

Advancing AI across insurance

Executive summary



The evolution of artificial intelligence (AI), including the new wave of generative AI (Gen AI), is transforming industries. Many insurance organizations are already using AI to provide new services for customers and enhance back-office processes, however, the pace of implementation is hindering progress and there are growing concerns around trust, accuracy, and security. So, how can insurance firms adopt AI effectively and unlock its full potential?

In this report, three key findings emerged:

1 Insurance organizations are increasingly investing in this space, but projects are taking too long to get into production:

Despite the natural risk-averse approach, insurance businesses are ahead of the global average when it comes to investing in AI use cases. However, the slow pace of implementation is creating significant delays in progress compared to other industries.

2 A careful balance of innovation and navigating risks will be crucial:

AI offers untapped potential for those that are willing to embrace change, but it also brings new and concerning risks that should be considered as organizations further develop their AI strategy. By undergoing an internal maturity assessment, organizations can have better clarity on current capabilities and identify areas to prioritize. Our tested maturity assessment framework enables organizations to do this effectively.

3 Successful organizations will likely still be data-driven and people-led:

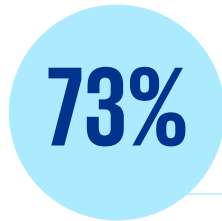
Before starting on AI transformation, business leaders should have a clear and robust transformation plan in place, and focus on having a solid digital foundation and clean data to improve the output. Upskilling and empowering colleagues and teams to better understand the bridge between AI and data can support longer-term success, and provide additional value by leveraging AI as an assistant.

The current landscape

Many insurance firms have already implemented machine learning or other AI solutions at an operational level to improve business processes. With enough training data, these algorithms can better analyze risk and predict outcomes, adding accuracy to risk models and pricing structures. These solutions are often developed to solve a specific problem, but there is an opportunity to quickly adjust for wider use across the value chain. Both Traditional and Gen AI could empower organizations to enhance actuarial models, deliver personalized insurance cover, or even increase the pace of insurance claims. But the process of doing so appears to be slow, with testing and implementation processes often taking several months to complete.



Estimated AI market size across insurance by 2032.¹



of insurance CEOs agree that generative AI is the most important investment opportunity for their organization.²

How are insurers approaching AI transformation?

Insurance organizations are approaching AI transformation strategically and with cautious optimism. Many have seen early success with a handful of integrated AI solutions, where use of the technology has typically been developed to tackle a specific problem, such as quality assurance. Others are developing an understanding of the wider capabilities through integrated platforms, such as Microsoft Copilot, learning to quickly create human-like text, images, audio, and videos.

While businesses understand the potential advantages of scaling initiatives, there is a hesitation to introduce AI more widely across the workforce, partly due to the speed of evolution and associated risks. There are also growing concerns around data quality along with ethics and biases (particularly when using legacy datasets), in addition to regulatory compliance across jurisdictions. The inability to respond to these could result in significant risk to reputation and rising pressure from shareholders.

AI and automation adoption in insurance

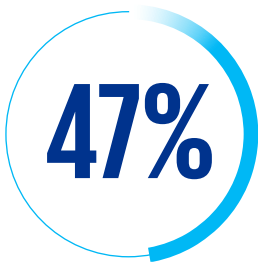
34% Leadership supports and has funded the strategy, yet implementation is behind schedule.

23% A strategic vision exists but executive buy-in and/or investment approval is limiting progress.

30% We are proactive in progressing against our strategy and are continually evolving.

13% A strategy is being designed and pilot tested, but a broad initiative has not yet started.

Source: KPMG Global Tech Report 2024, KPMG International, September 2024. 165 insurance respondents.



of insurance organizations that are experimenting with AI have set up AI centers of excellence, featuring employees from across the business, compared to the global average of 40%.³



¹ Artificial Intelligence (AI) In Insurance Market Size, Share, and Trends 2024 to 2034, Precedence Research, July 2023.

