



# HARNESSING THE POWER OF AI, TO TRANSFORM LIFE INSURANCE

## Abstract

Rapid advancements in digital technologies are ushering in exciting new opportunities for the life insurance industry more than ever before, motivating insurers to embrace these disruptive technologies for a competitive edge. Artificial Intelligence (AI), and Generative AI (Gen AI) in particular, are transforming the industry and creating value for carriers and the policy holders. This paper explores insurance processing use cases for Gen AI and touches upon the key considerations that insurers need to keep in mind as they embark on this transformative journey.



## Understanding Generative AI

Generative AI is a powerful subset of AI algorithms that analyses data sets to generate original content, such as text, images, videos, and even entire datasets. Its unique ability to produce original content makes it a valuable tool for creative industries and data augmentation. Unlike conventional AI models, which require training on labelled data for specific tasks, Gen AI models can extend even beyond the training data. It is this feature that can help improve efficiencies in various functional areas, create superior customer experiences, and revolutionize the insurance industry.

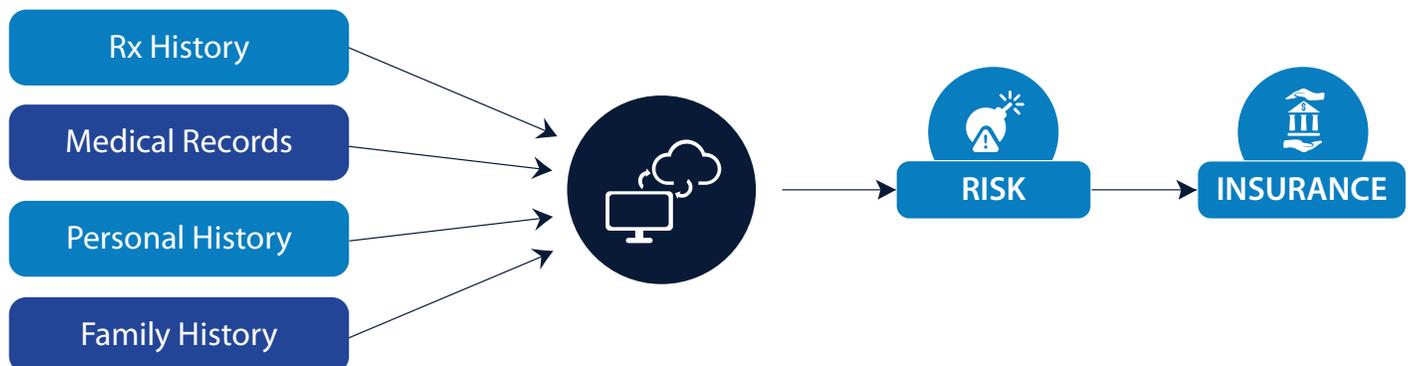
Below are a few functions in the life insurance value chain where AI/Gen AI can make a difference:

### 1. New business and underwriting:

The ability to analyse vast amounts of data in real-time and continuously learn and adapt makes Gen AI a suitable ally for the labour-intensive underwriting process, unleashing efficiency, accuracy, and personalization.

With Gen AI, underwriters can perform comprehensive risk assessments leveraging Rx history, medical records, family history, and sensor data on wellness

from Internet of Things (IoT) devices, besides the data disclosed by applicants. The technology can also access and analyse genetic predispositions, lifestyle habits, and environmental factors, which further improves the accuracy of assessments. Access to such granular and precise risk profile can help insurers make accurate decisions faster and tailor policies and coverage to individual health profiles and incentivize healthy behaviours, and proactively mitigate risks. It also leads to reduced processing times, with quicker policy issuance and thereby better customer experience.



## Generative AI in action- examples

Lapetus is an example of AI solution provider that utilizes facial analysis and biometric data to simplify underwriting. Their flagship product, Chronos, employs machine learning algorithms to analyse selfies and accurately predict an individual's life expectancy within seconds. The innovative product streamlines the underwriting process, reducing the costs and effort associated with recommending appropriate life insurance policies for potential clients.<sup>1</sup>

Additionally, Lapetus also has a suite of life estimation products that provide the insurance and reinsurance industries with fast and accurate life expectancy calculations from simple questions.

