# CELENT
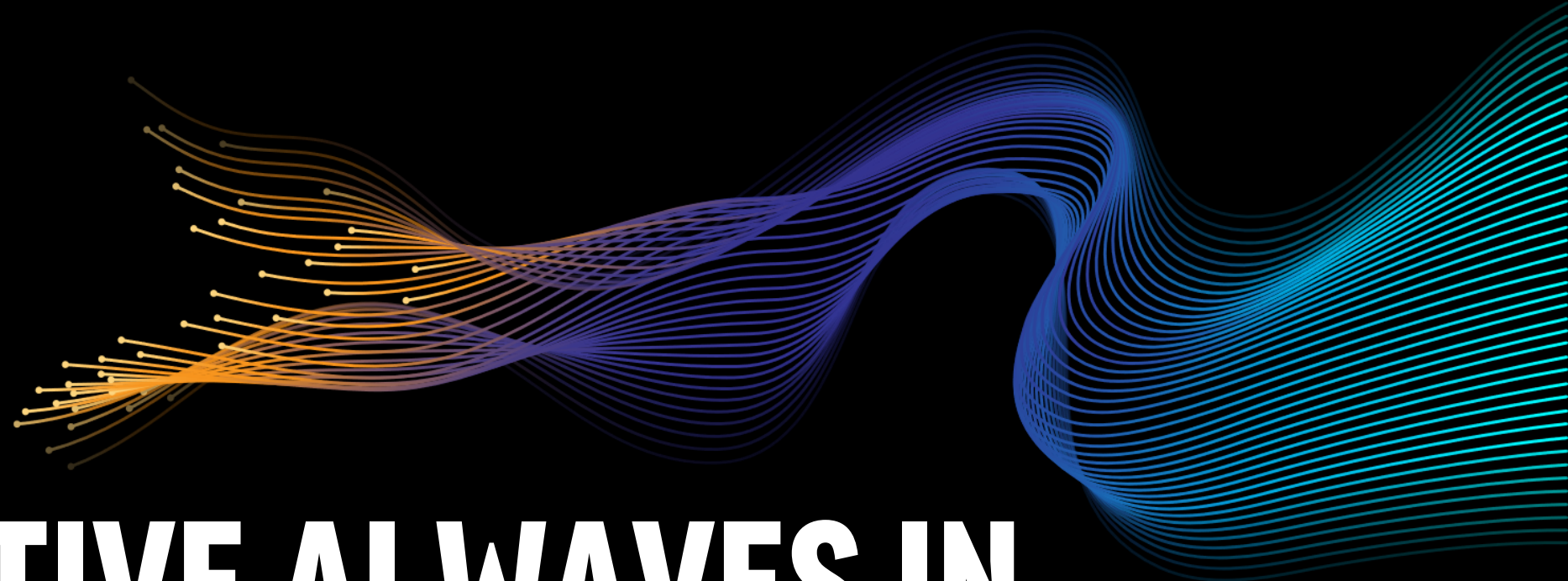
# GENERATIVE AI WAVES IN INSURANCE

Use Cases Driving Adoption

Keith Raymond
March 2025

A Global Data company

# CONFIDENTIALITY

Our clients' industries are extremely competitive, and the maintenance of confidentiality with respect to our clients' plans and data is critical. CELENT rigorously applies internal confidentiality practices to protect the confidentiality of all client information.

Similarly, our industry is very competitive. We view our approaches and insights as proprietary and therefore look to our clients to protect our interests in our proposals, presentations, methodologies, and analytical techniques. Under no circumstances should this material be shared with any third party without the prior written consent of CELENT.

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# FOR THIS REPORT, CELENT CONDUCTED INTERVIEWS AND HAS DRAWN UPON ADDITIONAL SOURCES OF INFORMATION

## Celent proprietary research

**Qualitative research:** Celent continually speaks with GenAI tech providers, insurers, and financial institutions (FIs) in the adoption vanguard to better understand use cases, trends, and underlying drivers. Celent also draws upon extensive research on new technology adoption and infrastructure modernization.

**Quantitative research:** Celent has undertaken surveys on the application of GenAI by both tech providers and insurers. Celent also examined data on historical technology adoption curves.

## Amazon Web Services (AWS) insights

**Client experience:** AWS has shared insights gleaned from working with insurers and their technology partners. It has hands-on experience supporting these firms to leverage GenAI across the three layers of the tech stack: applications, large language models (LLMs), and infrastructure to train and run AI workloads.

**Subject matter expert input:** AWS experts, who provided valuable input to Celent based on their "in the field" experience and takeaways:

- Chad Hersh, Head of Worldwide Market Development, Life Insurance
- Jayme Hart, Head, FSI Market Development – Insurance | Global Financial Services

## Interviews with AWS clients

**Practitioner input:** AWS has many clients deploying GenAI solutions in insurance, and Celent had the privilege to speak to a few of them, gaining valuable insights based on their practical experience.

The executives we spoke with provided great insight, and we highlighted our interview with Don Vu, SVP Chief Data & Analytics Officer from New York Life from the variety of case studies.
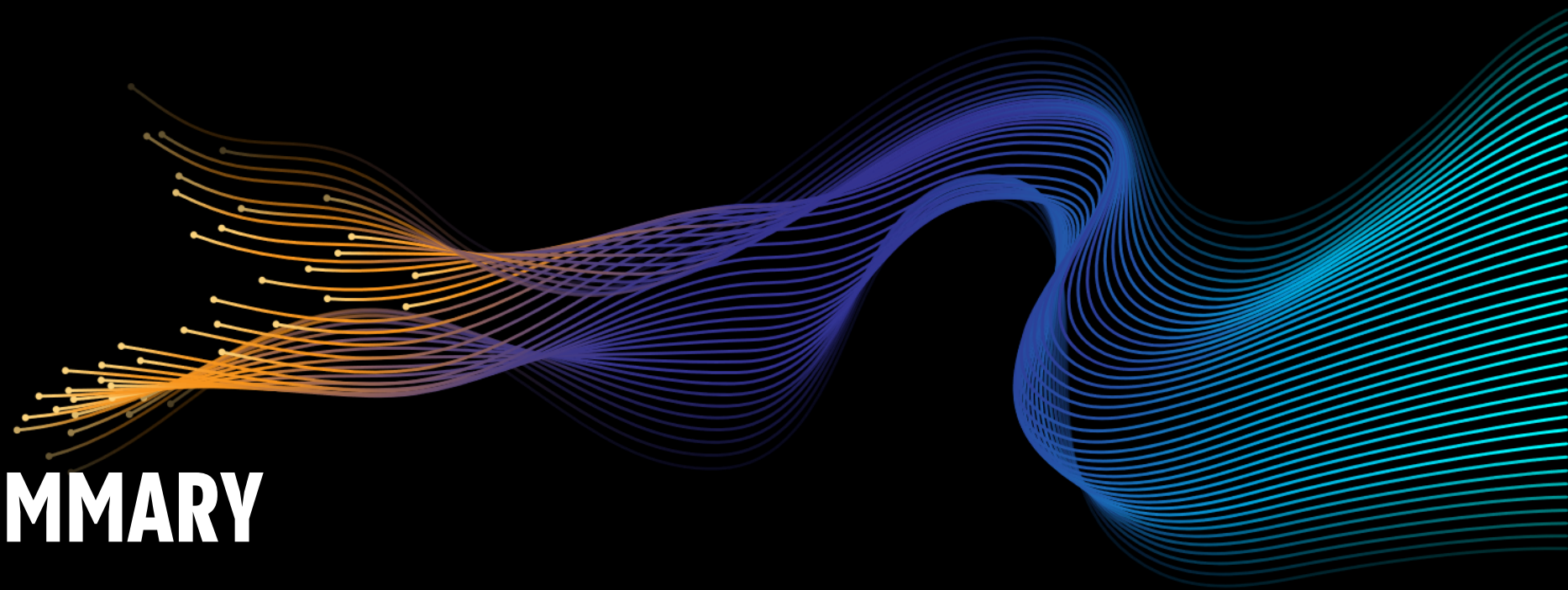
**Spotlight:**

NEW YORK LIFE

Celent is grateful to all contributors for their insights and perspectives.

# 01

## EXECUTIVE SUMMARY

# THE GENERATIVE AI WAVES

Although we are still in the early stages of adopting generative artificial intelligence (GenAI), leading insurance companies are already exploring applications throughout the property, casualty, life, and annuity insurance value chain. Due to its significant potential, creating a GenAI strategy is essential to avoid falling too far behind early adopters.

The adoption of generative AI is anticipated to evolve significantly over the next few years. In 2025, organizations are expected to move from largely experimental uses of GenAI to a more structured and strategic approach. This transition will involve the development of clear mid- to long-term road maps and the identification of key performance indicators (KPIs) to assess the impact of GenAI projects. Companies will also prioritize realistic return on investment (ROI) analyses to ensure that GenAI initiatives align with their business goals and produce measurable results, which will aid in optimizing resource allocation and scaling operations effectively.

GenAI technologies continue to evolve at a breakneck pace (e.g., DeepSeek, QwQ-32B, multi-modal models, etc.), and adoption of GenAI across the insurance industry has already advanced at an extraordinary pace compared to that of other technologies historically. The initial awe and trepidation is being replaced with a growing positive sentiment as the financial services industry is starting to see the value of their initial GenAI projects. However, while there is no lack of imagination around use cases, some adoption barriers remain, particularly around the level of technology maturity as well as security and regulatory concerns.

GenAI's potential for the insurance industry is beginning to crystallize as insurers test use cases and identify those that show the greatest potential. To help insurers distinguish the hype from reality and develop a blueprint to harness GenAI successfully, Celent has developed the **GenAI Adoption WaveGram**. **With this framework, Celent is striving to help insurer participants to:**

| **Determine the factors influencing GenAI development and adoption** | **Develop a strategic plan to harness GenAI** | **Make sound decisions regarding next steps and prioritization** |
|---|---|---|
| Celent endeavors to bring clarity and focus to factors accelerating or impeding the adoption and evolution of use cases. FIs can then monitor these factors as they are relevant to their use of GenAI. | Celent's WaveGram displays a 5+ year horizon for GenAI trends and use case adoption. Celent views the waves as structural building blocks that have certain characteristics, drivers, and outcomes. | Celent identifies use cases that are likely to become mainstream by wave. Celent creates a taxonomy beginning with type (e.g., content summarization) and then pinpoints common use cases and those specific to insurance. |

> "
> I think we have to rewire ourselves for these new probabilistic machines in a way that we never have before.
>
> Don VU, SVP Chief Data & Analytics Officer, New York Life

# GUIDE TO CELENT'S GENAI ADOPTION WAVEGRAM

Celent's **GenAI Adoption WaveGram** comprises three layers.

## THREE WAVES

Based on conversations with GenAI tech innovators, FIs in the adoption vanguard, and historical tech adoption curves, Celent anticipates that GenAI adoption will occur over three waves, with each wave encompassing specific drivers and outcomes. Drivers include both accelerators and impediments.

**WAVE**

| | | |
|---|---|---|
| 1 | 2024–2026 | |
| 2 | 2027–2028 | |
| 3 | 2029+ | |
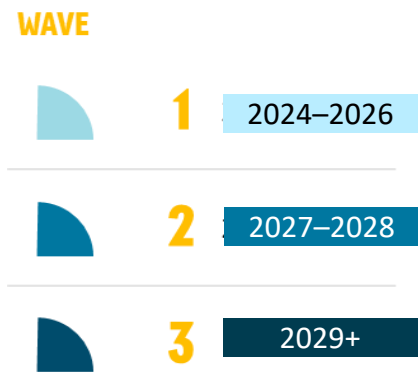
## COMMON USE CASES
### EMPLOYEE- AND CUSTOMER-FACING

Across the property casualty and life insurance industry, there are common use cases. Celent distinguishes between customer-facing and employee-facing use cases since employee-facing applications are progressing faster in the medium term due to their relatively lower risk. Celent adds an impact dimension on the vertical axis.
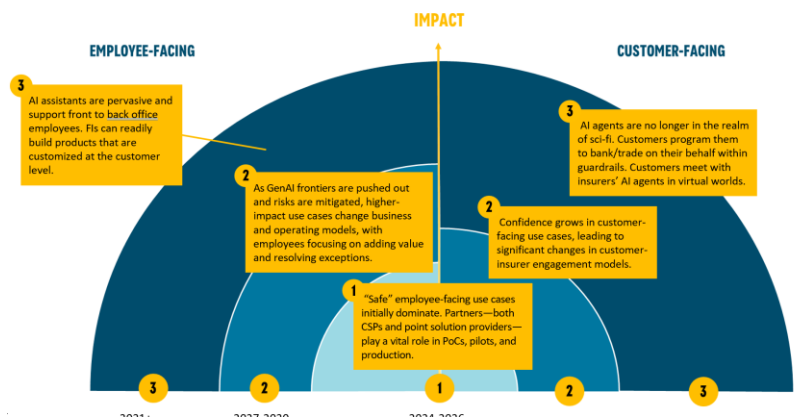


## INDUSTRY-SPECIFIC USE CASES
### PROPERTY CASUALTY AND LIFE INSURANCE

Although there are differences in products between P&C, life, and annuity insurance, the core services are similar. Celent spotlights use cases that go across both industries but also recognizes that use cases within these industries are not necessarily homogenous.
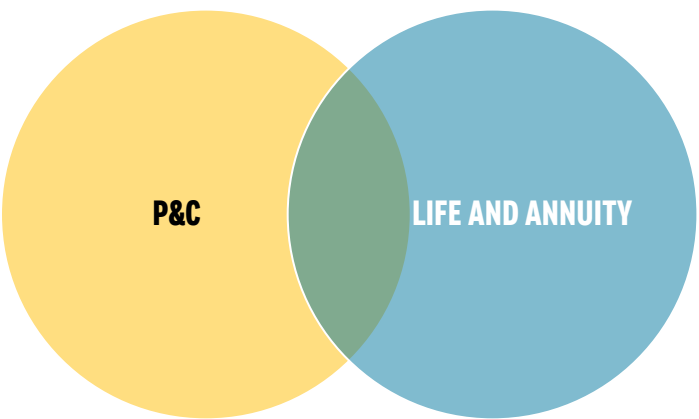
# THE WAVES: KEY TAKEAWAYS

Celent anticipates three AI adoption waves propelled by tech advances (e.g., faster/more efficient compute such as DeepSeek and Alibaba's QwQ-32B, agentic AI, quantum computing, etc.); competitive pressures; the maturation of GenAI applications through increasing FI comfort level; and regulatory clarity. To help FIs unpack the dynamics influencing GenAI adoption, Celent discusses factors that are accelerating or impeding adoption and the evolution of use cases.

