NTT DATA

Insurtech Global Outlook 2026

Orchestrate value beyond boundaries of Insurance

Content

01.

Trends/ pain points / challenges

NTT DATA Insurtech Global Outlook 2026 / Orchestrate value beyond boundaries of Insurance

Challenges and considerations

The insurance industry is operating in an environment shaped by rapid technological change, dynamic risk evolution, and fundamental shifts in customer behavior. Solving the industry's most complex challenges increasingly requires ecosystem thinking and deep collaboration across partners. To achieve the next level of innovation, insurers must engage with the technology frontier and evolve their operating models to thrive in this new environment.

Decreasing insurance innovation

Insurance Innovation is facing its challenges. The industry is importing innovation with partnerships and an ecosystem architecture.

In some cases, Insurers are building the technology frontier with emerging technology companies and other partners.

Resilient operating models

As risks grow in complexity and severity, insurers must shift from pure indemnification to models that protect, prevent, and reduce harm. Partnering with stakeholders and innovators becomes key to improve performance and strengthen resilience for the entire sector.

Yet challenges remain: In 2026, fewer than 15 % of Property & Casualty insurers have scaled AI across their core operations, even though more than 60 % are piloting or deploying AI technologies. Legacy systems still hamper transformation, with up to 70 % of IT budgets spent on maintaining outdated platforms, slowing resilience building and operational agility.

Platform modularity & flexibility

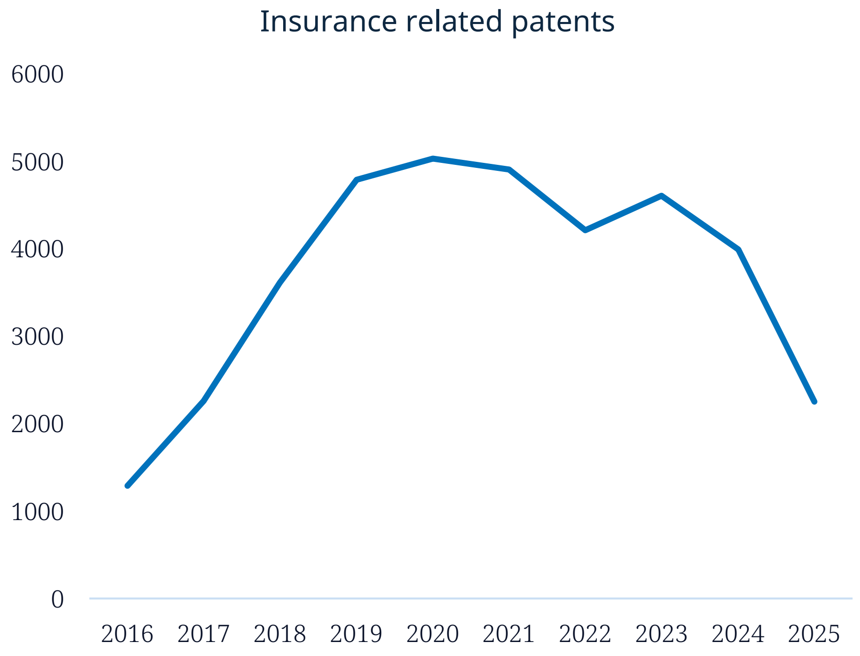
Insurance is shifting from fixed, product-centric models to adaptive, platform-driven ecosystems. Ecosystems, built on modular, vendor-agnostic technologies, allow insurers to integrate insurance with other ecosystems and embed coverages in new customer journeys.

For example, the embedded insurance market powered by APIs and ecosystem partnerships has been estimated in the tens of billions in 2026 and is forecast to expand rapidly as coverage is offered inside e-commerce, mobility, and digital finance platforms.

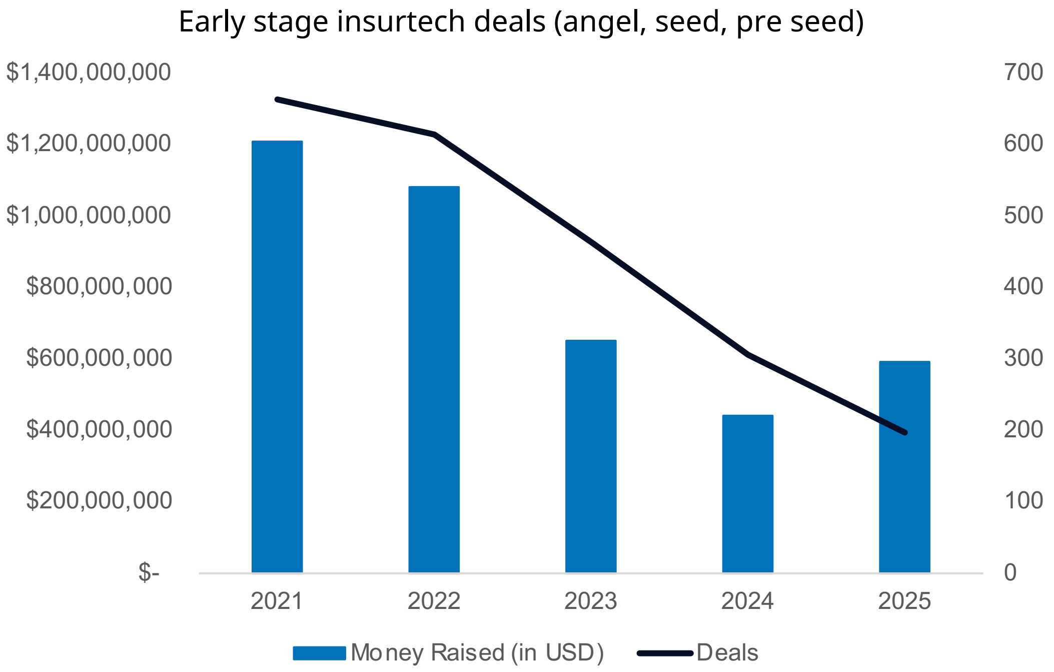
Source: WEF Insurability Changing World 2026

Decreasing insurance innovation

Insurance patents filed has been falling over the last years, reaching in 2025 the same level of 2017. In parallel, new entrants illustrated by early-stage funding has been also decreased in term of number of deals from 2021 to 2025.



Source: WIPO Database



Source: Internal data source

Resilient operating models with limited connection to the technology frontier

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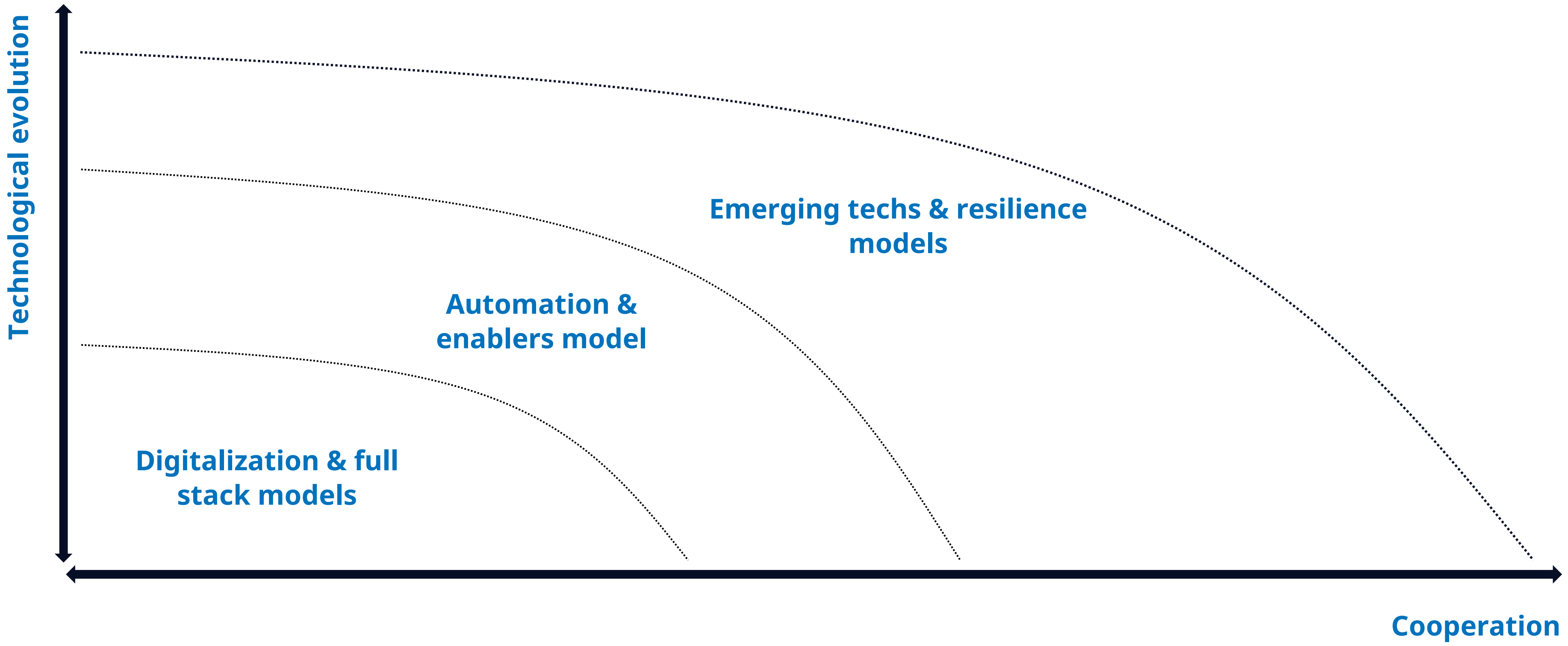
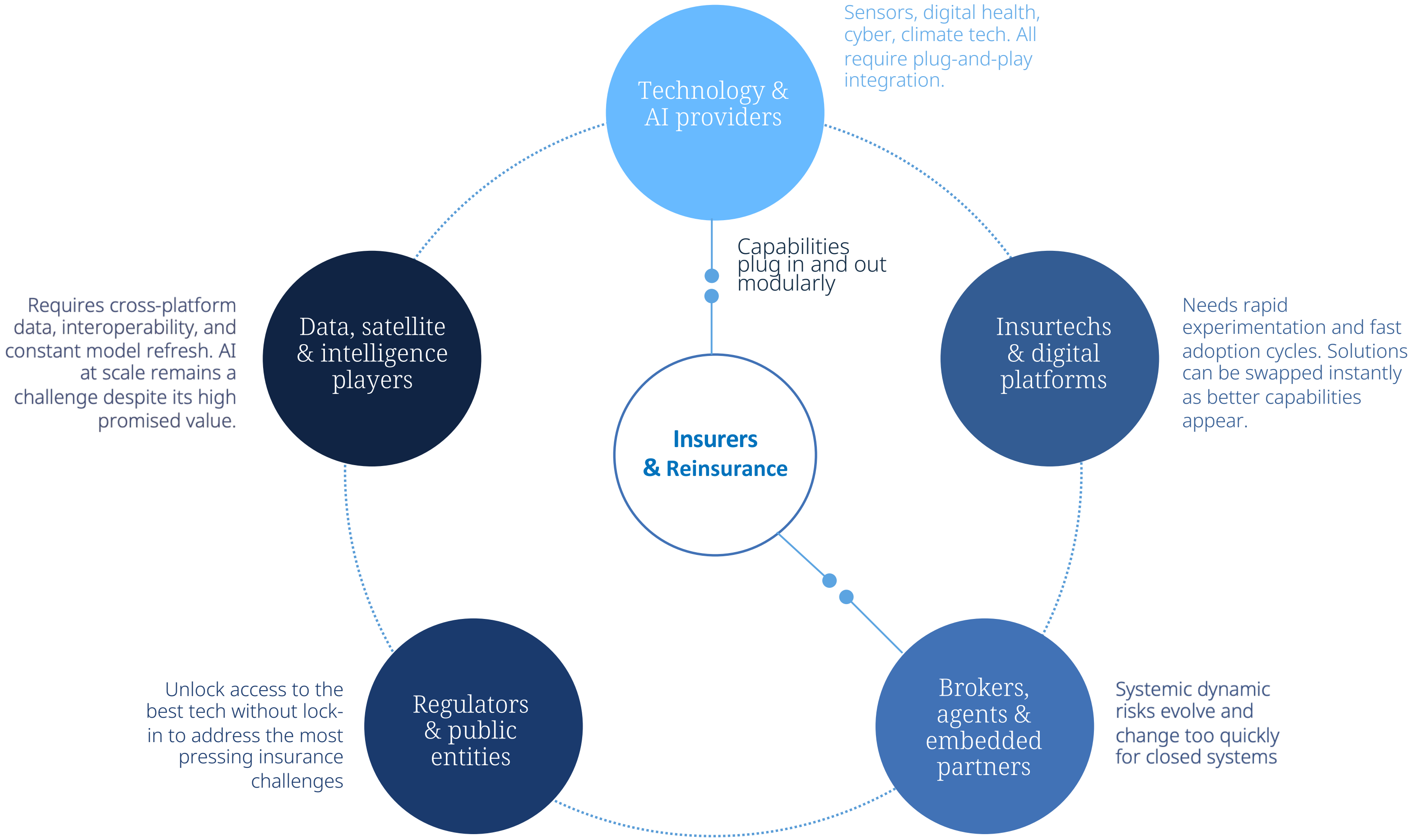


