



**Strategies for a pragmatic approach to AI in the insurance industry**

## Strategies for a pragmatic approach to AI in the insurance industry

“Why is AI so dumb?” blared the headline in a recent IEEE technical magazine. With increasing chatter in the artificial-intelligence community on the topic, that kind of headline shouldn’t be unexpected. Overhyping the “I” in AI could lead to years of AI innovation that may not ultimately result in meaningful and measurable business impact.

To be sure, the current state of AI is nowhere near the assumption many make about the “I” in AI being very close to human-level intelligence, also called “artificial general intelligence.” Tesla has not helped by claiming its cars would achieve Level 5 autonomy — the highest level of driving automation, where there’s no need for human intervention — by the end of 2021, only to have to walk that claim back to Level 2 — partial driving automation — when questioned by California regulators. (For more on the various levels, see [“The 6 Levels of Vehicle Autonomy Explained.”](#))

Current AI is nowhere near having the high degree of artificial general intelligence required to not only learn and reason but also think abstractly. Many researchers believe that AI is closer to the level of intelligence of an infant (even though infants don’t really need lots of data to learn from the world around them, as AI does).

Does this mean that the financial services industry, particularly insurance companies, should slow down their AI initiatives? Far from it. They should approach their use of AI pragmatically: apply it where it aligns to the overall business strategy and where there is a clear return on investment. Innovative insurers should use AI to stay ahead of upcoming potential disruptions to the industry and, in the process, ensure their long-term survival.

Innovative insurers should use AI to stay ahead of upcoming potential disruptions to the industry and, in the process, ensure their long-term survival.



# Intelligently applying AI

There are several use cases for AI in the insurance industry:

Product management	Marketing and sales	Quote, issue, bind, UW	Policy servicing	Claims
 <ul style="list-style-type: none"> <li>• Performance analytics</li> <li>• Pricing optimization</li> <li>• Time-to-market reduction</li> <li>• Modeling analytics</li> <li>• Hyper-personalization of products</li> </ul>	 <ul style="list-style-type: none"> <li>• Conversational agents</li> <li>• Customer segmentation and analytics</li> <li>• Automation of input</li> <li>• Distribution performance analytics</li> <li>• Agent performance analytics</li> <li>• Manual-to-document-to-data assist</li> </ul>	 <ul style="list-style-type: none"> <li>• STP and faster quote</li> <li>• Underwriter assist</li> <li>• Autonomous underwriting</li> <li>• Manual-to-document-to-data assist</li> <li>• Pricing analytics — new and retention</li> <li>• Reserve calcs</li> <li>• KYC, AML checks</li> <li>• Fraud analytics</li> </ul>	 <ul style="list-style-type: none"> <li>• Conversational agents</li> <li>• Data monetization</li> <li>• Churn analytics</li> <li>• Predictive insights</li> <li>• Policy document analysis</li> </ul>	 <ul style="list-style-type: none"> <li>• Claims adjuster assist</li> <li>• Autonomous adjudication</li> <li>• Conversational agents</li> <li>• Fraud analytics</li> <li>• Predictive insights</li> <li>• Churn analytics</li> <li>• Business impact analytics</li> <li>• Manual-to-document-to-data assist</li> <li>• Litigation and subrogation analytics</li> </ul>

To use AI effectively, insurers should address these issues and follow these strategies:

Issues
<ul style="list-style-type: none"> <li>• Business strategy: Disruptive or transformative?</li> <li>• Black-box nature of AI: How was a decision made?</li> <li>• Is the AI responsible and ethical?</li> <li>• Data collection interruption: Data represents business conditions?</li> <li>• Data availability, quality, engineering, infrastructure</li> <li>• Data privacy and security</li> <li>• New risks from using AI</li> <li>• Dearth of resources</li> <li>• Real return on investment?</li> </ul>

Strategies
<ul style="list-style-type: none"> <li>• Consider human + AI</li> <li>• Get highest-level executive support</li> <li>• Build ecosystem and a platform with partners</li> <li>• Increase use of conversational AI</li> <li>• Create a framework for responsible and ethical AI</li> <li>• Create a robust data engineering strategy</li> <li>• Create a training strategy and plan</li> <li>• Get insurance for use of AI</li> <li>• Manage the hype and develop business case with longer-term return on investment</li> </ul>

Since the insurance industry is highly regulated, it is important for insurers to focus their initial use of AI on instances where there's no need to explain the decision that led to a specific business action.

The highest-level executives in an insurance company must develop the company's business strategy around the use of AI. AI technologies that will be used to achieve business goals and meaningful return on investment should align to the chosen strategy, either disruptive or transformative.

Many insurance entities could be content with transforming their business processes by targeted injection of AI to assist humans involved in the process. A good example is the work DXC Technology has done for a multirisk underwriter to extract data from documents using machine learning models, eliminating the task of keying in data from emails and other documents into systems of record. A human needs to supervise the process, because with current AI technologies, process automation is only about 70% to 80% accurate.