² KPMG Insurance CEO Outlook, KPMG International, December 2023.

³ KPMG Global Tech Report 2024, KPMG International, September 2024. 165 insurance respondents.

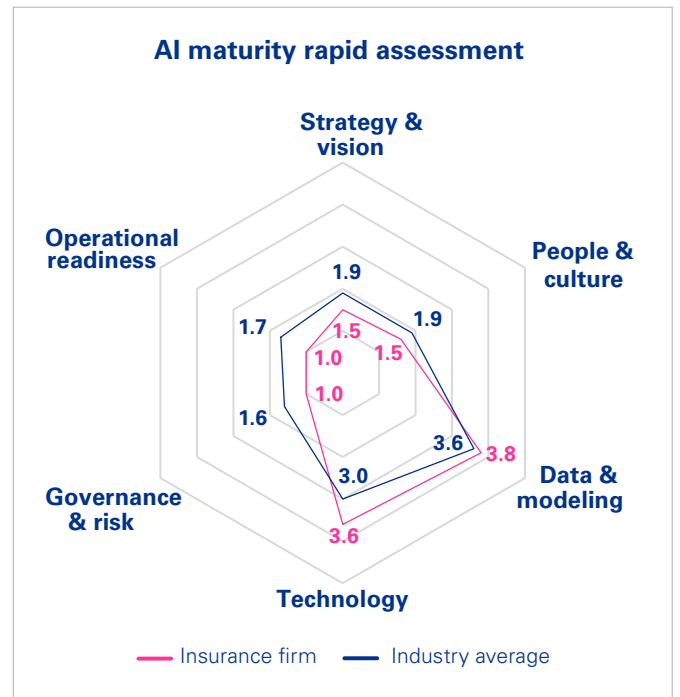
Measuring maturity of AI adoption

How ready is your organization to scale AI? Adoption of AI is not likely to be a one-day journey or overnight success. While other industries may prioritize speed and disruption, insurance organizations deal with sensitive data, complex regulations and ethical considerations that require a careful approach. Similar to building a house, insurance stakeholders and AI integrators need to first consider a blueprint of how the digital solution can be developed before jumping in; What tools are already in place? What skills and infrastructure may be needed?

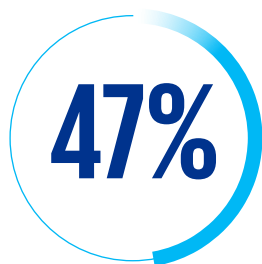
For insurance organizations, a successful AI transformation should start with a step that can often be overlooked; an honest, internal assessment of functional capabilities. Based on collective member firm experience working with clients around the world, the KPMG insurance AI maturity framework is based on six foundational pillars that we believe are the key components to making AI work, with five maturity levels against each. This tested methodology, detailed in the report, helps to identify where the organization stands at present, and what steps it needs to take to help accelerate progress.

Insurance organization — Example		
Assessment category	Score	Maturity level
Strategy and vision	1.5	Elementary
People and culture	1.5	Elementary
Data and modeling	3.8	Operational
Technology	3.6	Operational
Governance and risk	1.0	Elementary
Operational readiness	1.0	Elementary

Maturity level	Description
Elementary	Beginning to explore AI and understand its potential value
Emerging	Building capability and a view of how and where to deploy
Operational	Capability is in place to deploy AI in a targeted way
Embedded	AI is a core part of BAU and how the organization operates
Leading	Market-leading capability, deploying differentiated AI solutions



Source: KPMG International, August 2024.



47% of insurance organizations have invested strategically to integrate AI across core business capabilities. These organizations have AI use cases running actively across the organization and are returning business value, compared to the global average of 43%.⁴

⁴ KPMG Global Tech Report 2024, KPMG International, September 2024. 165 insurance respondents: Which of the following best describe your organization's current maturity level with AI adoption?

