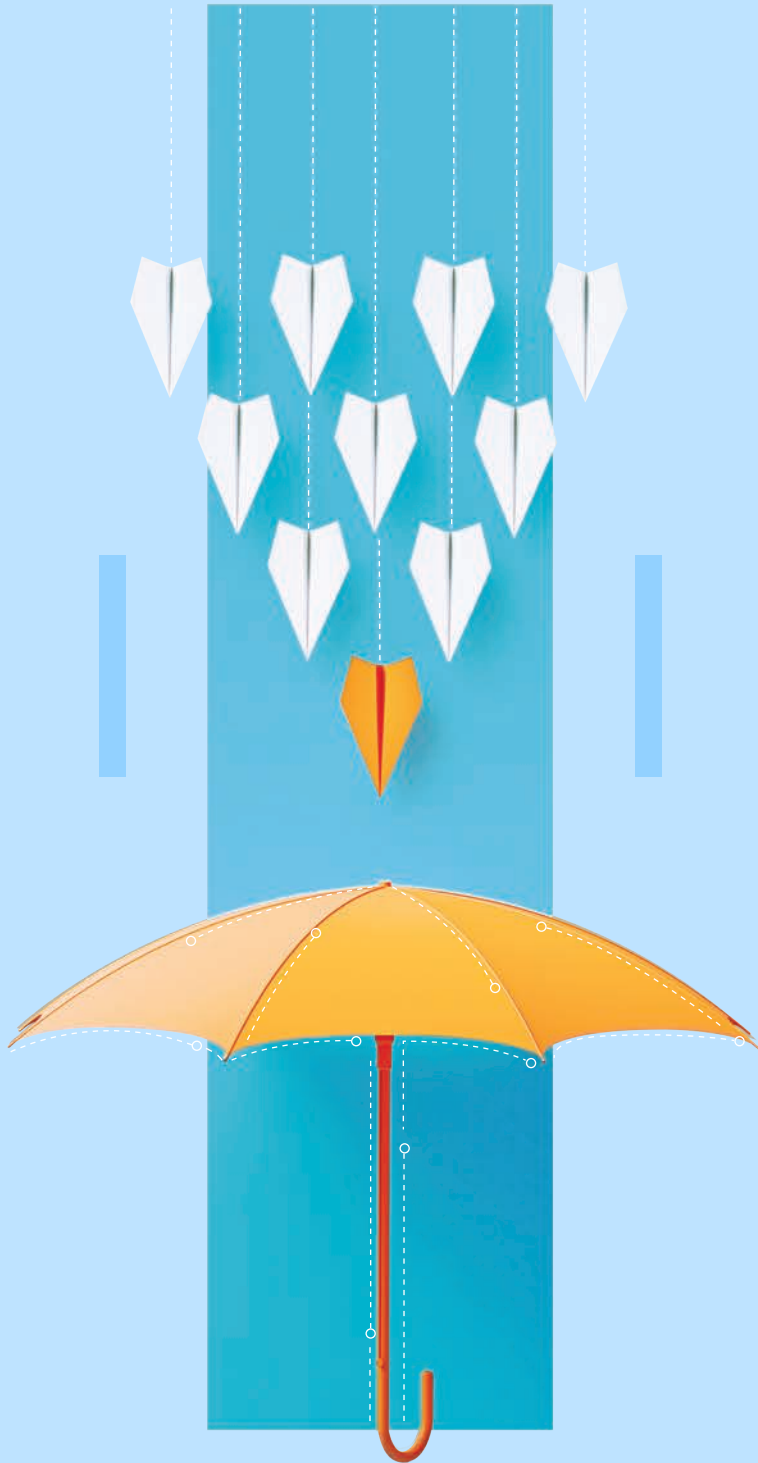


PROS, CONS, AND PATHWAYS TO AI-DRIVEN MODERNIZATION IN INSURANCE

This discussion of insurance core modernization and artificial intelligence comes from a series of questions put to Infosys insurance and technology experts by a technology leader at an insurer. It gives guidance on where AI is changing insurance technology and what that means for modernization strategy.