In contrast, other insurers could become disruptive by using AI to reinvent insurance as we know it. For example, it is possible to replace humans with an AI-based underwriter in targeted insurance product markets.

The black-box nature of AI is an important issue that the AI community needs to address to make AI applicable in highly regulated industries. While applications using simple statistical models and basic machine learning algorithms are more amenable to explaining decisions made by AI, the recent focus on deep learning algorithms poses a new set of challenges. Many leading-edge technology companies, universities and research institutions are working feverishly on solutions to these new challenges.

Since the insurance industry is highly regulated, it is important for insurers to focus their initial use of AI on instances where there's no need to explain the decision that led to a specific business action. For example, in underwriting, it is important to explain how the decision was made by the AI algorithms to provide a quote, then bind and issue the policy. The black-box issue needs to be addressed to ensure ethical and responsible AI is being used for the broader client base. Innovative insurers should consider developing a framework for deploying AI models that adhere to the core tenets of responsible and ethical AI. At DXC, we have been increasingly advising our customers on the contours of such a **framework**.



Insurance entities should start exploring newer AI platforms that democratize the use of AI by empowering non-data-science personnel to participate in the development and deployment of AI capabilities.

Another issue is the advent of new risks and litigation stemming from the use of AI. Insurance companies using AI should consider one of the emerging insurance products to cover these. One of our property and casualty customers developing insurance products to insure the risks associated with the use of AI has been looking at using our DXC Assure product set to easily configure an end-to-end coverage solution.

## Data requirements and computing resources

Many insurers have not yet seen real returns on their AI investments. New technologies, while straightforward to experiment with, always require enormous investment as efforts continue into the production stage. Insurance entities should start exploring newer AI platforms that democratize the use of AI by empowering non-data-science personnel to participate in the development and deployment of AI capabilities.

Another aspect to address is creating **a data engineering team** to ensure that quality, representative and timely data is available for continuously training AI algorithms, in order to create models that align with underlying business conditions. During the COVID-19 crisis, it became clear that the unusual disruption in business activity across the globe made many AI models unpredictable, because they were trained under normal business conditions.

Considering that such data may not always be available, a good strategy is to start looking at newer AI technologies such as reinforcement learning.

It is important for insurance companies to secure access to training data and thwart efforts to trick AI models into revealing the parameters used for training models. Since it is likely that cloud is where models are trained and deployed, access to AI can be secured effectively if well-known cloud security patterns are followed and implemented.

The use of hyperscalers' cloud-native capabilities is a strategy to alleviate the computing resources needed to train AI algorithms, albeit at a higher cost if applications are not designed to optimize cloud usage. It is well known that deep learning will not scale efficiently as the number of layers increases, and insurers must optimize their return on investment by making an appropriate trade-off between accuracy of AI models and computing-resource costs.

## Progress on all fronts

Insurance companies also need employees who are knowledgeable about AI. Many of the newer AI platforms alleviate the need for a large contingent of such resources. To accelerate the use of AI, companies can train a broad swath of employees on the basics and a smaller subset on further details.

Since there is a lot of progress in using AI for natural language processing, insurers should focus on using conversational assistants to improve the customer experience. Although training these assistants to understand the insurance domain can be challenging and difficult to do effectively, this is an evolving area that will see improvement. For example, DXC helped a life insurer improve the efficiency of its contact center service personnel by assisting the company with a digital assistant that does real-time search of complex policy documents.

There is a lot of progress in the insurtech space, where startups have taken on the task of solving one of several smaller issues. Insurance entities should evaluate the smaller insurtechs and approach partnership discussions with an eye toward monetizing the results of the partnership.

While showing that AI works in a proof-of-concept setting is straightforward, the above-mentioned issues need to be addressed as insurers begin moving their work into production.

## Conclusion

While there is a lot of hype around the possibilities of AI in insurance, there are important issues to consider that are specific to the highly regulated industry. Insurers should focus on aligning AI with their overall business strategies and obtaining meaningful return on investment. They can do this by using AI to improve the customer experience, gain a foothold in underserved and uninsured markets, help reduce the gap between risk and capital in a hardening market, and improve coverage transparency.

Learn more at  
[dxc.com/insurance](https://dxc.com/insurance)

Get the insights that matter.

[dxc.com/optin](https://dxc.com/optin)



### About DXC Technology

DXC Technology (NYSE: DXC) helps global companies run their mission critical systems and operations while modernizing IT, optimizing data architectures, and ensuring security and scalability across public, private and hybrid clouds. The world's largest companies and public sector organizations trust DXC to deploy services across the Enterprise Technology Stack to drive new levels of performance, competitiveness, and customer experience. Learn more about how we deliver excellence for our customers and colleagues at [DXC.com](https://dxc.com).