

INSURANCE

# Generative AI in Insurance: A Game-Changer



Ever since Generative AI captured the collective imagination of the world upon the arrival of ChatGPT4 in November 2022, several industry verticals have constantly experimented with its prowess to simplify things in their respective workplaces. This AI-led application launched by Open AI, a US-based artificial intelligence research laboratory, surprised the world with its capability of generating text, images, and other forms of media using generative models. Models that learn the patterns and structure of their input training data and then generate new data with similar characteristics. When Microsoft pumped \$10 billion into this initiative, the focus became sharper, and experiments grew broader with more and more industries investing time and effort to develop use cases.

Generative AI is a type of deep learning that uses two competing neural networks to produce refined data based on the input. It analyzes patterns within the data to generate output that resembles the input, but differs from traditional AI because it can generate complex and unique results that are not limited by the constraints of pre-existing data and does not rely on predefined rules. According to [McKinsey](#), Generative AI has the potential to unlock 35 to 70% more economic value than AI deployments, besides bringing 15 to 40% of new use cases compared to traditional AI applications. Not surprisingly, the generative AI market is predicted to double every two years, reaching \$200 billion by 2032, according to [Deloitte](#).

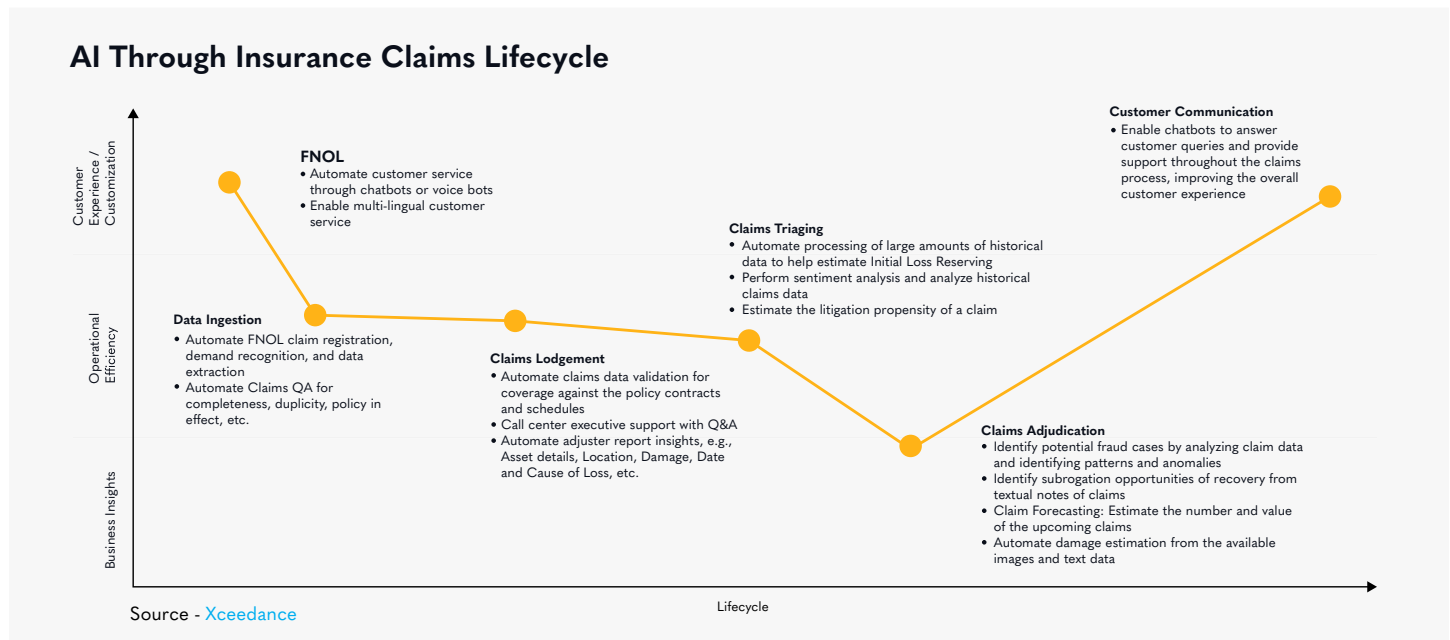
So, where does the insurance industry stand on generative AI and its impact on daily operations across the value chain? AI has the potential to revolutionize the industry, which has traditionally used legacy systems and manual processing across its entire value chain. The industry has relied on human-centric manual methods of underwriting, claims processing, and customer service. As the pace of digital transformation grows in the insurance industry, there is an acceptance of the demands of a digital age in terms of accuracy, quality of data, and quick turnaround across the entire industry workflows. Generative AI presents an opportunity for the industry to address the challenges around data-driven decision-making, customer engagement, and operational optimization.



