AiCore™

The Business Value of Generative AI for UK Insurers

Table of contents

AiCore

Executive Summary

The UK insurance industry, a mature sector with centuries of risk expertise, is embracing a new wave of innovation through Generative AI (GenAI). Industry surveys indicate near-universal interest, with 59% of insurers employing 100+ staff already utilising GenAI and nearly all others planning to invest [4].

GenAI's ability to process vast volumes of unstructured data—from claims forms to policy documents—and to automate routine tasks promises significant gains. Insurers anticipate productivity improvements of 10–20%, incremental premium growth of approximately 2%, and enhanced loss ratios [2].

Early adopters are experiencing faster claims handling, smarter underwriting, and more personalised customer service. Realising GenAI's value at scale will require upskilling staff and addressing data governance challenges, but it offers transformational benefits in efficiency, customer experience, and innovation across UK insurance operations.

Top Three GenAI Use Cases by Function

1. Claims & Underwriting

Claims Processing Co-Pilot

Challenge: Claims handling in the UK is labour-intensive and often subject to delays, increasing operating costs and customer dissatisfaction.

GenAI Solution: An AI claims co-pilot assists adjusters by transcribing customer calls, auto-filling claim forms, and drafting initial assessments. For example, one insurer's pilot generated claim summaries and customer communication drafts from voice-to-text inputs [3].

Impact: A significant boost in processing speed – early deployments showed a productivity increase of up to 50% for claims handling tasks and approximately 40% reduction in leakage [3]. Faster, more accurate claims settlement enhances customer satisfaction and reduces costs.

Underwriting Submission Triage

Challenge: Commercial underwriters face surges in policy submissions from brokers, spending excessive time on clerical reviews rather than risk assessment.

GenAI Solution: LLM-based triage tools swiftly analyse submission documents and emails, extracting key risk factors and prioritising cases, thereby allowing underwriters to focus on analysis.

Impact: Increased throughput and improved conversion rates – automation enables near 100% processing of submissions and can potentially double submission-to-quote conversion rates [7].

Fraud Detection & Risk Evaluation

Challenge: Fraudulent claims and mispriced risks cost UK insurers millions annually, while traditional rule-based checks capture only known patterns.

GenAI Solution: Generative anomaly detection models learn normative patterns in claims data and flag outliers—also simulating fraudulent scenarios to train detection systems—and cross-check claims against policy terms using natural language understanding.

Impact: More proactive fraud prevention and refined underwriting, with GenAI projected to reduce claims payout amounts by approximately 3–4% [2], while early adopters are leveraging these insights for better risk selection [3].

Top Three GenAI Use Cases by Function

2. Operations & Customer Support

24/7 Customer Service Chatbot

Challenge: Insurers face high volumes of routine customer queries regarding policy details and coverage, leading to long wait times and reduced satisfaction.

GenAI Solution: Conversational AI agents (chatbots powered by LLMs) deliver immediate, human-like responses online or via telephone, handling tasks such as policy enquiries, claim filing guidance, and simple transactions.

Impact: Marked improvements in efficiency and service quality, with one UK insurer's virtual agent resolving 77% of FAQ queries in a single interaction [6] and reducing call waiting times by 50% [9].

Agent "Copilot" Tools

Challenge: Frontline service representatives and claims agents often spend excessive time on administrative documentation during calls, delaying responses.

GenAI Solution: Real-time agent assist systems transcribe calls live, automatically providing relevant knowledge base information and suggesting next-best actions.

Impact: Reduced call handling times and more consistent service delivery, with AI-supported agents managing more calls per hour and with fewer errors [7].

Process Automation & Reporting

Challenge: Many back-office processes such as policy issuance, compliance checks, and report generation are repetitive and rule-based.

GenAI Solution: Generative process automation can draft personalised policy documents, cover letters, and regulatory reports by integrating data from multiple systems and generating narrative explanations.

Impact: Significant productivity gains – tasks that previously required hours can now be completed in seconds, allowing employees to focus on more complex activities and reducing human error.

Top Three GenAI Use Cases by Function

3. Data & Analytics

Synthetic Data for Risk Modelling

Challenge: Insurers must model rare risks (e.g. floods, pandemics) while protecting customer privacy.

GenAI Solution: Generative models (GANs) create realistic synthetic insurance data that mirror real-world scenarios without exposing personal information [5]. This expanded dataset augments actuarial models and mitigates sampling biases.

