

Generative AI in insurance

May 2024

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Background and methodology

As generative artificial intelligence (GenAI) leaps beyond legacy automation and is poised to rapidly advance even further in the near future, the demand for novel solutions is rising quickly. Traditional carriers are ramping up GenAI experimentation through both targeted partnerships and the development of in-house capabilities.

To better understand how insurers are exploring or implementing GenAI applications (including OpenAI ChatGPT, Adobe Firefly, GitHub Copilot and others), we conducted the following survey:

Conducted in November and December 2023

N=200

- ▶ Respondents included global property and casualty (P&C) carriers, life and annuity (L&A) carriers, group benefits providers, brokers or agents, and InsurTechs.
- ▶ Decision-makers focused on distribution, underwriting, policy servicing, claims, product strategy, and other investment and technology representatives.
- ▶ The survey gauged knowledge of the represented firm's GenAI initiatives or direct involvement in teams leading GenAI efforts, with specific expertise implementing GenAI applications.
- ▶ Sample decision-maker titles included (but were not restricted to) CEOs, chief technology officers (CTOs), COOs, chief data officers (CDOs), chief digital officers (CDOs), chief strategy officers (CSOs), heads of AI and other positions in the firm.

This document is organized into nine chapters:

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Our study clarifies the value in taking a dual-track approach to operationalize GenAI: both rapid, use-case experimentation and the development of top-down enterprise strategies

Key takeaways

1	Insurers are prioritizing specialized GenAI use cases in one area of the value chain and those that provide quick wins .
2	Current use cases focus on enhanced chatbots , while future investments prioritize predictive risk assessments and enhanced underwriting .
3	Insurers are utilizing both top-down enterprise innovation and bottom-up grassroots innovation to activate GenAI.
4	Heads of new AI and GenAI teams are reporting directly to key decision-makers , including the CTO and CEO.
5	Insurers are anticipating that GenAI will ultimately drive productivity gains, revenue uplift and cost savings across core insurance functions.

Supporting data

- ▶ **69%** of insurers prefer specific use cases that transform one area of the value chain.
- ▶ **83%** of insurers prioritize use cases that deliver either quick wins, or a combination of near-term and long-term benefit, vs. those that strictly provide long-term impact.
- ▶ **54%** of group benefits providers and **34%** of L&A carriers are exploring chatbot use cases.
- ▶ **More than 50%** of insurers cite predictive risk assessments as a future priority, while **52%** of L&A carriers and **51%** of P&C carriers prioritize enhanced underwriting.
- ▶ **59%** of insurers seek top-down enterprise innovation, while **41%** prefer grassroots approach.
- ▶ **56%** are governing GenAI teams with a centralized model, while **31%** opt for a hybrid model.
- ▶ **58%** of leaders of active GenAI teams and 53% of leaders of future teams report to the CTO.
- ▶ **12%** of leaders of active GenAI teams and 7% of leaders of future teams report to the CEO.
- ▶ **82%** of large insurers (greater than US\$25b direct premiums written (DPW)) cite productivity gains as a primary driver for implementing GenAI.
- ▶ **65%** of all insurance companies expect revenue uplift of over 10%, and **52%** of respondents anticipate additional cost savings.

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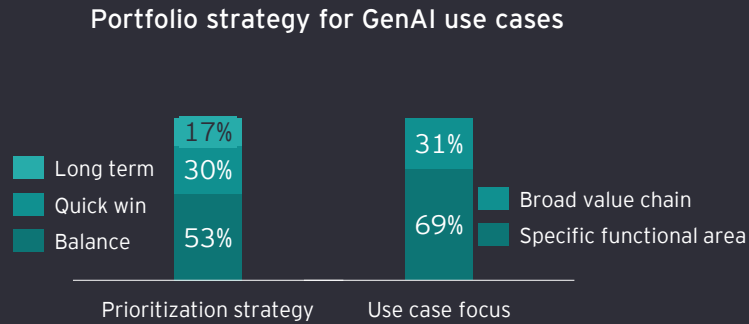
Priority use cases

Demographics overview

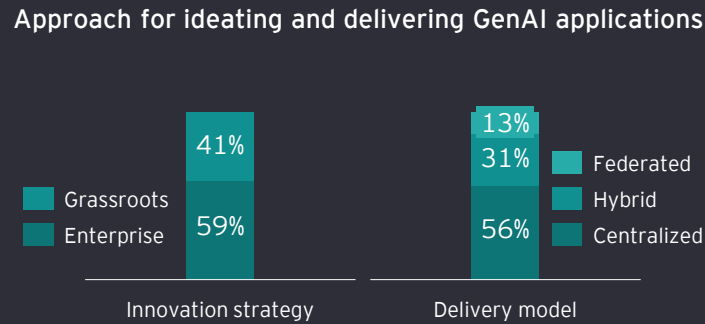


Near- and long-term use cases are focused on enhanced underwriting, predictive risk assessments and personalized product recommendations

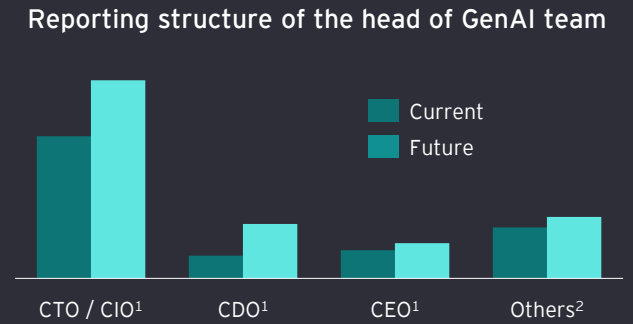
Respondents prioritize quick win use cases specific to one functional area



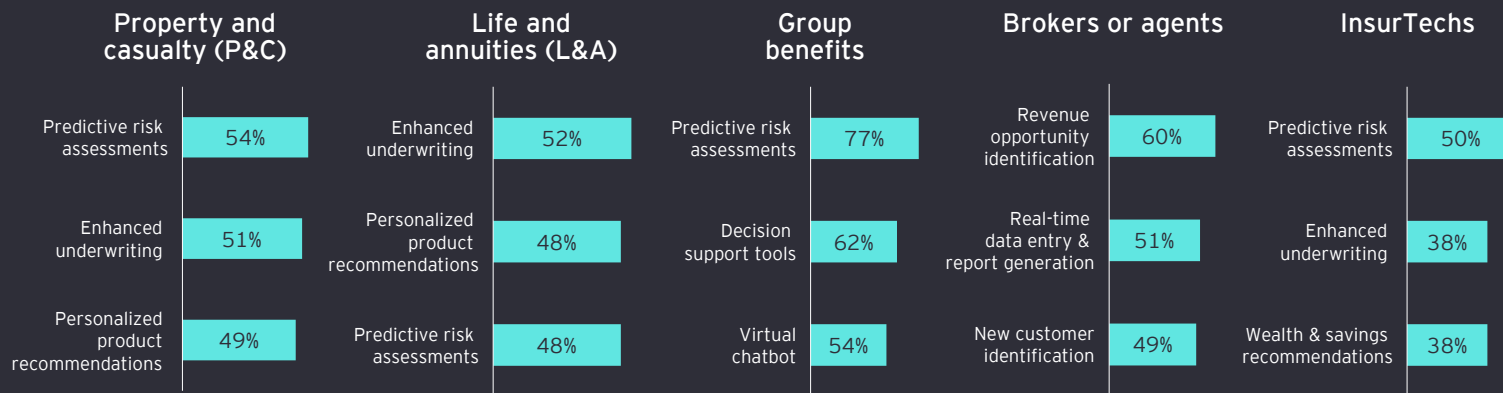
GenAI is being activated via a combination of enterprise and grassroots innovation



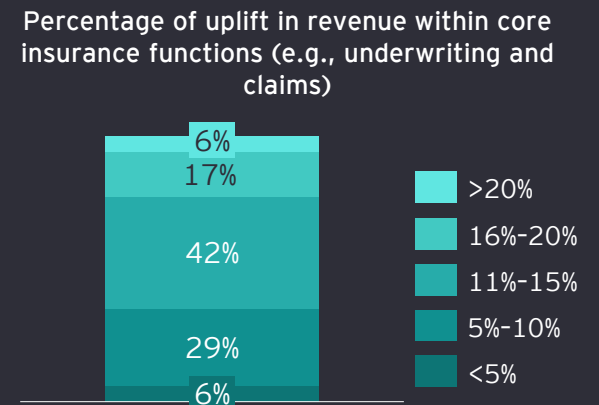
Head of GenAI teams are reporting directly to key decision-makers



Future investments prioritize predictive risk assessments and enhanced underwriting capabilities



Respondents expect moderate-to-high revenue impacts from GenAI application

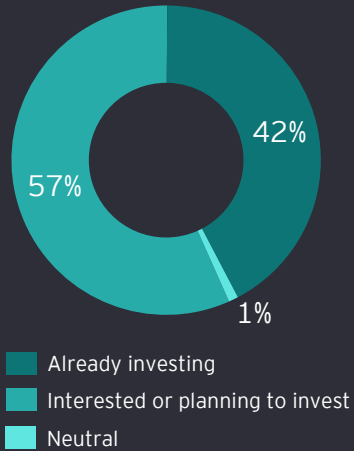


1.CTO or CIO - chief technology officer or chief information officer; CDO - chief data officer; and CEO - chief executive officer.