# The Shift from AI to Generative AI in Insurance

In recent times, there have been multiple use cases of artificial intelligence being used in the insurance industry across the entire value chain. For example, we have instances of banks simplifying the processes for their insurance partners using customer data and micro-segmentation or an insurer embedding digital tools such as AI-based audio and video illustrations to help agent activities vis-à-vis their customers. However, with the arrival of large language models (LLM) and generative AI following the ChatGPT launch in November 2022, the number of use cases are growing (See charts). In fact, a [McKinsey](#) report says generative AI will enhance productivity and generate \$2.6 trillion to \$4.4 trillion annually.

## Use Cases Across the Claims Lifecycle



## Operational Efficiencies

Generative AI can considerably enhance the operational efficiencies of the entire claims process, starting with automated claims registration, demand recognition, and details extraction. Insurers can automate the extraction of critical information from claim forms and documents through generative AI tools. This considerably reduces manual efforts by extracting information around policy numbers, and policyholder and claim amounts directly from email body copy and attachments. The process of quality analysis of data and documents gets automated, while claims validation becomes more accurate when parsed against policy contracts and schedules to check for coverage. Moreover, large volumes of historical data could be processed in seconds to help with Initial Loss Reserving estimations.

## Customer Experience

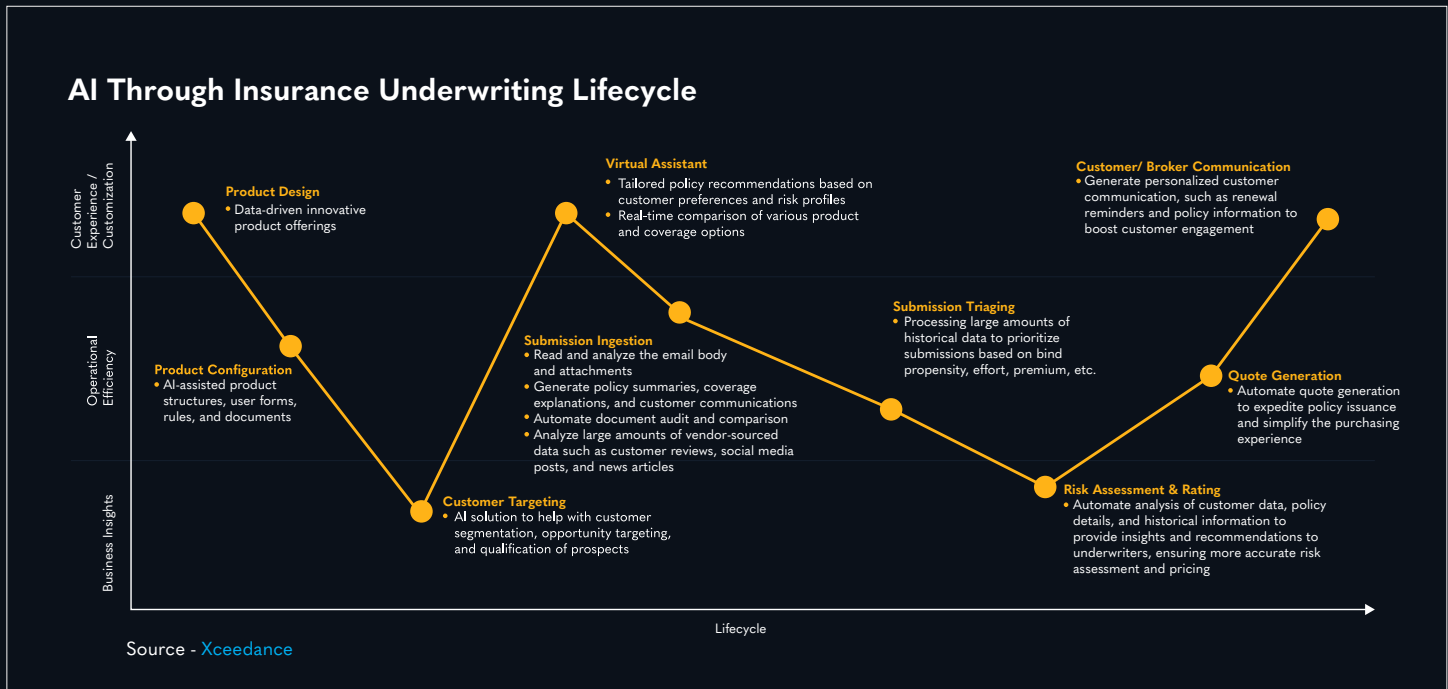
From the point of view of better customer engagement and service quality, Generative AI-led chatbots and voice bots could enable multilingual customer service. In addition, it can support call-center executives with ready reference material that considerably reduces customer interaction time while enhancing its quality.

