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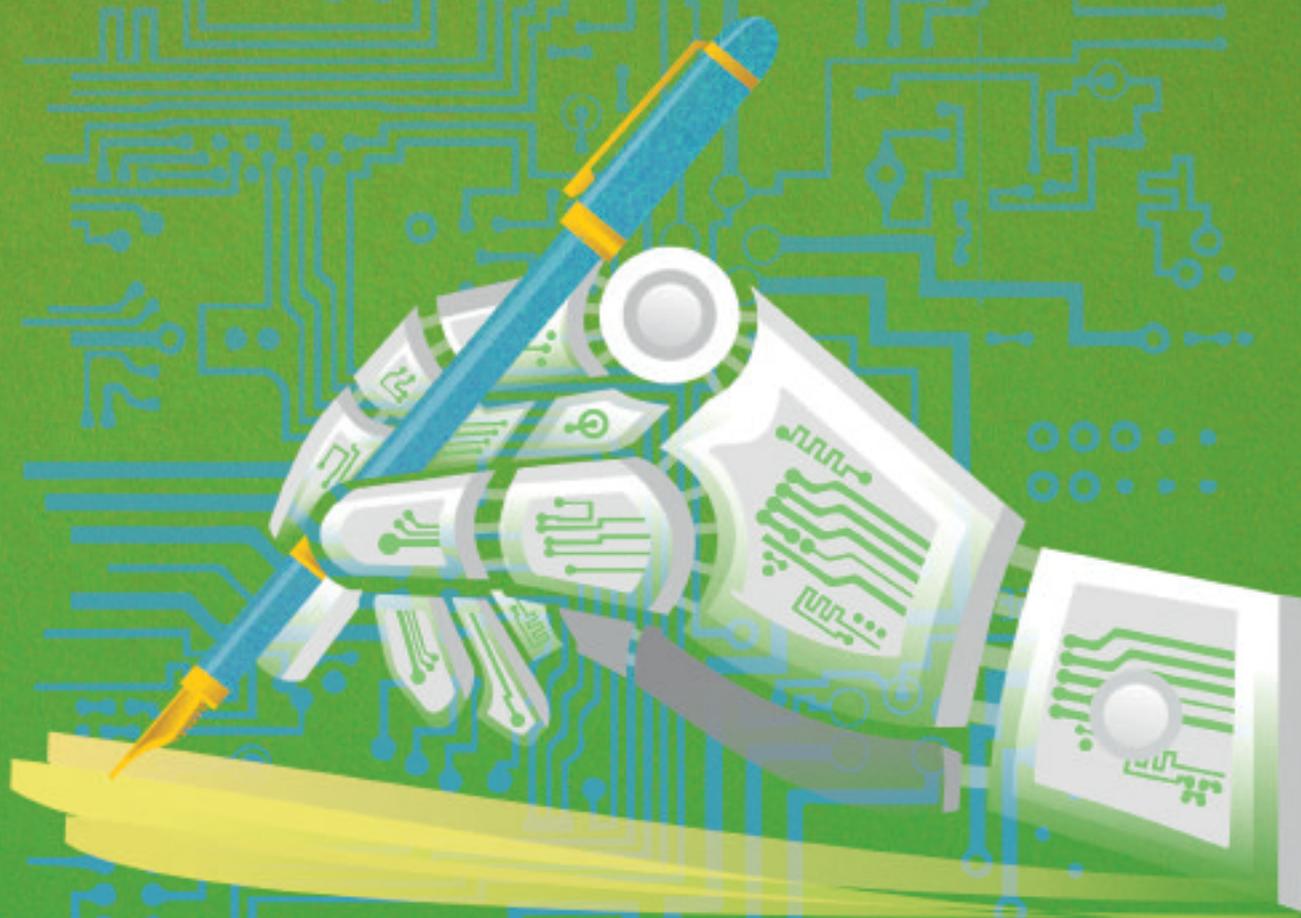
Why innovation is
vital for reinsurers
in the year ahead

A NEW REVOLUTION

How technology
will transform
(re)insurance

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**Industrial revelation:
An evolving sector**



4IR

THE GAME CHANGER

We are on the brink of the fourth industrial revolution – what does this mean and how will it affect the (re)insurance sector? By Samera Owusu Tutu

Many in the industry started the new year with reports of a Japanese insurance company replacing 34 claims handlers with one supercomputer, the IBM Watson Explorer. The firm, Fukoku Life Insurance, said that it anticipated a 30% reduction in the burden of business processes as a

result of the computer's introduction.

The reports not only shook the industry to the core, it brought into stark focus the changes in the way we will work in the future.

At the heart of these emerging technologies is a phenomenon known as the fourth industrial revolution (4IR). It's a term that's growing in significance, as it underpins the technological evolution in how we

work, rest and play. As such, it was flagged as intrinsic to modern global risk by the World Economic Forum.

