SPECIAL TECHNOLOGY ISSUE

BUSINESS INSURANCE®

www.businessinsurance.com

INSURTECH 2018

DIGITAL REVOLUTION

Innovation takes over

PAGE 4

REGULATORY REVIEW

New era raises questions

PAGE 8

DATA DIVE

Insurtech facts and figures

PAGE 15


Different by design
The only SaaS platform to provide integrated solutions to the entire insurance value chain: Risk Managers, Brokers, TPAs, Carriers
ORIGAMI RISK
www.origamirisk.com/insurtech

BUSINESS INSURANCE®

Riding the insurtech wave

Gavin Souter
EDITOR

Insurance and risk management professionals have long had to learn their fair share of industry jargon, but now a new set of arcane terms and phrases are raining down on them.

Starting off with "insurtech" — the term used loosely to describe the various innovations that many believe with transform insurance and risk management over the next few years — insurers, brokers, buyers and others looking to thrive in the future will have to assimilate numerous new concepts and ways of doing business.

While still coming to grips with the lexicon of cyber risk — be it botnet, encryption, phishing or ransomware — market participants will have to understand concepts such as artificial intelligence, big data, blockchain and wearables, to name a few.

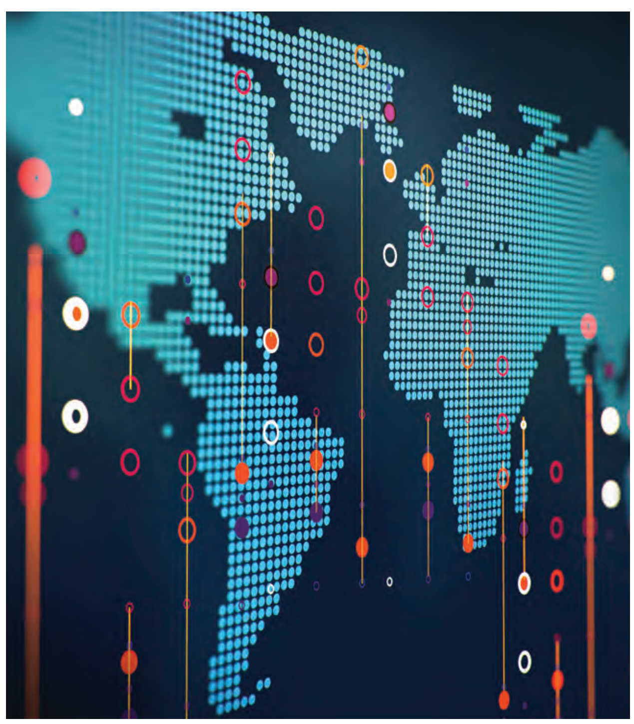
But it will require more than simply learning a raft of new definitions; as the risk management process is overhauled, all those involved will have to make the best use of the tools and techniques available.

Recognizing the huge changes about to be wrought by innovations on the commercial insurance sector, *Business Insurance* is publishing this special edition focusing on insurtech and related developments.

In the articles, charts and tables that follow, we look at the development of the insurtech sector, the potential efficiencies such changes might bring, regulators' reaction to insurtech and how the new technology can be harnessed to further advance a centuries-old business.

While it is hard to predict what the commercial insurance buying and risk management process will look like just five years from now, understanding the forces fomenting the changes will be key to succeeding in the new environment.

INSIDE



NEWS ANALYSIS

FOR BREAKING NEWS COVERAGE, VISIT
businessinsurance.com

BUSINESS INSURANCE (ISSN 0007-6864) Vol. 52, No. 10, is published monthly by Business Insurance Holdings, 545 West Main Street, Tavares, FL. 32778. Periodicals postage paid at Fort Lauderdale, FL, and additional mailing offices.
POSTMASTER Send address changes to Business Insurance, 4343 Old Grande Ave., Suite 110, Gurnee, IL 60031. Printed in USA.

PERSPECTIVES

Insurtech puts focus on risk management

BY PAUL D. WINSTON

Despite all the attention on insurtechs that focus on personal lines applications, tech startups focused on risk management applications are greater in number and are attracting more funding than nearly any other category. Insurers have been slow to embrace opportunities from insurtech in general and commercial insurance in particular. But that may soon change.

Forward-thinking companies in the insurance industry have been exploring how to leverage new technology to improve engagement with personal lines customers, serve unmet consumer needs and lower costs by driving operational efficiencies.

Much of this movement by insurers originated from a recognition they needed to respond to the digital expectations of personal lines consumers — expectations set by digital experiences with Amazon.com, Netflix, Uber and others. Consumers want the same simple, quick experience as when ordering food, a movie or a car service.

Startups focused on leveraging technology and inventing applications for risk management are one of the largest categories of insurtechs.

Why should the commercial insurance buyer be any different? After all, many noninsurance organizations are embracing technology to better serve their customers, innovate products and services and use tech to make their operations more efficient. Technology-driven innovation represents an opportunity for commercial insurance buyers — risk managers — to not only define their needs and preferences for insurers but also to get better acquainted with the risk management implications of technology.

What is insurtech?

The insurtech movement arose when tech innovators began to ask how they could resolve various pain points in the insurance market. Many tech innovators looked at some of the archaic, paper-intensive processes and decades-old IT systems in insurance and saw opportunity for improvement. They knew little about insurance, but were free from the constraints of dealing with legacy issues and more willing than incumbents to ask what-if and why-not. To these startups, it was obvious technology could be applied to nearly all parts of the insurance value chain and achieve dramatically better results.

Investors universally agree that the opportunity is huge. Since 2014, more than $20 billion has flowed into the insurtech marketplace, funding startups focused on transforming and improving current insurance processes and products, according to data from Insurance Thought Leadership's Innovator's Edge. Some of that investment has come from venture capital firms, some from insurance companies and some from noninsurance tech giants such as Amazon, Google and Microsoft.

Insurers increasingly recognize that to remain relevant and competitive, and to ensure a healthy future, they must improve their ability to creatively apply technology to solve customer needs and pain points, and to create products that unlock new markets. A recent survey of U.S. insurance company executives by ITL and The Institutes found that 70% have a strategy around innovation. Despite this strategic priority, many insurers and reinsurers are struggling to develop the capabilities to meet their goals, and appear uncertain they have the talent, innovation processes and tools to evaluate and take advantage of the array of tech options available.

LARGEST INSURTECH CATEGORIES BY NUMBER OF STARTUPS

CATEGORY	COUNT
Risk management	393
Health insurance	238
Auto insurance	190
Agents and brokers	129
Life insurance	120
Insurance comparison tools	116
Underwriting	107
Claims management	95
Property insurance	94
Small business insurance	69

Source: Innovator's Edge

LARGEST INSURTECH CATEGORIES BY STARTUP FUNDING — 2013-2018 YTD

CATEGORY	TOTAL FUNDING
Health insurance	$4,782,509,927
Risk management	$3,030,136,386
Auto insurance	$2,504,820,939
Insurance comparison tools	$1,517,210,716
Small business ins	$1,381,082,023
Agents and brokers	$1,348,254,926
Property insurance	$1,329,714,774
Life insurance	$1,315,112,144
On-demand insurance	$931,872,905
Product insurance	$827,518,109

Source: Innovator's Edge

Let´s get personal

The initial focus of many of the tech innovators was largely on personal lines insurance. It generally is less complex, smaller policy limits are at risk and it was easier to try to address customers' digital expectations and needs in product lines such as pet insurance, travel insurance and renter's insurance. Auto insurance, term life insurance and homeowners insurance also became a big target of innovation and technology.

Early applications of technology by insurers willing to explore these opportunities focused on such low-hanging fruit as streamlining customer acquisition through online sales and quote shopping sites, automating and accelerating manual processes from underwriting to claims, analyzing large data sets to more quickly find information and apply it against predetermined rules, and leveraging online and mobile platforms to compare and sell policies.

Some startups went beyond such operational efficiencies to experiment with new forms of on-demand product insurance, new approaches to mutualization called peer-to-peer insurance, embedding insurance within consumer products and usage-based insurance, among others.

Today, startups focused on leveraging technology and inventing applications for risk management are one of the largest categories of insurtechs, both in terms of number of companies (393) and the amount of investment they have attracted ($3.03 billion since 2013). That funding is second only to health insurance-focused insurtechs (see charts).

Defining risk management opportunity

A good place to start thinking about how insurtech will be applied to commercial insurance customers is examining elements of the risk management process:

- Risk identification.
- Analysis of exposure to risks.
- Evaluation of risk mitigation options, such as avoidance, transfer or retention of risk.
- Implementation of the chosen options.
- Monitoring of the results and adjusting.

Nearly all of those, but especially risk identification, analysis and monitoring, can be improved through the application of existing technology. Here are just a few examples with application for commercial insurance:

- Artificial intelligence and machine learning, for example, are being used to improve the speed and quality of information analysis, which has applications in risk identification, risk analysis, underwriting, policy wording, reserving, claims and much more. With this technology, there's no good excuse for policy renewals or something as mundane as policy issuance to take so much time.
- Big data analytics gives risk managers and insurers the ability to combine their own data with other large data sets to quickly analyze information, find previously unknown risk correlations, and make better decisions. The ability of insurers to leverage new capabilities in analytics and data processing speeds puts better risk-adjusted pricing within reach for more companies, for example.
- Drones, geo-imagery and visual processing technologies provide powerful new tools to inspect and analyze property more quickly, more safely and with more data. Pairing the visual output with the ability to analyze the data more quickly opens new opportunities in such areas as hazard identification, property loss prevention and claims reporting.
- Sensors and "internet of things" applications are being widely deployed in many commercial settings to monitor and provide data about property and people. The potential applications for workplace safety of wearables and sensor technologies are huge.
- Autonomous vehicles are not just about private passenger automobiles and ride sharing. Autonomous trucks and vehicle fleets are being commercially developed that will give companies new options to keep supply chains more reliable and drivers safer.
- Blockchain represents a new digital method of recording transactions and events without the time and expense of an intermediary. Blockchain is being applied to manage and track logistics, provide more rapid notification of claims and loss notification, and perhaps most importantly, adds a potentially powerful layer of protection against cyber risks.

