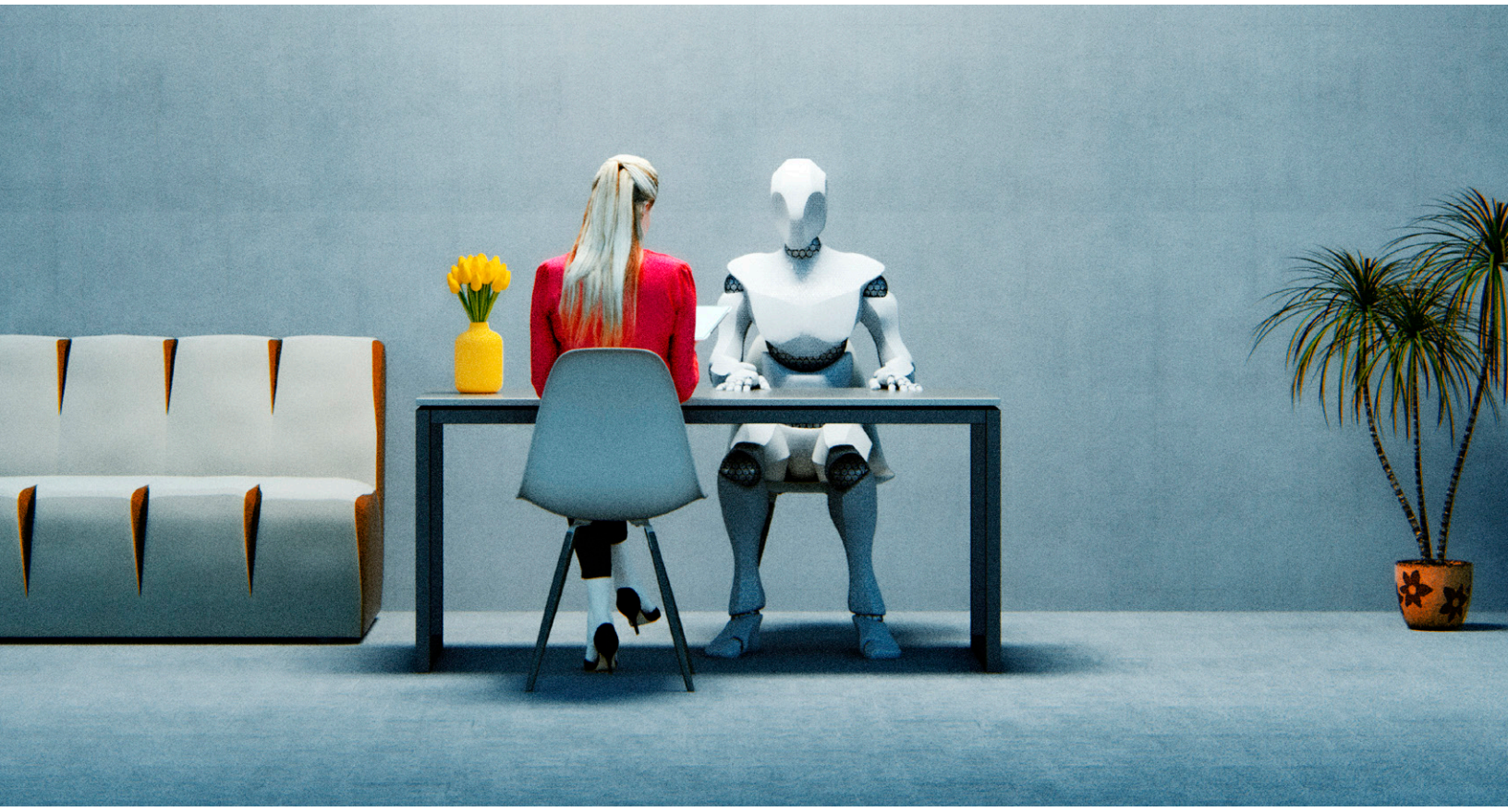
McKinsey & Company

Financial Services Practice

# The future of AI in the insurance industry

Only a few insurers have extracted outsize value from AI to gain a competitive edge. Joining their ranks requires a strategic, comprehensive approach that rewires the enterprise.

*This report is a collaborative effort by Nick Milinkovich, Sid Kamath, Tanguy Catlin, and Violet Chung, with Pranav Jain and Ramzi Elias, representing views from McKinsey's Financial Services Practice.*



July 2025

**Once in a great while,** a technological innovation comes along that changes the world, and businesses have to adjust—or potentially decline into irrelevance. The Industrial Revolution's steam engine and the mechanization of production allowed for a shift from largely agrarian to urban lifestyles. The birth of the internet brought us enhanced real-time communication, e-commerce, cloud computing, and more.

Now, it's AI's turn. This powerful technology is rapidly transforming workflows, driving innovation, and reshaping industries. As with other transformative changes brought by technology, it will be hard if not impossible for companies, including insurers, to ignore AI. About two decades ago, as e-commerce became ubiquitous and more sophisticated, consumers got used to seamless ordering and fast delivery and came to expect those capabilities from all merchants. Similarly, AI has changed consumer expectations to the point that customers now expect higher accuracy and reliability during the consumer journey, human-like conversations with AI bots (whether text- or voice-based), hyperpersonalized offers and communication, and on-demand products and interactions tailored to their needs.

Gen AI and agentic AI in particular can be game changers. One key difference from previous technological leaps is that gen AI is capable of levels of reasoning, judgment, creativity, and empathy that far exceed previous innovations' capabilities—skill sets with particular salience to insurers. That's why gen AI has the capacity to truly transform the insurance industry.

At its core, insurance involves gaining an accurate understanding of the underlying risk, and effectively and empathetically assisting people in distress as efficiently as possible. AI can transform all of this: Traditional analytical AI understands patterns in data; gen AI enhances those capabilities with greater understanding of unstructured data forms and enables the addition of hyperpersonalization and empathy into responses; and the latest advances in agentic AI add unprecedented levels of automation to complex workflows, allowing insurers to maximize benefits. Because of this versatility, insurers are using AI in all core areas, including sales productivity and hyperpersonalization; automation and improved accuracy of underwriting; augmented claims management; customer service operations with voice agents; and transformation of back-office functions such as finance, actuarial, and IT.

As with other groundbreaking technological innovations, consumers will come to realize that AI can make their lives easier and will then expect it from their service providers. Insurers that seize the opportunity to deeply integrate AI into everything they do will be poised to come out on top. They will be able to conduct more business, faster, in a more personalized manner, and with a better understanding of the underlying risk. Insurers that merely dabble in AI risk being left in the dust, unable to keep up with their AI-native peers.

