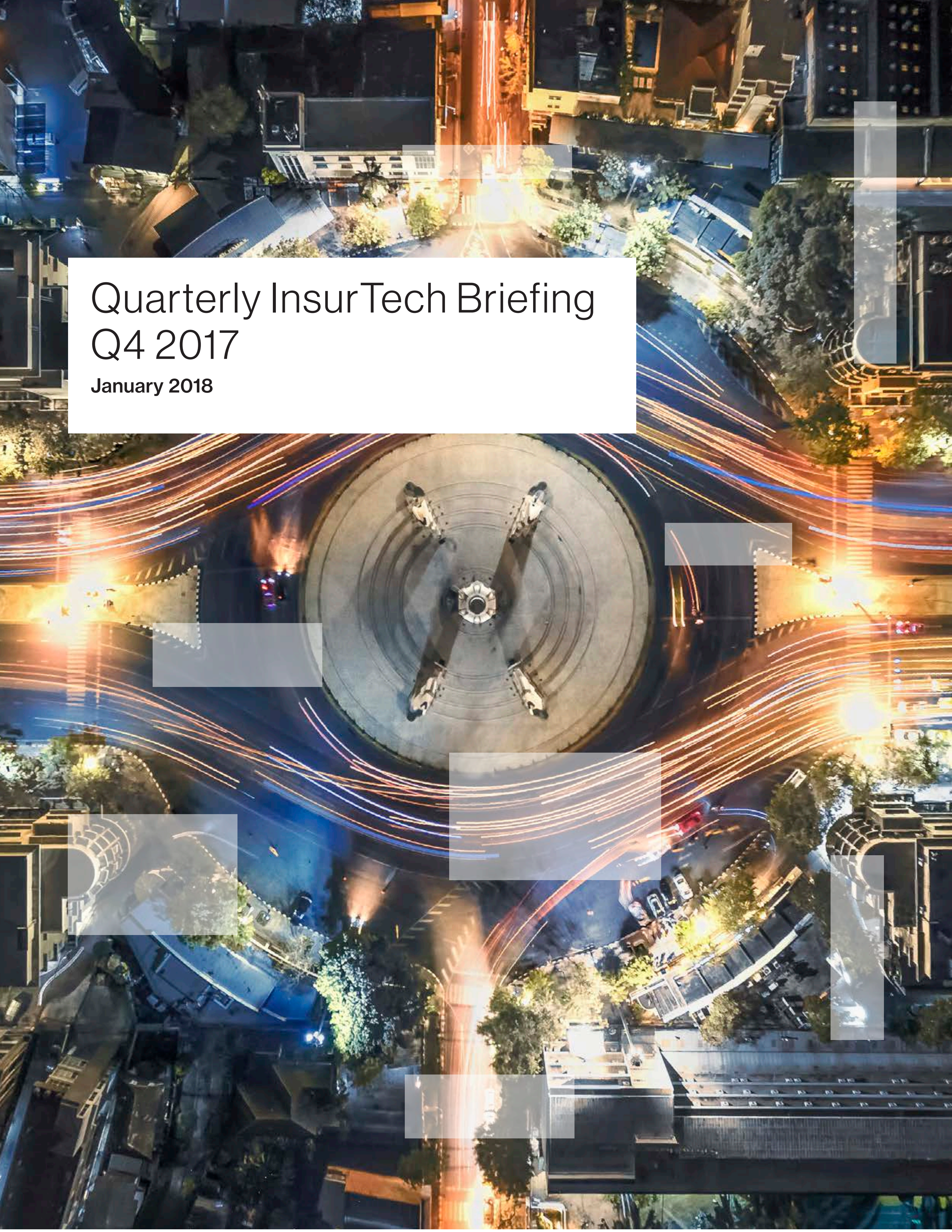
Quarterly InsurTech Briefing Q4 2017

January 2018



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Quarterly InsurTech Briefing

Introduction

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Foreword: The Sobering of InsurTech

The fourth edition of our *Quarterly InsurTech Briefing* offers an opportunity to reflect on a full year's worth of InsurTech activity in 2017 – another year of record investment into the space from both financial investors and (re)insurers.

2017 brought a new trend to the industry, which we describe as the *The Sobering of InsurTech*. Incumbents sent a clear message to potential disruptive outsiders: by investing heavily in start-ups and technology, (re)insurance companies appear to have assumed a semblance of control over the InsurTech revolution. During the year, conversations about disruption of the existing value chain evolved towards an efficiency-driven search for incremental innovation. However, technology revolutions rarely result in redistribution of power among incumbents. Instead, these developments more often produce an entirely new approach to the value chain that defines winners. Look at Amazon, Tesla and Apple as examples, and consider the markets they've taken from Walmart, GM, Ford, Kodak, Nokia and others. Insurance may not trace the same trajectory – high barriers to entry associated with regulation, product complexity and the value of long-term customer relationships may shield incumbents from large-scale disruption. It is also possible that incumbents' collective response to InsurTech hype has diminished their ability to recognize true disruption.

Should Incumbents Feel Safe?

Our *Q4 Industry Theme* feature focuses on (re)insurers shaping InsurTech. 65% of incumbent investments to date have focused on enabling the current value chain, as (re)insurers have attempted to enhance the efficiency of product delivery, underwriting, claims and other administrative functions. It remains to be seen whether enhanced efficiency will drop to the bottom line for incumbents, get delivered to customers or fund third party solution providers, but it is difficult to identify or quantify disruption within incremental innovation resulting from these investments. Less than 10% of InsurTech investments to date have flowed into start-ups targeting full scale value chain disruption.

This trend is magnified in the results of our (re)insurer innovation survey, which includes responses from nearly 600 (re)insurance and investment professionals. 75% of respondents believe their company is "moderately" to "extremely" at-risk of disruption, even as 72% of company innovation resources, on average, are devoted to incremental technologies (instead of disruptive or radical ones) and nearly half of respondents describe their company's innovation philosophy as "ad-hoc," meaning their company is neither explicitly a first mover or a fast follower. Most respondents believe customers and employees are valuable internal sources of innovation, while only 20-30% recognize and prioritize substantial innovation contributions from external talent pools, such as accelerators/incubators and venture capital. Henry Ford once said, "If I'd asked customers what they wanted, they would have told me, 'A faster horse.'" Third party venture capital money in InsurTech is betting on something else. Leading VC fund Andreessen Horowitz sees new technologies differently, stating: "It has to be a radical product. It has to be something where, when people look at it, at first they say, I don't get it, I don't understand it." External capital entering the industry is searching for potential unicorns, funding disruptive ideas and breakthrough technologies that may seem crazy at first.

New Capital Bets on High-Growth Products

Our *Transaction Spotlight* feature highlights an example of a significant bet on fundamental changes to (re)insurance sourced from outside of the industry. Guidewire's $275 million acquisition of Cyence marks a technology company's entrance into an attractive niche market which may represent one of the most compelling growth opportunities in the (re)insurance sector. Today, cyber attacks are estimated to cost more than $1 trillion per year, more than three times higher than economic losses from natural disasters in 2017, the third most expensive year in history. To date, the (re)insurance industry's response to cyber threats has been mixed; amidst limited product penetration due to a lack of experience data, global cyber premium is estimated at just $3 billion in 2017, though selected incumbents are working hard to advance their cyber products, modeling capabilities and underwriting and claims handling infrastructure. It is interesting that one of the leading cyber risk modeling firms has been acquired by a technology vendor, and not a (re)insurer.

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Who Benefits from Modularization?

Our *Thought Leadership* feature further focuses on the InsurTech sobering phenomenon and the associated growth of incumbent interest in technologies addressing their back-office needs. With technology moving forward at an unprecedented pace, incumbents are increasingly electing to outsource functions to highly specialized new entrants, renting evolving modules of technology that can be tailored to suit their individual needs. Though this approach may be more cost effective, it further fuels the question of whether incumbents will allow value in the industry to shift towards new entrants. In time, market participants will come to understand which module in the chain generates the most value. It is plausible that automation in distribution will shift value towards efficiency of internal processes that support cutting-edge modeling and underwriting engines.