## Business Insights

Finally, automation of the claims adjudication process could assist in fraud identification processes by analyzing claim data and identifying patterns and anomalies. Insurers can analyze claim descriptions, policy details, and evidence of patterns that identify high-risk or suspicious claims.



## Use Cases Across the Underwriting Lifecycle



### Operational Efficiencies

Generative AI can help create better product structures, automate user forms and generate document builder rules. For example, insurers can automate repetitive tasks such as term policy comparison that takes extensive human effort. Generative AI models can do side-by-side data comparisons, highlighting similar and dissimilar fields. From the point of view of claims submission, it can generate policy summaries, coverage explanations, and review documents and comparisons. In addition, processing large volumes of historical data in a jiffy could help prioritize submissions based on bind, propensity, effort, and premium, thus resulting in an automated quote generation process that potentially speeds up policy issuance and enhances the purchasing experience.

### Customer Experience

Generative AI could build data-driven product offerings based on the data that the customer shares around their unique requirements that are augmented by real-time comparison options. On the front end, there could be virtual assistants constantly engaging in live interactions with customers to guide them through various policy queries across the lifecycle while simultaneously generating personalized communications around policy explanations and renewal reminders.

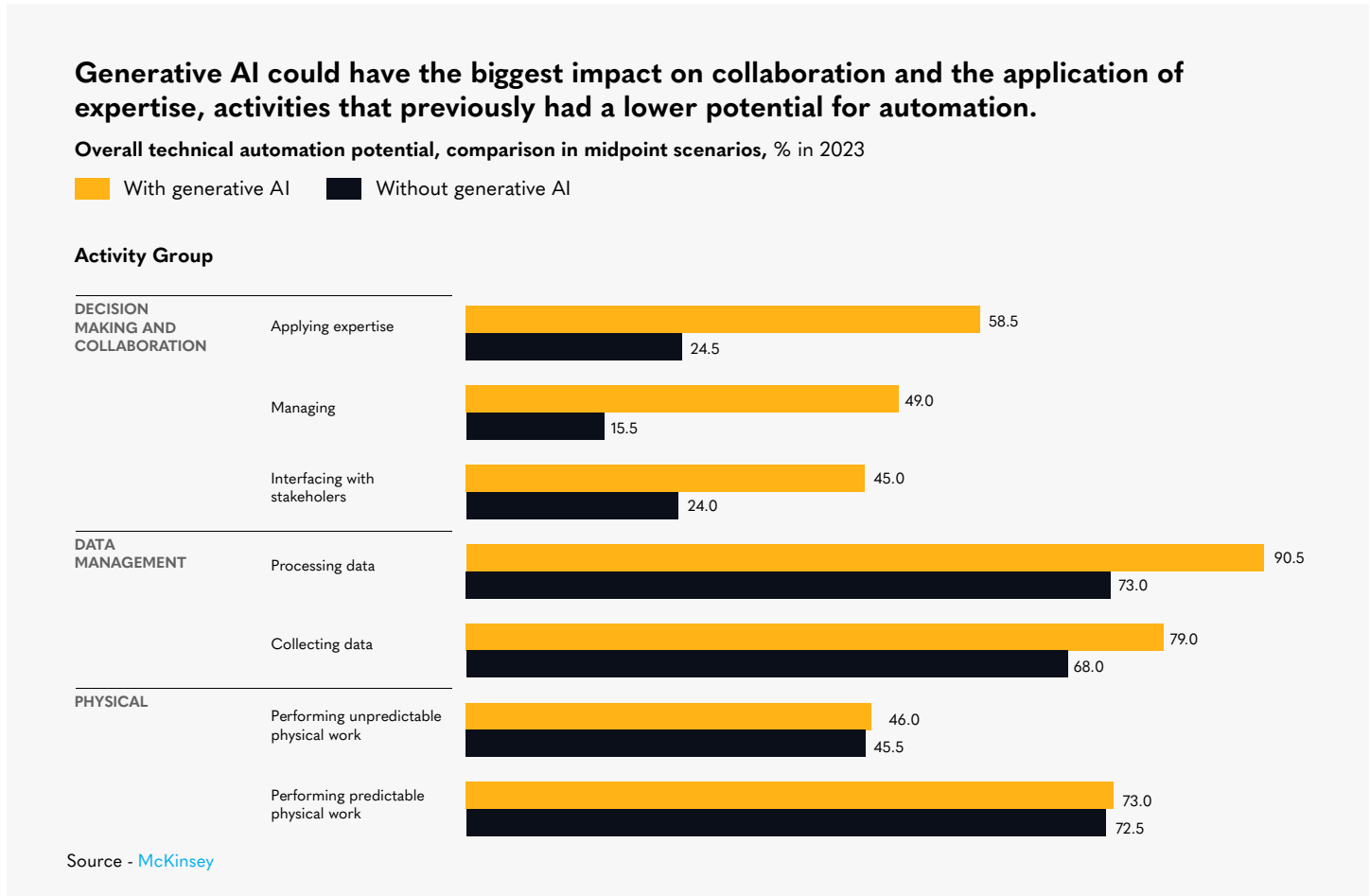
### Business Insights

Having supported data acquisition and storage, generative AI could also create customer segmentation that can enhance opportunity targeting and qualification of prospects. Insurers would have quick access to a broader range of factors such as historical data, customer data, market trends, and demographics to enhance accuracy in premium calculations. These inputs provide valuable information to the underwriters, guiding them toward better risk assessments and sharper pricing.

These examples clearly indicate that generative AI is at the forefront of the insurance industry's digital transformation process, right from micro-personalization of customer journeys to offering a seamless customer experience through a mix of automation and intuitive data collection. Insurers can use Generative AI to identify patterns in customer behavior, anticipate customer needs, and develop strategies to reduce risk. Leveraging machine learning algorithms provides predictive analytics for forecasting future trends and estimating demand. Additionally, it speeds up report generation while limiting costs associated with paperwork and manual processes.