Platform modularity & flexibility

As insurer roles expand beyond traditional boundaries, value can no longer be created inside a single organization. Dynamic roles require ecosystem architecture, that turns collaboration into repeatable performance.



02.

Solutions/ key technologies

NTT DATA Insurtech Global Outlook 2026 / Orchestrate value beyond boundaries of Insurance

Insurance ecosystem operating model

Insurance is entering a phase where static models can no longer keep pace with risk, technology, or customer behavior. Four structural shifts are redefining how insurance must operate: dynamic risk, ecosystem architecture, open insurance and adaptive operating models.

Invisible insurance

Embedded insurance and platform disintermediation enable insurers to reach and engage new customers through leading customer experience platforms, while aligning insurance products and services more closely with evolving customer expectations.

Embedded insurance projected to exceed $116B in premiums by 2025.

Signals a move from occasional, product-based interactions to **continuous, contextual insurance.**

Ecosystem driven insurance

A resilience model that extends beyond organizational boundaries enables insurers to adopt multiple strategies to strengthen their capabilities, address increasingly complex challenges, and pursue sustainable growth.

In 2024, 37% of insurers' primary source of innovation was in house development and **63% was collaboration.**

Value creation has moved outside the insurer's boundaries.

Open insurance

Platform businesses capture outsized market value vs. traditional linear businesses. Ecosystems enable faster innovation, lower marginal costs, and network effects.

75% of insurance executives say digital ecosystems will be transformative.

26% are experimenting with platform models

Connect to tech frontier

Collaboration and partnerships enable insurance ecosystems to access state-of-the-art technologies, allowing insurers to import innovation or co-create solutions with emerging technologies and specialized partners.

Strategic partnerships bridge today's capabilities with tomorrow's breakthroughs, accelerating readiness and reducing innovation risk.

Source: WEF Insurability Changing World

Invisible insurance

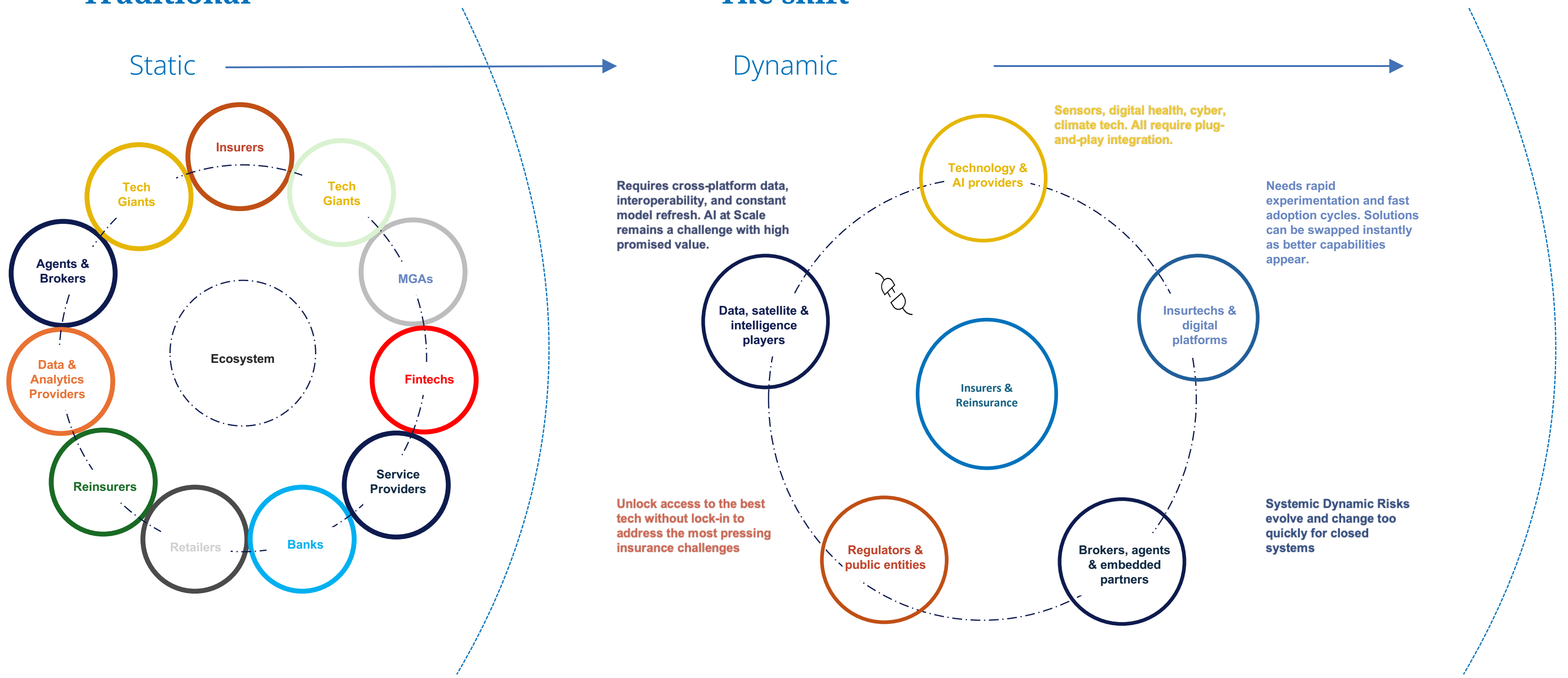
Embedded insurance and platform disintermediation enable insurers to reach and engage new customers through leading customer experience platforms, while aligning insurance products and services more closely with evolving customer expectations

Invisible insurance: From static to dynamic limits

Insurance no longer operates within a static boundaries; it now functions as a dynamic ecosystem that creates value through interconnected players and capabilities. As a result, insurance strategies, and the roles required to execute them, have expanded and evolved.

Traditional

The shift



Dynamic roles emerging

- **Risk orchestrator** coordinating multiple ecosystem players
- **Data & insights** provider translating real-time signals into action
- **Platform participant** embedding insurance into third-party journeys
- **Prevention enabler** reducing loss before it happens

Market Share Generative AI foundational models and platforms. Source: IoT Analytics

End-to-end insurance and technology solutions

bolttech

Global insurtech and technology provider offering end-to-end insurance and distribution solutions, including digital platforms and device protection tech.

AXA

AXA Group, specialising in B2B2C insurance & assistance across motor, home, travel, health, credit & lifestyle protection — delivered via partners to enhance customer experiences.

Overview

- AXA Partners and bolttech unveil strategic partnership to drive embedded insurance solutions across Europe

Business need

- Customers increasingly expect seamlessly integrated insurance at the point of purchase (e.g., with products and services), rather than traditional standalone policies.
- Business partners (telcos, banks, travel platforms, retailers, OEMs) need flexible, scalable insurance experiences embedded into digital journeys to unlock new revenue streams and customer value

Partnership solution

This partnership combines AXA Partners' innovative B2B2C insurance and assistance services across Motor, Home, Travel, Credit & Lifestyle Protection, and other lines of business within the AXA Group. It also leverages bolttech's expertise as a global insurtech and provider of end-to-end insurance and technology solutions, including device protection solutions.

Together, AXA Partners and bolttech will create new commercial opportunities for business partners by enabling greater upsell and cross-sell potential. The partnership will focus on building strategic relationships with carriers, MGAs, reinsurers and distribution partners across verticals such as telcos, financial services, utilities, travel, OEMs and retail, expanding market reach and meeting a wider range of customer needs.

Embedded insurance in Japan

CHUBB

Subsidiary of Chubb Group, a global insurance leader operating in 54+ countries, providing personal and commercial property & casualty products.

smartpay

Tokyo-based fintech offering Japan's "Buy Now, Pay Later" (BNPL) services and digital payment solutions, including Smartpay Bank Direct (instant bank withdrawals)

Overview

- Bring Japan's first embedded insurance service into digital commerce by integrating insurance directly into the payment flow — starting with BNPL transactions.

