

# INSURANCE NEXUS

## Insurance AI

### The Roadmap to Impact

With Contributions from:



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Head of Artificial Intelligence  
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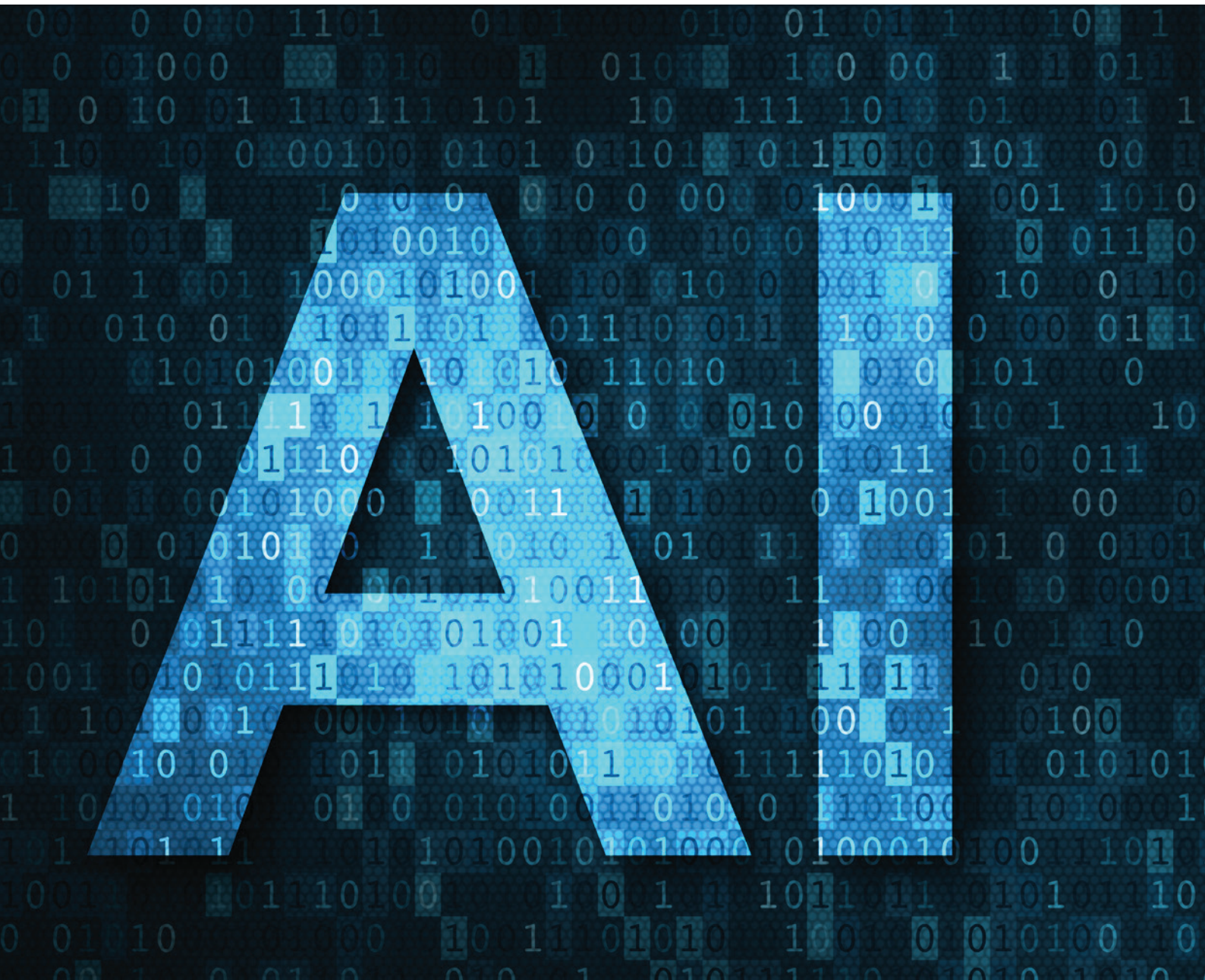
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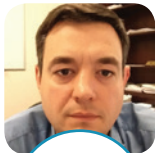
**CCA Global Partners**



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### Insurance Nexus in association with CCA Global Partners explores how AI will impact the insurance industry

#### Insurance Artificial Intelligence: The Journey towards efficiency and customer engagement

It's hard not to use the language of science fiction when talking about Artificial Intelligence (AI). Machines that can read information, act, learn, adapt and create feel alien, far away from our experiences today.

