Quick Answer: What Role Does Generative AI Have in the Insurance Industry?

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Although there is hype around ChatGPT, it is only one solution among the larger scope of generative AI opportunities. This research shows where the insurance industry can leverage GenAI's unique capabilities, multiple use cases and great long-term value appropriately in both life and P&C insurance.

Quick Answer

What role does generative AI have in the insurance industry?

- **Unique capabilities:** GenAI offers insurers capabilities the industry and existing toolset have been lacking. These include the ability to summarize and generate content, build conversational interfaces for both customers and employees/agents, create personalized content, and write code.
- **Use cases:** GenAI can be applied for tasks across the entire value chain, such as supporting: (1) customer/consumer engagement; (2) customer-facing employees/agents; (3) operations and internal employee roles; and (4) product/service enhancement.
- **Long-term opportunities and risks:** GenAI will be applied to drive digitalization around underwriting decisioning, customer experience and agent empowerment. While there are many risks associated with the use of GenAI across the insurance value chain, such as hallucinations and loss of IP, the benefits outweigh the risks..

More Detail

AI adoption is quickly approaching mainstream in the insurance industry. According to Gartner's 2022 Data and Analytics for Digital Transformation Survey, approximately 43% of insurers are using AI today, and an additional 19% plan to deploy AI within 12 months. [1]

Adoption is likely going to be accelerated beyond this, with the recent launch and entry of ChatGPT in 2023. Excitement and use of AI is increasing in both life and P&C insurance as well (see Quick Answer: What Should Insurers Know About ChatGPT?).

Although ChatGPT is important in the industry, it is a single solution within the wide category of generative AI. ChatGPT is small in value compared to the potential transformational power and scope of generative AI. Generative AI has the promise of driving transformation across the value chain through the use of large language models (LLMs) and analysis of unstructured content, which is currently underutilized.

Generative AI refers to AI techniques that learn a representation of artifacts from the data and use it to generate brand new, completely original artifacts that preserve a likeness to original data. Generative AI can produce totally novel media content (including text, image, video and audio), synthetic data and models of physical objects.

Unique GenAI Capabilities for Insurance

Generative AI expands the output of AI systems to include high-value artifacts such as video, narrative, software code, synthetic data through to designs and schematics. Generative AI is much more than a single or even list of technologies (e.g., ChatGPT) and is more than even LLM, which is what is getting the most attention today. Generative AI can create original media content, synthetic data and models of physical objects to provide breakthrough innovation opportunities. Generative AI has greater power in helping the insurance industry meet business objectives in the long term, especially around:

- Building conversational user interfaces to support internal, agent and customers
- Improving data science
- Summarizing content (especially those in large policies or documents)
- Supporting knowledge workers such as underwriters or claims professionals

Using LLM is one way, but the GenAI capabilities for synthetic data and analysis of images and other types of media will help support industry processes throughout the value chain. The use of generative AI over the long term will help transform the insurance value chain, including customer self-service, data science, claims, underwriting and internal operations (IT and product filings/compliance).