Who Were The Winners In 2017?

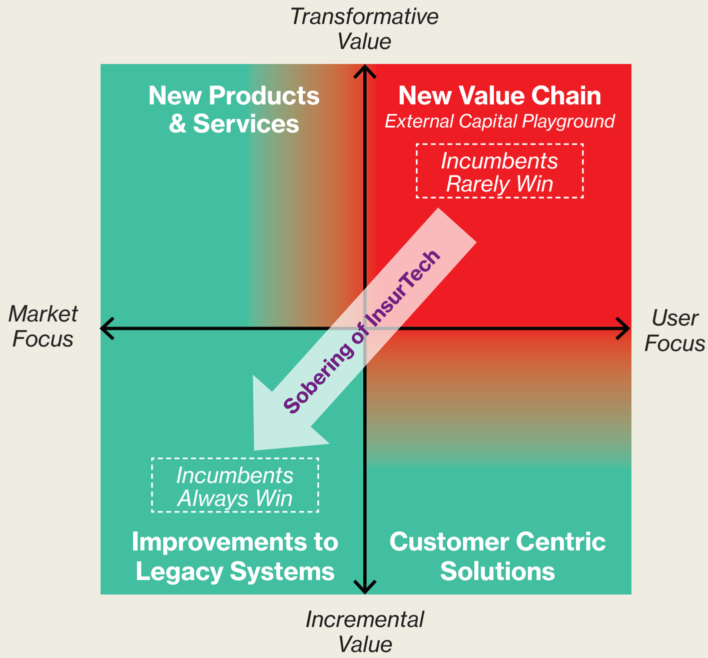
Our (re)insurer innovation survey shows that innovation does not necessarily correlate with geography, size or even underlying product. Four companies voted to be most innovative: Munich Re, Lemonade, AXA and Swiss Re vary in size from the hundreds of millions to over $30 billion, focus on personal or commercial lines products, insurance or reinsurance and have global or local platforms.

Hundreds of InsurTech startups are looking for their place in the insurance value chain. To summarize the year, we cataloged 100 companies to watch into four categories, including the top 25 companies in product & distribution, business process enhancement, data & analytics and claims management. We believe that these categories represent the current frontiers of innovation in insurance. Over half of InsurTechs target distribution and product design, with data & analytics and claims management representing relatively smaller segments. We expect the business process enhancement category to grow based on the current level of incumbent focus on this area.

Incumbents Fuel Investment Momentum in Q4

$697 million of InsurTech funding in Q4 rounded off 2017 at a total of $2.3 billion, a 36% increase from $1.7 billion recorded in 2016 and the second highest total for any year to date. (Re)insurers, directly and through corporate venture arms, are increasing their activity in the sector and expanding their focus to invest in a broad range of technologies with potential applications to their core (re)insurance businesses. 35 private technology investments by (re)insurers in Q4 and 120 private technology investments by (re)insurers in 2017 are the highest totals recorded in any quarter and year to date, respectively.

I want to thank you for all the comments and guidance we received during the year. We are very grateful for the positive response to our Quarterly InsurTech Briefing to date. We want to continue to improve it, and as ever, we welcome your feedback and suggestions.



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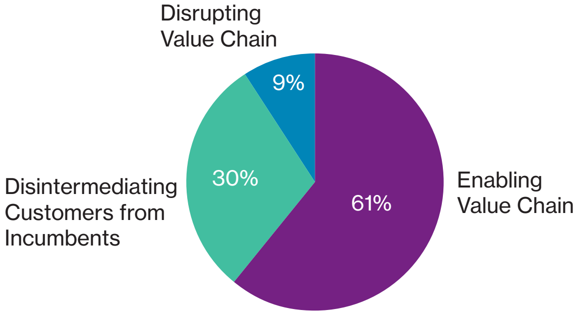
The State of InsurTech

InsurTech funding volume increased 36% year-over-year in 2017, demonstrating that technology driven innovation remains a core focus area for (re)insurance companies and investors heading into 2018. However, perhaps contrary to many of the opinions championed in editorial and press coverage of the InsurTech sector, further analysis of the growing number of start-ups successfully attracting capital from (re)insurers and financial investors reveals that the majority of InsurTech ventures are not focused on exiling incumbents by disrupting the pressured insurance value chain. According to research from McKinsey & Company, 61% of InsurTech companies aim to enable the value chain, while 30% are attempting to disintermediate incumbents from customers and just 9% are targeting full scale value chain disruption. Has the hype surrounding InsurTech fostered unjustified fear from overly defensive incumbents?

We have taken this analysis a step further by tracking funding volume from strategic (re)insurers versus financial investors for InsurTechs focused on enabling the value chain relative to their counterparts attempting to disintermediate customers from incumbents or disrupt the value chain altogether and found that 65% of strategic (re)insurer InsurTech investments have been concentrated in companies enabling the value chain, with only 35% of incumbent investments going to start-ups with more disruptive business models. What does it mean? While recognizing the subjective nature of surmising an early stage company's ultimate industry application at maturity from its initial focus, we attribute this phenomenon to the tendency of incumbents to, consciously or subconsciously, encourage development of less perceptibly threatening innovation while avoiding more radical, potentially intimidating technologies and applications.

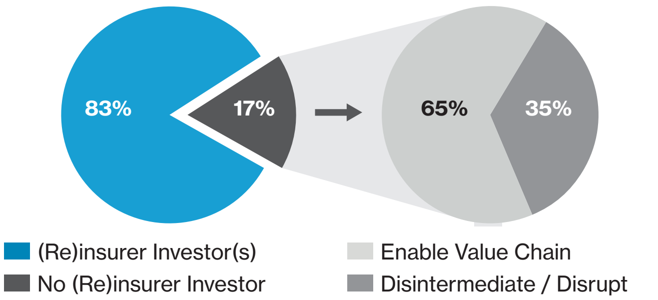
Recognizing that this behavior may allow incumbents to preserve a palatable status quo, it should be considered in the context in which individual investments are evaluated – on the basis of expected benefits relative to potential risk. We have listed several benefits that InsurTechs offer to incumbents on the right side of this page.

InsurTechs by Focus in Value Chain



Strategic (Re)insurer InsurTech Investments

InsurTech Universe by Investor Type	Value Chain Focus of (Re)insurer Investments



What Can InsurTechs Offer Incumbents?

1. **Enhanced Connectivity & User Experience**
   - AI chatbots and automation reduce costs for (re)insurers and improve ability to respond to customers quickly
   - Machine learning increases efficacy of automated processes and AI customer interactions
   - Elevated social engagement drives more frequent and meaningful interactions with customers
   - Digitizing traditional customer pain points reduces claim cycle time and increases responsiveness, improving customer satisfaction
2. **Consumer Responsive Product Development**
   - Low cost infrastructure enables start-ups to develop tailored products targeting emerging risks in the modern economy and underserved niche markets
3. **Data-Driven Decision Making & Insights**
   - Access to diverse sources of data incorporated into underwriting, pricing and claims management processes
   - Efficient data capture and organization enables more informed and efficient decision making
4. **Disconnected Experimentation & Innovation**
   - New ventures, unencumbered by costs and legacy infrastructure of incumbents, can afford to take more risks, adapting business models and product concepts to identify pockets of value within the insurance value chain

Source: McKinsey & Company research.

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The Sobering of InsurTech: Adapting Business Models for Incumbents

Segmenting the InsurTech Universe

As InsurTech start-ups continue to emerge across the various components of the insurance value chain and business lines, incumbents and investors are evaluating opportunities to deploy these applications in the insurance industry today and in the future. To simplify the process of identifying useful and potentially transformational technologies and applications, we have endeavored to segment the increasingly broad universe of InsurTech companies by their core function into four categories:

1. Product & Distribution
2. Business Process Enhancement
3. Data & Analytics
4. Claims Management

This exercise is complicated by the tendency of companies to operate across multiple functions, so significant professional judgment was used in determining the assignment for each company. A summary of the criteria used to determine placement is listed below. On the following pages, we have included market maps to provide a high level perspective of the number of players in each category, as well as a competitive assessment of each subsector and our expectations for each market going forward. Selected companies in each category, ranked by the amount of funding they have raised to date, are listed, followed by more detailed overviews and Q&A with selected representative companies from each subsector.