Business need

- Traditional insurance purchases in Japan remain analog, paper-based, and disconnected from digital transactions.
- Consumers increasingly prefer digital, seamless experiences, with over 50% of spending now cashless, demanding friction-free insurance at the point of sale.
- Market growth opportunities exist as embedded insurance adoption lags behind digital commerce trends.

Solution

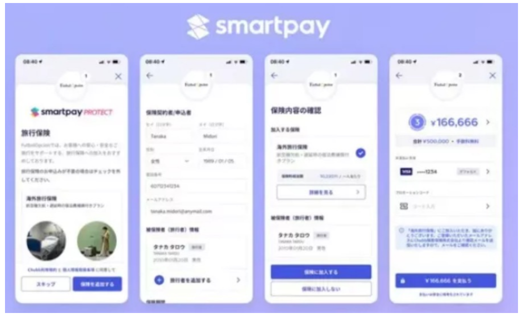
- Embedded Insurance Integration: Smartpay embeds Chubb's insurance options directly into its BNPL checkout process.
- Seamless Customer Experience: Users can opt into insurance at the moment of payment — without separate forms or offline steps.
- Secure, Tech-Enabled Orchestration: Combines Smartpay's payment infrastructure with Chubb's insurance backend to deliver real-time policy issuance and dynamic pricing.

KPI

Metric	Business Impact
First-to-Market rollout	Set to launch the first embedded insurance product in summer 2025 via Smartpay BNPL.
Improved CX	Reduces friction by eliminating separate insurance application steps
Market opportunity Capture	Embedded insurance aligns with Japan's digital payment growth and evolving consumer expectations
Operational efficiency	Real-time digital issuance improves speed and lowers manual processing

How does it work

- Trigger at Checkout – When a customer selects Smartpay's BNPL at purchase, embedded insurance options appear.
- Instant Enrollment – Insurance coverage is selected and issued in real time within the same digital flow.
- Point-of-Need Relevance – Initial offerings include coverage linked to international travel and cultural programs (e.g., Fútbol Opción), easing risks for families traveling abroad.



Ecosystems infrastructure

A layered infrastructure, in which foundational and emerging technologies work together to enable coupling, decoupling, and rapid scaling of new solutions, is increasingly essential in today's insurance landscape. Cloud + AI for example creates the perfect environment to build insurance solutions at scale.

Informed & sovereign infrastructure ready for ecosystems

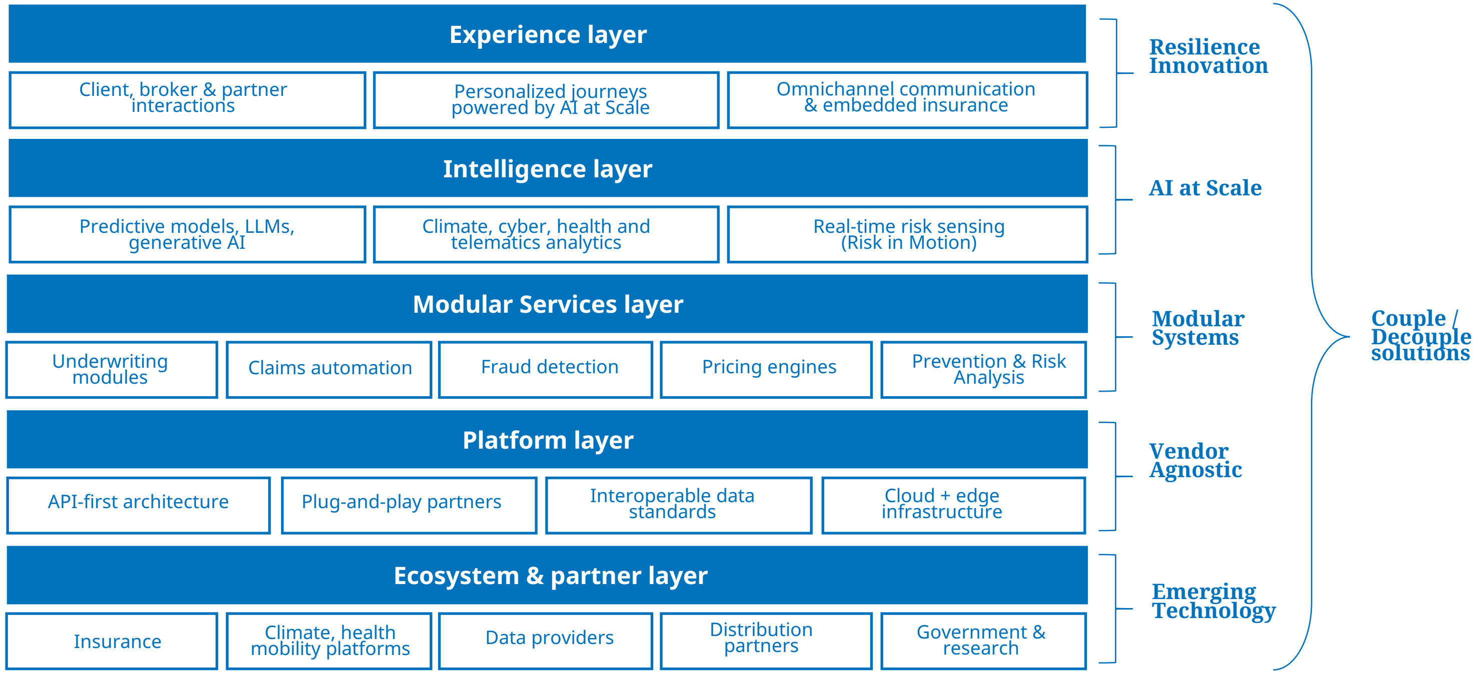
Ecosystems are now the operating model that lets insurers integrate, innovate, and scale, with each layer designed to plug into partners, data sources, and technologies seamlessly.

Hybrid, Intelligent Infra for AI and Data.

Insurance is shifting from fixed, product-centric models to adaptive, platform-driven ecosystems. **Ecosystems built on modular, vendor-agnostic technologies allow insurers to scale AI, integrate emerging innovations,** and respond to risks that evolve in real time.

This adaptive architecture lets companies plug in new capabilities, remove outdated ones, and continuously upgrade their operating model. **The result is faster innovation, stronger resilience, and a long-term competitive edge.**

Insurers must decide where workloads should run (on-prem, sovereign cloud, edge) to optimize cost, latency, resilience, security and compliance.



Strategic modernization roadmap

In the dynamic insurance industry, cutting-edge technologies are transforming traditional processes to boost efficiency and agility. Undertaking a legacy modernization initiative within an organization can lead to multiple projects. These projects may involve streamlining applications, modifying infrastructure, implementing new data management approaches, transforming processes, restructuring teams, and addressing talent requirements.

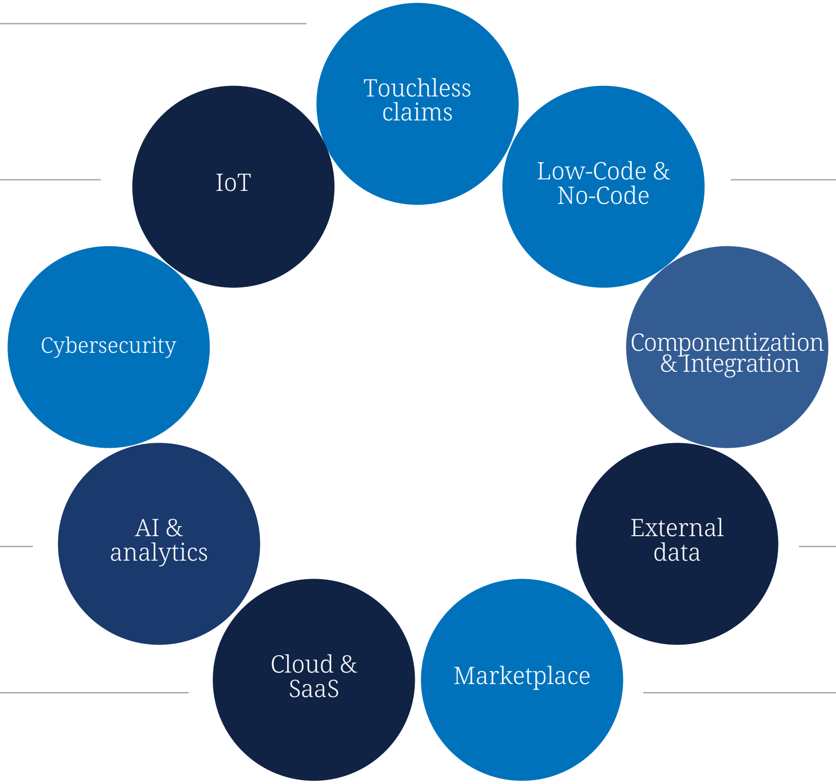
Minimal Physical interactions and paperwork usage-based insurance products

Integrate and process data from IoT devices and support usage-based Insurance products

Ensure advanced cybersecurity to protect against sophisticated cyber threats and security of sensitive data

Leveraging AI and Analytics to improve operations, sales and other activities across the value chain

Adopt cloud-native and SaaS solutions to increase scalability, flexibility with lower costs



Development of new products and services with easy and minimal configuration and without wide coding knowledge

Decouple components into distinct modules and focus on an API first strategy to ensure a seamless integration

Access large amounts of data from third parties to improve underwriting, risk assessment and customer experience

Obtain best-in-class tools and services and niche solutions available in the market from the third parties

Insurance challenges & the cloud imperative

The first generation of cloud adoption centered on speed, cost, and modernization, helping insurers escape the limitations of legacy infrastructure whereas. The second generation, insurance cloud 2.0, is defined not by migration, but by value creation.

Cloud is how insurers move from legacy protection models to intelligent, connected, and experience-driven insurance

More than 90% run at least part of their core operations in the cloud	**40% of investment** on legacy Modernization via SaaS and Cloud
70% of insurers prioritize hybrid cloud architectures	**$723.4 billion in 2025** spending on public cloud services

Simplify the core

Replace fragmented legacy systems with modular, cloud-first platforms to increase speed, agility, and innovation.

Enable ecosystems

Use cloud APIs to embed insurance into customer journeys and partner ecosystems, shifting from products to experiences.

Adopt a lean operating model

Leverage SaaS, BPaaS, and cloud elasticity to reduce fixed costs, improve margins, and adapt faster to change.

