

Envisage the Future of Insurance with **Generative AI**



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Success Story

Introduction: Evolution of Gen AI

With Generative AI, the Insurance Industry is undergoing a seismic transformation. From underwriting and claims processing to customer service and fraud detection, the industry is steering towards an era of innovation, efficiency, and customer-centricity. Let's embark on a journey to discover how enterprise-ready Generative AI seeks to address the crucial problem of declining productivity in insurance knowledge workers and how it can revolutionize Insurance business process, amplify & personalize customer experience to reimagine insurance of the future.

Mapfre, Spain's biggest insurer, has confirmed it is already testing generative artificial intelligence.

Health insurance start-up Plum launches AI-powered tool PolicyGPT

Google Launches Bard AI Chatbot To Compete With ChatGPT

Google releases Bard, an AI chatbot entering the market to compete with OpenAI's ChatGPT and Microsoft Bing Chat.

OpenAI announces GPT-4, the new generation of AI language model

OpenAI says the new model will produce fewer factually incorrect answers. In fact, the company claims GPT-4 performs better than humans on many standardized tests.

Lemonade Expects Generative AI to Improve Business Processes and Profits

NVIDIA Brings Generative AI to World's Enterprises With Cloud Services for Creating Large Language and Visual Models

Adobe to Build Models for Next-Generation Creative Workflows; Getty Images, Morningstar, Quantiphi, Shutterstock Using NVIDIA AI Foundations Cloud Services to Customize Models for AI-Powered Applications

2023

2022



DeepMind Sparrow

Underlying Basis

AI driven innovation has been pioneered by Google Research and Deepmind

2020

GPT-3 powers the next generation of apps

Over 300 applications are delivering GPT-3-powered search, conversation, text completion, and other advanced AI features through our API.

2017

PROGRESSIVE GROWING OF GANS FOR IMPROVED QUALITY, STABILITY, AND VARIATION

Tero Karras NVIDIA, Timo Aila NVIDIA, Samuli Laine NVIDIA, Jaakko Lehtinen NVIDIA and Aalto University
(tkarras, t.aila, slaine, jlehtinen}@nvidia.com

Tero Karras & a team from NVIDIA, propose a method for generation of highly realistic images.

2014

Introduction of attention mechanism that transformed the entire language modelling space



2020



Google Launches LaMDA – breakthrough conversation technology

2018

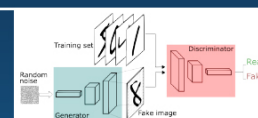


Google Launches encoder based transformer BERT

2015



2014



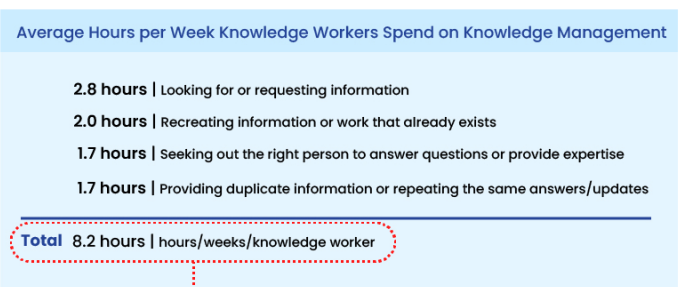
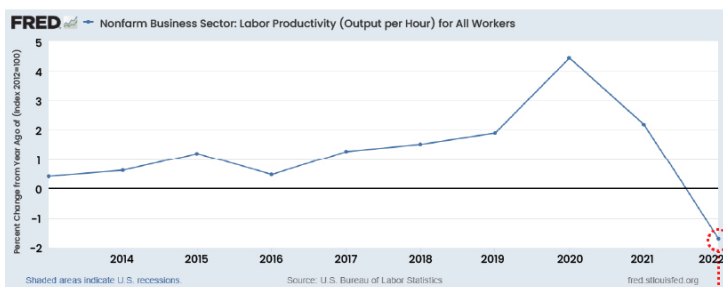
Goodfellow published his famous and highly-cited white paper titled "Generative Adversarial Nets."

Why Now?

