

InsurTech explained: How technology is revolutionising insurance

17 June 2025  Jon Snade, Asha Patel and Tom Murrell

The insurance sector - long defined by legacy systems, paper-heavy workflows, and cautious innovation - has been undergoing a profound transformation over recent years.

At the heart of this change is the rise of the InsurTech sector, the intersection of insurance and technology. As legal advisors working closely with InsurTech companies, underwriters, investors and regulators, we've seen firsthand how digital tools are reshaping the insurance industry.

This guide will:

- Map out the evolving InsurTech ecosystem.
- Highlight the key trends and business models emerging in the UK market.
- Explain the core technologies driving this shift.
- Examine the legal and organisational hurdles InsurTech firms must overcome as they grow.
- Offer a glimpse into what the future of insurance might look like.

What is InsurTech? A working definition

InsurTech refers to the broad category of technological innovation within the insurance value chain. From distribution and underwriting to claims management and reinsurance, InsurTech businesses are leveraging technologies such as artificial intelligence (AI), machine learning, blockchain, and the Internet of Things (IoT) to redesign insurance for the digital era.

Importantly, InsurTech is not about replacing insurance, it's about refining and reinventing it. These innovations respond directly to customer demands for greater personalisation, speed, transparency, and value.

Why and how technology is transforming the insurance industry

The insurance sector has long been recognised for its conservatism and its reliance on deeply embedded legacy systems. However, increasing customer expectations for seamless digital experiences, data-driven pricing, and responsive products have pressured insurers to evolve and modernise. In response, InsurTech companies (many of which are early stage, venture capital backed companies) have emerged to answer that call. With their agility, innovative technologies, and customer-first approach, they are reshaping the landscape in ways that many traditional insurers have struggled to match.

Core transformations being driven by InsurTech firms include:

- **Digital customer experiences** that replace manual onboarding processes with seamless, user-friendly interfaces.
- **Data-driven underwriting** that enhances pricing accuracy, better identifies risk, and reduces losses.
- **Automation of claims management**, significantly reducing time and cost.
- **Modular product design**, allowing insurers to innovate and iterate in real time.

The six key InsurTech categories (and their core transformations)

In the UK, the InsurTech market is gravitating towards six distinct categories, each with its own regulatory, commercial and technical considerations.

1. Managing General Agents (MGAs)

Core transformation: Modular product design.

What they do:

- Bundle capacity from established insurers to underwrite innovative products.
- Offer turnkey covers (e.g. on-demand cyber, parametric weather) without building full underwriting back-ends.

Why it matters: MGAs can iterate on product features – pricing tiers, endorsements or parametric triggers without the overhead of a full carrier licence.

2. Platform providers

Core transformation: Modular product design and digital customer interfaces.

What they do:

- Provide white-label, no-code/low-code platforms for policy creation, sale and administration.
- Embed seamless portals and apps, eliminating manual onboarding and paper forms.

Why it matters: Insurers and brokers can launch new products in days – complete with branded customer-facing apps - rather than months.

3. Claims innovations

Core transformation: Automated claims management.

What they do:

- Leverage AI, video streaming and cloud-hosted workflows to auto-triage, assess and settle claims.
- Detect fraud, validate damage remotely and issue payments in minutes instead of weeks.

Why it matters: Policyholders enjoy faster, fairer payouts; insurers slash administrative costs and improve loss ratios.

4. Data and analytics specialists

Core transformation: Data-driven underwriting.

What they do:

- Ingest, enrich and analyse massive real-time data streams – satellite imagery, telematics, social signals, sensor feeds to redefine risk models.
- Generate dynamic risk scores that adjust pricing and capital requirements on the fly.

Why it matters: Underwriting moves from broad risk pools to precision pricing, reducing unforeseen losses and aligning premiums with actual exposure.

5. Digital brokers

Core transformation: Digital customer interfaces.

What they do:

- Aggregate quotes from multiple carriers and present them via slick web or mobile apps.
- Replace phone-or-paper applications with real-time e-binding and policy issuance.

Why it matters: Consumers get instant, transparent quotes and can bind cover in minutes – no paperwork required.

6. Risk-management enablers

Core transformation: Data-driven underwriting and modular product design.

What they do:

- Offer governance, compliance and risk-monitoring dashboards that plug into insurers' systems.
- Deploy IoT sensors (home flood, smoke, leak detectors) and feed alerts into proactive risk-mitigation programmes.

Why it matters: Carriers can both price more accurately and prevent losses before they occur – closing the loop between underwriting and prevention.