2.Others include COO, chief innovation officer, CSO, chief digital officer and head of AI.

Usually viewed as slow adopters of technology, insurers across all lines of business are actively investing in GenAI and mobilizing dedicated teams

Respondents are actively exploring GenAI initiatives



99% of respondents are already investing in GenAI, planning to invest or are highly interested in learning more.

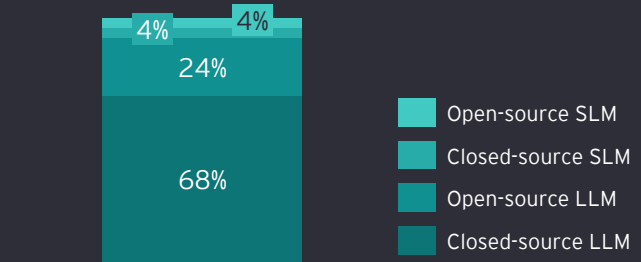
42% of these respondents are investing today.

Anticipate numerous benefits following implementation

Respondents are most motivated to invest in GenAI due to the following drivers:

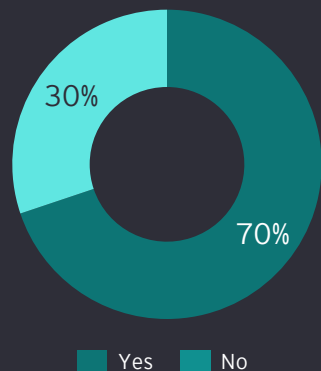
- 1 Productivity enhancements
- 2 Cost savings
- 3 New revenue generation or optimization
- 4 Risk management
- 5 Cash flow and liquidity optimization

Prefer closed-source large language models (LLMs) as opposed to small language models (SLMs)

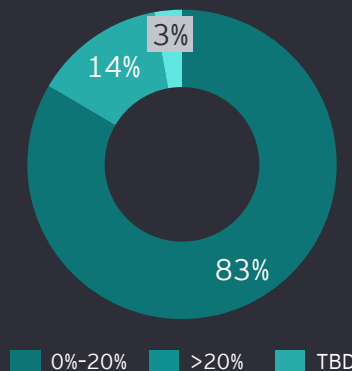


Have begun making investments in dedicated GenAI teams to realize these benefits

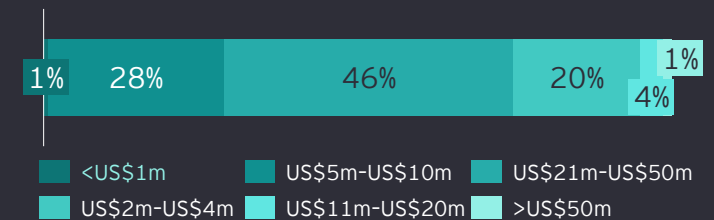
GenAI team mobilization (n=200)



Percentage of available corporate budget dedicated to GenAI (n=139)

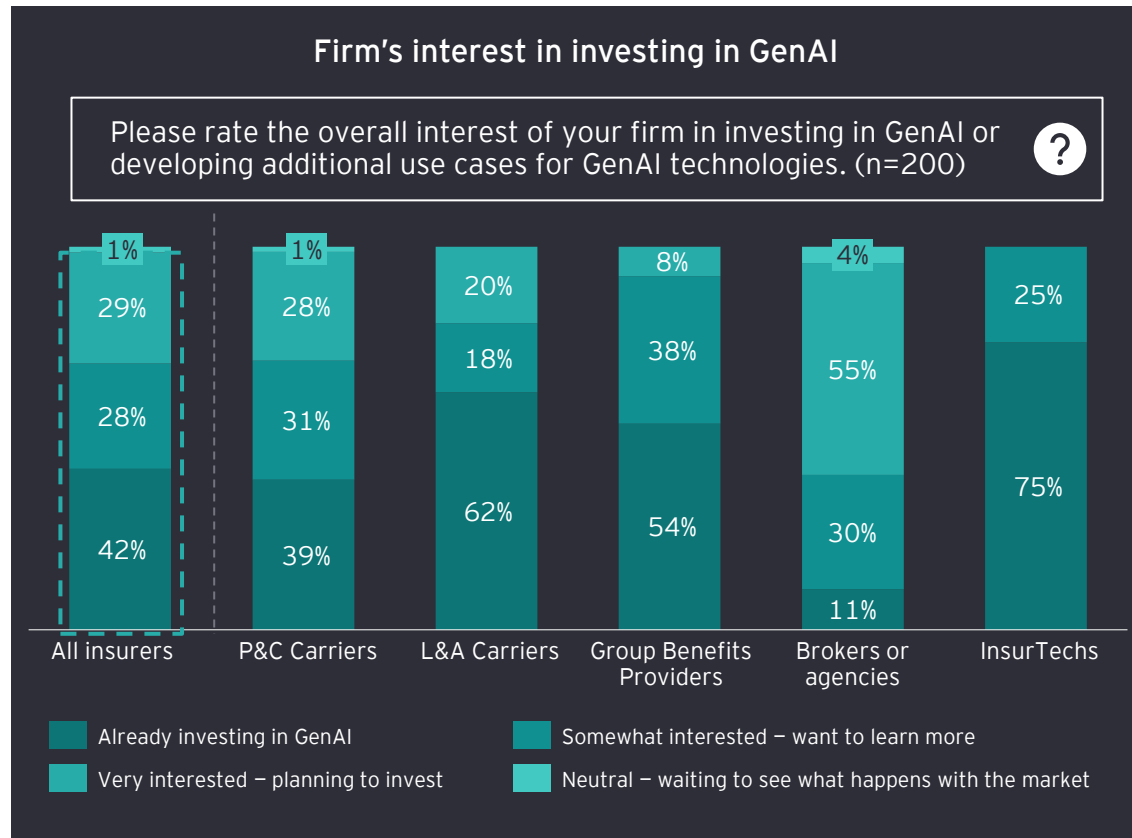


Funding amount for GenAI teams (n=187)

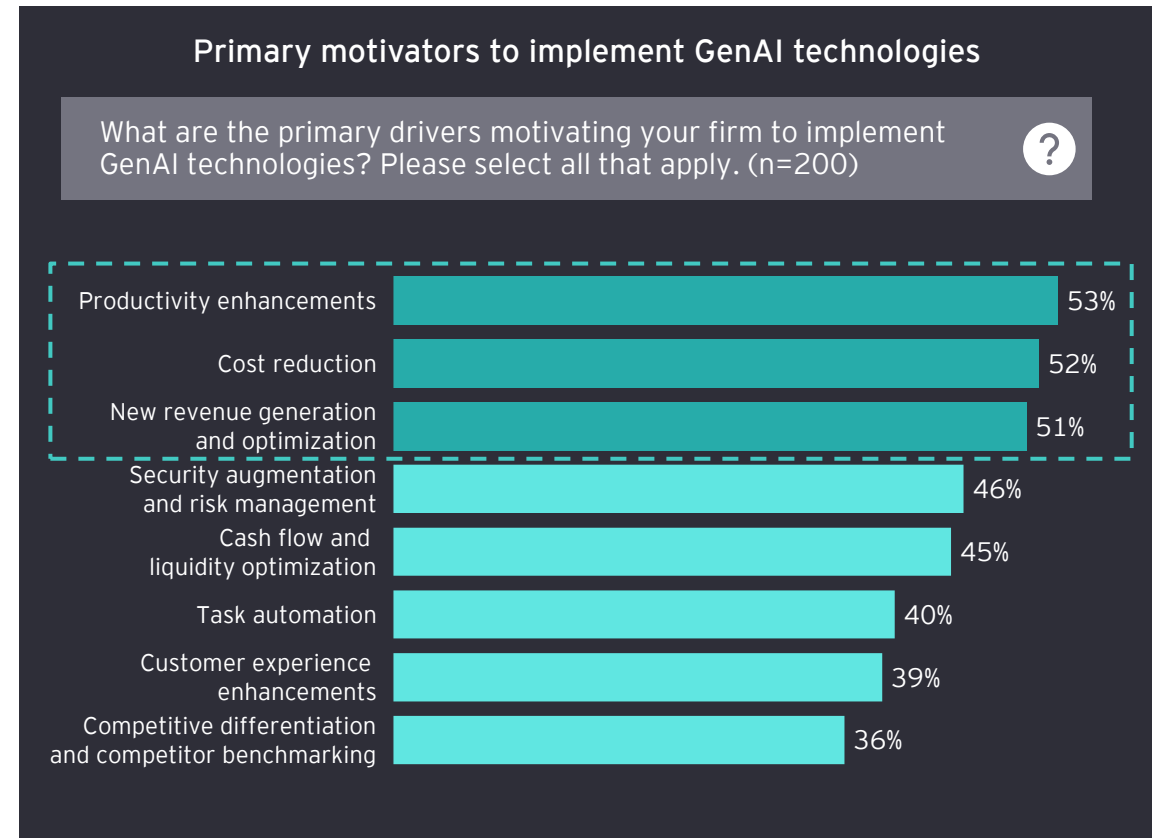


More than 70% of respondents are allocating at least US\$5m to GenAI.