Placement Criteria by InsurTech Category

Product & Distribution

- Personal or commercial lines digital insurance distribution businesses including MGAs, brokers, online marketplaces, aggregators or other comparison sites
- Companies offering specialized products to emerging or niche markets (e.g. per use coverage, products tailored for "gig economy" workers, or for individual personal items, pet insurance, etc.)
- Other consumer or enterprise facing insurance product sales oriented companies

Business Process Enhancement

- Outsourced technology solutions enabling digital marketing, underwriting, policy administration, billing and claims management
- Technology-enabled employee benefits brokerage and administration
- Integrated human resources technology solutions for recruiting, health insurance benefits and payroll

Data & Analytics

- Data mining and analysis
- Modeling companies quantifying emerging risks
- Analytical platforms and tools
- Businesses developing or offering automated machine learning capabilities

Claims Management

- Claims processing software and/or mobile applications leveraging AI and machine learning to improve customer communication, data capture and analysis and/or automation throughout the claims cycle
- Technological solutions for managing drones or other technologies providing or enabling remote inspection capabilities

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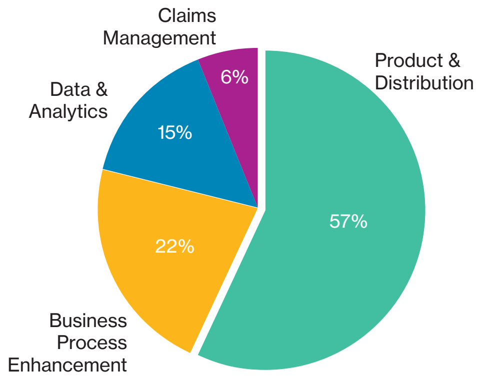
Product & Distribution

1 Product & Distribution

256	Companies
$5.9 billion	Funding Volume to Date

InsurTechs by Subsector



- Broadest category includes 256 companies (~57% of InsurTech universe) primarily focused on direct distribution and/or specialized insurance products
  - Consumer facing online marketplaces, mobile applications and/or specialized products targeting emerging risks in the modern economy or in underserved niche markets
- Focused on improving user experience for insurance customers
  - Recent research from Aon suggests that 55% of InsurTechs are seeking to change how customers interact with insurers
  - According to an Accenture study, 40% of customers are unhappy with their coverage and willing to switch to a new provider
- *Though many of these businesses focus on disintermediating customers from incumbents, (re)insurers are increasingly focused on user experience and will explore acquisitions or partnerships with leaders in the space and continually evaluate opportunities to provide capacity for consumer responsive products that demonstrate profitability and scalability*

Homeowners/Renters

Auto

Diversified/Other Personal Lines

Small Business

Health

Life & Annuity

Asian Aggregators and E-Commerce Point-of-Sale

Insurance-Linked Securities

Source: Aon research and Accenture research.

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The Sobering of InsurTech: Adapting Business Models for Incumbents

Product & Distribution

Product & Distribution – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
1	Zhong An Insurance (HK: 6060)	931.0	▪ Alibaba Group ▪ CDH Investments ▪ CICC ▪ Keywise Capital ▪ Morgan Stanley ▪ Ping An Insurance ▪ SAIF Partners ▪ Softbank Group ▪ Tencent Holdings ▪ Theorem Capital	▪ Backed by founding partners Ping An, Tencent and Alibaba Zhong An, launched as China's first online-only insurer in 2013 ▪ Currently offers more than 240 coverages across health, accident, liability, bond, credit, auto and lifestyle consumption ▪ Majority of products are distributed at point of sale and embedded directly into the platforms of Zhong An's 180+ partners ▪ Listed on the Hong Kong Stock Exchange with a $1.5 billion IPO in September 2017 ▪ Softbank Group was cornerstone investor in the IPO and acquired 5% of Zhong An for approximately US$522 million
2	Oscar	727.5	▪ 8VC ▪ BoxGroup ▪ Brainchild Holdings ▪ Breyer Capital ▪ capitalG ▪ Fidelity Investments ▪ Formation 8 ▪ Other Investors [a]	▪ Technology-enabled health insurer founded in 2013 ▪ Sells individual and small group health plans, distributing both directly and through brokers (including online marketplaces) ▪ Originally only offering coverage in New York, Oscar has since expanded to New Jersey, California and Texas ▪ Offers an easy-to-use, comprehensive mobile app where customers can customize their policies, consult with a doctor and schedule appointments with in-network providers
3	Clover Health	425.0	▪ AME Cloud Ventures ▪ Arena Ventures ▪ Athyrium Capital ▪ Brainchild Holdings ▪ Casdin Capital ▪ First Round Capital ▪ Other Investors [b]	▪ Data-driven health insurance start-up founded by Vivek Garipalli (founder of CarePoint) that aims to lower costs of health insurance and managed care for elderly / low-income members ▪ Uses analytics and custom software to direct clinical staff to proactively fill in gaps in care ▪ Acquired Ullico Life Insurance Company from Ullico, Inc. for $8.3 million in April 2016
4	Bright Health	240.0	▪ Bessemer Ventures ▪ Cross Creek Advisors ▪ Flare Capital Partners ▪ GE Ventures ▪ Other Investors [c]	▪ Online health insurance marketplace delivering a smarter, more connected health care experience based on its exclusive partnerships with health systems, affordable health insurance plans, and simple technology driven user interface
5	Gryphon Insurance	230.0	▪ Leadenhall Capital ▪ Punter Southall Group	▪ UK based start-up life insurer founded by former executives from Prudential, Zurich and Admin Re ▪ Markets critical illness and income protection products directly and through financial advisors ▪ Supported by tech enabled digital and cloud-based infrastructure

(a) Includes Founders Fund, General Catalyst, Goldman Sachs, Google Ventures, Horizon Ventures, Khosla Ventures, Lakestar, Ping An Ventures, Stanley Druckenmiller, SV Angel, Thrive Capital, Wellington Management and undisclosed investors.
(b) Includes Floodgate, Google Ventures, Greenoaks Capital, Nexus Venture Partners, Palm Drive Capital, Refactor Capital, Sequoia Capital, Social Capital, Spark Capital, SURA Ventures, Western Tech Investment, Wildcat Venture Partners and undisclosed investors.
(c) Includes Greenspring Associates, Greycroft Partners, New Enterprise Associates and Redpoint Ventures.

