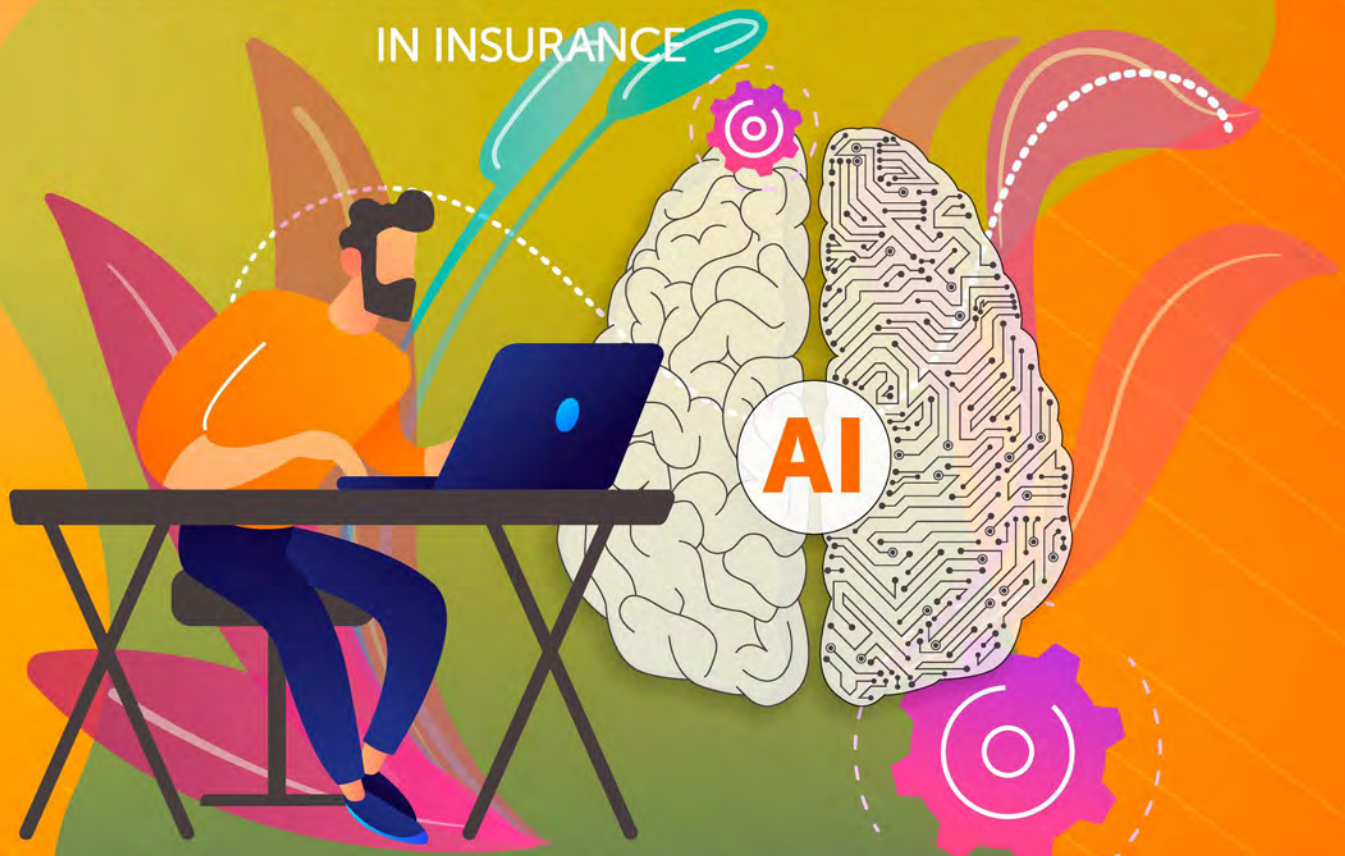
DEMYSTIFYING

ARTIFICIAL INTELLIGENCE

IN INSURANCE



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Topics:

WHY READ THIS EBOOK?

Artificial Intelligence is one of the key topics in every insurer's discussions. However, has it already demonstrated value in an insurance context? What technologies are considered part of Artificial Intelligence and what are the factors insurers need to take into consideration when investing in AI?

Artificial intelligence tends to be a term that has a lot of buzz around it. It is important for insurance professionals to understand the impact of the technology. This ebook will explain how it can be applied.

