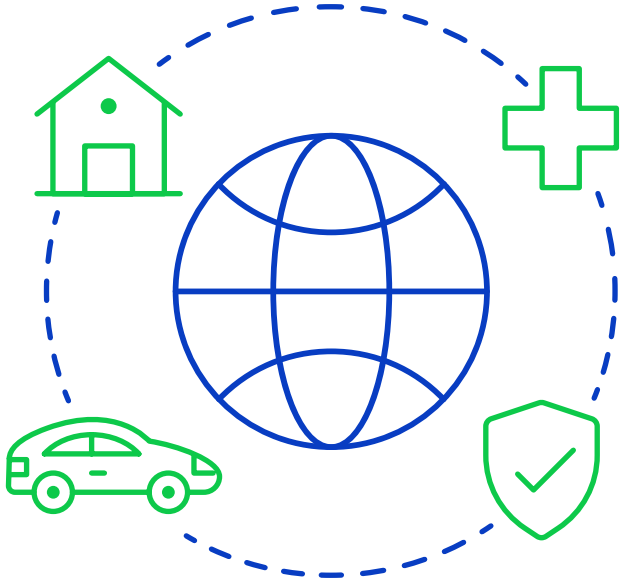


Insurance

2026

State of Agentic Orchestration & Automation

Closing the agentic AI vision-reality gap

Contents

Introduction 3

Automation is delivering business value and there's runway to do more 4

Process complexity is outpacing innovation 5

- Rising volume and diversity of process endpoints 5
- Agentic orchestration as the new operating model 6

AI in practice: Risk versus reward 7

- The limits of siloed agents 8
- Building a foundation for trust 9

Conclusion 10

About the report 10

Introduction

In the insurance sector, loss and expense ratios are increasingly under strain due to catastrophe activity, social inflation, and complex commercial risks. Against this backdrop, and with added pressure for business growth, insurance organizations are scaling automation investment across core areas, such as claims and underwriting processes to improve service quality at scale while preserving combined ratio discipline. And the results are clear, with process automation driving tangible business growth according to an overwhelming majority (97%) of insurance organizations. On average, firms have automated 47% of their processes and believe this could reach 63%. Almost four in five (78%) plan to increase automation spend, with budgets expected to rise by an average of 21% over the next two years, and 84% say they will increase automation spending by at least 10%.

At the same time, many insurers are contending with rising technology noise. AI models, point solutions, and various platforms are proliferating across the technology stack, often increasing fragmentation rather than simplifying delivery. This is compounding a broader structural challenge as technology stacks become more distributed and AI moves from experimentation into everyday claims handling and risk assessment work. Alongside the risk of falling behind technologically, there is a growing need to manage change in a controlled way, ensuring AI agents are deployed into meaningful, high-value work rather than adding further complexity.

With rising client expectations for faster, more transparent journeys in claims and underwriting, insurers are under pressure to improve service without increasing costs. As a result, the insurance sector is turning to AI agents to extend automation into complex knowledge work that previously required human judgment. Many insurance organizations want to turn that promise into a dependable capability that can scale across the business, but **almost two-thirds (65%) say there is a gap between their vision for agentic AI use and the reality today.** While 69% are already using AI agents, only 11% of agentic use cases have reached production in the last year. This report outlines how organizations can move from isolated agent pilots to enterprise agentic automation, where agents, people, and systems are orchestrated as part of governed, end-to-end business processes.

What is an AI agent?

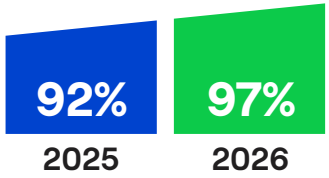
An AI agent is a piece of software that uses Large Language Models (LLMs) to interpret goals, make decisions, reason about next steps, and interact with people, systems, and devices.

For this report, we spoke to 125 senior IT decision makers, business decision makers, and enterprise software architects from the insurance sector, responsible for process automation in large organizations (over 1,000 employees). We asked about the current state of process orchestration and automation in their business, how AI and agents are being used today, and what stands in the way of scaling and governing AI agents in production.