Bestow is another digital life insurance platform that leverages AI and advanced analytics to make life insurance products accessible and convenient. The platform's AI-driven underwriting engine, Apollo, instantly assesses risk profiles using various data sources and predictive models. By automating and accelerating the underwriting process, Bestow enhances productivity and enables life insurance providers to offer a seamless digital experience to customers.<sup>2</sup>

The natural language processing (NLP) capabilities of Gen AI can also facilitate seamless communication with applicants, provide clarification on complex terms, and provide guidance through the application process.

### 2. Policy servicing

From customer servicing to claims processing, Gen AI can revolutionize all aspects of policy management. The

most significant impact, however, is the personalization of customer interactions through NLP algorithms.

AI's predictive modelling capability can leverage the vast amounts of readily available customer interaction data to help anticipate customer needs and preferences. It can even forecast potential life events, allowing insurers to cross-sell and up-sell. A case in point are

policyholders nearing retirement age. With the help of AI-driven triggers, customer service representatives can proactively reach out and offer tailored retirement planning solutions and options that match their customer's changing needs.

As the technology continues to evolve, the potential to enhance the overall insurance experience and improve outcomes for policyholders and providers is limitless.

## Generative AI in action

Lemonade uses AI-driven chatbots to handle policy applications, changes, and claims processing. Its AI assistant, Maya, can process policy updates and renewals in real-time, ensuring a seamless customer experience without human intervention.<sup>3</sup>

Customer communication can be generated faster using AI driven template models for different types of service requests and can be fed to the document generator.

### 3. Claims processing

One of the primary ways in which AI enhances claims processing efficiency is through automation. Advanced machine learning algorithms can quickly and

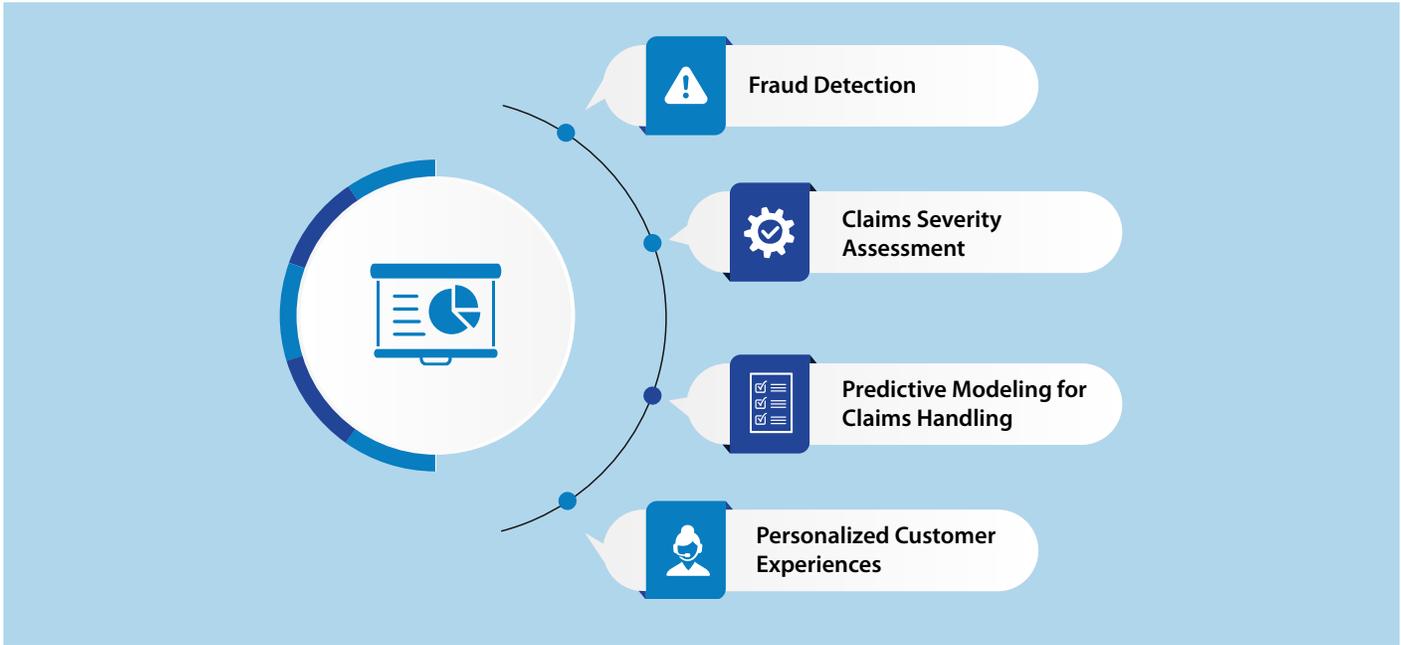
accurately analyse and extract relevant information from various documents, such as medical records and legal documents like death certificates, legal heir documents, and more. The AI

capabilities significantly reduce the time and effort needed to review documents, accelerating claim resolutions and meeting beneficiaries' expectations on faster claims settlement.