With the growth of myriad technologies to generate, capture and analyze data, there is a growing recognition among some in the insurance industry that there is an opportunity for insurers to use their data in new ways, particularly to enhance loss prevention and not just transfer the risk and finance the loss. The new opportunity for insurers is to reduce the frequency and severity of losses by leveraging their data, capital and policies in concert with those companies that building new technologies. They also recognize that new competitors may emerge that are more agile at using this data.

To risk managers, new products and services to support loss prevention would be welcome, and represent a way for insurers to use technology to address their commercial insurance customers' pain points and challenges.

Better understanding of tech risk

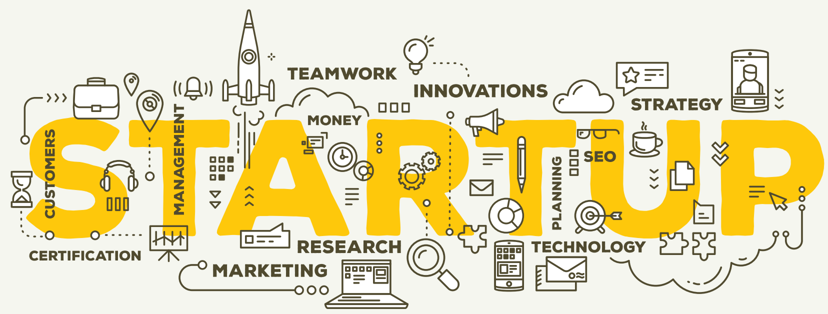
The promise of insurtech is not all rainbows and unicorns. Insurers and risk managers both have a natural tendency to look for risks, liabilities and other adverse outcomes, so they won't blindly embrace the technology that will ostensibly solve problems. No doubt some are asking questions like:

- What assurances do we have that blockchain is more secure than any other digital transaction, or existing processes?
- How do we know that the information a sensor provides is accurate and reliable?
- Who verifies that artificial intelligence is providing the correct answer?
- How can businesses protect an autonomous vehicle from being hacked?
- Where are tradeoffs in privacy and the security of personal information being made to enjoy more comprehensive capture of data?

These are questions that are worth asking and underscore why risk managers should be part of the conversation to identify, analyze and minimize potential risks associated with the application of any new technology by their organization. To the extent that risk managers can be educated about how tech can be applied to solve business challenges, not just insurance challenges, risk managers will be better positioned to help their organizations innovate.

The point of innovation and new technology is to respond to society's desire to make the world a better place, to try to make things safer, more convenient, more accessible, less expensive more abundant. Risk management can help organizations make more informed decisions about technology so companies and people can take advantage of these new opportunities.

Paul D. Winston is chief operating officer of Insurance Thought Leadership Inc., serving decision-makers and innovators transforming the insurance and risk management marketplace with thought leadership, an innovation software platform and advisory services. Prior to joining ITL, he served over 25 years in digital marketing, editorial and management roles with Business Insurance. He can be reached at pwinston@insurancethoughtleadership.com.



TECH STARTUPS OFFER RANGE OF TOOLS

From the thousands of insurtechs looking to transform insurance, here is a sampling of startups focused on commercial insurance applications. All of the companies have been recognized by Insurance Thought Leadership Inc..as an "Innovator to Watch."

Aquaai Corp. has developed an autonomous marine robot that looks and swims like a fish and can be used to gather marine data more safely than putting divers in the water. The drone is equipped with interchangeable sensors that gather data such as water health, temperature and oxygen levels. The platform is applicable to multiple uses, including aquaculture, pollution cleanup, disaster recovery, port security and marine monitoring.

Care Bridge International Inc. offers a big-data solution to help users predict medical outcomes and expenses at an individual claim level. The company uses machine learning based on 1 billion claim transactions to quickly and accurately predict medical reserves and set-asides under Medicare secondary payer rules. Care Bridge eases compliance headaches with Medicare secondary payer requirements that can delay claims settlements.

Coastal Risk Consulting LLC uses LIDAR to map precise elevations within neighborhoods so it can tell which properties are especially vulnerable to flooding and which might be far safer than traditional hazard analysis suggests. The company also helps policyholders understand how they can mitigate their risks and how exposures will likely increase as climate change raises the levels of the oceans.

iCede Solutions Ltd. is a cloud-based platform that makes it simpler for the lead insurer to manage all aspects of a multinational property/casualty program. A rules engine ensures compliance with local coverage requirements, and interactive dashboards make it easy to manage.

RiskGenius uses artificial intelligence to analyze policies. It can quickly analyze and spot coverage gaps, identify policy wording that has resulted in litigation and help insurers and brokers to find the best policy language to protect their interests.

SpatialKey Inc. set out to make geospatial data more accessible for typical business users in the insurance industry, improving the mapping of data that otherwise would require expert knowledge to access and analyze the information. SpatialKey serves three key areas within insurance: underwriting, risk accumulation analysis and post-event response.

Terrene Labs Inc. was born from a desire to make the small business insurance risk selection process simpler, faster and more accurate. Terrene simplifies applications by asking for only four identifying fields when applying for coverage. For insurers, Terrene delivers high-veracity information for risk evaluation. Terrene capitalizes on a repository of over 1,200 data sources and stitches together various data sets in a unique process to enrich and provide insight to underwriting risk.

Windward Ltd. is a maritime data and analytics company shedding light on what's really happening on the seas. Security agencies worldwide use its system to combat maritime challenges ranging from smuggling to sovereignty issues. Fishing authorities use the data to combat illegal fishing. Windward's insurance portfolio is designed to continuously monitor and evaluate the functions of ships, including navigation, operation in both normal and rough weather conditions, and maneuvering at ports.

Paul D. Winston

Medicare Set-Asides: You are Paying too Much

3 Minute Read

Workers' Compensation Medicare Set Asides (WCMSAs) have become a standard feature in settling workers' compensation claims over the past fifteen years. This year set aside MSA proposals for 26,000 workers' compensation claims might be submitted to the federal government. We present new evidence that strongly suggests that this voluntary process of submission predictably and excessively inflates the cost of claims. For claims payers who are concerned about the burdens of Set Asides, this problem and its solution are top news.

By Deborah Watkins, CEO Care Bridge International

Workers' compensation claims payers far over-spend on Medicare set-asides (MSAs), paying up to double what they need to. The conventional practice of submitting a MSA report to CMS for review and approval, which is entirely voluntary, predictably inflates costs and overburdens claims payers. Claims payers simply need to change their game plan.

This year alone, for some 26,000 claims and at an average of about $93,000, claims payers will set aside funds to reimburse Medicare for any medical care Medicare delivers to injured workers to treat their work injuries.

I became involved in this massive, cumbersome process of financial resolution in 2000. I participated and watched as most claims payers elected to follow a certain game plan. They've stuck to it.

In a nutshell here is what happens, at an annual outlay of over two billion dollars. At the time of a claims settlement, claims payers want to cap their future financial exposure to Medicare. They know that if they submit to Medicare a report for funding ("set aside") a fixed, irrevocable amount of money for treatment under Medicare, and Medicare approves the report, they can wash their hands of the claim.

This method of resolution spawned a small industry of firms who help claims payers prepare these reports and negotiate an agreed amount.

Problem solved – but at a very high cost.

First, the process is extremely convoluted and time consuming. Our company's survey of three dozen claims payers, which we undertook in 2016, revealed a very low level of trust in the process. Due to the involvement of Medicare, it is inherently bureaucratic.

Second, these irrevocable set-aside plans ("MSA reports") tend to be extremely costly. They greatly inflate the projected treatment costs over actual treatment costs.

Our company recently analyzed several hundred approved reports. We compared the forecasted spending on medical care (surgeries, medication, etc.) with actual spending on behalf of the injured worker for the first five years post MSA report approval. We found that in the 5th year post settlement, the pace of medication spending was 64% of the forecast and for all other medical care 55%.

In other words, close to half of the funds locked up in the MSA reports were not being used!

Another study confirms how medical spending declines for many claimants over time. We analyzed a huge database of eight million non-settled workers' compensation claims, noting medical spend for up to 11 years after injury. We focused on opioid treatment patterns, as opioids are both expensive and create patient safety risks. The data showed a rapid early decline, as we expected. But it strikingly showed that the decline in use never ceased. For instance, for every 100 claimants who were actively using opioids in the fourth-year post injury, only 50% were using opioids in the 7th year and 25% were using opioids in the 10th year.

Why don't MSA reports anticipate that medical spending will go down? The reason is due to mandatory rules that Medicare imposes. If you elect voluntarily to submit an MSA report, you must follow these rules, three of which are worth noting:

First, Medicare requires that medications (which comprise about half of all set-aside budgets combined) be priced unrealistically high, at Redbook ® "average wholesale price" or AWP. I cannot imagine a claims payer paying for drugs at that price. Pharmacy benefit managers arrange for prices that are up to 30% lower.

Second, Medicare unrealistically requires that all medications be budgeted unaltered for the projected life of the injured worker. The average life expectancy for a MSA is 24 years. There is no scientific assurance whatsoever that opioids are effective in providing long term relief from pain, much less being safe to use for 24 years.

Third, Medicare requires that any treatment the worker is receiving or has planned at the time of settlement will continue. Yet in reality, treatment evolves as patients adapt.

Rather than submit a MSA report, which locks the claims payer into an inflated and unalterable fixed amount, the claims payer can prepare a MSA plan for the large majority of claims using realistic forecasts, fund it, and enjoy a cap on its financial liability—without submitting a report. CMS has always recognized a non-submitted, funded plan as sufficient to satisfy its secondary payer rights so long as certain compliance steps are taken, and in fact states the submission process is a voluntary one.

There is a way to realistically predict the medical spend: refer to a huge database of actual spend. Care Bridge's Analytic-Powered MSA generates a Medicare Set Aside plan in minutes, based upon machine learning algorithms of over a billion medical claim transactions. It forecasts future medical care and costs at a zip code level. The variables of a claim can be matched against a large data set of similar claims to forecast care, which offers a more objective and accurate projection compared to current methods. Our clients are able to fund Medicare protection at the most probable cost, rather than an inflated cost, and settle claims 6-8 months faster. This offers a defensible way to protect Medicare and manage risk at a more realistic cost.