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Product & Distribution

Product & Distribution – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
6	MetroMile	205.5	▪ China Pacific Ins. ▪ David Friedberg ▪ Felicis Ventures ▪ First Round Capital ▪ Index Ventures ▪ Intact Ventures ▪ Mark Cuban ▪ Mitsui & Co. ▪ New Enterprise Ass. ▪ SV Angel ▪ Undisclosed Investors	▪ Entirely new coverage model for car insurance in the U.S. based on pay-per-mile insurance ▪ Combines advanced data analytics with smart technology offerings in real time ▪ Product offering is designed for low mileage urban drivers, providing a more cost-effective option versus traditional coverages ▪ Ongoing partnership with Uber for pay-per-mile coverages for Uber drivers and vehicles in California, Illinois and Washington ▪ Announced quota share program with Hudson Structured Capital Management in September 2017
7	Lemonade	180.0	▪ Allianz Ventures ▪ Google Ventures ▪ Sequoia Capital Israel ▪ SoftBank ▪ XL Innovate ▪ Other Investors [(a)]	▪ Licensed insurance carrier offering homeowners' and renters' insurance powered by artificial intelligence and behavioral economics through a direct-to-consumer online platform ▪ Targets urban dwellers promising zero paperwork and instant servicing (policy issuance, claims, communication, etc.)
8	Policy Bazaar	146.8	▪ ABG Capital ▪ IDG Ventures India ▪ Intel Capital ▪ Ribbit Capital ▪ Tiger Global Mgmt. ▪ Other Investors [(b)]	▪ India based financial products comparison website offering personal lines coverages, loans and credit cards ▪ Provides free insurance quotes and allows users to compare plans based on customizable filters
9	BIMA	114.2	▪ Allianz ▪ Axiata Digital ▪ Kinnevik ▪ LeapFrog Investments ▪ Millicom International	▪ Leading mobile life and health insurance distribution platform in emerging markets ▪ Currently reaches 7 million people across eight countries in Africa, Asia and Latin America, including Ghana, Senegal, Tanzania, Mauritius, Bangladesh, Sri Lanka, Indonesia and Honduras
10	Goji	109.9	▪ Coffin Capital & Ventures ▪ Hudson Structured ▪ Five Elms Capital ▪ Thayer Street Partners ▪ Village Ventures ▪ Undisclosed Investors	▪ Leading independent online and offline data-driven personal lines insurance distribution platform combining digital quoting capabilities with personalized recommendations from licensed insurance agents and customer service representatives ▪ Carrier partners include Liberty Mutual (Safeco), MetLife, National General, Progressive, State Auto, Travelers and others
11	Bank Bazaar	109.0	▪ Amazon ▪ Eight Roads Ventures ▪ Experian ▪ Mousse Partners ▪ Sequoia Capital India ▪ Walden International	▪ India based online marketplace providing users with instant customized quotes for loans, credit cards and insurance products

(a) Includes Aleph, General Catalyst, Sound Ventures, Thrive Capital and Tusk Ventures.

(b) Includes Info Edge, Inventus Capital Partners, MakeSense Technologies, PremjiInvest, Steadview Capital, True North, Wellington Management and undisclosed investors.

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The Sobering of InsurTech: Adapting Business Models for Incumbents

Product & Distribution

Product & Distribution – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
12	CompareAsia Group	90.0	▪ ACE & Company ▪ Alibaba ▪ Goldman Sachs ▪ IFC ▪ Route 66 Ventures ▪ Other Investors [(a)]	▪ Hong Kong based comparison platform offering a variety of consumer-focused banking and insurance products in Asia ▪ Providers benefit from lower acquisition costs, higher conversion rates and unlimited reach to customers through the internet ▪ Operates localized brands in Hong Kong, Vietnam, Malaysia, Taiwan, Thailand, Singapore, the Philippines and Indonesia
13	eHealth (NASDAQ: EHTH)	86.0	▪ Dell Tech. Capital ▪ Goldman Sachs ▪ Kleiner Perkins ▪ Lake Street Capital ▪ Lightspeed Ventures ▪ QuestMark Partners ▪ Sprout Group ▪ WellPoint	▪ Leading online marketplace for individual and family health insurance products ▪ Licensed to distribute health coverages in all 50 states and Washington D.C. with over 5 million customers ▪ Ongoing partnerships with Aetna, Humana, Kaiser Permanente, Oscar and UnitedHealthcare ▪ Listed on Nasdaq in October 2006 (EHTH)
14	Ins110.com	84.0	▪ Leading Capital ▪ Undisclosed Investors	▪ China based marketplace for travel insurance with ongoing partnerships with major Chinese online travel service providers including Tuniu and Qunar.com
15	Trov	84.0	▪ Anthemis Group ▪ Baloise Group ▪ Guidewire Group ▪ Munich Re/HSB ▪ Oak HC/FT Partners ▪ Sompo Holdings ▪ Suncorp Group ▪ Undisclosed Investors	▪ On-demand insurance provider covering everyday consumer items ▪ Provides single item coverage for loss, theft, accidental damage, etc. for any duration via mobile app ▪ Munich Re had existing partnership and led Series D funding round; Sompo invested with aim of introducing product in Japan
16	Health IQ	81.6	▪ Andreessen Horowitz ▪ CRV ▪ First Round Capital ▪ Foundation Capital ▪ Greylock Partners ▪ Menlo Ventures ▪ Rock Health ▪ Western Tech Investment ▪ Undisclosed Investors	▪ Mobile life insurance underwriting platform that aims to provide customized coverage solutions ▪ Offers plans that can be tailored to different dietary and lifestyle choices, avoiding penalties that would apply to certain customers under traditional coverages ▪ Ongoing partnerships with Lincoln Financial, Brighthouse Financial, Transamerica, Berkshire Hathaway, Securian, SBLI, Manulife, Assurity, Prudential, Principal, Ameritas and others
17	GetInsured	78.3	▪ Bessemer Ventures ▪ Noro-Moseley ▪ Partech Ventures ▪ River Street Mgmt. ▪ Trinity Ventures ▪ Vocap Investments ▪ Undisclosed Investors	▪ Integrated online comparison shopping portal for small business and family health coverages ▪ Licensed to operate in 50 states with 1.5 million customers enrolled in GetInsured's online platform ▪ Offers coverages from Aetna, Anthem, Blue Cross Blue Shield, Humana, Kaiser Permanente and others

(a) Includes H&Q Asia Pacific, Jardine Matheson, Nova Founders Capital, SBI Group and undisclosed investors.

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Product & Distribution

Product & Distribution – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
18	Insurance Zebra	61.5	▪ Accel Partners ▪ AlphaLab ▪ Ballast Point Ventures ▪ Birchmere Ventures ▪ Other Investors (a)	▪ Online car insurance comparison marketplace that offers more than 1,800 car insurance products from over 200 companies nationwide in the U.S. ▪ Also provides additional educational resources to inform consumers about appropriate coverages and pricing
19	Digit Insurance	60.0	▪ Fairfax Financial	▪ India based technology-enabled insurance company founded by Fairfax and led by insurance and e-commerce professionals
20	Trupanion (NASDAQ: TRUP)	60.0	▪ Highland Capital ▪ Maveron	▪ Pet insurance carrier offering affordable coverages and proprietary claims handling through online portal ▪ Listed on Nasdaq in 2014 (TRUP)
21	CoverHound	56.3	▪ ACE Group Holdings ▪ AmFam Ventures ▪ Core Innovation Cap. ▪ Route 66 Ventures ▪ RRE Ventures ▪ Other Investors (b)	▪ Personal lines and small commercial insurance comparison platform offering fast, accurate quotes ▪ Offers coverages placed with Chubb, QBE, Esurance, Progressive, 21st Century, Infinity P&C, Mercury General, Kemper, Travelers, Hartford Financial, MetLife and other leading carriers
22	PolicyGenius	51.1	▪ AXA Strategic Ventures ▪ MassMutual Ventures ▪ Norwest Venture Partners ▪ Transamerica Ventures ▪ Other Investors (c)	▪ Online marketplace for unique, customized life insurance products ▪ Offers quoting and comparison services for life, long-term disability, renters and pet insurance products ▪ Proprietary software, Insurance Checkup, helps users discover coverage gaps and offers immediate solutions
23	GoHealth	50.0	▪ Norwest Equity Partners	▪ Online portal offering fast, reliable quotes for customized health insurance coverages
24	Singapore Life	50.0	▪ China Credit Limited ▪ IPGL	▪ First local independent life insurance company in Singapore to be granted an insurance license since 1970 ▪ Markets life products directly through a state of the art digital underwriting engine licensed from UnderwriteMe ▪ Reinsurance capacity provided by Hannover Re, Munich Re and Pacific Life Re ▪ Announced acquisition of Zurich Life's Singapore run-off business in January 2018 (approximately $4.5 billion of coverage)
25	Xishan Information Technology	49.0	▪ Ce Yuan Ventures ▪ China Development Bank ▪ Fosun ▪ Ping An Ventures ▪ Undisclosed Investors	▪ China based holding company for Datebao.com, a personal lines e-retailer offering low cost coverages ▪ Offers a range of insurance products including life & health, personal liability and travel insurance

(a) Includes Daher Capital, Floodgate, Mark Cuban, Silverton Partners and Simon Nixon.
(b) Includes AngelPad, Bulberg Capital, Bullpen Capital, Ed Odjana, Source Interlink, Thomas Lehrman and Tugboat Ventures.
(c) Includes Fika Ventures, Karlin Ventures, Otter Rock Capital, Revolution, Susa Ventures, Switch VC and undisclosed investors.

