

InsureTech 2021

Trends and Opportunities for Actuaries





InsureTech Connect 2021

Trends and Opportunities for Actuaries

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InsureTech Connect 2021

Trends and Opportunities for Actuaries

InsureTech Connect 2021

From October 4 – 6, 2021, the world of insurance and technology made its home at the Mandalay Bay Convention Center in Las Vegas at the InsureTech Connect conference (ITC 2021), the world's largest gathering of insurance innovation. The 6,000 professionals who attended the conference were focused on finding new ways to capitalize on growing trends and opportunities for the future of insurance. Participants were excited to be back in person to discuss insurtech concepts and connect to create new partnerships, with the Society of Actuaries as one of the many industry Marketing Partners participating at ITC2021. The Expo Hall within the conference also contained nearly 300 exhibitors and startup kiosks to help showcase new ideas and facilitate connections to the evolving world insurtech. We look forward to seeing everyone again as ITC Vegas returns to Mandalay Bay next September 20 – 22, 2022!

Bill Harris
Vice President and Chief Revenue Officer
InsureTech Connect

For more information about ITC 2021 and future opportunities at the conference, please see the conference website:

<https://vegas.insuretechconnect.com/>



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Key Trends in the InsurTech Industry

InsureTech Connect 2021, covered emerging trends that were and future opportunities for insurance technology. In addition, Society of Actuaries (SOA) staff and key SOA volunteers who work in the insurtech industry interviewed a variety of attendees to gather further information on these trends. Our presence and interactions at ITC 2021 were also greatly helped by the SOA insurtech partnership with Plug and Play, a technology industry company that runs over sixty accelerator programs every year in major industries and cities. For more information on the variety of insurtech initiatives between the SOA and Plug and Play, see the following link to the SOA website:

<https://www.soa.org/programs/insurtech/>

The following key trends in the insurtech industry were observed at ITC 2021:

ROLE OF THE ACTUARY

Starting without knowing all the distinct rules of insurance regulation, the history of insurance distribution, the nature of past historical customer experiences and the historical approach to claim adjudication has some strong potential benefits to spark insurtech innovation. Many insurtech companies noted in our conversations during ITC 2021 that there can often be a benefit for technology startup companies to have staff who may not know at first the strict rules of insurance regulation in order to spur more innovation. One benefit of the actuarial profession to the value of insurtech companies is to work with the innovations that are occurring and help shape how they can work within the structure of insurance. Insurtechs noted the ability for actuaries to be innovators and also to be an effective bridge between innovators and data-driven implementation.

EMBEDDED INSURANCE

Embedded insurance concepts bundles coverage or protections within the purchase of a product or a service itself, offered in real-time or at the point of sale.¹ In addition, the definition of embedded insurance may also extend to offering distinct insurance products for sale in situations where the consumer is already engaged in purchase behavior of other goods and services. Insurtech companies, venture capital managers and traditional insurance companies continue to investigate further ways to expand their presence in embedded insurance.

INNOVATION ENABLES NEW RISKS TO BE COVERED

New insurance offerings have recently evolved both through direct writers offering risks on their own paper or through specialty carriers emerging to write risks. Cyber risks, pet insurance and other offerings have emerged to begin to broaden the types of risks covered in recent years. New risks, such as wildfire risks and coverage for automated vehicles lack historical data and regulatory required capital. In many developed markets the level of the overall insurance industry as percent of Gross Domestic Product (GDP) has stalled. For the Organization for Economic Co-operation and Development countries (OECD) insurance as a percent of GDP has hovered in the range of 8 – 10%. Coverage gaps for many key risks can emerge in these situations, and insurtech companies are primed to provide new opportunities and innovations to cover growing risks that are faced by consumers.

VENTURE CAPITAL

Capital management companies have quickly graduated over past years from where insurtech was noted as a growing opportunity to the place where venture capital firms are building large portfolios to fund and incubate new

¹ B. Péterfi. "This Is Why the Future of Insurance Distribution Is Embedded" (Innoveo, 2021) <https://innoveo.com/news/embedded-insurance-is-the-future-of-insurance-distribution/>

innovations. Several sessions at the conference involved companies pitching their concepts to venture capital firms, venture capital firms giving advice as to how to effectively pitch, and traditional insurance companies highlighting their own internal investment process for seeking out and evolving new technologies. Insurtech companies are themselves moving into situations where their proof of concept has been accepted and looking more towards initial public offerings to attract public capital. This activity is not limited solely to the US markets either with many international firms were interacting at the conference. For more information coming from a recent survey fielded on venture capital and insurtech, see the report summarizing survey results at <https://www.soa.org/resources/research-reports/2021/insurtech-and-venture-capital-survey/>

