change while maximizing resource utilization to better meet customer demand. While a leading packaging company uses AI to robotize material movement, saving millions every year and making staff more productive and effective.

Urgency Meets Unease: Strategy and Skills Gaps Widen

Despite the enthusiasm, IFS' findings underscore an uncomfortable truth: organizations are not fully prepared to manage the AI leap. More than half of senior decision makers globally (52%) express concern about their leadership's understanding of AI, with that number rising to 61% in the US. Meanwhile, 53% are concerned about the lack of a coherent AI strategy; in the UK, that concern spikes to 65%.

There's also fear that slower adopters will be left behind. 56% of senior decision makers globally worry their businesses will lose market share to competitors moving faster on AI. That anxiety is even greater in the US (63%) and the UK (67%).
But the pace of adoption is outstripping readiness, held back by fractured strategies, skill shortages, and leadership gaps.

The Human Factor: Training, Trust, and Workforce Transformation

The Invisible Revolution isn't just technological, it's human. For AI to scale, employees must evolve alongside it. Senior decision makers overwhelmingly agree: 99% of organizations will need retraining or reskilling to fully implement AI. More than half (53%) estimate up to 60% of their workforce will need retraining, while a third say it could be as high as 100%. This is not a minor shift; it's a full-scale reimagining of the workforce.

But readiness is lagging. While 82% of US respondents believe their education systems support the future of work, 64% say recruiting the right AI-capable talent is still extremely difficult. Over half of US firms (54%) offer formal training, yet 65% of US senior decision makers say their businesses still lack the knowledge to use AI to its fullest. By contrast, just 46% of respondents in Japan feel this gap exists, pointing to stronger internal confidence. Without aggressive upskilling programs and organizational learning, AI initiatives risk stalling just as the revolution gains pace.

% of respondents who strongly agree/somewhat agree that their countries education system is currently developing enough people with necessary skills to sufficiently meet the future workforce demands of their industry

Global	US	UK	France	DACH	NTH	Nordics	UAE & KSA	Japan	ANZ
68%	82%	72%	64%	61%	67%	53%	79%	45%	73%

Industrial AI Is Already Changing the Game

This is no longer about chatbots and dashboards. We are entering the era of Industrial AI, where AI automates processes, augments strategic decision-making, and creates new business models. This new era of automation sees intelligent agents continuously search, reason, and act to streamline operations, increase capacity, and free up skilled workers for higher-value tasks. It goes beyond traditional AI's pattern recognition and prediction to enable truly autonomous decision-making and execution.

Over half of US organizations are already using automation AI (56%), predictive AI (54%), and agentic AI (35%), systems that can act autonomously to execute decisions. Globally, the numbers are slightly lower but still significant, demonstrating early momentum across industries.

And yet, despite these advances, trust in AI remains a major hurdle. When asked whether they would trust a fully automated AI system to make critical decisions, whether in budgeting, innovation, talent management, or even health and safety, only 29% said they would be "completely happy" to do so. A clear majority (68%) said humans must still review or confirm decisions made by AI. This reflects the duality of AI's role: it's a powerful enabler, but one that still has to earn full human trust.

Bias also looms large, particularly in the US, where 63% cite it as a top concern, compared to just 40% in the Nordics. This discrepancy reflects differing regional perspectives on risk, and highlights why trust remains a major factor in scaling AI across high-stakes environments.

That lack of trust extends to how AI is governed. While many enterprises are moving forward with implementation, the call for oversight is growing louder. 71% of US senior decision makers, and 62% globally, believe AI needs some form of regulation. And notably, 65% of global respondents support the creation of an international, independent body to oversee AI development and

deployment, signalling that organizations are not only concerned about risk within their own walls, but are calling for globally coordinated oversight as AI becomes more deeply embedded in critical systems. However, respondents in Japan (22%), Nordics (19%), The Netherlands (16%), and Germany (13%) had the most respondents resistant to the idea of a global independent AI organisation.

% of respondents who believe an independent organisation be critically involved/ significantly involved in regulating AI

Global	US	UK	France	DACH	NTH	Nordics	UAE & KSA	Japan	ANZ
66%	75%	72%	77%	68%	61%	52%	62%	48%	69%

Economic, Social, and Environmental Impact on the Horizon

AI is no longer just transforming operations, it's redefining business models. 77% of respondents (and 85% in the US) believe servitization, the shift from selling products to delivering value through services and outcomes, will become a dominant revenue model, made possible through AI. This signals a move away from selling assets toward enabling continuous value through services and performance.

Furthermore, 80% of senior decision makers globally (and 90% in the US) expect AI-driven savings to be reinvested back into their enterprise, fueling further innovation, growth, and expansion. Nearly three-quarters (73%) say they plan to pass some of these savings on to customers through improved pricing and enhanced service.

However, this customer-centric view is not universally shared, particularly in asset-heavy industries where margins are tight and competition fierce. In these sectors, many believe that any efficiency

gains from AI will be channelled directly into strengthening profitability rather than shared externally. This tension highlights a growing debate over how, and for whom, AI creates value.

Environmental impact is also firmly on the radar. 86% of senior decision makers believe AI will help organizations meet environmental goals, from energy efficiency and emissions reporting to CO2 management. A hopeful 90% believe AI will have a positive planetary impact over the next five years.

% of respondents who believe AI will have a significant/somewhat positive impact on the planet's environment over the next five years

Global	US	UK	France	DACH	NTH	Nordics	UAE & KSA	Japan	ANZ
90%	96%	95%	90%	92%	84%	78%	91%	79%	94%

The Clock Is Ticking

The data is clear – AI is creating value. 88% of respondents report that it has already improved profitability. In Germany, that number rises to 94%; in the US, 92%. But there's a danger that this revolution, so promising, so powerful, may outpace the very systems meant to harness it.

% of respondents that feel AI has positively impacted their organizations profitability?

Global	US	UK	France	DACH	NTH	Nordics	UAE & KSA	Japan	ANZ
88%	92%	91%	89%	94%	86%	72%	89%	83%	92%

IFS' research signals a new stage of enterprise AI. It is no longer confined to innovation labs but is powering frontline operations. Industrial AI is becoming the operating system of modern industry. The next 12 months will be decisive: those who act now will shape the future of global competitiveness, customer experience, and value creation.

IFS' message is unequivocal: AI is no longer optional, and the window to act is closing fast. To keep pace, businesses must urgently close the gap between ambition and execution. That means prioritizing strategy, education, regulation, and leadership readiness, not eventually, but immediately.

This matters because AI is no longer a technology issue. It's a leadership issue. Businesses, governments, investors, and regulators all have a stake in how quickly AI capability, trust, and oversight evolve. Organizations that close the AI execution gap today will be tomorrow's market leaders. Those that don't may find themselves outpaced, not just by competitors, but by the pace of transformation itself.

The Invisible Revolution is already underway. The only question is: who will lead and who will be left behind?

For more information about the research, IFS.ai, or to request an interview or comment from an IFS Industrial AI expert, please contact us.

Helen Hauck, Head of Marketing, AI
helen.hauck@ifs.com

Mairi Morgan, Director Corporate & Executive Communications
mairi.morgan@ifs.com

Learn more – head to www.ifs.com/ai