So what does all of this mean for the reinsurance industry now that these technologies are on its doorstep? Before we can assess what it means, we need to understand what it is – and for many, this is easier said than done.

In short, 4IR is the point where industrial advancements and



4IR will be changing the face of many industries and sectors, including (re)insurance

any guide, this revolution will lead to massive disruption to the industry leaders, and companies that were thought untouchable will be disrupted – and some will disappear as a result of the new way of doing things.”

While there is much talk of how 4IR will affect manufacturing – the use of machines and robots augmented with web connectivity and the ability to use logic and make decisions – there is no doubt that 4IR will be changing the face of many industries and sectors, including (re)insurance, a point proved by the action of Fukoku.

Powerful technology

The supercomputer used, IBM Watson Explorer, is a cognitive search and content analysis platform that uses machine learning and language processing to analyse data and spot trends and patterns.

Emphasising the step-change in machine learning, Wray points out: “The hardware that makes our computers, smartphones and tablets is so powerful that it can appear intelligent – at least in a limited way. But machine learning is far more powerful than this – it means being able to observe the world and act, something we’re already seeing in semi-autonomous vehicles. This is something that is already having an impact on the insurance sector, particularly on liability insurance.

“AI and machine learning will replace roles and tasks that previously could only be done by a person. The opportunity for reinsurers is to take advantage of these developments, with the most successful being those who can use these new tools to further magnify the efficiency and capability of their people and resources.”

While the opportunities for efficiencies is clear, Touriga Risk founder and managing director Ashley ▶

communication advancements have converged. It represents the combination of the Internet of Things and the Internet of Systems, from which cyber-physical systems (CPS) have emerged.

To use an analogy, it represents the graduation from the debit card to transferring funds into the appropriate account on your smartphone and using the device to pay – all without inconveniencing

those behind you in the queue.

According to Fifth Step chief executive Darren Wray, previous industrial revolutions have had a profound impact on the world and the shift we are seeing now will be no different. “We are on the brink of the next industrial revolution,” Wray says, “one that will combine electronics, machine learning, data and communications in a way that has never been possible before. If history is



Hunter believes the impact of 4IR on (re)insurance will, in fact, generate the need for a highly skilled human workforce.

“People are very uncomfortable because they just assume that the majority of their functions are going to be replaced, but we’re having to underwrite much more complex things – someone still has to come up with the underwriting table. It’s not about getting rid of the old workforce, because that is a brains trust you don’t want to lose,” says Hunter.

“It’s going to move away from giving everything to a computer – especially on the reinsurance side – to actually assessing these new exposures. We’re going to have to figure out what happens if robots gets hacked; and if the robot is hacked, then how the robot will perform a function if it’s now being controlled by, say, a drone a million miles away. It gives the reinsurance industry more opportunities to actually grow an additional workforce, as opposed to take away from it.”

According to Hunter, a proactive approach to 4IR would be to interact with those that are innovating outside of the industry so there is an awareness of emerging technologies and CPS, and a better understanding of the new risks they give rise to. “As an industry, we should be speaking to the Googles and Amazons, finding out what they are developing, and how we can create policies that will respond to these things.”

‘The underwriter needs to sit next to the hacker to foster some kind of dialogue’

Ashley Hunter

Moreover, Hunter believes a more integrated approach to the modern workforce is needed to mirror the developments in 4IR that are happening globally. “The underwriter probably needs to sit next to the hacker to foster some kind of dialogue. Effectively, everyone needs to be all on the same floor and in the same room.”

Regulation questions

Given the events at Fukoku, it’s no surprise that the dialogue on 4IR has focused on the impact it will have on the industry’s workforce. But Xceedance senior vice-president and head of data sciences Rajesh Iyer believes the real challenge is in how these emerging technologies are regulated – a point on which the WEF agrees.

As 4IR and its emerging technologies grow and develop, the industry’s regulators will have to find a way to keep pace with the change to ensure

that the movement of large amounts of data is legal and, indeed, necessary.

“As 4IR progresses, what you will see is advancements in what we call edge computing,” explains Iyer. “This is where we detect and interact with an app or software without actually collecting and sending information on [to an external server].”

“Regulators are going to have to be very aware and at pace with this change, so that they don’t fall behind in understanding what companies are collecting versus what they really need to collect.”

He adds: “It’s possible to imagine a future where, for example, with telematics you build a model that really doesn’t require the device to keep recording information and sending it to a central repository.

“You can come up with a scoring model that does the computation happens right there on the device, without sending any information back. Regulators need to know when the state of the art has reached a point where this information doesn’t need to go anywhere else, so that they can start contracting the kind of information they allow companies to collect.”

Whether 4IR generates an alternative workforce is yet to be seen, but one thing resonates loud and clear: while it is important to stay optimistic, when it comes to the ever-evolving 4IR, its emerging technologies and CPS, it’s even more important to stay ahead. ■