An authoritative White Paper, "Medicare Set-Asides: What is the True Cost of Future Medical Care?" is available here or at https://carebridgeinc.com/wp-content/uploads/2018/07/MSAs_TrueCost_2018.pdf

Insurtech prompts regulatory debate

BY GLORIA GONZALEZ
ggonzalez@businessinsurance.com

Existing regulations are generally seen as sufficient and flexible enough to oversee the emerging and expanding use of insurtech, but the trend does raise a host of questions that regulators and stakeholders in the insurance industry must grapple with.

This includes striking the right balance between encouraging and facilitating innovation and protecting consumers from possible adverse effects, such as discriminatory practices in insurance sales, experts say.

"Early on, there was a belief that we needed extra protections," said Stephen Clarke, vice president of government relations for Jersey City, New Jersey-based Verisk Analytics Inc. "Now, people have become comfortable that we don't need to overregulate insurtech."

"I think we're seeing a shift in the paradigm," said Ray Farmer, director of the South Carolina Department of Insurance in Columbia. "Those companies that don't keep up with the new advances in technology will be dinosaurs fairly soon. I think regulators have to also keep up with advances in technology to help the new companies, the new products come to the marketplace. This is certainly an exciting time to be a regulator."

Innovation was a major theme at the National Association of Insurance Commissioners' summer meeting in Vermont in August and will continue to be a priority for the organization as the NAIC figures out the best way to support its regulators tasked with evaluating new insurtech products and concepts, according to regulators.

Patrick McPharlin, Michigan insurance commissioner in Lansing and chair of the NAIC's innovation and technology task force, said he sees no need to change existing regulations and has challenged industry trade associations to speak up about what regulations would need to be waived to foster innovation. However, none have yet cited any particular rules, with the exception of regulations that ban or limit rebating by insurers.

"I think the biggest barrier is the companies being willing to come and talk to us," Mr. McPharlin said.

But that means that only the insurtech companies who directly engage with regulators receive the regulatory flexibility that they need, said Vikram Sidhu, a New York-based partner in the insurance transaction and regulatory practice with Clyde & Co US LLP.

"The wholesale rethink that insurtechs are clamoring for is just not even on the discussion table," he said. "We need to have clear sets of rules because the flexibility that they are always touting doesn't provide a clear framework that everyone can then use to innovate."

NAIC PREPARES FOR THE FUTURE

The National Association of Insurance Commissioners is devoting additional resources to supporting regulatory innovation, including sponsoring or participating in live programs or webinars for regulators focusing on topics such as insurtech and regtech.

2017 FUNDING	2018-2020 BASE BUDGET	NEW FISCAL*
$200,000	$525,000	$600,000

Source: NAIC State Ahead strategic plan for 2018-2020

Potential funding awaiting approval by NAIC executive committee

While existing regulations were not written with insurtech in mind and "may not jibe with what insurtech wants to do in every way, I think the bedrock of solvency and market conduct — that is, making sure insurers pay when they're supposed to pay — that's going to be the guiding principle for regulators," said Scott Fischer, a New York-based partner with Morgan, Lewis & Bockius LLP and former executive deputy superintendent for insurance at the New York State Department of Financial Services. "As long as those two things are kept at forefront of the insurtech people's minds, then everything else can get dealt with — slowly and painfully, but can get dealt with."

But for insurtech companies, the state-based system of U.S. insurance regulation can be tricky to navigate, with 56 jurisdictions regulating insurers and any of these jurisdictions still reluctant to adopt the sandbox concept designed to allow insurtech companies to experiment with new ideas for products and solutions through a supervised process with regulatory requirements waived in some situations to facilitate innovation, experts say.

"In terms of the complexity of regulation state by state, there's no easy answer," said Julie Sherlock, head of insurance strategy for insurtech development platform Boost Insurance USA Inc. in New York.

One approach could be to try to develop a principles-based regulatory approach, as has been adopted for capital reserving, versus a rules-based approach to ensure some level of uniformity, said Ben Seessel, a Hartford, Connecticut-based shareholder with Carlton Fields Jorden Burt PA.

"There's a big hurdle in terms of regulation," he said. "You can have the same law or virtually the same law and the same regulation in two different states, but it's interpreted by the insurance commissioner in a different way. It's a challenge for innovators to innovate in this state-based environment."

Insurtech companies are also concerned about protecting their intellectual property, which they fear could be made public under open record laws without the right legal protections, while incumbent insurers are concerned about them receiving preferential treatment and not being subject to the same transparency requirements, experts say.

Meanwhile, regulators are asking many questions about the use and safeguarding of individuals' data gathered through insurtech innovations. For example, there is significant concern that the data would be used in a discriminatory manner similar to the use of credit checks that disadvantaged poor people in the purchase of insurance policies.

People may assume that artificial intelligence and algorithms will provide nonbiased answers and information, but that is simply not true, Mr. Fischer said. "In reality, there's a huge amount of biases that can be baked into the system, because the algorithm doesn't write itself," he said.

In addition, there are questions about whether consumers are being properly informed about how their data is used and who owns the data, experts say.

"Many of those issues are legitimate issues and concerns that I think we can address," Mr. McPharlin said. "But … I think the best thing we can do for consumer protection is to make insurance more available and easier to purchase, especially for the under-30 set."

Regulators appear to be more flexible when it comes to regulatory changes on the commercial side, particularly for large commercial policyholders, Mr. Sidhu said. "I think the biggest issue there will then lie with 'where do you draw the line for commercial insurance?'" he said. "From the regulatory perspective, they see the small and maybe even medium-sized enterprises falling closer to the consumer side and needing more protection compared to the large commercial insureds."

In a follow-up email, Mr. McPharlin said the NAIC task force has not considered consumer protection issues for commercial issuers nor has it received any comments on this issue, to his knowledge.

Regulators say they do not need additional staffing or funding resources to manage insurtech regulation.

"I don't think just because a new sector like technology comes along that you automatically need to change the way you do business," Mr. Farmer said.

> "There's a big hurdle in terms of regulation. You can have the same law and the same regulation in two different states, but it's interpreted by the insurance commissioner in a different way. It's a challenge for innovators to innovate in this state-based environment."
>
> Ben Seessel, Carlton Fields Jorden Burt PA

"We definitely have the people with the expertise and the knowledge to assess any company," Mr. McPharlin said. "Resources are not an issue, at least in Michigan."

But stakeholders disagree, given the rapid expansion of insurtech in the sector.

"That's a tough question because it's not really my place to say go hire people, but they need to hire people," Ms. Sherlock said. "They need to bring in people who understand the technology, maybe not necessarily understand all the ins and outs of it, but speak the lingo (about) the different tools."

"There's millions and millions and millions of dollars … being poured into insurtech, but there's not exactly millions and millions and millions being poured into regulation," she added.

"They all need more resources," Mr. Fischer said. "Period. Because it's just getting more and more complicated and the budgets don't seem to match."

SANDBOX CONCEPT PLAYS OUT OVERSEAS AS UNITED STATES LOOKS ON

The United Kingdom and other countries are playing in the insurtech sandbox, but U.S. regulators may be reluctant to follow suit.

The sandbox concept, which is designed to allow insurtech companies to experiment with new ideas for products and solutions through a supervised process with regulatory requirements waived in some situations to facilitate innovation, has been widely promoted overseas, mainly by the United Kingdom Financial Conduct Authority. But many U.S. regulators and stakeholders are skeptical about the value and necessity of the sandbox, including whether waiving rules is necessary to foster innovation or unfair to incumbent insurers, and even whether the sandbox concept could be effective in a country with a state-based system of insurance regulation.

"We've been asked by a number of the regulated entities, insurers or new companies, to consider sandbox legislation," said Ray Farmer, director of the South Carolina Department of Insurance in Columbia. "I do not think my state needs any legislation to be creative, to be innovative."

The sandbox is "the million-dollar question," said Julie Sherlock, head of insurance strategy for insurtech development platform Boost Insurance USA Inc. in New York. "I'm not convinced yet that sandboxes are what we need. I understand the intent: Let's have a safe haven for these insurtechs. Let's protect the consumers in case some of them fail. Let's waive some of these complicated regulations to get them out there. But … when do you 'graduate'? What exactly are all the things that we're trying to measure and test? I'm not sure that there is a firm answer on that yet."

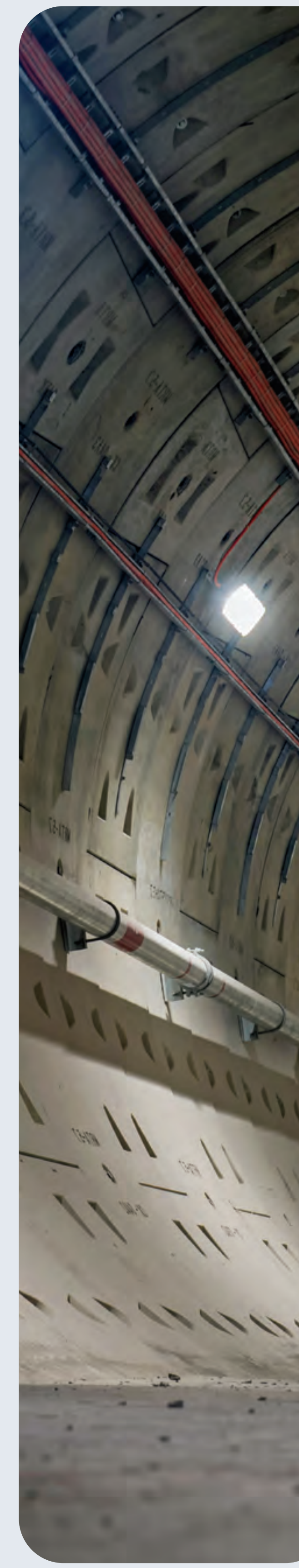
"In the rush to allow insurtech, you do have to be careful that you don't create an unlevel playing field and therefore give an unfair advantage to insurtech companies," said Stephen Clarke, vice president of government relations for Jersey City, New Jersey-based Verisk Analytics Inc. "During the test period, it's fine, but if waivers are granted for certain requirements, there has to be an exit plan so that all regulated entities play by the same rules at the end of the day."