The good and bad of insurance tech

Insurers have traditionally moved slowly with developing technology, but with AI, they are behaving differently. They see its potential to make processes more efficient and unlock new insights from the information and expertise embedded across the enterprise.

The typical enterprise technology architecture in an insurance enterprise works well. It is sturdy, purpose-built, reliable, and well-suited for specific and complex tasks. However, insurance systems and platforms are also often outdated, heavily customized and not easily integrated. This limits agility and, most importantly, the

ability to take advantage of new advances in AI and other technologies.

The choice for IT leaders in insurance companies is whether to embark on a full-scale modernization or pursue modernization in selected areas. This is not a new choice, but it has grown more acute for insurers because of rapidly advancing AI capabilities.

What will be disrupted

AI-powered changes in insurance enterprises will first alter or disrupt standard procedures in operational and tertiary systems such as customer service, billing, reporting, distribution, and fraud detection.

These functions are characterized by high volumes, structured processes, and repetitive tasks that AI agents can be trained to execute with decreasing levels of human intervention or supervision. Critically, these are areas where AI can take over routine, rules-based work without requiring deep regulatory certification or domain knowledge transfer. By Infosys estimates, an insurer's policy administration system (PAS) is surrounded by more than 100 different systems.

As these functions consolidate, they will be able to deliver new capabilities via a new sort of cognitive engine that can apply intelligence across business workflows.

Says Infosys chief delivery officer Satish HC: "Encoding intelligence and AI in the flows leads to more automation and autonomy. And this is leading to the development of a new layer within an enterprise stack, which is what we call the [systems of cognitive work](#)."

How insurers manage data and extract legacy knowledge is also changing due to AI. Insurance businesses are typically old and hold a great deal of unstructured data and siloed information that can be extracted and transformed rapidly and cheaply with new AI tools and [retrieval-augmented generation \(RAG\) models](#). Looking further out, standard software-as-a-service (SaaS) platforms and general business functions face displacement by AI as hyperscalers add AI-native capabilities to their cloud ecosystems.



What will persist

Core insurance platforms will persist. Policy administration, underwriting, and claims are the least likely insurance components to be displaced by new AI functions.

The reason is twofold.

First, any system at the heart of an insurer must be approved by multiple authorities across multiple jurisdictions. That makes for a process that is lengthy, complex, and not navigable by AI-native platforms alone.

Second, the domain knowledge embedded in these platforms — actuarial logic, underwriting judgment, and claims adjudication expertise — has (thus far) proven [difficult to replicate or extract](#).

The AI-native insurance platform [Federato](#) highlights a [potential demarcation](#) between disruption and persistence in commercial and specialty underwriting. The platform addresses a genuine operational bottleneck: the flood of broker submissions that arrive daily as unstructured data, typically PDFs attached to emails, spanning general liability, property, catastrophic risk, and beyond. Federato applies AI to triage that volume, predicting which submissions have the highest likelihood of leading to finished policies so underwriters can prioritize their attention.

That is a meaningful efficiency gain. But Federato does not price the risk, quote the policy, or bind the coverage — all of which happen downstream in core systems like [insurance software platform Guidewire](#). More importantly, it does not replace the underwriter's judgment, nor does it replace the broker relationship that generated the submission in the first place.

Where AI is heading

AI progress has been fast but distributed unevenly and adopted poorly.

As the 2026 edition of the Stanford University AI Index report notes, this has given rise to a sort of "jagged intelligence." AI models can deliver a gold-medal performance at the International Math Olympiad but [cannot read a clock](#).

Still, AI advances will put pressure on traditional insurers. AI chat tools have trained users and customers to expect



a new kind of engagement from companies. Customers who receive good AI-powered customer experiences will expect the same from insurers, regardless of heavier regulatory burdens.