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Nicolas' research concentrates on insurance systems including life policy administration, customer communication management, predictive analytics and data technology providers.

Since joining Celent, Nicolas has advised multiple insurance companies and vendors on IT and business strategies including strategic IT program alignment, partnership evaluation, conceptualization of cross-country system implementations, and IT vendor selection and strategy.

What is AI to insurers

There are three components that make AI possible in insurance.

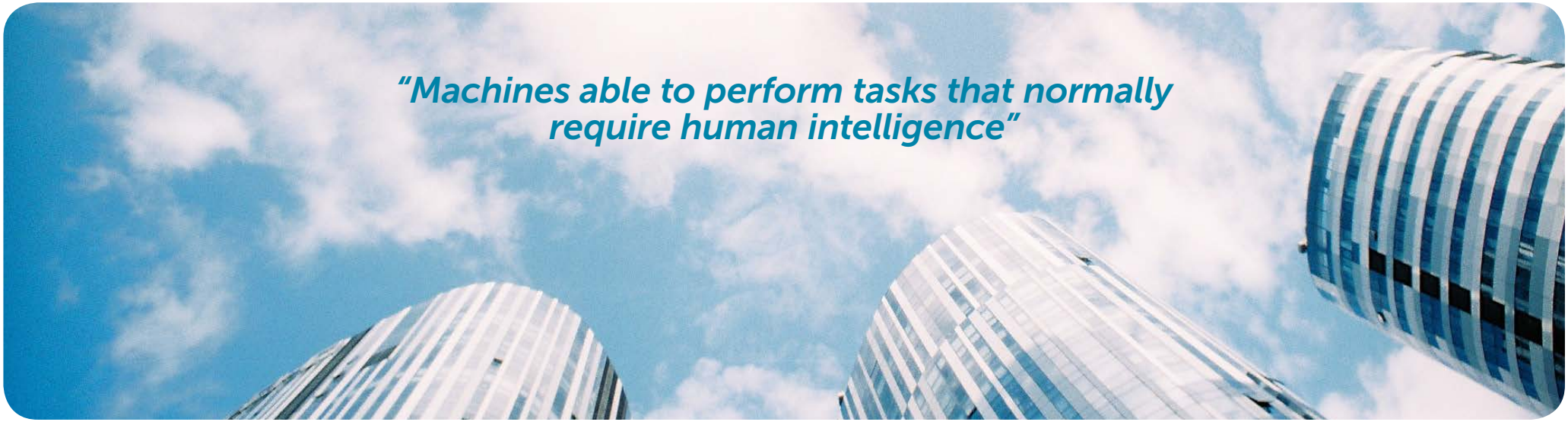
• Processing power. Processing power has evolved drastically over the past 20 years, with machines able to store and process information at a very fast pace.

• Data availability. It is very important for insurance companies to have access to a wide range of data types and sources to create holistic pictures of risk. The availability of internal and external data is growing exponentially and has a big impact on analytics processes.

• Algorithm improvements. You need to have the tools, technology, people and data availability to leverage this processing power and get the output presented in real-time.

Insurance companies are already doing interesting things in leveraging different AI technologies. Some of the technologies that are considered part of AI when asking insurers include: Machine learning, Deep learning, Neural networks, Natural Language Processing (NLP), image recognition, Speech/Voice Recognition, Data science, Robotic Process Automation (RPA), DevOps / DataOps.

It is interesting to see that AI professionals see other definitions then operational people. There are huge differences in common understanding of what AI is, as you can read in the FRISS study "Digital Transformation in Insurance." For this ebook, we will stick to the definition and technologies as mentioned.



IT is all about the data

Good results from applying AI is all about having good quality data. So, how to assess the quality of data e.g. from external vendors? There are three main types of data that can always be used in processes related to risk assessment at underwriting or fraud prevention.

• Internal data. This type can always be used.
It is available usually from the core system.

• Data gathered with the collaboration of the customer. For instance, apps which are used by the customer in exchange for discounts or extra service. This can always be used, as the customer has given their consent to make use of the data in return for the personal benefits.

• Data that need no pre-authorization. These include social media, forums, blogs and other online sources.

Priority would be to leverage the first two sources, because these provide the most direct value. The other can deliver a lot of noise as well. And it is well known that you "don't listen to everything if you want to hear something".

The customer in the end is the key supplier of data. Therefore it is also very important to take into account the rules and regulations. One of these is of course GDPR.