# Bridging the Gap: Human and AI Collaboration

Human expertise remains invaluable in insurance operations. AI is efficiently handling data-intensive tasks and offering valuable insights for human judgement. However, empathy and creativity are critical traits for insurers that AI can't replace. It gives humans the essential information for complex decision-making and personalized customer interactions. According to [McKinsey](#), Generative AI has the potential to automate 34% more functions that require human expertise.



An example of collaborative decision-making could be assessing liability in motor vehicle claims. AI-based systems can quickly analyze and interpret the data points associated with a collision. However, human input is still necessary to properly evaluate the context of the incident. It includes assessing whether a driver was behaving dangerously or if any mitigating circumstances that could impact the liability. By leveraging the strengths of both human and AI agents, insurance companies can make better decisions faster while avoiding the pitfalls of over-reliance on either side. Insurers can therefore harness AI-backed tools to generate insights and make informed strategic decisions. These tools can help identify market trends, comprehend customer behavior, and study their preferences by analyzing historical and real-time data. It enables insurers to respond to emerging risks proactively.

## Immediate Challenges to Driving Generative AI

The first challenge that insurers need to be aware of before taking the generative AI plunge is to address the core problem related to data, particularly across legacy systems. The quality of data is paramount and implementing solutions that remove the human element towards reducing errors is the point that has been taken on board by most insurers across the world. The digital transformation exercise that's taken roots in the industry is already making a difference to data quality and consistency across the entire value chain.

A second challenge relates to ethical issues, which we have discussed separately below. However, a related issue was brought about by a recent survey that found mention in an article published on the [Insurance Business Mag](#). The article titled "Are Insurance Customers Ready for Generative AI" quoted the survey to suggest that customers weren't too excited to encounter ChatGPT in their insurance journey, with nearly three in five (59%) saying they tend to distrust or fully distrust generative AI. What's more, despite the fact that the latest innovation could improve the customer experience, close to 70% of the respondents said they would still prefer to interact with a human.

## Addressing Ethical and Regulatory Concerns

The increased efficiency and cost savings associated with Generative AI have made it an attractive proposition for insurance companies. However, beyond these benefits, several potential ethical and regulatory issues must be addressed. Insurers must ensure that the data used for training AI models is representative and unbiased. It is vital to prevent the impact of bias like demographics or socio-economic classes on AI-generated results. Maintaining transparency is critical to make the decision-making process explainable. It helps build trust with customers and regulators. Data privacy and security are the biggest concerns for insurance companies. Any data used by their AI models must be adequately protected and not exposed to unauthorized access. Insurance companies must adhere to stringent data protection measures to prevent misuse of sensitive customer information.

A major challenge for insurance companies is they must comply with region-specific regulations related to privacy, data protection, and ethical considerations. For example, in the US, the Health Insurance Portability and Accountability Act ([HIPAA](#)) and the Gramm-Leach Bliley Financial Services Modernization Act ([GLBA](#)) set forth legal requirements. Whereas in Europe, the General Data Protection Regulation ([GDPR](#)) outlines data protection and security standards. Using Generative AI technology can raise ethical considerations for insurers. They must share information about how AI-driven automation systems access, store, and use private customer data.



# Best Practices for Generative AI Adoption in Insurance Industry

AI can provide a level of personalized service to customers that many insurers struggle to match. It also adds a level of complexity to insurance processes. Insurers need to understand the following best practices for incorporating Generative AI:

## Understand Business Needs

Insurers must define their goals and objectives for the adoption of technology. It requires understanding the data available and how it can improve customer experience, operations, product development, and sales. It will allow them to measure the success of their AI investment.

## Utilize Existing Resources

Insurance companies can implement Generative AI from scratch or in phases based on their goals. However, it is essential to leverage their existing resources as well. Reviewing existing data points allows customized training of AI algorithms for the insurer's business needs. Open-source AI libraries and APIs can be integrated for improved data analysis instead of reinventing the wheel. It helps shorten the development process and keeps costs under control.