Impact: Enhanced predictive accuracy and fairer pricing models – by 2027, an estimated 40% of insurers are expected to utilise GenAI-generated synthetic data to improve fairness and compliance.

Automated Data Extraction & Insights

Challenge: UK insurers manage vast quantities of unstructured data (PDF reports, adjuster notes) that strain analytics teams.

GenAI Solution: Large language models (LLMs) rapidly extract and summarise key information from documents, automating data preparation and revealing patterns that might be overlooked by human analysts.

Impact: Significant efficiency gains – up to 29% of routine insurance work hours could be automated, freeing analysts for higher-value tasks such as trend analysis and strategic planning.

Advanced Predictive Analytics

Challenge: Traditional actuarial models struggle to incorporate all drivers of risk and customer behaviour.

GenAI Solution: Generative algorithms simulate thousands of what-if scenarios by integrating economic, climate, and behavioural variables, thereby stress-testing underwriting assumptions and suggesting novel predictor combinations.

Impact: More robust risk forecasts and pricing accuracy, with insurers foreseeing a 1.5–3.0 percentage-point improvement in technical results [2].

Top Three GenAI Use Cases by Function

4. Finance & Strategy

Financial Planning & Analysis (FP&A)

Challenge: Finance teams devote substantial time to gathering data and generating reports rather than analysing strategy.

GenAI Solution: Automated financial analysis tools ingest internal and external economic data to produce draft reports, dashboards, and narrative insights.

Impact: Accelerated, data-driven decision-making, with routine reporting reduced from days to seconds and finance staff effort lowered by 10–25%, freeing professionals to concentrate on strategic planning.

Strategic Scenario Generation

Challenge: Developing business strategy requires evaluating numerous scenarios, such as new product launches, M&A activity, and regulatory shifts.

GenAI Solution: Generative scenario modelling simulates market conditions and competitor behaviours to produce outcomes for various “what-if” scenarios.

Impact: More informed strategy formulation, enabling leaders to explore dozens of strategic options cost-effectively, with some insurers identifying niche market opportunities that improved 5-year ROI by 15% [2].

Risk & Capital Optimisation

Challenge: Insurers must maintain sufficient capital for solvency while maximising returns under complex regulatory constraints.

GenAI Solution: AI-driven capital modelling generates thousands of economic scenarios to optimise reinsurance strategies, asset allocations, and risk transfer decisions—including stress testing extreme scenarios.

Impact: Improved risk-adjusted performance and more precise capital buffers, potentially reducing capital needs by avoiding overly conservative assumptions.

Top Three GenAI Use Cases by Function

5. Marketing & Product

Hyper-Personalised Marketing

Challenge: In a competitive market—especially in auto and home insurance—traditional mass marketing often fails to engage potential customers effectively.

GenAI Solution: Personalised content generation at scale allows GenAI to craft individualised marketing emails, social media ads, or video scripts tailored to each prospect's profile, adapting tone and localisation automatically.

Impact: Increased conversion and engagement, with quote submissions rising by 5–10% due to targeted messaging.

Product Recommendations & Cross-Sell

Challenge: Upselling or cross-selling insurance products is challenging without timely and relevant offers.

GenAI Solution: Next-best offer engines analyse policyholders' data to generate tailored product suggestions, such as recommending flood coverage to a home insurance client based on local weather patterns and claims history.

Impact: Enhanced customer retention and lifetime value, with retention campaigns expected to yield a 5–10% improvement in customer renewal rates.

Rapid Product Innovation

Challenge: Adapting insurance products to emerging risks or new consumer preferences is often a slow process.

GenAI Solution: Generative product design tools analyse market trends, customer feedback, and competitor offerings to suggest new product features or entirely new coverage ideas, including drafting policy wording and pricing scenarios.

Impact: Shorter product development cycles and first-mover advantage, with GenAI-driven innovation potentially increasing insurance revenues by 15–20% [2].

Top Three GenAI Use Cases by Function

6. Human Resources & Talent

AI-Augmented Recruitment

Challenge: The high volume of job applications in areas such as customer service or analysis makes screening and shortlisting time-consuming.

GenAI Solution: Intelligent talent acquisition tools rapidly screen CVs and cover letters, identifying suitable candidates based on insurance-specific criteria, and even generate customised outreach emails.

Impact: Reduced time-to-hire and lower recruitment costs, with some firms reporting screening time reductions of up to 75% [4].

Personalised Training & Knowledge Management

Challenge: Keeping a large workforce updated on complex insurance products and regulations is challenging with one-size-fits-all training.