To get AI transformation right, it's not enough to tinker around the edges and run a few pilots, or to expect true AI enablement to come from buying a patchwork of software-as-a-service products from suppliers with minimal strategic intent, or to hope that workflows will be transformed by off-the-shelf AI solutions. To create lasting business value from AI, insurers need to set a bold, enterprise-wide vision for AI's potential, and deeply, fundamentally rewire how they operate across the various business domains (underwriting, claims, distribution, customer service and more), embedding the technology into every part of the organization. They will need to completely retool workflows, rethink operating models, work toward a modern data and tech stack, and scale AI by harnessing reusable components for various use cases and business areas. And they will need to do this in a manner that creates meaningful improvements in unit economics (see sidebar "McKinsey's work on AI in insurance"). Processes will need to be revamped end to end to extract value from AI, rather than simply layering AI on top of existing

## McKinsey's work on AI in insurance

**McKinsey,** which has been recognized as a leader in digital transformations by Forrester, has worked on AI with more than 200 insurers globally.

Our AI consulting arm, QuantumBlack, includes a specialized insurance-focused division with a library containing more than 50 reusable AI components and more than 20 end-to-end insurance capabilities for clients to use and customize.

By adopting a comprehensive and strategic approach to AI, insurers can position themselves to become AI-native and build a sustainable competitive advantage.

processes, or even worse, inserting an additional step in a workflow with an unnecessary AI tool.

One reason why gen AI holds so much promise is that thanks to reusable components, the technology can be scaled to overhaul different parts of a business. For instance, a gen AI capability trained to generate customer service responses can be repurposed to handle internal IT support queries, marketing content creation, request-for-proposal response reviews, or even legal document drafting. Even though the end results are very different, the underlying AI components can be reused across various business areas and use cases.

AI continues to innovate rapidly. For example, in the near future, nearly all customer onboarding functions in insurance could be delivered through AI multiagent systems, which could act as virtual coworkers. An intake agent would ingest information, communicate with customers or intermediaries to clarify data points, and seamlessly extract data from complex documents such as medical records or engineering reports. A risk profiling agent could build a comprehensive risk profile for each case, using existing underwriting guidelines. A pricing and product agent could automatically price the case and suggest policy structures to meet customer needs, for instance, by adding critical illness or disability riders to a life insurance policy. A compliance and fairness agent could review the entire process to ensure regulatory compliance and high ethical standards. A decision orchestrator agent could aggregate input from various other agents to determine if the policy can be automatically approved or if it needs to be escalated to a human senior underwriter for review given the size of the policy or other factors. A learning and feedback agent could continuously refine models, use human feedback to improve, and track drift, or degradation of a machine learning model's performance over time. Of course, humans will continue to be involved across different business areas in insurance, particularly those that include touchpoints with customers.

While AI holds immense potential for insurers, scaling it enterprise-wide remains challenging. Security risks, high costs, the risk of getting locked in with suppliers, talent shortages, cultural resistance, governance gaps, and legacy infrastructure often hinder progress. A true transformation requires addressing these barriers head-on—and doing so in a thoughtful way that avoids creating "tomorrow's legacy" with the proliferation of approaches and solutions we are seeing today.

That's why change management is an integral part of AI transformations. In our experience, change management represents half the effort required to secure both financial and nonfinancial impact, while efforts to bring clean data to the models, the modeling itself, and the integration of AI account for the other half.

Next, we explore what best-in-class insurers do to harness the power of AI.

## What it takes for insurers to excel in AI

Virtually all insurers have begun implementing AI, with numerous use cases in production. Still, executives at many insurers feel their companies are not truly AI native, recognizing that they have yet to fully integrate it into their business models. This sentiment fuels the desire to increase investment in AI technologies as companies strive to stay competitive. Insurers are eager to find the right recipe for success, even though few have managed to do so.

Insurers that are AI leaders are already outshining their peers. For example, our research shows that over the past five years, the insurance sector's AI leaders have created 6.1 times the TSR of AI laggards (compared with two to three times in most other sectors).

Although few insurance companies are extracting meaningful value from AI across the full value chain at scale, best-in-class insurers are taking a domain-based approach to transformation. They choose certain business functions—such as distribution, pricing and underwriting, claims, investments—and comprehensively revamp how that function operates. So far, domain-level rewiring with AI has had a measurable impact on key parts of insurance businesses, including a 10 to 20 percent improvement in new-agent success rates and sales conversion rates, a 10 to 15 percent increase in premium growth, a 20 to 40 percent reduction in costs to onboard new customers, and a 3 to 5 percent accuracy improvement in claims.

We have long said that companies need to transform themselves to harness the power of digital and AI. We published the blueprint for doing so in our book *Rewired: The McKinsey Guide to Outcompeting in the Age of Digital and AI*. This imperative has become even more pressing with the rapid evolution and growing impact of gen AI.

In line with the *Rewired* framework, insurers can make six signature moves to build organizations that will outperform in the age of digital and AI:

— *Align the C-suite around a business-led road map for AI transformation.* As we noted above, leading insurers don't see AI as just another efficiency tool—they recognize it as a fundamental driver of transformation and an opportunity to improve growth, relationships with customers, and productivity. The transformation must be rooted in business value and the results have to be measurable. Insurers embarking on an AI transformation need to inspire and align the top team, focus their efforts on a few important business areas and transform them end to end, and tie the transformation outcomes to specific improvements in operational KPIs, such as lower customer churn. It is crucial to take a broad approach, integrating AI solutions across the enterprise with a clear road map for aggregating multiple use cases in a domain rather than deploying scattered individual use cases across domains. Domains are core functional or business areas, such as claims or underwriting, each with its own set of processes, data flows, and operational challenges (see sidebar "Domains and subdomains"). Using AI to reimagine entire domains can result in significant synergies.

— *Build the right talent bench.* To be digital leaders, insurers must build their talent bench by having a strong in-house digital talent pool, with ideally 70 to 80 percent of digital talent being in-house. Digital leaders take three key actions: shifting to a talent pool with more experienced, highly productive technologists and fewer novices; developing granular skill progression grids backed by credentials to foster excellence and recognize distinctive technologists; and establishing a specialized team to adapt HR processes to attract and retain digital talent. Additionally, they are preparing for a new era in which the workforce is

made up of humans and AI agents, a development that will require organizational practices to evolve.

— *Adopt an operating model that can scale.* Insurers undergoing an AI transformation must select an operating model that supports their strategy. Additionally, it is crucial to implement robust product management capabilities, which can help ensure the transformation is a success.

— *Use technology for speed and distributed innovation.* Insurers excelling in AI rely on a flexible AI capabilities stack powered by reusable multiagent systems. The modern AI tech stack for an insurer is highly modular and flexible to cope with fast-changing technology. Reuse of underlying AI components and capabilities is critical, as is an agentic AI mesh architecture. This composable, distributed, and vendor-agnostic architectural paradigm enables multiple agents to reason, collaborate, and act autonomously across an array of systems, tools, and language models securely and at scale. The architecture is also built to evolve with the technology.

