CORETECH INSIGHT

Targeting the Future

AI for Life Insurance

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Introduction

Insurers, software providers, and industry analysts continue to explore how AI will impact the life insurance industry. With a promise of 10X productivity improvements from AI technologies, it remains unclear what specific use cases life insurers should initially pursue to maximize value. While current AI models and the movement toward Artificial General Intelligence (AGI) raises ethical concerns for the future of humanity, more targeted models are already beginning to solve key challenges for life insurers. Questions abound, however, on how AI will be used by life insurers to create the sort of dramatic productivity improvements so many anticipate. What is clear is that life insurers cannot compete effectively if they choose to ignore AI and fail to take full advantage of the benefits it promises. The goal here is to create a repository of shared information to help the industry keep pace with AI growth.

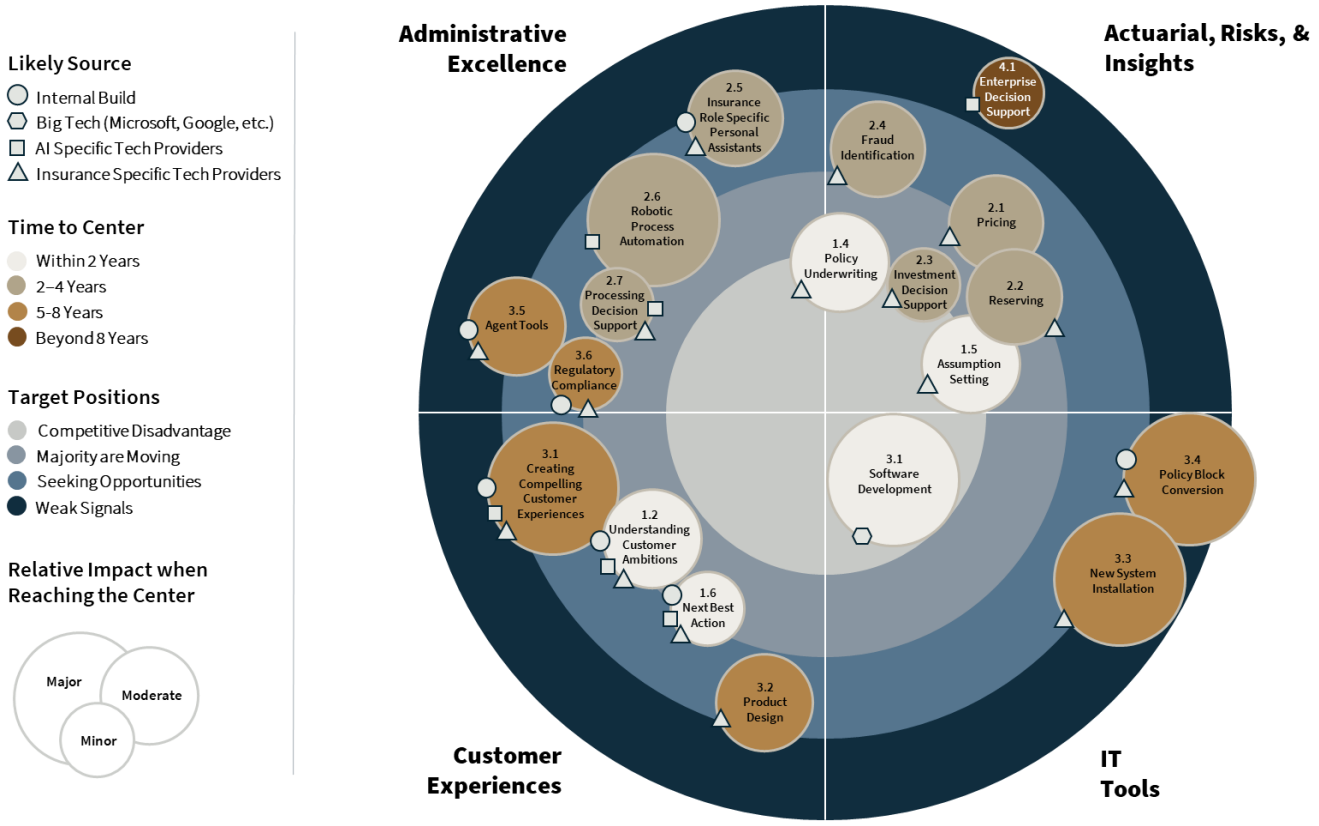
February 2024 update and observations –

- Note some minor changes in paragraphs below to add clarity or specificity.
- Note that the Robotic Process Automation bubble has moved closer to the center based on the rising interest by life insurers to find ways to leverage this technology.
- Note that the Creating Compelling Customer Experiences moved inward based on the use of AI to do customer segmentation and targeting.
- It's increasingly clear the AI use cases are progressing from the most general use cases such as Adobe's generative AI or Microsoft's Copilot, toward highly specialized models for life insurance or individual carriers.
- There are increasing indications that traditional life insurance software vendors are actively exploring ways to bring AI to their customers through their product offerings.
- Investment by life insurers into AI continues to grow.

Document Methodology

To begin to create clarity in the industry, each AI use case for life insurance has been described and positioned on the chart in **Figure 1**. Readers should recognize that there is not currently a common set of use cases with common definitions. Rather there are ideas and approaches that are emerging and evolving. Over time, this report will be updated with new use cases, definition revisions, and use case positions as conditions change. The author is interested in getting feedback that will make the document better and more beneficial to insurers and software providers across the industry. Please don't hesitate to reach out with recommendations for improvement to the email address at the end of this document.

Figure 1. Life Insurance AI Use Case Assessment



Source: *Coretech Insight (February 2024)*

Use Case Summaries

As noted, the use case AI models described in **Figure 1**, reflect a best understanding of what is happening across the industry. Each use case is placed on the target to illustrate the expected time it will take for that use case to arrive at the center of the chart. If life insurers are not leveraging a particular use case when a use case arrives at the center of the chart, they will be at a competitive disadvantage. Readers should pay careful attention to both the time and the likely source of each use case, as both data points will help them effectively plan for the future.

