



POINT OF VIEW

# AI IN INSURANCE: **THE RACE IS ON!**





## STARTING GUN FIRED

The public release of ChatGPT in November 2022 marked an "iPhone moment" for AI. Before this, AI was often perceived as "black magic" by the public and many business executives. However, since then, AI has been increasingly recognized as a true disruptive force with immense potential to transform both businesses and society.

Foundational models (FMs) that power generative AI applications like ChatGPT are incredibly sophisticated. However, by “democratizing” interaction with AI through natural language, ChatGPT and similar applications have effectively 'humanized' AI. This, coupled with the enhanced or newly facilitated capabilities of generative AI, has spurred businesses to invest heavily in harnessing AI's power. From accelerating drug discovery in healthcare to enhancing production efficiency in manufacturing and beyond, generative AI is driving significant advancements across industries. Ironically, despite being inherently driven by data and analytics, the insurance industry had been one of the most reticent to incorporate AI into its core processes until recently. However, this time, the industry has shown great enthusiasm and has emerged as a leader in AI adoption. Applications such as knowledge assistants and coding assistants are already being scaled across the value chain. These tools help streamline processes from the first notice of loss to the final settlement in claims processing, significantly reducing operational costs and improving efficiency [1]. In a survey of 100 insurers, a strong inclination was expressed toward using generative AI to automate claims processing, create synthetic data, and verify policies [2].





# WHY THE ADVENT OF GEN AI HAS MADE A TRUE PARADIGM SHIFT IN THE INSURANCE INDUSTRY

The change in attitude towards AI in insurance is not just due to a general shift in perception of AI and its potentials. Generative AI, individually or in combination with other pre-existing AI techniques (referred to as 'Classic AI'), is now better suited to address the unique needs of the insurance industry:

*Generative AI is set to significantly impact the insurance value chain by introducing advanced capabilities across the insurance value chain, unlocking new opportunities driving efficiency, innovation, and customer satisfaction.*

- ① **A substantial amount of important insurance data is in the form of paper or scanned documents at various stages of business, from underwriting to claims management.** Only a paucity of these data is manually digitized and used. While some insurers and InsurTechs had developed solutions to ingest such data using a combination of OCR, machine learning, and NLP, the solutions were either not reliable or costly in terms of time, resources, and money.
- ② **Selling insurance products still relies heavily on conversations between customers and brokers, salespeople, or call center agents.** ML-powered recommender systems used for Next Best Action have been somewhat successful in improving cross-selling, upselling, and customer retention through digital channels but have had less success via human channels. Generative AI will boost sales through both. 'Salesbots' can enhance sales in digital channels by adding interactive consultation in a purely digital journey. "Smart teleprompters" can assist brokers, sales agents, and call centers by preparing them better, prompting them to ask the right questions, helping them answer difficult technical and policy-related questions, and reducing their administrative load.
- ③ **A significant portion of insurers' costs comes from operations,** including claim management, customer services, policy management, and other back-office tasks, which largely still rely on humans. Reducing such costs through automation came at the expense of increased errors, such as claim leakage or customer dissatisfaction. Adding Generative AI to classic AI/ML enables intelligent automation to a large extent. For instance, most claims could be processed and resolved without human intervention, similar to +99% of credit card applications that are now being algorithmically assessed and approved or declined.
- ④ **Many existing workflows and IT systems are decades old and have mostly remained unchanged.** Changing workflows and migrating from old systems, such as those coded in outdated languages like COBOL, is time-consuming and risky, especially as COBOL programmers are rarer today. The code generation, interpretation, and reviewing capabilities of Generative AI have made such migrations much easier.

