KPMG | 85 Be in Front

AI in Insurance Sector

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AI in Insurance sector

Trends, opportunities and challenges

INSURANCE SECTOR – TRENDS, OPPORTUNITIES AND CHALLENGES

Insurance is shifting from AI pilots to scaled, trust-led transformation across operations, distribution, and ecosystems

Key Trends Reshaping Insurance	Prevalent Opportunities	Related Challenges
Agentic operating model Insurers are transitioning from GenAI assistants to multi-agent systems that can intake, validate, decide, and execute end-to-end across domains	**Scaling value – domain rewiring** Domain-level transformation can materially improve economics, including 20-40% onboarding cost reduction.	**Oversight and control challenge** Higher autonomy increases the need for human oversight, traceability, and proportional controls
Touchless, real-time claims Claims becoming straight-through processed with higher automation, shrinking cycle times dramatically	**Touchless claims at scale** Proven regional impact – 98% claims auto-assessed in Singapore; ~60% without human intervention and paid within 24 hours	**Trust and accountability gaps** As automation expands, explainability and redress becomes critical to prevent conduct/reputational issues when customers dispute outcomes
AI-augmented distribution In APAC, distribution remains dominated by intermediaries; AI is being used to augment agents/RMs rather than replacing them	**Driving conversion and servicing ROI** With intermediated channels driving >90% of sales (as per Oliver Wyman), advisor copilots offer outsized ROI across conversion, onboarding and servicing.	**Mis-selling and compliance risk** GenAI raises mis-selling and compliance risk if outputs are not bounded to approved suitability rules and properly supervised
Health insurance affordability reset Singapore's health insurance market is resetting toward affordability and sustainability, tightening IP riders and utilisation controls.	**AI-enabled affordability/utilisation control** AI strengthens claims triage and benchmarking to control costs and support sustainable coverage.	**Fairness and explainability at scale** AI cost containment must be transparent and clinically informed to avoid fairness and dispute risks.
Open finance and consent-based sharing SGFinDex leverages Singpass-based consent to aggregate financial data across institutions, including life, accident and health insurance coverage	**Personalized and embedded insurance** Enables AI-driven protection gap identification and faster onboarding today; also, paves the way portfolio optimisation and embedded, cross-ecosystem insurance propositions	**Trust as a scalability constraint** Trust becomes the constraint: consent, security and explainability must scale with data sharing

Sources: "AI in insurance", IBM, Link; "Singlife Accelerates Digital Transformation with Qlik's AI-Powered Analytics, Enhancing Speed of Digital Claims Process", Singlife, Link; "Etiqa Insurance scales generative AI across customer and staff workflows", ITnews, Link; other secondary sources; Manulife Leads the Charge in Generative AI Innovations: Enhancing Productivity and Elevating Customer Experience, Manulife, Link; other secondary sources, all accessed in Mar 2026

PREVALENT AI THEMES IN INSURANCE SECTOR

Insurers are shifting to GenAI to modernize claims and customer engagement driving faster decisions

	Key themes in market	Future imperatives for players
Claims transformation with automation	AI-enabled claims automation uses NLP to scan documents and images, speeding up claim decisions, while GenAI helps summarize information and draft reports, saving time and improving accuracy Singlife partnered with Qlik to speed up digital claims using AI-powered analytics. Real-time insights helped cut data analysis costs by 35% and improve customer experience	• Embed AI-driven hyper-personalisation and customer insight engines into system to meet rising consumer expectations
Enhanced customer experience	AI-enabled chatbots and virtual assistants deliver instant, 24/7 support for policy, premium, and claim queries, reducing reliance on human agents while improving response speed, personalization, and operational efficiency Etiqa Insurance Singapore uses AI chatbots to answer customer questions on policies and claims. Customers get instant help without waiting for call-center agents. This has improved customer satisfaction and reduced workload for staff	• Leverage customer data and behavioral insights to deliver tailored recommendations, policy advice, and next-best actions in real time • Enable smooth hand-offs between virtual assistants and human agents
Rapid shift from traditional automation to GenAI	Insurers are shifting from rule-based systems to GenAI for document reading, claims summarization, underwriting support, and chatbots, with 77.0% of insurance leaders saying rapid GenAI adoption is essential to stay competitive Manulife is using GenAI in Singapore to move beyond scripted automation by equipping 2,000+ agents with a Sales Agent Enablement Tool that delivers personalized, context-aware engagement recommendations, achieving 68.0% adoption within two weeks	• Ensure data privacy, model transparency, regulatory compliance, and human oversight to mitigate risk and bias • Equip employees with GenAI literacy and change-management support to drive adoption and trust