Use case summaries are arranged below by "Time to Center" with those use cases with the shortest time to center being presented first.

Within Two Years

1.1 Customer Chat

The industry has had customer chat for many years from early script-based chat technologies to much more sophisticated conversational AI based systems. As customers' expectations continue to be affected by more conversational AI experiences such as Siri, Alexa, and others, they will expect insurer chat systems to do more, be more accurate, and more able to help them solve increasingly complicated questions. AI models will be layered on top of existing technologies to ensure the accuracy of customer data. Chat will help life insurers assess risks early, score leads, cross-sell, answer questions, etc. Insurers should anticipate conversational AI capabilities to be offered by AI specific providers.

1.2 Understanding Customer Ambitions

For insurers to create a compelling customer experience with highly personalized products and services, they need to have a more granular view of their customers' fundamental goals and ambitions. They need to go beyond simply recognizing whether someone is a good prospect for the sale of a particular insurance product, to understanding what customers are trying to achieve more fundamentally. For example, customers often use insurance products to reduce risks associated with starting a business, growing a family, or preparing for retirement. Understanding these underlying goals of customers is the first step in creating products and services that help customers achieve them. Insurers are using AI to assess customer behaviors to understand these ambitions and increase their value proposition and help customers succeed.

This use case is placed on the chart on the ring border of "Seeking Opportunities" and "Majority are Moving." This placement is based on some of the work already being done to create more target marketing approaches to find customers more effectively. But there is much more that insurers can (and should) be doing to leverage AI in further uncovering the underlying customer ambitions. Models will be increasingly offered by AI solution providers, industry specific software providers, as well as built by insurers themselves over the next two years.

1.3 Software Development

Big tech firms have been providing these capabilities for several months now and many are benefiting from the AI recommendations as part of software development. Insurers that are not taking advantage of this today are at a competitive disadvantage, and this disadvantage will continue to grow over time.

1.4 Policy Underwriting

Underwriting is a natural place for AI to be used as decisions tend to be well defined with a pre-established set of data as the basis of the decision. These AI models should include both requirements ordering and requirements management, along with the final underwriting decision. The model should also seek proxies for those life underwriting requirements that are most expensive, most difficult to get, and most time consuming, to drive further efficiencies into the life insurance underwriting process. Life insurers should expect the AI models for this use case to come primarily from insurance specific technology providers.

