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AI

HOW SMARTER TECHNOLOGIES ARE TRANSFORMING THE INSURANCE INDUSTRY

AI WILL DRIVE THE NEXT WAVE OF INSURANCE DISRUPTION

New artificial intelligence technologies will enable insurers to redefine how they work, how they create innovative products and services, and how they deliver customer experiences.

Artificial intelligence (AI), which enables machines to simulate and augment human intelligence, is coming of age at a time when insurance and other industries are facing widespread digital disruption. Competition is fierce. More than half of Fortune 500 companies have gone out of business since 2000. And AI is set to take this disruption to a new level.

Although AI technologies are still evolving, they already have the capacity to enable tangible, real-world business outcomes. Across all industries, they're being used to address a wide range of challenges by making interactions with machines and systems smarter and simpler. Insurance companies, too, are entering the intelligence age. And they're doing so while already under intense pressure on multiple fronts.

Whether it's intelligent automation replacing repetitive manual tasks, workers augmented with enhanced judgement, improved interactions with customers, or the development of intelligent products, the technology will drive growth, profitability and sustainability across the board for insurers that grasp the opportunity it presents.
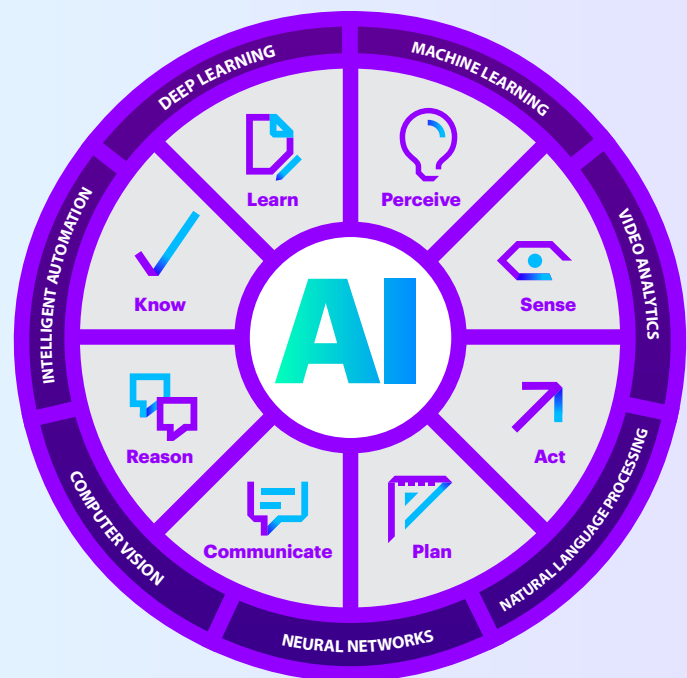
KEY TAKEAWAYS

- **AI will allow insurers to redefine existing processes, create innovative products and transform customer experiences.**

- **Insurers must adopt a people strategy that adapts, upskills and augments the human workforce.**

- **They must evolve how they work, from simple RPA towards AI-powered intelligent decisions.**

- **They must unlock trapped value in new and existing datasets, by allowing AI to leverage data in creative ways across the entire value chain.**

AI EXPLAINER

We define AI as: a computer system that can sense, comprehend, act and learn. In other words, a system that can perceive the world around it, analyze and understand the information it receives, take actions based on that understanding, and improve its own performance by learning from what happened. And by enabling machines to interact more naturally—with their environment, with people and with data—the technology can extend the capabilities of both humans and machines far beyond what each can do on their own.

Applied intelligence takes this a step further. We use the term to describe the application of intelligent technology and human ingenuity at the core of business—across every function and process—to address an organization's most complex challenges, break into new markets or generate entirely fresh revenue streams.

The term 'AI' encompasses many different technologies and capabilities

AI wheel diagram. Center: **AI**. Inner segments: Learn, Perceive, Sense, Act, Plan, Communicate, Reason, Know. Outer ring labels: DEEP LEARNING, MACHINE LEARNING, VIDEO ANALYTICS, NATURAL LANGUAGE PROCESSING, NEURAL NETWORKS, COMPUTER VISION, INTELLIGENT AUTOMATION.