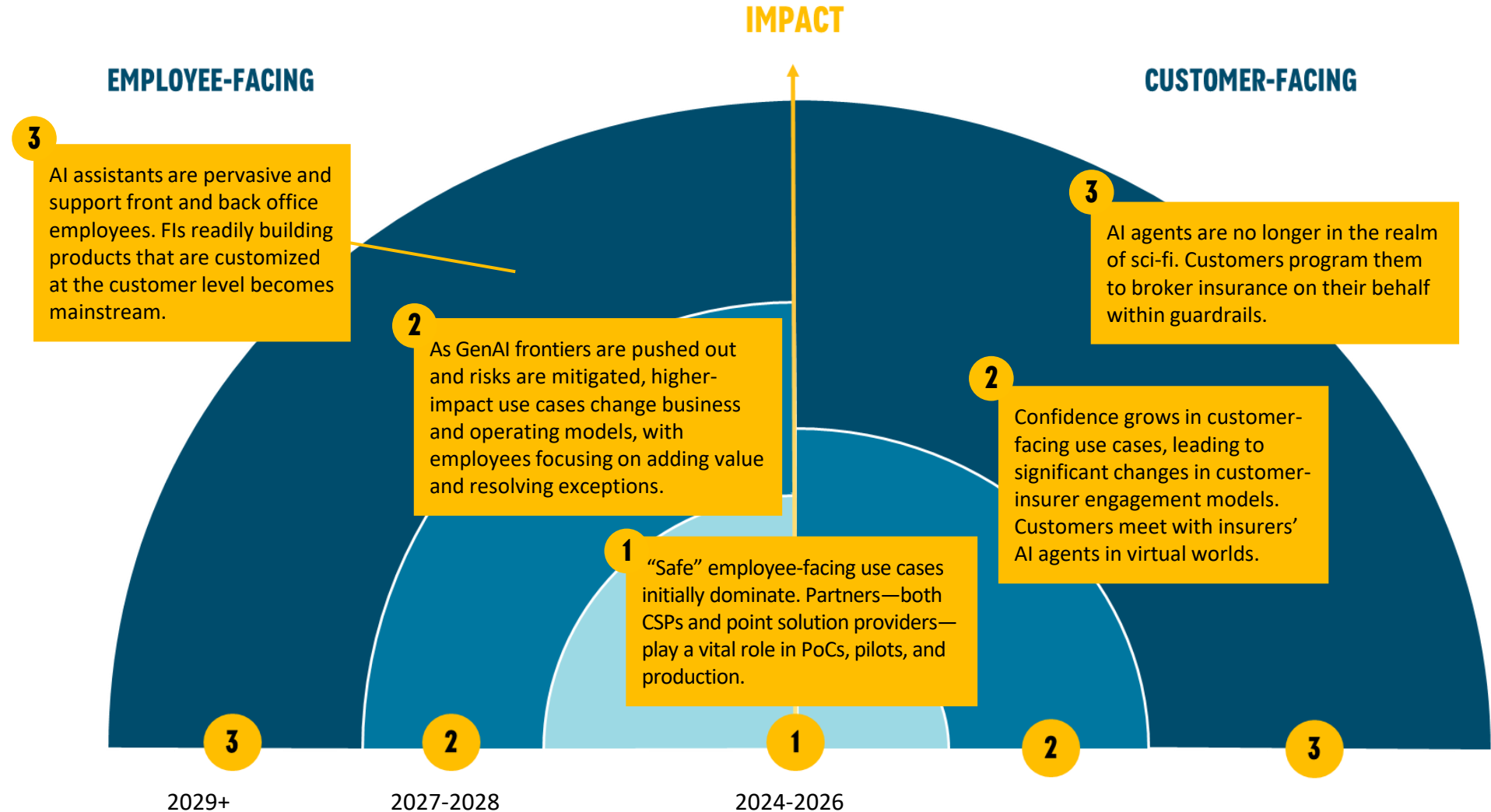| ADOPTION WAVE | CHARACTERISTICS |
| --- | --- |
| **1** 2024–2026 | Use cases in the first wave can be described overall as pragmatic. The initial focus is on use cases that promise high productivity/efficiency gains in low-risk areas with relatively low integration costs. Prime examples include code development (e.g., co-pilot, debugging and testing), customer experience, and AI assistants to interact with large information sources (e.g., claims and underwriting). Early innovators will execute more advanced use cases that will not experience mainstream adoption until wave 2. These players stand to gain a competitive advantage and drive further investment. |
| **2** 2027–2028 | The second wave will be characterized by higher-impact applications and deeper integration of GenAI into workflows. Fueled by adoption accelerators (e.g., increased compute capability, lower cost and risk), FIs will test and implement more use cases and reach new frontiers (e.g., AI assistant adjusters and underwriters). In this phase, new advances in wave 1 such as agentic AI will proliferate and the concept of augmented humans will be widely embraced across P&C and life insurance. FIs will deliver highly personalized interactions via customer-facing services. As bias and hallucination risks are controlled and model accuracy becomes sufficiently high, FIs will deliver prescriptive analytics (e.g., financial advice). |
| **3** 2029+ | The advances in AI seem to be advancing at light-speed, and no one can accurately predict what will transpire in 3–5 years. Instead, Celent offers a few visions of how GenAI could be coupled with other advanced technologies (e.g., quantum computing, distributed ledger technology, and virtual reality) and how AI agents could play a role in financial services. As GenAI matures further, customer-facing use cases will approach the scope and impact of employee-facing use cases. Humans will become comfortable with AI agents that act as their proxy for select activities (e.g., retirement or annuitization planning). |

# THE WAVES + COMMON USE CASES: KEY TAKEAWAYS

Celent places use cases common to the insurance industry within the three waves. Across the two insurance industries, there are common use cases (e.g., code debugging, training material generation, customer behavior analysis), with overlaps in the value chain. Celent distinguishes between customer-facing and employee-facing use cases because insurer employee-facing applications of GenAI are progressing faster in the medium term due to their relatively lower risk. Within each wave, Celent spotlights use cases that will move into the mainstream. In addition, Celent evaluates their likely impact by taking into consideration a variety of metrics, including hard metrics (e.g., cost, revenue, and efficiency/productivity gains) as well as soft metrics (e.g., employee and customer satisfaction and ability to "wow" employees and customers).

**IMPACT**

**EMPLOYEE-FACING**

**CUSTOMER-FACING**

**3** AI assistants are pervasive and support front and back office employees. FIs readily building products that are customized at the customer level becomes mainstream.

**3** AI agents are no longer in the realm of sci-fi. Customers program them to broker insurance on their behalf within guardrails.

**2** As GenAI frontiers are pushed out and risks are mitigated, higher-impact use cases change business and operating models, with employees focusing on adding value and resolving exceptions.

**2** Confidence grows in customer-facing use cases, leading to significant changes in customer-insurer engagement models. Customers meet with insurers' AI agents in virtual worlds.

**1** "Safe" employee-facing use cases initially dominate. Partners—both CSPs and point solution providers—play a vital role in PoCs, pilots, and production.

**3**     **2**     **1**     **2**     **3**

2029+      2027-2028      2024-2026

# 02

## INTRODUCTION

# WHAT IS GENAI? A LEVEL SET ON THE TECHNOLOGY AND USE CASES

## Generative AI (GenAI)
GenAI is a subset of deep learning that can generate new content based on patterns learned from existing content. Content can include text/data, images, music, video, or other forms of media.

| Celent High-Level Use Cases | Examples |
|---|---|
| Content Generation | Document drafting, report generation |
| Content Management | Categorization, tagging, curation |
| AI Assistant—Knowledge Source | Research assistant, information retrieval |
| AI Assistant—Automation | Autofill, next-best action suggestions, autonomous agents |
| Code Development | Debugging, refactoring, coding |
| Information Analysis | Synthesis, summarization |
| Data Analysis | Augmentation, visualization |
| Synthetic Data Generation | Text versions for analysis, time series data generation, scenario generation |
| Workflow Improvements | Suggestions for workflow amendments, automated changes to workflows |
| Detection Models | Errors, fraud, problem-solving |

**Artificial Intelligence**

**Machine Learning**

**Neural Networks**

**Deep Learning**

**GenAI**
A subset of deep learning that includes many model types. For example: generative pretrained transformer (GPT), generative adversarial network (GAN), variational autoencoder (VAE), and diffusion models.
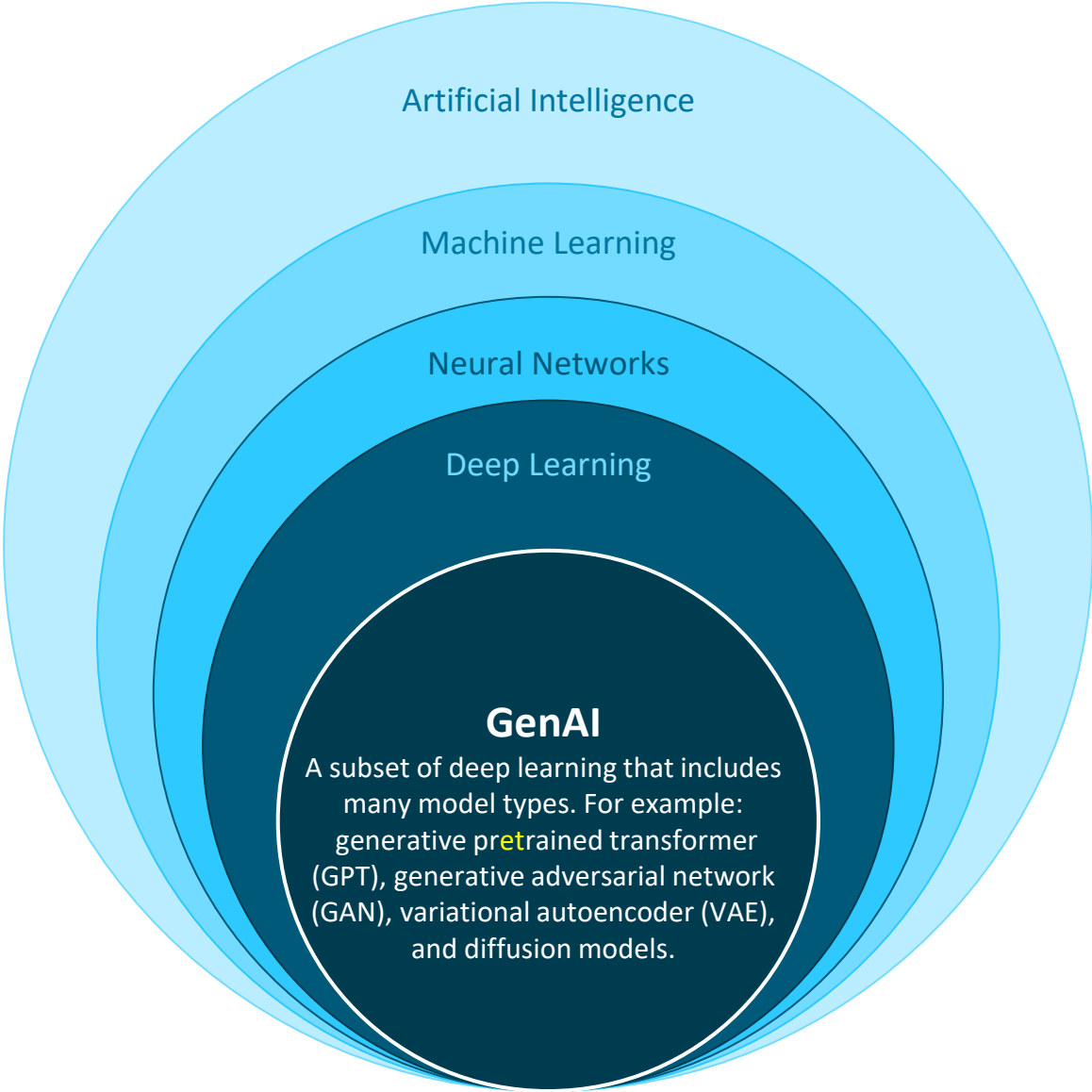
Sources: Celent interviews, research, surveys, and analysis.