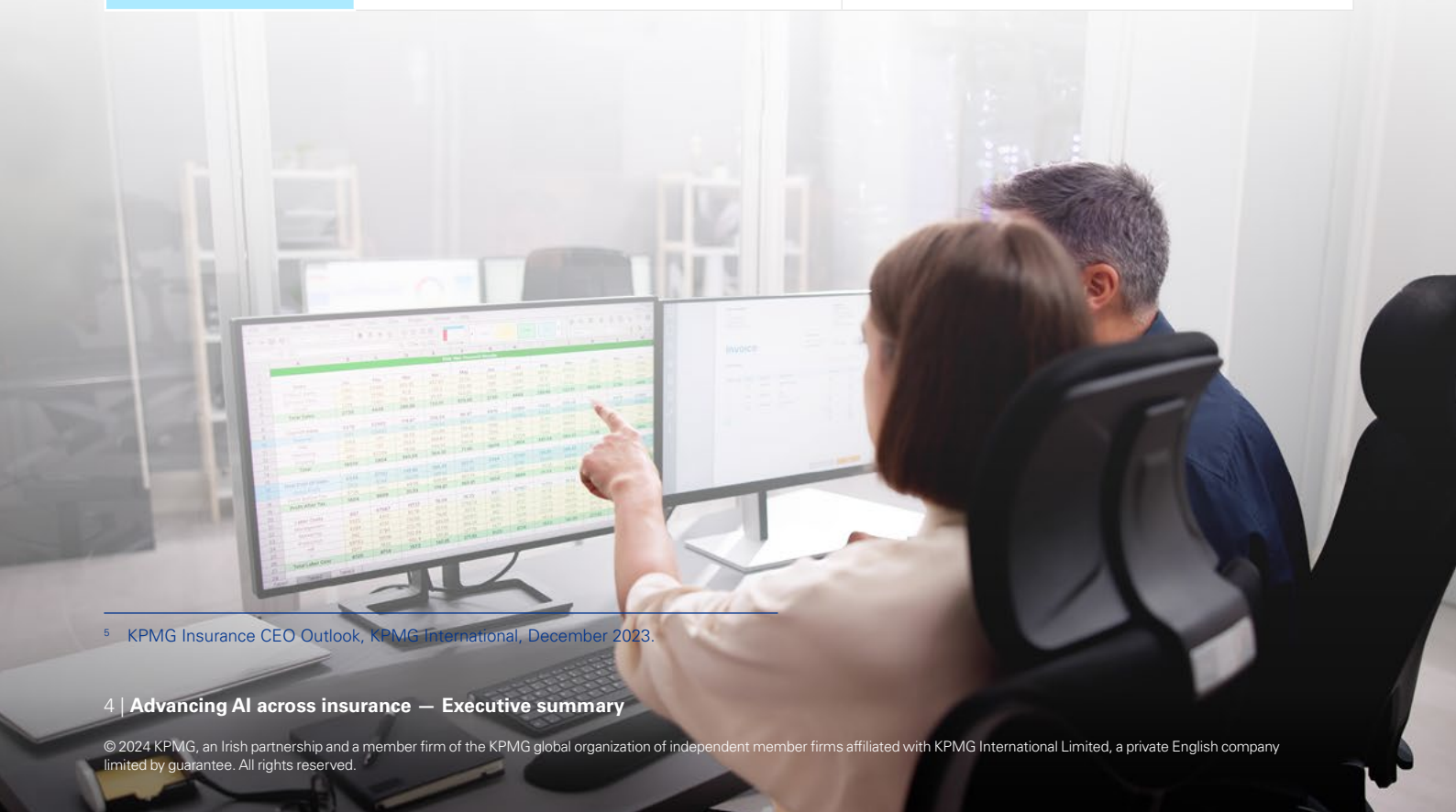
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Navigating the associated risks of AI

While the opportunities aligned with AI are significant, the associated risks are also increasing. Eighty-five percent of insurance CEOs believe that generative AI is a double-edge sword, in that it may not only aid in the detection of cyber-attacks but also provide new attack strategies for adversaries.⁵ However, avoiding AI altogether will also expose insurers to the risk of missing out on potential opportunities and benefits and losing competitive advantage.