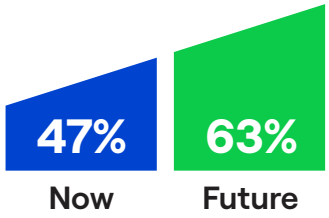
Automation is delivering business value and there's runway to do more

Automation is already delivering measurable impact across insurance, evolving from incremental efficiency gains into a key driver of value across many core business processes. Insurers are also using AI to reinvent claims processing and underwriting, helping to reduce leakage, accelerate cycle times, and improve service quality. As regulators continue to raise the bar on data and solvency requirements (especially in the U.S. insurance companies have to navigate fragmented local and state regulations), there is significant scope for further automation, with the investment outlook underscoring this ambition.

The next step for insurance organizations is extending into agentic orchestration, where AI agents participate in the same core processes with the same level of control and reliability as other tools and technologies.



Increased business growth due to process automation over the past year



47% of processes are currently automated.

This figure could climb to 63%



78%
plan to increase automation spend



+21%
Automation budgets expected to rise by an average of 21% over the next two years



84%
will increase automation spending by at least +10%

Process complexity is outpacing innovation

Many insurance organizations aim to increase investment in process automation, yet mounting complexity is slowing their ability to innovate.

Process complexity is rising due to:

- **80%** — Regulatory complexity
- **54%** — Branching and conditional logic
- **54%** — Legacy systems that are difficult to connect to
- **46%** — Multiple systems that must interoperate
- **46%** — Human work
- **23%** — Homegrown software that is hard to integrate

Rising volume and diversity of process endpoints

Process endpoints are a major source of complexity in designing, running, and managing end-to-end business processes. Endpoints can be:

- **People** such as underwriters, claims adjusters, customer service teams, brokers, and compliance officers
- **Systems** such as policy administration platforms, claims management systems, risk modeling and catastrophe-loss tools, regulatory reporting systems, and fraud detection platforms
- **Devices** such as IoT-enabled risk sensors, telematics devices for usage-based insurance, and connected home or vehicle monitoring systems

As technology stacks evolve, process endpoints are multiplying in both volume and diversity. At the same time, many systems embed AI agents in isolated, vendor-specific ways, often within closed ecosystems that limit transparency, complicate governance, and reduce adaptability to carrier-specific needs. This adds another level of fragmentation to an environment where insurance processes are tightly intertwined with many systems, teams, external partners and, increasingly, AI agents. As organizations integrate new technologies including IoT, digital risk models, and telematics devices, coordinating these endpoints reliably becomes more challenging and more critical. Creating or changing an end-to-end insurance process often implies touching multiple systems and interfaces, which slows down change and increases risk.

What's needed to tame process complexity?



82% say they need better tools to manage the intersection of processes



62% say they need a better way to monitor and control process automation

Process complexity is outpacing innovation

+14%

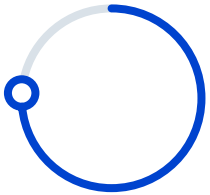
Survey respondents shared that they manage an average of **49 endpoints** in their business processes, and that footprint is **growing at 14% year over year**.

Most commonly used process endpoints:

58% — Enterprise applications such as SAP, Oracle, and Salesforce

56% — Task automation technologies such as robotic process automation (RPA)

54% — AI/ML software, including LLMs and intelligent document processing (IDP) tools



72%

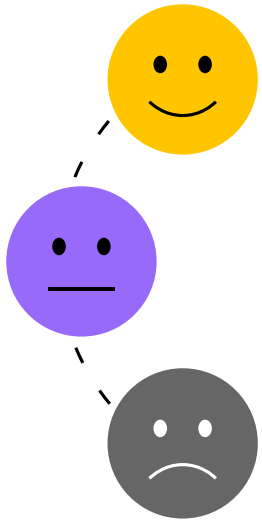
say the volume and diversity of endpoints are increasing exponentially

Agentic orchestration as the new operating model

Agentic orchestration enables teams to blend deterministic and dynamic orchestration of business processes. It leverages agents to add dynamic reasoning to deterministic processes, selecting the right tools and actions to achieve the desired outcome. This is crucial for insurance organizations under rising pressure to protect margins and navigate regulatory complexity.