Sources: “AI in insurance”, IBM, Link; “Singlife Accelerates Digital Transformation with Qlik's AI-Powered Analytics, Enhancing Speed of Digital Claims Process”, Singlife, Link; “Etiqa Insurance scales generative AI across customer and staff workflows”, ITnews, Link; other secondary sources; Manulife Leads the Charge in Generative AI Innovations: Enhancing Productivity and Elevating Customer Experience, Manulife, Link; other secondary sources, all accessed in Mar 2026

AI-DRIVEN OPPORTUNITIES AND CHALLENGES IN INSURANCE

AI drives efficiency and accuracy in insurance, but raises regulatory, data privacy, and trust challenges

Opportunities

Underwriting Accuracy and Speed

AI **accelerates underwriting by extracting insights from structured and unstructured data**, while multi-agent AI automates intake, risk assessment, pricing, and escalation significantly reducing turnaround time

GRADIENT AI

Gradient AI deploys predictive underwriting models for workers' compensation, group health, and P&C insurance, **enabling sharper risk segmentation and faster quote turnaround**

AI-Enabled Fraud Detection

AI-enabled fraud detection **helps insurers identify suspicious claims early using machine learning,** NLP, and image analytics reducing fraud losses while speeding up genuine claim settlements

insureMO

InsureMO partnered with Singapore-based UCARE.AI to deploy real-time, AI-driven health claims adjudication with built-in fraud, waste, and abuse detection, instantly flagging suspicious medical claims by analysing procedures, billing patterns, and patient histories

Challenges

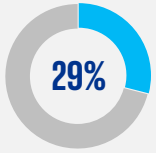
Regulatory and Legal Uncertainty

AI regulation in insurance is **evolving unevenly across regions, forcing insurers to manage state-level rules, the EU AI Act,** and data privacy laws driving higher compliance costs and operational complexity

- In 2026, **NCOIL moved toward encouraging state-based AI regulation**, creating a fragmented compliance landscape for national insurers operating across multiple jurisdictions

Data Security and Privacy Concerns

AI in insurance handles highly sensitive data, making security and privacy critical as breaches, AI attacks, or model theft can cause regulatory fines and reputational damage, requiring strong governance and privacy-by-design controls



Annual rise in cyber incidents across Asia-Pacific, along with a 233% surge in social-engineering and fraud claims, highlighted in Aon's cyber risk research, shows how AI-enabled and **deepfake-driven attacks are significantly increasing insurers' exposure to data breaches** and AI model manipulation risks

Sources: "Navigating the AI Regulatory Landscape in Insurance", InsuranceIndustry.AI, Link; "How Generative AI Is Transforming Insurance In Asia", Oliver Wyman, Link; "NCOIL resolution encourages state-level regulation of AI use in insurance", Newsbreak, Link; "Are insurance customers ready for generative AI?", Insurance business, Link; "The future of AI in the insurance industry", Mckinsey, Link; "AI in insurance underwriting: use cases and results from leading insurers", Shift, Link; "Gradient AI unveils enhanced underwriting solution to boost insurance risk segmentation", InsurTech analyst, Link; "InsureMO and UCARE.AI Announce Breakthrough AI-Powered Claims Adjudication Solution", insureMO, Link; other secondary sources; all accessed in Mar 2026

KPMG INSURANCE SECTOR PUBLICATIONS – KEY FINDINGS

AI creates efficiency and insight gains, but scaling impact requires strong data foundations, governance, and workforce upskilling

