Best of Business AI
AXA case study

AXA is a leading insurance company that offers a full array of services, including life, health, property, and casualty insurance. Founded in 19th century Normandy, it now serves over 105 million customers in 54 countries. As its customers face increasingly complex and interconnected risks, AXA is always looking for ways to provide better protection. Its ability to understand risks, model them, and propose appropriate premium levels is essential.

That's where AI comes in. AXA is leveraging AI to help assess risk and adjust premiums more accurately. Insurance companies have always used data and statistical models to calculate risk, using techniques like linear regression. AI offers the opportunity to increase the accuracy of these predictions by crunching much more data.

In adopting AI, AXA's first priority is to do so responsibly. For AXA, the role of an insurer is more than just doing business. According to Jérôme Lafon, head of the connected car domain in AXA's smart insurance team, "We have a unique role of protecting people, protecting their life, being there in the important moments of their lives. There are social responsibilities associated with our work." AXA takes that responsibility seriously across their organization, including in their work with AI.

The result is that AXA has not only increased its competitive standing in the industry, it has also become a leader in responsible AI, helping to set the standard for other organizations.

Leading the industry in responsible AI

Collecting relevant curated data

AI models are only as strong as their training data, so a key part of AXA's strategy is to be selective when choosing what data to use. According to Marcin Detyniecki, Head of R&D and Group Chief Data Scientist at AXA, "We don't collect data for the sake of collecting data. We identify priority data where we think there is a causal effect and then test the prediction power of these variables." Training the AI model with causal data makes its predictions and recommendations more accurate.

Strategy

Establishing AI governance

Given the impact that AXA's AI-based decisions can have on people's lives, AXA realizes the importance of strong AI governance.

AXA created a dedicated governance team made up of a diverse cross-section of the company: actuaries, data scientists, data privacy specialists, and business experts. Their objective is to help the business adopt and manage AI in a responsible way. This group has a strong sponsorship from senior management.

Responsibility

Enabling explainability of AI-based decisions

One element of governance is ensuring that AXA's AI recommendations can be explained and justified. A common concern with AI models is they can be a "black box," meaning it's difficult to understand the rationale behind their decisions. This makes them harder to audit, troubleshoot, and manipulate.

To make sure its models are transparent, AXA is developing "transparent by design" models, where some algorithms are specifically calibrated to trace and explain the rules and outputs of the model.

Responsibility

Ensuring data privacy and security

Another dimension of responsible AI development is data privacy and security. AXA deals with highly sensitive customer information and has the responsibility to protect it. Operating across so many countries, they have to comply with a wide range of regulations around data, such as GDPR.

Responsibility

AXA customers must provide consent for the company to access their data. Plus, AXA has implemented a specific platform to manage customer data that's totally separate from their other systems.

Forming a coalition to make a greater impact

AXA is going above and beyond internal AI responsibility by contributing to external responsible AI initiatives. AXA is a founder of Impact AI, a French coalition managed by Microsoft with over 65 members ranging from startups and enterprises to public entities. AXA's Detyniecki serves as a vice president of the coalition and leads the Responsible AI working group.

Responsibility

Recently, the working group released a practical guide aimed at helping organizations implement responsible AI governance. The working group is also developing ethics guidelines for AI and a trustworthy AI assessment tool.

AI in action: modernizing insurance

With the approach described above, AXA is using AI to modernize insurance.

AXA is at the forefront of using machine learning to calculate risk in areas such as property, life, and health insurance. With a more accurate understanding of risk, they've been able to decrease premiums on some products by as much as 5-10%, giving them a competitive edge in the industry.

Risk prediction is just one example of how AXA is putting AI to work. The organization envisions several concrete ways to use AI, including:

- Predictive models for a variety of use cases: Beyond risk prediction, AXA uses AI for things like predicting call volume at call centers. They use AI to analyze weather data and predict when requests for assistance will increase (e.g., in wetter weather) so that they can have capacity in place to meet the need.

- What Detyniecki describes as "understanding the world:" applications of AI that use tools like image analysis, natural language processing, or text recognition to analyze documents or photos. For example, AXA uses natural language processing models to identify key information in contracts and image recognition models to analyze images of tornado damage.

- Automation: For example, AXA is automating elements of its customer service to more effectively serve customers around the clock, across multiple channels and in multiple languages.

Guiding responsible AI into the future

AXA continues to explore the possibilities of AI throughout the organization and come up with new responsible approaches.

According to Detyniecki, their research team is working to find ways to debias data: "Even if the data is biased, we could then debias it in a very intelligent manner, thanks to the usage of an AI."

Responsible AI tools and practices are constantly evolving, and AXA is leading the charge in developing them.

Marcin Detyniecki

*Head of R&D and
Group Chief Data
Scientist, AXA*

Jerome Lafon

*Head of Connected
Car Domain, AXA
Smart Insurance team*

Learn how other companies have used AI successfully on the [Best of Business AI site](#) and the [AI Business School](#). The AI Business School includes modules on:

*Defining an
AI strategy*

*Enabling an
AI-ready
culture*

*Responsible
AI*

*Scaling AI
in your
organization*

*Enabling
business users
with AI*

AI Business School

**Learn tips and strategies for leading in the age of
AI with our online class**