This is a pretty strict regulation when it comes to data protection. Also in comparison other countries / territories. When launching an initiative around data, it should be compliant. With GDPR when you collect sensitive data, you have to make the customer aware that the data is used to also train models and predictive analytics. That said, there is a lot of value even when complying with data protection regulation.

Click here to read the ebook on Data, data, data

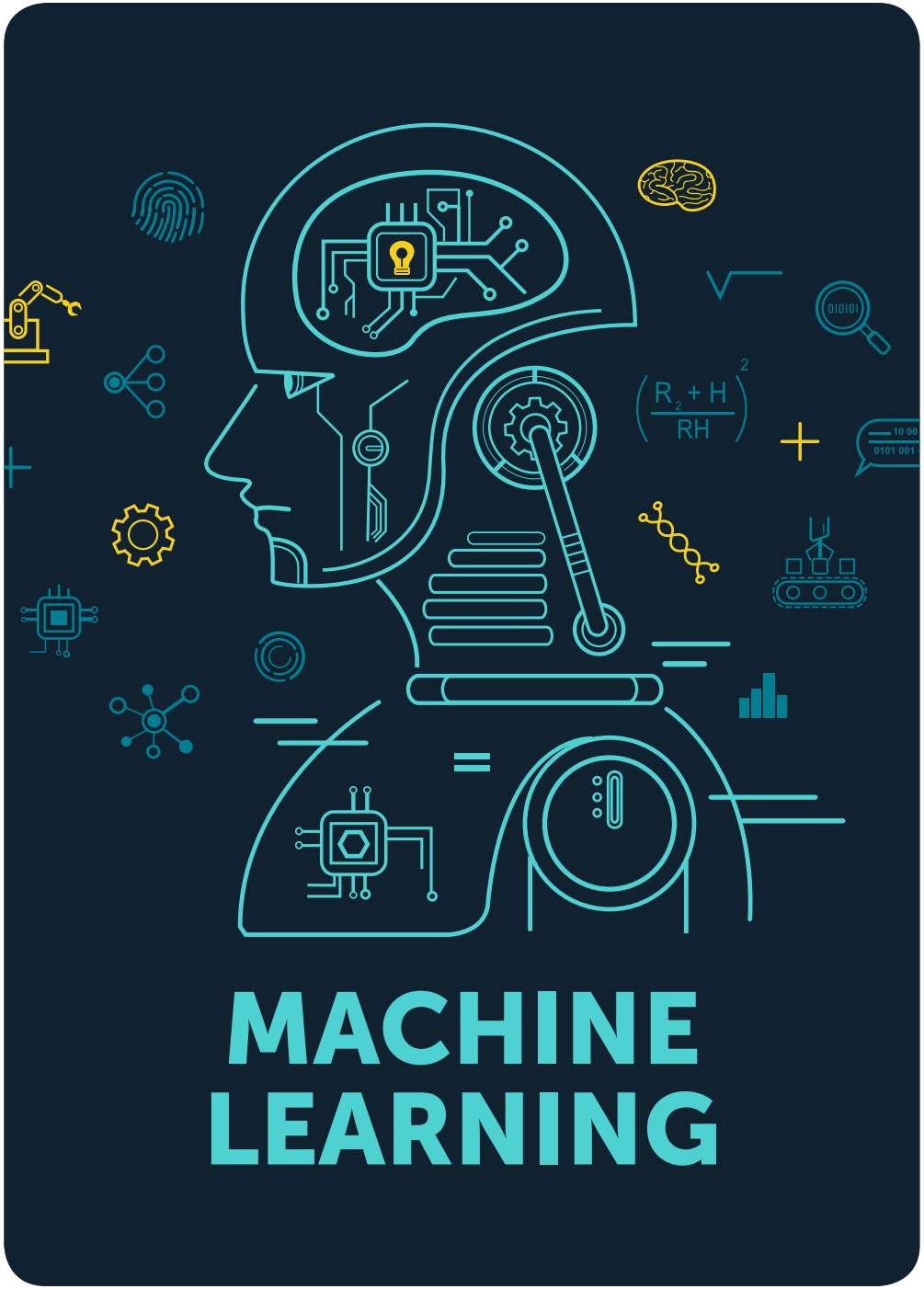
The potential of AI in claims fraud detection

It is important to understand that where insurance companies see AI can have a big impact on their business. Celent research shows that AI-related technologies can have the biggest impact when incorporated in the claims processes. Predictive fraud analytics is one of the areas that is expected to see broader adoption in the near future. The next area is utilizing AI for customer service improvements. Natural language processing has been around for a while now to improve customer interactions, trying to optimize and automate customer service.