Approximately 99% of insurers are already investing in GenAI or are interested in investing due to expectations for productivity, cost and revenue benefits

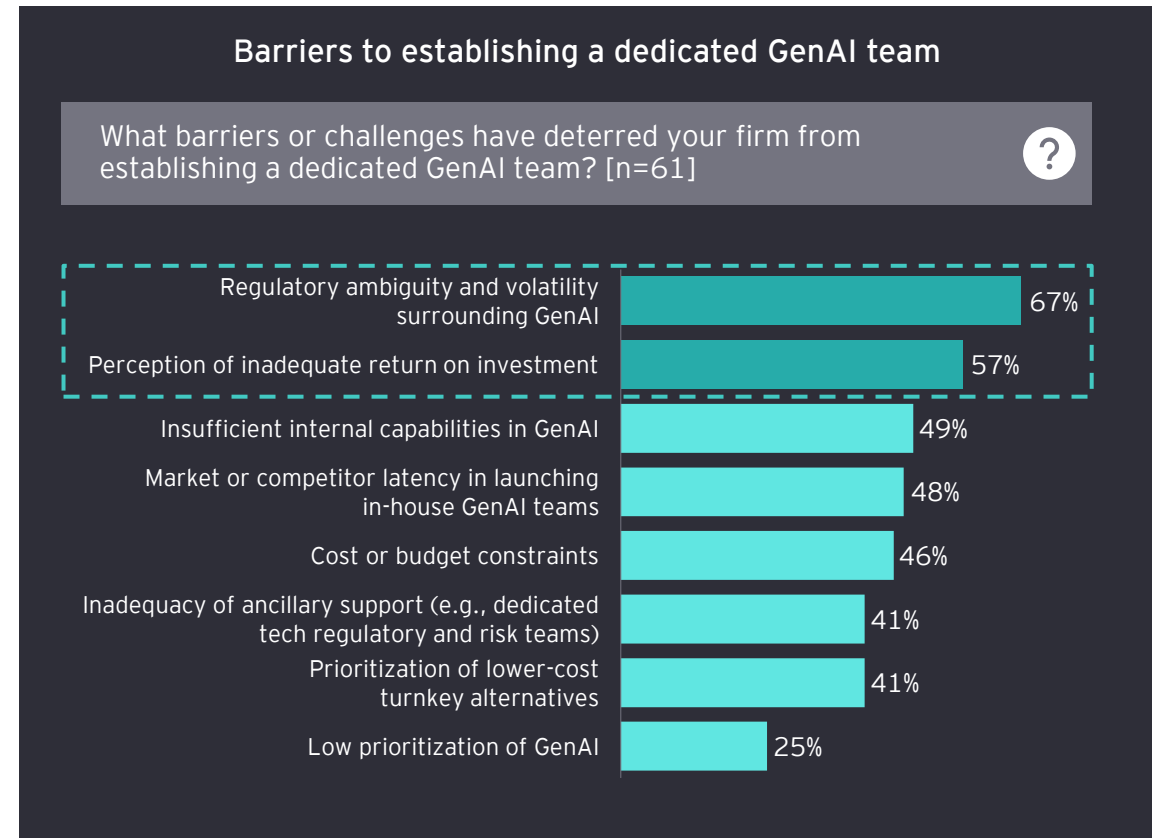
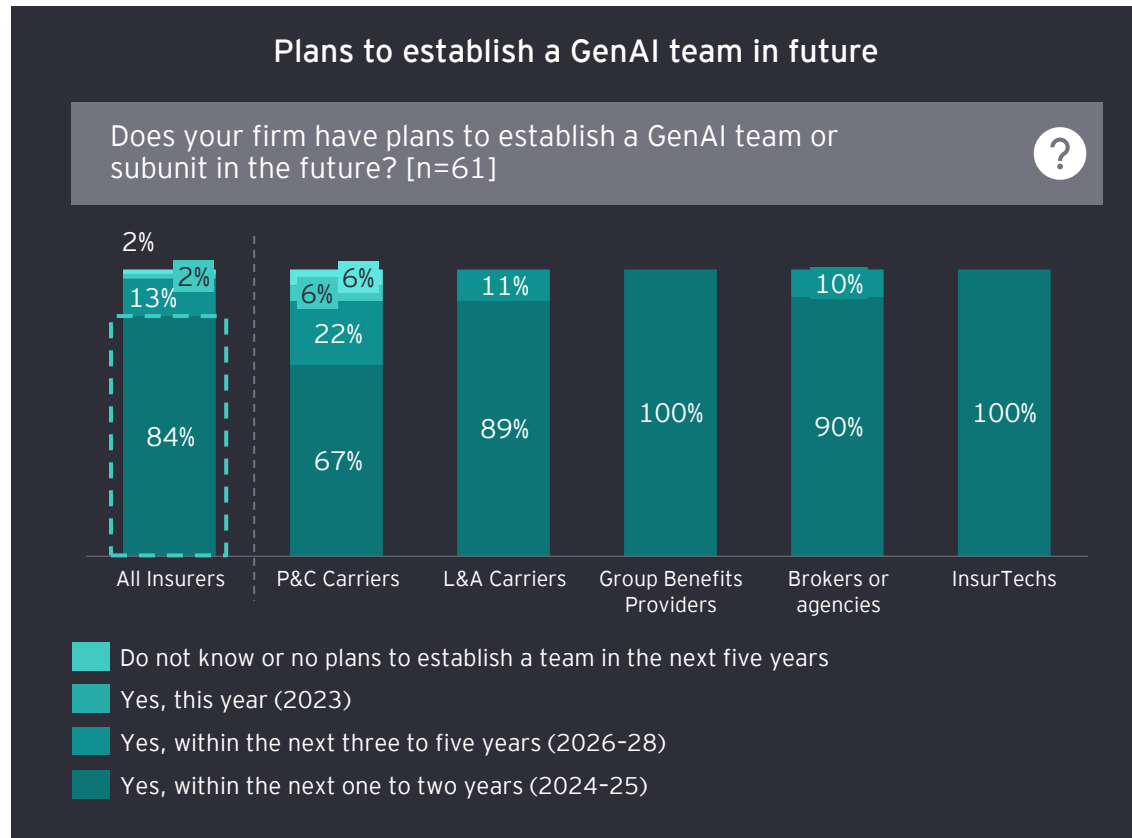


- ▶ InsurTechs lead the way, with **75%** having already invested in GenAI, while L&A carriers are close behind at **62%**.
- ▶ Large insurers with **more than US\$10b** in DPW have clear appetite for GenAI application, with **73%** having already invested, and an additional **17%** planning to invest.



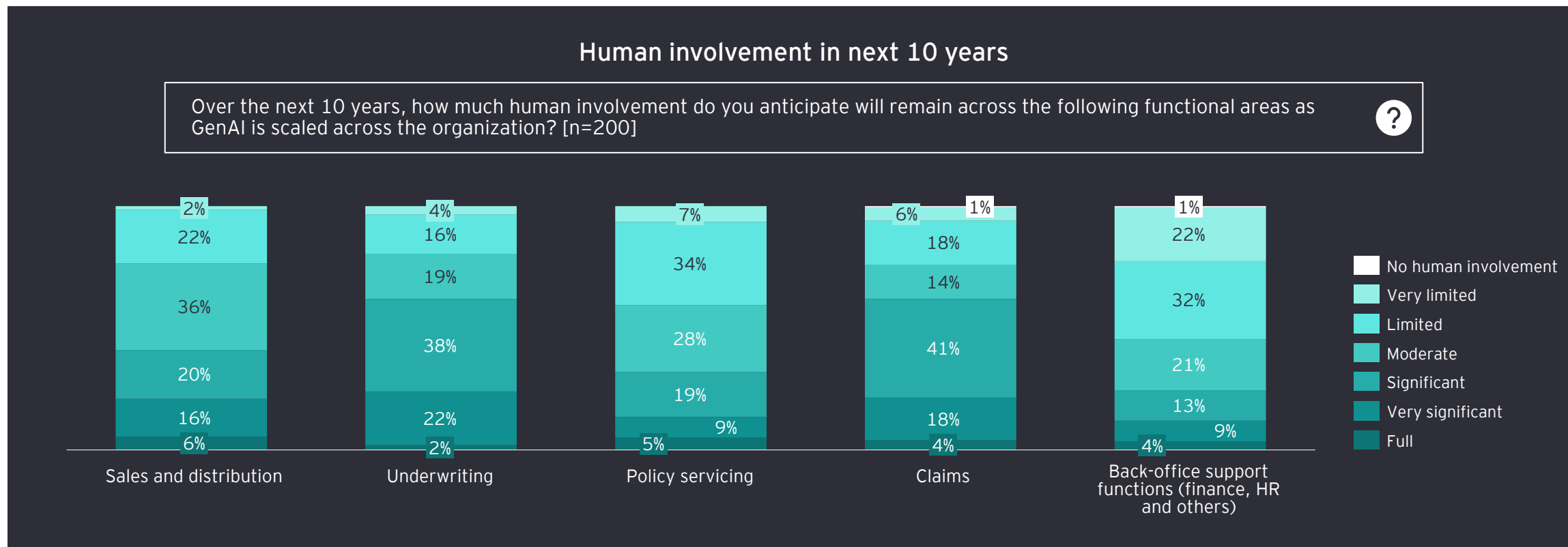
- ▶ Productivity enhancement is the leading motivator for insurers seeking to implement GenAI.
- ▶ Productivity is more important for large insurers, **70%** of those with US\$10 to US\$25b, and **82%** of those with greater than US\$25b DPW cite this as a key driver.