But it is a fact that AI – of a kind – is already in use in the insurance industry today. As early as 2015, Tata Consultancy Services put the average investment in AI *per insurer* that year at \$124m<sup>1</sup>.

What insurers are investing in today is arguably not AI but its foundations. "Today, AI is in a development stage. It is the very practical use of technology for the simplification and automation of processes, leveraging some defined rules around the overall business," explains George Hansen, Claims Actuary, General Insurance, Zurich Insurance.

Insurers believe AI has the potential to transform their business model, delivering cost efficiencies, generating new product lines and improving customer engagement. Like any sector-wide transformation, it is an iterative process and one that sees some players better able to adapt than others.

"There are some organizations in insurance that will be more ready for AI than others and it's the ones with the ability to harness data and leverage skilled engineers, programmers and automated platforms" said Imir Arifi, Imir Arifi, senior director, business solution consulting, Health Care Service Corporation.

In this paper we look at the type of insurance capabilities AI is most likely to influence in the near future and how insurers can prepare for it today.

#### AI and insurance 2020: Two speed insurance

Experts agree that in the interim we are likely to see a two-speed insurance landscape as the old meets the new. For the insurance customer, the most obvious example of this will be new types of insurance product.

Technology is making customers' environments 'smarter'. Homes are less susceptible to fire, flood and theft because of smart monitoring devices. Cars are driven more safely and are less likely to break down because of preventative maintenance. Even health is proactively managed using apps and wearables to encourage active lifestyles and monitor vitals as an early warning system.

"In the property space, we are beginning to see two distinct books of business. One will require claims solutions for all the advancements the industry has seen so far – with respect to smart home technology. By defaults, the other book will center on those figuratively 'ignorant' properties. The pace of smart home construction

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<sup>1</sup> <https://business-reporter.co.uk/2018/01/26/artificial-intelligence-giving-control/>



will make smart insurance statistically meaningful by 2030 and by 2050 it will be responsible for radical change and ensure that virtually all insurable physical property will have the DNA of the smart home," states Gregory Johnson, Senior Vice President, CCA Global, Strategic Partners Group.

### AI and Insurance 2020: Finding beauty in the data

Pattern recognition is and will continue to be one of the major benefits of AI. Already helpful in identifying fraud risks, it is going to prove increasingly valuable in managing insurer exposure.

"We're already looking at AI in some of our high severity books. We run those through the AI model to look at the notes that are in there, looking for combinations and connections that the claims handlers are putting in, identifying high exposures and then putting team leaders on it to make sure they proactively address those cases," Hansen reveals. "We identify through the history of a claim, starting at FNOL, flagging anything with potential for business interruption and that kicks off the forensic accounting unit, who then work to quantify and limit the exposure."

The ability to find the 'unknown unknowns' in the data allows insurers to refine their offerings. It's a win-win for insurer and insured. The risk to the company is reduced as more factors can be weighted and the customer is given coverage that more accurately reflects their need.

### AI and insurance 2020: The rise of the machines?

There is natural concern among both customers and the insurance workforce that people will be replaced wholesale by machines. Not only is this unlikely in the short term, but most executives believe this will never be fully realized. That's not to say automation won't reshape the employee landscape:

"How far you can automate comes down to where insurers use human intervention to add value. But even then, the issue is to define what it is to 'add value'. That becomes broader and broader as AI becomes more sophisticated. In the foreseeable future we will have AI intervention in a lot of customer contact processes. You either won't need as many people, and people who are there will need to handle the more complex tasks," explains Hansen.

"A significant amount of our business processes will be automated – with an ability to handle exceptions where customization needs to occur. But in general, many of our processes have the perfect infrastructure to move into AI – it's all logic driven decision criteria on structured data sets," explains Matt Marino, AVP, Operational Effectiveness, Unum.

One such example would be in first notification of loss (FNOL): "You want it as fast as possible and get approvals in for everything that can be done automatically. That's good for customers and good for the business. Simplifying workstreams and zero touch operations are the opportunities in AI that come to mind," Marino adds.

"Simplify processes as much as possible," Hansen advises. "Streamline mundane activities that don't add value to that process. If a system can quickly validate a

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simple claim and give the customer a cheque, that's certainly a benefit in getting them swiftly back to their pre-loss state.