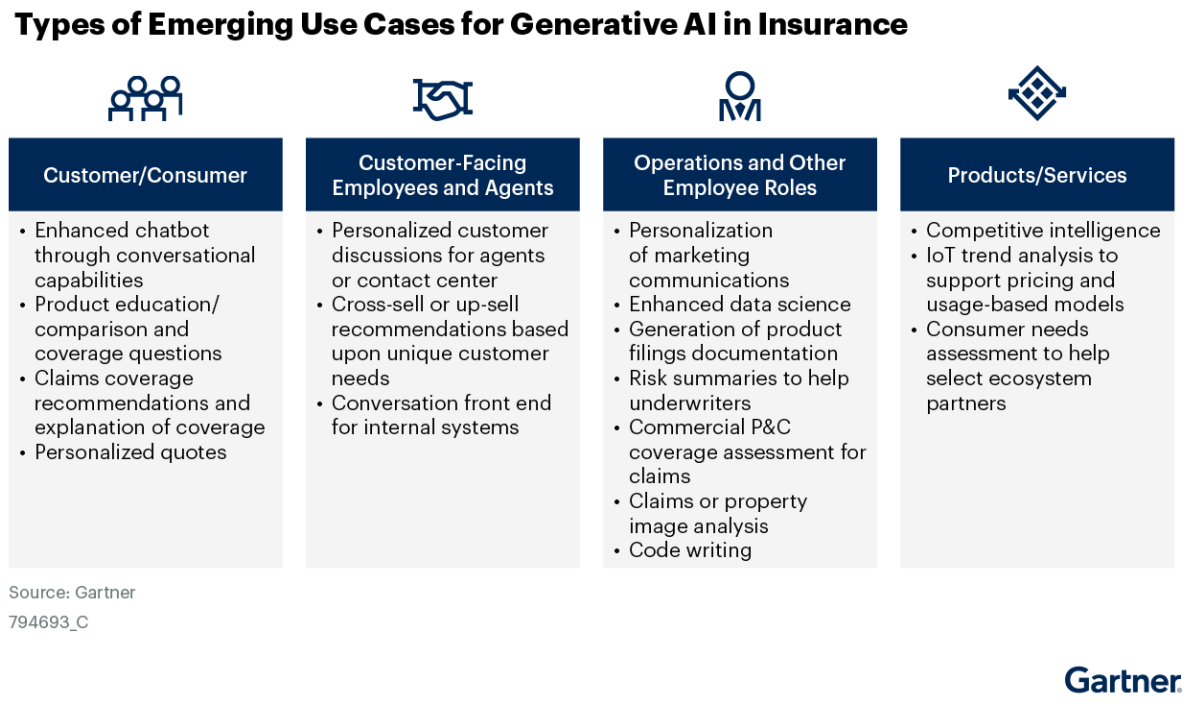
Types of GenAI Use-Case Categories for Insurance

Figure 1 shows the top four use-case categories for how generative AI can be applied by P&C and life insurance companies:

- Customer/consumer engagement
- Customer-facing employees/agents
- Operations and other employee roles
- Product/service enhancement

This list is not comprehensive, but shows examples of how generative AI can be applied by P&C and life insurance companies.

Figure 1: Types of Emerging Use Cases for Generative AI in Insurance



Solutions have been evolving over the last few years. Vendors, such as those in the intelligence document processing (IDP) market, are embedding LLM and some generative capabilities into solutions, as well video analysis using generative capabilities to analyze car image pictures for estimation predictions. GenAI also has use in horizontal solutions around summarizing and composing emails or analyzing content, but has many insurance-specific uses that are being developed more recently, especially as insurtechs offer new solutions targeted at unique industry needs. However, announcements of ChatGPT and new solutions such as OpenAI have made this more known among insurance technology buyers.

In most use-case categories, generative AI has the potential to significantly enhance, automate and transform insurance processes, such as:

- **Knowledge worker decisioning,** such as underwriting or claims, by creating summary reports that can be analyzed to help with decision quality, productivity and efficiency outcomes
- **Enabling panoptic-personalization** (see Panoptic Personalization: An Insurance Trend for 2022), where customer data is analyzed using natural language and then interacted with in conversational terms to drive revenue and customer satisfaction and reduce churn
- **Improving data science/analytics** using unstructured content, including video and images, for tasks such as underwriting risk selection or claims estimation of loss calculations
- **Generating content,** even for difficult operational roles such as rate filings or product approvals, as well as the ability to create synthetic data
- **Enhancing document processing and ingestion** capabilities through the addition of content summarization to help with document intelligence and understanding
- **Summarizing content,** including summary of “my policy” for policyholders or competitive intelligence for marketing (e.g., What products are my competitors offering?)
- **Improving self-service** through improved chatbot and conversational AI capabilities, as natural language and conversational interfaces are used to better understand and deliver personalized discussions with customers

These use cases generally involve competitive intelligence, Internet of Things (IoT) trend analysis to support pricing and usage-based models, and consumer needs assessments that can help identify the most likely ecosystem partners.