1.5 Assumption Setting

Actuaries are increasingly using AI to leverage large scale data to create more accuracy in their mortality, morbidity, public health, customer churn, and other assumptions. These AI models will help actuaries improve the accuracy of their assumptions to make better risk, financial, pricing, and other assumptions. Insurance specific technology providers will be instrumental in
creating effective models here with actuarial departments likely developing more data science competency. Over the next two years models of this sort will be commonplace across the industry thereby making better decisions more cheaply.

1.6 Next Best Action

These AI models will be used to anticipate the needs of customers for products and services. While based on understanding customer ambitions, these models will trigger actions that could lead to new sales, but also create better customer experiences. They will help customers achieve their ultimate ambitions and automate the delivery of the
value proposition promised by insurers and their partners. It should be expected that these solutions will come from AI specific tech providers, insurance specific tech providers, and from insurers themselves, with likely a wide variation in priorities and capabilities.

2-4 Years

2.1 Pricing

Life insurance pricing has well established procedures and practices that help insurers to meet profit targets. Over time, various tools have been introduced to help actuaries and actuarial departments do their work and actuaries have often been the early adopters of new technologies within life insurers. AI is not expected to fully take over the pricing function completely for several years, but models are already being used by actuaries to simplify pricing and provide improved outcomes. Insurance specific technology providers will be instrumental in creating tools to assist actuaries and make them more productive.

2.2 Reserving

Similar to pricing, AI models will assist actuaries in creating accurate reserving of life insurance products. AI models for reserving are likely to be brought by insurance specific technology providers over the next several years.

2.3 Investment Decision Support

Actuaries will increasingly use AI models to help them make the best investment decisions. Models will make decisions and recommendations from a variety of internal and external data sources. It is critically important that these data sources are secure, accurate, current, and reliable. As models become more powerful, it will be increasingly important that the models are transparent so that actuaries have a thorough understanding of their recommendations.

2.4 Fraud Identification

AI models will be able to help insurers improve their ability to fight fraud in claims, customer service, and underwriting. Models will be used to validate customer provided information, identify interaction anomalies, and quantify fraud risks for specific customer behaviors. Over the next two to four years, insurance specific tech providers (often in conjunction with AI tech providers) will bring practical tools to address different types of fraud risk.

2.5 Insurance Role Specific Digital Personal Assistants

While general personal assistants are already being provided by major technology providers such as Microsoft, more role-based tools will likely need to be developed or adapted for actuaries, underwriters, customer service agents, insurance agents, etc. Adapting the existing assistant models for these roles will require some specialized training to generate recommendations that reflect the style and expertise of an insurance role, make appropriate next best action recommendations, and integrating regulatory requirements. Creating the specific insurance context will not likely be a major undertaking for tech providers and it is expected that insurers and insurance specific tech providers will be able to be in production with these capabilities in two to four years' time.

2.6 Robotic Process Automation (RPA)

These specialized AI models are composed of virtual agents that are trained to observe human users complete various transactions across a business process. Once an virtual agent learns these behaviors, they perform these functions automatically by mimicking the actions of the human trainers. The benefits of this approach carry the promise to reduce processing costs by as much as 90%. RPA providers are already providing production level solutions and continue to prove their value but use within life insurance companies remains at an early stage. Over the next two to four years, these capabilities will become commonplace within insurers and those organizations failing to leverage these capabilities will find themselves at a significant disadvantage.

2.7 Processing Decision Support

In this use case, customer facing employees will ask questions of an AI model to quickly be provided with answers to help customers. AI models should also provide users with information that is likely to be relevant to a claims evaluator to collect relevant data or a customer inquiry to help human agents anticipate customer needs. For example, a call comes in from a customer and the call center representative is provided with interaction history, a description of several reasons why the person is calling, and information that might be useful to help that customer. Internal builds and AI tech providers will refine these capabilities for specific roles within the organization.

5 to 8 Years

3.1 Creating Compelling Customer Experiences

This use case uses AI models to assemble a range of valuable capabilities from partners and insurers to help life insurance customers achieve their goals and ambitions. While AI is certainly being used for target marketing and customer segmentation which is an aspect of creating compelling customer experiences, the real power of AI is to understand customer ambitions well enough to help life insurers expand the traditional value proposition for customers. For example, if a customer is starting a business, the AI model might suggest business best practices, local requirements and resources, common customer behaviors, possible risk, etc., along with recommendations specific to insurance products such as a buy/sell life insurance concept. These models will be developed by several sources for various customer types and will be widespread in five to eight years.