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Product & Distribution

The Sobering of InsurTech: Adapting Business Models for Incumbents

Product & Distribution Example (P&C) – Goji

Technology-Enabled Hybrid Approach to Personal Lines Distribution

Founded in Boston in 2007 as Consumers United Inc., Goji is a leading independent online and offline data-driven personal lines insurance distribution platform that was rebranded in 2014. Licensed in 41 states, Goji employs an online-to-offline high-touch concierge model that uses a data-driven consultative approach to efficiently match consumers with carriers. The company primarily distributes preferred personal lines products including auto, home, excess liability and others on behalf of several leading insurance carrier partners. Goji's employees primarily consist of licensed insurance advisors and customer service professionals that provide personalized and objective guidance to customers. The company's digital quoting portal enables instant side-by-side comparison of insurance policies, though its digital distribution technology is supplemented with one-on-one customer service typically delivered over the phone.

Following completion of a $15 million financing round led by (re)insurance focused private investment firm Hudson Structured Capital Management (HCSM Bermuda) in November 2017, Goji has raised a total of $110 million (per CB Insights) from a diversified investor base that also includes Thayer Street Partners, Coffin Capital & Ventures, Five Elms Capital and Village Ventures. Proceeds from the recent financing round will be used to support Goji's growth and expansion, while Goji also intends to explore opportunities to strategically partner with HCSM Bermuda to leverage the firm's sophisticated insurance knowledge and strong access to (re)insurance markets.

The recent financing round followed an earlier November 2017 announcement that Goji has hired longtime insurance technology executive and former Insureon EVP of Sales, Programs and Facilities Peter Breitstone to serve as CEO, replacing Steve Kezirian, who had served in that capacity since 2015.

We spoke to Goji's Executive Chairman, Matt Coffin, and CEO, Peter Breitstone, about the advantages of Goji's hybrid distribution model and the company's strategy going forward. Their responses to a series of questions are included on the following page.

The Goji Platform

Technology
- Data & Machine Learning-Based Proprietary Analytics

Operations
- Targeted Customer Acquisition
- Hybrid Approach to Sales and Service

Product
- Auto: *Preferred (focus), Standard, Non-Standard*
- Home: *Renters, Condo, Home, Inv. Property*
- Excess Liab.: *Umbrella*
- Personal: *Watercraft, ATV, Snowmobile, Trailer, Rec. Vehicle*

High Value Targeting, Data-Driven Sales and Operational Excellence Driving Strong Results

- ~95% (+72%-pts): *Preferred, High Lifetime Value Customers* [a]
- +124%: *YoY New Premium Growth* [b]
- ~60% (+54%-pts): *Cross Sale Rate* [a]
- +81%: *Avg. Premium Per Customer* [a]

Selected Carrier Relationships

Travelers; Safeco Insurance (A Liberty Mutual Company); State Auto Insurance Companies; MetLife; Progressive; National General Insurance

Selected Goji Investors

Thayer Street Partners; Coffin Capital & Ventures; Five Elms Capital; HSCM Bermuda Management Company; Village Ventures

(a) As of December 2017 (vs. January 2016).
(b) As of Q4 2017.

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Product & Distribution Example (P&C) – **Goji**

Peter Breitstone
Chief Executive Officer

- Joined Goji as CEO in 2017
- 20+ years of senior executive leadership experience in the insurance industry
- Previously served as EVP of Sales, Programs and Facilities at Insureon
- Held various senior leadership positions with Zurich North America and Aon
- Former Founder & CEO of Environmental Partners, an insurance broker, sold to Aon

Matt Coffin
Executive Chairman

- Goji's Executive Chairman since mid-2016
- Manages Coffin Capital & Ventures, which has invested in Goji
- Founder & CEO of LowerMyBills.com, which was sold to Experian for over $380 million
- Board Member of Brighter.com, which was sold to Cigna in December 2017
- Ernst & Young Entrepreneur of the Year Award in 2007

Describe Goji's business model. How is it different from other specialized insurance distribution companies focused on the personal lines insurance market?

Goji's data-driven home and automobile insurance platform enables Goji agents to seamlessly match the optimal coverage needs of its preferred buyers with Goji's integrated network of more than a dozen insurance carriers. Goji's customers, in effect, access an online insurance concierge service that yields personalized, real-time, valued-based quotes designed to fit their individual coverage requirements. Goji combines human expertise with smart technology to match customers with the right coverage at the best price.

Goji has one of the most unique distribution platforms in the industry, which leverages its data and predictive analytics to actually capture high value customers and build a book of business with many carriers. It has developed a very efficient mousetrap for sourcing, identifying and converting high value customers. Goji's solution not only offers consumers price quotes but actually writes preferred customers on behalf of its longstanding network of carriers. Goji has and leverages a fully-built platform to drive continued growth through accelerated customer acquisition.

Unit economics are critical to the success of any business. Most other online businesses follow the old adage, "lose money on every deal but make it up in volume." However, when we consciously shifted to our high lifetime value model in mid-2016, we made a pledge that we'd acquire high value customers in a positive unit-economic way. Goji has since shifted its focus to preferred customers and has applied its metrics-driven sales strategy, which leverages sophisticated data analytics, resulting in greater success with both customers and carriers. Goji's performance metrics are currently at their all-time highs.

Describe Goji's customer profile and how it is different from other insurance companies.

Goji efficiently acquires customers through a targeted sales and marketing approach, focused on high-value Preferred customers. Today, over ~95% of Goji's customers are preferred, representing higher credit quality customers, the vast majority of whom are homeowners, which translates to better cross-sell rates and retention rates, all of which leads to stronger unit economics and higher lifetime value.

Many consumers shopping online for insurance today are looking for a Certificate of Insurance or an ID card at the cheapest price but don't actually care about covering their risk; for those insureds, they'll buy online. However, they typically cancel their insurance frequently and fall into the category of 'non-standard' insureds. Then there's the other category of consumers seeking to protect their wealth from risk; that category, while migrating towards online purchasing is not comfortable deciding what to buy. Consequently, there's a need for a better user experience, as well as offline agents advising the customer on how best to protect their risk. We believe this dichotomy is not going away any time soon.

While it's possible, in the future, that A.I. and predictive analytics will improve this process, people will still want to know that they're properly covered. Goji lives to address this complexity. We spend an enormous amount of time on user experience, as well as analytics necessary to make sure that the customer can get the highest quality product at an affordable price.

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Product & Distribution

Product & Distribution Example (P&C) – **Goji**

How does Goji balance the use of new technology (often automated) with the delivery of a model that also includes personalized customer service and support?

Insurance is complicated. Some InsurTech companies would have you believe that insureds can't wait to buy insurance without interacting with an agent, whereas some insurance agents would say that insureds are not capable of understanding the complexities of buying insurance without a human agent; we believe that the reality is somewhere in-between. While the world is evolving whereby online and offline markets are converging, preferred consumers seeking insurance are going to need both for the foreseeable future.

We've found that the preferred customer demands more than what's typically offered by online comparison shopping sites. While price is always important, coverage features, personalized advice from licensed agents and analytics tend to be the driver of Goji's relationship with its customers. This consultative approach serves the customer well and leads to maintaining long-term customer relationships that are more focused on coverage than solely on price.