Paul Worthington, London-based international lead of FCA Innovate, which has received more than 200 applications to its sandbox to date, including several by insurtech companies, was asked at the National Association of Insurance Commissioners' summer meeting in Boston in August what happens at the end of the sandbox period. Firms are required to issue a final report to the FCA that builds on the metrics and data they have been tracking throughout the process, highlights key findings and how the results measure up against the original test plan criteria and the FCA will then make a call on licensing, he said, according to meeting minutes. While more than 90% of the firms have gone on to release their products in the market, some realize they have to "pivot" their model to achieve what they set out to do, with a small number that just stop operations entirely, he said.

Startup companies can end up spending all their money participating in a sandbox and pass muster with the regulator, but then have no resources for moving forward, said Ben Seessel, a Hartford, Connecticut-based shareholder with Carlton Fields Jorden Burt PA.

"I'm sort of skeptical of the sandbox concept in this country," he said. "In other countries like the UK, if you pass what the regulator wants, then you can market through the whole country."

Gloria Gonzalez



EU privacy rules set bar for data management

BY JUDY GREENWALD
jgreenwald@businessinsurance.com

Risk managers can reduce their firms' potential liabilities by guiding their information technology departments on how to comply with the European Union's General Data Protection Regulation, including its challenging right-to-be-forgotten provision, say experts.

The GDPR, which became effective May 25, applies to U.S. companies that operate in the European Union or provide goods and services there and have any EU-based employees regardless of whether they are EU citizens.

The regulation broadens the scope of what is considered personal data, and companies can be fined up to 4% of annual revenue or €20 million ($23.9 million), whichever is greater, for the more serious breaches. Among its other significant provisions is that individuals have the "right to be forgotten" and their personal data erased.

It is still early insofar as determining the level of GDPR enforcement by regulators, say observers.

"I think we're all still learning as to what GDPR will actually lead to in terms of enforcement and the fines and penalties or liability that's levied against our potential insureds," said Marcin Weryk, New York-based head of cyber-West and South at Axa XL, a unit of Axa SA.

"Many of the U.S. companies, I would say, are not in compliance, or have not taken it maybe as seriously" as non-U.S. companies have, said Mr. Weryk.

> "Erase really means erase. That data has to be gone. You have to delete them, unless there's some other legal requirement to keep them."
>
> Michael Hiskey, Semarchy Inc.

MARCHING ORDERS

Experts interviewed by *Business Insurance* have recommended the following steps to comply with the European Union's General Data Protection Regulation:

- Hold discussions between risk management and other business units
- Identify where the company is managing its data
- Keep only data that is strictly necessary
- Develop data cancellation procedures
- Establish data security protocols

Giampaolo Scarso, Milan, Italy-based head of client advisory services for brokerage Marsh International, said larger companies are "far more prepared than the smaller ones."

Annmarie Giblin, New York-based senior counselor for cyber liability with Chubb Ltd., said, "Cyber risk and the privacy concerns that the GDPR does regulate is a common theme that does run through most companies risk profiles overall, and the regulatory burden is only increasing with respect to those issues."

Marek Stanislawski, deputy global head of cyber and tech professional liability for Allianz Global Corporate & Specialty SE, who is based in Stockholm, said, "Companies are in a good position in that there have already been privacy regulations enforced in the U.S., so they do have a lot of mechanisms in place that are now being required by the GDPR. It's just a matter of assuring" whether the way they are approaching things should be adjusted, he said.

"For some organizations, it's going to be rather expensive" to comply with the GDPR, however, including the cost of retaining and hiring top talent such as privacy professionals and attorneys, said Dannie Combs, Chicago-based chief information security officer for Donnelley Financial Solutions Inc.

Mr. Weryk said the key is for risk managers to hold discussions with their firms' business units as well as their information technology departments "and have an understanding of what information actually is collected, and what is being done with that information," and if "any technology needs to be put in place to allow for the appropriate use, collection and destruction of that data."

Those who do business in Europe should conduct "a fairly detailed review" of their data operations, said Richard May, Seattle-based managing principal for Integro Ltd.

The GDPR introduces basic privacy rights, and a company's software "may or may not have been designed with the ability to limit or change data collection," so there may be "substantial development costs involved," he said.

The first step companies should undergo is data mapping and identifying where they are managing data, which takes some time, Mr. Scarso said. "It becomes hard at the very beginning to get a picture of the current situation," he said.

The next step is data minimization, said Mr. Scarso. "You should keep only the data that's strictly necessary for your business."

The third is data cancellation, creating and implementing effective and efficient processes and procedures "to immediately know how to deal with data that needs to be canceled or eliminated" because the client is asking for it, or because it no longer needs to be kept. The final step is data protection, which includes encryption, Mr. Scarso said.

"Stop sending spreadsheets," said Michael Hiskey, New York-based chief strategy officer for Semarchy Inc., a data management firm. When these are sent by email, "you're opening up all sorts of exposure to personal data," if it is hacked. Instead, send links to a corporate network to which access can be controlled, he said.

The right to be forgotten is the most challenging of the GDPR's requirements, say experts.

"Erase really means erase," said Mr. Hiskey. The GDPR is "very clear," he said. "That data has to be gone. All those files have to be blank. You have to delete them, unless there's some other legal requirement to keep them."

Mr. Hiskey added this provision is "exceedingly tricky" because "some of that data sits with downstream processors," and can be in many different systems "and it's not well correlated."

INSURANCE COVERAGE AVAILABLE FOR GDPR EXPOSURES

Insurance coverage is available for risks related to the European Union's General Data Protection Regulation, say observers.

Richard May, Seattle-based managing principal for Integro Ltd., said although many cyber policies are written to respond to data breaches and do not necessarily incorporate claims related to privacy rights, "most of the major insurers have issued GDPR endorsements that incorporate to a greater or lesser degree the privacy rights granted under GDPR into the coverage" under their cyber policies.

"But most of them are very narrowly written, so they only apply" to European countries regulated by the GDPR, Mr. May said.

Steven H. Anderson, Dallas-based vice president and product executive for privacy and network security at QBE North America, a unit of QBE Holdings Inc., said most insurers' cyber policies provide regulatory coverage, "and GDPR would fit under that" category.

Some brokers are asking insurers, though, for specific endorsements that target the GDPR, "just to make sure the i's are dotted and the t's are crossed," Mr. Anderson said.

The coverage "hasn't been challenged yet from a claims perspective," but brokers are asking for the endorsements to make sure there isn't any confusion, he said.

Mr. May also pointed to the California Consumer Privacy Act of 2018, which takes effect in January 2020 and incorporates many of the GDPR's provisions.

"With the change in the California law, privacy rights is going to become a big issue for almost every buyer of cyber, so I expect the next year we're going to see a shift from a lot of policies being quite narrowly data breach-driven to a broader privacy rights approach," he said.

It may take a couple of years, though, for insurers to assimilate the California law's impact, Mr. May said.

Judy Greenwald

Blockchain expands, concerns remain

BY MATTHEW LERNER
mlerner@businessinsurance.com

Insurance industry technology alliances are moving forward with their development and deployment of digital ledger technology, widely known as blockchain, in an attempt to realize time and cost savings, experts say.

Some groups have made technical changes and established timelines to roll out applications for use by members and others. But as with previous technologies, there are lingering uncertainties and challenges, including potential compatibility issues with existing systems.

The RiskBlock Alliance started out with the 1.0 version of Canopy in late 2017 built in Ethereum, one available digital ledger technology, said Christopher G. McDaniel, president of The Institutes RiskBlock Alliance, based in Malvern, Pennsylvania. "We learned a lot," he said, adding that Ethereum presented issues with both security and scalability.

RiskBlock has shifted course, with its 2.0 version of Canopy written on Corda, Mr. McDaniel said. Corda is the digital ledger technology platform from R3CEV LLC, which began as a consortium of banks, but now includes insurers.

"Corda's blockchain technology was designed to address the specific needs of the financial services industry. It is heavily inspired by and captures the benefits of traditional blockchain systems, but with design choices that make it able to meet the needs of regulated financial institutions," said Ryan Rugg, global head of insurance at R3CEV in New York.

B3i Services AG, which began as an industry consortium but in March incorporated in Zurich, has moved to Corda from an earlier technology, in this case hyperledger.

Hyperledger "was successfully used as a prototype but we also realized it had some limitations as a platform for operational use. We started looking at Corda and concluded it was a better alternative to grow into an enterprise-grade operational state," said Paul Meeusen, CEO of B3i in Zurich.

"There's a really good reason that all of the insurance consortiums out there including us have moved to Corda because it's really built for the business enterprise. The insurance industry pretty much has chosen Corda as its platform," Mr. McDaniel said.

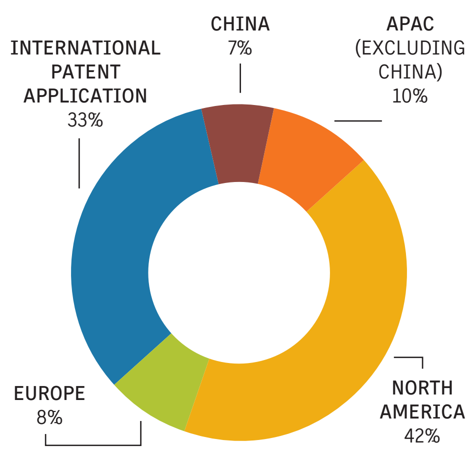
Digital ledger technology, generically referred to as blockchain, is being touted as a way to achieve greater efficiency in operations aimed at time and cost savings for insurers and others while improving both information sharing and security among users, experts say.

"Just how the internet changed the world, obviously blockchain has the potential to connect various business ecosystems," said Sastry Durvasula, chief data and analytics officer for Marsh LLC in New York.

Digital ledger technology is a good fit for the insurance space, Mr. Durvasula said.