<sup>1</sup><https://www.the-digital-insurer.com/dia/lapetus-chronos-technology-the-future-of-life-event-prediction/>

<sup>2</sup><https://www.bestow.com/learningcenter/is-your-life-business-ready-to-adopt-ai>

<sup>3</sup><https://uxreactor.com/lemonade-ai-disrupts-insurance-industry/>



Furthermore, AI-powered predictive analytics are crucial in identifying potentially fraudulent claims. AI algorithms can flag suspicious cases for further investigation by analysing historical data

patterns and detecting anomalies in claim submissions. This proactive approach helps insurers mitigate fraud while ensuring that legitimate claims are processed swiftly. Throughout the claims process, insurers

can engage with claimants through chatbots or virtual assistants, providing instant responses to queries and guiding them through the claims submission process step-by-step.

## Generative AI in action

Sprout.ai focuses on automating insurance claims handling, including life insurance claims. The AI platform uses NLP and optical character recognition (OCR) to interpret and extract crucial information from a variety of claim documents, such as death certificates, medical reports, and police files. By quickly analysing and categorizing claims data, Sprout.ai assists life insurance companies in expediting claim settlements, reducing manual effort, and improving overall productivity.<sup>4</sup>

MetLife Japan announced the adoption of AI solution “Force” for fraudulent claim detection, and is expected to see significantly reduced operational expenses and improved outcomes.<sup>5</sup>

Allstate employs AI-based systems to monitor and analyze claims for signs of fraud. Its AI system can cross reference claims data with historical data to identify inconsistencies, allowing its fraud detection team to investigate and prevent fraudulent claims more effectively.<sup>6</sup>

Undoubtedly, AI delivers a notable improvement in claims processing for the

life insurance industry as it helps streamline workflows, enhance fraud detection, and

deliver faster, more responsive service to policyholders.

<sup>4</sup><https://sprout.ai/>

<sup>5</sup><https://emerj.com/ai-sector-overviews/artificial-intelligence-at-metlife/#:~:text=In%20an%20interview%20with%20The,average%20call%20time%20to%20half>