— *Embed data everywhere.* State-of-the-art data capabilities remain critical as all AI runs on data. While AI itself can help with overcoming data challenges, most insurers will need to enhance their data capabilities more fundamentally to achieve their AI vision. Creating these capabilities requires overcoming both technical and organizational challenges. The ability to embed and harness an insurance organization's expertise and "special sauce" into agentic AI systems could become core to insurers' intellectual property.

## Domains and subdomains

**Domains are** the fundamental building blocks of an insurer's business processes. Domains include primary functions such as sales and distributions, pricing and underwriting, claims, and policy servicing. Insurers typically have about ten to 15 domains that could be rewired through the use of AI.

Domains are made up of subdomains. A subdomain is the fundamental unit of an AI transformation, and is characterized by three key attributes:

— people, assets, and capabilities working to reach common objectives

— core business outcomes linked to each domain

— custom AI applications spanning multiple business segments, necessitating reusable components and tailored success metrics

**While AI itself can help with overcoming data challenges, most insurers will need to enhance their data capabilities more fundamentally to achieve their AI vision.**

— *Invest in adoption and change management.* Adoption is just as important as development. As a rule, for every dollar spent on developing digital and AI solutions, plan to spend at least another dollar to ensure full user adoption and scaling across the enterprise. Change management is the key differentiator between AI sitting idle and AI transforming operations. Successful AI adoption depends on shifting mindsets, building essential capabilities, and ensuring that AI is truly central to transforming the business, not something done on the side. In the most successful AI-based transformations of underwriting or claims, for example, we see employees begin to view AI assistants as core to their jobs, embedded with their own knowledge and expertise. If an AI tool delivers suboptimal results, these employees take ownership of the problem, rather than blaming the engineer who built it. Moreover, the AI space will continue to evolve significantly faster than most insurers, resulting in a growing gap between what AI can deliver and how most insurers are using it. To mitigate this, it's critical to embed the ability to test, learn, fail, and scale into the culture of the organization, enterprise-wide.

In this report, we offer a deeper dive into four of the six points outlined above: implementing a business-led road map for AI transformation, adopting an operating model that can scale, using technology for speed and distributed innovation by building a flexible AI capabilities stack, and investing in adoption and change management.

## Implementing a business-led road map for AI transformation, with value top of mind

Insurers undergoing an AI transformation will need to consider which domains to overhaul first. A typical insurer has various domains, such as sales and distribution, pricing and underwriting, claims, and policy servicing, each offering significant opportunities for AI-driven optimization.

Transforming a domain requires scale. To unlock AI's full potential, insurers must move beyond fragmented solutions or use case initiatives and adopt a domain-based implementation. Individual use cases are often designed to demonstrate the feasibility of gen AI technologies in a controlled environment. And while they can show promising results, proof of concept (POC) and minimal viable product (MVP) initiatives usually focus on quick wins and lack long-term strategic fit, workflow integration, and sustainable benefit capture.

A domain-based approach can start with an end-to-end transformation of one to three domains to achieve meaningful impact without overwhelming the organization. The number of use cases required to rewire a domain varies, but it is crucial to ensure that the selected use cases can drive meaningful change and collectively improve performance. Typically, the impact of isolated use cases is too limited to affect profitability, but transforming an entire domain can lift the bottom line by double digits. By adopting a domain-wide approach and reorganizing entire workflows, insurers create synergies in data preparation, systems integration, and change management. That sets them up to achieve tangible efficiency gains, resource optimization, and lasting competitive advantage.

Insurers that successfully scale AI prioritize use cases with the highest measurable business impact. These high-impact use cases can be readily adapted and deployed across multiple domains by developing and scaling a set of highly transferable AI capabilities (Exhibit 1).

### Across insurance

Insurers across the board are poised to benefit from the integration of gen AI, which can enhance operational efficiency and customer engagement across various domains.

Exhibit 1A

## High-impact AI use cases can be adapted and deployed in various domains.

**Gen AI use cases in insurance** — **Across insurance**

■ Machine learning ■ Natural language processing ■ Optical character recognition ■ Cognitive agents ■ Robotic process automation

| | Sales and distribution | Pricing and underwriting | Claims management | Policy servicing |
|---|---|---|---|---|
| **Revenue generation** | ■ Agent copilot<br>◪ Hyperpersonalized customer outreach<br>■ Product research<br>■ Customer 360 profile<br>■ Personalized marketing campaigns<br>◪ Service provider contract analyzer | ■ Broker-facing chatbot<br>■ Auto-generated quotes<br>■ Real-time pricing analysis | | ■ Policy pricing recommendations |
| **Productivity and efficiency improvement** | ■ Request-for-proposal streamlining<br>■ Automated call assessment<br>■ Agent recruitment chatbot<br>■ Personalized agent training<br>■ Automated prefilled forms | ■ Automated web search<br>■ Auto-generated risk report<br>■ Automated prefilled forms<br>■ Automated customer enrollment | ■ Auto-generated "first notice of loss" insights<br>■ Claims prioritization engine<br>■ Postcall synthesis<br>■ Auto-generated documentation<br>■ Claims review copilot<br>■ Dynamic information collection | ■ Chatbot interactive voice response<br>■ Conversational AI<br>■ Automatic document verification |
| **Cost and risk reduction** | | ■ Underwriting decision agent<br>◪ Market and sentiment analysis<br>■ Customer risk assessment<br>■ Fraud detection<br>■ Risk segmentation<br>◪ Real-time assessment of sudden news impact<br>■ Policy risk expert | ■ Customer behavior adviser<br>■ Liability determination<br>■ Fraud prediction<br>■ Litigation reduction<br>■ Reinsurance recovery assessment<br>■ Triage and routing<br>■ Prior authorization optimization<br>■ Complaint prediction<br>■ Network optimization | ■ Natural language processing policy review |