The Declining Productivity Problem



The knowledge workers in the insurance sector – Underwriters, Claims Adjusters, Brokers, and Risk Managers – play a crucial role in analyzing data, assessing risks, and making informed decisions. The success of the business relies on the efficiency and accuracy of its knowledge workers. However, 40% of knowledge workers bandwidth is now spent on non-core activities such as skimming through thousands of Pages of documents, manual policy review, information search and much more. While there have been efforts to reduce operational bottlenecks through infrastructure modernization and cloud adoption, there is a lack of support in the insurance sector for underwriters, claims adjusters and other knowledge workers who often feel overwhelmed by the increasing volume of information, complex processes, and the need to stay updated with regulations. This negatively impacts the bottom line for insurance companies, leading to higher expense ratios, increased loss ratios, and reduced net written premiums.



Productivity of the knowledge workers is on the decline

40%

Time spent by insurers in non-core activities

35%

Rise in administrative cost per policy in last decade

<30%

Customers have positive experience with their insurers

Let's deep dive into the potential of generative AI to address this problem.

Generative AI: Empowering Knowledge Workers Through Enhanced Productivity

Generative AI holds immense potential to alleviate operational challenges within the insurance sector. AI-powered knowledge assistants can swiftly retrieve critical information, keeping underwriters and claims adjusters updated. Automated compliance monitoring ensures regulatory adherence without manual tracking. Intelligent process automation streamlines tasks like documentation, manual data entry and policy generation, freeing knowledge workers from administrative burdens. Customized alerts and decision support systems aid in quick, informed decision-making. Additionally, natural language generation helps curate personalized responses to customers thus elevating customer satisfaction. By incorporating generative AI solutions like these, insurance companies can empower their knowledge workers, streamline operations, enhance compliance, and ultimately improve their bottom line by reducing expense ratios, optimizing loss ratios, and increasing net written premiums.



Generative AI's impact on productivity could add the equivalent of **\$2.6 trillion to \$4.4 trillion** annually to the global economy thereby increasing the impact of artificial intelligence by **15 to 40 percent**.

The global market size for generative AI in the insurance sector is set for remarkable expansion, with projections showing growth from **USD 346.3 million in 2022** to a substantial **USD 5,543.1 million by 2032**, which reflects a robust growth rate of **32.9%** from 2023 to 2032

Generative AI could enable labor productivity growth of **0.1 to 0.6** percent annually through 2040

Applying generative AI to customer care functions could increase productivity at a value ranging from **30 to 45** percent of current function costs.

Let's dive under the hood to understand how Generative AI can enhance productivity of knowledge workers within the insurance value chain.

Empowering Agents and Brokers Through Personalized Customer Targeting

Agents and brokers play a crucial role in sales and distribution within the insurance landscape. Their responsibilities encompass not only the sale of insurance policies but also the crucial task of tending to customer requirements. As the insurance industry evolves, the role of agents and brokers transforms alongside it. Embracing Gen AI solutions empowers them to enhance their efficiency and redefine their relationship with customers.

Let's take a look at how the synergy between technology and human expertise can empower Peter, an Insurance broker to increase productivity and personalize his services



Peter engages in prospecting activities to identify potential clients and generate leads



Once client is identified he conducts a thorough assessment to understand the client's insurance requirements



Based on assessment, Peter presents insurance policy options that align with the client's requirements



After the client decides on a policy, he assists client in completing the necessary application forms and collects all required documents



Once the application is approved, he shares the policy documents with the client & provides ongoing customer service and support by acting as a main point of contact

Avenues for Improvement



Taking notes in a notebook & summarizing at the end of a call can be messy & time consuming



Searching through product guide based on specific requirements is highly time consuming



Writing personalized messages to each client and notifying them of updates & current status is a cumbersome task

Gen AI Use Cases



Smart Transcript Summarizer – to summarise customer conversations



Intelligent Knowledge Navigator – to search on product documents and guides providing recommendations



Intelligent Email Composer – for seamless composition of personalized emails, tailoring content and tone to individual recipients

Empowering Underwriters Through AI Powered Application Analysis

Underwriters are responsible for assessing risks associated with insurance policies. They evaluate applications, analyze data, and determine the terms and conditions of coverage. Insurance firms rely on the underwriters' expertise to strike a balance between providing coverage and managing risk for the insurer. Generative AI streamlines the underwriting process by automating risk assessment and decision-making. AI models can analyze historical data, identify patterns, and predict risks, enabling insurers to make more accurate and efficient underwriting decisions.