[HUMAN XPROCESS XDATA]AI

The insurers that benefit most from AI will be those that are prepared to rethink their approach to their people, their processes and their data.

Dramatic advances in AI are taking place just as insurers are facing huge pressures. Competition is heating up, new entrants are disrupting existing business models, and technology is advancing at an exponential rate. Consumers' expectations of their insurers are growing, spurred by rapid technological advances in other industries.

As a result, insurers must find new ways to improve operational efficiency, drive product innovation and transform customer and employee experiences. Why can't a customer track the progress of their insurance claim in the same way they track their Amazon delivery or their Uber driver, for example? This is just one way insurers lag other consumer-facing industries when it comes to engaging with end-users.

What's more, insurance products are themselves changing. Insurers are evolving away from a pure compensation model towards one characterized by accident prevention and risk mitigation. To make these new offerings work, insurers must be able to monitor and proactively respond to vast amounts of data—from connected vehicles, for example— and often in real time. The speed and scale of the analysis and actions required to make use of that data are simply beyond human capabilities.

These changes call for a revolution in products and customer service. And insurers recognize that AI will play a defining role. In fact, 63 percent believe intelligent technologies will completely transform the industry, according to Accenture's Future Workforce Survey.

Most insurers around the world report that they're investing more in AI technologies than they were two years ago, and that they plan to increase their investment in future. Insurers have found the results of their initial investments to be encouraging, and realize that constant advances in AI capabilities are opening the door to ever more transformation—especially in product development, risk management and the customer experience.

Insurers are investing significantly in AI technologies

% of insurers who anticipate making moderate or extensive investments in these areas over the next three years:
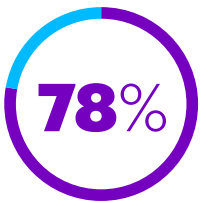
78% — Deep Learning

81% — Embedded AI Solutions

81% — Machine Learning

71% — Video Analytics

78% — Natural Language Processing

Data from Accenture's Technology Vision for Insurance 2017

Insurtech start-ups also understand the importance of these technologies. Many have put AI at the heart of their strategies. Their workforces use AI tools as naturally as they would a pen and paper. Accenture's global analysis of more than 450 insurtech deals revealed that the number relating to AI or intelligent automation roughly tripled between 2014 and 2016.

Human x Process x Data

How should insurance organizations best make use of AI's extraordinary new capabilities? With an intelligent framework that augments their people's work, rethinks how they operate with intelligent automation, and unlocks growth through data.

**PROCESS
Re-imagine business models and processes**

Smart machines will continually review end-to-end processes and apply 'intelligent automation of process change' to refine and optimize.
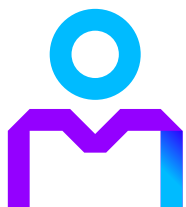
**HUMAN
Transform relationships**

Using AI, people will be able to spend more time on exceptional work: the 20% of non-routine tasks that drive 80% of value creation.

**DATA
Illuminate dark data**

Companies will apply AI to greatly enhance large data analytics, evolve algorithms with transactional data faster, and combine data in new ways to discover trends.

HUMANS: AUGMENTING YOUR WORKFORCE

Forget about 'humans versus machines' – AI is about 'humans augmented by machines'

Many insurers are already investing heavily in technologies like deep learning, video analytics and natural language processing. Exciting as the technology is, insurers won't be able to unlock the full potential of AI unless they can successfully support their existing human workforces in adapting to AI. That includes fostering the right corporate culture and skills base.

Insurers need to develop strategies that deal with adapting, upskilling and augmenting their existing workers. Retraining will be essential as virtual customer service agents and chatbots automate routine tasks, freeing human representatives to focus on higher-value activities. Functions like underwriting and pricing will also increasingly rely on machine learning algorithms rather than human experience and judgement.