EMPLOYERS AS PART OF INSURANCE DISTRIBUTION

A noticeable percentage of participants in the ITC 2021 conference focused on the link to consumers through their employers, and the concepts were especially strong in a set of sessions entitled GroupTech Connect. Employers were noted to be critical to the success of consumer financial security through their employee benefit and voluntary insurance offerings and were especially important when it came to offerings made to small businesses. Often these small businesses are focusing on their product, services and growth, and may then enjoy higher technology solutions so insurance offerings are more streamlined and easier to offer to their employees. That concept rings even more true in the current era, often labelled “The Great Reshuffling,”² where attracting and retaining employees is growing in importance. Insurtech companies are finding new and innovative ways to be involved in the offering of group-based products and noting that a strong employee experience and problem solving, leveraging of technology, can be a more productive solution than focusing solely on distribution techniques and product features.

PICTURES ARE WORTH A THOUSAND WORDS

Technology that uses photo imagery was a growing theme throughout insurtech presentations and discussions at ITC 2021. With smartphone technology embedding high resolution cameras and machine learning being able to discern information, technology surrounding cameras and images was front and center. Claims for personal auto property damage using cameras was part of several concepts, as well as the growing use of satellite imagery for examining and underwriting properties, assessing roofs for underwriting and using time-lapse satellite imagery to assess claims damage during catastrophic storms.

DATA-DRIVEN ASPECTS OF INSURANCE

The world of collecting new data sources for use in insurance analytics continues to get larger all the time. Data sources relating to health and wellness, wearables, prescription drugs, physician and hospital activity, telematics and many others were on display to foster innovation and partnerships. Analytics tools and rating software that can bring in a variety of sources of data for analysis were prominent at several sessions and presentations. In addition, the use of unstructured data is growing. Simpler demographic data is still important, but the addition of unstructured data such as written documentation, images, audio, video and social media is quickly becoming involved in new ways to look at a customer or a risk.

THE CUSTOMER EXPERIENCE

As insurance evolves with more emphasis on technology, expanding and enhancing the customer experience is a growing trend. Insurance distributors, the underwriting process, in force policy management and the claims

² D. Buss, “Welcome To The Great Reshuffling” (Chief Executive, 2021) <https://chiefexecutive.net/welcome-to-the-great-reshuffling/>

experience all have technology angles that are coming further into focus. This trend follows in the footsteps of other financial institutions and other large consumer purchases and highlights that while the product and pricing and important variables, making an enjoyable customer experience can be key to the purchase decision and retaining the customer.

COMPETITIVE PRESSURE FROM NEW PLAYERS

In many sessions focusing on trends in the insurance industry it was noted that insurtech is well beyond being new or being a passing novelty. New entrants to the insurance industry are here, some having fully implemented and grown to be taking risk, establishing a customer base and even growing to build partnerships for the future. This growth of insurtechs and competition may be a precursor to having insurance costs decrease with lower volatility of losses, reduced unit expenses and overhead and low cost of capital.³ In addition, several ITC 2021 presentations noted that digital insurers are growing in their presence and establishing reasonable footholds as carriers. These digital insurers also may tend to take different approaches in their distribution or customer engagement processes as compared to traditional insurers. Some may leverage more heavily by starting as developing customers through other products other than insurance. For example, a digital insurer may have parallel business that center around other property-related services such as technology-driven home improvement or maintenance, security systems, or building communities that center on Internet of Things (IoT) technology. These companies then expand on that customer and community experience to expand into insurance offerings.⁴

³ A. Jones, "What's Next for Insurtech?" (HSCM Ventures, October 2021) <https://hscm.com/wp-content/uploads/2021/10/ITC-2021-ALJ.pdf>

⁴ J. Williams, "Forrester Infographic: Insurtech Funding Roundup, Q1 2021" (Forrester, June 2021) <https://www.forrester.com/report/Forrester-Infographic-Insurtech-Funding-Roundup-Q1-2021/RES165099>

The Opportunity for Actuaries in InsurTech

All during ITC 2021, the staff and key volunteers from the SOA asked attendees what the value and opportunities are for actuaries in the world of insurtech. Many actuaries already play a strong role in the insurtech space either as part of the C-suite at insurtech companies, serving on insurtech Boards of Directors, providing advisory or consulting services for insurtech companies, or as key parts of the staff of insurtech companies. In addition, many attendees had interacted with actuaries as part of their insurtech experience, often through validating new insurance technology concepts or working on merger, acquisition or venture capital transactions.