Two-thirds of respondents cite regulatory ambiguity as the top barrier to establishing a dedicated team for GenAI, though there is large variance by line of business



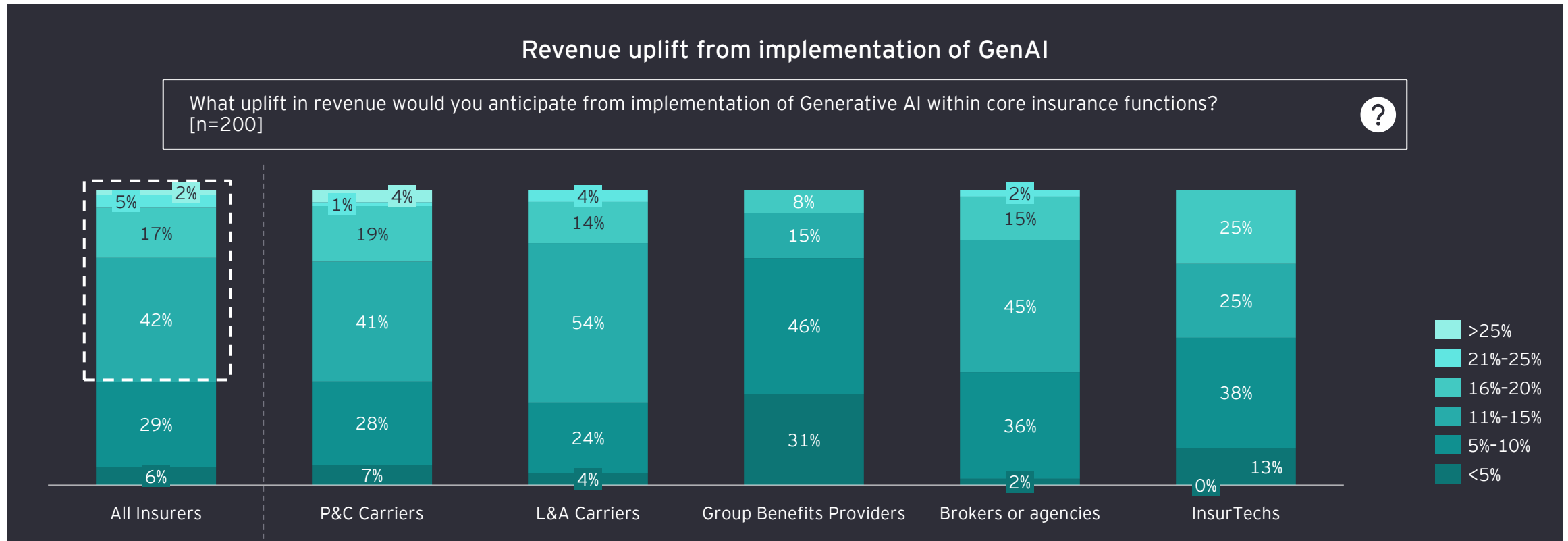
- ▶ **84%** of insurers that have not already established dedicated GenAI teams plan to do so before 2025, **61%** are planning to launch a team by Q2 2024; **100%** of InsurTechs plan to launch GenAI dedicated teams imminently.
- ▶ **100%** of larger insurers, with more than US\$5b DPW, plan to launch a dedicated GenAI team prior to 2025.
- ▶ **67%** of insurers that have not established dedicated GenAI teams are deterred by regulatory uncertainty, while **57%** are due to inadequate expected return.

Insurers expect that GenAI will impact workforces, with functions such as back-office support and policy servicing having limited human involvement in the long term



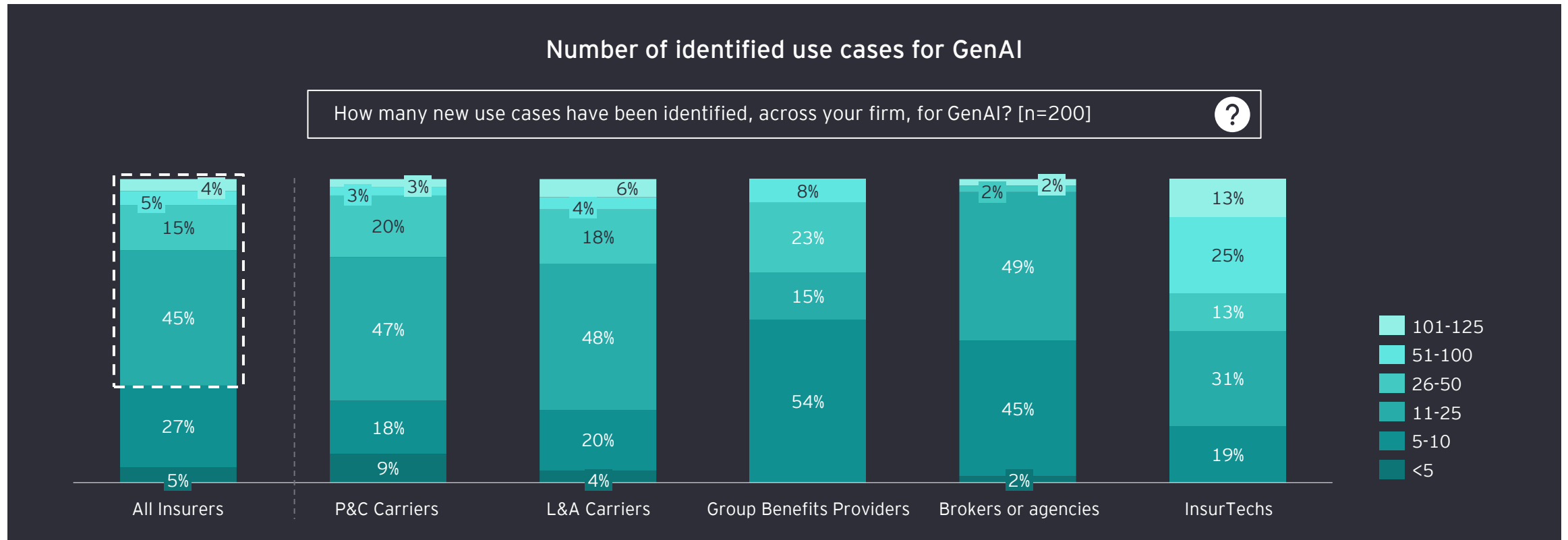
- ▶ At least **40%** of insurers expect moderate to no human involvement across sales, underwriting, policy servicing, claims and back office in the next 10 years.
- ▶ Insurers anticipate an even larger impact on back-office and policy servicing, with over **55%** predicting limited to no human involvement in the next 10 years.
- ▶ Of the **23%** of insurers that expect very limited to no human involvement in back-office support within 10 years, **approximately 50%** have less than US\$1b DPW, indicating both larger and smaller carriers expect impact in this space.

Two-thirds of respondents anticipate a revenue uplift of greater than 10% from implementation of GenAI within their core functions



- ▶ **82%** of firms with US\$500m to US\$1b DPW anticipate over **10%** of revenue uplift by implementing GenAI across core insurance functions.
- ▶ **88%** of InsurTechs expect **more than 10%** revenue increase, and **50%** anticipate **more than 15%** increase.
- ▶ 66% of insurers that expect over a 10% uplift in revenue have less than US\$5b in direct premiums written (DPW), while only 15% have more than US\$10b DPW.
- ▶ **32%** of North American insurers anticipate an uplift in revenue of more than **15%**, compared with **16%** in Europe, the Middle East, India and Africa and **12%** in Asia-Pacific.