99%

Say AI use is reshaping their business

Source: Intelligent Insurance[1]

*"The integration of AI in the insurance industry is not just a technological shift but a strategic imperative" – **Scott Shapiro, US Sector leader, Insurance***

74%

Expect a moderate to very high ROI from AI investments

82%

Plan to increase the percentage of global budget spent on AI

Barriers to progress

46%
Of leaders have reservations about whether AI can be trusted

62%
Insurers are only partially aligned to an AI vision

73% Agree AI is a top investment priority

67%

Plan to allocate 10-20% budget towards AI

Source: KPMG 2025 Insurance CEO Outlook[2]

Obstacles in AI implementation

56%

Ethical challenges are biggest obstacle to AI implementation

77%
Agree that a top constraint on AI growth is AI workforce readiness

75%
Believe that competition for AI talent is a top constraint

*"To get the most from AI, it's important to identify how your AI models could create risks for policyholders or employees. This calls for an inventory of models that use AI, and a clear description of how you use data, to gain trust in the output." – **Jacques Cornic, EMA Lead of Insurance, KPMG in France***

Note(s): 1. Key findings based on quantitative survey of 1,390 decision-makers across key global markets, including 183 respondents from the insurance sector; 2. Key findings of the survey based on responses from 1,350 CEOs between 05 Aug and 10 Sep 2025
Sources: 'Intelligence Insurance', KPMG, Link; 'KPMG 2025 Insurance CEO Outlook', KPMG, Link; all accessed in Apr 2026

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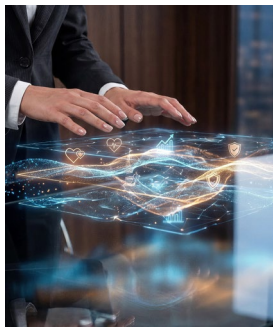
AI in Insurance sector

Case Studies



AI CASE STUDIES BY SECTOR – AI IN INSURANCE (1/3)

Repetitive insurance queries driving high call volumes were streamlined through an NLP-powered AI self-service assistant

KPMG in Israel developed and implemented an AI-enabled customer contact solution for a large insurance company to address high call volumes, improve customer satisfaction, and increase agent efficiency

Client challenge

- The insurer was facing high call volumes in its customer support centers, driven by repetitive and low-complexity policy-related queries (e.g., coverage details, policy dates, family coverage)
- Heavy reliance on human agents for routine questions resulted in:
  - Longer wait times for customers
  - Reduced customer satisfaction
  - Lower agent productivity and higher operational costs
- Existing service models were not optimized for self-service or digital-first interactions, limiting scalability as customer expectations for fast, on-demand service increased

Our approach

KPMG in Israel partnered with the insurer to design and implement an AI-enabled solution focusing on call reduction and service efficiency

1. Applied Natural Language Processing (NLP) and classification algorithms to analyze historical customer support calls and identify, categorize, and prioritize high-frequency customer queries
2. Identified “quick-win” use cases where AI could replace or augment human agent handling, especially for standard information requests
3. Designed an AI-based virtual assistant / self-service model, enabling customers to interact conversationally using natural language

Value delivered

- Reduced call volumes by diverting routine queries to AI-based self-service channels, lowering pressure on contact centers
- Improved customer satisfaction through faster response times
- Achieved a more cost-effective service model, improving first-contact resolution while reducing overall service delivery costs

Why KPMG?

- KPMG combines deep insurance expertise with AI, data, and cloud capabilities to drive end-to-end AI transformation
- The firm applies its Trusted AI framework to ensure compliant, secure, and responsible AI adoption in insurance operations

What we have learned

- People, processes, and change management are as critical as technology for successful AI implementation
- Strong data foundations and cloud modernization are prerequisites to unlocking AI value in insurance

Sources: “AI in insurance: A catalyst for change”, KPMG, Link; all accessed in Mar 2026

AI CASE STUDIES BY SECTOR – AI IN INSURANCE (2/3)

An insurance provider is Improving employee and client experiences with AI

KPMG in Canada's Gen AI Delivery Centre developed and delivered three prioritized generative AI use cases to address an insurance provider's operational and customer service issues.