Long-Term GenAI Opportunities and Risks

As use cases continue to emerge, insurers must know the long-term risks and opportunities of generative AI for each use-case category, as well as the overall technical and compliance risks that these technologies introduce. Today, use-case categories are more "human in the loop," where generative AI is used to help with decisioning and then a human validates the output. To support the use of generative AI, insurers must focus on how to manage risks associated with consumer trust, and security around black box models must be governed (see Executive Pulse: AI Investment Gets a Boost From ChatGPT Hype). Table 1 shows the opportunities, along with risks, associated with generative AI across the four top use cases.

Table 1: Opportunities and Risks Associated With Each Type of GenAI Use-Case Category

(Enlarged table in Appendix)

Use-Case Categories	Opportunities	Risks
Customer/Consumer Engagement	■ Improved usability of customer service chatbots ■ Improved online sales closure (even for complex lines as GenAI can summarize in layman terms)	■ Inaccurate or outdated information shared directly to customers ■ Lack of empathy ■ Biases that may be communicated in the response
Customer-Facing Employees/Agents	■ Improved sales for agents ■ Improved customer satisfaction through human-based channels ■ Improved cross-sell and upsell rates	■ Incorrect information being shared, which may hurt the trust of the agent ■ Lack of holistic customer data to provide accurate needs analysis ■ Lack of integration into sales systems, which may complicate process
Operations/Other Employee Roles	■ Productivity enhancements ■ Faster processing for core insurance tasks such as claims ■ Decision accuracy improvements (e.g., underwriting profitability) ■ Improved predictions (e.g., catastrophe response needs or risk)	■ Too simplistic an answer (answers are normally shortened & summarized) ■ Over-reliance on the summary without interpretation or validation
Product/Service Enhancement	■ Improved market awareness, which helps product differentiation ■ New product introduction based on new risk variables ■ Business model transformation, including ecosystem development	■ Limited data, especially for subject matter experts (SMEs) ■ IP preservation/protection

Source: Gartner

While risks exist, generative AI has high potential through its range of capabilities to help improve and transform the industry. It is critical that insurers begin experimenting with adding generative AI to their AI environment.

Recommendations:

- Assess the business impact (benefits/risks) of generative AI to an insurance company by understanding the use cases described in this research.
- Work with various stakeholders (e.g., marketing, operations and customer service) to evaluate generative AI use cases, identify opportunities and threats, and assess the technology feasibility, organizational readiness, and external factors for adoption or mitigation.

- Inventory key insurance value change software vendors, such as new business, marketing, underwriting, fraud analysis, claims administration) and work with them to determine if and how generative AI will become an embedded feature of their offering.
- Work with your security and risk management leaders to proactively build a risk mitigation, control, and governance framework for the use of generative AI.
- Engage with data and analytics leaders to identify ways to incorporate generative AI into your data strategy.
- Build strength in data science to help guide business and data partners in determining generative AI compliance issues, governance needs, and use cases.

Recommended by the Authors

Innovation Insight for Generative AI

Board Brief on Generative AI

Evidence

[1] **2022 Gartner Data and Analytics for Digital Transformation Survey:** This survey sought to provide industry-level insight, and to find out how organizations use data and analytics and how they relate to digital success. The research was conducted online from 2 September through 13 October 2022. In total, 311 respondents were interviewed across six industries — banking, insurance, healthcare, manufacturing, telecom and transportation. Respondents were required to be primary decision makers or have a high level of influence on their organizations' or business units' data and analytics investments. Disclaimer: The results of this survey do not represent global findings or the market as a whole, but reflect the sentiments of the respondents and companies surveyed.

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