"The insurance industry, by nature, has a range of parties involved on a global scale," he said. "It has a number of stakeholders, and constituents, from the consumers and clients through the brokers to the insurance companies, capital providers, governing bodies and regulators" and vendors. "So it is naturally conducive to digital ledger technology and blockchain because there is a lot of shared information and frictional points and operational issues," he said.

BLOCKCHAIN/DLT PATENTS BY REGION (JULY 2015 – MARCH 2018)



Source: Willis Towers Watson PLC calculations based on PATENTSCOPE data, World Intellectual Property Organization.

"You can deploy blockchain internally, but where you're going to see true cost savings is through connecting multiple disparate parties across the global insurance ecosystem (brokers, insurers, reinsurers)," said Ms. Rugg.

As with any new technology, however, uncertainties remain, one expert says.

"Blockchain technology presents both opportunities and risks for insurance," said Stephen D. Palley, of counsel with Anderson Kill P.C. in Washington. "On the one hand, a decentralized and 'trustless' infrastructure might allow for the development of claims and payment products that reduce friction and automate payment of easy to verify and undisputed claims. On the other hand, this is new technology, often open source, and still in many cases in development. Building too fast on still untested and often misunderstood infrastructure poses significant risk."

Also of concern was the need to have any new technology be compatible with existing systems.

"Corda was built from the ground up with our members, for our members," Ms. Rugg said. "Early on, in regards to infrastructure, they made it clear they weren't going to be able to completely uproot and move to a DLT/blockchain system and that we would need to have (application programming interfaces) and be able to integrate fully with them."

In September, RiskBlock rolled out both a 2.0 version of a proof of insurance application as well as a first notice of loss application, Mr. McDaniel said, adding the consortium also plans to expand into Canada and beyond with efforts now underway but no definite timetable.

B3i wants to have its first product, a natural catastrophe excess of loss contract, up and running by Jan. 1, 2019, so that it may be used in program renewals, Mr. Meeusen said.

"One key in the timeline is the January 1 renewal of NatCat products, when many firms renew their annual cover," he said. "That is the milestone we want to hit. We aim to be ready for companies to be able to renew that in digital form on our platform."

Experts point to parallels with the emergence of earlier technologies. "You could definitely look at it like the early days of computers," Mr. McDaniel said. Canopy, "is like Microsoft windows, with applications built to run on top of it."

Just like those early computers, digital ledger technology may take time to mature.

"While I am long-term bullish on blockchain, it will require patient iteration to work at scale and be useful in consumer-facing applications as well as being acceptable to American insurance regulators," Mr. Palley said.

HUMAN ISSUES MAY STALL TECHNICAL ADVANCES

Any technological revolution can bring with it challenges that are decidedly not technical, according to some involved with the rapid expansion of digital ledger technology, or blockchain, into insurance.

"I think the notion of sharing processes and practices which have traditionally been very competitive continues to be a little bit of a challenge as to who opens up first and who shares how much information," said Sandip Patel, Boston-based global managing director of insurance industry for IBM Corp. "We've seen some of that happen, where establishing a level of trust across parties has been one of the business challenges."

Those developing the technology must also make a case for its adoption by instructing in its use and highlighting the myriad benefits.

RiskBlock is developing and deploying resources aimed at "winning the hearts and minds" of the insurance industry, including creating educational and training programs, such as a four-hour online education course, said Christopher G. McDaniel, president of The Institutes RiskBlock Alliance, based in Malvern, Pennsylvania.

Mr. McDaniel added that such efforts are "key to removing barriers" in the industry. "That's the real challenge."

Matthew Lerner

Chatty bots answer the comp calls

BY LOUISE ESOLA
lesola@businessinsurance.com

Artificial intelligence is being deployed in the workers compensation sector to help free up some time for busy claim adjusters, allowing them to prioritize complicated claims and better meet the evolving demands of tech-savvy and time-crunched injured workers, according to experts.

A chatbot — either a computerized voice on the phone or an online chat with a computer — is being touted as an industry game-changer because it can provide answers to easy questions, without a claimant having to wait for a claims adjuster to return a phone call, experts say.

In turn, claims organizations can more readily address complicated issues that may arise in a workers comp claim because an adjuster's time has been freed up by a robot handling the less complex, but necessary tasks common in insurance, according to experts.

Artificial intelligence is "taking people who were doing these manual, repetitive processes and moving them to more subjective tasks, more thinking tasks," said Chris Griffith, St. Louis-based chief information officer for Safety National Casualty Corp.

Insurers can avoid costly problems by addressing more difficult claims first with an adjuster, who can spend more time on them rather than mundane tasks, he said.

"By 2020, 80% of carriers will have more than 20 robots doing manual, repetitive tasks," Mr. Griffith said.

As of late 2018, many insurers and third-party administrators either have the technology in place or are working to bring artificial intelligence to comp payers, according to industry insiders. For example, Zurich Insurance Group is piloting a chatbots program across all lines to gather information early on claims, according to a spokeswoman.

Crawford and Co.'s third-party administrator Broadspire Inc. is gearing up to launch a chatbot program in 2019, said John Jakovcic, the company's Atlanta-based senior vice president of strategy and innovation.

"We see this as freeing up the adjuster's time," said Mr. Jakovcic. "This will allow adjusters to focus on adjudicating claims. If this can take 10 calls away from an adjuster, if someone is willing to get information from chat technology, this leaves time for the adjuster to deal with a more complicated claim."

Chatbots, which can collect claims information at the onset of an injury, can also help adjusters prioritize claims, said Skip Brechtel, Metairie, Louisiana-based executive vice president and chief information officer for Cannon Cochran Management Services Inc., a third-party administrator launching its program this fall.

"We are utilizing this to pick out key information on calls that can go into an adjuster's queue; (an adjuster) can then prioritize their callback to individual claims based on that information that comes in," he said, adding that the technology focuses on key words that will alert an adjuster on whether a claim is at high risk, moderate risk or low risk for complications.

Mr. Brechtel's firm tries to maintain a caseload of 125 claimants per claims handler, he said, adding, "this will help adjusters with early interventions. It's a real game-changer in the industry."

And while technology that helps answer simple questions, solve problems, and record claims information can make it easier on insurers and other claims organizations to manage their caseloads, a real drive is coming from the claimant side, experts say.

"This is all about giving us another channel for an injured worker or client to come in and ask a question," said Mr. Jakovcic.

The consulting firm Accenture found that 74% of consumers say they would be happy to get computer-generated insurance advice, according to the firm's 2017 Global Distribution & Marketing Consumer study.

In comp, the technology can help alleviate problems stemming from long wait times for simpler answers, experts say.

"(Historically) if a customer needs info they would call their adjuster and leave a message; what we are seeing now is that everybody expects that they can get information when they need it and in a seamless way and in a way in which they choose," said Amy Carlisle, Boston-based vice president of claims transformation in global risk solutions at Liberty Mutual Insurance Co., which now offers its "insurance bot" program in the workers comp sector.

"We see (artificial intelligence) and bots helping us get information to claimants faster and allow them to receive the service they expect in a more digital age," she said.

Common tasks that a bot can accomplish for Liberty Mutual claimants include checking claim status, electronic funds transfers, and authorizations, said Ms. Carlisle. "They don't want to call us; they just want information," she said.

"Customers and employees want the interactions to be meaningful and we very much see technology as an enabler and a resource for making the best of our people, the greatest asset in our claims operation, available," said Ms. Carlisle. "(Adjusters) want to add more customer value. They see the enhancement and evolution of technology as helping them to do it."

"We want to use people for the things that matter most," she added.

TECHNOLOGY IN COMP

19%
of insurance industry executives believe artificial intelligence will have the biggest impact on workers comp in the future

86%
say advanced technologies in comp will have the greatest effect on medical management and claims management

Source: Mitchell International Inc. survey, 2017

ARTIFICIAL INTELLIGENCE MAY HELP COMBAT WORKERS COMP FRAUD

Artificial intelligence has the potential to become a useful tool in efforts to detect workers compensation fraud, experts say.

Insurers who utilize chatbots — either a computerized voice on the phone or an online chat with a computer — in early claims processing can get more information than they would the traditional way, said James Benham, chief executive officer of Bryan, Texas-based JNKnowledge Inc., a technology firm that creates insurtech solutions.

"We are enabling injured workers to communicate with insurance companies over voice instead of filling out forms," he said.

"People hate writing things … when you allow them to speak something, you get more information," Mr. Benham added.

Chatbots can transcribe these conversations, enabling claims organizations and risk managers to get as much as 10 times the information they would have received on a form, he said.

"When you compare safety reports that are written versus spoken you see so much more," Mr. Benham said. "If you are a risk manager, you always want more information (on incidents)."

Fraud detection is another plus when it comes to artificial intelligence such as chatbots, with the emerging technology having the ability to identify verbal cues such as long pauses that may indicate possible fraud, experts say.

Skip Brechtel, Metairie, Louisiana-based executive vice president and chief information officer for third-party administrator Cannon Cochran Management Services Inc., said the industry is closely watching the fraud detection technology.

"By the tone of voice you can verify whether the claimant is being truthful or providing potentially fraudulent information," said Mr. Brechtel.

"It won't give you a guaranteed result, but it will tell you that the person has the potential to be lying," added Mr. Benham.