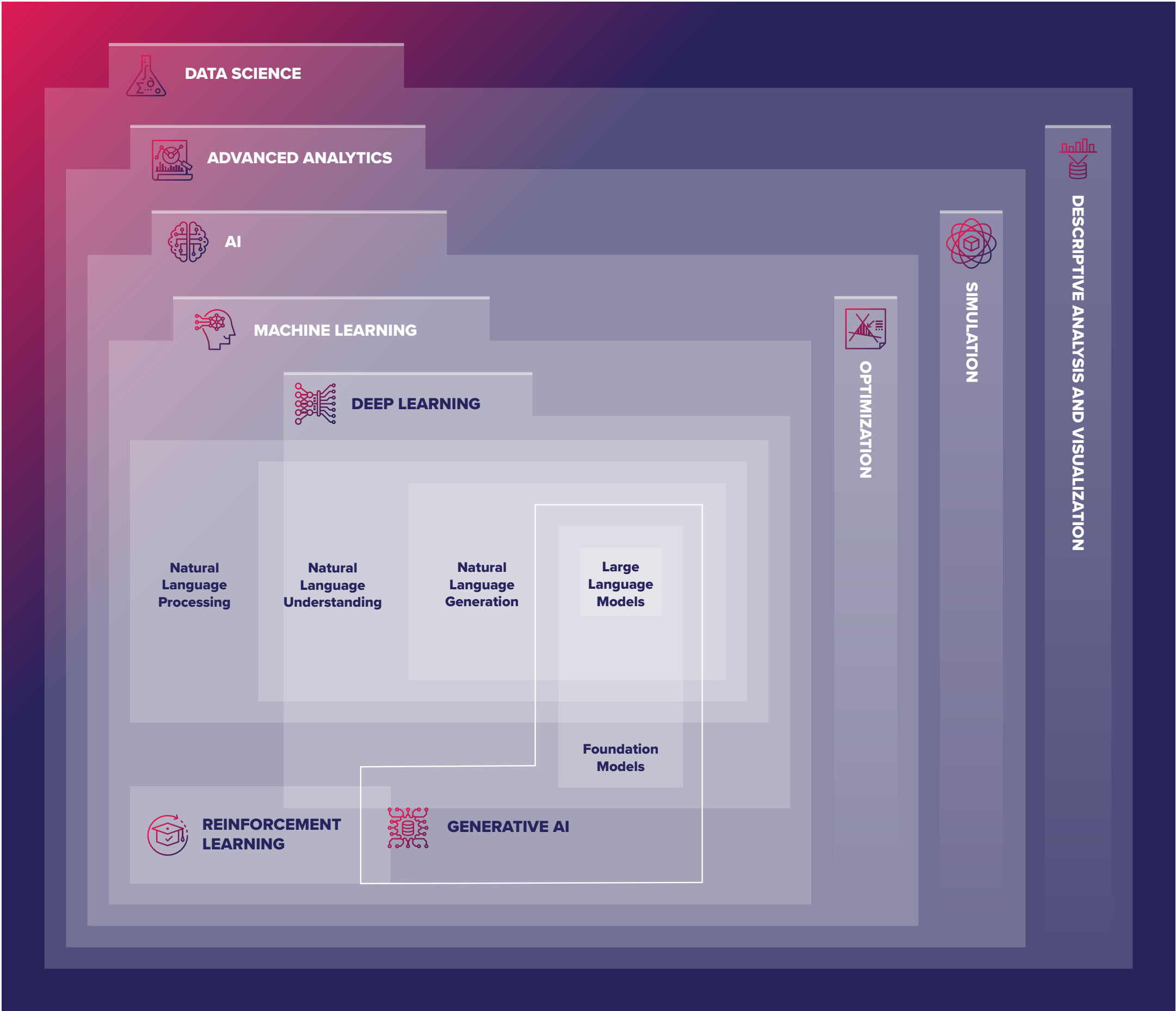


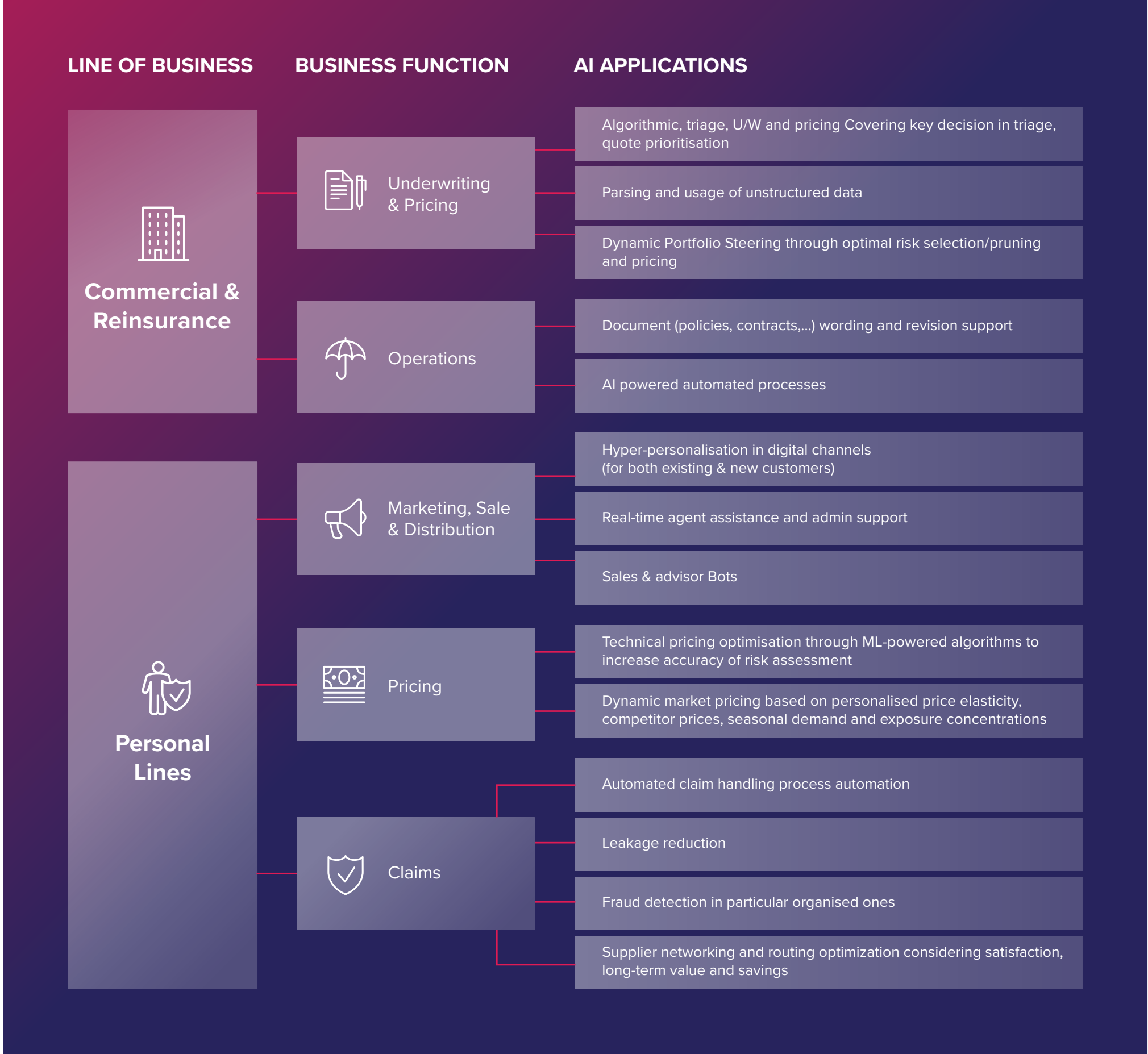
# GENERATIVE AI IS NOT A PANACEA

However, while Generative AI is driving AI adoption and despite its amazing capabilities, it is crucial to recognize that it is not the answer to every problem, at least on its own. Figure 1 schematically portrays Generative AI positioning in the broader field of AI and Data Science, showing that Generative AI is not as distinct from ‘Classic AI’ as some presume. ‘Classic AI’ or ‘Traditional AI’, which essentially refers to all other AI techniques and algorithms, such as Deep Learning and Reinforcement Learning are key components of Generative AI.

While Generative AI excels in tasks requiring natural language understanding, content creation, and conversational interfaces, there are several areas within insurance better suited to other AI algorithm families and techniques, such as Machine Learning, optimization, or even non-AI methodologies like simulations.

The most powerful applications, however, happen when Generative AI capabilities is combined with those in the broader Data Science field.





# GAME-CHANGING APPLICATIONS THAT INSURERS SHOULD PURSUE

It is paramount that every insurance company undertake, on their own or with external support, a rigorous evaluation of the challenges and opportunities in their business model and processes. This evaluation should focus on the high-priority problems.

Many companies (including insurers) look at the capabilities of the latest tech (Deep Learning, Reinforcement Learning, and now Generative AI) and try to leverage them, often leading to Proof of Concepts (PoCs) that sometimes look fancy but remain at that level. Worse, they are scaled up with considerable costs and fail to deliver any material value, leading to a frustrated “AI is just a hype” backlash. The advent of Generative AI is no exception.

Despite the enthusiasm and efforts, many insurers have not conducted sufficient due diligence on the expected impact, considering their unique strengths, weaknesses, opportunities, and challenges.

However, through supporting multiple insurers in such due diligence, we have identified several applications that were potential game changers in terms of competitive advantage and bottom-line impact. These vary depending on the line of business, especially between commercial/ reinsurance and personal lines, as shown in Table 1.