### AI and insurance 2020: Intelligent prospecting

AI is all about making intelligent connections in data. While this is already underway in certain parts of underwriting and claims processing, it has seen limited use in customer acquisition. That's a big missed opportunity, according to Johnson:

"The big deficit that's not being addressed is better using AI and InsurTech to make the connection between insurers' existing book of business and the next generation. With advances at the organisational level, how do we use technology to better ensure that the grandchildren of our existing clients become our customers."

Carriers focus a great deal on the recommendation potential of a positive claims experience, but fail to segment those word of mouth targets by their relationship to the insured. AI gives them visibility on that information.

Making connections is more than just finding customers with closer ties to the carrier brand than the general population. Building relationships with customer's family members would be considered by many to be a value-added proposition:

"This is about taking a leadership role in crafting solutions for customers that they don't yet know they're going to face. Undiagnosed dementia for example. How do we leverage technology to help manage the claims experience when the children and grandchildren may not know that their parents aren't quite right? Such solutions are not just about risk mitigation for the insurer, it's about the right thing to do," Johnson says.

Johnson believes insurers don't look far enough into the future to anticipate attrition and that using AI to make those connections is the answer. "Life insurers are just as guilty of failing to forward plan. Because there is no meaningful relationship or connectivity between the generations, there are a vast amount of annuity and life insurance disbursements that don't make their way back to those insurers."

### AI and insurance 2020: Limitations

There will be elements of the insurance landscape that will prove too involved even for AI to manage, Hansen adds. "There are processes outside the insurance world. Litigation means it takes time to settle complex claims. Workers Compensation insurance has to take into account subjective assessments including things such as maximum medical improvement. It isn't around facts, it is up to individuals to make the correct assessment. AI can help but it can't take over."

The use of the word 'involved' is deliberate. It implies many moving parts, incompatible situations and data sets but most importantly, it implies a constantly changing landscape presenting new challenges.

We're delving into semantics because often people refer to some situations as being too complex for AI to manage. AI is incredibly proficient – it eats complexity for breakfast. However, Arifi warns: "Complexity is not the challenge. The real

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challenge and where you want to be careful is repeatability. Machines can zero in on complexity. We can build complex neural networks. But if the case occurs rarely, if it's something that hasn't been observed, AI isn't possible. It can't make one-off strategic decisions."

Quite simply, if you don't have the data to train the algorithm, you can't use AI.

These are just some areas where AI is likely to impact the insurance sector in the near future of 2020 and beyond. To capitalize on these advances, carriers need to start taking action today, if they haven't already. From legacy systems to corporate culture, there are still many challenges to address.

### Preparing for AI – making the business case

One of the biggest challenges is taking the first step. There is an understanding that investment must be made:

"In large companies, the vast majority of AI or machine learning projects hugely impact the bottom line and customer experience. Certainly, the industry is beginning to understand that AI and advanced analytics will be part of the next industrial revolution," Arifi states, adding: "Even if the use cases are not as detailed as we'd like them to be, that's the way society is going."

But understanding intellectually that there will be some need to adapt to AI-based processes by 2020 and beyond is one thing, figuring out how to make it a reality in each organization is quite another. It is the difficulty in linking a vague sense of future need with current insurance pressures that is challenging executives who want to see AI in action today.

"One of the biggest stumbling blocks has been defining what the objectives of AI are," claims Hansen. "You cannot build an AI model without defining the problem we are trying to solve."

For many, that starting point for investing in AI has been its ability to create cost efficiencies. Insurance executives are spending to save: "Ironically, we started with looking at how we minimise our IT investments in legacy systems, and we are starting with how we can apply robotics to deliver better customer experiences with less IT investment and time required. We have been looking at the lower expense options to replace old systems. There is significant opportunity here," Marino explains.

### Preparing for AI – developing the culture

The general belief has been that insurance leadership teams understand and support the integration of AI. They also know that business transformation is necessary. However, Johnson feels progress may not be as significant as we are led to believe. It seems that buy-in may only be skin deep:

"There's a lot of lip service. There are pockets of really robust executive thinking around InsurTech and AI but it's also incredibly siloed. There also is a tremendous level of protectionism in place."

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Unum's Marino agrees: "A lot of the work AI and automation is suited for is prevalent within insurance companies. Being able to partner with the business leaders to demonstrate how AI and automation help an organization is critical. It's going to come down to getting the business to test and learn to discover that there is more science in that process than they would believe. If we lead these efforts as IT driven projects instead of building capabilities with business leaders adoption will be slowed significantly."