GenAI Solution: AI can create interactive learning modules, quizzes, and simulated customer scenarios tailored to different roles, while also acting as an internal “ask the expert” chatbot.

Impact: Accelerated onboarding and continuous upskilling, leading to improved decision-making and compliance.

Enhancing Employee Productivity & Engagement

Challenge: Concerns about AI displacing jobs are mitigated when insurers use GenAI to elevate human work by automating routine tasks

GenAI Solution: An “AI co-worker” handles mundane tasks such as data entry and routine emails, effectively serving as a junior assistant.

Impact: Increased productivity and improved employee morale, with 61% of insurers expecting higher staff productivity [4] and case studies showing doubled engagement scores [10].

Top Three GenAI Use Cases by Function

7. Legal & Compliance

Policy Document Analysis

Challenge: Legal teams must review extensive policy wordings, endorsements, and regulatory texts to ensure compliance—a process that is slow and prone to error when done manually.

GenAI Solution: Document analysis AI parses contracts and regulatory updates, highlighting key clauses, discrepancies, or risky language.

Impact: Accelerated compliance reviews and reduced legal risk, with AI-assisted contract reviews achieving up to 80% faster turnaround times with 94% accuracy [8].

Claims Compliance & Fraud Auditing

Challenge: Verifying that each claim complies with policy terms and regulatory requirements is labour-intensive and often relies on post-hoc sampling.

GenAI Solution: Automated compliance auditing uses generative models trained on historical claims and regulatory guidelines to flag anomalies and provide explanations for deviations.

Impact: Enhanced fraud detection and governance, with real-time AI reviews potentially reducing operating losses and claims leakage by 30–50% [3].

Regulatory Research & Advice

Challenge: The volume of regulatory material that UK insurers must monitor is vast, risking oversight and inefficiencies.

GenAI Solution: An AI legal researcher ingests legislation, regulatory bulletins, and judicial decisions, providing synthesised answers to complex legal queries.

Impact: More timely and informed legal decisions, dramatically reducing research time while still requiring human oversight to validate AI outputs [8].

Organisation-wide Data Literacy

Building a data-literate workforce is crucial for UK insurers to maximise GenAI's potential. GenAI tools are only as effective as the people interpreting and acting on their outputs. Employees across all functions require at least a basic understanding of AI's capabilities and limitations. With an estimated 29% of insurance work hours potentially automatable and a further 36% augmented by GenAI [4], roles will evolve rather than disappear. Decision-making becomes faster and more evidence-based when staff confidently leverage AI insights—for instance, approving a claim within minutes based on an AI recommendation. Process optimisation accelerates when front-line teams proficient in AI identify new automation opportunities and continuously refine workflows.

Investing in GenAI training and change management is therefore paramount. Notably, 47% of insurers in one survey identified staff training as the primary barrier to GenAI adoption [4]. Equipping staff with AI knowledge through workshops, hands-on pilot projects, and clear ethical guidelines helps overcome apprehension and ensures that GenAI is seen as a trusted colleague rather than a replacement. For example, when Aviva introduced AI assistants, it promoted an "AI as colleague, not replacement" ethos that led to higher job satisfaction and engagement [10]. In summary, organisation-wide data literacy enables insurers to unlock GenAI's full potential, driving smarter decisions and continuous improvement.

Table of Productivity Improvements

Function	Use Case	Claimed Improvement	Reference
Data & Analytics	Data analysis automation	~29% of routine insurance work hours automated	[1]
Claims & Underwriting	Claims handling co-pilot	Up to 50% productivity increase in claims processing tasks	[3]
Operations & Customer Support	Virtual customer assistant	~50% reduction in call centre staffing costs	[9]
Finance & Strategy	Finance process automation	10–25% reduction in finance/IT staff costs through AI-driven efficiencies	[1]
Marketing & Product	Hyper-personalised marketing	5–10% increase in quote conversion/submissions	[2]
Human Resources & Talent	AI augmentation of work	61% of insurers expect higher staff productivity with GenAI tools	[4]
Legal & Compliance	Contract review automation	~80% faster contract reviews with ~94% accuracy	[8]

AiCore

GenAI Case Study: Aviva

Organisation Overview:

Aviva plc is a leading UK-based insurance company, the nation's largest general insurer and a major provider of life and pensions. With over 18 million customers in the UK, Aviva operates a diversified model offering personal lines (e.g. motor, home), commercial insurance, life insurance, and asset management. This scale and scope made Aviva an ideal testing ground for GenAI, given its vast data and multiple use cases. Aviva's strategic goal has been to become a 'digital-first' insurer, leveraging AI to enhance customer outcomes and operational efficiency [10].