Goji has amassed a robust customer database generated from millions of historic customer interactions, enabling it to formulaically filter and identify high-value online customers, which becomes increasingly accurate with more user data. Goji acquires customers through a differentiated and high ROI strategy. Furthermore, Goji's fully integrated, end-to-end technology platform was developed over several years of investment. Goji also recently rolled out a new model, which enables it to evaluate prospects on a real-time, granular basis before introducing them to its program. The technology is allowing us to separate buyers from window shoppers and other online consumers.

I approach the company from an omnichannel perspective, involving distribution via direct-to-customer, affinity groups and B2B partnerships, among other paths. Goji can ultimately fulfill for carriers based on their specific appetite, as their distribution partner, by parsing customers into granular buckets and running highly targeted customer acquisition campaigns to address partner's specific preferences related to certain customers attributes and profiles. Ultimately, Goji can acquire customers more economically than its partners, leading carrier partners to outsource to Goji, which becomes a win-win proposition.

What are the key market trends driving Goji's growth?

From an economic perspective, home and auto insurance are needed in both good and bad economic times, which insulates Goji's business from the economy, while population growth and housing formation will continue to grow the size of the US insurance market.

The current climate has resulted in price instability, which has pushed a lot of people into the market to seek out easier alternatives for cost-effective coverage. Following recent hurricanes, insurance carriers in core markets like Houston have experienced significant losses, resulting in customers facing price increases and cancellations for reasons that having nothing to do with individual losses or characteristics. Our analytics team identifies niche trends where market dislocations lead to unjustifiably higher prices for certain demographics, in an attempt for carriers to balance their books. We're able to utilize our proprietary algorithms to identify attractive customers who have fallen victim to market forces, offering customers better and cheaper product options while offering carriers the opportunity to expand in certain markets, as other carriers suffer CAT-related losses.

How do you expect the landscape of digital distribution competitors to change over the next several years?

Consumer auto and home insurance represents over ~$260 billion in annual written premium in the US alone and we do not view online consumer insurance as a 'winner take all' market. From a technological perspective, under 5% of consumer insurance purchases are made online today, compared to 38% for consumer travel, positioning Goji well for a secular shift online, which is currently in the early innings. However, unlike consumer travel, insurance is far more complicated.

We'd like to believe that no one really is our competition; however, there are other players who report to play in our space. There are new entrants who are online insurance distribution players that believe customers are capable of buying online without any human intervention; in those cases where they do, they tend to attract non-standard customers, which are less complex to underwrite but are typically higher risk and generate lower ROIs. They also typically only offer teaser price quotes and don't actually write insurance, instead simply connecting with a customer and then passing that customer — in the form of a lead — to another company who tries to write the insurance. However, we're not big fans of tech gimmicks solely designed to market to online consumers; instead, we're focused on offering high value products to high lifetime value customers, ensuring that they get the right coverage at the best price.

Certain new-entrants competing online are also insurance carriers, therefore only offering one product and compete directly with insurance carrier incumbents, whereas Goji is not an insurance carrier (and does not retain any insurance risk) and offers customers options across its integrated carrier partner network.

While the insurance industry is beginning to shift online and offer customers a better experience, Goji uniquely offers customers the ability to do business with us however the customer wants to do so.

Q4 2017 Industry Theme

Product & Distribution

The Sobering of InsurTech: Adapting Business Models for Incumbents

Product & Distribution Example (L&H) – Kyobo Lifeplanet

Pioneering Digital Life Insurance: The First and Only Independent Digital Life Insurer in South Korea

Founded in December 2013, Kyobo Lifeplanet ("Lifeplanet") is the first, largest and only independent entity in South Korea engaged in online life insurance. The current shareholders are Kyobo Life Insurance, the third largest life insurer in Korea, and Lifenet Insurance, the first online life insurer in Japan founded in 2006.

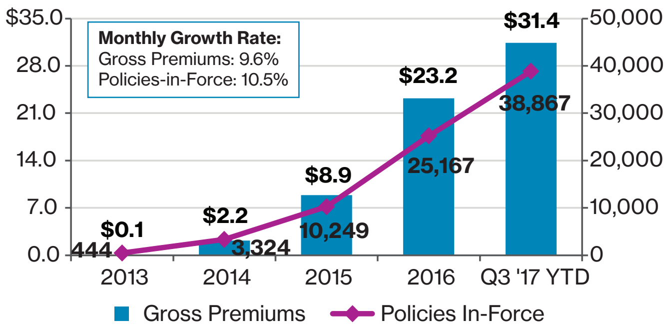
The company is free from legacy complications in Korea (e.g. high guaranteed rates portfolio, channel conflicts, etc.) and enjoys a structural advantage over more established traditional players. All other digital life insurance platforms operate as a business unit within bigger traditional players with sales models that manage a combination of incumbent agency and direct marketing or both.

Lifeplanet has grown rapidly to become a market leader in the online direct life insurance industry as of Q1 2017 with a market share of 36.9% by first premium (defined as premium received at the inception of a new insurance policy), according to data from Korea Life Insurance Association (KLIA).

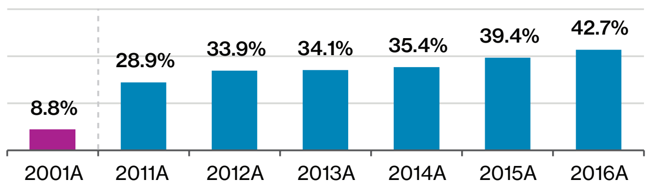
Driven by an evolving landscape and increasing competitive pressures, domestic retail banks are increasingly focusing on investments in financial technology to retain and attract customers. The recent success achieved by the country's internet-only banks (K-Bank and Kakaobank) reflect growing consumer demand for financial convenience. However, despite the robust growth of fintech in the retail banking sector, online sales in the life insurance sector remain relatively low. But as demand for simple, straightforward and more affordable life insurance products grows, the online life insurance market is forecast to achieve robust growth. By 2023, online life insurance sales are expected to grow to 6.8% of total insurance sales by number of new contracts, compared to 1.5% in 2016.

(US$ in millions)

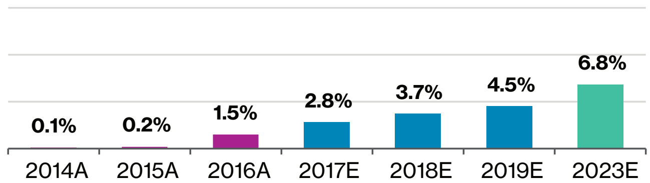
Gross Premiums and Policy Growth



Online Banking Volume % Total Banking Volume



Online Life Insurance Sales % Total Ins. Sales



By combining big data and AI technology with a seamless user experience, Lifeplanet aims to revolutionize the way life insurance products are sold. Being the first mobile-based life insurer in South Korea, the company offers a streamlined application process through its state-of-the-art digital platform enabling customers to complete the entire subscription process quickly, either through an internet portal or directly via mobile devices. Overall customer experience is further enhanced through a chatbot function, a straightforward payment system supported by leading digital payment providers, electronic signature and bio-identification capabilities, a user-friendly interface to access/service policies and an in-house customer participation platform which allows customers to provide and exchange feedback.

Source: Bain & Company research, Bank of Korea and Korea Life Insurance Association.

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Product & Distribution

Product & Distribution Example (L&H) – Kyobo Lifeplanet

Data-Driven Underwriting with Diversified Distribution

Lifeplanet aspires to develop and eventually implement data-driven and algorithmic-based underwriting. It aims to leverage AI algorithms to deliver an initial insurance quotation by matching a prospect's profile and needs within seconds through analysis of a multitude of online data sources (e.g. prescription drug histories, credit activity, property ownerships, consumption behavior, etc.).

The company has developed new pioneering products that are catered specifically to the online/digital platform with simple, innovative features offered at competitive premium levels. Lifeplanet distributes products through a diversified distribution platform including partnerships with reputable large corporates with extensive captive agent relationships, such as the first mobile bancassurance alliance with Industrial Bank of Korea.