McKinsey & Company

## Life

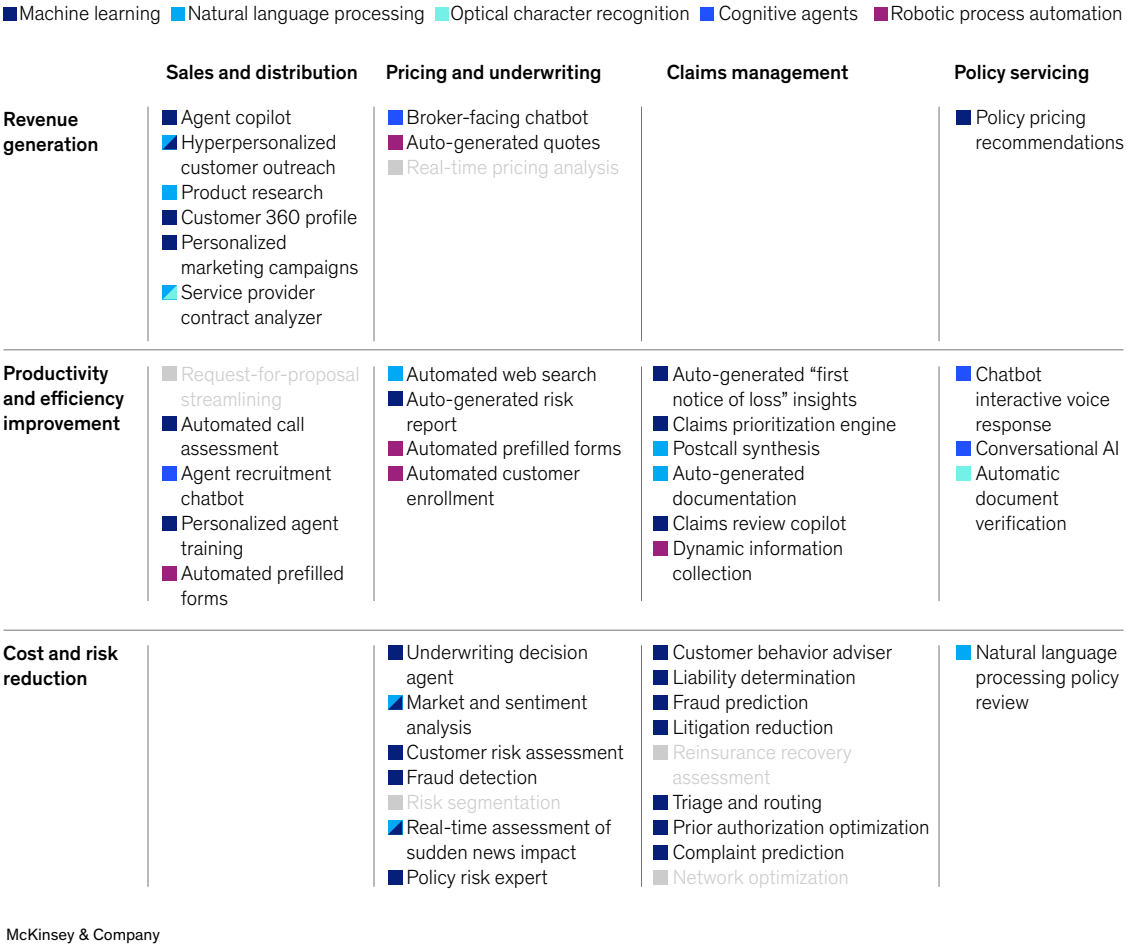
Life insurers can use gen AI to improve risk assessment and policy underwriting by generating synthetic data that augments existing data sets.

Exhibit 1B

### High-impact AI use cases can be adapted and deployed in various domains.

**Gen AI use cases in insurance**

**Life**




McKinsey & Company

### Health

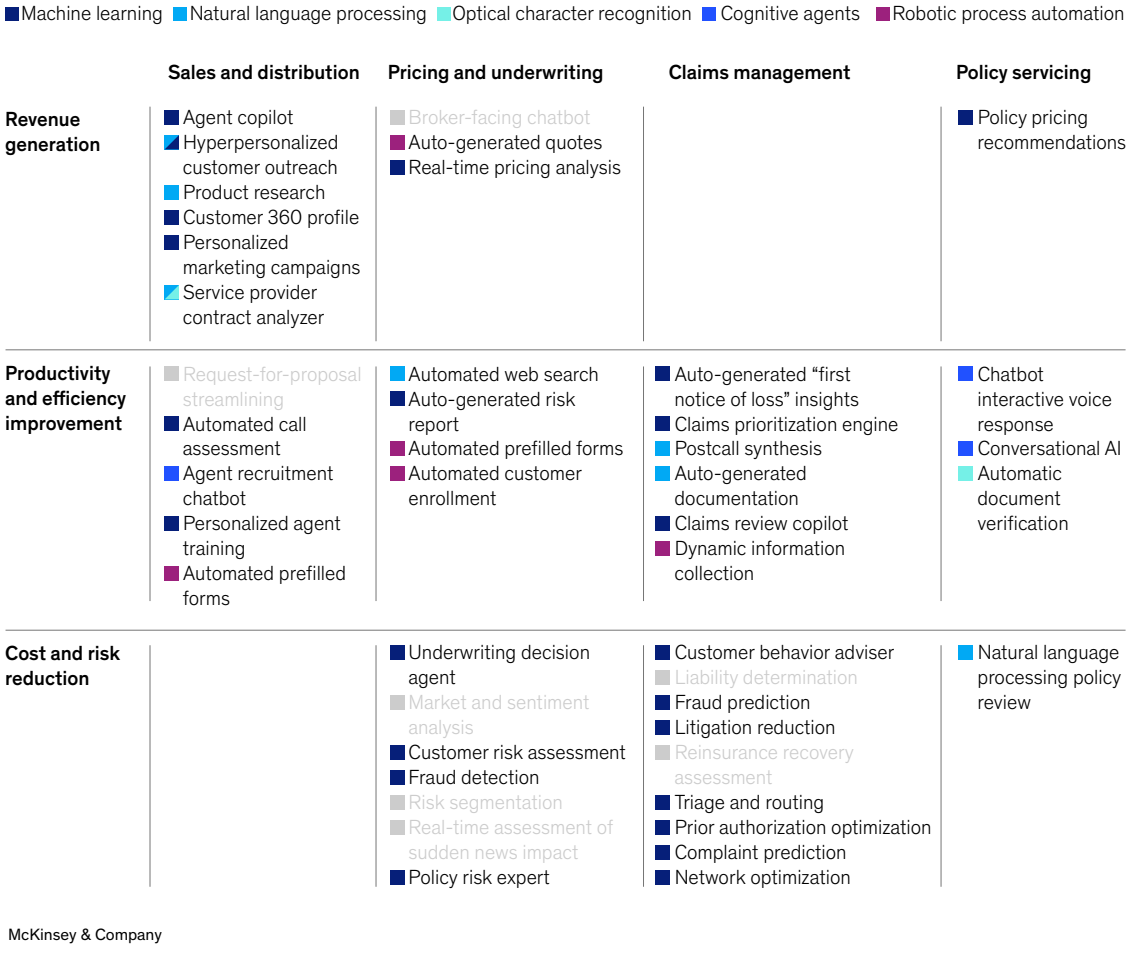
In health insurance, gen AI can help predict patient outcomes and personalize health plans by analyzing large data sets.

Exhibit 1C

## High-impact AI use cases can be adapted and deployed in various domains.

**Gen AI use cases in insurance**

**Health**




McKinsey & Company

### Commercial property and casualty

Commercial property and casualty insurers can use gen AI to generate detailed risk models and simulate various scenarios to better assess potential losses.