# GENERATIVE AI EVOLUTION AT LIGHT SPEED!
## (ILLUSTRATIVE)

To illustrate just how amazingly fast GenAI is evolving, Celent uses the following example from Midjourney. Here, after each update, Midjourney uses the same prompt to show the software's progression. The results tell the story of GenAI's rapid evolution …



Midjourney generations over time: "a hyper-realistic image of Harry Potter"
Source: Midjourney, 2023

V1, February 2022 · V2, April 2022 · V3, July 2022 · V4, November 2022 · V5, March 2023 · V5.1, March 2023 · V5.2, June 2023 · V6, December 2023
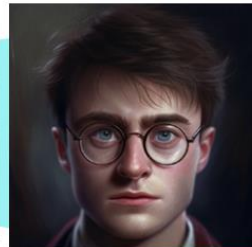
# WHY CARE? STRONG POTENTIAL TO BOOST PERFORMANCE

## PRODUCTIVITY AND EFFICIENCY

GenAI is already proving in production, PoCs, and pilots that it can reduce insurers' operating costs and improve productivity. Moreover, insurers are finding that measuring GenAI's impact on costs/productivity is relatively easy, allowing them to build business cases. Examples include:

| | |
|---|---|
| Front office | • Reduce cost to originate.<br>• Reduce cost to serve.<br>• Scale customer support. |
| Middle and back office | • Enable further automation of repetitive tasks.<br>• Enhance risk mitigation tools.<br>• Reduce the cost to onboard clients. |
| Technology | • Lower operating costs.<br>• Increase productivity. |
| Functional areas (nontech) | • Further digitize workflows.<br>• Reduce the cost of content generation. |

## REVENUE GROWTH

While most insurers are leading with productivity/efficiency use cases, some are blueprinting revenue-based business cases. These insurers tend to be more advanced in their digital journeys and are able to shift their focus to adding value (e.g., richer, better customer experience).

| | |
|---|---|
| Front office | • Shift to higher-value/revenue-adding tasks (e.g., cross-sell).<br>• Achieve nonlinear scaling of personalized services.<br>• Find new revenue sources by discovering new patterns (e.g., new products). |
| Product staff | • Improve revenue impact of product enhancements.<br>• Achieve pricing optimization. |
| Current customers | • Grow coverage (e.g., with improved customer understanding and experience, and personalization).<br>• Achieve trusted advisor status. |
| New customers | • Improve prospecting and product selection.<br>• Increase engagement and conversion. |

## NEXT-LEVEL PERFORMANCE

Celent anticipates that GenAI will help insurers become data-driven organizations that make faster and smarter decisions. The underlying drivers of this shift include improved overall data access, increased data input, and user-friendly interfaces leading to deeper and more actionable insights. In the long run, as confidence in data/model-driven decisions grows, insurers will implement autonomous workflows that will lead to not only cost reduction and productivity enhancements but, more excitingly, revenue growth as employees can focus more time with the customer, adding value for them. Moreover, GenAI could enable insurers to develop completely new revenue sources.

# THREE WAVES

## DEFINING AND DESCRIBING THE WAVES

Exceptionally fast-moving technology coupled with the evolving regulatory guidance makes projecting the adoption of GenAI challenging. To help guide insurers, Celent has developed the GenAI Adoption WaveGram. Celent anticipates three waves of adoption propelled by tech advances (e.g., faster / more efficient compute), the growing maturity of GenAI regulation and business structures, and competitive pressures.

Celent has mapped the waves and overlaid use cases based on conversations with GenAI tech innovators, insurers in the adoption vanguard, and Celent analysis of historical tech adoption curves.

| WAVE | CHARACTERISTICS |
|---|---|
| **1** 2024–2026 | Use cases in the first wave can be described overall as pragmatic due to regulatory uncertainty and an evolving ecosystem. The focus is on use cases that promise productivity/efficiency gains in low-risk areas with relatively low integration costs. Early innovators will bring more advanced use cases into production that will not experience mainstream adoption until wave 2. They stand to gain a competitive advantage and drive further investment. |
| **2** 2027–2028 | The second wave will be characterized by higher impact applications and deeper integration of GenAI into workflows. Fueled by adoption accelerators (e.g., lower cost and risk), insurers will test and implement more use cases and reach new frontiers (e.g., AI assistants for every point in the process). The concept of augmented humans will be widely embraced across industries, and insurers will deliver highly personalized interactions via customer-facing applications. |
| **3** 2029+ | No one can accurately predict what will transpire in 3–5 years. Instead, Celent offers a few visions of how GenAI could be coupled with other advanced technologies (e.g., quantum computing, distributed ledger technology, and virtual reality) and how AI agents could play a role in financial services. As GenAI matures further, customer-facing use cases will approach the scope and impact of employee-facing use cases. |

Sources: Celent interviews, research, surveys, and analysis.

# WAVE 1: DRIVERS AND OUTCOMES

Each adoption wave consists of drivers (factors that accelerate or impede adoption) and attendant outcomes. During wave 1, the factors that *accelerate* adoption in the insurance industry are those that lower costs (testing and implementation) and risks. The factors that *impede* adoption are technological readiness as well as legal, regulatory, and trust-related issues. As insurers move from proof-of-concept to pilot and production, they need to address multiple challenges ranging from ensuring compliance to integrating with legacy systems and reengineering processes. Most insurers will initially bring use cases into production slowly but will speed up by the end of this wave. The use cases that move into production first will be low-risk, productivity-related uses of GenAI—particularly those in which traditional AI has already been leveraged—and those with stand-alone applications (e.g., virtual assistants). FIs with a lower regulatory burden, strong competitive advantage, and revenue drivers will lead the way for the rest to follow.

## Accelerators

**AI models become smaller and faster.**
As a result, training and run costs decline, increasing the feasibility of use by FIs.

**Third party providers facilitate adoption.**
Hyperscalers and AI platforms provide scalable and consistent compute, AI tools, and models to facilitate use case development.

**P&C and Life early movers realize a significant edge.**
They mitigate risks and build trust by optimizing GenAI/human interactions.

**In the EU, regulatory clarity makes it easier to game plan.**
The AI Act in Europe and regulation in other geographies reduce ambiguity regarding "safe" use cases.

**Methods to lower hallucinations are developed.**
A prime example is requiring a GenAI model to retrieve data from a relevant database (known as retrieval-augmented generation or RAG).

Sources: Celent interviews, research, surveys, and analysis.

## Impediments

**In the US, regulation remains work in progress.**
For insurers, the recent AI Executive Order changes and SEC proposal leave much open to interpretation and additional legislation. However, the NAIC's Model Bulletin is being used by many states as the adopted playbook for AI governance. As of this writing, 17 states have adopted the Model Bulletin and 4 have done so with modification (i.e., CA, NY, TX, and CO).

**Computing hurdles inhibit mainstream adoption.**
Issues such as the scalability of GPU infrastructure could keep select GenAI use cases from becoming mainstream.

**Risk concern is relatively high for insurers.**
Concerns regarding bias and hallucinations exclude numerous use cases as regulatory hurdles are high for P&C and Life insurers.

**Combatting GenAI-enabled fraud and breaches consumes FI resources to the detriment of strategic investment.**

**Technical debt (especially in data management) persists.**
This prevents companies from taking full advantage of GenAI.

**Intellectual property concerns slow down select use cases.**
For example, this may slow marketing content generation.

## Outcomes

**Productivity-enhancing use cases lead.**
Insurers will target cost takeouts, in particular:
- digitizing manual/paper processes
- improving human-based processes

**Sandbox mode dominates.**
Insurers favor a controlled environment for innovation, allowing business and tech teams to collaborate and build while avoiding regulatory fallout.

**Prior AI use cases are enhanced.**
GenAI enhances existing AI use cases (e.g., intelligent virtual assistants) in a cost-effective way.

**Low-barrier use cases are exhausted.**
Early-mover insurers experiment with and implement use cases for which risks are contained (e.g., first draft content generation).

**Stakeholders establish frameworks to guide insurers.**
This is particularly relevant in the areas of regulation and governance.

**Successful early innovators encourage investment in GenAI by early followers.**

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# WAVE 2: DRIVERS AND OUTCOMES

During wave 2, insurers and their tech partners will make significant progress in lowering the costs and risks of GenAI. The complexity of scaling AI will be solved through advancements in computing. There will, however, be impediments that slow adoption, including heightened regulatory scrutiny and diminishing improvements in certain model types. Nevertheless, insurers will continue to build on lessons learned and improve their ability to scale models and embed GenAI across workflows and customer journeys.

**Accelerators** | **Impediments** | **Outcomes**

## Accelerators

**Tech advances drive development of use cases.**
Progress in LLMs design, computing, improved speed, availability, and reduced environmental footprint make new use cases possible. The scalability of GPU buildout improves, and new chip types are commoditized (e.g., domain-specific compute, 3D stacking).

**LLM access expands significantly.**
LLMs embedded in common business software are used by most employees as the competitive field of AI marketplaces develops and GenAI models are run on personal devices.

**Model accuracy continues to improve.**
Models built from text, data, video, audio, and images better understand prompts and generate content that is more diverse, accurate, and contextually relevant.

**Regulatory clarity is achieved globally.**
The main focus is on safety, with regulations driven either by a supranational entity or agreement on global guidelines.

**Insurers overcome technical debt issues.**
Modernized tech infrastructures supercharge the use of internal proprietary data in GenAI models.

## Impediments

**Fines for lack of compliance with GenAI regulations.**
History has proven time and time again that some will fail to comply with a regulation, heightening regulatory scrutiny and driving new regulation. However, for US insurers, the financial impact will likely be minimal compared to the framework for fines outlined by the EU's AI Act. It is yet to be determined how the US regulatory environment will play out, but it may incorporate some of the "lessons learned" from the EU's AI Act over time.

**Rogue LLMs spur greater regulatory scrutiny.**
Given the potential gains, models that support illegal activity are built, driving new regulation and new cybersecurity approaches to defend against them.

**Sources of good training data decline.**
Model performance is eroded due to the rising share of AI-generated data in the training data, and acquiring new high-quality training data becomes more costly.

## Outcomes

**Comfort level with GenAI applications increases.**
An exponentially rising number of customer-facing applications move into production.

**User interfaces migrate from drop-downs and clicks to functionality embedded in AI assistants.**
Customers are comfortable with conversation-based interfaces and AI assistants.

**Use cases piggyback and are interwoven.**
GenAI models are deeply embedded in workflows, often in various steps (e.g., in prospecting workflows beginning with list generation, then email generation and next best action).

**The use case frontier is pushed out.**
For example, insurers become comfortable providing AI assistants that act as portfolio advisors to customers.

**Competitive advantage from initial use cases is eroded.**
Access to models and compute becomes widespread.

**Highly specific GenAI models become the norm as costs become manageable.**

Sources: Celent interviews, research, surveys, and analysis.

# WAVE 3: DRIVERS AND OUTCOMES

After significant advancements between 2024–2028, pushing the GenAI frontier in 2029 and beyond will require leveraging other technologies such as quantum computing, augmented and virtual reality, and distributed ledger. As humans have proven time and again, we readily adopt technology that improves our lives and work and adapt how we communicate and operate. By wave 3, Celent expects that the majority of us will be comfortable having personal AI assistants and interacting with trusted AI agents.

## Accelerators

**Battle-tested models reduce risk exposures.**
End-user control is virtually guaranteed.

**Quantum computing goes into production.**
Although currently in development, quantum could go into production and further advance GenAI capabilities.

**Effective human vs. AI identifier is launched.**
For example, Tools for Humanity, which is currently building tools for the Worldcoin project, could achieve its ambition.

**VR/AR technology is refined, and prices drop.**
Adoption follows the smartphone adoption curve.

**GenAI and blockchain interact.**
For example, GenAI might create a personalized financial product and tokenize it to be traded on a blockchain.

**Compute is redefined.**
A new, more holistic approach to computing power is developed with increased energy efficiency, learning capability, distributed processing, and domain-specific optimization. Emerging technologies such as neuromorphic and edge computing could contribute.

## Impediments

**Model collapse due to low levels of human-generated data slows advancements.**

**Marginal cost of proprietary/human-created content increases, reducing ROI of GenAI initiatives.**

**New risks arise, e.g., autonomous agents increase data breaches.**
As a result, insurers divert resources away from innovation to risk mitigation.

**Higher likelihood that a "black swan" event erodes confidence in AI systems.**
The chance that AI systems have ignored a statistically unlikely outcome may lead to heavy losses and the erosion of confidence in AI-driven workflows and even individual models.

## Outcomes

**Customers are comfortable interacting with AI assistants.**
Autonomous agents are mainstream, and user interfaces are interactive and query-based. Customers "hire" and customize AI agents to do their coverage analysis and selection.

**Sophisticated data analysis supports performance-based pricing for select products.**
For example, corporate customers pay for group or fleet insurance based on cost savings and/or revenue generation.

**GenAI allows automation of the entire product lifecycle and product customization.**

**Coding is completely democratized by natural language interactions.**

Sources: Celent interviews, research, surveys, and analysis.

# 03

## PACESETTERS OF GENAI ADOPTION
## IN INSURANCE: CASE STUDY AND USE CASES

# COMMON SUCCESS FACTOR THEMES FOR GEN AI INITIATIVES

COMMON THEMES FROM INSURER INTERVIEWS AND PUBLICLY AVAILABLE DATA

**Leadership**

The AI movement in insurance is transformational, and having leadership support and buy-in for AI is a differentiator. This will also help with setting the right strategic direction and company alignment to that direction.

**Data Management**

Insurers must have their data, data architecture, data assets, quality controls, and data governance in order and have a data architecture positioned for generative AI models.

**Investment**

- Consider implementing a business value framework for Gen AI investments. This type of framework can be used to communicate the business problems the team is trying to address as well as the related business benefits.

- Investment is critical for AI initiatives now so organizations can be positioned to capture the waves of AI and GenAI advancements that will drive transformation and differentiation.

**Talent & Training**

- Train ALL employees across your organization on GenAI, providing employees with the knowledge of its capabilities and limitations.

- Bring all stakeholders to the GenAI table (e.g., legal, HR, compliance, operations, etc.). Senior leadership needs to be educated and plugged into the process in the early stages for success.

**Change Management**

- Insurers need to make sure to validate GenAI tools and models against the company's governance framework and to ensure that the impact of a project is business approved.

- Introduce change management training as part of the onboarding process to influence a culture of change.

**AI Governance**

- Make AI governance a cross-functional team activity to ensure your organization is writing a strong and thoughtful AI governance policy.