Business process maturity is essential to safely implement agentic orchestration at scale, but many insurance organizations are still early in their journey. They need to increase process maturity and AI maturity in parallel so that, as agents become more capable, teams are ready to embed them into governed, end-to-end processes rather than bolting them onto fragile or siloed automations. For insurance leaders, that means building the foundations to orchestrate agents, people and systems across distributed systems to improve resilience and execution, while maintaining control needed for processes that are long-running and often high-volume. end-to-end processes rather than bolting them onto fragile or ad hoc automations.

Current state of agentic orchestration



6% say they are currently using agentic orchestration

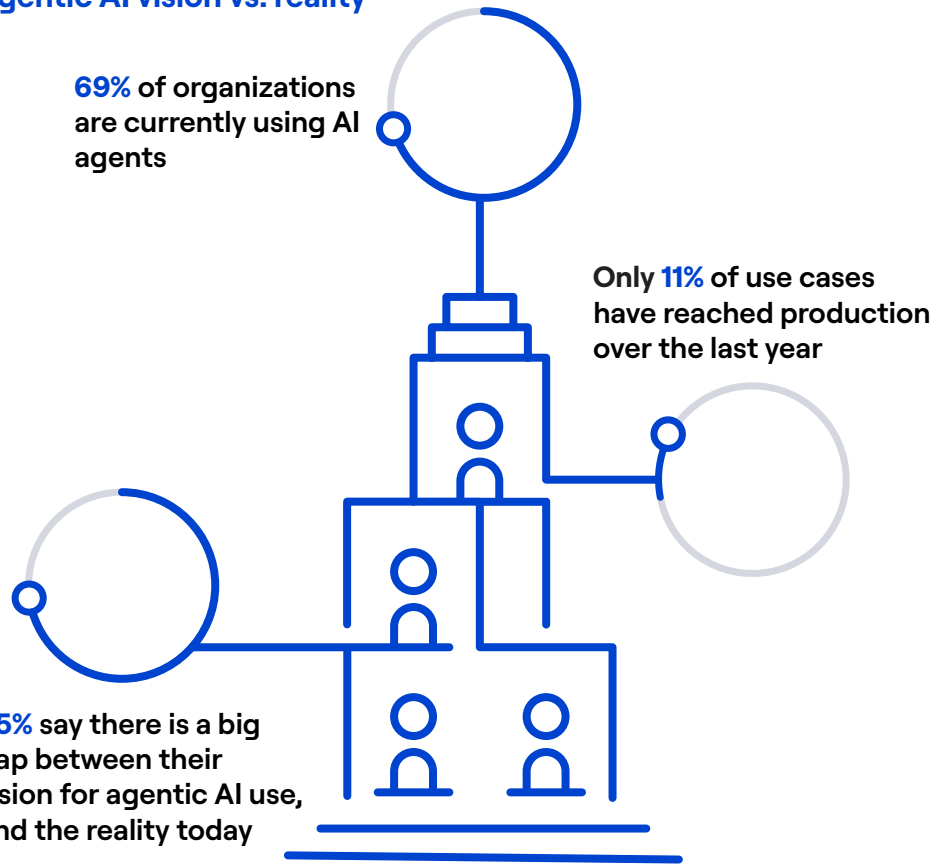
82% say they have not reached the right level of process maturity to implement agentic orchestration

82% say that without agentic orchestration, achieving a fully autonomous enterprise is a “pipe dream”

AI in practice: Risk versus reward

Across the board, organizational leaders understand that AI can bring substantial value by augmenting human work, saving time, and improving decision-making.

Agentic AI vision vs. reality



However, while many insurance organizations are experimenting with AI agents or plan to, trust remains a major barrier to wider adoption. As the sector faces rising data management, solvency, and climate resilience regulatory scrutiny, insurance leaders demand confidence that agents will perform consistently and operate within clear parameters. With weak oversight and rising costs already derailing projects, strong agentic risk controls are non-negotiable.

AI trust issues

What's holding organizations back?