Some carriers are moving ahead cautiously with a few first-generation use cases, while others are evaluating and prioritizing a lengthy backlog

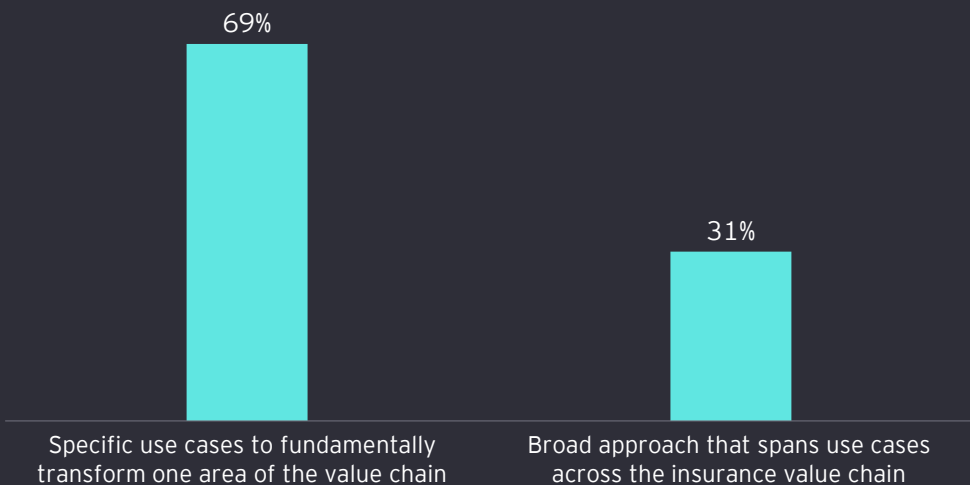


- ▶ Most insurers have identified five to 25 use cases, with 45% having identified 11 to 25; InsurTechs lead the way with approximately 40% of them having identified 51 to 125.
- ▶ Approximately 50% of insurers are also exploring real-time fraud detection, personalized assistants for customer-facing roles and enhanced data aggregation use cases.
- ▶ Approximately 95% of the insurers consider client-facing GenAI applications, and 56% of InsurTechs are very excited or excited about client-facing use cases.

Most carriers are prioritizing use cases to transform a specific part of the value chain (e.g., underwriting and distribution), with an emphasis on quick wins

Approach for pursuing GenAI investments

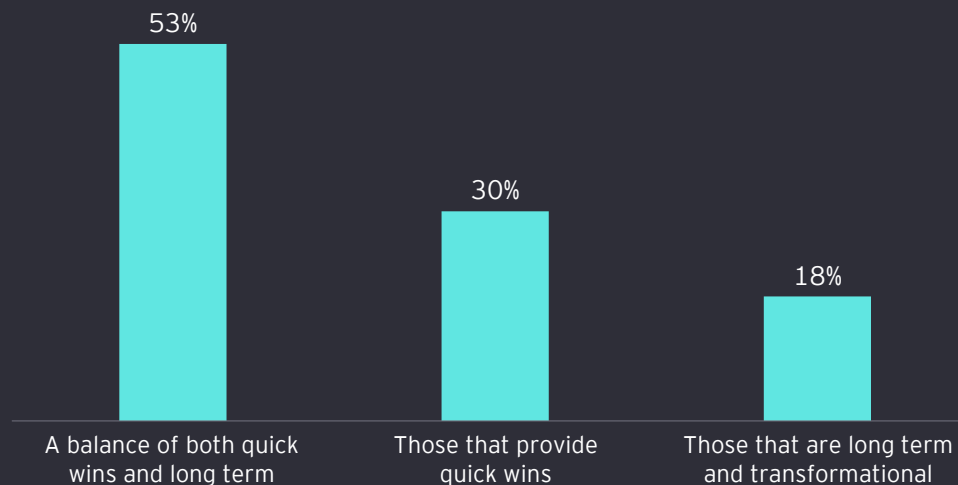
When pursuing GenAI investments, will you target specific use cases, or take a broader approach that spans the insurance value chain? [n=200]



- ▶ Of insurers that prefer a broad approach that spans insurance value chain, **76%** have greater than US\$1b DPW.
- ▶ L&A carriers are more open to a broad value-chain approach, with **40%** citing this as their preference over specific use cases.

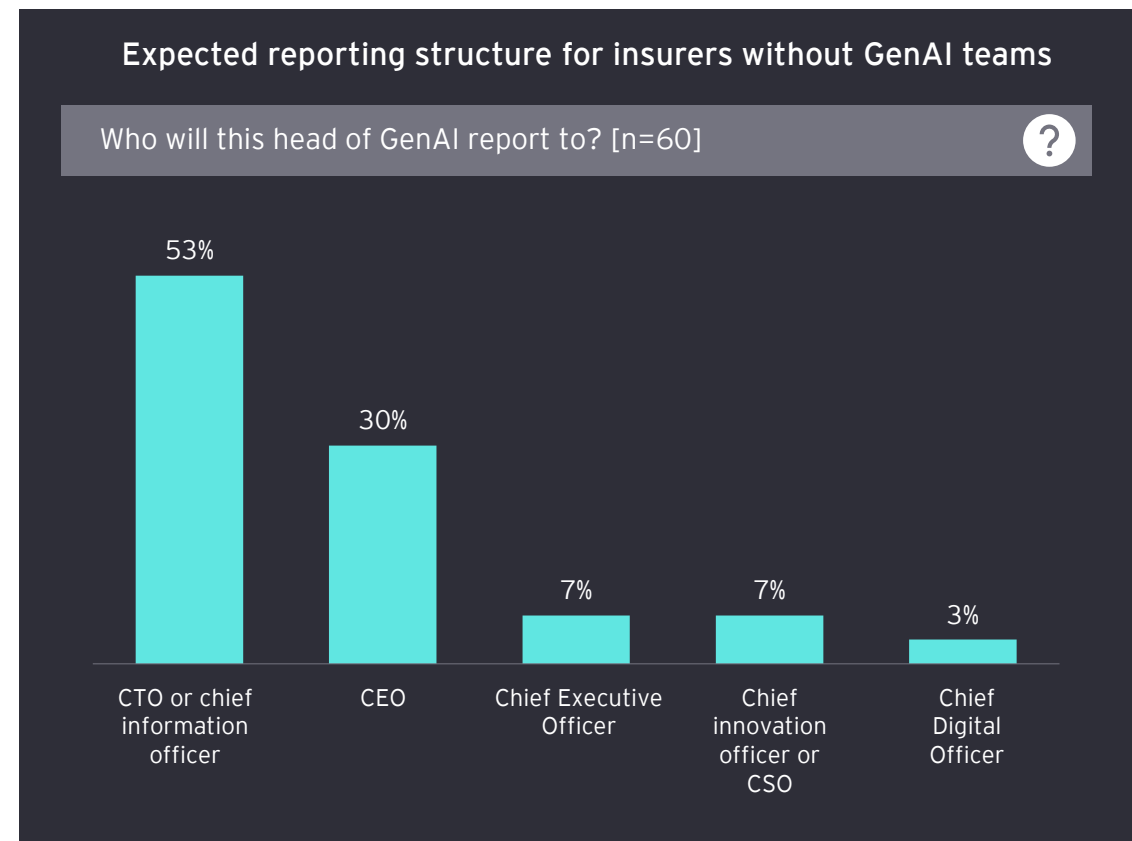
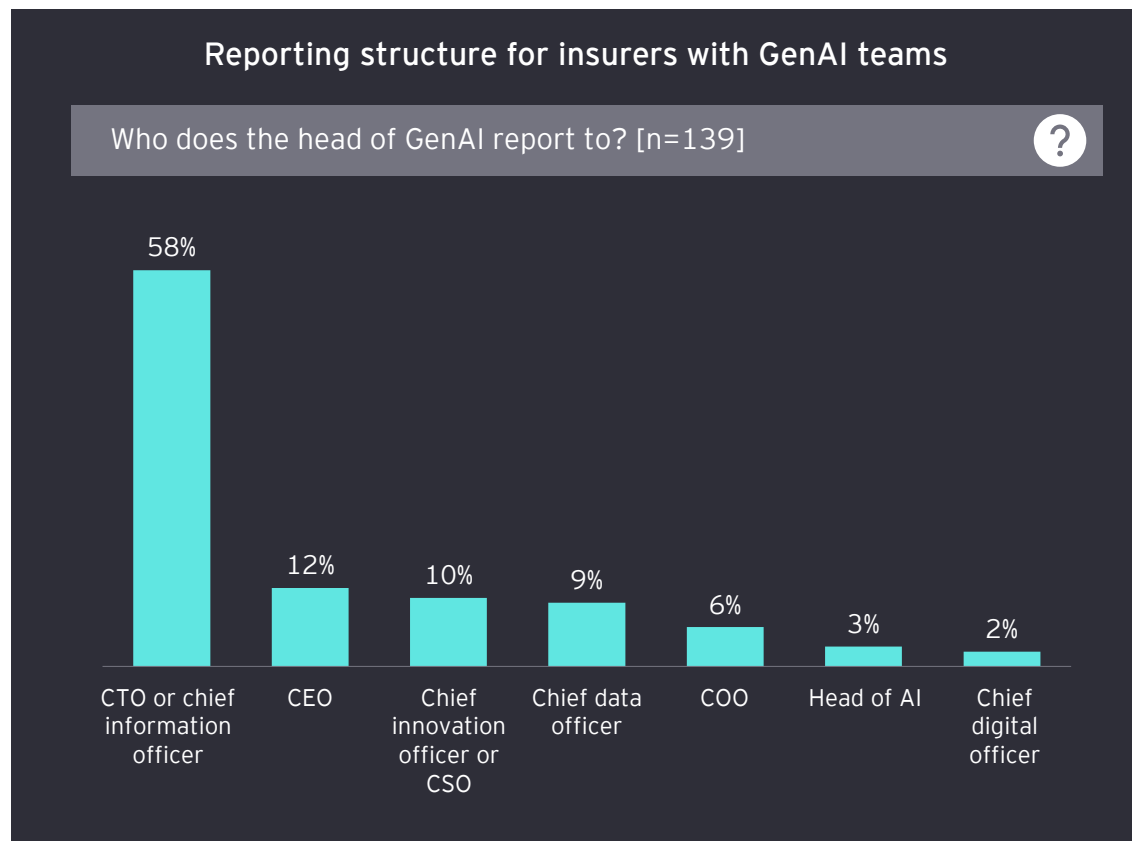
Prioritized use cases for initial implementation