Products

100% Principal Guaranteed Life Insurance

- Savings-oriented product designed such that expense loading is imposed only on the accrued interest of premium contribution, thereby guaranteeing the principal of the customer's premium contribution
- In contrast, similar products offered by traditional insurers impose expense loading on the customer's initial premium contribution immediately, creating negative value for the customer in the case of an early surrender or termination of the policy
- Such products are the first of their kind in Korea and are designed specifically for digital distribution, with the goal of making life insurance more intuitive for customers to understand

Preferred and Super Preferred Risk Classes

- Since the beginning of 2016, Kyobo Lifeplanet has offered term life, e-cancer and protection for various adult diseases, targeting customers with lower health risks
- More than 75% of the company's customers for such products are non-smokers with "Preferred" and "Super-Preferred" status, exhibiting superior mortality/morbidity experience
- Products are designed to be affordable in order to capture demand from relatively healthy customers with long-term protection needs; traditional products offered by established life insurers typically include unnecessary benefit coverage, inflating overall policy expenses

Exclusive Rights for New Products

- Exclusive rights, which prohibit other market players from replicating and selling certain products for three to six months, have been granted to Lifeplanet by KLIA for five products, including the company's **100% principal guaranteed life insurance product**, in addition to:
  - **e-hospitalization** and **e-surgical** – medical protection products designed in cooperation with government agencies utilizing data related to hospitalization and surgical costs, which eliminate unnecessary and obscure benefits, leading to lower premiums for customers
  - **Health age** and **annuity pace maker** – products developed by Lifeplanet which provide information on the required monthly premium and payment period based on inputs of data such as age, gender, fitness activities, etc., on a simple webpage/application

Distribution

B2C

Web Portal Search Engines

NAVER Daum

Insurance Comparison Website

온라인 보험슈퍼마켓 보험다모아 (Damoa)

B2B

Corporate/Affiliated Marketing
Targeting Captive Customers of Leading Corporates

- Kyobo Bookstore and Hottracks (stationery goods and music CDs provider)
- Seoul Metro (Seoul Metro Subway with Korail)
- Social Commerce (Ticket Monster, WeMakePrice) and Reward Apps (Cashslide, Cashwalk)
- Doosan Infracore, Volvo Korea, Samchully
- Telcos, Travel agencies, LG Uplus, Kakao Navi, FINDA, Fund Supermarket

Online Bancassurance
Distribution Through Banks' Online/Digital Portals

Industrial Bank of Korea	10th largest bank in South Korea by assets; primarily controlled by gov't
K bank	First internet only bank in Korea; launched in April 2017
Standard Chartered SC은행	Korean subsidiary of Standard Chartered plc
WOORI BANK	6th largest bank in South Korea by assets; primarily controlled by gov't

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Product & Distribution

Product & Distribution Example (L&H) – Kyobo Lifeplanet

Mr. John Lee (JL)
Chief Executive Officer

- Joined Lifeplanet in 2014 as CEO
- Former Head of Product Development, Marketing, Risk Management and e-Business Managing Director at Kyobo Life
- Holds BA from University of Maryland, MSc in Actuarial Science from University of Connecticut and is a member of American Academy of Actuaries

Mr. Sang Hui Lee (SL)
Senior Business Advisor

- Seasoned executive with 25+ years of experience across asset management and life insurance in the U.S., Japan, Hong Kong, Korea and Thailand
- Served as CFO and CMO of AIA Thailand
- Held various senior roles at AIG Korea, including CEO, Deputy CEO, CFO and CIO

Lifeplanet was initially established as a joint venture between Kyobo, Korea's third largest life insurer and Lifenet, Japan's first online life insurer. Can you please describe the company's ongoing business relationship, if any, with its two initial shareholders?

JL: *Lifeplanet is an independent company with its own life insurance license. Kyobo is a supportive shareholder and has provided invaluable technical expertise and industry experience in various areas, including product development and operations. Lifenet, the pioneer of the online insurance industry in Japan, has continuously assisted us with digital marketing and development of online/digital insurance products by sharing their unrivaled experience in these areas. Mr. Daisuke Iwase, Co-Founder of Lifenet, plays an instrumental role, contributing his knowledge and insights in his capacity as an active board member since the company's inception.*

SL: *I would add that the current shareholding is split between Kyobo (92.5%) and Lifenet (7.5%). Although Kyobo is the majority owner, I want to reiterate John's earlier comment that we are an independent company with a management that balances value creation for all stakeholders.*

Describe the technology that drives Lifeplanet. How is it different from your competitors?

JL: *Lifeplanet is the pioneer of online life insurance in Korea. Our mission is to make it easier for consumers to obtain protection coverage from high quality, price competitive products, through a simple, hassle-free, seamless purchase experience online. We are transforming the time-consuming and confusing life insurance purchasing process to make it faster, more secure and most importantly, more convenient.*

SL: *We are the first pure-play digital platform in the Korean life insurance industry and in order to achieve the company's mission, we established an automated underwriting system and adopted convenient payment systems such as Kakao Pay and Naver Pay, as well as authentication systems using digital signature and biometrics on the mobile platform. Within the next few years, new and existing technologies (AI, blockchain, etc.) will be added to the platform through strategic partnership to facilitate market leadership and enhance customer experience.*

Market observers are often quoted as stating that life insurance is too complicated to be sold digitially and will continue to require an element of human participation. What are your views on this topic and can you share with us the product strategy at Lifeplanet?

JL: *Life insurance products, accompanied with industry-specific jargon, are in general, difficult for most customers to fully comprehend. In Korea, more and more new business policies are not renewed after the first year. Net growth of in-force life insurance policies has been lackluster over the last several years, not only due to low new business growth, but also as a result of increasing lapses and policy terminations. By offering a simple online experience, we attract consumers of all ages, particularly younger generations in their 20s to early 40s, who are cost-sensitive and value conscious.*

SL: *We have superior results with respect to customer retention and we expect to continue to lead the market in this regard. Absence of intermediaries has allowed Lifeplanet to avoid channel conflicts and provide protection directly to consumers with innovative and customer-oriented products.*

Q4 2017 Industry Theme

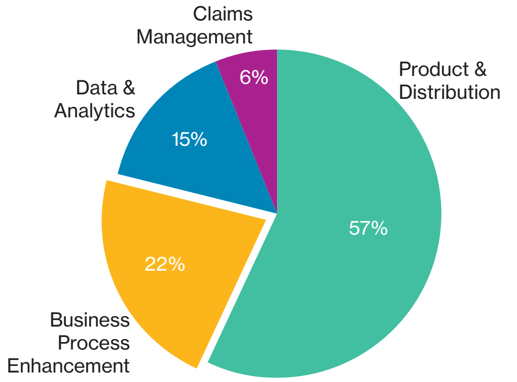
The Sobering of InsurTech: Adapting Business Models for Incumbents

Business Process Enhancement

2 Business Process Enhancement

100	Companies
$2.4 billion	Funding Volume to Date

InsurTechs by Subsector



- Category includes 100 companies (~22% of InsurTech universe) primarily focused on providing outsourced insurance technology services or technology-enabled employee benefits administration
  - Digital marketing, underwriting, policy administration, billing, claims management and/or employee benefits brokerage and administration
- Underwriting and other processes are evolving as (re)insurers explore opportunities to deploy automated machine learning to supplement, or in some cases, altogether replace, human decision making
  - Automation represents significant opportunity for incumbents to cut costs as they face pressure to generate returns despite limited organic growth opportunities and a prolonged low interest rate environment
- *New entrants face competition from established outsourced insurance technology providers; proven applications will attract strong interest from outsourced technology companies, which have already demonstrated willingness to acquire promising emerging businesses for premium valuations*