3.2 Product Design

AI models for this use case will be used to analyze customer data, identify patterns and trends, and recommend new products and product features to a product development team. Models will also be used to predict product performance with existing customers or predict how a potential product might perform in new markets. Insurance specific AI providers will be instrumental in building out this use case, but data sources and product development practices must mature before this model is widespread, delaying its use.

3.3 New System Installation AI

As part of any new application installation, considerable work is done to ensure that the new application interacts with all the existing applications across the insurer's ecosystem. This AI model analyzes the existing technology landscape to create an accurate model of existing interfaces with all adjacent applications. Once captured, the AI model configures the new application to replicate all existing interfaces and suggests configurations and code for any new interfaces or modified interfaces. The complexity of existing architectures will make training of these models challenging but industry specific tech providers will, over the next five to eight years, develop these capabilities.

3.4 Policy Block Conversion

The burden of legacy systems and their associated blocks of business, have added cost and complexity to life insurers for decades. AI models that analyze products on insurers' existing legacy systems to understand the processing methodologies, data structure, and insurance product design, will be fundamental to the success of this use case. Once analyzed, the AI model will create a mapping of products, state variations, policies, history, processing rules, etc. to the new system. The creation of these models by insurance specific tech providers along with some insurers will take place over the next five to eight years. Once this use case is widespread, life insurers will experience much higher levels of business agility, much lower cost structures, and better able to deliver their value proposition to their agents and customers.

3.5 Agent Tools

This use case involves enabling life insurers to leverage AI models to provide more value to their agents. Functionality could include AI models that improve agent prospecting, product recommendations, sales proposal creation, income planning, marketing program creation, marketing program performance prediction, etc. This value could be provided free to agents or insurers could leverage it as a new revenue source. These models will come from an array of different sources over the next five to eight years.

3.6 Regulatory Compliance

AI models that monitor processes, employee practices and behaviors, etc. will be used to help enforce regulatory compliance with agents and employees. Developed over the next five to eight years by insurers and insurance tech providers, these models will help insurers better understand employee behaviors, demonstrate compliance to regulators, and measure key factors in compliance.

Beyond 8 Years

4.1 Enterprise Decision Support

It is plausible that as insurers gain experience with AI models and find success in securing them and maximizing their usage, that an AGI (Artificial General Intelligence) model would be developed to support strategic decisions about products and markets. Decision makers would use this model to help them predict likely outcomes of various decisions, leverage the model to make business recommendations, and present risks. To be effective, the model will leverage an organizational (and perhaps industry wide) digital twin, and it will have been trained to make strategic recommendations for insurers. The development of both the underlying data and maturity of these models is likely more than eight years away.

Recommendations

Life Insurers should:

- Create an ethical framework that protects against misuse, hacking, model drift, misalignment, and other risks.
- Create a roadmap for each of these use cases which anticipates the source of the innovation as well as likely timeframes. Ensure that there will be budget available for innovations introduced by third parties and internal builds alike.
- Understand the risks, costs, and benefits each will likely bring.
- Create a plan for the positive and negative impacts to organizational structure, staff reallocation, investment decisions, market priorities, business agility, system strategy, agent and customer value proposition, etc.
- Explore the possibility of monetizing AI models that you have rights to by selling usage to agents, software providers, competitors, etc.
- Work closely with existing industry specific technology providers to request AI models for specific use cases and provide relevant support to make them effective and low risk.

Questions, comments, contributions, and recommendations should be directed to ***steve.leigh@coretechinsight.com***. Updates and revisions will be made quarterly for this report once the first one has been published. It is expected that the release schedule will occur 3 or four times each calendar year.

About the Author

Steve Leigh has served the insurance industry for nearly three decades in senior roles with leading companies such as Zurich Insurance, Gartner, and Microsoft. While with Gartner, he authored multiple Magic Quadrants on the life insurance industry. At Microsoft, he focused on creating solutions that enable Fortune 1000 organizations to capitalize on emerging trends and technological advancements. His work at Microsoft also extended beyond insurance to commercial and retail banking.

Email Steve at steve.leigh@coretechinsight.com or contact him via phone at +1 (719) 440-8710

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