Key innovations driving InsurTech forward

Several breakthrough technologies are fuelling the growth and scalability of InsurTech:

- **AI and machine learning:** For underwriting, claims processing, and customer interactions.
- **IoT:** Enables real-time monitoring of insured assets (e.g., telematics for vehicles, sensors for homes).
- **Blockchain:** Powers smart contracts and ensures transparency in claims and reinsurance transactions.
- **RegTech:** Optimising data and automating processes to enhance compliance functions.
- **Predictive analytics:** Allows proactive risk management and anticipates customer churn.
- **Cloud computing:** Provides scalability and resilience, especially critical for data-heavy applications.

Each of these innovations raises important legal questions around compliance, liability, data use, and contractual enforcement, making legal guidance indispensable in the sector. We explore below some of the themes outlined above, with a focus on the technologies currently in use and the key trends shaping the InsurTech landscape.

The role of AI and machine learning in modern insurance

Artificial intelligence has become central to how insurance is underwritten and delivered. Its most impactful applications include:

- Automated claims handling, where AI evaluates documentation, assigns value, and approves payouts.
- Risk scoring, using non-traditional data sources such as social media and lifestyle indicators.
- Fraud detection, identifying anomalies in claims patterns.
- Chatbots and virtual agents, providing 24/7 customer support at scale.

Firms operating in this space must navigate issues such as algorithmic transparency, bias mitigation, and regulatory scrutiny.

IoT in insurance: Smarter policies through connected devices

The integration of smart devices is enabling insurers to move from reactive to preventative models of cover:

- **Home insurance:** Leak sensors and smoke alarms alert insurers before a claim arises.
- **Auto insurance:** Telematics provide dynamic pricing based on driver behaviour.
- **Health insurance:** Wearables incentivise healthy habits, with insurers adjusting premiums based on activity data.

This proliferation of behavioural and biometric data necessitates robust privacy frameworks and precise contractual drafting around data usage and ownership.

RegTech: Transforming compliance operations

The modern regulatory burden on firms means that they must update their collection and management processes to capture all relevant data points to prove compliance. The lean nature of InsurTech means there are opportunities to:

- **Automate processes:** improving data validation and limiting human error.
- **Rich data sets:** identifying and assessing potential risks by providing advanced analytics.
- **Real-time monitoring and reporting:** enhancing responsiveness to trends within the portfolio, enabling prompt adjustments.

Embracing technology can propel InsurTech firms ahead of their legacy counterparts by improving compliance efficiency and gaining a competitive edge through an improved understanding of their operations.

Benefits of InsurTech for insurers and policyholders

For insurers:

- Enhanced risk profiling and lower loss ratios.
- Operational efficiency through automation.
- Ability to rapidly design and test new products.

For policyholders:

- More relevant and personalised coverage.
- Greater transparency and control.
- Faster claims resolution and improved service.

The convergence of efficiency and personalisation marks a rare instance where insurer and customer interests are aligned - something long considered elusive in this industry.

Challenges facing InsurTech adoption

Despite the opportunities, InsurTech faces material obstacles:

- Regulatory complexity, particularly for cross-border operations and digital-only models.
- Data governance and increasing global scrutiny of data privacy and AI ethics.
- Legacy integration for incumbent insurers adopting enabler platforms.
- Consumer trust, especially in areas where decision-making is fully automated.

Legal advisors must proactively assess these risks, helping clients develop regulatory strategies, internal policies, and compliance architectures that anticipate change.

The future of insurance: What's next for InsurTech?

Over the next five years, we expect to see:

- **Embedded insurance** becoming more prevalent, with cover integrated at the point of sale (e.g., booking travel, buying gadgets or ordering car repair).
- **Hyper-personalisation** driven by continuous data flows.
- **RegTech and compliance automation** becoming part of product design from day one.
- **Greater regulatory engagement**, particularly from the FCA and PRA, as the line between financial services and technology continues to blur.
- **An increase in partnerships** between traditional insurers and InsurTech firms as larger market players see opportunities to collaborate with, and invest in, InsurTech firms, to access technological, intellectual property and data advantages over their competitors and obtain new product distribution channels.

Conclusion

InsurTech is more than a set of digital tools. It represents a fundamental rethinking of how insurance solutions are designed, delivered and experienced. For new market entrants and established insurance players alike, this evolution offers opportunities but also requires stakeholders to:

- navigate regulatory considerations,
- develop IP strategy,
- put in place appropriate data architecture,
- evaluate the appropriate commercial structure,
- secure the necessary financing, and
- optimise product design.

InsurTech is not just about better insurance. It's about a smarter, more connected, and ultimately more human experience of protection. We are proud to support the innovators driving that vision forward.

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