Janet is an underwriter in an insurance company. Let's take a look at her daily activities as an underwriter, the problems she encounters and how generative AI solutions can play a key role to help boost underwriter productivity by automating manual tasks and enabling them to make informed decisions.



As an underwriter, Janet receives an application for an insurance policy



She contacts the agent/broker for any missing or additional information in case of incomplete applications



Once all the relevant information is obtained, Janet goes through established underwriting guidelines for evaluation of the application



Premium decision is made, policy document is generated and shared



Policy is shared with the customer via email

Avenues for Improvement



Drafting custom emails containing required terms is error prone and time consuming



Looking for a specific information in a large data corpus is highly inefficient & time consuming



Policy wording requires covering all required callouts. Manual process makes it error prone and time consuming



Composing multiple emails can be a time-consuming and burdensome process, lacking personalization

Gen AI Use Cases



Intelligent Email Composer - to write emails requesting required information



Intelligent Underwriting Companion - to search for information across underwriting manuals and guides and provide recommendations



Tailored Policy Crafting Assistant - to generate a custom policy automatically with human in loop for verification



Intelligent Email Composer - for seamless composition of personalized emails, tailoring content and tone to individual recipients

Empowering Claims Adjusters Through Accelerated Claims Assessment

Claims adjusters investigate insurance claims to determine their validity and negotiate settlements. Knowledge workers in this role use their expertise to assess damage, review policy terms, and ensure fair and accurate claim resolutions. Generative AI automates claims processing by extracting and validating data from claim documents, reducing manual efforts and processing time. Automated claims processing ensures faster and more accurate claim settlements, improving customer satisfaction and operational efficiency.

Steve is a claims adjuster in an insurance company. Let's take a look at his daily activities as a claims adjuster, the problems he encounters and how generative AI can tackle those problems efficiently by automating redundant tasks and expedite claims assessment with precision.



Steve, an adjuster, receives a FNOL for a claim



He contacts the agent/customer for any missing or additional information in case of incomplete applications



He refers to the claims guides & policy details to determine benefits & claims coverage



Proof of loss and supporting documents are utilised to perform loss assessment



Payout decisions are made and system is updated



Steve notifies insured of the detailed claims decision



Drafting custom emails containing required terms is error prone and time consuming



Looking for a specific clause or an exclusion in a large data corpus is highly inefficient & time consuming



Going through detailed loss documents and Summarising them is inefficient & time consuming



Composing multiple emails can be a time-consuming and burdensome process, lacking the element of personalization



Intelligent Email Composer - to write emails requesting required information



Intelligent Claims Companion - to search for information across policy documents, claims guides, manuals etc. and provide recommendations



Intelligent Summary Generator - to summarise loss details



Intelligent Email Composer - for seamless composition of personalized emails, tailoring content and tone to individual recipients