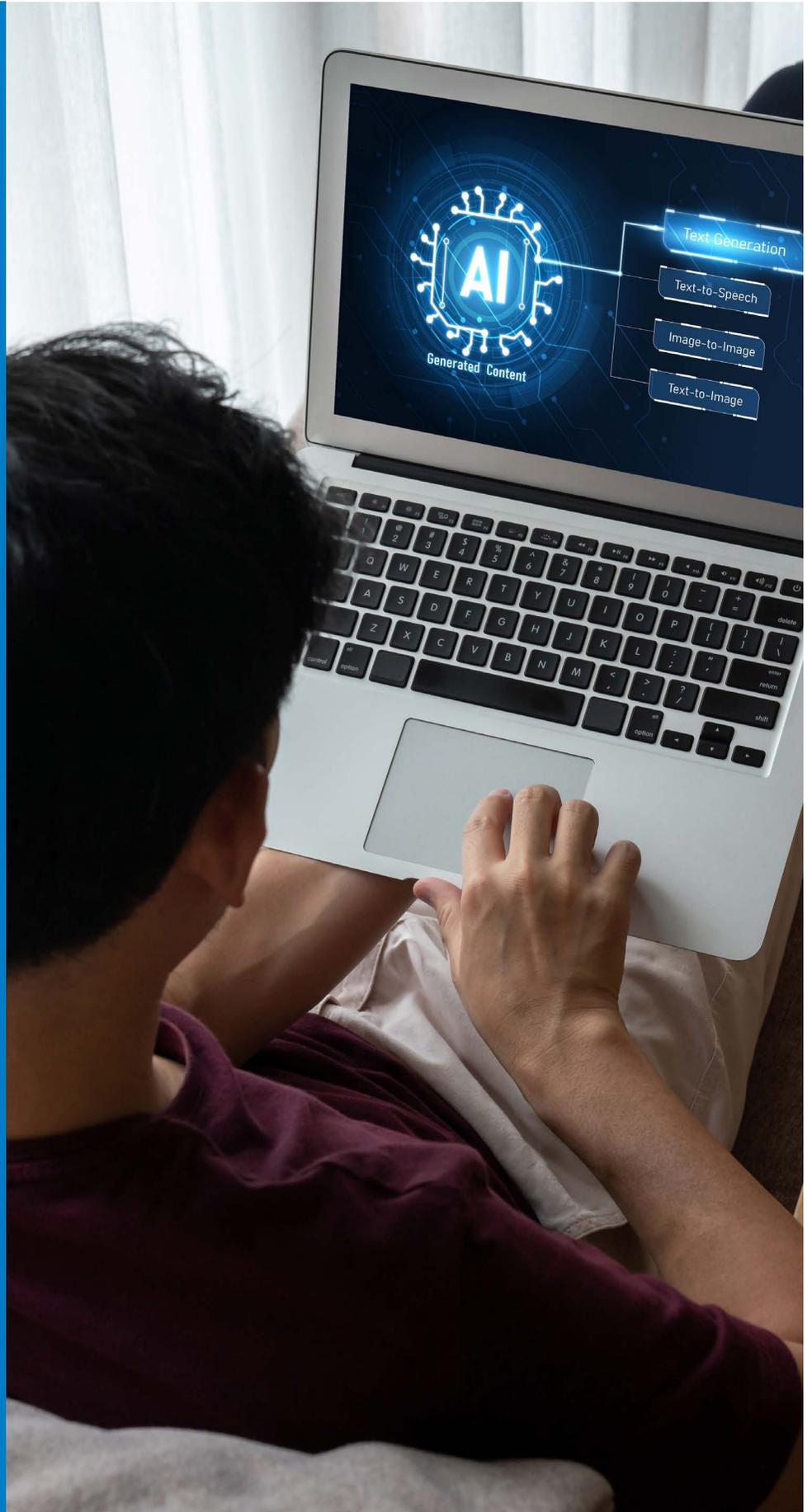
<sup>6</sup><https://www.pymnts.com/fraud-prevention/2020/allstate-ai-fight-insurance-fraud/#:~:text=Strictly%20manual%20systems%20are%20being,systems%20to%20automate%20this%20process.>

## Making the most of Generative AI

The advancements in the field of AI present a great opportunity for life insurance providers to usher in a new era of digitization and improved operational efficiency. As described in this paper, automation, predictive analytics, NLP capabilities, and the use of data-driven insights throw open new opportunities to personalize customer experiences, streamline operations, and enhance risk management.

However, it's important to note that AI technology and capabilities are still evolving and are not yet fully capable of evaluating scenarios or replicating human reasoning. These limitations of AI must be carefully considered, especially when dealing with matters as sensitive as insurance policies. Besides, AI models can be influenced by biases inherent in the training data, calling for added responsibility when relying on AI models for decision-making.

Thus, to successfully implement AI/Gen AI, providers need to consider data quality, reliability of models, collaboration between humans and AI, use of responsible AI practices, adherence to regulations, and create a strong governance framework. By proactively addressing these areas, life insurance providers can effectively unlock the advantages of Gen AI and deliver exceptional value to their policyholders.



## Authors



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Neeraj is an innovative and effective leader recognized for achieving exceptional results in highly competitive environments requiring continuous improvement and has driven the business of large-scale technology projects based out of the US, UK, India, and China Geography for the last 18+ years. He has an excellent business domain, architecture, design, and implementation skills in various life insurance administration as well as producer management & compensation systems.

Prior to this, Neeraj was part of Big 4 Consulting firms where he led digital transformation programs for the Insurance Industry. He has led strategic consulting and transformation initiatives across the Life, Annuities, and Property & Casualty Insurance space. He also holds LinkedIn Top Voice Badge for Insurtech, AI and Business Analysis. He holds a master's degree in insurance & risk management and the designations of ALMI (LOMA) and Fellow (III India).



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Baskar Sridharan has been leading several mission-critical initiatives at Infosys McCamish Systems, including the Infosys® McCamish Ngin platform initiative. A seasoned business leader with over 25 years of experience, Baskar excels in the insurance industry, platform development, product ownership, strategy consulting, and IT transformation. His entrepreneurial mindset enables him to help clients grow their businesses by crafting effective strategies and value-driven platform solutions.

Baskar holds a master's degree in business administration and is a certified risk management professional from the UK, fellow of the insurance institute of India, certified in AI applications for business growth from Northwestern Kellogg, and certified in leading organizations and change from MIT Sloan School of Management.

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