- Provide ethics training to the organization because employees will have to interact with AI at some point.

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# SPOTLIGHT CASE STUDY: NEW YORK LIFE
# DEPLOYING GENAI ACROSS THE INSURANCE VALUE CHAIN

… But before doing so, they needed to establish a foundation for success

| | |
|---|---|
| **Imperative** | Activate the power of New York Life's data through enterprise data, insights, and AI solutions that deliver business impact across New York Life's businesses |
| **New York Life Transformational Journey** | New York Life's transition from individual products to customer-centric holistic advice and guidance allowed them to focus on:<br>1. The client–agent experience<br>2. Improving operational efficiency<br>3. Integrating siloed businesses into a singular, customer-centric foundational business |
| **Early GenAI Approach** | Established a Generative AI Acceleration Office<br>• Consulted with a multitude of companies across the space, including hyperscalers, foundational model leaders, and strategic partners<br>• Worked with a strategic partner to set up the initial scaffolding and establish strong program management<br>• Collected over 200 GenAI use cases from across the organization<br>• Had a dedicated cross-functional team assess and prioritize use cases across a variety of dimensions, including business impact, cost, complexity, data readiness, and tech stack requirements, among other criteria<br>• Aligned on four initial GenAI use cases that scored the highest, considering business impact, cost, and feasibility |

> " GenAI has been an incredible catalyst moment and a step function for change and capabilities.
>
> Don Vu, SVP
> Chief Data & Analytics Officer
> New York Life

# NEW YORK LIFE'S ADOPTION OF GENAI AND IMPACT TO THE INSURANCE VALUE CHAIN

New York Life (NYL) is a full-service life insurance company offering insurance, investment, retirement, and advisory services for over 175 years. The following GenAI value chain examples were an outcome of their initial GenAI efforts. Though they have since evolved their strategy to be more encompassing, these GenAI value chain examples were an outcome of their initial baseline GenAI efforts.

| GenAI for Service | GenAI for Agent Assistance | GenAI for Marketing | GenAI for Claims |
|---|---|---|---|
| **Service Sage:** An AI assistant for NYL's service professionals that leverages an extensive library of procedures to provide timely and accurate answers to customer questions. Service Sage decreases hold times, increases the accuracy of information provided, and frees up service professionals to focus on having caring conversations with customers. | NYL activated a suite of GenAI capabilities to help their agents and advisors engage with clients more effectively across a variety of areas, such as client meeting summaries, CRM knowledge answers, and tailored email and text generation. | **Marketing Maestro:** Creates content across the channels through which NYL communicates with clients, maintaining the voice of the NYL brand and helping copywriters produce content across all channels, including websites, brochures, and social media. This increases content effectiveness and timeliness and paves a path toward developing a model for creating content on a more personalized level. | **Claims Genie:** Subsequent to a claims manager's decision on a case, Claims Genie accelerates the claims process by drafting an initial response letter for the claims manager's review based on their notes, company standards, guidelines, policies and regulations, and training on a large corpus of historical claims letters. This leads to an improved claims management process for all stakeholders, including better customer experiences and a significant reduction in the time between decision-making and communication and in potential error rates. |

NYL's initial GenAI use cases were strategically chosen to maximize impact while maintaining a human-in-the-loop approach, ensuring quality and oversight before anything reaches their clients.

# NEW YORK LIFE'S SUCCESS FACTORS FOR GROWTH AND PROCESS



## Partnerships

Diversified partnerships help NYL keep pace with the fast-moving AI space. This includes external partners like AWS, OpenAI, and Anthropic, which provide scalable services and thought leadership. Internal collaboration with New York Life Ventures also facilitates strategic partnerships with startups that provide specialized, differentiated advantages.

## Business Case

Starting with a strong business case is essential. The NYL Cost-Benefit Analysis (CBA) process provides a structured framework to assess opportunities, factoring in costs like business bandwidth and subject matter expert training. NYL intentionally integrated change management into the process—an element previously overlooked—and continue to refine it to meet evolving needs.

## Ideation

Ideation occurs in many forms and comes from many sources, starting with business-embedded AI teams and a central AI Center of Excellence (AI COE). Additional ideation efforts occur by democratizing R&D throughout the enterprise and intentional innovation efforts, such as internal hackathons.

## Evaluation Process

Evaluating the business impact of a use case at the beginning and throughout ensures a smoother deployment process and prevents potential setbacks. It is also a key process in use case prioritization and engagement. The cross-functional team, which includes compliance leaders, plays a crucial role in assessing use cases as they progress from proof-of-concept to pilot to scale.

## Business Impact

NYL focuses on ensuring its AI use cases drive business impact. For example, productivity is a key driver of growth, but its impact is not always a direct one-to-one relationship with business operations. If AI makes an agent 20% more efficient, what is the actual business impact? What do the agents do with that 20% gain? NYL refers to this as *productivity leakage* and is addressing ways to achieve value capture.

## Continuous Innovation

The AI landscape is rapidly evolving and requires NYL to continuously experiment with emerging solutions such as agentic AI. This ensures that they not only have the most effective tools to address current needs but also can pursue disruptive opportunities and growth into the future.

New York Life has experienced early success by focusing on opportunities where GenAI's strengths are a fit for specific use cases. For example, Marketing Maestro and Claims Genie leverage LLMs trained on large sets of unstructured data to create initial drafts with heavy personalization and humans in the loop to finalize content. These solutions save hours of time for each piece of content.

# NEW YORK LIFE ENCOUNTERED CHALLENGES, BUT THE FUTURE IS LOOKING BRIGHT WITH GENAI!

The biggest challenge for NYL? Ensuring GenAI initiatives are paired with the appropriate process changes to provide business impact

| Challenges | Looking to the Future |
|---|---|

**Challenges**

1. To drive enterprise GenAI impact across multiple dimensions, NYL developed a multi-pronged approach:

   - **Defend**: Democratize GenAI access to all users and enable everyday productivity. Leverage enterprise GenAI tools and GenAI features on software providers' road maps to get GenAI in the hands of users closest to business challenges, unlocking latent and distributed R&D.

   - **Extend**: Develop solutions for custom use cases that allow NYL to move the needle in specific areas that augment staff and improve existing processes.

   - **Upend**: Adopt a "self-disrupt" mindset and continually look to the future and what's on the horizon to focus R&D efforts and big bets.

2. Balancing immediate ROI-focused solutions with long-term innovation is crucial but often difficult for leaders accustomed to incremental gains through technology.

3. Gaining business buy-in and ownership is essential for operationalizing solutions and capturing their value.

4. Scaling GenAI from proofs of concept and pilots to enterprise-wide adoption remains a challenge.

5. GenAI projects are heavily influenced by data—often unstructured data—so it's critical to identify ownership of data and metadata, including its quality and freshness.

**Looking to the Future**

Continue to explore areas where GenAI has gained traction across industries and experiment with emerging solutions:

- **Customer Service:** Evaluate how LLMs can more deeply rewire customer-facing solutions. NYL questions how long will it take for LLMs to shift expectations on customer experience and make IVR obsolete.

- **Software Engineering:** They are evaluating how to make step-function improvements in their engineering capabilities with GenAI-driven development, where other organizations are reporting ~30% developer productivity gains.

- **Analytics:** GenAI tools greatly increase the speed of iterative analysis. NYL is evaluating how to harness GenAI capabilities to raise the floor for analysts across the enterprise.

# ANSWER OVER 10K QUERIES PER WEEK USING GENERATIVE AI

**Sun Life**

**Use Case**

One of the first big successes that Sun Life delivered came in the form of Sun Life Asks, a chatbot that safely and securely uses internal information to answer user queries. Deployed globally to all employees, Sun Life Asks uses Anthropic's Claude through Amazon Bedrock. Because Sun Life Asks is simple to adopt and use, employees are submitting over 10,000 queries a week.

Sun Life team members often save hours of work each time they query the chatbot. For instance, one market research analyst shared, "I asked the chatbot to act as a market research analyst and conduct a sentiment analysis providing the top five to ten themes with a theme frequency count. It easily saved me several hours of manual work." With thousands of queries being made each day, Sun Life Asks is powering employee efficiency throughout the global enterprise. Sun Life Asks resolved over 600,000 internal queries in its first 11 months.

**Results**

As a global enterprise, Sun Life has the organizational capacity needed to scale great ideas. The company wants to verify that the 40 generative AI experiments it has conducted since early 2023 translate to a genuine impact on clients.

Sun Life has learned a great deal from its GenAI initiatives. As it continues to explore new ways to deliver value to employees and clients, the company is focused on changing mindsets and upskilling internal teams. "Putting generative AI in the hands of all our employees combined with global upskilling is vital," says Janet Weldon, assistant VP for data strategy and enablement at Sun Life. "We really want to empower everybody to not only be generative AI builders, creators, and consumers but also use the technology in all that they do."

# USE CASE: SBI LIFE
## SHORTENING THE HANDLING TIME FOR CUSTOMER SERVICE AND REDUCING OPERATOR TRAINING TIME BY 30 PERCENT

**SBI Life**
INSURANCE
With Us, You're Sure

## Use Case

SBI Life Insurance needed to enhance customer service at its call centers and shorten the training period for operators. For example, the operators sometimes have to answer inquiries about discontinued life insurance products. SBI Life Insurance has products that were discontinued over 10 years ago, each with an enormous variety and volume of related documents, so answering these questions quickly was a challenge for operators. This situation made operator training a lengthy process.

To help solve these challenges, the IT team built a solution using Amazon Kendra that let call center workers easily search for documentation on insurance products and policies.

The team released a selfbot function that summarizes and displays search results using generative AI. The operators simply read the summary from the selfbot to respond to customer inquiries. To summarize the information, SBI Life Insurance employs several large language models, one of which is Anthropic's Claude through Amazon Bedrock.
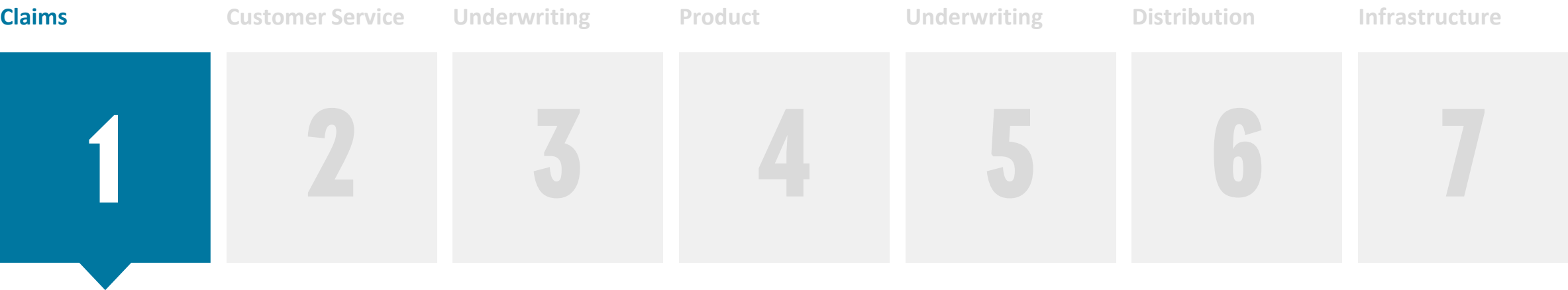
## Results

SBI Life Insurance conducted trials with a small group of operators. As of 2024, almost all operators use the new document search solution. In the past, operators had to search across various types of documents to respond to customer inquiries, but the new search system now empowers them to answer quickly.

The solution has significantly improved call center operations and reduced stress on operators. It also shortened the training periods by about 30%. SBI's goal is to automate and streamline comprehensive call center operations. The search solution is a part of that mission and will accelerate their digital transformation journey.

As the next step, the team will develop a solution that automatically converts and summarizes customer calls into text. This will free the operators from manually recording conversations and let them focus on customer service, leading to better customer satisfaction.

# INSURERS REALIZING EFFICIENCY ACROSS THE INSURANCE VALUE CHAIN WITH GENAI FROM AWS

Amazon is seeing a lot of effort and engagement with the implementation of artificial intelligence and machine learning with their client base.
Clients are starting to explore GenAI to take everything to the next step and engage more freely with customers and agents in the field.

**Claims**　　Customer Service　　Underwriting　　Product　　Underwriting　　Distribution　　Infrastructure

**1**　　2　　3　　4　　5　　6　　7

**Data Ingestion and Analysis:** Insurers are using AI and GenAI to ingest large amounts of unstructured data from forms and documents such as police reports, accident reports, etc. This not only speeds up the claim process but also allows actuaries to identify huge amounts of new information, which they can then access for new signals in the data or attributes that they want to introduce for rates.
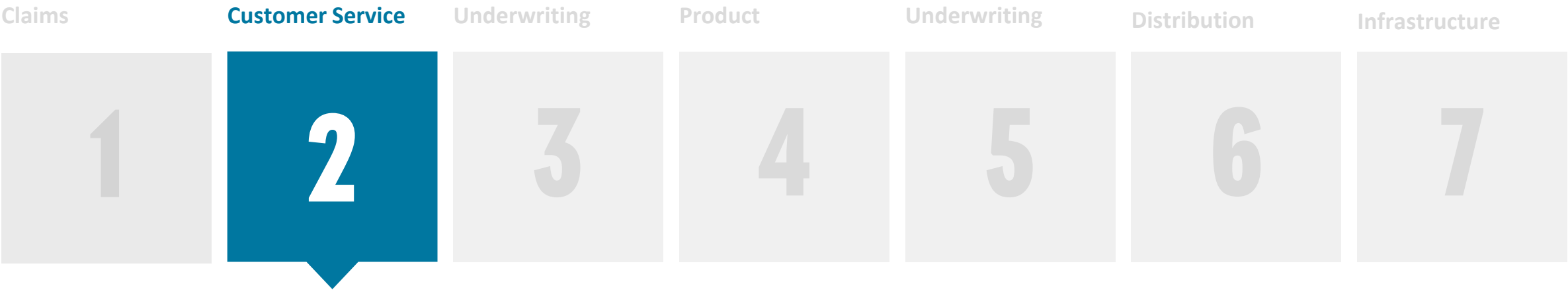
Example:

A tier 1 P&C carrier started ingesting appraisal reports for homeowners' insurance. Their actuaries mine data on the reports for notations in the documentation, such as cut trusses in the attic or cracks in the foundation. After that, the actuaries test their portfolio to see if there were any outsized differences in the way specific policy groups affected their overall risk and claim levels. Finally, the actuaries identified about eight new attributes that they wanted to push back into the rating process as a result.