81%	Business risk of AI in day-to-day processes when IT does not have appropriate controls in place
80%	A lack of transparency around how AI is used within business processes
68%	Compliance concerns around the use of AI agents
63%	Missing internal skills to manage AI effectively
48%	Concerns that AI will make poorly implemented processes worse
40%	Questions about using agentic AI where it doesn't add value
38%	Don't trust delegating critical tasks to AI

52% believe untamed agentic AI risks fanning the flames of poorly implemented processes and automations

AI in practice: Risk versus reward

These concerns do not negate the value of AI agents. Instead, they help explain why adoption patterns are uneven as organizations tend to be **comfortable using agents for low-risk tasks or internal copilots.** However, insurance leaders across the sector are much more **cautious when considering agents for end-to-end, revenue-critical, or highly regulated processes.**



81% say most of their AI agents today are chatbots or assistants that summarize or answer questions, rather than handling mission-critical cases

Caution is natural, but it comes at a cost. Insurance organizations unable to move beyond pilots and isolated use cases will capture only a fraction of AI's potential to manage rising compliance load across risk and reporting. Meanwhile, those that successfully incorporate agents into core operational processes will improve portfolio planning and execution, strengthen resiliency, and deliver more responsive, tailored services.

The limits of siloed agents

An additional barrier to using AI in production is the proliferation of siloed agents that aren't embedded in orchestrated business processes and aligned with an agentic orchestration strategy. In insurance, workflows can span multiple policy, claims, and customer service touchpoints, meaning disconnected agents add complexity without benefitting performance. Many IT leaders today refer to their agents as:

- **Focused on low-level, low-risk activities such as chatbots or assistants that summarize information and answer questions**
- **Operating at the edge of business processes rather than operating in core, mission-critical process flows**
- **Heavily dependent on human oversight and approval for important decisions, limiting ability to manage exceptions or adapt in real time**



45% say their agents today operate in silos and aren't woven into end-to-end processes

AI in practice: Risk versus reward

Building a foundation for trust

To build a foundation for trusting AI agents in production, insurance organizations need **agentic orchestration** to provide a control layer for agent behavior. This means using deterministic process models to define where agents are allowed to act, which decisions require human approval, what to do when confidence scores are low, and how to capture a complete audit trail of every step an agent takes.

AI in the future

90% — of respondents say AI needs to be orchestrated like any other end-point within automated business processes to ensure compliance with regulations

90% — say AI needs to be orchestrated across business processes if they are to get maximum benefit from their investments

74% — are looking to use AI to better analyze and improve processes

Once a foundation of trust is built, agents can either orchestrate processes by selecting tools and steps toward a goal or be orchestrated within broader governed processes, moving beyond siloed copilots or chatbots. This is agentic orchestration: the ability to design, orchestrate, and govern enterprise-grade agents that handle business-critical work. Agentic orchestration connects agents to process endpoints and systems of record, with explicit rules, observability, and human-in-the-loop checkpoints to ensure governance.

Conclusion

Facing pressure to reduce exposure in high-risk zones and protect margins, the insurance sector is looking to automate more of what matters most, while safely incorporating AI agents into their core business processes. Research shows that agentic orchestration, not standalone agents, is the key to closing the AI vision-reality gap. By using deterministic process models, clear guardrails, and event-driven orchestration to coordinate agents, people, systems, and devices, enterprises can build a foundation for AI agents they truly trust. With agentic orchestration, insurance organizations will turn today's AI experiments into durable, business-critical capabilities that improve planning and forecasting, secure information flows through new technologies, and enhance the overall customer experience.



About the report

Camunda commissioned Coleman Parkes to conduct a survey among 125 respondents (including 58 US, 25 UK, 27 Germany, and 15 France) from insurance firms with at least 1,000 employees. All respondents are either responsible for, or significantly involved in, process automation in their organization. This survey was conducted online between September 23 and October 23, 2025.

For more information about anything in this report, please get in touch.

About Camunda

Camunda is the enterprise platform for agentic orchestration, enabling organizations to coordinate AI agents, people, and systems across complex, end-to-end business processes. With built-in governance, auditability, and human oversight, Camunda gives enterprises the control they need to move AI from pilots to production — safely and at scale. Trusted by over 700 organizations worldwide, including 9 of top 10 US banks, Camunda helps enterprises boost operational efficiency, accelerate time-to-value, and deliver better customer experiences. Recognized as a Visionary in the Gartner Magic Quadrant™ for BOAT 2025 and rated 5/5 in Orchestration by Forrester.
For more information, visit camunda.com.