Put AI at the core

Use cloud-native AI and automation to transform underwriting, claims, fraud detection, and customer service.

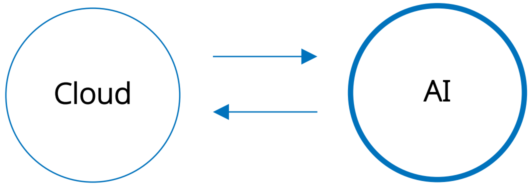
Become data-centric

Treat data as a strategic asset, using cloud analytics to enable real-time insights, personalization, and Open Insurance.

Source: Cloud Architecture and Modernization

Cloud + AI symbiosis in insurance

Cloud and Artificial Intelligence, especially Generative AI (GenAI), are no longer separate initiatives in insurance. They are deeply symbiotic, reinforcing and accelerating each other.

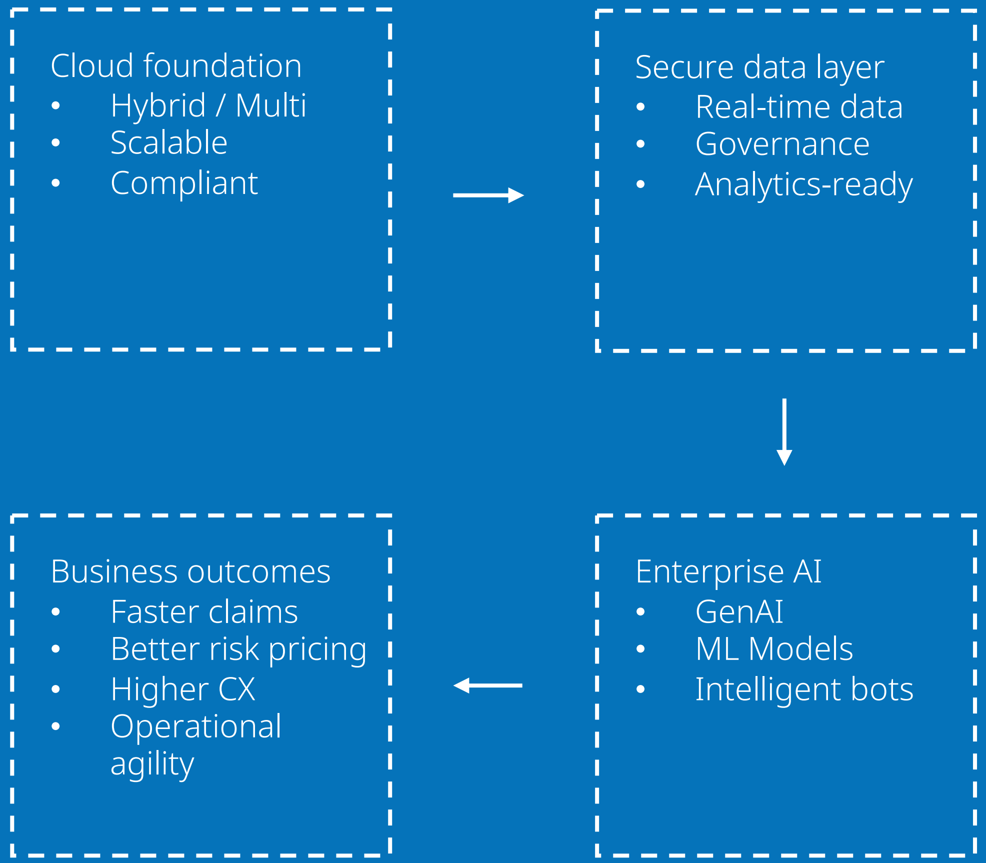


Generative AI can analyze and modernize legacy code, generate documentation, and automate testing, preserving business knowledge while accelerating release cycles. This improves engineering productivity and reduces migration risk.

As a result, GenAI is both a catalyst for modernization and an outcome of it, helping insurers shorten transformation timelines while building the foundation for enterprise-wide AI. GenAI-powered modernization accelerators automate code remediation and testing, while partnerships with hyperscalers enable seamless integration into modern cloud environments.

Cloud adoption is a strategic enabler, delivering scalability, integration with modern technologies, and strong security and compliance—creating the conditions for AI to scale across the insurance enterprise.

Cloud is the foundation; AI is the multiplier



Ecosystems-driven strategies

A resilience model that extends beyond organizational boundaries enables insurers to adopt multiple strategies to strengthen their capabilities, address increasingly complex challenges, and pursue sustainable growth.

Ecosystems-driven strategies

Co-develop model in the ecosystem is open for collaboration and building products if required. Innovation at the ***frontier is increasingly ecosystem-driven.*** Insurers that orchestrate ecosystems, buy capabilities or integrate with partners move faster, reduce risk, and scale capabilities more effectively.

Risk

Risk tolerance
Lower risk environment

GUIDEWIRE + Quantee

1

Buy

This approach enables rapid deployment, reduces time-to-value, and leverages mature vendor ecosystems to compensate for limited in-house expertise.

StateFarm / PING AN

2

Build

This approach enables rapid deployment, reduces time-to-value, and leverages mature vendor ecosystems to compensate for limited in-house expertise.

Risk aversion
Risky environment

NEXT + zesty AI

3

Partner

Partnerships reduce operational and financial risk while enabling controlled experimentation and shared value creation.

Liberty Mutual Reinsurance + safehub

4

Co-development

Organizations here possess strong internal capability but prefer to share risk by co-creating solutions with ecosystem partners.

Specialist

Capability

Generalist

Builders on frontier

Players in this quadrant must be prepared to absorb higher risk and upfront investment to drive performance expansion and innovation through proprietary capability development. This approach is typically best suited to organizations with strong market leadership and advanced technology maturity, where internal build can create sustainable competitive advantage.

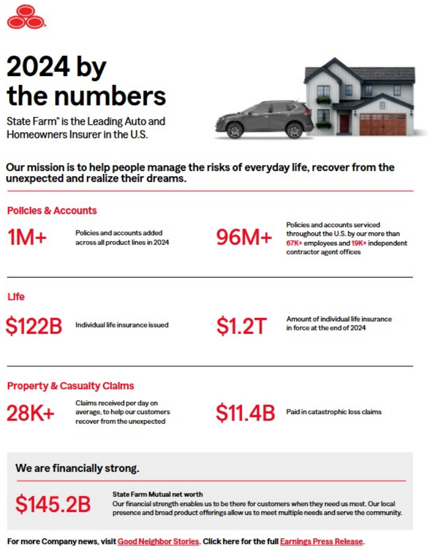
StateFarm

State Farm's innovation focus remains anchored in auto insurance, telematics, and operational excellence within core P&C workflows.

Frontier Capabilities

The Research and Innovation Lab
Vehicle Research Facility

Leading Auto and Home Insurer in the US



2024 by the numbers

State Farm® is the Leading Auto and Homeowners Insurer in the U.S.

Our mission is to help people manage the risks of everyday life, recover from the unexpected and realize their dreams.

Policies & Accounts

1M+	Policies and accounts added across all product lines in 2024	96M+	Policies and accounts serviced throughout the U.S. by our more than 67K+ employees and 19K+ independent contractor agent offices

Life

$122B	Individual life insurance issued	$1.2T	Amount of individual life insurance in force at the end of 2024

Property & Casualty Claims

28K+	Claims received per day on average, to help our customers recover from the unexpected	$11.4B	Paid in catastrophic loss claims

We are financially strong.

$145.2B — **State Farm Mutual net worth**
Our financial strength enables us to be there for customers when they need us most. Our local presence and broad product offerings allow us to meet multiple needs and serve the community.

For more Company news, visit Good Neighbor Stories. Click here for the full Earnings Press Release.

Number of patents filed (since 2016) : WIPO

Source: WIPO Database

Partnership: Next Insurance embedded Zesty AI capabilities

NEXT Insurance is a digital-first insurance leader providing fast, customized coverage for small businesses through AI-driven underwriting, automation, and a fully online customer experience.

ZestyAI is a leading insurtech company using advanced AI and geospatial data to deliver highly precise property-level risk insights for P&C insurers, enabling smarter underwriting, pricing, and climate risk management.

Acquired by: Munich RE | ERGO

Frontier clients: NEXT | kin. | Lemonade

Solution

- ZestyAI's Z-PROPERTY and Z-FIRE models to streamline NEXT Insurance's workflows and enhance decision-making. This enables Underwriting to be more accurate and efficient, especially for small-business properties that might not have full risk data.

Highlights

Enables NEXT to maintain a fully digital, fast-quote underwriting flow while injecting very high-quality risk insight.

ZestyAI uses advanced AI and geospatial analytics to deliver highly precise property-level risk insights, helping insurers improve underwriting accuracy, pricing decisions and climate risk assessment.

Z-PROPERTY™ covers 150 million+ residential and commercial properties across North America.

Innovating earthquake coverage: Liberty Mutual Re & Safehub

Liberty Mutual. REINSURANCE

The reinsurance arm of Liberty Mutual Insurance Group, providing global risk transfer solutions and capacity across property, casualty, and specialty lines.

safehub

A technology provider of seismic sensor and risk management solutions that delivers real-time, building-specific earthquake data to inform insurance triggers and support rapid response.

Solution

- This co-development leverages real-time sensor data + reinsurance expertise to shift earthquake coverage from broad estimates to precision risk transfer, reducing basis risk and enhancing customer resilience.

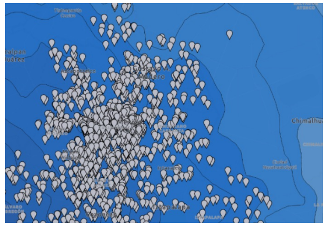
Highlights

Sensor-Based Parametric Trigger –

Uses Safehub's real-time, building-specific seismic sensors to trigger payouts, improving precision compared with traditional parametric products.

Reduced Basis Risk –

Localized shaking data aligns payouts more closely with actual loss, lowering the disconnect between event and indemnity.



ShakeNet Parametric

ShakeNet Parametric is an innovative insurance solution created in partnership with Liberty Mutual Reinsurance (LMRe). It is built on ShakeNet, Safehub's global platform that delivers the highest-resolution regional earthquake shaking estimates available by combining government seismic networks with Safehub's rapidly expanding sensor network. Powered by the Global Earthquake Model's OpenQuake engine, ShakeNet provides scientifically robust, globally scalable shaking data that can be deployed rapidly, even in regions with limited post-earthquake information.