Exhibit 1D

## High-impact AI use cases can be adapted and deployed in various domains.

**Gen AI use cases in insurance**

**Commercial property and casualty**

Machine learning | Natural language processing | Optical character recognition | Cognitive agents | Robotic process automation

| | Sales and distribution | Pricing and underwriting | Claims management | Policy servicing |
|---|---|---|---|---|
| **Revenue generation** | Agent copilot<br>Hyperpersonalized customer outreach<br>Product research<br>Customer 360 profile<br>Personalized marketing campaigns<br>Service provider contract analyzer | Broker-facing chatbot<br>Auto-generated quotes<br>Real-time pricing analysis | | Policy pricing recommendations |
| **Productivity and efficiency improvement** | Request-for-proposal streamlining<br>Automated call assessment<br>Agent recruitment chatbot<br>Personalized agent training<br>Automated prefilled forms | Automated web search<br>Auto-generated risk report<br>Automated prefilled forms<br>Automated customer enrollment | Auto-generated "first notice of loss" insights<br>Claims prioritization engine<br>Postcall synthesis<br>Auto-generated documentation<br>Claims review copilot<br>Dynamic information collection | Chatbot interactive voice response<br>Conversational AI<br>Automatic document verification |
| **Cost and risk reduction** | | Underwriting decision agent<br>Market and sentiment analysis<br>Customer risk assessment<br>Fraud detection<br>Risk segmentation<br>Real-time assessment of sudden news impact<br>Policy risk expert | Customer behavior adviser<br>Liability determination<br>Fraud prediction<br>Litigation reduction<br>Reinsurance recovery assessment<br>Triage and routing<br>Prior authorization optimization<br>Complaint prediction<br>Network optimization | Natural language processing policy review |

McKinsey & Company

**Personal property and casualty**

Personal property and casualty insurers can benefit from gen AI by automating claims processing and improving fraud detection through advanced data analysis.

Exhibit 1E

## High-impact AI use cases can be adapted and deployed in various domains.

**Gen AI use cases in insurance**

**Personal property and casualty**

■ Machine learning ■ Natural language processing ■ Optical character recognition ■ Cognitive agents ■ Robotic process automation

| | Sales and distribution | Pricing and underwriting | Claims management | Policy servicing |
|---|---|---|---|---|
| **Revenue generation** | ■ Agent copilot<br>◪ Hyperpersonalized customer outreach<br>■ Product research<br>■ Customer 360 profile<br>■ Personalized marketing campaigns<br>◪ Service provider contract analyzer | ■ Broker-facing chatbot<br>■ Auto-generated quotes<br>■ Real-time pricing analysis | | ■ Policy pricing recommendations |
| **Productivity and efficiency improvement** | ■ Request-for-proposal streamlining<br>■ Automated call assessment<br>■ Agent recruitment chatbot<br>■ Personalized agent training<br>■ Automated prefilled forms | ■ Automated web search<br>■ Auto-generated risk report<br>■ Automated prefilled forms<br>■ Automated customer enrollment | ■ Auto-generated "first notice of loss" insights<br>■ Claims prioritization engine<br>■ Postcall synthesis<br>■ Auto-generated documentation<br>■ Claims review copilot<br>■ Dynamic information collection | ■ Chatbot interactive voice response<br>■ Conversational AI<br>■ Automatic document verification |
| **Cost and risk reduction** | | ■ Underwriting decision agent<br>◪ Market and sentiment analysis<br>■ Customer risk assessment<br>■ Fraud detection<br>■ Risk segmentation<br>◪ Real-time assessment of sudden news impact<br>■ Policy risk expert | ■ Customer behavior adviser<br>■ Liability determination<br>■ Fraud prediction<br>■ Litigation reduction<br>■ Reinsurance recovery assessment<br>■ Triage and routing<br>■ Prior authorization optimization<br>■ Complaint prediction<br>■ Network optimization | ■ Natural language processing policy review |

McKinsey & Company

The following are notable examples of domain-level, multi-use-case AI transformations in insurance:

— *AI for claims processing.* UK insurer Aviva rolled out more than 80 AI models to improve outcomes in its claims domain, cutting liability assessment time for complex cases by 23 days, improving the accuracy of routing claims to the appropriate teams by 30 percent, and reducing customer complaints by 65 percent. Aviva told investors that transforming its motor claims domain saved the company more than £60 million ($82 million) in 2024.

— *Automation in insurance sales.* In an effort to enhance personalization and efficiency, an insurer implemented intelligent automation for offering quotes to prospective customers and selling policies. The results were striking: After the transformation, 80 percent of transactions moved online, and customer satisfaction scores—specifically, the metric on how likely a customer is to refer an insurer to an acquaintance—rose 36 percentage points.

— *Chatbot on the night shift.* An insurance carrier significantly enhanced its after-hours customer service by implementing a 24/7 chatbot, resulting in an 11 percent increase in the number of prospective customers who ended up buying policies.

— *AI with empathy.* Another carrier is using AI to generate the roughly 50,000 claims-related communications it sends out daily, finding them clearer and more empathetic than those written by humans.

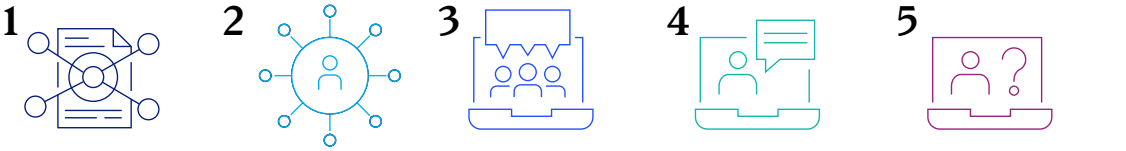
Once a domain is prioritized for transformation, it must be deconstructed into a series of executable AI-driven modules that can be implemented, refined, and scaled. For example, reimagining the sales and distribution process involves integrating gen AI capabilities and predictive analytics such as propensity models into interlocked, end-to-end AI solutions, such as multifaceted copilots and next-generation AI chatbots, to transform workflows (Exhibit 2).

**By designing AI transformations on a domain basis, insurers can unlock sustainable value. In the sales domain, gen AI can greatly improve employees' productivity and efficiency by saving time on routine tasks.**

Exhibit 2

## Insurers can use gen AI to transform sales workflows end to end.

### How AI can help insurance professionals



| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| **Routing and outreach** | **Agent preparation** | **Customer servicing and follow-up** | **Customer sales** | **Sales quality assessment and agent upskilling** |
| Generate a list of high-potential leads from marketing campaigns and summarize the results, along with leads to contact<br><br>Prepare tailored messages for the agent to use when reaching out to customers via direct messaging channels, eg, WhatsApp | Summarize customer insights, eg, background and preferences, in a Customer 360 profile<br><br>Suggest products and sales scripts that agents can offer to customers during sales calls | Respond to customer enquiries 24/7<br><br>Automatically capture customer details and decisions made in document format<br><br>If AI copilot can't resolve customer's issue, summarize customer interaction history for agents and automatically follow up with the customer | Automate sales conversation with customers, eg, responding to product enquiries and gathering customer information<br><br>Listen in, analyze responses in real time, and guide agent<br><br>Automatically summarize insights after calls and recommend next steps | Automatically assess agent's performance during a sales call<br><br>Offer personalized training suggestions based on the improvement areas identified from the assessment |