These are not just theoretical game-changing application areas. Many insurers have already started implementing such solutions and are reaping the benefits. For instance, the reinsurer SCOR has employed AI-powered risk assessment and pricing strategies, resulting in savings estimated to be up to \$100 million annually. The AI models help SCOR make more accurate risk assessments and pricing decisions, leading to better financial performance and reduced exposure to high-risk claims [3]. On the personal lines, Lemonade, an innovative insurance company, has effectively integrated AI into its operations, particularly in policy underwriting and claim management.



Utilizing an AI-driven system named Maya, Lemonade automates approximately 90% of its claims, drastically reducing the time and resources traditionally required for these processes. Maya has streamlined operations and enhanced accuracy and efficiency in handling customer claims. As a result, Lemonade has seen a significant improvement in its operational efficiency and profitability. According to a detailed report, Lemonade's AI-powered underwriting and risk management policies are expected to become increasingly accurate and profitable over time, showcasing the substantial value AI can create in the insurance sector [4].







It is important to note that while the applications provided in Table 1 and the industry example may seem to have a narrow focus at this point, it won't be long before entire functions are transformed. Consider the case of managing motor claims: after an accident, the insured will open the insurer's app and initiate a claim. They will take a video of the vehicles and damages, photograph the police sketch and the other driver's license, and record a voice message explaining the circumstances. Generative AI will ingest and parse the data, with an algorithm performing an initial damage assessment. Based on this, along with the insurance policy terms, vehicle details, and location, the AI will recommend next steps.

For instance, the insured might receive a message directing them to the most appropriate and convenient garage. If the policy includes a courtesy car, the customer will be notified about where they can pick it up, such as from the garage, and it will be dispatched accordingly. While the vehicle is in the workshop, the garage can submit their assessment through photos, voice notes, or direct connections. If assessor confirmation is required, it will be arranged and conducted via video call. All receipts and paperwork will be ingested, checked for fraud and leakage, and, if verified, the payout and compensation will be arranged. By the time the vehicle is repaired, in 99% of cases, the claim can be closed.

*This is no longer a sci-fi scenario. Multiple insurers are already utilizing some elements of what was described above. It won't be long before a fundamental transformation of the end-to-end claims handling process—from first notice of loss (FNOL) to settlement—becomes table stakes.*





# IMPLEMENTING AI: KEY CONSIDERATIONS FOR INSURERS

With such bountiful rewards at stake, insurers who have not embarked on the transformation journey to leverage the power of AI should waste no further time. After identifying the most impactful applications, they need to prioritize them based on feasibility and alignment with strategic fit.

A common pitfall in the AI transformation journey is starting with many PoCs but rarely moving beyond. It is crucial to remember that the indicated business values only materialize when the applications are industrialized and fully integrated into the processes of that function. To industrialize AI applications and scale adoption, insurers need to be mindful of several critical challenges:

- ① Transformation towards a Data & AI driven companies require to bring in also new capabilities, talents and resources. Processes should be re-engineered and new ones might be needed
- ② Despite the opinion shifts towards AI, companies should carefully consider how this transformation will affect the people working in a function. Ever since the Industrial Revolution humans have always initially been worried about technologies taking their jobs away. And while some tasks, or jobs have indeed been delegated to technology, each technological shift improved existing roles or create new ones
- ③ Industrialising AI solutions cannot happen without robust platforms and infrastructure for data, model development and deployment and integration of services such as FM/LLM providers
- ④ AI comes with various risks such as algorithmic bias, operational risks, legal and ethical exposures and more. Generative AI, along with its amazing capabilities, has added some new risks, chief among them the risk of hallucinations. These risks should be well understood and mitigated appropriately. Appropriate guardrails need to be in place and where necessary there should be a human in the loop.

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*If insurers lack the experience and expertise to address these challenges in-house, they must seek appropriate support from those who have supported such journeys in the past and know how to avoid pitfalls, mitigate risks, and bring critical expertise on board.*



# UPSHOT

As we stand on the brink of a new era in the insurance industry, it's clear that Generative AI is not just a passing trend but a pivotal force shaping the future. The potential of AI to revolutionize how we manage data, streamline processes, and enhance customer interactions is immense. However, it is essential for insurers to approach this transformation with a strategic mindset.

Success will depend not only on adopting cutting-edge technologies but also on integrating them effectively into existing systems, understanding the nuances of AI’s capabilities, and addressing the inherent challenges. By carefully evaluating and implementing AI solutions, insurers can drive significant improvements in efficiency and customer satisfaction, ultimately setting new standards in the industry.

The journey ahead requires commitment, foresight, and a willingness to embrace change—qualities that will define the leaders of tomorrow.

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