Practical gains in the next three to five years will come as much from closing the deployment gap as from further technical breakthroughs. Enterprises that prepare their data foundations and develop agentic architectures, which move beyond suggesting actions to humans to executing multistep work autonomously, will be best positioned to capture those gains as they arrive.

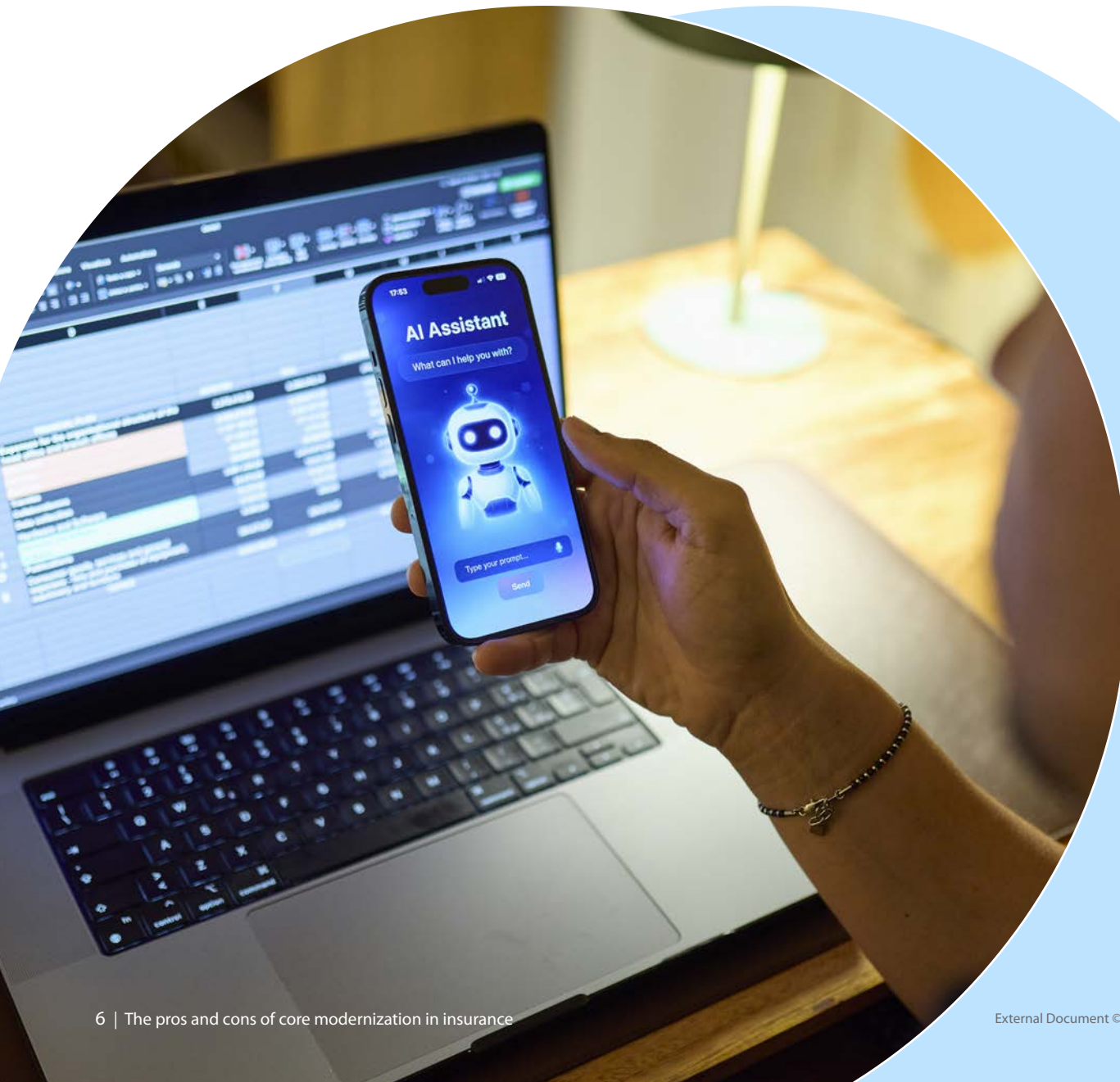
AI headwinds

In the general sense, public distrust of systems that aren't clearly explained, backlash against the energy