### Gen AI use cases for each subdomain

| | | | | |
|---|---|---|---|---|
| ■ Personalized marketing campaign<br>■ Hyperpersonalized customer outreach<br>■ Agent copilot | ■ Customer 360<br>■ Hyperpersonalized customer outreach<br>■ Product research | ■ Conversational AI<br>■ Auto-generated document<br>■ Agent copilot | ■ Conversational AI<br>■ Automated call assessment<br>■ Agent copilot | ■ Automated call assessment<br>■ Personalized agent training |

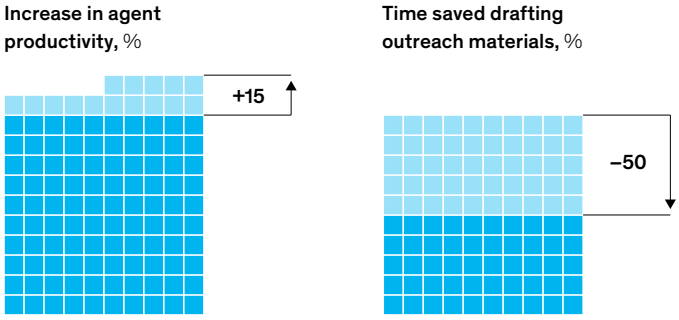
McKinsey & Company

By designing AI transformations on a domain basis, insurers can unlock sustainable value. In the sales domain, gen AI can greatly improve employees' productivity and efficiency by saving time on routine tasks (Exhibit 3).

Exhibit 3

## Gen AI can make insurance sales staff more efficient and productive.

**Typical impact of gen AI on the sales domain**




McKinsey & Company

## Adopting an operating model that can scale

A successful AI transformation necessitates a fundamental shift in how businesses operate. An insurer needs to have the right system in place to successfully embed AI across the enterprise.

When insurers embark on an AI transformation journey, they need to choose an operating model that aligns with their overall strategy. This could involve opting for a digital factory model of 20 to 50 pods, a product and platform model that encompasses a significantly higher number of pods, or a more comprehensive enterprise-wide agile business model that builds on the product and platform model and extends the benefit of agile to the entire business, not just the technology-intensive areas. A crucial aspect of successfully implementing the chosen operating model is integrating robust product management capabilities, as these can significantly influence the outcome of the transformation effort.

By integrating business functions, data, and technology into an agile, team-based operating model, insurers can break down silos, foster a culture of ownership, and align enterprise priorities with a customer-centric approach. An AI control tower plays a crucial role by ensuring governance, tracking AI-driven value creation, and monitoring adoption across the organization.

As insurers place more importance on reusable components and common AI standards, the role of central AI teams is becoming more prominent. Data and AI teams are working more closely with IT as stronger engineering and cloud capabilities are required. At the same time, these trends need to be balanced with front-line business ownership to focus tech capabilities on the right problems and drive real value. One promising model is the product-focused model, with teams oriented around core “super products” across the insurance value chain.

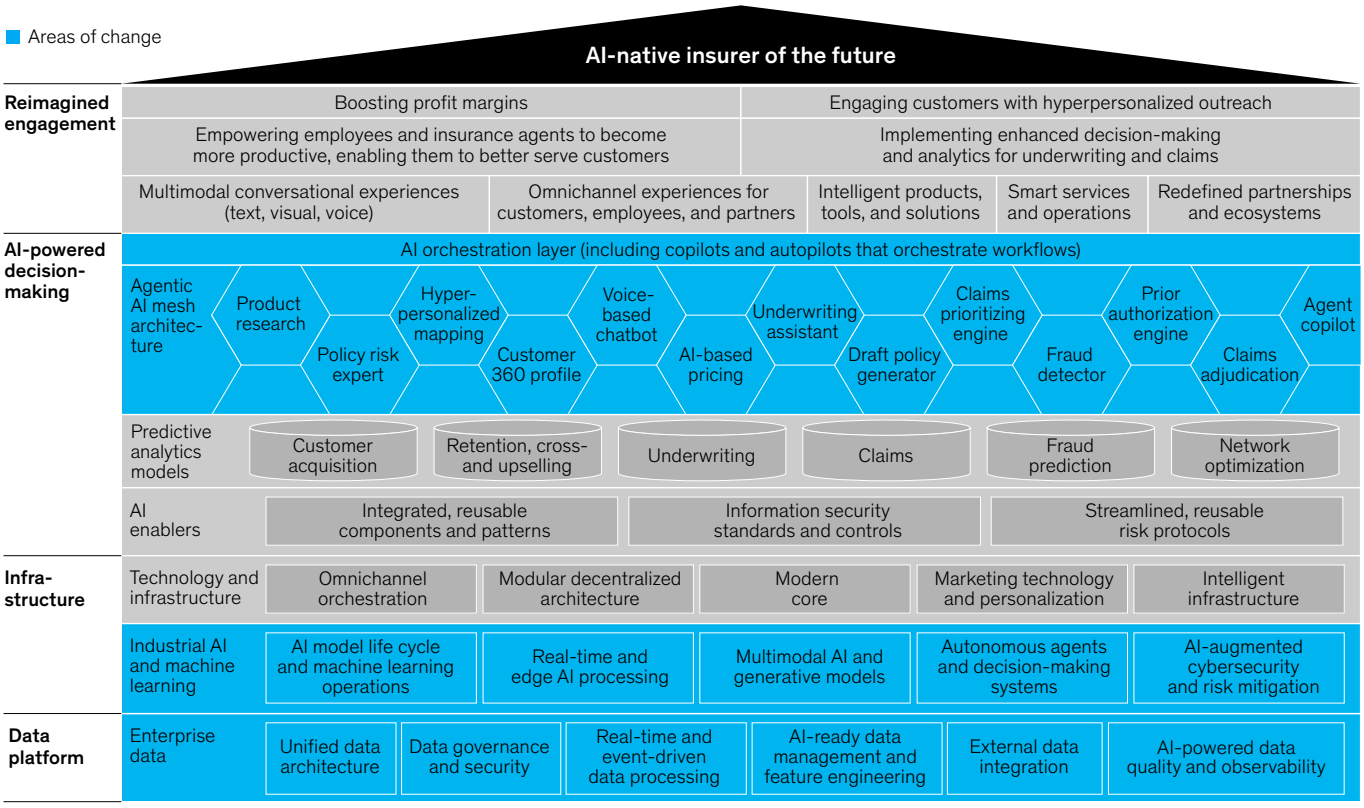
## Using technology for speed and distributed innovation

To drive sustainable value, insurers should adopt an AI-first approach and modernize their organization's entire capabilities stack. This enables organizations to remain adaptable, harness the latest AI advancements, and prevent the accumulation of outdated technologies that can hinder future development and innovation. True modernization requires ensuring that AI components and capabilities are reusable, aligning standards across the organization, and using high-quality data to train models.