**Claims Adjudication**: Insurers are ingesting claims information, comparing it to coverage verification, reading demand packages, and identifying the potential for litigation. They are also pulling in past underwriting notes and other information to sort through and process the information before it gets to a claims examiner.

Example:

A large carrier anticipates it could save about $100 million worth of operating costs by reducing the time that claims adjusters spend on manual tasks. This would include ingesting claims notes, preprocessing all the information, and responding to customers' requests for information. They also anticipate this reducing fraud and much of the carrier's legal costs from filings, in addition to improving propensity understanding to further litigate certain claims.

# INSURERS REALIZING EFFICIENCY ACROSS THE INSURANCE VALUE CHAIN WITH GENAI FROM AWS

| Claims | Customer Service | Underwriting | Product | Underwriting | Distribution | Infrastructure |
|--------|------------------|--------------|---------|--------------|--------------|----------------|
| 1 | **2** | 3 | 4 | 5 | 6 | 7 |

**Personalization:** It is important to pull in vast amounts of data from past customer communications to access customer sentiment and product coverage. The ability to use clickstream analytics from portals to identify customer product research is key. This helps carriers personalize product recommendations and can enhance call center analytics and servicing.
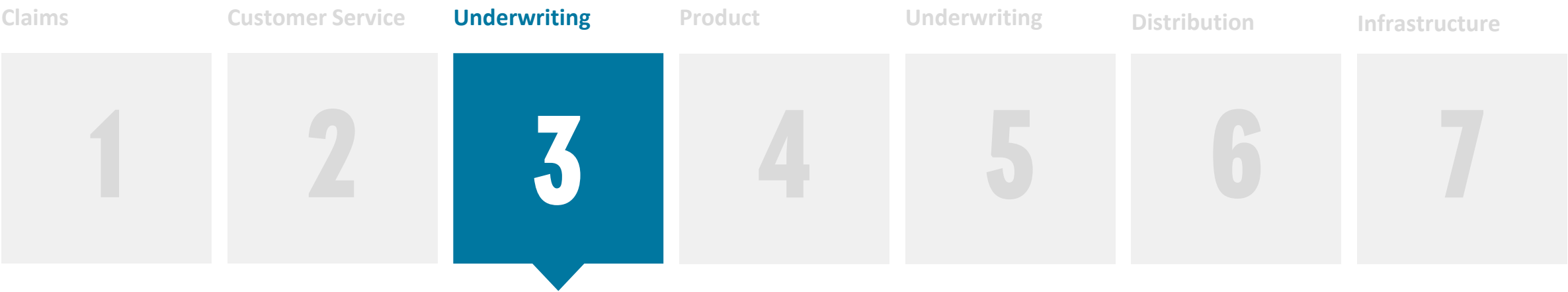
Example:

> One large insurer monitors customer product research and application activity, and this information is made available at the point of a call center interaction. AI automatically determines what the customer issue is, whether it was knowledge gathering or a broken operational process with the website or a lack of information about how to fill out the form. At the point where customers called into the call center, the AI application auto-routed them to the right customer service representative to help them quickly address and solve their problem.

**Personalization:** Another insurer created a concierge for policy orders to create a more personalized customer experience. To assist customers and determine what type of benefits they need or what the right product terms and coverages are, their GenAI concierge solution continuously learns and refines the experience with every click from the customer. The insurer also deployed GenAI chat bots on their customer portal to answer questions about products, determine the suitability of those products, and decide how the products apply to them. These chatbots are research agents for customers.

Example:

> A life carrier improved policyholder correspondence for filing a claim. Before a CSR sends information out, GenAI is used to preauthorize the response email, with all the correct regulatory language and other elements needed for the correspondence. The CSR then reviewed the correspondence before it is sent. Prior to the introduction of this process, about 8% of their communications didn't contain all the required regulatory communication features. After implementation, this number decreased to less than 1%.

# INSURERS REALIZING EFFICIENCY ACROSS THE INSURANCE VALUE CHAIN WITH GENAI FROM AWS

| Claims | Customer Service | **Underwriting** | Product | Underwriting | Distribution | Infrastructure |
|---|---|---|---|---|---|---|
| 1 | 2 | **3** | 4 | 5 | 6 | 7 |

**Underwriting Assistant:** With the efficiencies gained through GenAI, carriers are using it to collect and aggregate data that was normally performed by underwriting assistants. Underwriters are still heavily involved in the qualitative process when something is outside risk parameters. They still need to justify taking this risk or determine how to get a customer aligned with risk tolerances: That's the "art" that's not going away anytime soon. GenAI accelerates the task of pointing out when something is outside of risk tolerance.

Example 1:

One insurance carrier stated, "I'm tired of my underwriters sitting in their office. I want them out in the field, talking to customers, engaging in risk conversations, and making insurance personal again." GenAI helped achieve their goal and pushed underwriters toward the higher-value part of the job, where the "art" of underwriting excels. The science part of underwriting is where the insurer applied GenAI and subsequently saw productivity "go through the roof." GenAI efficiency gains in underwriting will have an impact on entry-level roles that have been doing a lot of the underwriting groundwork traditionally.
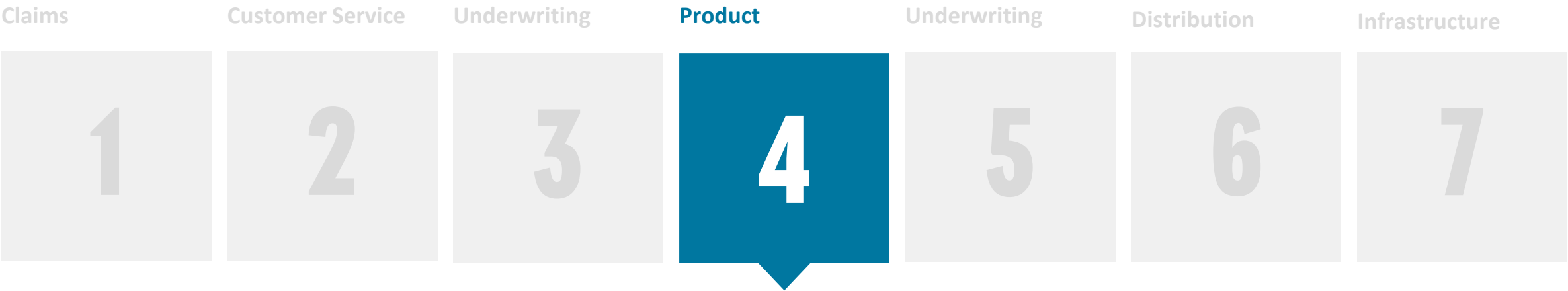
Example 2:

The creation of a digital assistant for underwriting in P&C insurance. An Amazon client was looking to improve its consumption of vast amounts of information from third parties. This included data such as submissions for commercial insurance, building inspection reports, maintenance data from a homeowners association, financial records, and annual spending versus fund accruement. The data was both structured and unstructured. GenAI is now being used to prepopulate and create a summary for the underwriter indicating whether the provided information is in good order, meets underwriting guidelines, and identifies areas outside of underwriting guidelines. The insurer also developed an assessment of how close to capacity they are for their appetite for specific types of policies.

Example 3:

Another insurer uses GenAI to ingest and summarize all of the data an underwriter would assess as part of decisioning. The summary is sent to a third party and returned with a recommendation as well as underlying insights. The insurer has seen a preliminary gain of approximately 50% in risk assessment efficiency.

# INSURERS REALIZING EFFICIENCY ACROSS THE INSURANCE VALUE CHAIN WITH GENAI FROM AWS
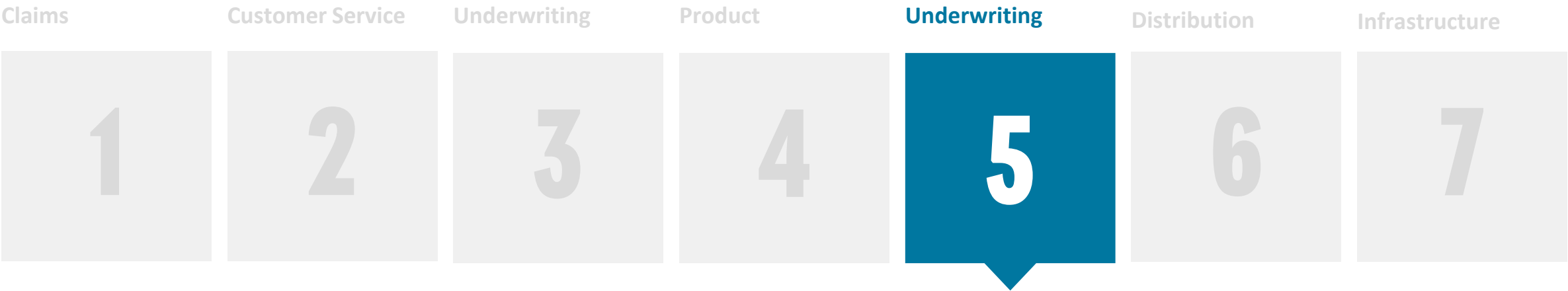
Claims    Customer Service    Underwriting    **Product**    Underwriting    Distribution    Infrastructure

1    2    3    **4**    5    6    7

**Personalization**

Clients are creating a variety of applications using GenAI.

- **Product Rates:** AI/GenAI is used to consume vast amounts of external data and bring in hundreds of different attributes related to a particular customer so they can create complex rating tables.

- **Product Recommendations:** A customer may initiate their journey asking for one product such as term life, detailing information through an email, voice communications, etc. With GenAI they are able to proactively showcase the right product for a customer with the right combination of terms, deductibles, limits, and premium payments to meet their coverage objectives.
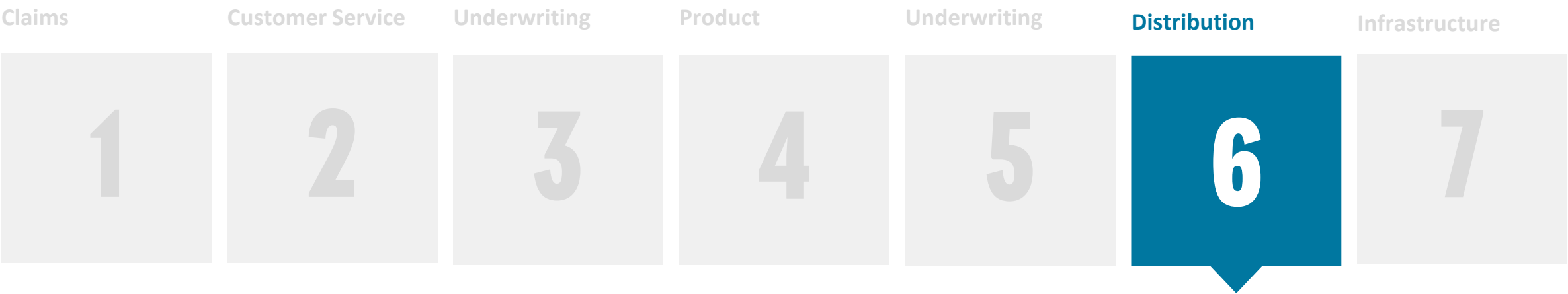
# INSURERS REALIZING EFFICIENCY ACROSS THE INSURANCE VALUE CHAIN WITH GENAI FROM AWS

| Claims | Customer Service | Underwriting | Product | **Underwriting** | Distribution | Infrastructure |
|--------|------------------|--------------|---------|------------------|--------------|----------------|
| 1 | 2 | 3 | 4 | **5** | 6 | 7 |

**Fraud**

- GenAI is helping customers to improve operational processes by accelerating detection.

- GenAI is being used to accelerate propensity analysis and send more detailed information to special investigation units so they can prioritize cases which are more anomalous.

- One large carrier used GenAI models to mine unstructured data during the application process for fraud. If a customer had applied for a different product previously and was reapplying and had changed some of their criteria (e.g., previously they said they were a smoker, but this time around said they're not a smoker), the GenAI catches it in real time during the application process. Previously, it took two to three months postbind when the fraud unit noticed there was anomalous information. Before using AI, the data had been so siloed that the underwriting team wasn't capturing much of the unstructured data from prior submissions. Now AI allows them to bring new optics to the application review process.