consumption and data center buildouts required by AI, and fears of AI-driven job losses could lead to regulatory, legislative, and judicial challenges.

In the corporate context, AI will grow more expensive as companies use it more, and executives have begun to speak of [AI sticker shock](#). Pricing plans and business models for even the largest AI companies are subject to change. Companies have committed to spend heavily on AI, but many have a hazy view on what return will justify that investment.

Adding risk to this context, every single vendor — software, service, or platform — claims to have added AI to its offering and promises increased productivity. But the value of AI in every platform is potentially offset by the extra cost of heavier usage driven by AI.



That means traditional and hybrid approaches to managing data, platforms and applications will remain valuable, particularly for high-volume, low-complexity processing where the cost per-transaction economics do not justify full AI deployment. Insurers should preserve well-functioning traditional business processes where they deliver reliable, auditable, and cost-effective outcomes.

The case for full-scale modernization

Insurers should move quickly and not take half-measures. Incremental upgrades and bolt-on solutions [have poor track records](#). Competitors will not wait.

[AI tools cannot operate reliably](#) on top of siloed, unmodernized data estates. A single canonical data model is a prerequisite for AI. Without a single source of truth and explainable audit trails, AI tools produce results that cannot be trusted. And without trust, new tools will not be adopted.

Regulators are also raising the bar. Emerging governance frameworks in the EU and UK will require insurers to demonstrate data lineage and explain model behavior — requirements that will make a modern, unified data foundation necessary.

[RAG models](#) have made modernization more achievable. These tools can extract structured and unstructured knowledge from legacy systems, accelerate migration, and reduce the cost and risk of traditional modernization efforts.

Modernized technology architecture also has business benefits. It enables rapid introduction of new products and expansion into new markets, and faster, cleaner integration with partner organizations. Insurers that modernize now will have data foundations ready for deploying AI agents as they mature and gain regulatory acceptance. In practical terms, this means the ability to launch a new parametric product in weeks, or onboard a distribution partner through application programming interfaces (APIs) rather than a hand-tailored integration effort.

The demand for modernization

Engineers, data scientists, and AI specialists actively choose employers based on the sophistication of their tech stack, and insurers struggle to compete. Tech companies are just [more modern and exciting for](#)

[jobseekers](#). Consumers and policyholders benchmark their insurance interactions against the [digital experiences](#) delivered in retail and other settings.

And as insurance industry consolidation continues and accelerates, the ability to integrate an acquired book of business is material to a transaction. Modernization skeptics often frame the investment in terms of current operational cost, but this ignores the strategic opportunities that modernization opens up.

The case for pathways and layers

Insurers should proceed with core modernization, but steer program design toward creating an intelligent decision platform that accelerates change in areas ripe for AI impact while preserving the core. In short, a core modernization program delivers architecture that improves core functions and is also capable of doing what comes next.

This platform's pathway-and-layers approach allows insurance leaders to be more strategic on where to modernize and where to employ AI, AI agents, and emerging technologies in their systems. This is less disruptive, enables small wins, and allows executives to bring a business lens to AI initiatives.

In practical terms, the program should be structured in defined phases, beginning with data, progressing to processes surrounding the core platform, and then creating AI-ready linkages across the enterprise.



With this approach, we recommend a program to build intelligent AI-powered bridges between legacy systems and emerging AI-native capabilities, using a two-speed architecture. This allows the legacy core to keep running while new products, processes, and customer experiences are built on modern, [AI-connectable infrastructure](#) alongside it.