If AI can be used to optimize claims processes and identify and mitigate fraud, there are more resources and time available to improve customer service. Technology has a direct impact on how you can free up resources to improve processes.

Click here to read "Trust your customer" ebook

The product development side, including underwriting, sees insurers using AI to optimize pricing. New types of data and models are used in order to price risks. It now goes beyond cost parameters, as predictive analytics is used in the context of pricing optimization to determine customer behavior and price elasticity.



Moving to AI fraud prevention

In fraud detection, a simple solution used by numerous insurers already is to deploy automated rules at a micro level. These can be deployed quickly and only require retrospective analysis. Defining fraud patterns would be a step up the ladder, where networks and organized fraud can be identified. This needs deeper knowledge and techniques. Implementing algorithms and predictive models further allow fraud to be reliably predicted in real-time. To do so, you need to have processing power, access to various data sources (both internal and external data) and be able to shape the data models. Providing feedback constantly improves the models while they are running.

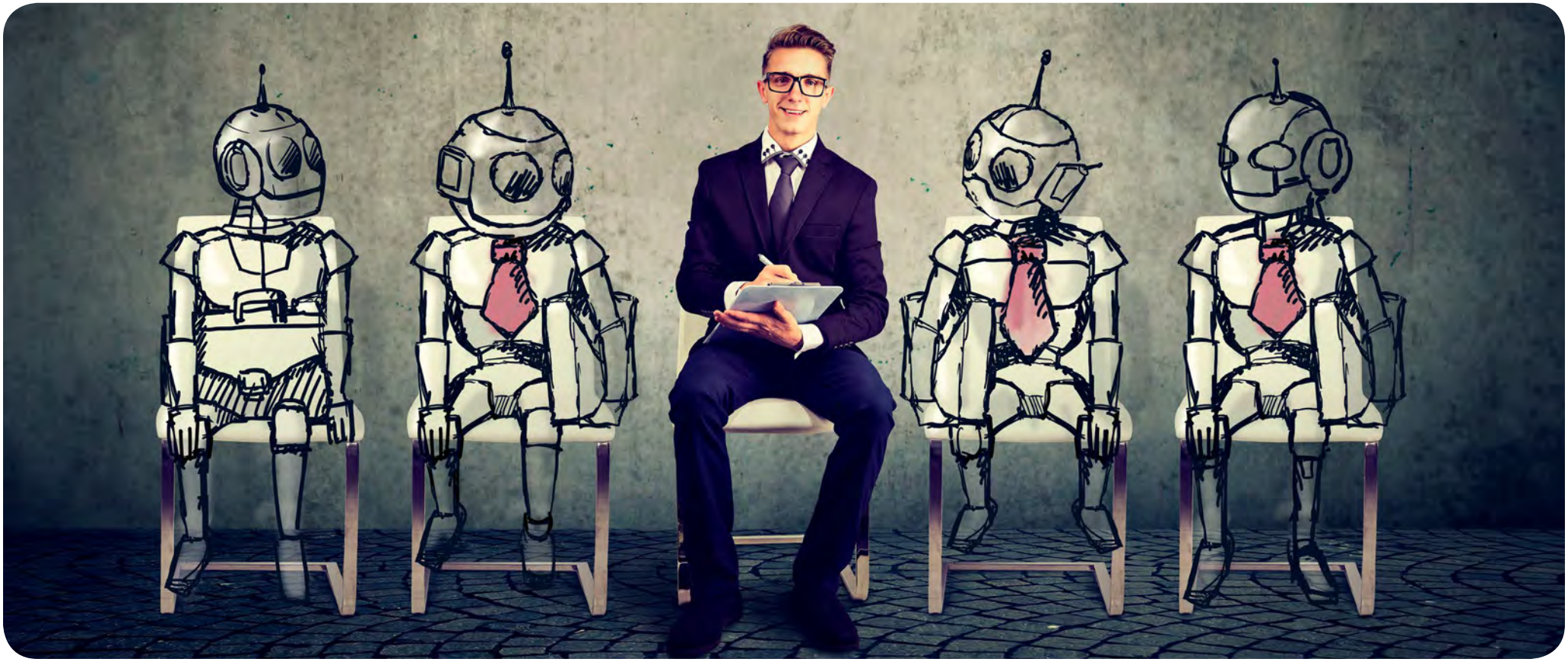
When it comes to better understanding fraud, it has become imperative to combine prospective and predictive analytics with real-time data. While basic rules may be defined in a core system, AI goes further using data to refine models and stay relevant over time. Models can also be used to detect fraud at underwriting to provide an alert when a suspicious person or company applies for a policy. This is especially important from a compliance perspective. Machine learning can be very powerful here, enriching data sources with all available information rather than only looking at the one application.