Faster Claims & Response –

Quicker access to funds and near-real-time alerts facilitate emergency response and business recovery.

Open insurance

Open insurance enables information sharing within the insurance industry. It creates more digital and open relationships between insurance companies and their customers: relationships based on trust, understanding, and data. It helps understand the needs of everyone involved.

Open insurance

Open insurance is now the operating model that lets insurers integrate, innovate, and scale, with each layer designed to plug into partners, data sources, and technologies seamlessly.

Strengthening distribution models

Insurance Innovation is facing its challenges. The industry is importing innovation with partnerships and an ecosystem Architecture.

In some cases, Insurers are building the technology frontier with emerging technology companies and other partners.

Digital marketing

DTC & embedded

CX to the next level

Insurance companies need to create a customer experience that is aligned with what is happening in the ecosystems. The challenge is great, but customers no longer expect complex or slow processes. Even insurance needs to be engaging, agile and usable.

Data sharing

Omnichannel

Data fit across the value chain

Data flows through every process and team, enabling decision-making at the edge. Infuse real-time data into every customer touchpoint and decision flow to ensure value is delivered continuously.

API

Real-time

Strengthening distribution models via regulations and tech

Transitioning to B2C empowers insurers to directly understand customer needs, reduce distribution costs, innovate faster, and build stronger, data-driven relationships, while still exploring hybrid approaches where strategic partnerships remain valuable.

Insurance Performance

Now

B2B2C Model

Insurance sold via banks (bancassurance), retailers

- Distribution channel: Relies on intermediaries such as brokers, agents, or partner businesses to reach end customers.
- Customer relationship: Limited direct engagement; customer data and insights are often owned by intermediaries.
- Sales approach: Bundled or partner-driven offerings; product customization is limited.

Drivers of Shift

European Data Act API

Open Data

- **Digitalization**: Online platforms, mobile apps, and marketplaces enable insurers to reach customers directly.
- **Data access**: Direct interaction allows insurers to leverage customer data for personalization and risk assessment.

Future

+ Emerging DTC Model

Open Insurance

- Distribution channel: Direct-to-consumer through websites, apps, or open insurance in digital ecosystems.
- Customer relationship: Full ownership of the customer journey and data, enabling personalized offerings.
- Sales approach: Flexible, on-demand, and usage-based insurance products (e.g., microinsurance, pay-per-use).

Time

Customer experience to the next level: Cover Genius

Customers expect the same level of experience and data portability throughout the ecosystems. Growing demand for: digital-first experiences, seamless switching, integrated financial services. Insurance is expected to follow **Open banking**–style standards.

Smarter underwriting & personalization

- More accurate risk profiling
- Deliver tailored policies meet customers' needs and drive loyalty

Instant, frictionless onboarding

- Customized coverage recommendations
- Offer preventative products

Full stack open service & aligned CX:

Auto, home, product, property, commercial, cargo & marine and Life events.

Wellness integration

- Alert customers before stress
- Provide budgeting + protection bundles

Better claims experience

- Validate income loss faster
- Reduce fraud through real-time verification

Data fit across the value chain

Policy data, which includes coverage details, premiums, limits, and endorsements; **claims data**, encompassing historical claims, loss records, and potential fraud signals; and **risk or behavioral data**, derived from sources such as telematics, IoT/sensors, and third-party risk feeds to assess exposure and behavioral patterns.

Product development

- On-demand insurance
- Micro-insurance
- Transparent insurance
- Protection & life coach
- Third-party data Monetization

Marketing

- Intelligent cross selling
- Data-driven lead management
- Customer life-time value
- Brand Image

Sales

- Agents performance boosting
- Personalized brokers strategy
- Internal sales force optimization
- Give data back to distributors

Policy admin & underwriting

- Fast quoting
- Aggregators insight
- Pricing sensitivity & elasticity
- Dynamic pricing

Claims management

- Claim leakage minimization
- Fraud detection
- Intelligent steering
- Providers network optimization
- Process optimization with DS & AI
- Demand forecasting & management

Open finance

Open insurance

Connect and build technology frontier

Collaboration and partnerships enable insurance ecosystems to access state-of-the-art technologies, allowing insurers to import innovation or co-create solutions with emerging technologies and specialized partners.

Emerging technologies redefining risk and distribution

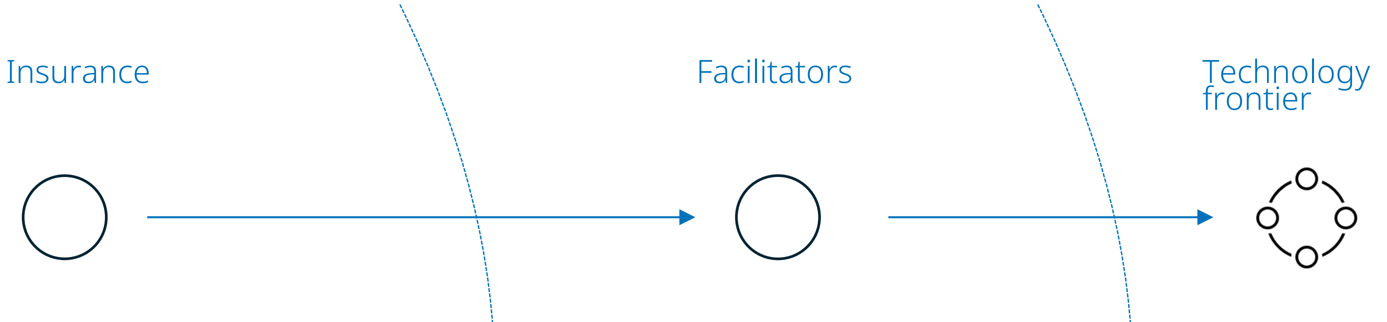
Together, these technologies enable insurers to move toward real-time risk intelligence, proactive prevention, and fully embedded insurance models.

Tech solutions	Business uses cases		
Agentic AI	Agentic AI uses autonomous, goal-driven agents that can reason, plan, and act across insurance systems with human oversight.		
	End-to-end claims orchestration	Automated workflows with human approval	Proactive customer engagement handling
Satellite & data	Satellite technology provides high-frequency, geospatial intelligence that enables real-time monitoring of physical risks at scale.		
	Real-time data	Climate risk modeling	Catastrophe claims validation
Digital twins	Digital twins create virtual representations of physical assets or environments to simulate, monitor, and predict risk behavior.		
	Risk assessment	Real-time premium adjustment	Claims forecasting
Quantum computing	Quantum computing uses advanced computational models to solve complex optimization and risk problems beyond classical computing limits.		
	Portfolio optimization	Complex pricing models	Reinsurance optimization

Connect to tech frontier

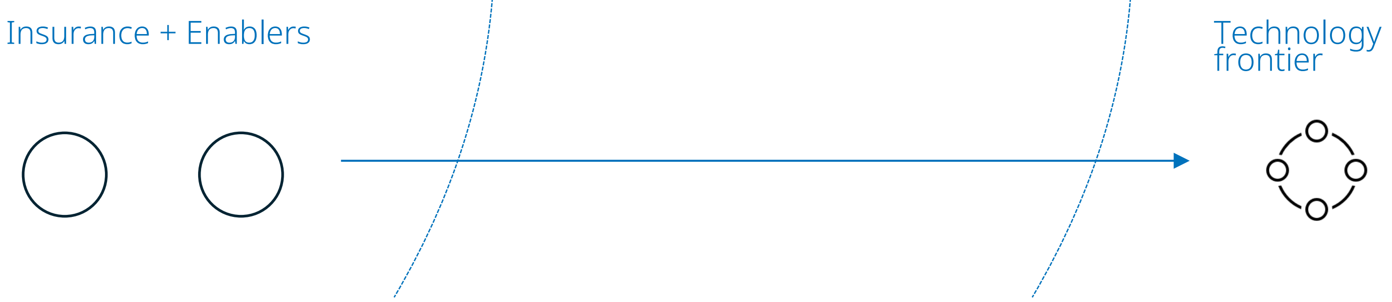
Additional and enhanced insurance capabilities are increasingly delivered through strategic partnerships. Insurers typically operate with facilitators such as TPAs, enablers, and Insurtech partners to extend their value proposition. Insurers gain access to frontier technology capabilities from leading innovators

Connect to frontier via partners



- Insurers seeking rapid access to frontier technology capabilities can establish straightforward partnerships with enablers. In this model, the enabler acts as the primary integrator and maintains direct alignment with leading technology frontier players (e.g., hyperscalers and AI providers), enabling insurers to leverage advanced capabilities with limited internal build or ownership.

Build the frontier with partners



- Insurers can pursue deeper, mutual-benefit partnerships focused on co-creating and advancing frontier capabilities. This model emphasizes joint capability development and shared innovation, requiring strong alignment across strategic objectives, business models, and technology roadmaps to achieve sustained technology leadership.

Connect to frontier models: Quantum computing

Quantum computing will transform how insurers model risk, optimize capital, and serve customers, but no insurer can reach this frontier alone. Strategic partnerships bridge today's capabilities with tomorrow's breakthroughs, accelerating readiness and reducing innovation risk.

Insurance ecosystem

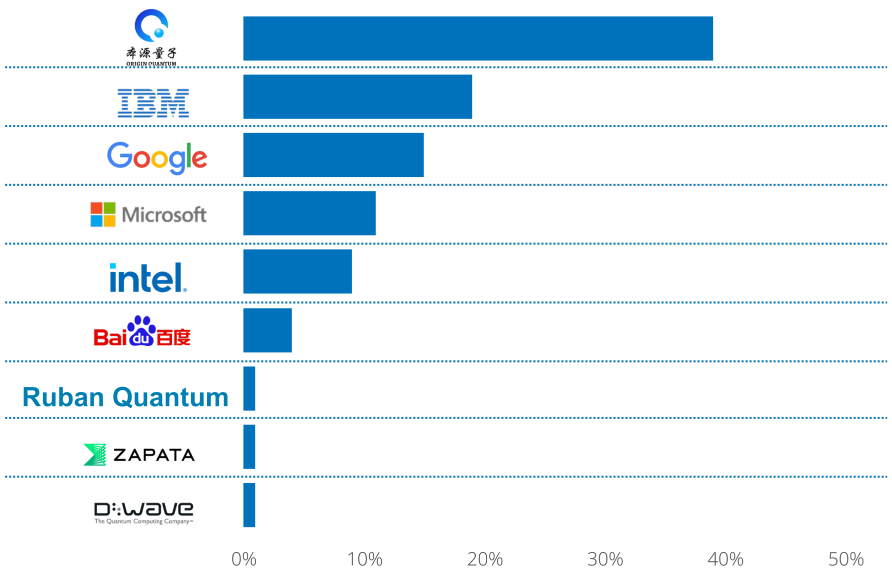
- Rising demand for deeper risk modeling, climate analytics, and cyber-resilience
- Increasing reliance on advanced data, simulation, and optimization capabilities
- Insurers face talent gaps and technology constraints that slow innovation
- Competitive pressure to offer personalized products and faster decisioning

Facilitators

Amazon Braket
Get started with quantum computing
QAIventures
Microsoft Azure
IBM Quantum System One

- Provide access to quantum hardware, simulators, and hybrid platforms
- Offer expertise, talent, and R&D support not available internally
- Reduce barriers to experimentation through accelerators and shared ecosystems
- Help insurers identify real-world use cases and build quantum-ready architectures

Quantum computing & algorithm frontier



Market Share Generative AI foundational models and platforms. Source: IoT Analytics

Connect to frontier models: Quantum computing case

Amazon Braket connected AIOI to quantum computing capabilities of IONQ to develop a PoC on telematics analysis, computing driving scores using vast amounts of data. Other Quantum insurance cases are focused mainly on Optimization and cyber security problems.