An intelligent system of record

Modern PAS systems such as Guidewire and Majesco have integrated with AI capabilities, holding the authoritative, compliant data and process backbone while AI agents operate as an orchestration and intelligence layer above them. Agents will handle intake, customer interaction, and other functions without replacing the core transactional and regulatory functions the platforms perform. These platforms will retain their central role because they carry irreplaceable institutional knowledge of insurance processes, hard-won regulatory certification, and the operational trust of hundreds of enterprise clients.

Insurers can keep binding, quoting, and policy management actions to the core platform. This improves efficiency without affecting the downstream functions of a PAS.

Established PAS vendors are not passive in this dynamic. Guidewire's acquisition of the AI pricing company Quantee and its launch of a dynamic pricing platform signal that it is actively embedding AI capabilities into its platform, taking on processes that AI-native competitors currently occupy.

Guidewire's more than 570 clients give it a broad view into how insurance processes flow, including decision points, bottlenecks, and operational nuances. This gives it an early-mover advantage in developing [AI-native capabilities](#). The company has an AI framework and developer studio, agentic tools in underwriting, predictive scoring in claims, and AI-assisted pricing tools.

An insurer's vendor strategy should anticipate and actively shape this evolution rather than treat it as a background development.

Agents at the edge of claims

Claims systems are just as core to an insurer as policy administration. An insurer's claims system should

continue to serve as its authoritative system of record, where coverage is confirmed, reserves are set, regulatory reports are generated, and settlements are executed.

This division of responsibilities is durable because claims decision-making in conventional, established lines of business carries significant regulatory and reputational weight. Further, explainability of decisions is a compliance requirement, and insurers must maintain a traceable log.

Supported in both cases

Regardless of current architecture and modernization strategy, insurers must face a set of technology truths.

1. Modernization is a must. Doing nothing invites smaller, more agile competitors to take market share.
2. Data cleanup has a new AI leg up. Rapidly advancing data tools can bring structure to unstructured data and link siloed systems.
3. An AI end-run is possible. Standard SaaS platforms and general functions face a risk of displacement as hyperscalers integrate AI into their cloud ecosystems. Throughout a modernization program, leaders must continually ask: Are we about to build something that will be obsolete?
4. Regulatory requirements will slow the process. The rate of change will vary from region to region and jurisdiction to jurisdiction.
5. All modernization programs need circuit breaks. Large-scale modernization runs the risk of lasting longer than a typical CIO's tenure, or a business strategy's relevance.

Orchestration over integration

Integration in insurance is mostly a point-to-point, API-driven technical discipline. AI agents can replace this by querying systems of record for context and cognition and then executing tasks across platforms and managing data flows. In short, insurers can build dynamic, intelligence-led orchestration capabilities in place of hard-coded integrations.

In insurance enterprises, core PAS, claims, and underwriting systems become nodes that AI agents query and update. AI agents, modernized business processes, and control towers

for reporting and oversight together function as a cognitive engine tuned for strong business performance.

In practice, platforms such as [Infosys Topaz Fabric](#) already provide out-of-box integration across model layers, data platforms, and business systems, offering insurers a credible path to AI-mediated interoperability that is faster and more adaptable than traditional integration projects.

Beyond greater efficiency, this layer creates cross-sell opportunities and data harmonization that siloed architecture prevents. However, the integration challenge does not disappear — it moves from the

system layer to the governance layer, requiring insurers to invest in robust agent orchestration controls, data residency compliance, and clear rules about which system's data is authoritative when an AI agent's output diverges from what a system of record holds.

Success in core modernization is measured by efficiency gains, cost savings, and above all, the flexibility to act on opportunities that do not yet exist. A modernized architecture makes expansion into new markets, rapid product introduction, and continuous innovation structurally possible. The ultimate return is the capability to do what comes next.

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