Implementation speed depends on the complexity of the problem to be solved. Simple problems would require some anticipation based on lessons learned from the past. More complex problems would require not only anticipation but also prospective and predictive analysis.
Insurance companies value AI in all areas as a key enabler of innovation. We are going to see more investment in these technologies because insurers understand there is a clear ROI and a quick payback period.

Human intelligence vs. AI in fraud detection

Machines should be optimized in the identification of patterns and scoring of potential fraud. Yet, human intelligence will still play an important part in special investigations. Claims adjusters and special investigators need to understand the field and leverage business expertise to derive the full potential of the tools that are available. Technology then provides the experts with insights of the bigger picture and standardized processes.

Analyzing all available data can be cumbersome, if not impossible, for an investigator. Information from other experts and historical claims can be helpful, but only if it's available in a useful format. The technology is ready for the scoring and identification of potential fraud in such a way that it can be presented in an understandable manner and really support the investigators or adjusters. The key is explainability, or "Actionable Insights," which are of the utmost importance.



There are 5 elements that should be taken into account when working with AI:

• Soundness: AI applications should be reliable and accurate, behave predictably, and operate within in the boundaries of applicable rules and regulations

• Accountability: Model complexity or third-party reliance should never be used as arguments for limiting the organization's accountability.

• Fairness: It is vital for society's trust in insurance that AI applications do not inadvertently disadvantage certain groups of customers.

• Ethics: This moral obligation goes beyond compliance with applicable legal requirements. Insurers should ensure that their customers, as well as other stakeholders, can trust that they are not mistreated or harmed, directly or indirectly, because of the firm's deployment of AI.

• Skills: From the work floor to the board room, a sufficient understanding of the strengths and limitations of the organization's AI-enabled systems is vital.

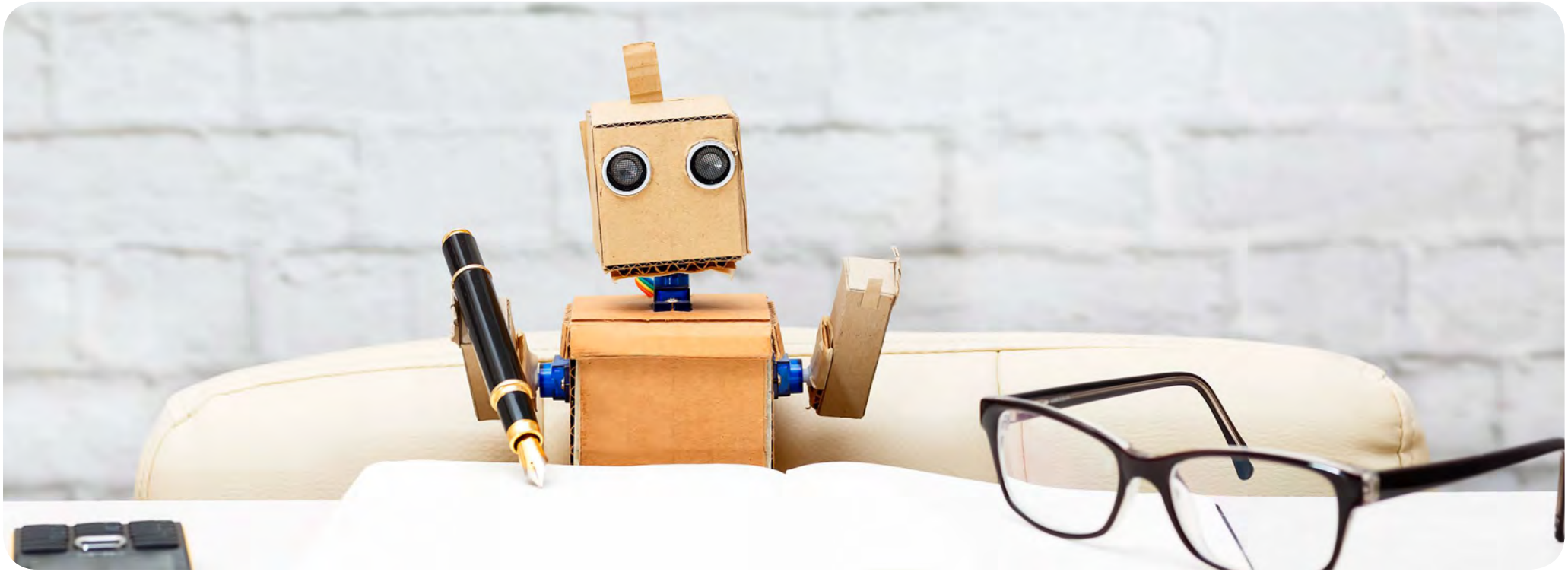
It is important for an insurance company to review the key aspects of their business and where they see bottlenecks. Many times, simple process optimization is a good start, freeing up time for employees to focus on the areas where manual work brings the best return.