MS&AD **Aioi Nissay Dowa USA** → Amazon Braket (Get started with quantum computing) → IONQ

We expect the amount of data from the telematics of self-driving cars will grow exponentially as self-driving technology becomes prevalent, and we wanted to explore whether we can apply quantum computing to create novel solutions.

It was easy for us to get started with simulators and access quantum computers on Amazon Braket, so we moved ahead with a PoC for telematics analysis.

Quantum computing

Quantum computing unlocks new levels of optimization and security. It helps insurers anticipate systemic shocks and manage capital with far greater efficiency. As quantum capabilities mature, they will redefine resilience, security, and decision-making across the industry.

1. Quantum optimization
Speeds up portfolio optimization, pricing, and capital allocation, enabling insurers to find optimal outcomes across millions of variables in near-real time.

2. Quantum-enhanced security
Quantum cryptography and quantum-safe protocols protect sensitive insurance data and strengthen cybersecurity against emerging threats.

Partners

Terra Quantum · QuEra · CLASSIQ · KIPU QUANTUM

Connect to frontier models: Agentic AI & gen AI

Generative AI and Agentic AI are reshaping underwriting, claims, and customer engagement, but reaching enterprise-scale impact requires more than internal capabilities. Strategic partnerships accelerate innovation, close talent gaps, and ensure insurers deploy AI safely, responsibly, and competitively.

Insurance ecosystem

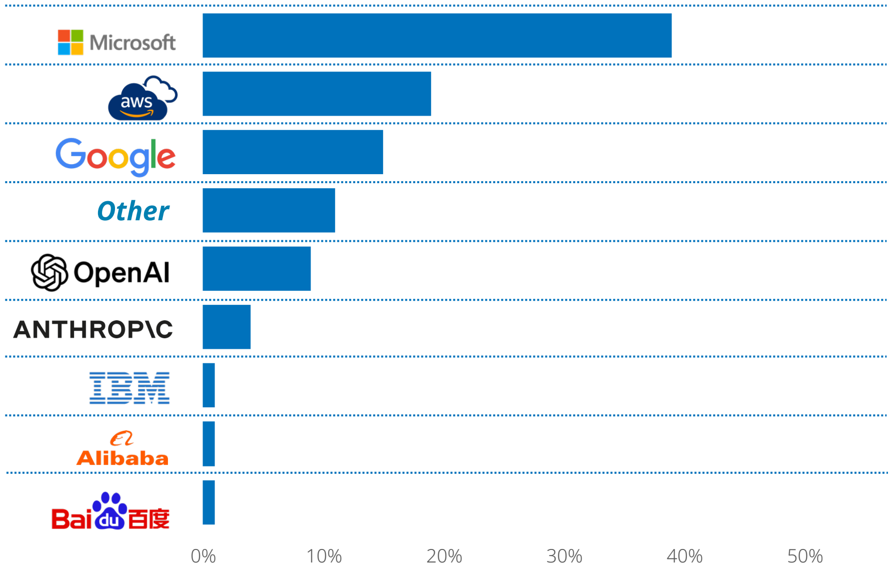
- Rising pressure to deliver hyper-personalized customer experiences
- Increasing complexity in underwriting, compliance, and claims processing
- Expanding data volumes beyond traditional analytic capabilities
- Regulatory expectations around model governance, transparency, and responsible AI
- Talent scarcity in advanced AI and ML engineering

Facilitators

krisp LangChain SIERRA crewai

- Provide cutting-edge Gen AI & Agentic AI models and development tooling
- Bring domain expertise in safe deployment, governance, auditing, and risk controls
- Enable access to pre-trained models, accelerators, and sandboxes for rapid prototyping
- Reduce implementation time through ready-made frameworks, integrations, and industry blueprints

Generative AI frontier



Market Share Generative AI foundational models and platforms. Source: IoT Analytics

Connect to frontier models: Agentic AI case

Agentic AI will redefine insurance through autonomous systems that underwrite, process claims, and serve customers in real time. To lead in this shift, insurers must partner with technology frontier players driving next-generation AI capabilities and platforms.

ZURICH → Sixfold → OpenAI

Zurich North America collaborated with Sixfold to roll out an AI underwriting tool that could transform how underwriters approached risk assessments.

Instead of starting from a blank page, underwriters now receive an AI-generated first draft of the underwriting narrative, tailored to Zurich North America's unique risk appetite and preferred format and tone.

Agentic AI & Gen AI

Generative AI and Agentic AI are rapidly transforming the insurance value chain by shifting work from human-driven tasks to intelligent, autonomous systems capable of reasoning, deciding, and acting.

1. Underwriting acceleration & intelligent risk decisioning
Underwriters spend enormous amounts of time gathering data, reading submissions, validating documents, and manually assessing risk..
2. Claims automation & proactive resolution
Touchless or low-touch claims, faster payouts, lower loss adjustment expenses, and improved customer satisfaction.
3. Distribution & customer experience reinvention
Agents and customers struggle with complex policy language, slow processes, and inconsistent information.

Partners

SIERRA, Ema (Enterprise Machine Assistant), crewai, krisp, Simbian, VidLab7, Sixfold, UPTIQ, LangChain, D-iD

Connect to frontier models: Quantum computing

Quantum computing will transform how insurers model risk, optimize capital, and serve customers, but no insurer can reach this frontier alone. Strategic partnerships bridge today's capabilities with tomorrow's breakthroughs, accelerating readiness and reducing innovation risk.

Insurance ecosystem

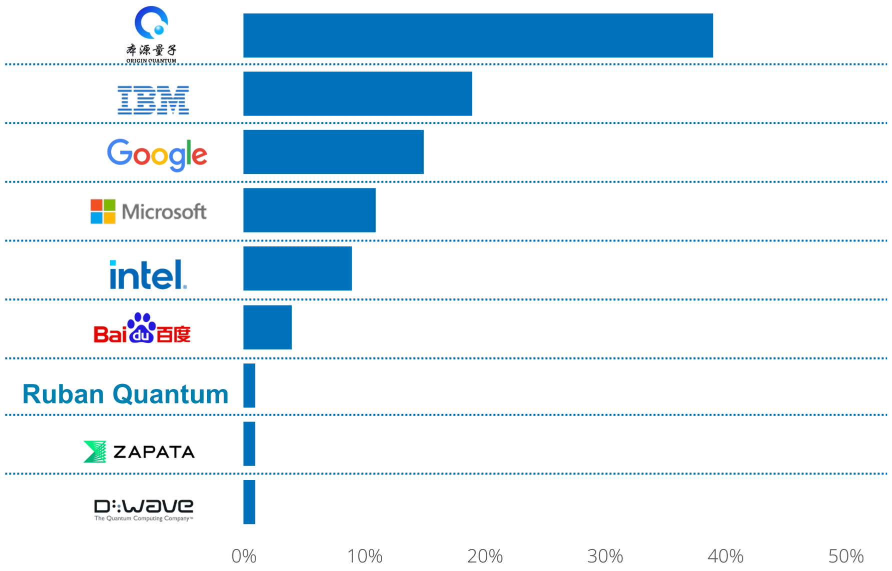
- Rising demand for deeper risk modeling, climate analytics, and cyber-resilience
- Increasing reliance on advanced data, simulation, and optimization capabilities
- Insurers face talent gaps and technology constraints that slow innovation
- Competitive pressure to offer personalized products and faster decisioning

Facilitators

Amazon Braket Get started with quantum computing | QAIventures | Microsoft Azure | IBM Quantum System One

- Provide access to quantum hardware, simulators, and hybrid platforms
- Offer expertise, talent, and R&D support not available internally
- Reduce barriers to experimentation through accelerators and shared ecosystems
- Help insurers identify real use cases and build quantum-ready architectures

Quantum Computing & algorithm frontier

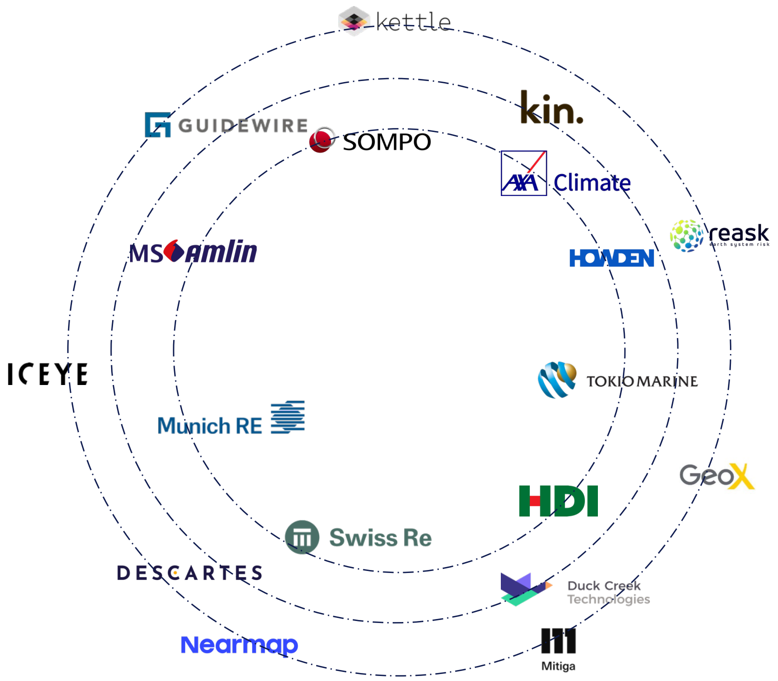


Market Share Generative AI foundational models and platforms. Source: IoT Analytics

Insurance ecosystems as frontier models: Satellite & data

Insurance companies sit at the frontier of satellite and advanced data via partnerships, creating an ecosystem that transforms real-time Earth observation, AI, and geospatial intelligence into actionable insights that insurers can use instantly across underwriting, pricing, and claims.