Client challenge

A Canadian insurance company that offers a wide range of insurance, savings and investment products wanted to explore a Proof of Concept (POC) to test the viability of a generative AI solution to help solve their operational and customer service issues.

The goal was to identify and prioritize the most critical use cases to showcase generative AI's potential within the organization.

- The use cases were intended to address three key business challenges:
- Difficulty in locating relevant information from a complex contractual database.
- Inefficient access to client data leading to time-consuming resolutions of call centerservice calls.
- Training and program onboarding that lacked uniformity and were time consuming for staff

Our approach

Using the proprietary Use Case Prioritization Framework, the KPMG in Canada team identified three prioritized use cases for generative AI. Ideation workshops assessed potential value requirements for each case and the KPMG Generative AI Delivery Centre developed three Minimum Viable Products (MVP) designed to address each element of the client challenges:

1. A Contract FAQ Chatbot that uses Natural Language Processing (NLP) and the insurer's internal knowledge bases to address inquiries regarding customer contracts.
2. A Virtual Call Center Assistant using speech-to-text and Natural Language Processing to develop an advanced chatbot for assisting agents during customer calls.
3. An Internal FAQ Chatbot powered by GPT giving employees access to company data for research and information analysis.

Value delivered

The project delivered value across all of the MVPs developed as part of the POC:

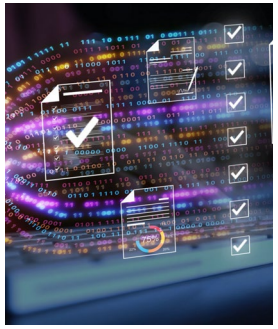
- The Contract FAQ Chatbot delivered enhanced the employee and client experience, reduced repetitive support requests, minimized errors, misunderstandings and disputes.
- The Virtual Call Center Assistant decreased average processing time, increased customer satisfaction, achieved a higher first-call resolution rate, reduced the number of call transfers and standardized agent responses.
- The Internal FAQ Chatbot for employees was able to answer close to 300 questions within two weeks of deployment. It improved decision-making, increased operational efficiency, facilitated faster onboarding and employee training and optimized organizational communications.

Why KPMG?

- KPMG in Canada's expertise in Gen AI, coupled with a strong relationship with the client.
- The collaborative approach of involving functional and sector advisors helped in identifying needs and developing tailored solutions.
- KPMG in Canada's commitment to delivering value through innovation and a trusted workforce.

What we have learned

- The importance of tailoring AI solutions by developing MVPs to address specific client challenges.
- The significance of streamlining processes and enhancing customer support through technical innovation



AI CASE STUDIES BY SECTOR – AI IN INSURANCE (3/3)

German insurance group automates invoice processing

KPMG in Germany leveraged AI and deep learning technologies to improve efficiency and reduce operational costs by up to 80 percent in accounts payable by automating invoice processing

Client challenge

KPMG in Germany's client is a global insurance group, providing comprehensive insurance, asset management, and retirement solutions, including life, health, property, and casualty insurance, to individuals and corporate clients.

The firm's client experienced significant cost pressures from an inefficient invoice processing system and wanted to overhaul the system due the reliance on manual processing. The current system led to operational inefficiencies; poor data quality due to non-standard invoice processing; and the complexity of international regulatory requirements that posed compliance risks.

The client also needed to align with an ongoing internal S/4 Hana transformation initiative. This initiative aimed to enhance business processes and operational efficiency. The goal was to ensure streamlined invoice processing and regulatory compliance.

Our approach

KPMG in Germany's approach involved a comprehensive AI-powered solution for automating invoice processing and leveraged the KPMG team's cross-functional expertise across SAP, finance transformation and technical AI implementation.

Deep learning optical character recognition (OCR) techniques were implemented, using ABBYY Vantage for intelligent document processing. AI models were developed in Python to optimize the overall invoice processing.

A SaaS application was utilized to automate the entire Accounts Payable process, which included conducting a Proof of Value with the client's data and establishing an internal workflow for approvals.