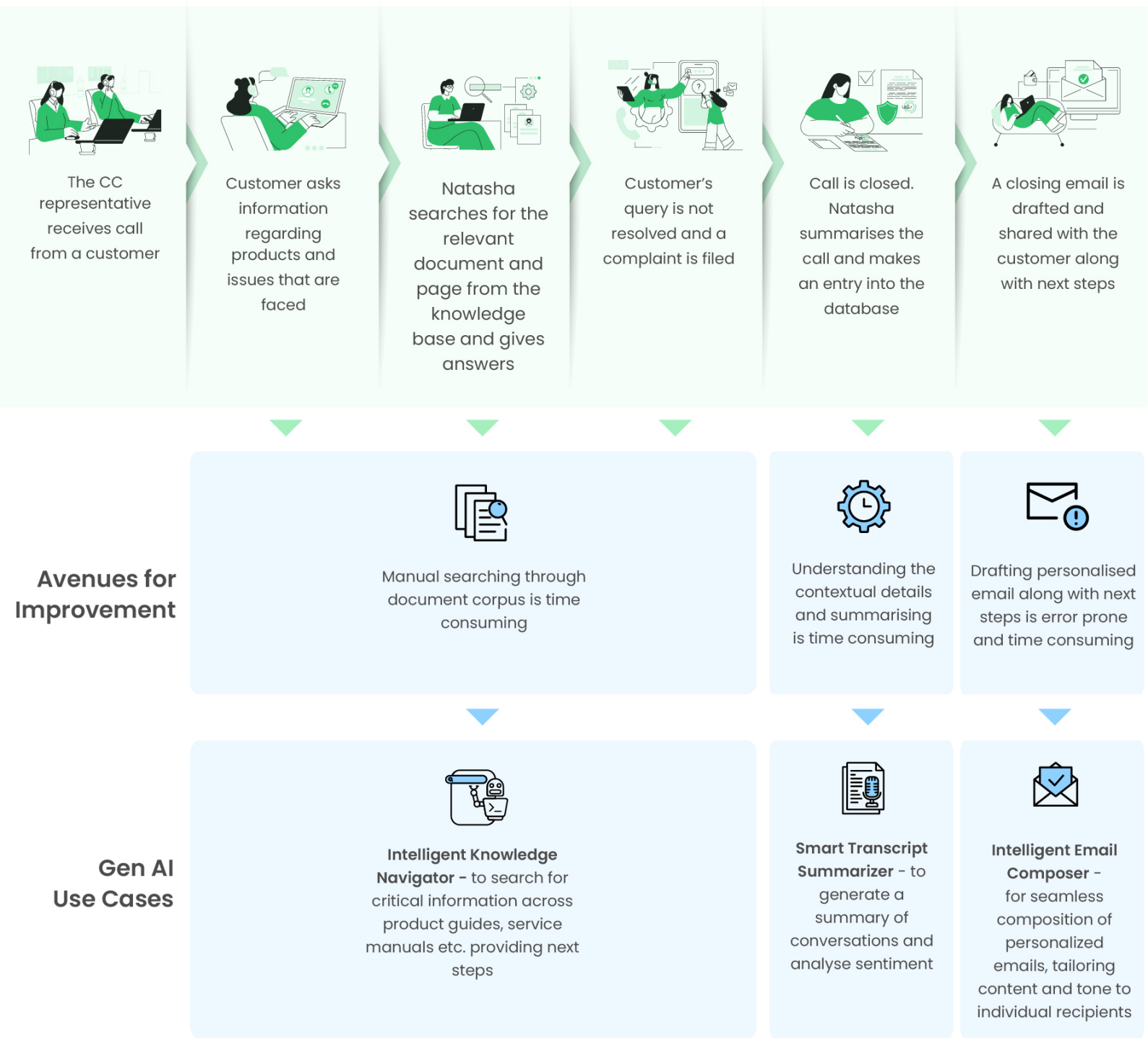
Avenues for Improvement

Gen AI Use Cases

Empowering Contact Center Representatives to Offer Elevated Customer Experience

Contact center representatives help policyholders with inquiries, policy changes, and claim-related questions. To serve the customers better, they need a deep understanding of insurance products, and the customers information at their fingertips. By processing extensive volumes of customer data, Generative AI-based assistants can be trained to have the capability to tailor insurance products to meet individual needs and preferences, enabling the human representatives to offer significant superior and personalized customer experience.

Natasha is a contact center representative in an insurance company. Let’s take a look at her daily activities as a contact center representative, the problems she encounters and how generative AI tackles those problems by expediting query resolution and consequently enhancing overall customer satisfaction (CSAT).



Empowering Customers Through Self Service

With rising customer expectations, consumers now place a premium on self-reliance and personalized service encounters. The evolving customer landscape demands heightened control over policies and rapid information accessibility. Insurance enterprises now have a unique opportunity to empower policyholders through the integration of a conversational smart bot, driven by Generative AI. This innovative approach not only addresses frequently asked questions but also facilitates product searches, provides real-time service request updates, and streamlines claims filing thus fostering an enhanced, seamless, and effortlessly convenient customer experience.

Tony, a potential customer seeks to gain information about insurance products catering to his needs. However, he faces challenges while getting in touch with the contact center representative of the company. Let's see how Generative AI can help him ease out the process of product search.



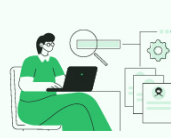
Tony, a potential customer, searches on the internet or hears about a product from a friend or a colleague



He calls the contact center to know about a product



He connects with an agent to get more details about policies and get advice on which policy is suitable to his needs



After policy is bound the details are sent to Tony, an insured. He starts paying his monthly premiums



While filing claim, Tony contacts agent/customer service regarding claims process & documents to be submitted.