Insurance building the frontier for S&D technology



Frontier capabilities

- **The S&D Insurance Ecosystem replaces static, model-driven datasets with real-time observational intelligence**, equipping insurers with timely satellite, aerial, and environmental insights across the full catastrophe lifecycle.

Cat Response	Event Intelligence	Real Time Monitoring

- **It fuses advanced technologies—SAR imaging, AI vision, climate science, geospatial analytics, and machine learning—to generate high-resolution, property-level risk intelligence previously unattainable.**

HD Risk Data	Geospatial Analytics	AI Hazard Assessment

- **This collaboration enables insurers to transition from reactive to proactive operations**, supporting early-warning systems, dynamic exposure management, and accelerated claims triage through continuous event detection.

Early Detection	Exposure Management	Claim Acceleration

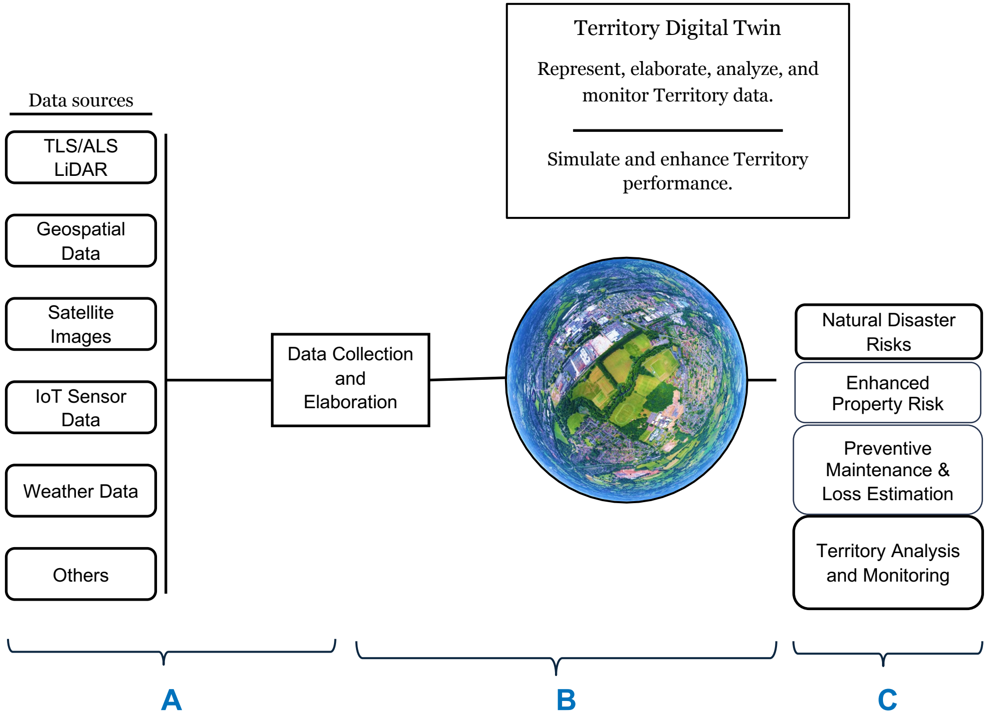
- **The S&D Insurance Ecosystem provides the high-fidelity data foundation required to scale next-generation insurance solutions**, including parametric products, micro-zonal pricing, and climate-informed catastrophe models aligned with evolving risk profiles.

Parametric Enablement	Pricing Precision	Dynamic Climate Model

Insurance ecosystems as frontier models: Digital twins

Digital twins expands the possibilities of insurers by creating digital replicas that. It requires different technologies that can be accessed leveraging partnerships and collaboration.

Digital twins



AI powered insurtechs: digital twins ecosystem

A	B	C
ICEYE	GeoX	Next
planet.	Nearmap	kin.
NASA	zesty AI	Lemonade

Backed by insurers

Munich RE | Swiss Re | ZURICH

03.

Use case/ lighthouse use case

NTT DATA Insurtech Global Outlook 2026 / Orchestrate value beyond boundaries of Insurance

InsureMO a middle layer cloud operations

Company description: InsureMO (short for Insurance Middle Office) is a cloud-based middleware platform (PaaS) designed to modernize and accelerate insurance operations by enabling digital, connected, and embedded insurance solutions.
Technology: Cloud-native, microservices, API-first architecture
Stage: Market Adoption / Enterprise Deployment / Global Integration

Business need

- Legacy insurance systems lack agility and API connectivity, slowing innovation and product launches.
- Carriers struggle to digitize distribution channels and integrate modern ecosystems without disruptive core replacements.
- Traditional tech stacks are unable to support rapid product variation, multi-channel distribution, embedded insurance, and ecosystem connectivity at scale.

Solution

- Middleware Platform (PaaS) enabling seamless integration between existing core systems and modern digital channels.
- Extensive API and Microservices Library supporting the full insurance product lifecycle (product definition, rating, quoting, binding, servicing).
- Digital Insurance Product Library with thousands of pre-built products and components to accelerate product launches.
- Scalable Cloud Architecture for processing high volumes of transactions efficiently and supporting ecosystem expansion

KPIs

Metric	Result / Value	Business Impact
Platform Adoption	300+ insurers & ecosystem partners globally	Demonstrates broad industry trust and reach
Channels Connected	5000+ distribution partners & tech ecosystems	Expands market reach and embedded insurance opportunities
Countries Served	~40+	Global footprint and regulatory versatility
API Library Scale	Tens of thousands of APIs and product components	Accelerates time-to-market, integration, and innovation
GWP Processed	~$20+ billion annually	Indicates high volume operational capacity

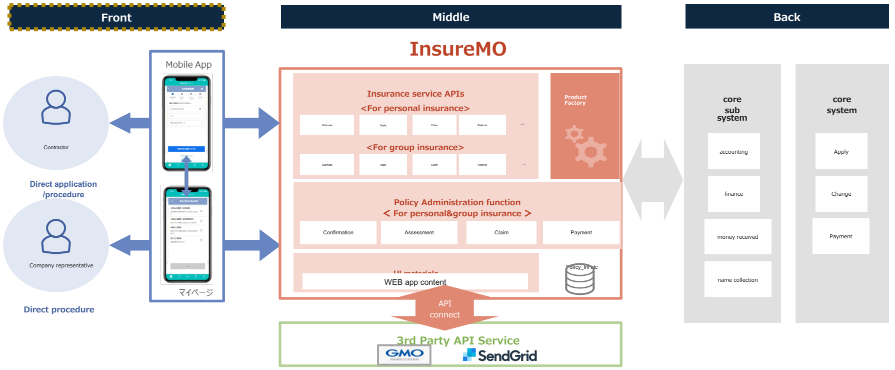
Next steps

- Expand product and microservice catalog to support new insurance lines and embedded scenarios.
- Further enhance ecosystem partner connectivity including AI, IoT, and data enrichment services.
- Co-develop regional go-to-market accelerators with carriers and distribution networks.
- Support developer experience and low-code/no-code adoption for rapid solution delivery

Legacy modernization

Microservices and API

Middleware platform



Terra Quantum

Company Description: Terra Quantum (TQ) is a deep-tech quantum software and hybrid quantum computing company enabling enterprises to access exponential performance advantages and next-generation AI capabilities.
Technology: Hybrid Quantum Computing, Quantum Machine Learning, Tensor Networks, Quantum-powered Generative AI
Stage: Enterprise Deployment / Industrial Scale Solutions / Global Partnerships

Business need

- Traditional analytics and AI struggle with highly complex, probabilistic, and computationally hard insurance problems.
- Existing infrastructure limits insurers' ability to experiment with frontier technologies without high cost, long timelines, or dependency on immature quantum hardware.
- Increasing climate volatility, fraud sophistication, and customer expectations demand new computational approaches beyond classical methods.

Solution

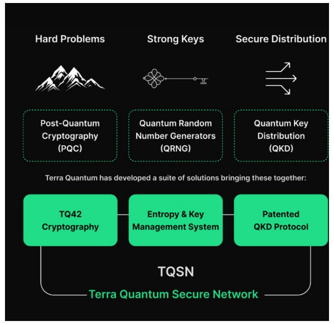
- Hybrid Quantum Computing Architecture enabling insurers to run quantum-enhanced algorithms on existing CPUs, GPUs, and simulated qubits today, while remaining future-ready for native quantum processors .
- Quantum Machine Learning & Tensor Network Solutions to address high-dimensional optimization, probabilistic risk modeling, and advanced pattern detection at scale.
- Quantum-powered Generative AI improving computational efficiency, scalability, learning accuracy, and context awareness for customer engagement and operational use cases .
- Modular Software Components that integrate into enterprise environments, enabling decoupled innovation without disruption to core systems.

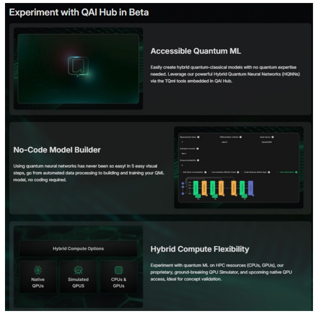
Next steps

•Identify high-impact insurance use cases suited for quantum advantage (e.g., CAT modeling, fraud detection, capital optimization).

•Pilot hybrid quantum solutions using existing infrastructure to validate near-term value.
•Integrate TQ capabilities into ecosystem architectures alongside AI, data, and cloud platforms.

•Establish a quantum innovation roadmap to progressively adopt native quantum computing as hardware matures.