Louise Esola

DATA

Insurtech gains momentum

BY ANDY TOH
atoh@businessinsurance.com

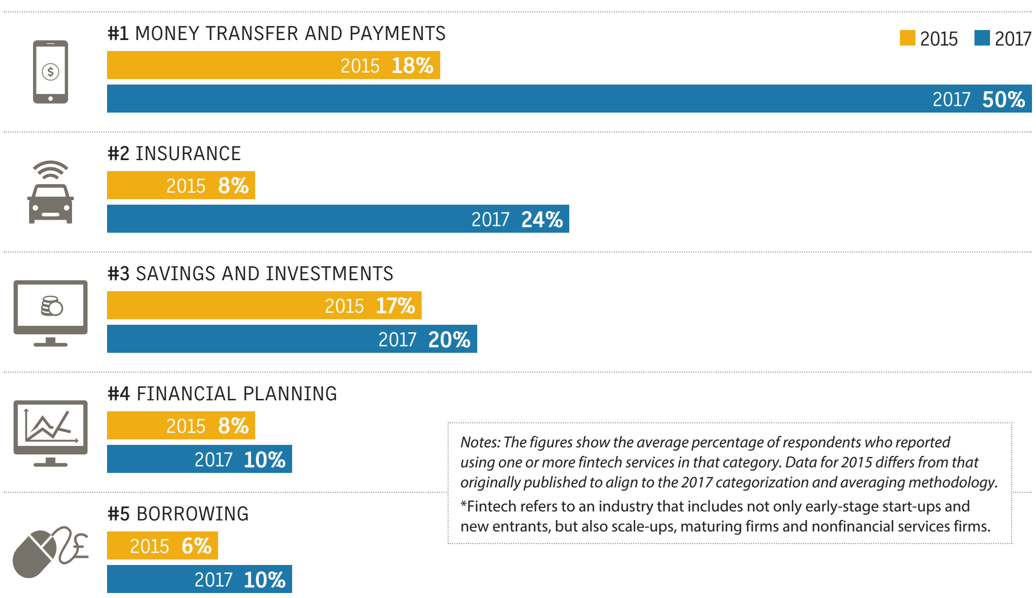
With advancements in digital technology and more powerful smartphones coming into the marketplace, we can do more now with our devices than ever before. There are more opportunities to disrupt the marketplace and to capture new consumer behaviors and habits. As several reports have shown, there is exponential growth in adoption of uses by consumers, as well as new services and products being introduced by providers in the past few years. These trends are expected to accelerate significantly as the technology continues to mature.

ADOPTION RATE

In the 2017 EY Fintech* Adoption Index, insurance services have seen significant increases, overtaking both savings and investments, and borrowing, with 24% adoption among digitally active consumers that have used this type of service in the past six months.

Based on more than 22,000 online interviews in 20 markets, insurance moved from being among the least commonly used services of five broad categories that included money transfer and payments, financial planning, savings and investments, and borrowing in 2015 to the second most popular service in 2017. This was largely due to the inclusion of insurance premium comparison services and expansion into telematics and wearables (helping companies predict claim probability better).

COMPARISON OF FINTECH CATEGORIES RANKED BY ADOPTION RATE IN 2017 AND 2015



Notes: The figures show the average percentage of respondents who reported using one or more fintech services in that category. Data for 2015 differs from that originally published to align to the 2017 categorization and averaging methodology.
*Fintech refers to an industry that includes not only early-stage start-ups and new entrants, but also scale-ups, maturing firms and nonfinancial services firms.

CURRENT USE VS. ANTICIPATED USE OF FINTECH FOR INSURANCE

Anticipated future use of fintech for insurance is expected to grow to 39% from the current use of 24% in 2017. Respondents were asked about their future anticipated use, and although statements about future intent have limited reliability, they are directionally indicative of consumer sentiment, according to EY Fintech.

2017 USE	FUTURE USE
24%	39%

PERCENT OF U.S. POPULATION ADOPTING FINTECH

In the U.S., the average adoption rate of fintech has grown from 17% in 2015 to 33% in 2017, with future use projected to grow to 46%.

2015	2017	FUTURE
17%	33%	46%

NEW SERVICES

New services and new players are driving higher adoption. The 2017 EY Fintech Adoption Index considers three services in the insurance category in 2017, compared with one in 2015.

2015 SERVICES	2017 SERVICES
Car insurance using telematics (black box) that monitor driver behavior and health premium aggregators	Car insurance using telematics (black box) that monitor driver behavior
	Insurance premiums comparison sites
	Activity-based health insurance that tracks your exercise

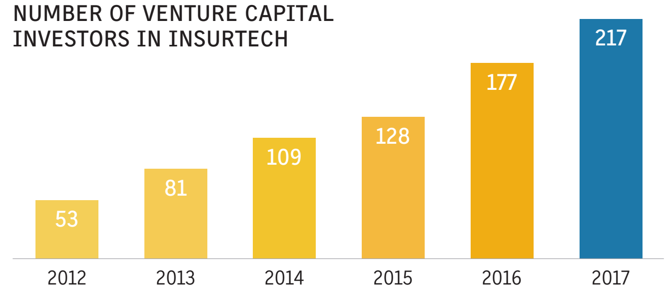
Source: EY Fintech Adoption Index 2017

INSURTECH INVESTMENTS

Growth of the insurtech ecosystem drives increased interest from a variety of investors outside of the traditional insurance industry, and that in turn forces incumbents to defend themselves by investing in new technology directly, according to the latest edition of the Quarterly Insurtech Briefing by Willis Towers Watson PLC.

The number of venture capital investors participating in the insurtech sector has increased from 53 in 2012 to 217 in 2017 — a fourfold increase or +30% annual growth, according to data from CB Insights. From a transaction count and dollar investment standpoint, since 2012 CB Insights has tracked more than 700 insurtech investments with nearly $9 billion of disclosed capital committed.

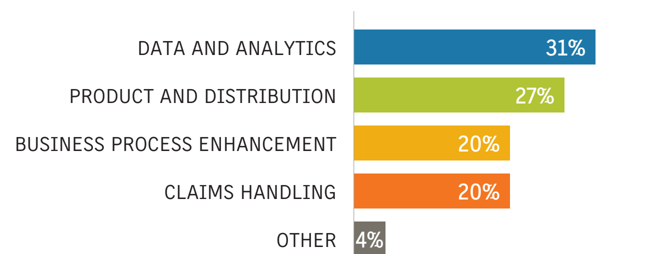
NUMBER OF VENTURE CAPITAL INVESTORS IN INSURTECH



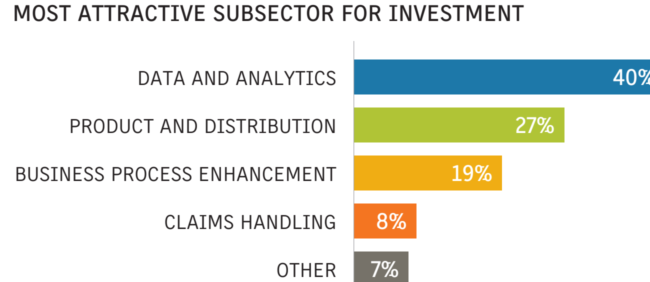
Source: Willis Towers Watson PLC, Quarterly Insurtech Briefing Q1, 2018

Data and analytics, and product and distribution, are the top two primary focus areas of survey participants, according to a survey that focuses on the characteristics and strategies of over 100 insurtech investors of Willis Towers Watson Securities' investor contacts, as well as CB Insights' weekly insurance technology newsletter subscribers. Likewise, CB Insights saw data and analytics, and product and distribution, as the most attractive subsectors for investment.

PRIMARY SUBSECTORS OF INVESTMENT FOCUS



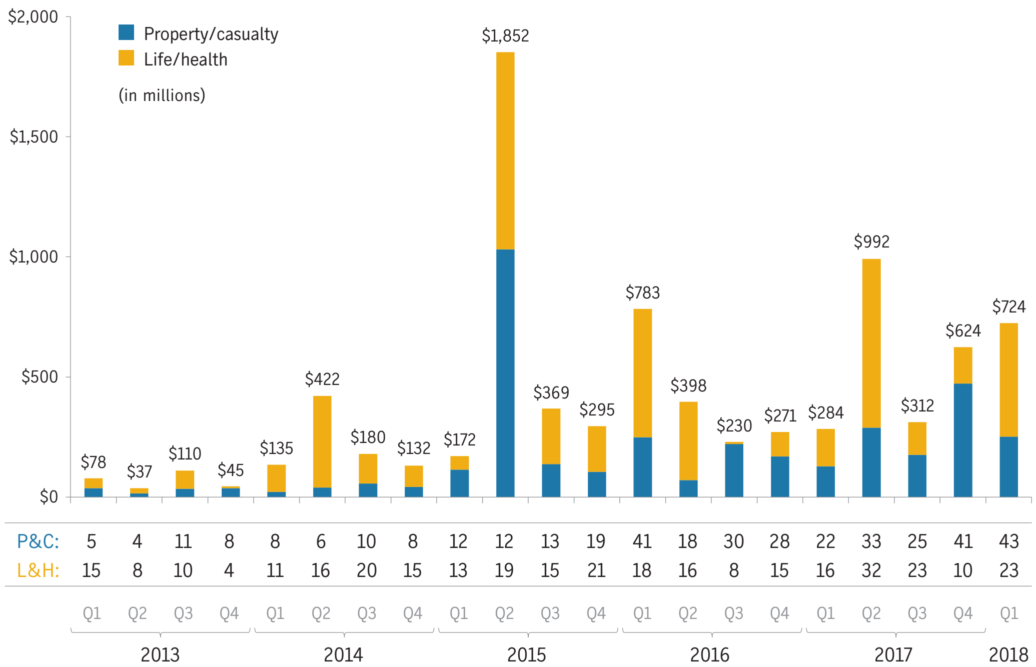
MOST ATTRACTIVE SUBSECTOR FOR INVESTMENT