Which use cases do you expect to pursue first? [n=200]



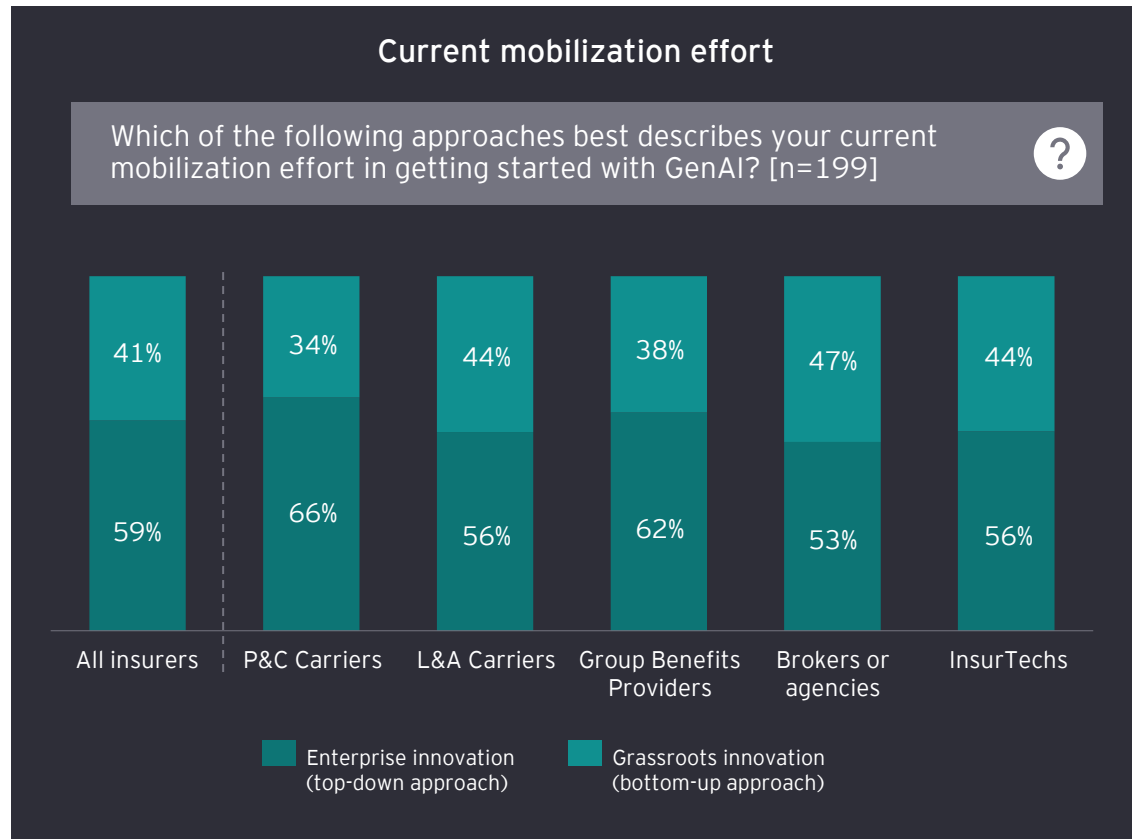
- ▶ Group benefits insurers, InsurTechs and L&A carriers prefer a portfolio that provides quick wins at **54%**, **38%**, and **36%** respectively.
- ▶ Brokers or agents and P&C prefer balance at **74%** and **53%** respectively.
- ▶ **Approximately 40%** of insurers with US\$5b to US\$10b DPW will prioritize use cases that are long term and transformational.

Insurers are building dedicated teams, many of them with direct links to the C-suite and board; more than a quarter of GenAI leaders report to senior executives

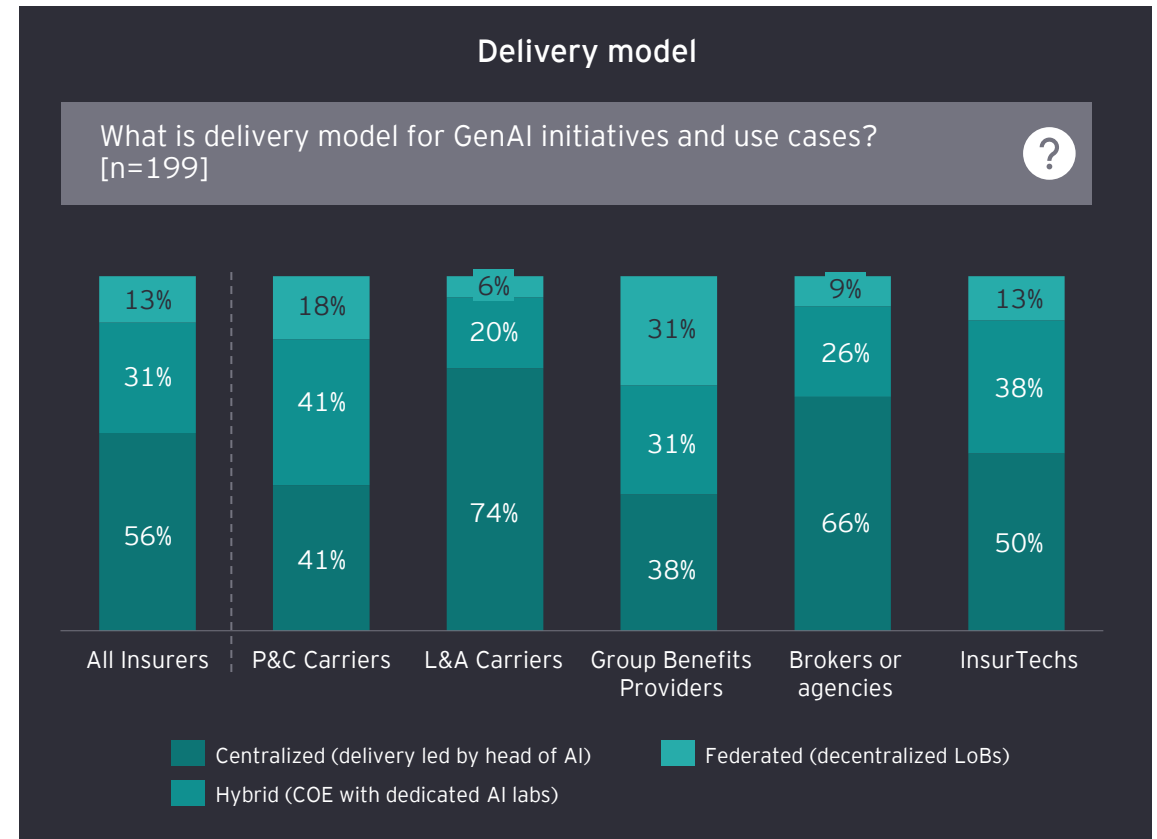


- ▶ Most leaders of dedicated GenAI teams report to the CTO or CIO. However, **12%** report directly to the CEO. Among insurers that do not currently have a dedicated GenAI team but are planning to establish one, almost **7%** expect that the team leader will report directly to the CEO.
- ▶ Of the insurers that do not yet have a dedicated GenAI team but intend to create one, **58%** expect it to be led by the head of technology, **32%** by the head of data and analytics, and only **8%** anticipate the leader will hold the title of head of innovation and strategy.

Dual-track approaches balancing grassroots experimentation and top-down strategies, with strong underlying governance, have emerged as a leading practice