# INSURERS REALIZING EFFICIENCY ACROSS THE INSURANCE VALUE CHAIN WITH GENAI FROM AWS

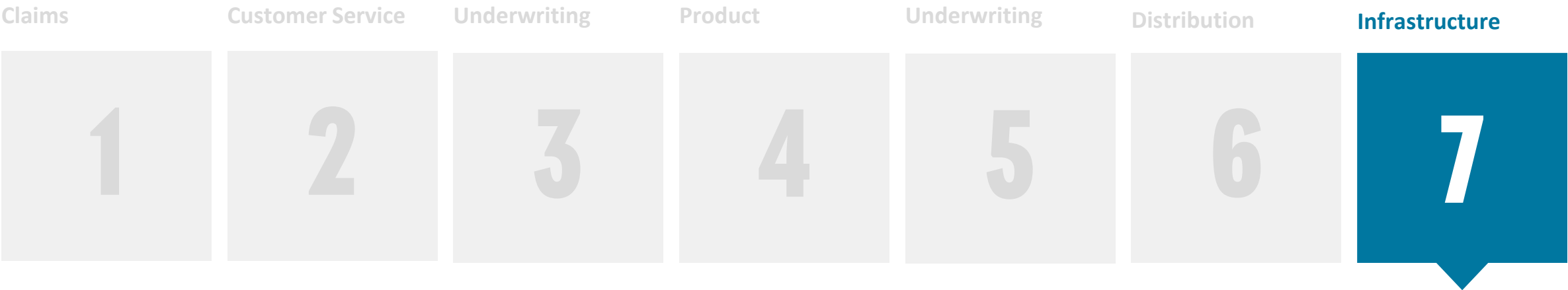| Claims | Customer Service | Underwriting | Product | Underwriting | **Distribution** | Infrastructure |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | **6** | 7 |

**Omnichannel Servicing**

For those deploying AI and GenAI, AWS is seeing a significant focus with insurers building an omnichannel servicing platform for their customers so that they're not just assisting a customer on a preferred channel but interacting with them simultaneously across all channels.

Example:

When a customer is speaking to an agent or to the contact center, they can see the results of the interaction on their laptop or mobile device with multiple policy quotes updated in real time. If a customer decides that the policies quoted are too expensive, the agent or contact center representative can modify them, and the customer sees that in real time. Once the agent or CSR verifies the information, GenAI aggregates various other products the customer may already own to see how policy changes affect their discounts and pricing.

This example personalizes recommendations and provides consistent customer interaction. This type of platform serves as the distribution point to the back office insurance administration platforms, such as Guidewire, ALIP, Salesforce, etc. This platform also provides flexibility for dealing with customer information and becomes easy to reconfigure and evolve, making it much more efficient than modifying monolithic background applications.

# INSURERS REALIZING EFFICIENCY ACROSS THE INSURANCE VALUE CHAIN WITH GENAI FROM AWS

| Claims | Customer Service | Underwriting | Product | Underwriting | Distribution | Infrastructure |
|--------|------------------|--------------|---------|--------------|--------------|----------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Mainframe Modernization**

GenAI is helping to drive turnover in legacy code, especially around mainframe modernization. AWS is seeing several customers tackle and get rid of large mainframe application stacks because they can have AI and GenAI do code conversion. In addition, GenAI can mine the data for edge cases and create test cases that would then challenge the converted code by creating testing harnesses.

GenAI capabilities can provide a huge uplift for all carriers, especially life carriers dealing with vast amounts of legacy applications and the ever-diminishing staff expertise heading to retirement. Before the introduction of GenAI, insurers would have to spend significant amounts of capitol on external SIs for this type of effort. Now they can do a lot more of it in house by analyzing the triage performance of the GenAI and AI tools pointed to that code conversion process.

**Cybersecurity**

One client developed a GPT model for summarizing cybersecurity threats, which was previously done manually.
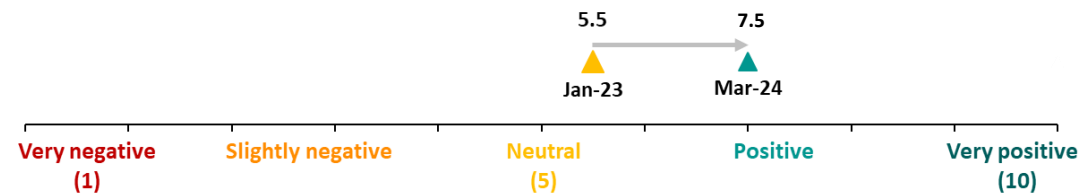
# 04
## INSURERS GETTING THE MOST OUT OF GENAI
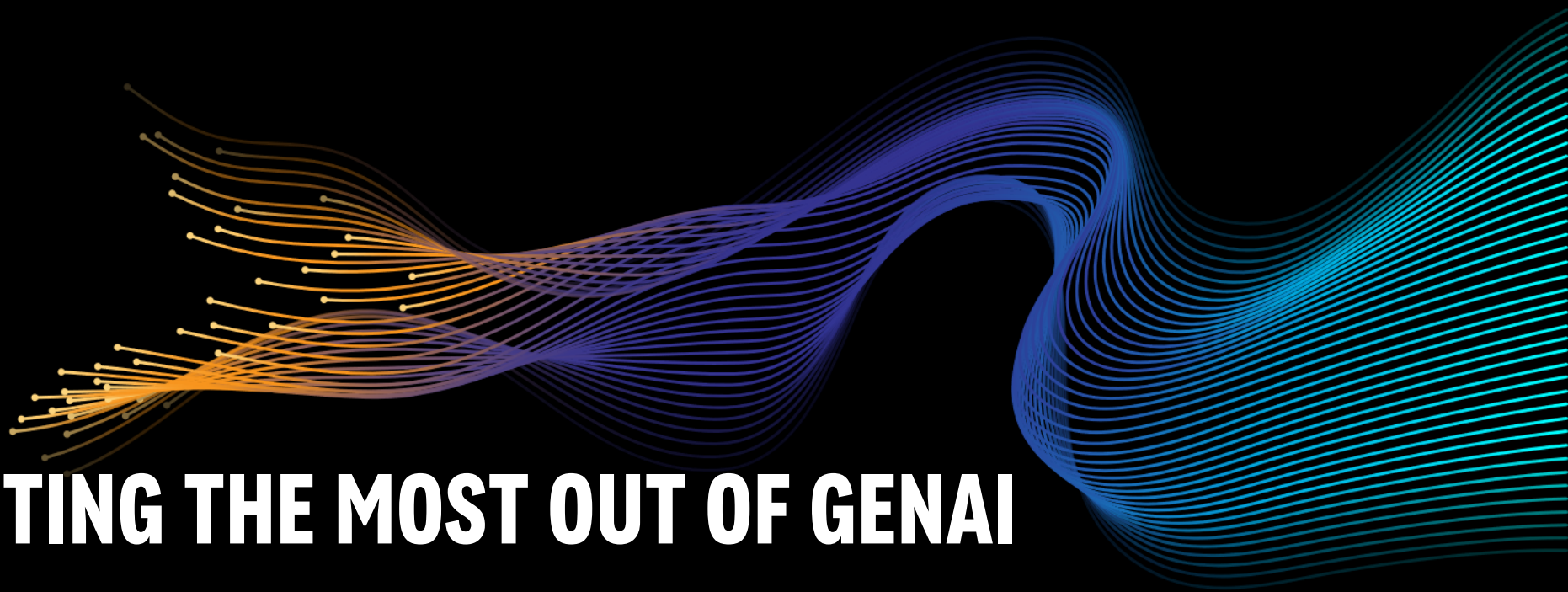
# CELENT FINDS POSITIVE SENTIMENT BUT A CAUTIOUS ADOPTION OF GENAI

## BASED ON 2024 SURVEY RESULTS OF US INSURERS

### GenAI sentiment: Positive change over previous 14 months

5.5 → 7.5

Jan-23 ... Mar-24

| Very negative (1) | Slightly negative | Neutral (5) | Positive | Very positive (10) |

### Positive sentiment is likely driven by strong performance improvement expectations, with employee and customer use cases being top areas of focus
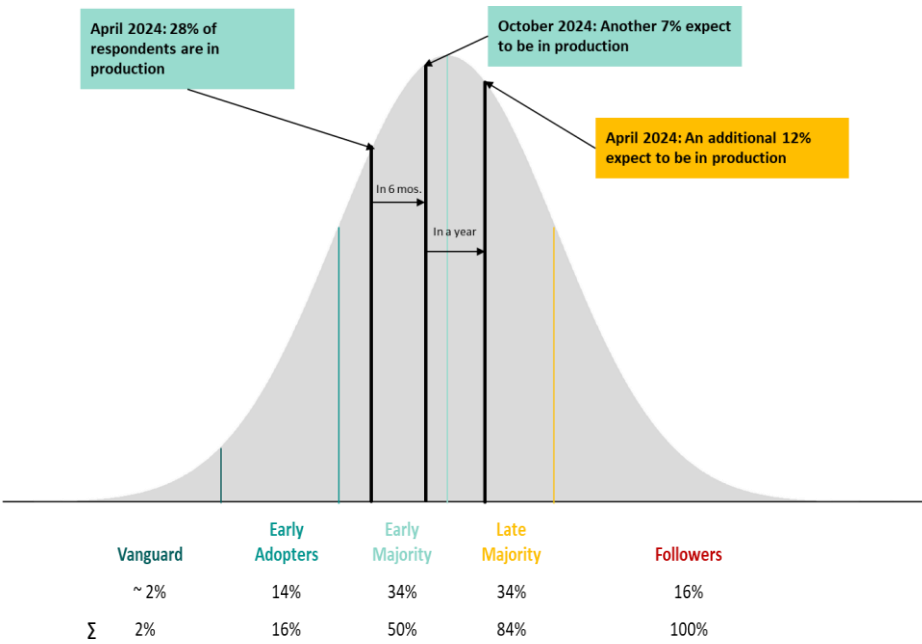
**Employee** — **69%** of respondents have GenAI solutions in production focused on employee use cases.

**Customer** — **19%** of respondents have GenAI solutions in production focused on customer-facing use cases.

**Both** — **12%** of respondents have GenAI solutions in production focused on both employee and customer-facing use cases.

Sources: Celent Insurance GenAI Adoption Survey 2024, research, and interviews.

### Perspectives reflected in adoption and pipeline

**28%** of respondents are **in production.**

**7%** expect to move into production **within 6 months.**

**12%** expect to move into production **within 12 months.**

**47%** are currently **exploring use cases.**

### 28% in production translates into early majority adoption stage

April 2024: 28% of respondents are in production

October 2024: Another 7% expect to be in production

April 2024: An additional 12% expect to be in production

In 6 mos.

In a year

| | Vanguard | Early Adopters | Early Majority | Late Majority | Followers |
|---|---|---|---|---|---|
| | ~ 2% | 14% | 34% | 34% | 16% |
| Σ | 2% | 16% | 50% | 84% | 100% |

# PARTNERING, BUY-IN, AND DATA QUALITY ARE CRITICAL TO EXECUTION

## Technology approach: Partnerships rule

**44%** are working with a solutions provider or consultant that offers GenAI/LLM services (e.g., Google, Microsoft).

**28%** are working with a hyperscaler and/or directly with a GenAI developer (e.g., AWS, OpenAI, and Anthropic).

**15%** are leveraging an open source LLM.
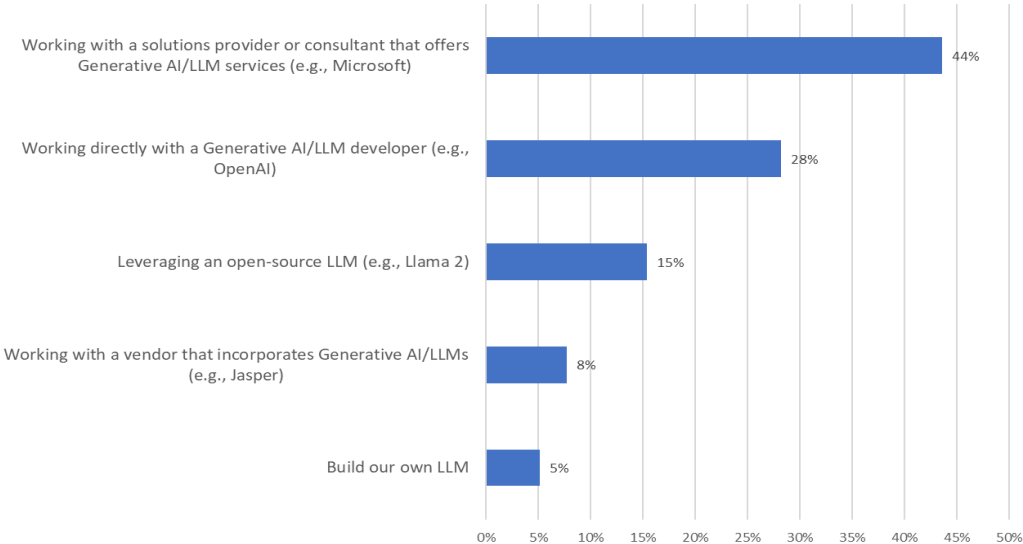
| Category | Value |
|---|---|
| Working with a solutions provider or consultant that offers Generative AI/LLM services (e.g., Microsoft) | 44% |
| Working directly with a Generative AI/LLM developer (e.g., OpenAI) | 28% |
| Leveraging an open-source LLM (e.g., Llama 2) | 15% |
| Working with a vendor that incorporates Generative AI/LLMs (e.g., Jasper) | 8% |
| Build our own LLM | 5% |

## Key success factors vary notably

**Organization buy-in is a strong #1.** However, insurers definitely have differing views on the leading key success factor. The likely reasons are 1) varying organizational comfort levels with innovation and disruption, and 2) different starting points in terms of ability to harness and monetize data.