Source: Willis Towers Watson PLC, Quarterly Insurtech Briefing Q1, 2018

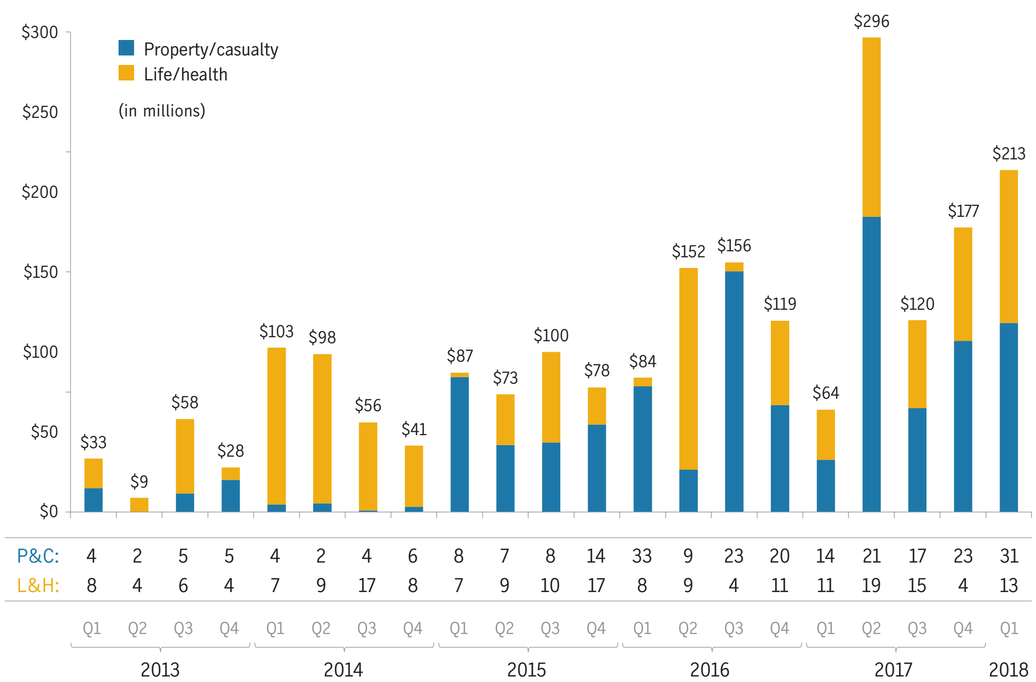
DATA

QUARTERLY INSURTECH FUNDING VOLUME – ALL STAGES



- Insurtech funding volume of $724 million in Q1 2018.
- 16% increase from $624 million in Q4 2017; 155% increase year-over-year from $284 million in Q1 2017.
- 66 total transactions in Q1 2018 represents highest transaction volume completed in any quarter to date; 29% increase from 51 transactions in Q4 2017 and 74% increase year-over-year from 38 transactions in Q1 2017.
- Property/casualty funding volume was 47% lower from Q4 2018, but 95% higher than year-over-year Q1 2017.
- 43 Property/casualty transactions in Q1 2018 represents a 5% increase from 41 transactions in Q4 2017 and a 95% increase year-over-year from 22 transactions in Q1 2017.
- Life/health funding volume was 213% higher from Q4 2018 and 204% higher year-over-year Q1 2017.
- 23 Life/health transactions in Q1 2018 represents a 130% increase in volume from Q4 2017 and a 44% increase year-over-year from 16 transactions in Q1 2017.

QUARTERLY INSURTECH FUNDING VOLUME – EARLY STAGE

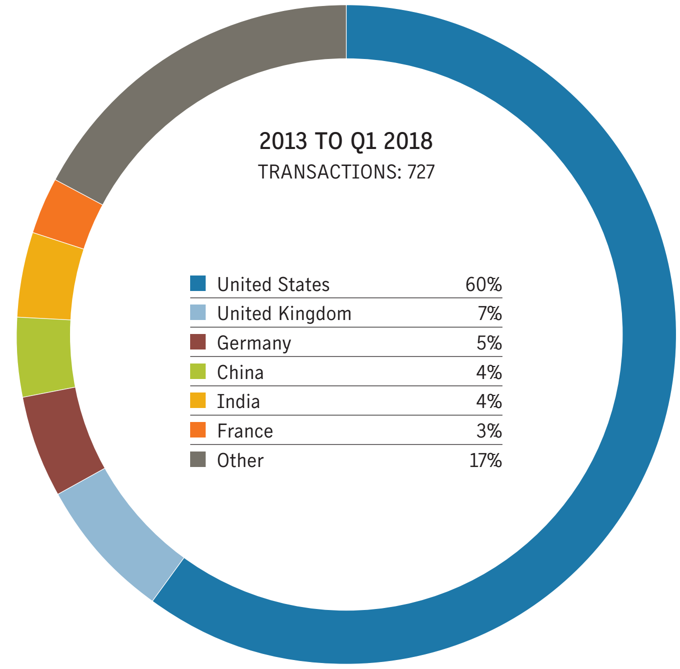


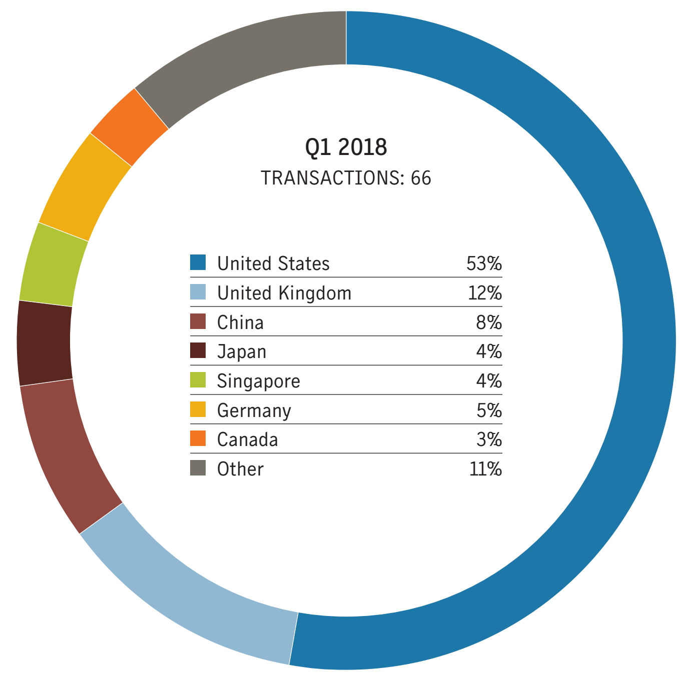
- Early stage accounted for 29%, or $213 million, of the $724 million of funding volume with 44 transactions.
- 20% increase from $177 million in Q4 2017; 233% increase year-over-year from $64 million in Q1 2017.
- 31 property/casualty transactions in Q1 2018 represents a 35% increase from 23 transactions in Q4 2017 and a 121% increase year-over-year from 14 transactions in Q1 2017.
- 13 life/health transactions in Q1 2018 represents a 225% increase in volume from Q4 2017 and a 18% increase year-over-year from 11 transactions in Q1 2017.

Source: Willis Towers Watson PLC, Quarterly Insurtech Briefing Q1, 2018

INSURTECH TRANSACTIONS BY COUNTRY

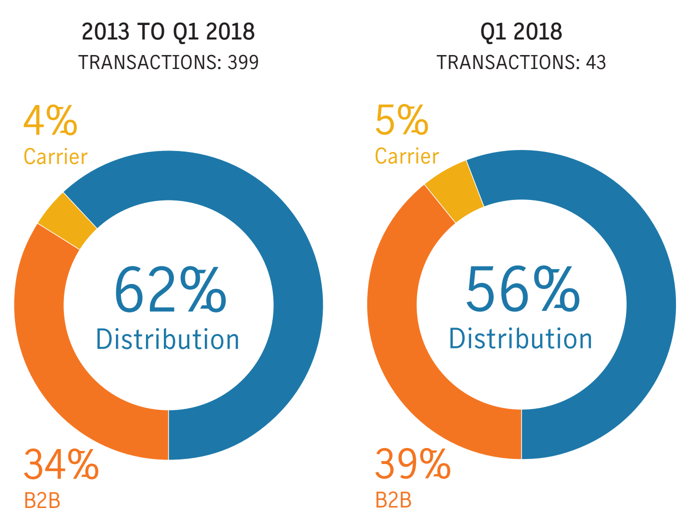
U.S. accounted for 60% of transactions since 2013, but only 53% in Q1 2018.





P&C INSURTECH TRANSACTIONS BY SUBSECTOR

Distribution accounted for more than half of the total transactions, 62% since 2013, down to 56% in Q1, 2018.



Source: Willis Towers Watson PLC, Quarterly Insurtech Briefing Q1, 2018

It's an insurance evolution, not a revolution

How disruption and disintermediation will change the insurance workplace

For the last couple decades, industry after industry has been disrupted by new technologies offering new ways to do things. The insurance industry has not been excluded.

While the industry has been notoriously slow to innovate, the pace has picked up substantially. According to the latest Quarterly Insurtech Briefing from Willis Towers Watson PLC, produced in collaboration with CB Insights, 66 insurtech investment deals in the first quarter of 2018 marked a new high. Insurtech investment volume of $724 million was 16% greater than the fourth quarter of 2017, and up 155% from the first quarter of 2017.

Technology is altering the way insurance is underwritten, bought and delivered. The internet and mobile phones enable customers to search, review, price compare, and purchase an insurance policy in minutes. Comparatively, advancements in technology (artificial intelligence) and access to data ("internet of things", telematics) have allowed insurers to automate submission intake (pre-fill) and pricing of coverage. For example, we can use AI to create risk scores for our customers based on their characteristics and behavior that aids in reducing policy issuance cycle time to seconds or minutes. And we can improve our pricing algorithms with data-driven insights through telematics and IoT. These advancements have also allowed insurers to transform their marketing strategies to be more active in the sales process rather than passively wait for business to arrive at their desks.

These trends are putting pressure on the heavily intermediated insurance sales process at a time when distribution costs are increasing. Cost of distribution has steadily increased within insurance. Today, for every $1 of gross written premium, an insurer can on average pay $0.15 to $0.40 in distribution-related expense. There is an argument that the current intermediary structure's value does not equate to its cost.

Subtle shifts

Customer expectations are rapidly changing with the advancements in technology. Today, customers:

- demand more tailored risk transfer solutions for their specific needs
- require more education and awareness of their risk positions
- look for services to improve or grow their businesses while reducing their risks
- want to be served digitally and on demand
- seek prices that are fair and transparent
- seek support across the lifetime of an insurance policy (especially during a time of loss) and not just at the time of policy issuance.

Customers are used to instant interactions via social media and mobile apps in so many aspects of their lives. They now expect that sort of instantaneous service from their business interactions, too. That's why many new insurtech innovations have aimed to enable customers to interact with companies in new ways that are faster and more convenient.

Even with all of the change happening within insurance distribution today, most in our industry don't expect jobs to be destroyed but rather transformed and enhanced with new skill sets.

New platforms are expanding the ability of insurers and brokers to reach new markets. For instance, coffee growers in Colombia are offered crop insurance protection against adverse weather to smallholder coffee farmers in partnership with Nestlé Nespresso SA. In the future, will the commercial insurance industry offer cyber insurance through a business' security software providers? There are so many possibilities on the table.