	Examples of risk	Mitigating actions
Data discrimination	Some AI technologies, such as machine learning, are designed to look for correlations between sets of data. As a result, the output could discriminate based on characteristics such as gender or ethnicity.	Increase the transparency of AI models to understand how they produce their results. Monitor and test their outputs for discriminatory biases and adjust the system to help reduce bias.
Pricing problems	AI-driven personalized pricing can create affordability challenges, often impacting vulnerable groups who benefit most from insurance coverage.	Help customers to improve their risk profiles, such as through vehicle telematics or advice on how to reduce vulnerability to cybercrime.
Data confidentiality	Customer data provided to public Gen AI systems could appear in output elsewhere, breaching data protection laws, client confidentiality and client trust.	Train staff to avoid using customer data in prompts to an open-access Gen AI service. Set up similar services that are limited to the organization.
Inaccurate outputs	'Hallucinating' or getting things wrong is an inherent risk in Gen AI systems which rely on probability rather than rules.	Draw only on the organization's credible material rather than a general archive archive to improve accuracy.
ESG impact	The environmental impact of the substantial computing power needed for AI raises ESG regulatory and reputational risks.	Monitor energy use and prioritize less intensive AI models for certain applications.

⁵ KPMG Insurance CEO Outlook, KPMG International, December 2023.



How KPMG professionals can help

By combining deep industry and functional knowledge with the right technologies, KPMG firms can help you to unlock business value and harness the full power and potential of AI with speed, agility, and confidence. KPMG firms have worked with global insurance firms to help deliver meaningful AI transformation, combining industry knowledge and actionable insights with leading technology alliances, developing robust frameworks and AI accelerators. KPMG professionals are experienced in developing proof-of-concepts and scaling these into integrated solutions. And these processes have been used internally to review and enhance KPMG firms' capabilities.

Our global insurance professionals can offer:

- AI 360 assessment of internal capabilities and support to integrate AI into your strategy.
- Development of use cases and AI operating model aligned with your business objectives.
- AI risk assessment and development of control and governance frameworks for AI. This includes guardrails and policies to help organizations feel comfortable as they use the technology and conform to regulatory pressures.
- Creation of a data foundation for AI integration, and support with developing models and tuning.
- AI concept development with our global alliance partners, leveraging organizational data to develop a scalable solution to help ensure your business is future-ready.
- Workforce impact assessment and analysis on the impact of transformation on the organization.

Transformation credentials:

IDC MarketScope: Worldwide Leader in Artificial Intelligence 2023

IDC MarketScope: Worldwide Leader in Microsoft Implementation Services 2024, 2021

IDC MarketScope: Worldwide Leader in Cybersecurity Consulting Services: Global System Integrator/Consultancies 2024

IDC MarketScope: Worldwide Leader in Operations Improvement Consulting Services 2023–2024

ALM Pacesetter: Global Leader, Digital Transformation Services 2023



Client zero

The need for human thought and oversight, data analysis, critical thinking and decision-making is not disappearing. And so, while clients are looking for support, they're also interested in the lessons learned in KPMG firms' AI journey.

KPMG professionals are approaching this new future as 'client zero', and 'walking the talk', following the same advice that KPMG professionals provide to clients — designing and implementing an AI strategy that aims to prioritize human centricity in the way KPMG firms adopt innovation, and to enhance the KPMG workforce of the future. KPMG teams align to regulatory and voluntary standards, such as the EU AI Act and the ISO 42001.

The human factor is always what makes a difference in our work, and AI is a technology that has the potential to enhance us as individuals and the services and solutions KPMG firms provide to clients.

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