**Ranked #1**

**25%** Organizational and Operational Buy-In
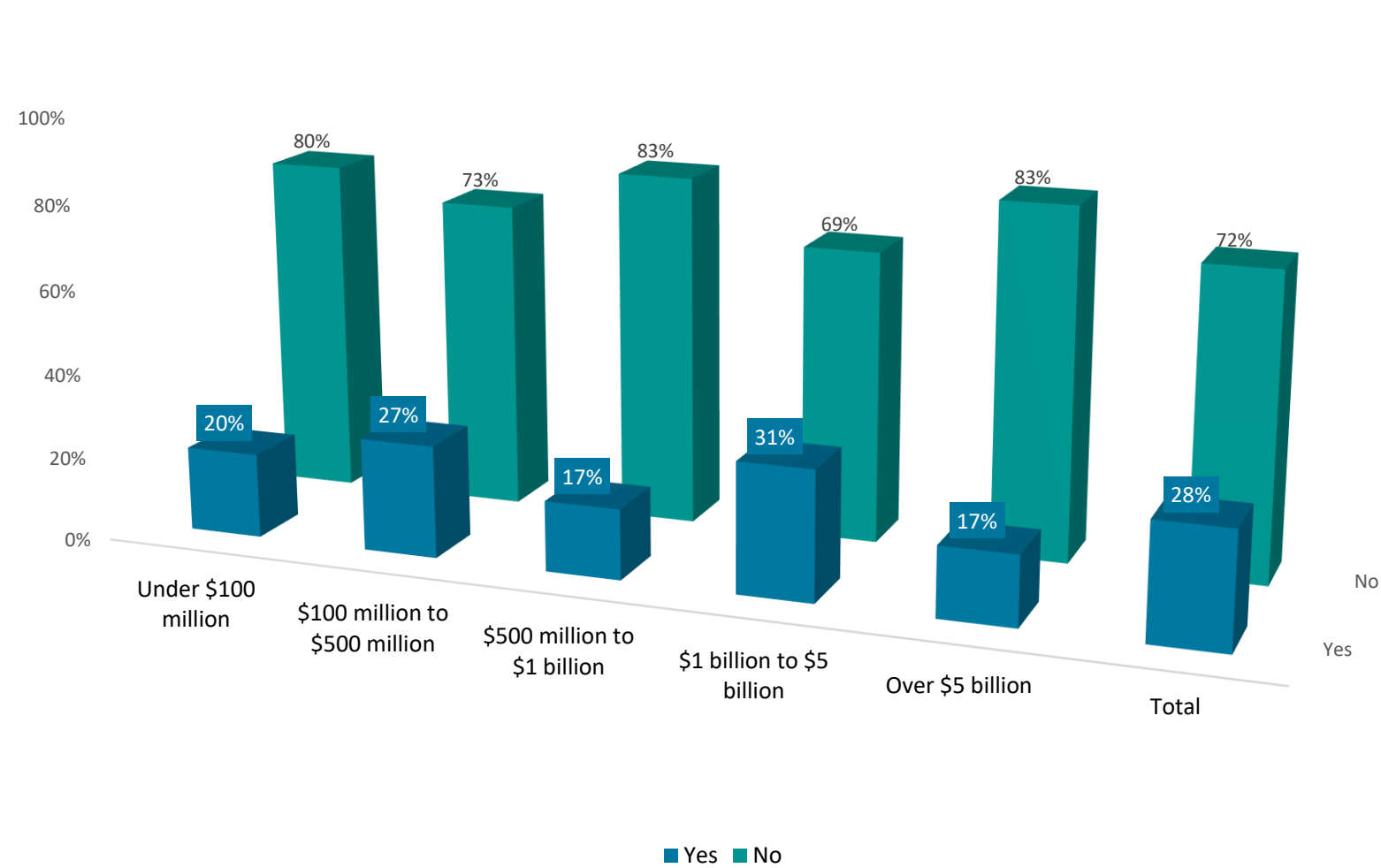
**15%** Improved Data Quality

**11%** Strong Data Governance

Sources: Celent Insurance GenAI Adoption Survey 2024, research, and interviews.

# 28% OF INSURERS INDICATED THEY ARE IN PRODUCTION WITH GENAI



**The majority of insurers are not in production with GenAI**

- 28% of respondents note their organization is in production with GenAI, implying that the technology has not yet been adopted at scale.

- The data suggests that a minority of organizations are in production with GenAI across all tiers.

- A possible hypothesis may be that GenAI adoption is not presently meaningfully linked to insurer IT budget or available resources.
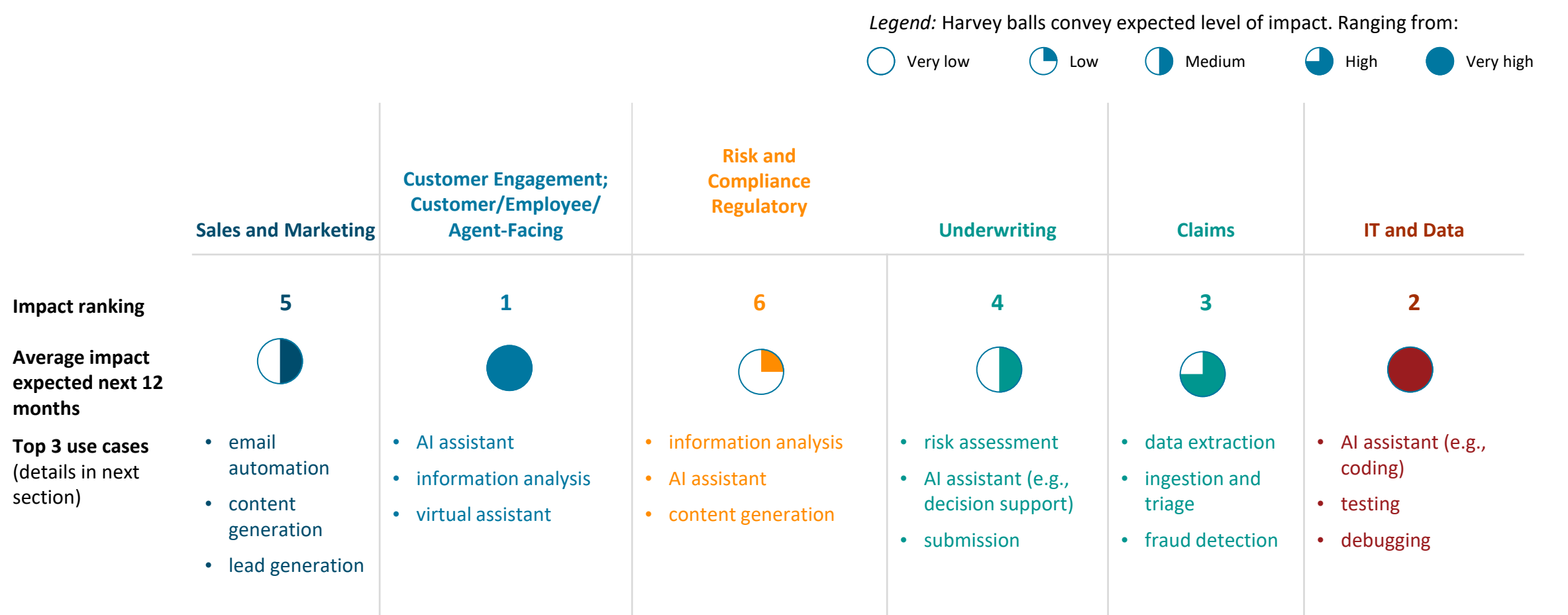
**For those in production with GenAI**

- 69% are for *employee-facing use cases,* 19% are for *customer-facing use cases,* and 12% are for *both.*

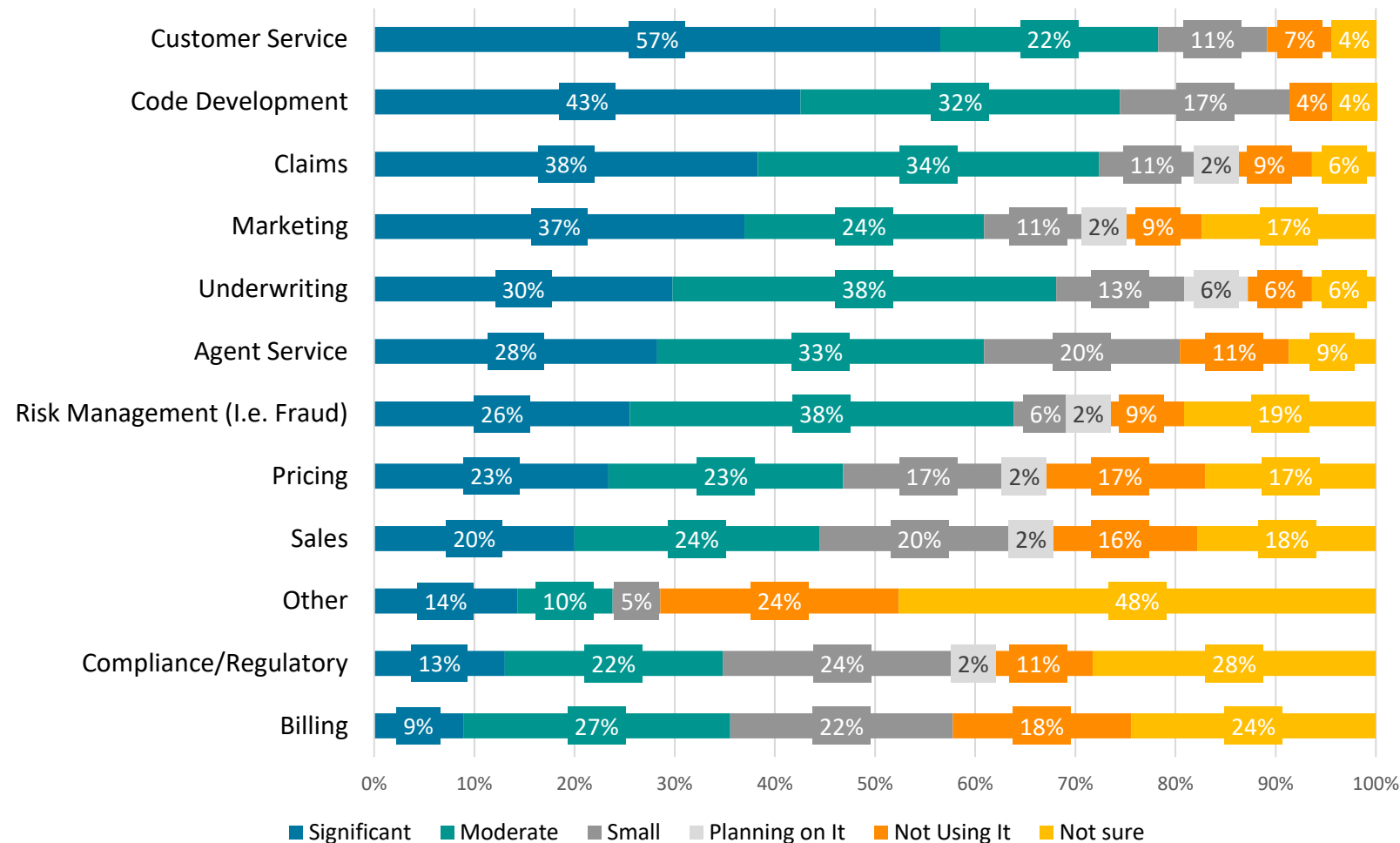- Insurers may feel that there are generally fewer risks in employee-facing use cases.

Sources: Celent Insurance GenAI Adoption Survey 2024, research, and interviews.

# INSURERS EXPECT GENAI TO HAVE MODERATE TO HIGH IMPACT ON AVERAGE ACROSS THE INSURANCE VALUE CHAIN

Across the value chain, insurers expect GenAI will have a moderate impact on average **over the next 12 months**. The impact is expected to be strongest in **Customer/Employee Engagement** and **IT and Data**, which makes sense given that 28% are in production and 45% are in PoC or pilot. The third through fifth rankings are fairly close: Claims, Underwriting, and Sales and Marketing. The top use cases driving expected impact are consistent with insurers' expectations that the strongest performance improvement will be in productivity: CX experience, code development, information analysis, and workflow improvements.
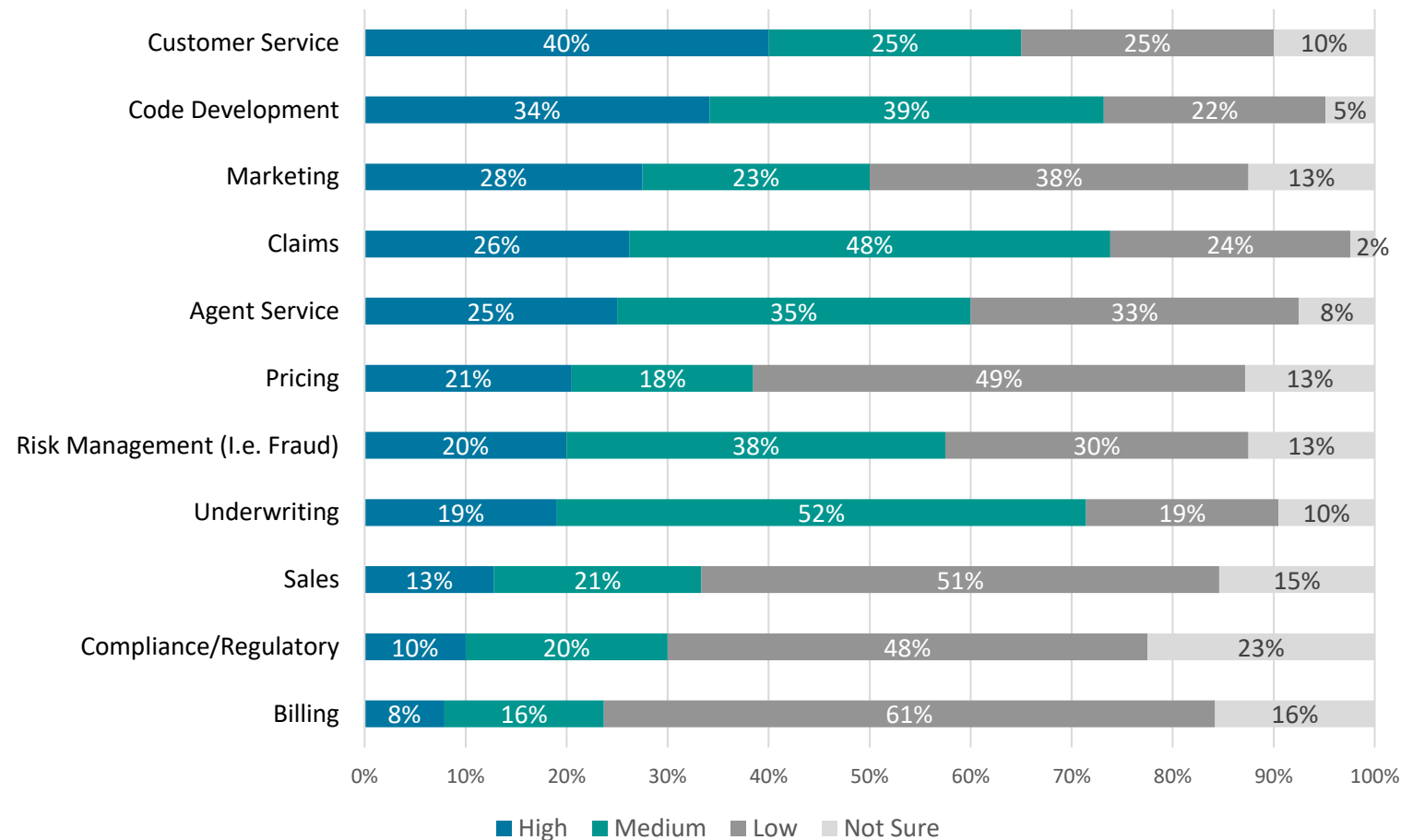
*Legend:* Harvey balls convey expected level of impact. Ranging from:

◯ Very low  ◔ Low  ◑ Medium  ◕ High  ● Very high

| | Sales and Marketing | Customer Engagement; Customer/Employee/ Agent-Facing | Risk and Compliance Regulatory | Underwriting | Claims | IT and Data |
|---|---|---|---|---|---|---|
| **Impact ranking** | 5 | 1 | 6 | 4 | 3 | 2 |
| **Average impact expected next 12 months** | ◑ | ● | ◔ | ◑ | ◔ | ● |
| **Top 3 use cases** (details in next section) | • email automation<br>• content generation<br>• lead generation | • AI assistant<br>• information analysis<br>• virtual assistant | • information analysis<br>• AI assistant<br>• content generation | • risk assessment<br>• AI assistant (e.g., decision support)<br>• submission | • data extraction<br>• ingestion and triage<br>• fraud detection | • AI assistant (e.g., coding)<br>• testing<br>• debugging |

# THE AREAS AND DEGREE TO WHICH INSURERS ARE IMPLEMENTING GENAI VARIES

| Function | Significant | Moderate | Small | Planning on It | Not Using It | Not sure |
|---|---|---|---|---|---|---|
| Customer Service | 57% | 22% | 11% | | 7% | 4% |
| Code Development | 43% | 32% | 17% | | 4% | 4% |
| Claims | 38% | 34% | 11% | 2% | 9% | 6% |
| Marketing | 37% | 24% | 11% | 2% | 9% | 17% |
| Underwriting | 30% | 38% | 13% | 6% | 6% | 6% |
| Agent Service | 28% | 33% | 20% | | 11% | 9% |
| Risk Management (I.e. Fraud) | 26% | 38% | 6% | 2% | 9% | 19% |
| Pricing | 23% | 23% | 17% | 2% | 17% | 17% |
| Sales | 20% | 24% | 20% | 2% | 16% | 18% |
| Other | 14% | 10% | 5% | | 24% | 48% |
| Compliance/Regulatory | 13% | 22% | 24% | 2% | 11% | 28% |
| Billing | 9% | 27% | 22% | | 18% | 24% |

Legend: ■ Significant ■ Moderate ■ Small ▫ Planning on It ■ Not Using It ■ Not sure

- **Varied Adoption Across Functions:** The data indicates a varied degree of AI integration across different functional areas within insurance firms. Customer service and code development lead in AI adoption, with over 75% of respondents indicating significant or moderate usage. This suggests a strategic focus on improving customer interactions and operational efficiencies through GenAI, which are likely seen as areas with immediate ROI.

- **Future Potential and Uncertainties:** The significant percentage of respondents planning or unsure about AI implementation in several areas—like underwriting, agent services, and billing—suggests that while the potential for GenAI is recognized, its full implementation is hampered by factors such as cost, complexity of integration, or lack of clear ROI. This indicates room for growth as technology advances and organizations become more comfortable with its applications.

# INSURERS INDICATE THE MOST IMPACTED AREAS BY GENAI IN THE SHORT TO MEDIUM TERM

**Which areas do you see generative AI having the biggest impact in the next 12 to 24 months?**

| Area | High | Medium | Low | Not Sure |
|------|------|--------|-----|----------|
| Customer Service | 40% | 25% | 25% | 10% |
| Code Development | 34% | 39% | 22% | 5% |
| Marketing | 28% | 23% | 38% | 13% |
| Claims | 26% | 48% | 24% | 2% |
| Agent Service | 25% | 35% | 33% | 8% |
| Pricing | 21% | 18% | 49% | 13% |
| Risk Management (I.e. Fraud) | 20% | 38% | 30% | 13% |
| Underwriting | 19% | 52% | 19% | 10% |
| Sales | 13% | 21% | 51% | 15% |
| Compliance/Regulatory | 10% | 20% | 48% | 23% |
| Billing | 8% | 16% | 61% | 16% |

Legend: ■ High ■ Medium ■ Low ■ Not Sure

- **Customer Service as a Prime Beneficiary:** Customer service is highlighted as the area most anticipated to be impacted by GenAI, with 40% of responses predicting a high impact. This reflects a consensus that AI can significantly enhance customer interactions through automation, personalized communication, and improved response times, which are essential for enhancing customer satisfaction and loyalty.

- **Code Development and Claims Processing:** Code development, claims processing, and underwriting are recognized for substantial AI influence, with strong expectations of medium to high impact (73%, 72%, and 71%, respectively). This suggests that AI is set to further automate tasks, enhance decision-making accuracy, and streamline operations, thus reducing cycle times and improving efficiency in these areas.

- **Risk Management and Fraud Detection:** Risk management, particularly fraud detection, shows a considerable expectation of impact (58% foreseeing medium to high impact). GenAI's ability to analyze vast amounts of data and recognize patterns can greatly assist insurers in identifying fraudulent activities more quickly and accurately, potentially saving significant costs and protecting revenue.

Source: Celent Generative AI use case survey 2024.

# THE TOP SUCCESS FACTOR FOR REALIZING THE BENEFITS OF GENAI IS IMPROVED DATA QUALITY

**Rank the key success factors to realizing the benefits of GenAI** *(1 to 10, with 1 being the highest)*

| Success Factor | Overall (Average) |
|---|---|
| **Improved data quality** | **3.9** |
| **Organizational and operational buy-in** | **4.6** |
| **Strong data governance** | **4.6** |
| **Increased number of data sources** | **4.9** |
| **Regulatory clarity** | **5.5** |
| **Modern database architecture** | **5.7** |
| **Effective deployment platform** | **5.9** |
| **Hire more AI talent** | **6.0** |
| **Increased access to and development of higher-performance compute power** | **7.1** |
| **Improved affordability of higher-performance compute power** | **7.6** |

- **Emphasis on Data Quality:** With the highest average ranking of 3.9, this suggests that insurers are recognizing that without high-quality data, the effectiveness of GenAI-driven decisions and processes is significantly compromised. The importance of clean, accurate, and well-integrated data cannot be overstated, as it underpins all other aspects of successful GenAI deployment.

- **Organizational and Operational Buy-In:** A notable ranking for "Organizational and operational buy-in," with a score of 4.6, reflects a growing awareness within the industry that AI initiatives must be supported by a strong organizational culture that embraces change and innovation. This buy-in is essential for overcoming resistance and ensuring that AI tools are used effectively across the company.

- **Governance and Regulatory Clarity:** "Strong data governance" and "Regulatory clarity" receiving scores of 4.6 and 5.5, respectively, highlights the strategic necessity of establishing clear policies and frameworks for data management and compliance. Effective governance not only supports GenAI efficacy but also aligns with regulatory expectations, mitigating risks associated with data breaches and misuse.

Source: Celent Generative AI use case survey, March 2024.

# GETTING THE MOST OUT OF GENAI REQUIRES BOTTOM-UP AND TOP-DOWN APPROACHES

## DEMOCRATIZE ADOPTION
### DRIVE WIDESCALE USE AND CONTINUOUS DISCOVERY

- More than 40% of your employees already have used generative AI in their work—you need a **secure environment** for them *today*.

- Early adopters will see **massive productivity gains**, even if the general employee population is skeptical.

- Immersion is critical to building widespread excitement and engagement across the entire organization and unleashing their creativity—leading to **productive adoption**.

- The end goal is to build an organizational competency around continuous improvement and **unlock the power of the full enterprise**.

## BUILD MOMENTUM
### FOCUS ON A FEW SPECIFIC, HIGH-VALUE BUILDING BLOCKS

- Many organizations are focused on identifying use cases that will **deliver value for specific functions** or business processes.

- The top use cases often end up ensnaring wide swaths of the organization and demand complex change management and excessive governance, which **stalls progress**.

- The key is to work on discrete parts of a process that require **one or two skills** that eventually will ladder into a wider use case.

- Businesses can then demonstrate **rapid progress** and realize early benefits, since skills are relevant to many use cases.

*You need to get enterprise GenAI in the hands of as many people as soon as possible.*

*You need a concerted effort to tackle company-specific opportunities.*

Source: Celent GenAI Symposium 2024.

# COMPANIES MUST THINK ABOUT GENAI AS A KEY CAPABILITY, WITH A DEDICATED GROUP TO DEVELOP IT

## Key Elements of GenAI Capability

**Mission Statement**

**Framework, Policy, and Risk Management**

**Technical Implementation Management**

**Organizational Readiness**

Strategic Ambition and Scope

GenAI Framework, Legal and Compliance Policies

GenAI Risk Management

GenAI Technology & Architecture

Data Management

GenAI Reporting & Monitoring

GenAI Vendor Management

GenAI Change Management

GenAI Innovation & Research

## Example Responsibilities and Requirements

- Define ambition around GenAI and link to wider strategy.
- Define criteria for investment and measures of success.
- Outline program structure (people, process) and define technology requirements and investment appetite.

- Create policies and structures on where, when, and to what extent GenAI solutions should be used (and when they should not).
- Define framework to be used when assessing risk as new use cases are identified, then guide/provide mitigation approaches.
- Facilitate process to approve use cases beyond POC.
- Establish dedicated GenAI-focused team.

- Stand up GenAI architecture and platform within business (whether internally built or through innovation partner).
- Evaluate unstructured data stores and enrich as needed.
- Monitor and report on usage across the organization.
- Build and manage relationships with innovative third parties.

- Build and deliver training programs on GenAI to all employees and incorporate into the onboarding process.
- Implement engagement program to generate excitement and encourage use.
- Define process to capture and act on grassroots ideas.
- Monitor the market to identify opportunities and new skills.

© CELENT    Source: Celent GenAI Symposium 2024.

# CONCLUSION

# CONCLUSION: GENAI COULD ACCELERATE AND FORTIFY COMPETITIVE ADVANTAGE

Historically, insurers have succeeded at realizing incremental change by leveraging proven technology. While cumulatively valuable for customers and employees, incremental change yields short-lived competitive advantage.

GenAI is opening the door for insurers to achieve step change and even game-changing differentiation. Initially, differentiation will likely be "behind the scenes" in employee-facing use cases. GenAI is already proving it can reduce operating costs and improve productivity efficiency, which frees up resources to focus more on value-adding activities and innovation. In addition, Celent anticipates that GenAI will help insurers accelerate to the cloud and modernize their data infrastructure, enabling them to become more data-driven and make faster, smarter decisions.

Eventually, as GenAI risks are mitigated and accuracy improved, it will drive powerful customer-facing use cases. Moreover, GenAI could enable insurers to develop completely new revenue sources.

**Competitive Advantage**

High and sustainable

**Game-changing**
- Leveraging emerging technology to generate new disruptive business models
- Informed by inventing on behalf of customers and employees
- Examples include AI agents for individual agents and brokers that help them personalize customer interactions and responses and customer-specific AI assistants

Moderate, two years+

**Step Change**
- Leveraging proven and emerging technology to transform processes, customer journeys
- Informed by customer discovery and internal inventing on behalf of the customer as well as employees
- Examples include GenAI used in code development, GenAI-driven improvements in IVAs and call center operations, and AI assistants supporting marketing and sales

Low, short-run

**Incremental**
- Leveraging proven technology to fix what's broken, e.g., solve common pain/friction points
- Informed by customer discovery
- Examples include enhancements to chatbots for customer servicing

Incremental —— Step Change —— Game-changing
**Level of Change**

# CELENT'S GENERATIVE AI RESEARCH IN INSURANCE IS EXTENSIVE
## KEEPING PACE WITH ADVANCES AND OPPORTUNITIES

**Celent's GenAI Report Series**

**Life Insurance Focused**

**P&C and Life Focused**

**P&C Insurance Focused**



**In addition to our ongoing report series, we have in-depth coverage of the rapid progression of GenAI:**

*GPT-4 and Other News: Tomorrow Is Today*

*ChatGPT and Other Large Language Models: What Non-techies Need to Know*

*Generative AI and Large Language Models: A Snap Poll for the Celent Executive Panel*

*Should I Build My Own ChatGPT?*

*A Guide to Determining Best Fit LLMs*

*Beyond Human Intelligence: Unleashing The Power of LLMs in Life Ins*

*Responsible Innovation: The Implications of AI and Regulation*

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*HSBC AI Global Tactical Index*

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Sept 4, 2025!

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