A comprehensive capabilities stack helps to seamlessly integrate AI across the enterprise. This AI stack comprises four critical layers: reimagined engagement, AI-powered decision-making, infrastructure, and data platform (Exhibit 4). Each layer requires strategic investment to maximize AI's enterprise-wide impact. The AI stack for insurers has been updated from a previous iteration published in 2023 to account for advancements such as gen AI. Insurers can seek inspiration from banks in building their AI stack, tailoring it to account for important differences between the two industries.

Exhibit 4

### Advancements in AI are creating new imperatives for AI enablement in insurance.




McKinsey & Company

Next, we explore each layer of the AI stack in more detail.

**Reimagined engagement**

Insurers must rethink customer engagement, harnessing AI to deliver seamless, highly personalized experiences. Leading insurers are using AI to improve customer interactions, using multiple modes of communication such as text chatbots, images that help customers understand complex information, and voice assistants that allow customers to communicate with their insurer by speaking instead of typing. The AI helps ensure that the customer experience is not just human-like, but also smooth and consistent across channels. For example, if a customer starts a conversation on a mobile app and continues it through a phone call, the AI will take the previous inputs into account, so the customer doesn't have to repeat information. Customers are also becoming more familiar with gen AI. Among people who use gen AI applications such as ChatGPT, 29 percent utilize them for financial or investment-related information, advice, or recommendations.[1] As more consumers get comfortable with using gen AI tools to do things like compare insurance offers, carriers will need to raise their game on advisory, communication of product value, and price transparency.

**AI-powered decision-making**

The AI-powered decision-making layer trawls mountains of data generated across various channels to provide a highly personalized employee and customer experience. This layer complements existing pricing and underwriting decisions, supports claims decisions, and improves claims accuracy by dynamically evaluating data points such as adjuster notes, damage images, text submissions, documents, and claim histories. For example, one carrier has built an integrated product repository that includes policy documents across the global enterprise; it allows call center agents to seamlessly answer questions related to coverage, exclusions, and more. In property and casualty, many carriers are using AI to combine claims data with external data to identify new risk factors, such as climate-related damage estimates.

Driven by advancements in AI technology, leading insurers are moving from traditional predictive models to sophisticated capabilities such as multiagent systems and multistep reasoning. Agentic AI is revolutionizing the application of AI. Gen AI agents are advanced AI systems that can apply judgment and are often designed to interact conversationally with users by making use of extensive scientific knowledge and historical data. Multiple agents work collaboratively to execute tasks, such as using satellite and drone imagery for damage assessment and prevention. They offer valuable insights, provide real-time support to human agents, and suggest relevant next steps. Gen AI agents have the potential to significantly enhance customer engagement, automate complex workflows, and boost productivity. Multistep reasoning, meanwhile, allows an AI system to break down complex problems into several smaller, manageable steps and then solve each step in sequence. For instance, an insurer could use an AI system capable of multistep reasoning to review a claim, assess the damage, and calculate a payout.

The capability to integrate unique expertise and proprietary methods into agentic AI systems could become a central part of insurers' intellectual property. For example, a leading insurer based in North America is using agentic processes throughout its underwriting workflow. Through this implementation, the insurer has uncovered various implicit judgments that underwriters have traditionally relied on and codified them into new rules and protocols, enhancing the efficiency and consistency of its underwriting process.

[1] Alexis Calla and Sandeep Mukherjee, *AI, wealth management and trust: Could machines replace human advisors?* World Economic Forum, March 17, 2025.

To maximize value from AI, insurers must also focus on scaling reusable, standardized components. AI models and pipelines should be designed as modular, interoperable code assets that can be used in multiple domains. For instance, an AI-powered document classification engine developed for underwriting can also enhance claims processing and policy servicing. Investing in standardized AI frameworks, APIs, and coding assets reduces development time, minimizes redundancy, and accelerates AI adoption across the enterprise. By treating AI as a scalable capability rather than a series of one-off projects, insurers can extract significantly more value from their AI investments (Exhibit 5).

One important factor for insurers to consider is whether to build or buy AI technology or pursue a hybrid model (see sidebar "Deciding whether to build, buy, or partner").

### Infrastructure

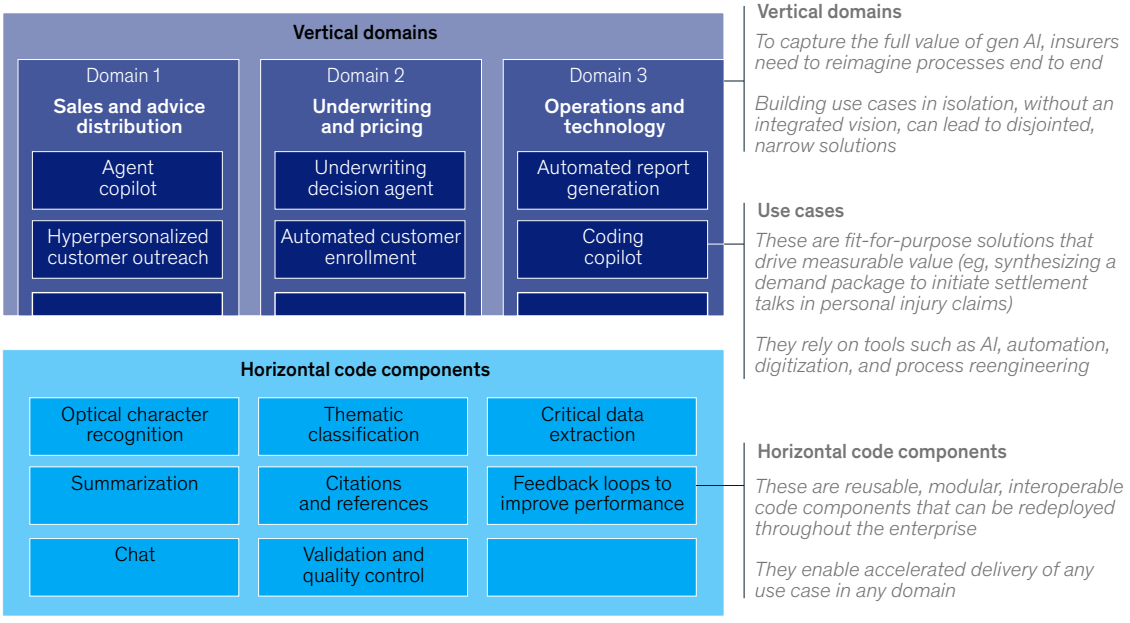
A strong infrastructure layer provides the capabilities that enable AI to function effectively and deliver value, including machine learning pipelines capable of running large AI models efficiently.

A major challenge in IT transformation is undocumented legacy systems—outdated technology still in use despite no longer being supported by vendors. Insurers will need to modernize this legacy infrastructure to fully harness AI, overcoming rigid IT systems that lack scalability and real-time processing power. Gen AI helps demystify legacy systems by analyzing code and generating structured documentation, helping organizations preserve institutional knowledge.