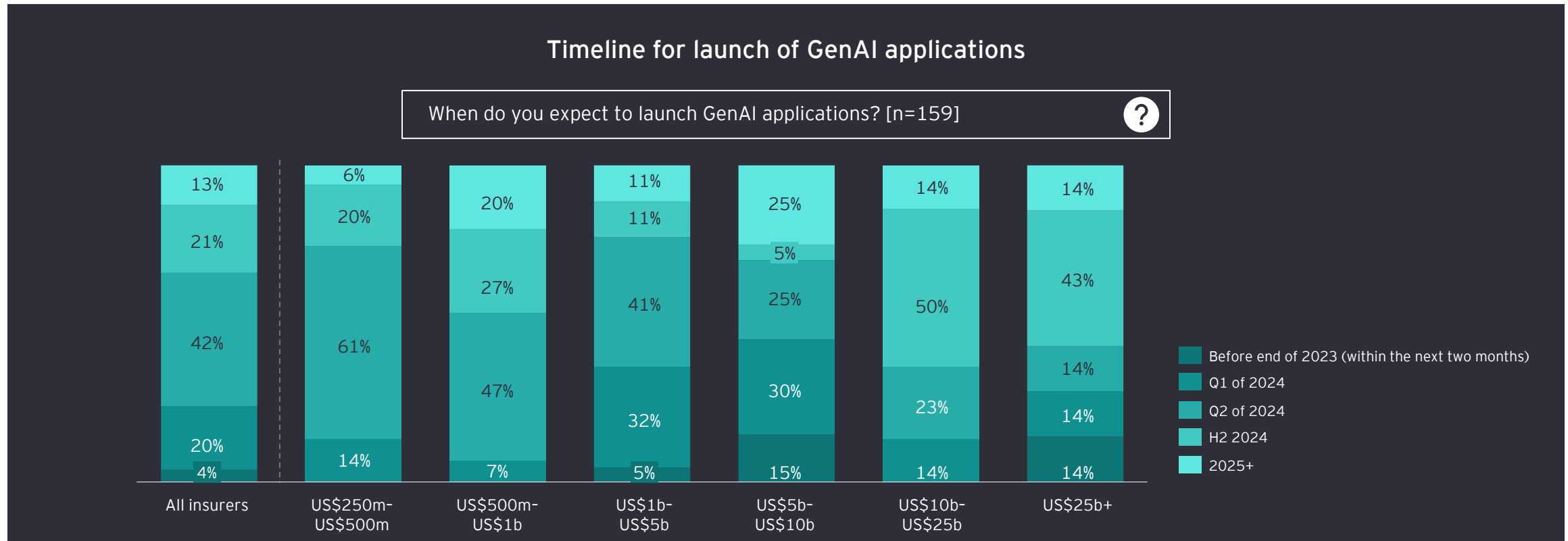


- ▶ **59%** of insurers leverage an enterprise readiness (top-down) approach when mobilizing GenAI. This includes 100% of the largest insurers, defined as those with a DPW greater than US\$25b.
- ▶ **55%** of insurers that have yet to launch a dedicated GenAI team but plan to do so expect to use an enterprise readiness approach.



- ▶ **56%** of insurers leverage a centralized delivery model, while **31%** prefer hybrid.
- ▶ **70%** of smaller insurers with less than US\$500m DPW prefer a centralized model.
- ▶ **57%** of insurers that have yet to launch but are planning to establish a dedicated GenAI team expect to leverage a centralized delivery model, while **32%** prefer a hybrid approach.

Insurers are prioritizing quick-win use cases that can be tested and launched efficiently, with low risk, across near-term time horizons



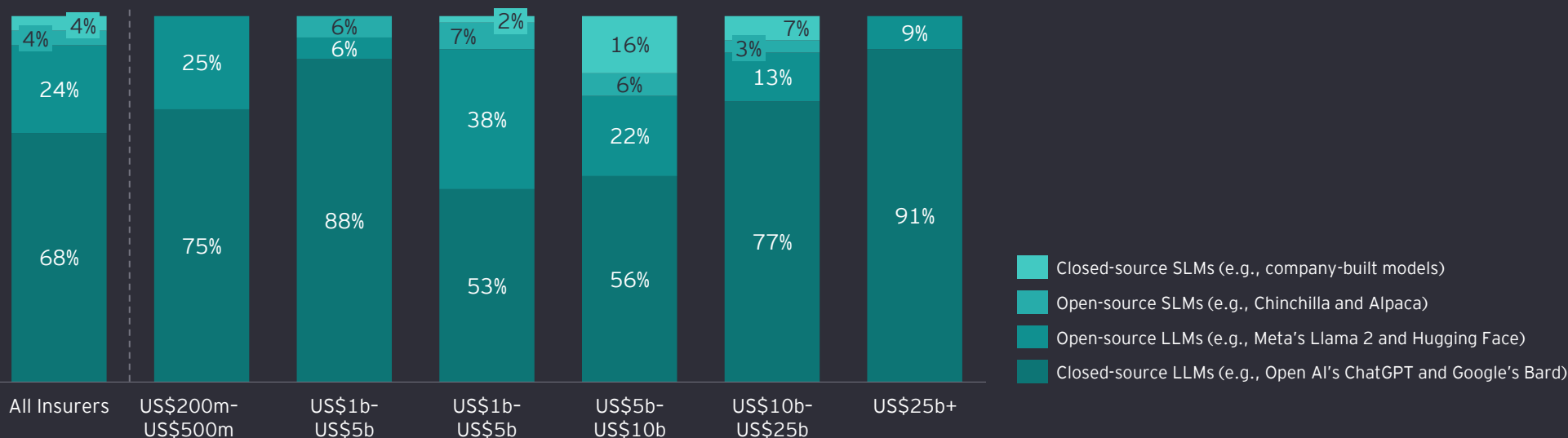
Key observations

- ▶ **4%** of all insurers plan to launch GenAI imminently, or within the next two months.
- ▶ **95%** of smaller insurers, or those with less than US\$500m DPW, plan to launch GenAI in 2024.
- ▶ **42%** of InsurTechs expect to launch GenAI applications in Q1 of 2024, and **17%** even plan to within the next two months.
- ▶ **58%** of insurers anticipate that GenAI applications will enable greater than **60%** automation viability in the next five years.

Sixty-eight percent of insurers expect to use closed-source LLMs, while 24% prefer open-source LLMs – establishing trust and security in all platforms is a priority

Company approach to test and launch GenAI

What type of approach or environment does your firm plan on initially using to test and launch GenAI use cases? [n=200]



Key observations

- ▶ 44% of InsurTechs plan to leverage open-source LLMs to test and launch GenAI use cases, while 77% of brokers and group benefits carriers plan to use closed-source LLMs.
- ▶ 77% of insurers with US\$10b to US\$25b DPW plan to use closed-source LLMs, as do 91% of insurers with greater than US\$25b DPW.
- ▶ 8% of all insurers expect to leverage SLMs, however, 44% of those with US\$5b to US\$10b DPW plan to do so.

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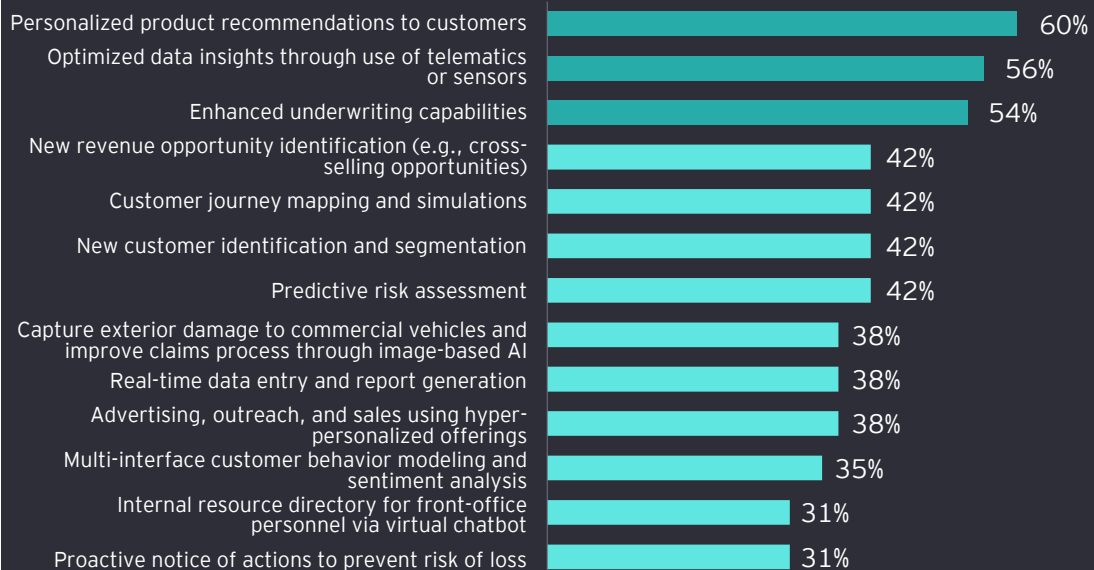
Demographics overview



Personal P&C insurers are most focused on personalized, data-driven product use cases, while commercial lines insurers are prioritizing pricing and underwriting applications

Priority of investment across core insurance functions – personal P&C carriers

Where do you expect to prioritize investment across core insurance functions? Please select all that apply. [n=48]



- ▶ A majority (**60%**) prioritize investment in personalized product recommendations, indicating a trend toward a more tailored customer experience.
- ▶ **Around 56%** of respondents prioritize investment in optimizing data insights by utilizing telematics or sensors, reflecting the growing importance of data-driven strategies in insurance.

Priority of investment across core insurance functions – commercial P&C carriers

Where do you expect to prioritize investment across core insurance functions? Please select all that apply. [n=26]



- ▶ The majority (**77%**) of commercial P&C insurers prioritize investment in predictive risk assessment, aiming to improve their ability to forecast and manage risks.
- ▶ "Enhanced underwriting capabilities" and "Proactive notice of actions to prevent risk of loss" were equally selected by **46%** of insurers, signalling a focus on improving underwriting processes and loss prevention strategies.