Optimizing AI

A common goal in deploying AI is to save staff time. In the right context this can be valuable, however employees need a level of ambition to ensure AI is providing value to the organization. Data and feedback are important in developing models over time. As AI models improve, a bigger business case can be built for broadening their use across the organization. Ambitions can also be broadened as value is seen.

Improving accuracy is a function of consistent testing and learning. Then, improved accuracy can lead to more complex use cases. For example, starting with a simple chatbot on a customer-facing website can automate and speed up some of the simplest processes.

As these become more accurate and complex, AI can begin to serve larger, more complex and more time-consuming processes, such as touchless claims. Start with the low hanging fruit, prove the value, continue increasing complexity, and the outcome can surpass even the most ambitious expectations.



Build vs. Buy

When looking at new technologies, it is often a build versus buy discussion. Should we partner with off the shelf solution providers or get the knowledge in house and develop our own system? When building your own solution, keep in mind that hiring the right talent can be a though exercise. This can be especially true when looking to hire technical roles, like data scientists, who might prefer to work for a tech company over an insurance carrier. Hiring and retaining the talent needed for these big projects can also prove costly.

It is often faster (and more effective) to partner with a specialized vendor who has a proven system ready for implementation. When doing so, it's wise to select a vendor who can incorporate any AI initiatives you already have going, rather than replace them. This gives you the best of both worlds – a ready-to-use system augmented with the tools you've already proven to be useful.

Another point worth mentioning when building yourself is that you are limited to the knowledge within your own company and past experience. Working with a specialized vendor allows you to benefit from their knowledge of all implementations as well as new market trends, fraud schemes, insurtech innovations and emerging data sources.

It turns out that 66% of insurers are willing to work with external partners. Claims fraud detection vendors such as FRISS are good partners to work with, as they have proven, ready-to-use tools.

Click here to read a whitepaper about Build VS Buy

Recommendations

Without having a clear view of the business case, AI is not always a definite solution. You have to think about what challenges you're trying to solve and what people, tools, experience and technologies are needed to solve them.

The technology itself is not always the only consideration. When looking for a new solution provider, culture is an important success factor. Implementing AI needs a well thought through change management program, because culture is the biggest building block for success. Applying AI can easily change many of the organization's processes, systems and people. Therefore, the people need to be motivated and committed. This usually is a big challenge, because everyone wants change, but no one wants to change. It is the people that make or break a project. Data, skills and tools come in second. If you want to launch an initiative around AI, change management is key.

IT is often seen as a cost from a business perspective. However, when you have AI working for you, whether in the underwriting, claims or pricing departments, it should be considered a gain in the bigger picture. It will drive growth and innovation in order to attract better customers and help maintain a profitable book of business.

Keep in mind that although there is a lot of buzz surrounding the use of AI, it should be carefully considered to ensure you realize the best value from it. The fight against fraud is a good starting point when introducing AI in the organization.

ABOUT FRISS

FRISS is 100% focused on automated fraud and risk detection for P&C insurance companies worldwide. Their AI-powered detection solutions for underwriting, claims and SIU help 175+ insurers grow their business. FRISS detects fraud, mitigates risks and supports digital transformation. Insurers go live within 4 months, realize 10 times ROI and 80% increase in straight through processing of policy application and claims. FRISS solutions help lower loss ratios, enable profitable portfolio growth, and improve the customer experience. For more information, please visit www.friss.com.

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