GenAI Implementation

Aviva set out to build the UK's most advanced claims operation using AI, reimagining every step from first notification of loss (FNOL) to final settlement. In partnership with technology experts, Aviva implemented a suite of GenAI-driven solutions including an intelligent FNOL triage system, claims decision-support models, and AI-powered communication tools. When a claim is reported, a GenAI triage model immediately analyses the incident description and policy details using natural language understanding to determine liability—flagging scenarios that indicate at-fault patterns—and routes the claim to the appropriate team with priority tags. This process replaces the manual review previously undertaken by experienced handlers

Aviva also introduced a claims 'copilot' that auto-generates draft reports and suggests subsequent actions, such as requesting specific documents or approving straightforward cases. On the customer side, GenAI is employed to keep claimants informed by automatically sending updates via email or text, crafted in a clear, empathetic tone tailored to each situation. These GenAI applications integrate seamlessly with Aviva's existing claims workflow, augmenting the expertise of human adjusters. Importantly, Aviva invested heavily in training its staff to work effectively alongside AI while maintaining rigorous oversight to ensure fairness and regulatory compliance.

Business Impacts

The results of Aviva's GenAI transformation have been significant. The average time to assess liability in complex claims decreased by 23 days, as AI rapidly gathers key facts and directs adjusters to a preliminary decision [10]. Claim routing accuracy improved by approximately 30%, ensuring that cases reach the appropriate experts on the first pass and reducing rework. These efficiencies have translated into markedly improved customer satisfaction, with shorter wait and cycle times contributing to a 65% reduction in customer complaints and a more than sevenfold increase in the internal Net Promoter Score.

Operationally, the streamlined claims process has yielded substantial cost savings. Faster liability decisions and enhanced triage have helped control indemnity spend and overall operating expenses, contributing to an estimated 2–3% improvement in the loss ratio for UK general insurance. Furthermore, the GenAI solutions have supported a more sustainable claims process; for example, AI-generated repair recommendations have led to a tripling in the use of recycled parts in auto repairs, thereby reducing both costs and environmental impact [10].

Employees have also benefitted, as offloading routine tasks to AI has allowed adjusters to focus on complex cases and provide more empathetic customer service. Post-implementation, employee engagement scores doubled, reinforcing the view that GenAI is a valuable colleague rather than a replacement [10], [9]. Aviva's experience offers a compelling roadmap for other UK insurers, demonstrating that with executive vision, cross-functional collaboration, and robust oversight, GenAI can drive significant improvements in both efficiency and customer outcomes.

References

[1] Deloitte UK, “Generative AI: Value creation for UK insurers,” Deloitte Insights report, Jun. 2024.

[2] C. Giovine, K. Rifai, P. Hudelson, P. Joseph, and S. Kamath, “The potential of gen AI in insurance: Six traits of frontrunners,” McKinsey & Company – Insurance Blog, Nov. 20, 2024.

[3] K. Donnelly et al., “The $100 Billion Opportunity for Generative AI in P&C Claims Handling,” Bain & Company Brief, Oct. 31, 2024.

[4] P. Sharma, “Why are most UK and US insurers using generative AI?” IBS Intelligence, Jun. 1, 2023.

[5] IDC (S. Saha), “Insurers to use synthetic data in AI for fairness, compliance by 2027,” IT-Online, Apr. 2024.

[6] Boost.ai, “Ageas successfully resolved more than three-quarters of chat FAQs first-time with conversational AI,” Case Study (online), Nov. 26, 2024.

[7] I. Santenac, G. Messineo, and P. Manchester, “How to revolutionise the insurance value chain with generative AI,” EY Insights, May 14, 2024.

[8] P. Estes, “AI Contract Management: 80% Time Savings in Legal Work,” Virtasant – AI Today Blog, Oct. 15, 2024.

[9] Fortune Magazine, “Keeping the ‘human’ in human resources in an era of generative AI,” Fortune.com, Jun. 20, 2024.

[10] McKinsey & Company, “Aviva: Rewiring the insurance claims journey with AI,” Digital case study, 2023.

AiCore

AiCore

Specialist AI, Data and Cloud Capability Partner

Transform your team and business through government-funded training in generative AI

Haron Shams
Managing Director
haron@theaicore.com

Christian Kerr
Managing Director
christian@theaicore.com

Tim Howe
AI Consultant
tim@theaicore.com

AiCore