The following items were noted as the strengths, opportunities and areas for improvement of the actuarial profession in the future of insurtech:

STRENGTHS AND OPPORTUNITIES

- Actuaries play key niche roles in several insurtech businesses, ranging from those that focus on rating/underwriting/actuarial software to businesses that rely heavily on data-driven decisions where actuaries are needed to discern the meaning of the data
- Research and development opportunities fit well with the actuarial skill set. These roles help validate the value new processes or partners bring to an organization above their current approach. Many insurtech companies continue to look for actuaries to assist in validating concepts and give more credibility to their innovation through research and engagement.
- Increasingly, large and established traditional insurance and reinsurance companies are getting involved with insurtech and these companies typically include an actuarial presence to be part of (or lead) the team investigating new opportunities.
- Actuaries provide key connections to insurance regulation. Some insurtech companies noted their own reduced awareness of how intricate regulation can be for new products, underwriting and rating algorithms and other aspects of their technology. Actuaries can help insurtech companies to become more aware of the challenging aspects of the insurance industry and bring in critical reasoning and decision-making.
- Insurtech companies are often now interested to get data-driven analysis and actuarial work much earlier in their development and incubation process. Early evaluation by consulting actuaries or advisors can give them information they value to effectively shape and develop their ideas.

AREAS FOR IMPROVEMENT

- The analytic skills of some actuaries do not allow for entrepreneurial thinking and can be narrowly focused on a specific practice or product topic. Actuaries working in insurtech should be aware of and receptive to new ideas and concepts.
- The insurtech world values networking and communication skills. There needs to be a deeper awareness of the growing pool of actuaries who are creating a broad network and are confident in the ways they communicate with their clients or prospective partners.

- Insurtechs bring competition for the general actuarial profession in some cases. We need to challenge those Innovators and entrepreneurs who are not as familiar with the actuarial profession and who may prefer to work with data analysts that are more in their network or comfort zone.

The Checkers Analogy

START AS IF YOU DON'T KNOW THE RULES

The evolution of insurtech requires creative innovation, whether it be from new concepts or ideas that look to be injected into traditional insurance or traditional insurers looking to re-invent their legacy processes to stay fresh and current with underwriting and customer experiences.

Picture a situation where you are looking to teach a young child how to be a successful checkers player. You lay out the board, place all the pieces, diligently laying out the red and black round checkers neatly within the squares. “The goal,” you note, “is for you to get all my pieces off the checkerboard.” With a broad smile, the young child then leans over to your side of board and with one swift swipe of their forearm, they proceed to wipe all your pieces off the board to the floor. It’s an innovative move, even if their action is technically against the rules of the game.

You reset all the pieces and then reply, “The goal is for you to get all my pieces off the checkerboard using your pieces.” And with quick precision, the young child begins to snowplow their pieces forward towards yours and pushes your pieces into your lap. Another innovation. Mission accomplished.

With a final reset of the pieces you note, “The goal is for you to get all my pieces off the checkerboard using your pieces to jump over mine, with a set of predetermined rules as to how those jumps work.” Eventually, the discussion turns to strategy and decision making, but you’ve enjoyed watching the innovative spirit at work.

As stated at the start of this report, starting without knowing all the distinct rules of insurance regulation, the history of insurance distribution, the nature of past historical customer experiences and the historical approach to claim adjudication has some strong potential benefits to spark insurtech innovation. Disruptive technology companies such as Uber and Lyft didn’t follow the rule of “First, buy a whole fleet of vehicles.” Airbnb didn’t adhere to the historical rule of “First, build a lot of hotels.” Many insurtech companies noted in our conversations during ITC 2021 that there can often be a benefit for technology startup companies to have staff who may not know at first the strict rules of insurance regulation in order to spur more innovation. One benefit of the actuarial profession to the value of insurtech companies is to work with the innovations that are occurring and help shape how they can work within the structure of insurance. Insurtechs noted the ability for actuaries to be innovators and also to be an effective bridge between innovators and data-driven implementation.

Future Considerations and Observations

REPRESENTATIVE QUOTES FROM ITC 2021

Throughout the duration of ITC 2021, SOA staff and key volunteers collected a variety of observations. Listed below are some of the representative quotes that look to give additional color and insight to the ITC 2021 conference.

“Actuaries bring richer content to the use cases we study as compared to pure data scientists”

“Sometimes with embedded insurance and customer experience, you can draw an analogy to (the 1999 film) Fight Club... The first rule of insurance is don’t make it about insurance...”

“Disruption is a word I hate... It implies that the current system is broken or not adding value. Insurance has been extremely good for consumers, even though it needs to be modernized.”

“If we sit in a room with actuaries, they shouldn’t just come up with what we have always done. Data scientists have a goal of coming up with something new.”

“There’s a need to use rigor in setting rates for risks that have not yet occurred or been previously covered. This provides an opportunity for predictive analytics!”