Employees must understand that technology is a powerful enabler and not a threat to their livelihoods. AI will create new jobs—perhaps even entirely new categories of jobs—for the human workforce. For example, insurers will almost certainly need more people working in control and governance functions because virtual workers and algorithms will require some human supervision. In fact, 68 percent of insurance CXOs forecast that intelligent technologies will result in a net gain in jobs at their companies in the next three years, according to Accenture research.

Insurers that make extensive use of AI technologies will need humans (data scientists, AI developers and others) with the skills to build, use and maintain them. That means attracting some of the best digital talent into what is perceived to be a slow-moving, traditional industry. Accenture's Technology Vision for Insurance 2017 found a third of insurers citing 'a lack of expertise in using these technologies' as a barrier to adopting AI.

To respond to changing business needs in an agile manner, insurers will also need to complement their own human and virtual employees with external resources. New technologies will oblige insurers to forge new partnerships, with AI vendors and insurtech start-ups, for instance. And to do so, they may need to fundamentally redesign their approach to outsourcing.

Insurers will need to implement responsible and ethical AI practices to ensure trust and transparency, especially given the sensitivity of the data they have access to. That means developing strict guidelines for the use of AI, as well as fully auditable and regulatory compliant processes.

68 percent of insurance CXOs forecast that intelligent technologies will result in a net gain in jobs at their companies in the next three years

HUMANS
&MACHINES
WORKING TOGETHER

52% **... of insurance CXOs believe human-machine collaboration is important to achieve their strategic priorities**

61% **... of insurance CXOs expect the share of roles requiring collaboration with AI to increase in the next three years**

68% **... of insurance workers believe Ai will have a positive impact on their work**

Source: Accenture Future Workforce Survey, 2017.

PROCESS: INTELLIGENT AUTOMATION

Intelligent automation should not simply be about automating existing human processes, along with their flaws. It should be about fundamentally redefining these processes— maybe even the business model— to achieve the best outcomes.

Insurers have laid solid foundations with robotic process automation (RPA)—creating rules-based virtual workforces with the ability to scale. Now they need to build on those foundations with intelligent automation—virtual workforces that can learn and adapt to the needs of the business. That means complementing RPA with newer AI technologies and evolving from pre-programmed execution to intelligent decision-making.

The industry anticipates that customer service will see the most radical improvements from

this shift. Intelligent, end-to-end solutions will connect the front and back offices in ways that were previously impossible. For example, they'll give human customer service representatives access to the most relevant customer data, or they'll advise a claims handler of the next best action to take during a difficult or emotional phone call. And they'll create frictionless experiences for customers, such as offering the same high level of customer service at any time and on any device.

Insurers expect AI to completely transform the way they run their businesses in the next three years
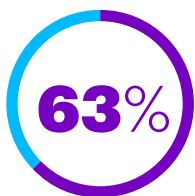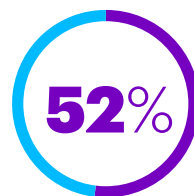
Insurance CXOs agree:

75% Our organization will automate tasks and processes to a large extent or a very large extent in the next three years.

67% Adopting intelligent technologies will be critical to the organization's ability to differentiate in the market.

63% Our organization will be completely transformed by intelligent technologies.

52% Smarter decision-making can only be achieved through intelligent technologies that can generate information in real time.

PROCESS: INTELLIGENT AUTOMATION

It won't just be customer service representatives who see the benefits of these smarter processes. The wider workforce will also win. Taking repetitive, easily automated tasks away from skilled, experienced workers frees them to deliver higher-quality work, allowing them to focus on tasks or customers that need a human touch. And their working lives will become more interesting in the process.

Embedding intelligent decision-making into insurance processes is already making an impact. South African insurer Santam uses predictive analytics and machine learning to reduce fraud and improve operational efficiency. The initiative saved US$2.4 million in its first four months, and has allowed Santam to accelerate half of processed claims by leveraging straight-through processing.[1]

Japanese life insurer Fukoku Mutual is using AI to interpret medical certificates and factor in the length of hospital stays, medical histories and surgical procedures before calculating pay-outs to policyholders. It expects the system to increase productivity by 30 percent and generate a positive ROI within two years.[2]

This is not to say that RPA is obsolete. Traditional forms of automation have a role in augmenting AI-centered processes. They can be used to carry out actions across underlying systems once intelligent decisions have been taken. And they can generate cost savings to fund further capabilities in intelligent automation.