Checks were performed on external sites to confirm regulatory compliance.

Value delivered

- KPMG in Germany's AI-powered solution dramatically reduced the client's operational costs by 80%, increased invoice processing efficiency and improved decision-making.
- The technology tool ensured compliance with international regulatory standards, which is integral to maintaining the client organization's global reputation and significantly reduced the risk of non-compliance penalties.
- The initiative also reinforced the client's internal S/4 Hana transformation, ensuring a smooth transition and future-proofing their operational processes. This strategic support has poised the client for continued growth and innovation.

Why KPMG?

- KPMG in Germany combines expertise across cross-disciplinary teams and technological innovation through its collaboration with SAP.
- The firm's deep understanding of industry-specific challenges and AI application capabilities ensured international compliance and efficient process transformation

What we have learned

- The importance of good change management as a critical success factor in implementing AI solutions.
- The project's success relied on the client's internal capabilities, such as technical skillset, and the quality of existing data and processes.
- The need for a collaborative approach between the firm, client, and technology partners to realize the full potential of AI-led transformation.

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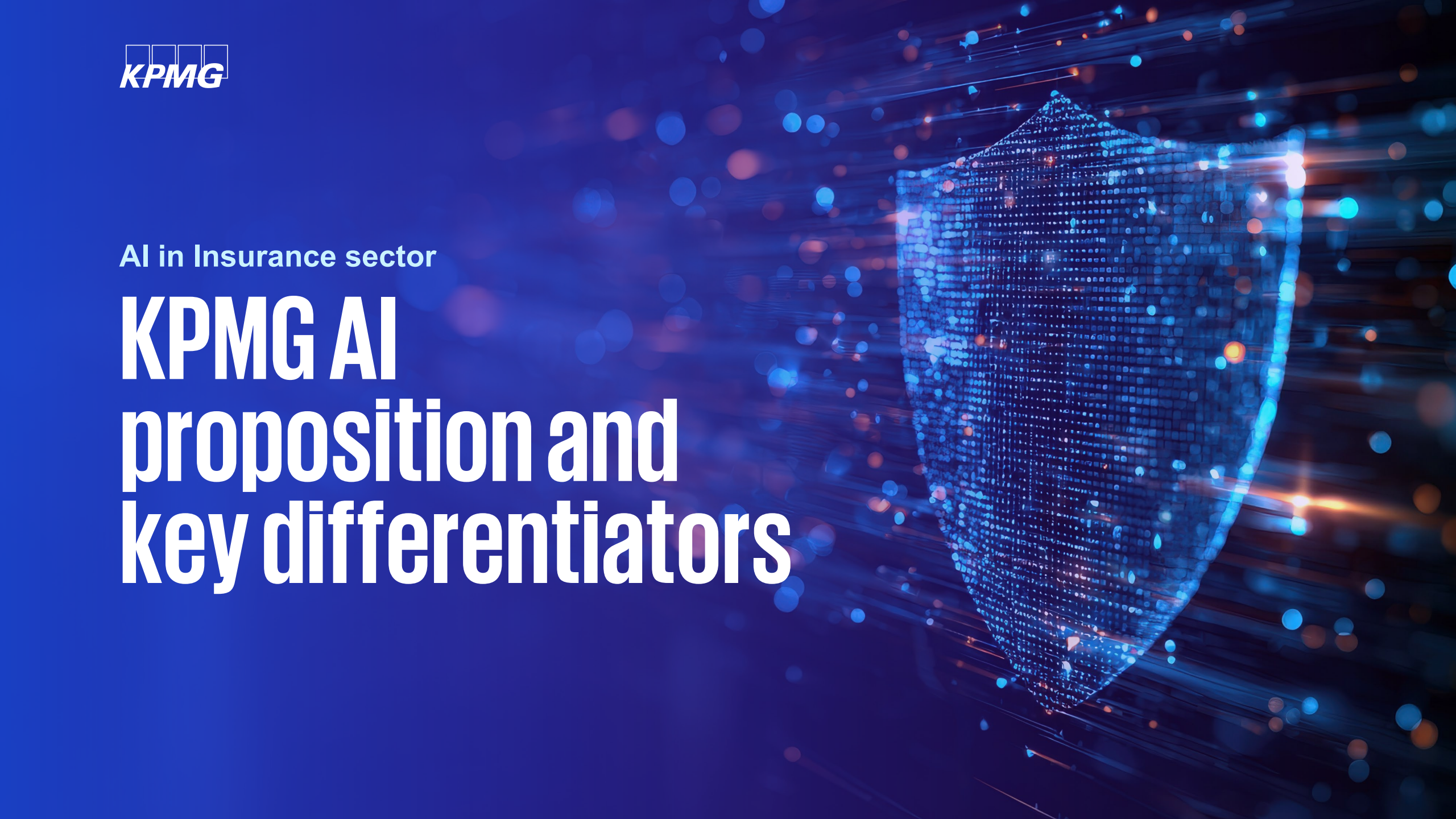
AI in Insurance sector