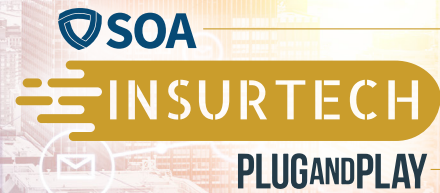
“While many start-ups may aspire to be unicorns, insurance companies are mainly focused on incremental changes in time and cost.”

“Insurtech companies at the forefront seem to be in some key categories: Digital insurers who aspire to sell insurance in new or different methods; Comparison enterprises who connect with distribution and customers; and Enablers who look to bring operational improvement and build new capabilities

“Many of the insurtech companies who will be close to IPOs or additional rounds of funding are ones that are emphasizing customers.”

“Insurtech still has some tendency today to be more or P/C coverages, but it’s also significantly more focused on life and health than a few years ago. Investors are looking increasingly more for life industry opportunities.”

SOA and InsurTech: Make the Right Connection



Connections. It's what the Society of Actuaries (SOA) and InsurTech start-up accelerator Plug and Play are all about – helping you make the right ones. Through a strategic partnership, we provide a bridge between actuaries and tech start-ups. What does this mean for you? Gain access to a vast array of educational resources, learning experiences and networking opportunities. Check out just a few of the options:



Inside InsurTech: Virtual Roundtable Series

This two-hour live webcast series combines learning and networking for you. Hear from actuaries and InsurTech start-ups about the critical lessons they've learned. Use this opportunity to network and build stronger connections with the InsurTech community. New event dates are being planned for 2022.



ElderTech Summit

Join SOA and Plug and Play as we bring together InsurTech experts and actuaries to explore the intersection between aging and technology. It's a critical conversation as the U.S. population ages and it's one you don't want to miss. Mark your calendar for the Second Annual ElderTech Summit, December 6-7, 2021.



"Get Plugged In" Podcast Series

Listen in as actuaries interview InsurTech start-ups about their experiences working with new technology in the insurance industry.



Research on InsurTech

The SOA Research Institute develops a wide array of research papers, essays and surveys. Check out our InsurTech page to access some of the latest studies on innovation and technology:

- InsurTech and Venture Capital Survey Findings
- A Primer on Insurance Policies and Genetics
- Technology in Microinsurance
- Peer-to-Peer Insurance: Blockchain Implications



Office Hours – InsurTech Advisor Opportunity

Actuaries host virtual office hours with start-ups. It's a chance for InsurTech leaders like you to connect with SOA members to gather insights and gain advice. Office hours are pre-scheduled meetings.

**Make the right connections for
your business.**

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SOCIETY OF INNOVATORS

ABOUT ACTUARIES AND THE SOA

Actuaries are the backbone of financial security. Their problem-solving provides a safeguard against catastrophe and gives businesses the confidence to grow. They work in a variety of business sectors, helping manage and mitigate risk and uncertainty. Actuaries can harness their skills and insights to help advance new ideas in InsurTech to benefit the insurance industry, regulators and the public. Actuaries are known as problem-solvers, business leaders and experts in managing risks.

The SOA is the world's largest actuarial professional organization with more than 31,000 actuaries as members. Through research and education, we advance actuarial knowledge and enhance the ability of actuaries to provide expert advice and relevant solutions for financial, business and societal challenges.



Make the right connections for
your business.

Visit soa.org/InsurTech today.



Acknowledgments

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SOA Insurtech Advisory Council members:

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About the Society of Actuaries Research Institute

Serving as the research arm of the Society of Actuaries (SOA), the SOA Research Institute provides objective, data-driven research bringing together tried and true practices and future-focused approaches to address societal challenges and your business needs. The Institute provides trusted knowledge, extensive experience and new technologies to help effectively identify, predict and manage risks.

Representing the thousands of actuaries who help conduct critical research, the SOA Research Institute provides clarity and solutions on risks and societal challenges. The Institute connects actuaries, academics, employers, the insurance industry, regulators, research partners, foundations and research institutions, sponsors and non-governmental organizations, building an effective network which provides support, knowledge and expertise regarding the management of risk to benefit the industry and the public.

Managed by experienced actuaries and research experts from a broad range of industries, the SOA Research Institute creates, funds, develops and distributes research to elevate actuaries as leaders in measuring and managing risk. These efforts include studies, essay collections, webcasts, research papers, survey reports, and original research on topics impacting society.

Harnessing its peer-reviewed research, leading-edge technologies, new data tools and innovative practices, the Institute seeks to understand the underlying causes of risk and the possible outcomes. The Institute develops objective research spanning a variety of topics with its [strategic research programs](#): aging and retirement; actuarial innovation and technology; mortality and longevity; diversity, equity and inclusion; health care cost trends; and catastrophe and climate risk. The Institute has a large volume of [topical research available](#), including an expanding collection of international and market-specific research, experience studies, models and timely research.

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