Individual L&A carriers are focused on enhanced underwriting use cases, whereas group benefits providers are more focused on distribution and marketing capabilities

Priority of investment across core insurance functions – L&A carriers

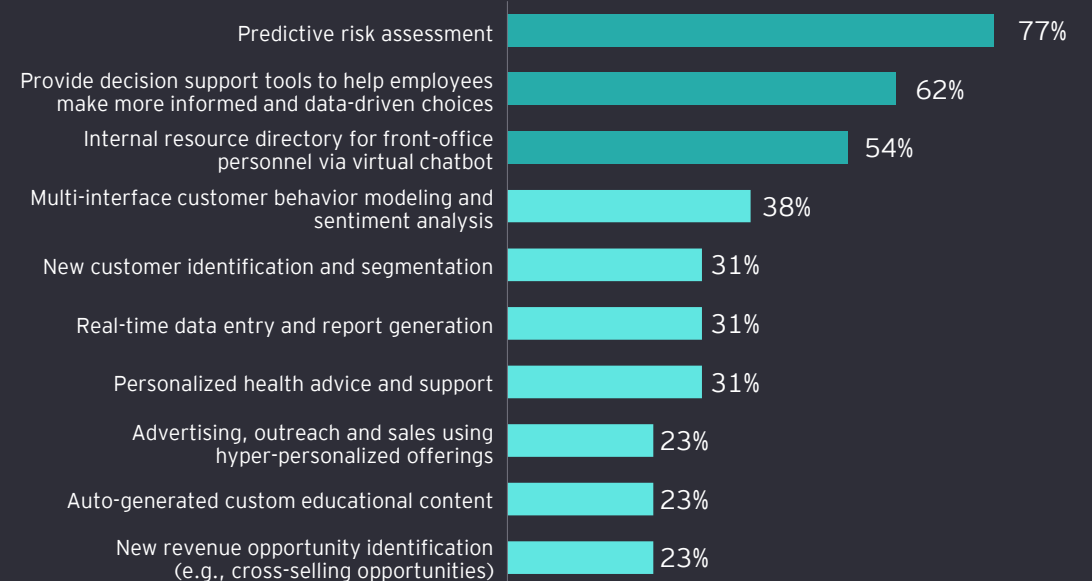
Where do you expect to prioritize investment across core insurance functions? Please select all that apply. [n=50]



- ▶ For L&A carriers, enhanced underwriting, personalized product recommendations, predictive risk assessment and new customer identification are GenAI priorities, with **52%** citing enhanced underwriting the top use case.
- ▶ **Around 48%** of L&A carriers identified personalized product recommendations, predictive risk assessment and new customer identification as priorities.
- ▶ L&A carriers prioritize both personalized product recommendations and new customer identification and segmentation for the expected customer value, referencing this the top criteria at **79%** and **67%** respectively.

Priority of investment across core insurance functions – group benefits providers

Where do you expect to prioritize investment across core insurance functions? Please select all that apply. [n=13]



- ▶ For group benefits carriers, predictive risk assessment, decision support tools and internal directories are GenAI priorities, with **over 60%** citing predictive risk assessments and decision support tools the top use cases.
- ▶ **Approximately 60%** of group benefits providers prioritize predictive risk assessment for the expected customer value, while **50%** prioritize new customer identification and segmentation for the expected customer value.

Brokers and agents are prioritizing investments in revenue-generating use cases; InsurTechs are focusing on advanced analytics and other targeted applications

Priority of investment across core insurance functions – brokers or agents

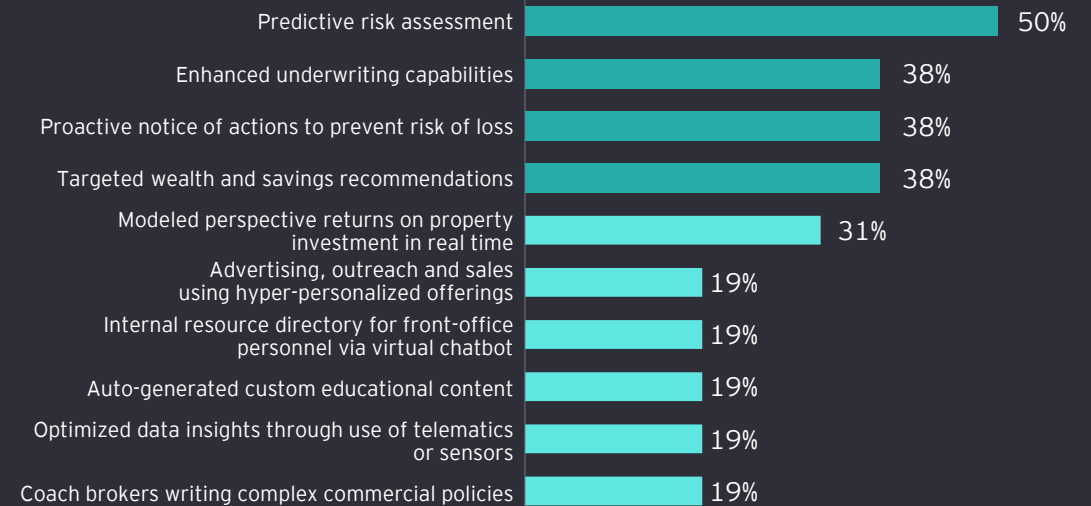
Where do you expect to prioritize investment across core insurance functions? Please select all that apply. [n=47]



- ▶ For brokers or agents, new revenue opportunities, real-time data entry and report generation, and new customer identification are GenAI priorities, with **over 50%** citing new revenue opportunities and real-time data entry the top use cases.
- ▶ **Around 45%** of brokers or agents prioritize better underwriting and risk assessment, showing a need for more precision in pricing and risk management.
- ▶ **Approximately 61%** of brokers or agents prioritize new customer identification and segmentation for the expected customer value, while **43%** prioritize predictive risk assessment for the anticipated reduction in implementation cost.

Priority of investment across core insurance functions – InsurTechs

Where do you expect to prioritize investment across core insurance functions? Please select all that apply. [n=16]



- ▶ For InsurTechs, predictive risk assessment is the primary GenAI priority, with **50%** citing this the top use case.
- ▶ Enhanced underwriting, risk prevention actions and personalized financial advice are each prioritized by **38%** of InsurTechs, indicating a focus on improving core insurance processes.
- ▶ **Approximately 50%** of InsurTechs prioritize targeted wealth and savings recommendations for the anticipated reduction in implementation cost, while **38%** prioritize predictive risk assessment for the expected customer value.

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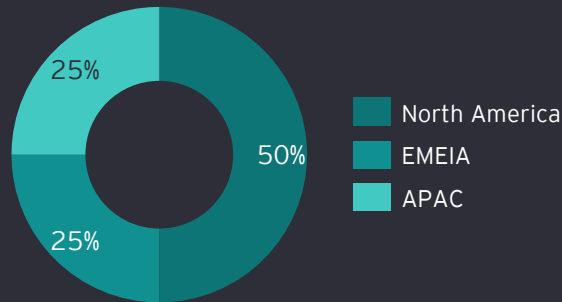
Demographics overview



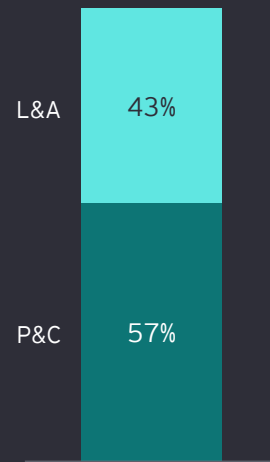
Surveyed insurance company demographics

Surveyed insurance companies by region and sector

In which country or region are you based? (n=200)

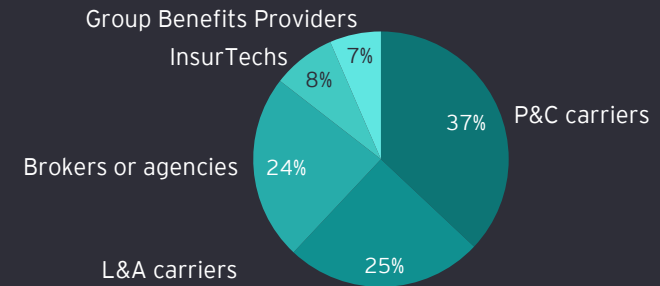


Which of the following insurance sectors does your company primarily serve? (n=200)



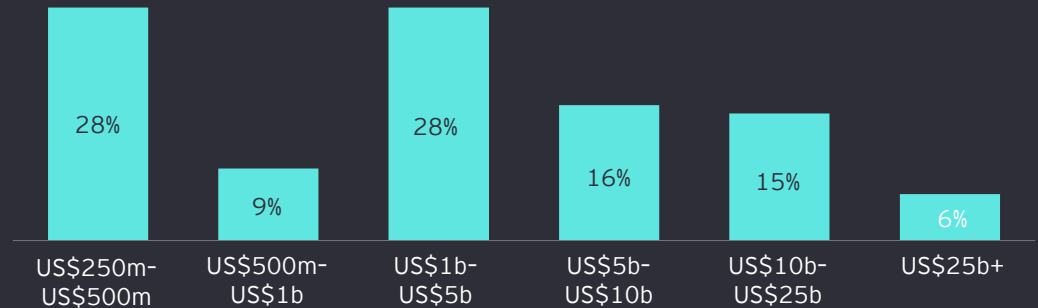
Surveyed insurance companies by type

Which of the following best describes your insurance organization? (n=200)



Surveyed insurance companies by DPW

What is the size of your institution's DPW base? (n=200)



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