Johnson explains that the personal history of senior insurance executives may color their view: "The generation of executives who populate senior leadership today tend to have risen through the ranks. They were adjusters and underwriters who worked their way up. This will be in sharp contrast to the next generation of claims leaders who will have backgrounds and expertise in big data, mathematics and technology."

He goes on to add: "There's also a disconnect between the evolution of InsurTech and the board and governance community. Their focus is on an already crowded dashboard and they haven't yet been baptised into this brave new world. This small but influential group of stakeholders is now being asked to fund technology initiatives that will make stark changes to a legacy business largely unchanged for a century. The key to quicker adoption is ultimately bringing the governance community up to speed."

"This technology is highly disruptive but the challenges around technology have largely been resolved. If you have the drive and the budget you can do it. You need executive sponsorship to support engagement because implementation takes time and resources. But you also need true believers at the grassroots level because they have to be willing and able to do the work. You can't expect change overnight." Arifi adds.

Change may not be coming overnight but it is imminent: "We are at a tipping point where the pressures on profitability from other parts of the business are compelling companies one by one to look harder and more seriously at making substantive change. More carriers are being forced, rather than running willingly, into strategic AI investments because they're experiencing other tremors on their balance sheet," Johnson says.

### Preparing for AI – hiring and firing

A significant worry for senior leadership is to find the skilled employees that can deliver AI seamlessly into the organization. Without knowledge of their own, they are looking to experts to drive the function internally. The challenge is, that in this brave new world, no-one really knows what today's crack AI team looks like:

"We haven't nailed down how our team supporting these new capabilities will be formed. As we look at building out new capabilities we will evaluate talent that is available in the workforce as well as strategic partnerships," Marino explains.

Johnson refers to the notion that there might be a single AI leader who can embody all the competencies with respect to technology and science, strategy and finance and the customer experience ethos as a 'unicorn'. In other words, such a person doesn't exist.

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"You don't try to hire someone with all the skill sets but you do make sure you bring those skill sets to the table," Hansen elaborates. "Data scientists have skill sets used across a lot of different industries that are transferable to AI in insurance."

"The real limit is the availability of talent," Arifi admits. "You need someone with at least three core competencies. Someone who understands the data, understands the business, and understands coding but also understands the mathematics of what you're trying to do. Getting that in a single person is pretty rare."

It looks as though 'AI by committee' is the way forward: "You need leadership to understand how integrating AI has been successfully completed in another industry or organization. Then you need to set up teams and ingrain standards for the projects they're charged with. It's unavoidable. The whole field is so new that everyone needs some training. There are no turnkey solutions."

In Zurich, Hansen says, they have built a 'team of all the talents.' "The data scientists are in house and have a lot of experience; some have actuarial experience, others come from an AI background. A lot of companies struggle to build that. Talent is available and it doesn't have to come from the insurance industry."

"But," he adds, "you can't just throw a problem at that team. You need to get the business knowledge, have subject matter experts and senior management all together identifying the problem that needs to be solved and figuring out how it fits into the business flow."

### Preparing for AI – looking for leaders

It would appear that the insurance sector is on a relentless shift towards an AI-driven universe and the only question is how far or fast they can go with the tools they already have.

There will be no 'overnight sensation' as organizations build or buy in capability; advancing and enhancing parts of their proposition until the data and strategy is in place that takes the industry into a truly 'intelligent' future.

Insurers are getting more comfortable with adopting innovation, but that's not to say they are generally willing to take the first step:

"Progress towards AI is going to be incremental. I'm holding out hope for a couple of players to be bold and think about how they're going to be leaders in this space," Marino suggests.

What is clear is that AI will transform the sector over time and that insurers must find ways around the challenges they still face to remain relevant to their customers:

"We don't have to look very far to see what's coming in the way the big, established players adapt. Within the wealth management space, at the dawn of the roboadvisor trend, the establishment laughed at the concept. After all, who was going to trust their investments to an algorithm? Fast forward 15 years and the big players have either developed proprietary models or acquired them outright. Insurers will go the same way across the full spectrum of technology solutions," Johnson concludes.

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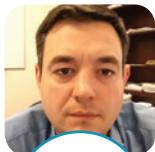
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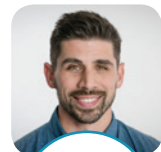
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