Exhibit 5

## Extracting enterprise-wide value from AI requires transforming entire domains by harnessing the power of reusable components.

**Examples of domains, use cases, and code components in an AI transformation of an insurer**




McKinsey & Company

## Deciding whether to build, buy, or partner

**Choosing whether to build** internal capabilities and intellectual property (IP) or to outsource the development of AI solutions that could be the foundations of high-value IP in the future is a high-stakes decision for insurers that affects scalability, differentiation, and speed to market. Building AI capabilities in-house allows for tailored solutions that align closely with specific business needs and capture an insurer's "secret sauce," preserving it within the AI capabilities stack with a protective moat that offers greater control and differentiation potential.

However, this approach demands significant investments in specialized talent, infrastructure, and long-term development cycles, which may not always be cost-effective. In contrast, purchasing AI solutions from established vendors enables quicker deployment and relies on proven technologies, though it will come with limitations in customization, integration challenges, long-term costs, reliance on third-party product road maps, and a reversion to market-median performance through the use of tools and capabilities that everyone else is using.

A hybrid approach can balance scalability with strategic control. Insurers that outsource standardized solutions that integrate gen AI—especially in corporate functions such as finance, human resources, and procurement—can concentrate internal resources on core functions such as underwriting and claims management. In these areas, custom-built AI capabilities can serve as unique differentiators by making use of proprietary data and domain-specific expertise to enhance competitive advantage. This strategy effectively balances costs, speed, and differentiation, enabling thoughtful build-versus-buy decisions based on long-term business objectives and unique business needs. A hybrid approach necessitates the development of an internal orchestration capability that can integrate internal and external solutions from both a technical and value perspective, resulting in additional IP for insurers to use as a competitive differentiator.

Additionally, establishing a flexible partner network allows insurers to gain cutting-edge external expertise and solutions in areas where internal capabilities may be limited. Given the evolving AI landscape, insurers must adopt a cost-benefit-driven approach and maintain a long-term perspective to strategically navigate these choices.

So far, few insurers have established a rigorous framework for the build-versus-buy decision, and even fewer actively revisit this framework in an era of rapid technological change. Evaluating whether to build or buy AI technologies requires a clear assessment of value creation, cost efficiency, speed to market, and long-term scalability. Insurers must also consider factors such as technical capability, integration complexity, regulatory compliance, and data security. For outsourced capabilities, effective technology vendor management requires insurers to carefully select, evaluate, and govern AI and cloud service providers to ensure compliance, interoperability, and long-term scalability. The right decisions align AI investments with business priorities, ensuring agility, innovation, and sustained competitive advantage.

Additionally, gen AI enhances developer productivity through automated code generation and testing, cutting manual effort and accelerating release cycles. CIOs and CTOs can look to past lessons from technological revolutions to guide the C-suite in scaling gen AI from pilot projects to lasting business value.

For example, a few years ago, a leading financial institution faced a bill of more than $100 million to modernize a transaction processing system. Gen AI has brought the costs down to less than half of that. Meanwhile, a top 15 global insurer used gen AI to reach a more than 50 percent improvement in code modernization efficiency and testing, and accelerated coding tasks by over 50 percent as well.

### Data platform

Insurers should invest in the data infrastructure required to train and scale multiagent AI systems, ensuring seamless integration across business functions. A hybrid cloud infrastructure, which combines on-premises data centers with public cloud environments, should be designed to ensure scalability, while highly configurable core product processors provide flexibility and efficiency.

## Successful AI adoption depends on fostering a culture of innovation, shifting mindsets, and building essential capabilities, but organizations often underestimate employee resistance and readiness to embrace new ways of working.

On the data governance front, insurers must evaluate the availability and quality of their data, while also considering the complexities of managing sensitive information. In cases where legacy systems pose a challenge, insurers may need to modernize their IT landscape to fully support AI adoption at scale.

### Pursuing adoption and change management

Successful AI adoption depends on fostering a culture of innovation, shifting mindsets, and building essential capabilities, but organizations often underestimate employee resistance and readiness to embrace new ways of working. Employees need to be equipped with the right skills and develop a clear understanding of AI's enabling role in helping them do their jobs. Leading insurers implement structured change management programs that emphasize leadership role modeling, clear communication of AI's value, comprehensive capability-building initiatives, and the establishment of appropriate performance structures.

Employees may feel anxious about their roles as organizations adopt AI technologies. However, history has shown that technology typically creates new needs and opportunities, leading to the emergence of different roles and responsibilities. Ultimately, embedding AI into workflows requires cultivating shared ownership and accountability for AI adoption across the organization.

Change management is the key differentiator between AI sitting idle and AI transforming operations. It's not enough to have excellent technology—that's only half the battle. The other half is to get employees to actually use AI in their daily tasks, and to shift the needle in the way work is done, be it through automation or augmentation.

In our experience, adopting AI is imperative for staying competitive. Only a few leading insurers have fully operationalized AI, presenting a compelling example for others that want to seize the opportunity to transform. These insurers are already pulling ahead, and recent technological developments have given them the opportunity to move even faster. Most others remain stuck in pilot purgatory, encountering various common pitfalls. They lack the bold, enterprise-wide AI strategy with measurable financial outcomes that can shift the organization out of its AI inertia.

They underestimate the full range of investment needs, leading to small-scale, fragmented efforts and poor ROI. They focus on narrow use cases instead of driving domain-wide transformation. They fail to create components that are reusable across business lines, limiting AI's long-term value. They rely too much on off-the-shelf solutions, reducing alignment with their unique business needs and cannibalizing their own ability to create new-age intellectual property. Without addressing these challenges, these insurers risk stagnation.

---

To remain competitive in a rapidly evolving world, insurers must adopt a bold, enterprise-wide vision for AI, fundamentally rewiring their operations and embedding AI into every aspect of their organization. This involves developing enterprise-specific systems, fine-tuning AI models on internal data, retooling workflows to outcompete in specific lines and markets, rethinking operating models, and scaling AI through reusable components to maximize its transformative potential. By rewiring their operations to put AI first, insurers can create lasting business value and stay ahead of the competition.

**Nick Milinkovich** is a partner in McKinsey's Toronto office, **Sid Kamath** is a partner in the London office, **Tanguy Catlin** is a senior partner in the Boston office, **Violet Chung** is a senior partner in the Hong Kong office, **Pranav Jain** is an associate partner in the Singapore office, and **Ramzi Elias** is a senior asset leader in the Munich office.

The authors wish to thank Chloe Ngan Tran, Devon Chen, Elena Mironova, Imad Bouazza, Kamila Muchowska, Khai Cheng Kiew, Khaled Rifai, Maria Serebryanaya, Robert Malan, and Simon Tamayo for their contributions to this report.

This report was edited by Jana Zabkova, a senior editor in the New York office.

Designed by McKinsey Global Publishing