Distribution redefined

In the small and mid-sized business market, we have the technology and data to revolutionize how insurance is bought and sold. The Boston Consulting Group estimates that in the United States only 4% of the SMB insurance market is transacted digitally. There remains a heavy reliance on the agent/broker, with more than 50% of customers who try to buy insurance digitally ending up speaking to an agent or broker to complete the sale. While growth estimates by Morgan Stanley suggest that digital penetration could rise to 15%-20% in the coming years, there is still a lot of work to be done to get there. It's not just about automating policy issuance; it's more about being able to provide the proper education and service.

Intermediaries are still a valuable part of the equation and that's especially so when managing large business risks. Commercial risk is complex and ever changing. Every business has a unique risk profile and as such, their insurance program is carefully crafted to meet their bespoke needs.

Plus, commercial insurance buyers are insuring against certain exposures that can pose significant financial loss or put an entire large business at risk. Not something that many would want to do alone. An underwriter or broker who has seen what's out there — what other clients are facing, what claims are coming in and what exposures are overlooked — bring experience and expertise to a transaction that is still hard to replicate through technology. However, broker knowledge can be augmented through collaboration with other experts in the field.

Take cyber risk. The risk itself is hard to define and understand because it's constantly changing. Questions about cyber insurance coverage are widespread in the market as insurers, brokers, security vendors and clients try to collectively grasp the full extent of possible cyber exposures and find optimal cyber risk management approaches.

That doesn't mean that new technologies won't be able to address some market needs. Currently, we are experimenting with new distribution channels to be able to better meet our customers where they may already be interacting today. For example, with Slice Labs, we are launching an on-demand, SMB cyber product — an online, subscription-based product on Slice's insurance cloud services platform to help an underserved market. And, since 61% of all cyber attacks were perpetrated against small businesses in 2017, the need to develop an accessible insurance product is clear. Providing education and cyber risk awareness will be essential to our success and, as such, partnerships with data and analytics companies, software providers and cyber security experts are integral to both product development and distribution strategies.

Changing jobs

Yes, there has been plenty written about how new technologies will eliminate jobs. And in some cases, they have. For instance, between 2000 and 2010, the U.S. lost more than 5.5 million manufacturing jobs, although productivity during the same period increased. And, a 2017 study by McKinsey Global Institute estimated that 800 million jobs may be lost to automation worldwide as a result of advancements in robotics and AI. On the flip side, McKinsey's researchers also acknowledge that technology will not be totally destructive. New jobs will be created and existing jobs will change.

Lauren Tennant Pollock is the digital distribution lead and partner of Accelerate, Axa XL's internal innovation team focused on creating commercial opportunities that arise from new technologies and strategic partnerships. She can be reached at 212-915-6315 and at lauren.tennantpollock@axaxl.com.

Even with all the change happening within insurance distribution, most in our industry don't expect jobs to be destroyed but rather transformed and enhanced with new skill sets.

The underwriter of the future will be a portfolio manager, less concerned with underwriting individual risks. Actuarial roles will be enhanced by data science. Fewer risks, especially in the SMB and mid-market space, will be transacted on a one-off basis. And those that are, the submission and underwriting process will be automated. To do so, we'll need more software engineers to create better platforms, user interface/user experience designers to help us build out our customer journey, and entrepreneurs and technologists to challenge our thinking.

Technology enables. It's enabling us to reach new markets with new products. It's changing how we perform day-to-day tasks. With insurtech investments continuing to flow, the insurance industry can expect more changes in what we offer and how we sell it. And, undoubtedly, it will enhance insurance career opportunities, not eliminate them.

Blockchain offers potential to transform legacy of manual processing in insurance

Sandip Patel is the global managing director of insurance industry for IBM Corp., based in Boston. He can be reached at (212) 671-9582 and Sandip.patel@us.ibm.com.

Early insurers could have scarcely imagined the impact of today's digital technologies in transforming their paper-based business. From artificial intelligence to natural language processing to cloud computing and even drones, the industry has faced more changes in the past few years than in the past few centuries.

One of the most recent and disruptive technologies to spark industry change is blockchain or distributed ledger technology. Around the world, insurers are studying, experimenting with and deploying proofs-of-concept with the technology. It enables organizations and network members, customers or business partners to create frictionless business transactions and trusted environments based on permissions. Every transaction is time-stamped and stored in digital 'blocks' that become part of a growing chain, a permanent record that cannot be altered or tampered with as it is decentralized across the ecosystem. Already, blockchain is proving its value in logistics and supply chain, enhancing the safety of the food system. And it is emerging in other areas such as trade finance, payments and digital currency exchange.

Blockchain holds the potential to improve trust and transparency in several ways. Trust is required in relationships among customers, insurers and service providers in the insurance claims process. It's also necessary for verifying the authenticity of shared transaction data, such as repair estimates or exchange rates applied in cross-border premium or claim payments.

Introducing new blockchain technologies to established and regulated insurance processes brings new challenges and questions, especially given the importance of insurance in global commerce. How will insurers integrate blockchain into legacy systems that impact essential business processes from quote to claim? While digitalization has changed many aspects of business, these insurance legacy systems remain deeply embedded and critical to insurer everyday operations. It's not easy to change or replace them.

One example: contracts. Currently, insurance contracts administration is extremely manual and process-intensive. One driver is the high degree of regulation insurers face. Manual processes to ensure compliance are often required, and the systems used across different parties in an insurance contract don't always communicate well with each other. To ensure key events take place, physical checks are often needed across multiple parties, and sometimes across multiple countries. Not only is this costly and time consuming, but it also has the potential to lead to disputes that cause further inefficiency.

Blockchain is ripe for transforming the area of insurance contracts because it provides a single, unified platform of transactional information transparent to all the participants. One main benefit is control of permissions and privacy, allowing contract information access to only those who need it, and providing a verifiable audit trail of all changes. In insurance, a permissioned blockchain network makes sense because it requires an invitation for each participant and must be validated by the owner of the network or by a set of rules. This places restrictions on who can participate in the network and the type of data and control available to each.

> Blockchain is ripe for transforming the area of insurance contracts because it provides a single, unified platform of transactional information transparent to all the participants. One main benefit is control of permissions and privacy.

The Linux Foundation's Hyperledger Fabric is an example of a permissioned blockchain framework and one of the Hyperledger projects hosted by the foundation. It has been designed from the ground up to cater to these types of enterprise requirements in a highly scalable, carefully permissioned environment. Hyperledger Fabric's support for private and confidential transactions allows insurers to share data with the network, knowing that they own their data and have control over who has access to it.

Hyperledger aims to enable organizations to build robust, industry-specific applications, platforms and hardware systems to support their individual business transactions by creating an enterprise-grade, open-source distributed ledger framework and code base.

IBM is a founding member of Hyperledger and utilizes the technology to develop blockchain applications for clients in insurance and other industries.

Another example of where blockchain can be applied is underwriting. Through the underwriting process, insurers evaluate the risk of furnishing a client with a policy, how much coverage the client should receive and how much they should pay for it. Sometimes it can take months to a year to evaluate the risk versus reward for larger corporate policies.

On blockchain, external data can be included to decrease risk liability and provide semi-automatic pricing. This can help to automate and shorten the underwriting process, reducing the cost of operations. Blockchains also bring transparency and improve trust in the underwriting process by enabling shared visibility in complex multinational programs.

By using blockchain technology, insurers can also more easily manage regulatory compliance. Regulators could be invited to join a network where they can audit specified data and ensure regulatory adherence in real time, with access to only the information they require to do their jobs. Other participants may not be able to "see" all the data regulators can, increasing willingness of insurers to participate and reducing risk of noncompliance regulatory action.

As with any established industry, change will not happen overnight. But legacy systems' essential role in business models should not prevent insurers from exploring blockchain's potential and efficiencies. To keep up with the market, insurers should already be examining how they can incorporate new technology within their current architecture and frameworks.

The transformation of the insurance industry is top of mind for the C-suite, and blockchain might be the hottest topic in the rapidly changing world of fintech. While the technology has the potential to reshape the insurance industry, it also requires careful collaboration with other emerging technologies, regulators, incumbents and additional stakeholders to be successful.

Ultimately, the promise of blockchain lies in its capacity to help eliminate inefficiencies through improving trust and permission-based access to confidential information. Blockchain makes it easier to share information, providing greater line-of-sight to data and security through records that cannot be altered. To keep pace, insurers must ensure their technology environments are ready, build up blockchain familiarity and skill, identify the right blockchain projects to get started with, and learn from the advancements others are making in and outside the industry.

REGISTRATION IS OPEN!

2nd Annual Women to Watch Awards & Leadership Conference EMEA 2018
November 15-16, 2018
Sheraton Grand London Park Lane

13th Annual Women to Watch Awards & Leadership Conference 2018
December 13-14, 2018
Sheraton New York Times Square Hotel

CELEBRATE THE NEWEST CLASS OF WOMEN TO WATCH

Join *Business Insurance* for the **Women to Watch Awards & Leadership Conferences** in London and New York. Winners based in Europe, Middle East and Africa will be honored at the London event. Winners based in North America and other countries outside EMEA will be honored at the event in New York.

Come to network, learn and be inspired at these events that celebrate women in the commercial insurance industry and other related fields who are successfully driving the industry forward. 2018 winners will be announced on businessinsurance.com in late September.

REGISTER AND LEARN MORE:

London Event:
businessinsurance.com/conference/WomentoWatchEMEA

New York Event:
businessinsurance.com/conference/WomentoWatch

#BI_WomenToWatch

NEW YORK SPONSORS

GOLD

AIG
AON Empower Results®
RSG Ryan Specialty Group
sedgwick caring counts
ZURICH®

SILVER

AXA
MARSH
Trusted SAFETY NATIONAL Since 1942

EMEA SPONSORS

GOLD

AIG

SILVER

AXA
MARSH
sedgwick caring counts

BUSINESS INSURANCE.
WOMEN TO WATCH

SPONSORSHIP OPPORTUNITIES: Jeremy Campbell | jcampbell@businessinsurance.com