KPMG AI proposition and key differentiators



The KPMG Trusted AI Centre of Excellence
AI that deliver results, not just pilots.

Most organisations can launch AI pilots.
Very few manage to scale them.
The KPMG Trusted AI CoE exists to fix that.

What we do

We help organisations design, build, and scale AI that:

- Solves real business problems
- Is trusted by leaders, employees, and regulators
- Can be adopted and scaled across the organisation
- Enables intelligent governance, decision-making and operations

The result

AI that people trust, use, and rely on,
that leaders can see, measure, and defend.

Contact us

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What makes our AI CoE different

KPMG Four-Door Framework

A structured way to scale AI across the enterprise

VALUE
Turn AI activity into real business impact and ROI.

TRUST
Build AI that's trusted by everyone, from the start.

PEOPLE
Design AI around how people work, so adoption sticks.

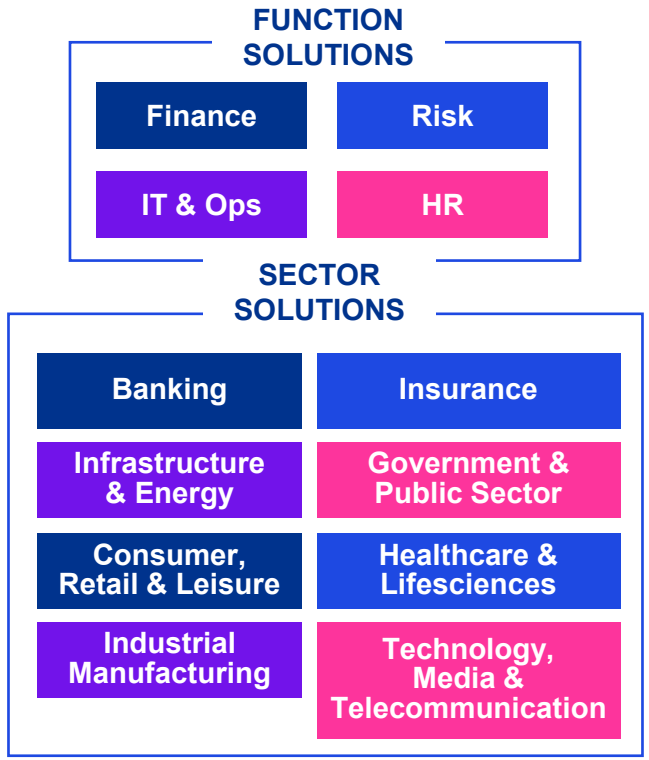
TECH & DATA
Enable AI to scale with the right technology foundation

Trusted ecosystem

KPMG brings together a powerful ecosystem of partners (leading technology companies, academia, industry organisations, and government agencies) to help turn AI ideas into tangible innovative solutions.