## Prioritize Security and Governance

The insurance industry is heavily regulated, so it is essential to prioritize security and governance before incorporating AI into business operations. Organizations should have stringent policies in place to ensure data privacy, compliance with regulations, and risk management. Some of the best practices to ensure AI governance are conducting regular monitoring and testing, keeping transparency of data with all stakeholders, and ensuring a human review of outputs produced by AI models.

## Manage Expectations

Setting realistic expectations across the organization when adopting Generative AI is important. They must be prepared for a period of trial and error while the system is being rolled out. It is also important to understand that, like all other technologies, even Generative AI may not always be 100% accurate. Therefore, manual intervention may be required throughout the deployment process.

## Upskill the Workforce

The introduction of new technology increases the need for training the workforce. It is essential to have a team dedicated to developing, maintaining, and monitoring Generative AI models. These individuals should be insurance industry experts with knowledge of AI so that they can troubleshoot potential issues.

## Focus on Continuous Improvement

The ever-changing insurance landscape requires continuous improvement in technological practices so that they can be used to their full potential. Companies should regularly review their practices and measure results against objectives, adjusting as necessary. Additionally, staff should be encouraged to identify areas where processes and technologies can be automated to maximize efficiency.

Adopting these best practices ensures a smooth transition for incorporating Generative AI into business operations.





# Harnessing the Full Potential of Generative AI

The implementation of Generative AI in the insurance industry requires careful planning, strategic thinking, and resilient technological infrastructure. Insurers must overcome several challenges to unlock the full potential of this disruptive technology. A few are presented in this chart:

## Understand Business Needs

Insurers must define their goals and objectives for the adoption of technology. It requires understanding the data available and how it can improve customer experience, operations, product development, and sales. It will allow them to measure the success of their AI investment.

As AI technology evolves, insurers should remain agile to invest in training their employees and building a robust technical infrastructure. Partnering with an industry-specific Digital Adoption Platform (DAP) provider will ensure continuous learning and development to keep pace with advancements. Insurers must build a culture of innovation and foster AI literacy across the organization.



### Limited scope

Highly complex tasks like underwriting and compliance cannot be fully automated right now. It will require the AI model to have a deeper level of understanding and data processing.



### Adoption requirements

Insurers will need to spend time and resources to train their workforce and build trust among customers before delving into technology adoption.



### Data privacy

AI can process large amounts of sensitive customer data, which will create even more concerns around privacy and security. Insurers must ensure that customer information is secure.



### Diversified impact

Generative AI will have varying effects on different types of insurance, given their diverse needs. For instance, P&C insurance could see the highest impact while life insurance may not measure up to those levels.

The next-generation Generative AI tools for insurers will be revolutionary. It is critical for organizations to discover how using them can help in growing their business. According to [McKinsey](#), the focus of insurance companies is likely to shift from 'predict and personalize' to 'engage and share value' by 2025 and 'prescribe and prevent' by 2030. The ability to make informed decisions and create personalized preventive strategies will give insurers a competitive edge. It will also speed up everyday operations like claim processing and fraud detection.







## In Conclusion...

Generative AI represents a paradigm shift in the insurance industry, offering transformative capabilities for insurance companies. It will lead the industry into a new era of innovation and growth, led by automation that delivers a zero-error data collection process and paves the way to top-notch analytics that provide actionable insights to all stakeholders. Optimal use of data from AI models would further enhance efficiencies, and accuracy, resulting in better customer experiences that lead to improved retention and higher lifetime values.

As the generative AI domain evolves and ethical and regulatory standards are created in parallel, the insurance industry could consider leveraging it across a much broader spectrum that drives smarter strategic planning and seamless collaboration with technology providers. Such a move will deliver economic benefits across the entire industry value chain – starting from the customers to the insurer and the multiple levels of associates fulfilling various tasks. Given that customers are willing to share more and more of their personal data, future Generative AI tools can test out models that boost customization beyond its current definition.