KPIs

Metric	Result / Value
Performance Improvement	Up to **5.7x increase** in prediction accuracy in industrial use cases
Model Efficiency	**8x fewer parameters** and **GPT-2 compressed to 20%** of original size
Accuracy Gains	**20–80% improvement** in optimization objectives
Risk Modeling Enhancement	Improved catastrophe scenario modeling with reduced non-modelled risk

Hybrid quantum computing

Quantum ai

Technology frontier enablement

Deepkeep

Company description: DeepKeep is an AI security and trustworthiness platform designed to protect large language models (LLMs), multimodal models (including vision & tabular), AI agents and enterprise AI usage throughout the entire AI lifecycle.
Technology: Agentic AI, Orchestration Engine, Advanced Risk & Pricing Models, Multimodal AI
Location: NTT DATA – Insurance & AI Innovation

Business need

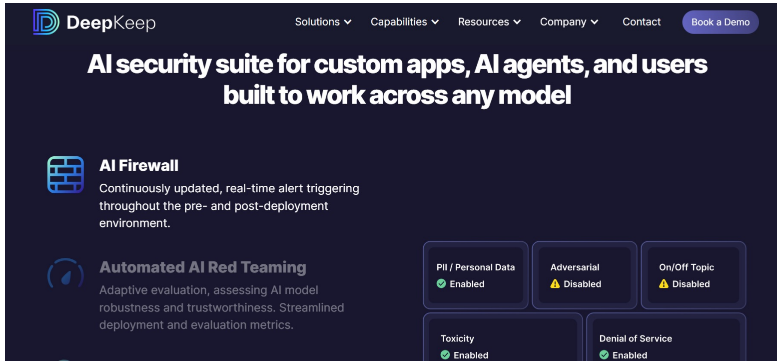
- Detect and mitigate AI-specific risks (data leaks, hallucinations, bias, prompt attacks).
- Ensure trust and compliance when organizations deploy AI in operations.
- Protect AI development, applications, agents, and employee use with consistent policies and controls

Solution

- Shadow AI usage — employees using unmanaged AI tools without oversight.
- Unsafe or sensitive outputs — hallucinations, biased/harmful responses, or leaking personal data.
- Unauthorized behavior by AI agents — autonomous AI processes acting unpredictably.
- Lack of visibility into AI workflows — security teams can't monitor prompts, responses, or model actions in real-time.

How does it work?

- Focuses on AI risks, not traditional tech security. Provides end-to-end protection for models, applications, agents, and users.
- Helps enterprises govern, monitor, and secure AI usage while supporting compliance and trust.
- Received industry recognition and expanded availability on major cloud marketplaces.



KPIs

Metric	Result / Value
Productivity Improvement	3× improvement
Topline Growth	5–10% increase
Loss Ratio Impact	2–5 points improvement
LAE Reduction	20–25% reduction

Hybrid quantum computing

Ai security

Technology frontier enablement

04.

Sample analysis

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Ecosystem architecture - top insurtechs 2025

Insurtechs are building multiple operational layers alongside incumbents, shaping the ecosystem architecture required for the future of insurance.

Cloud

Carbyne is a software company that develops cloud-based mission-critical contact center solutions.

Novidea is a cloud-based, data-driven insurance management platform for brokers, agents, MGAs/MGUs, & wholesalers.

Episode Six is a cloud-based financial platform that enables banks and enterprises to develop and manage digital payment solutions.

AI infrastructure

Veezoo is a software company that develops analytics solution for business insights from cloud databases using natural-language.

FurtherAI provides AI assistants for insurers, automating workflows like submission intake, policy comparisons, and underwriting processes.

AI claims platform for health & life insurance

Emerging tech layer

Reask is a technology company that builds climate forecasting tools, hazard models, and event response applications using machine learning.

FloodMapp is a predictive flood mapping technology available as a suite of B2B SaaS products.

Resilience operating model focus – top Insurtech 2025

Resilience in insurance is being rebuilt as a technology stack, combining cloud-native cores, AI-driven intelligence, and emerging climate and risk models. These Insurtechs show how insurers move from reactive risk transfer to real-time insight, automation, and decision support across underwriting, claims, and operations.

Life

BESTOW

Bestow represents the industrialization of life insurance as software, offering end-to-end APIs that allow insurers, fintechs, and wealth platforms to launch, embed, and scale life products rapidly. It is representative because it turns a traditionally slow, advisor-led product into plug-and-play infrastructure for digital ecosystems.

Olé

Ole Life represents the evolution of life insurance distribution through ecosystems, embedding protection into fintech, employee benefits, and digital financial platforms across emerging markets. It is representative because it aligns life insurance with everyday financial use cases, not traditional sales channels.

P&C

Wrisk

Wrisk exemplifies embedded insurance for mobility and lifestyle ecosystems, powering OEMs, retailers, and digital brands with modular auto and device insurance via APIs. It is representative because it proves insurance can be fully white-labeled, real-time, and experience-driven, integrated directly at the point of purchase.

Seyna

Seyna is a European full-stack insurer built specifically to serve platforms and digital businesses, enabling rapid product creation, underwriting, and compliance through APIs. It is representative because it shows how licensed carriers can operate as risk-as-a-service providers for ecosystems at scale.

Source: Internal data source

Embedded insurance / Open insurance 2025

Embedded insurance and open insurance continue to gain momentum, driven by rising customer expectations and ecosystem-based distribution models. Insurtechs are innovating in this space, with players such as 180 Seguros in Brazil and Yasmina in Saudi Arabia delivering compelling embedded insurance solutions.

Embedded insurance

Yasmina

Yasmina offers AI-driven Embedded Insurance. Yasmina offers a digitally native Home & Renters Insurance. They do this by leveraging Artificial Intelligence, chatbots, and behavioral economics, which we apply to both insurance issuance and claims.

Seed, Saudi Arabia, Asia, USD 2 Million

180 Seguros

180 Seguros is Brazilian first tech-driven insurance carrier offering embedded insurance products and infrastructure financial use cases, not traditional sales channels.

Early-Stage Venture, Brazil, USD 6.3 Million

Open insurance

Openly

Openly is an insurance company that offers home insurance, life, and auto insurance services. Tailored homeowners' insurance coverage sold by independent agents.

Venture Series, US, USD 123 Million

Surebird

Surebird develops an open insurance platform that provides a personalized insurance wallet. A Dutch digital insurance platform that simplifies comparing, arranging, and managing personalized insurance coverage in one place.

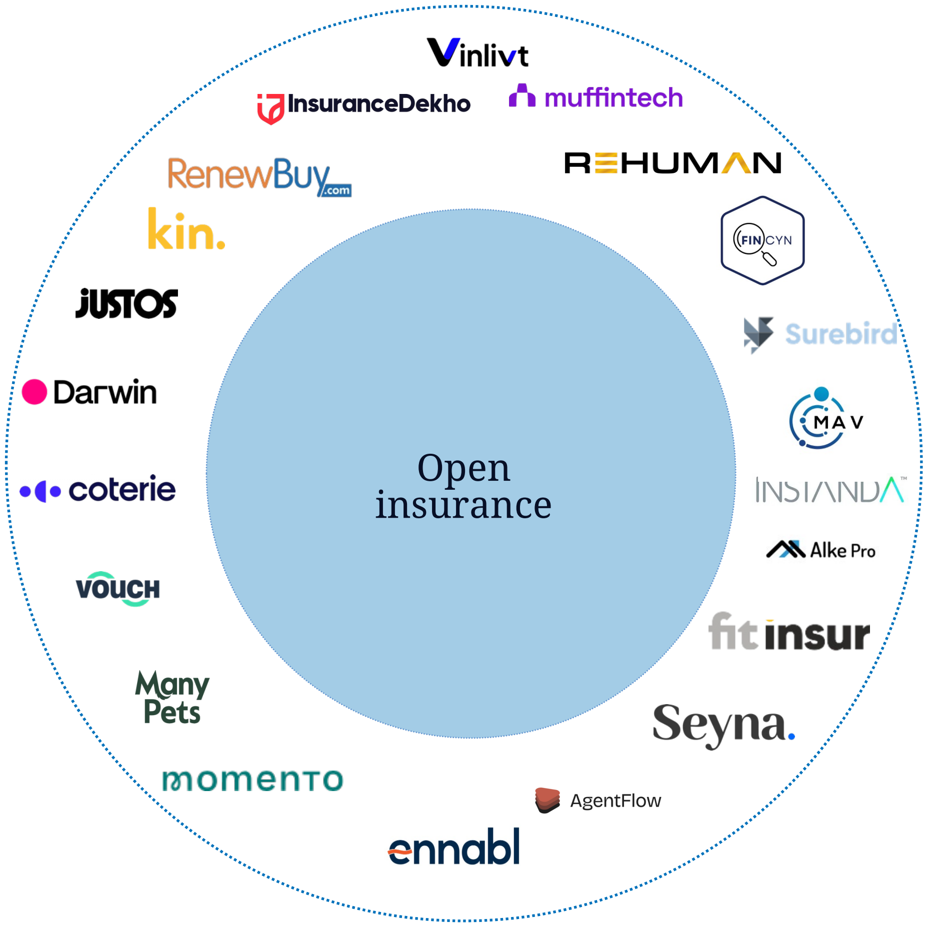
Seed, Netherland Europe, USD 1.3 Million

Source: Internal data source

Insurtech 2025 mapped for open insurance

Strengthen distribution model

Expanding direct-to-consumer (DTC) models through digital platforms and explore embedded insurance partnerships with fintech, e-commerce, and mobility platforms.



CX to next level

Customers expect the same level of experience and data portability throughout the ecosystems. Growing demand for: digital-first experiences, seamless switching, integrated financial services

Core / Orchestration / API Layers

Data flows through every process and team, enabling decision-making at the edge. Infuse real-time data into every customer touchpoint and decision flow to ensure value is delivered continuously.

05.

Conclusion

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Key take aways

Insurance value is shifting from reactive loss reimbursement to continuous prevention, protection, and resilience enablement. Ecosystem collaboration has become the primary driver of insurance performance, scalability, and sustainable growth.

Insurance as a resilience platform

- Insurance innovation is resilience-centric, combining prevention, protection, and recovery
- Risk complexity (climate, cyber, mobility, health) requires continuous, real-time intelligence, not static models
- Ecosystems linking insurers, tech providers, data players, and regulators are now core to sustainable growth
- Insurers that orchestrate ecosystems improve performance, reduce loss volatility, and strengthen customer trust

Ecosystems are the operating model of the future

- Insurance roles are expanding platform provider, risk orchestrator, data advisor, ecosystem integrator
- Cloud + AI form the informed infrastructure that enables modularity, speed, and continuous innovation
- Legacy Modernization is the foundation for ecosystem participation
- Frontier innovation scales fastest when insurers build, buy, and partner simultaneously

Doing nothing is a strategic decision, one that leads to higher volatility, lower trust, and declining relevance. Acting now unlocks a future where insurers are not just payers of claims, but architects of resilience.

Visit **nttdata.com** to learn more.

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