He calls the call center regarding policy details, personal details modification or policy renewal



Limited availability. Longer response times due to higher call volumes or queues during peak times



Limited availability. In-person meetings are time constrained.



Limited Availability. Longer response times due to higher call volumes or queues during peak times



Intuitive Communication Companion - to provide answers on product documents and brochures



Intelligent Service Assistant - for human like interactions with customers, offering real-time support and assistance

Avenues for Improvement

Gen AI Use Cases

Quantiphi's Excellence in Generative AI: Pioneering Innovation in the Insurance Landscape

Generative AI has emerged as a game-changer in the insurance industry, offering tremendous potential to streamline operations, enhance productivity, and elevate customer experiences. It is built on the underlying technology of Large Language Models (LLMs). We can see the boom around certain applications like Chat GPT, GitHub Co-pilot, Stable Diffusion which use vast amounts of public data to perform a range of routine tasks. But the real challenge lies in how organizations can bring this huge data within the realm of their enterprises!

That's where Quantiphi's expertise plays a role. At Quantiphi, we are committed to revolutionizing the way organizations empower their knowledge workers by harnessing the power of generative AI. Quantiphi helps organizations build custom LLMs tailored to their specific problem areas. Baioniq, our enterprise-ready generative AI platform empowers organizations to supercharge the productivity of their knowledge workers by applying generative AI to downstream tasks within the insurance industry. It is built on responsible AI principles, guaranteeing the highest standards of quality assurance, and ensuring that the answers generated are reliable and grounded while prioritizing the safety and trust of our customers.

baioniq ADVANTAGES



Increased Productivity

baioniq helps in improving the productivity of knowledge workers by automating downstream tasks



Increased Decision Making

baioniq generates insights from documents, helping employees make better decisions



Enterprise Ready Integrations

baioniq integrates with enterprise systems (such as EPIC) and fetches relevant information needed for the LLM to facilitate the downstream task



Domain Adaptation at Scale

baioniq enables fine tuning of language models. It houses a large repository of domain specific created & curated fine tuning data. baioniq also facilitates RLHF so that the model is tuned further with human feedback.

Insurance is a document-intensive industry and we understand unlocking insights from unstructured data assets has been a challenge for the industry. That is why our AI-led Document Processing Platform, Dociphi now comes with an integrated enterprise-ready Generative AI (Large Language Model) module that can help in predicting the next best action. This module contextualizes the LLM to domain knowledge along with the extracted entities to reduce hallucinations and provide highly contextualized answers. This helps insurance carriers, brokers, and 3rd party administrators to enhance knowledge worker productivity with

dociphi

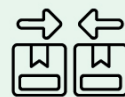
**Gen AI enabled
Document
Processing**



In-domain QnA,



Automated claim and
policy document
summarization



Discrepancy email
generation, and more

Success Story

Gen AI Assistant for Underwriters

Problem Statement

Client a US based f100 insurer, faced productivity issues with their underwriting teams. They had to go manually go through underwriting guides having 100+ pages

Solution

Quantiphi developed a generative AI assistant that could perform QnA, search and summarisation based tasks on underwriting manuals



Smart Assistant for Customer Service Representatives

Problem Statement

Client is a global life insurer had their customer service reps flooded with calls, where reps need to go through knowledge base comprised of 80,000 documents leading to prolonged wait time

Solution

Quantiphi developed a QnA based assistant wherein customers could interact and get questions solved



Claims Adjudication Assistant

Problem Statement

Client a US based f500 supplemental insurer, wanted to augment their claims professionals as well as customers with an intelligent QnA system

Solution

Quantiphi developed a generative ai assistant that enabled claims adjusters to perform QnA on top of claims data, knowledge base and customers to perform QnA on their account, product level data



Industry RECOGNITIONS



Insurtech100 3X - Recognized as
one of the world's most Innovative
InsurTech Companies



Everest Group - Analytics & AI
Services LEADER



IDC - Leader in IDC MarketScape:
Worldwide AI Services, 2023



Frost and Sullivan - Best Practices
Competitive Strategy Leadership
Award in AI Services in BFSI

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