Co-creation of solutions

with you, for you in your function and sector



Support from EDB

With grants for

- Solution Design & Rapid Prototyping
- PoC/Pilot Build

Speed to market

- Faster time to market, going from idea to POC to scaled deployment
- Access to proven, reusable AI solutions and accelerators

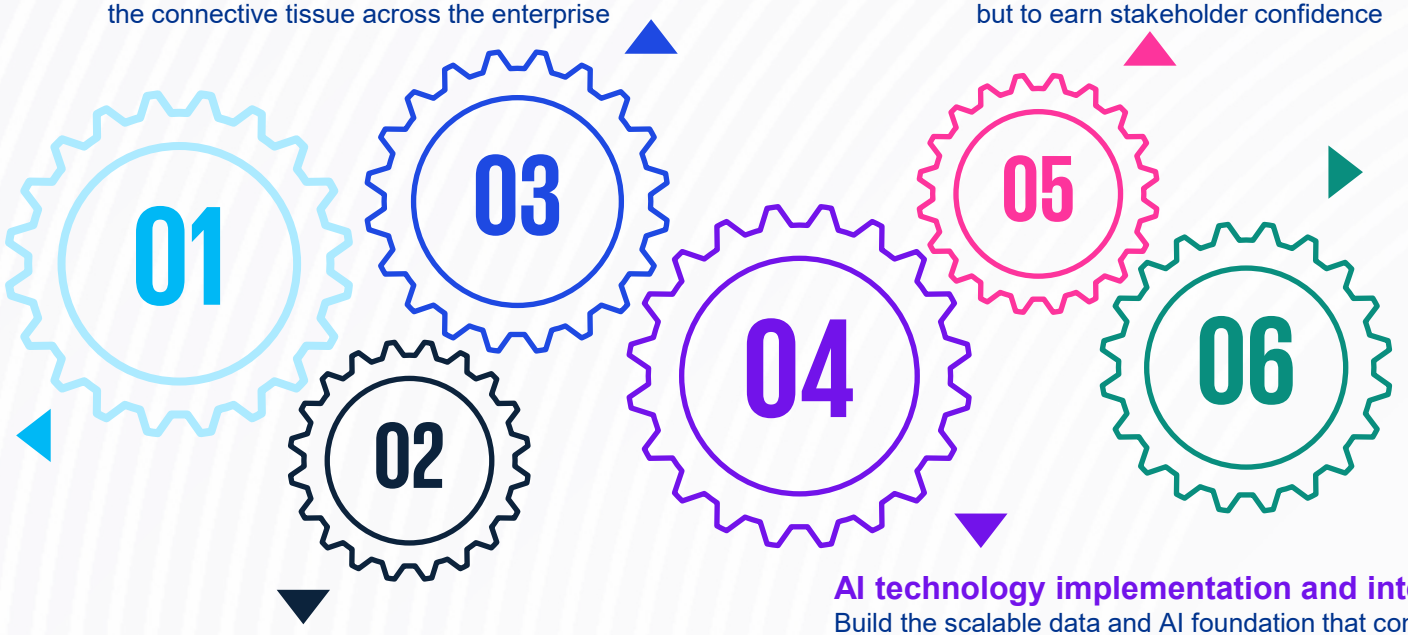
HOW KPMG CAN HELP (1/2)

Driving enterprise-wide AI impact by combining strategy, technology, workforce, and trust

AI strategy and program stand-up
Help clients shape a bold AI vision, underpinned by an enterprise-wide strategy, modern operating model, and trusted governance

Functional AI transformation
Helps re-imagine front- and back-office operations – from hyper-personalized customer engagement to AI-enabled finance, HR, and IT – so AI becomes the connective tissue across the enterprise

Trusted AI
Help clients design trusted AI by embedding ethics, transparency, and fairness at the core – not just to comply, but to earn stakeholder confidence



Bespoke AI solution and product deployment
Co-create bespoke AI solutions – spanning forecasting, pricing, trade promotions, and contract leakage – to power teams with KPMG retail solutions

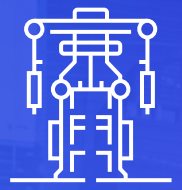
AI change enablement and workforce shaping
Beyond technology, we help create an AI-ready workforce – co-driving adoption, new career paths, and skills that fuel innovation.