CASE STUDY:

Intelligent first notification of loss (i-FNOL)

During your morning commute, you collide with another car while tuning your radio. You contact your insurer's claims hotline, preferring to speak with a human being, and complete a basic FNOL report. The claims advisor establishes that you were at fault and asks you to upload photos of the damage via an app on your phone.

The system uses computer vision and machine learning to analyze the images, confirms that you had an at-fault accident, and automatically organizes for your car to be collected and for a courtesy car to be delivered. While you wait, you receive progress updates via the app.

Simultaneously, a separate algorithm automatically scores the claim. As the predicted risk score for personal injury is high at 63 percent, the claim is pushed to the Claims Dashboard App to be reviewed by a specialist claims handler. The handler contacts the other driver immediately to arrange car repair, a courtesy car and free physio sessions for whiplash.

DATA
UNLOCKING GROWTH

Unlocking trapped value will do more than save costs. It will create entirely new products and services for future growth.

Insurers have invested significantly in technologies and people to support using data for pricing and risk management. But their focus on traditional actuarial capabilities means that data hasn't been leveraged as widely as it might have. Insurers should start using AI to unlock the hidden value in their data—for example, by interrogating and visualizing enterprise and customer data in ways that have not previously been attempted or considered.

In doing so, data mustn't be kept isolated in silos, or restricted to one part of the value chain. Instead, it should be leveraged across the whole business. Rather than using customers' claims data only to identify fraudulent behavior, why not also use it to generate insights to design better insurance products? Or use real-time analysis to anticipate customers' needs and offer them a product or service before they even realize they want it?

Zurich, for example, is working with EagleEye Analytics and its Talon Predictive Analytics System. Machine learning algorithms produce real-time scoring to better inform decisions in claims management, pricing and underwriting, marketing and distribution.[3]

Insurers should look beyond their own datasets to unlock growth. New types of external or public data could let them tap into new revenue streams. And taking an innovative approach to data will often serve as a catalyst for innovation in other parts of the business.

Using AI will generate richer data insights for insurers, and may even open new revenue streams

55% ...of insurers expect their firm to benefit from additional data analysis and insights as a result of adopting AI.

52% ...of insurers expect their firm to benefit from increased revenue opportunities as a result of adopting AI.

Source: Accenture Future Workplace Survey, 2017.

A free coffee to keep you on the road.

Picture yourself at the wheel of your car three years from now. It's late. You're on the highway and you're so tired that you're in danger of having an accident. Your virtual assistant pops up on the dashboard or phone to let you know it thinks, based on your telematics data, that you may be tired. It starts a conversation about the Olympics since it knows you're interested from the data to which you've given it access.

As you talk, the virtual assistant analyzes your voice and decides you're too exhausted to be driving. So it offers to buy you a coffee at the next service station—paid for by your auto insurer. Buying coffee for a couple of hundred drivers a night is still cheaper than dealing with a single insurance claim.

CONCLUSION

AI will transform the way the leading insurers of tomorrow organize, run and grow their businesses. They'll use it to reduce costs, fuel innovation and create better experiences for customers. They'll adapt their workforces and operating models, while implementing strict guidelines to ensure the technology is used responsibly and ethically.

Most of all, they'll show their human workforces that AI is not a threat, but rather a tool that will empower them to reach new heights in their working lives. The technology is already here. It's time to get smart and get ready for intelligent insurance.

AUTHORS

Roy Jubraj
Insurance Strategy and Innovation Lead, UK&I
kadesh.r.jubraj@accenture.com

Sharad Sachdev
Financial Services Artificial Intelligence Lead,
North America
sharad.sachdev@accenture.com

Simon Tottman
Global P&C Insurance Research Lead
s.tottman@accenture.com

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