AI technology implementation and integration
Build the scalable data and AI foundation that connects your enterprise and powers your intelligent operating engine.

Sources: 'AI in Retail – Global lessons from strategy to storefront', KPMG, Link

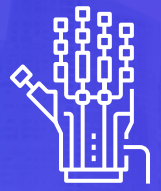
HOW KPMG CAN HELP (2/2)

KPMG can help clients across their AI journeys



Develop a transformational AI strategy

Define your AI goals, identify opportunities and risks, and create a tailored strategy and execution plan. Build a business case with clear metrics to secure investments and ensure measurable success by scaling AI for enterprise-wide impact and building lasting capabilities.



Ensure AI trust and compliance

Scaling AI introduces complexities and risks. KPMG Trusted AI teams can help ensure your AI solutions are ethical, secure and compliant. Our Trusted AI Framework, built on 10 ethical pillars, empowers organizations to boldly deploy AI responsibly, transparently and with confidence.

Empower your workforce with AI

KPMG AI-enabled Workforce solutions deliver personalized adoption and upskilling experiences, helping your team embrace generative AI and infuse it into everyday work.

Build a sustainable AI technology infrastructure

Leverage KPMG professionals' experience to integrate AI frameworks, platforms and accelerators, helping you ensure your technology infrastructure is ready to scale AI initiatives.

Sources: 'Intelligent Retail, KPMG, Link

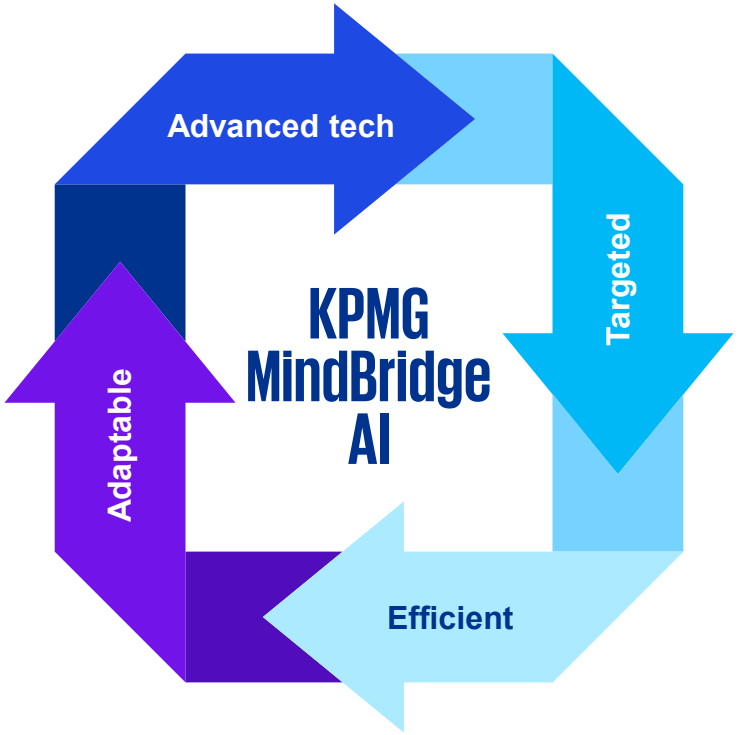
KPMG INSURANCE SECTOR CREDENTIALS

KPMG MindBridge AI

Powered by 20-30 advanced P&C algorithms, MindBridge processes the full dataset, evaluates complex relationships across transactions, establishes baseline trends, and highlights deviations and potential risk outliers.

Advanced technology

MindBridge's cloud-based AI, uses advanced statistical, machine learning and rules-based analytics technology helps augment an auditor's professional judgement



Targeted approach

Allows for faster and more granular analysis of 100% of an entity's transactions, effectively focusing the audit on the relevant and riskier aspects of the business

Many use cases

MindBridge's technology is able to adapted and applied in a large variety of practices and industries

Increased efficiency

Using MindBridge results in less effort for our people, while providing more insights for client management and much higher audit quality

kpmg.ai/Singapore