Business Process Enhancement

Technology-Enabled Business Processes

Employee Benefits Administration

Q4 2017 Industry Theme

Business Process Enhancement

The Sobering of InsurTech: Adapting Business Models for Incumbents

Business Process Enhancement – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
1	Zenefits	583.6	▪ Andreessen Horowitz ▪ Comcast Ventures ▪ Insight Venture Partners ▪ Khosla Ventures ▪ Maverick Capital ▪ TPG Growth ▪ Venrock ▪ Y Combinator ▪ Other Investors [(a)]	▪ Cloud-based HR automation platform aiming to make business and employee management effortless and centralized ▪ Connects and integrates payroll, benefits and other HR systems, allowing users to manage everything using one dashboard
2	Gusto	176.1	▪ Data Collective ▪ General Catalyst ▪ Google Ventures ▪ Kleiner Perkins ▪ Ribbit Capital ▪ Salesforce Ventures ▪ Y Combinator ▪ Other Investors [(b)]	▪ Online platform that consolidates companies' payroll, benefits and human resources capabilities into one dashboard ▪ Has over 40,000 small business customers across 50 states
3	Namely	153.1	▪ Altimeter Capital ▪ Lerer Hippeau Ventures ▪ Matrix Partners ▪ Sequoia Capital ▪ Vayner RSE ▪ Other Investors [(c)]	▪ Cloud-based HR and employee benefits management platform ▪ Provides tech-enabled employee benefits administration software ▪ Diverse carrier relationships with variety of large health insurers ▪ Partnership with Cigna for Namely Employee Benefits Exchange
4	Collective Health	119.0	▪ Google Ventures ▪ Great Oaks VC ▪ Maverick Capital ▪ New Enterprise Assoc. ▪ Redpoint Ventures ▪ Rock Health ▪ RRE Ventures ▪ Social Capital ▪ Other Investors [(d)]	▪ Unified benefits platform that helps employers connect and administer health plans, benefits, spending accounts and employee support in a cost-effective and efficient manner ▪ Provides services to a diverse spectrum of leading U.S. employers including Activision Blizzard, Palantir, Red Bull and Zendesk
5	PlanSource	94.0	▪ Great Hill Partners ▪ Lemhi Ventures ▪ Timucuan Asset Mgmt.	▪ Cloud-based, on-demand software that integrates benefits administration, payroll and human resources management ▪ Delivers tailored technology solutions through carriers and brokers ▪ Partnered with Arthur J. Gallagher, Marsh & McLennan, USI and OneDigital, as well as Aflac, Humana, MetLife and Transamerica
6	Busines solver.com	65.2	▪ JMI Equity	▪ Online benefits administration and outsourcing service integrating best-in-class customer care with the latest technology to automate benefit enrollment and servicing
7	Decisely	60.0	▪ EPIC Ins. Brokers ▪ Two Sigma	▪ Automated tech platform providing small businesses with tailored solutions for benefits administration, HR management and paper-free onboarding and offboarding

(a) Includes Fidelity Investments, Founders Fund, Hydrazine Capital, Institutional Ventures, Sound Ventures, SV Angel and undisclosed investors.
(b) Includes A-Grade, Brainchild Holdings, capitalG, Emergence Capital, Obvious Ventures, Pear, Rothenberg Ventures, Sherpalo Ventures, Slow Ventures, WME Ventures and undisclosed investors.
(c) Includes Bullpen Capital, Four Rivers Group, Greenspring Associates, Scale Venture Partners, True Ventures and undisclosed investors.
(d) Includes Formation 9, Founders Fund, Redpoint Ventures, Spectrum 28, Subtraction Capital and undisclosed investors.

Q4 2017 Industry Theme

Business Process Enhancement

The Sobering of InsurTech: Adapting Business Models for Incumbents

Business Process Enhancement – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
8	Maestro Healthcare (AXA)	59.0	▪ AXA Group	▪ Cutting-edge health benefits service company designed to reduce costs, simplify administration processes and integrate medical service management on a single platform ▪ Acquired by AXA in January 2018
9	Maxwell Health	56.4	▪ Cambia Health Solutions ▪ Catalyst Health Ventures ▪ GIS Strategic Ventures ▪ Lerer Hippeau Ventures ▪ Sun Life Financial ▪ Other Investors [(a)]	▪ Simplifies benefits and HR for small-to-midsized employers by providing a benefits marketplace for employees and enterprise tools that streamline HR administration processes
10	Justworks	53.0	▪ Bain Capital Ventures ▪ Daring Journey Ventures ▪ Index Ventures ▪ LocalGlobe ▪ Redpoint Ventures ▪ Thrive Capital	▪ HR management and benefits administration software enabling employers to streamline administrative processes
11	One	52.2	▪ AGI Partners ▪ AmFam Ventures ▪ AXA Strategic Ventures ▪ Camp One Ventures ▪ Centana Growth Ptnrs. ▪ H&Q Asia Pacific ▪ MassMutual Ventures	▪ Integrated cloud-based platform designed to transform the way insurers interact with customers ▪ Comprehensive solutions include policy administration, rating, billing data analytics, CRM, payment processing and agency management ▪ Enables insurers to modernize operations and offer superior solutions to customers
12	Bswift (Aetna)	51.0	▪ Aetna	▪ Cloud-based HR and benefits software and service provider for employers, and public and private exchanges nationwide ▪ Acquired by Aetna in 2014
13	Remedy Partners	50.3	▪ Bain Capital Ventures ▪ Undisclosed Investors	▪ Episode payment program manager that empowers health care providers to develop and operate patient-centric episode of care payment programs
14	PokitDok	48.7	▪ GIS Strategic Ventures ▪ Healthy Ventures ▪ Lemhi Ventures ▪ McKesson Ventures ▪ Other Investors [(b)]	▪ Technology-enabled platform seeking to streamline administrative functions within the health care process, including scheduling appointments, submitting claims and managing health care data
15	Gravie	40.7	▪ Aberdare Ventures ▪ FirstMark Capital ▪ GE Ventures ▪ Securian Financial Group ▪ Split Rock Partners ▪ Undisclosed Investors	▪ Digital health benefits administration platform that helps employers develop customized benefits plans and employees with choosing appropriate and affordable coverages ▪ Aims to become appointed with all insurance companies in every state; individuals can purchase plans from non-appointed companies if the insurer sells plans to the public
16	Simplee	37.5	▪ 83North ▪ AmEx Ventures ▪ Embarcadero Ventures ▪ Heritage Group ▪ Social Capital	▪ Payments and loyalty platform that helps leading medical providers improve collections with clear interactive bills and payment convenience for patients ▪ Proprietary medical wallet application allows users to manage and pay for all of their family's health care expenses in one location

(a) Includes Adams Street Partners, Annox Capital, BoxGroup, Brothers Brook, Cendana Capital, Industry Ventures, Schooner Capital, Serious Change Fund, Startup Health Academy, TiE Angels, Tribeca Venture Partners, Vaizra Investments, Western Tech Investment and undisclosed investors.
(b) Includes Ballast Fund, CRV, FFP Holdings, New Atlantic Ventures, New Ground Ventures, Rogers Venture Partners, Subtraction Capital and undisclosed investors.

Q4 2017 Industry Theme

Business Process Enhancement

The Sobering of InsurTech: Adapting Business Models for Incumbents

Business Process Enhancement – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
17	Lumity	33.0	▪ Draper Fisher Jurvetson ▪ Rock Health ▪ Social Capital ▪ True Ventures	▪ Using powerful insights and tools condensed into a simple online dashboard, Lumity offers efficient “consulting-in-a-box” to enable employers to make smart health benefits decisions while driving cost savings and better outcomes for businesses and employees
18	iPipeline	33.0	▪ Fidelity Ventures ▪ Golub Capital ▪ NewSpring Holdings ▪ Tech Crossover Ventures ▪ Thoma Bravo	▪ Service provider offering a suite of on-demand, distribution products for the insurance industry, which streamline forms processing, data services, quotes and policy delivery
19	Liazon (Willis Towers Watson)	30.8	▪ Bain Capital Ventures ▪ Bessemer Ventures ▪ F-Prime Capital ▪ Ingleside Investors ▪ Rand Capital ▪ Willis Towers Watson	▪ Employee benefits software provider that helps employees purchase customized packages ▪ Acquired by Willis Towers Watson in 2013
20	League	29.0	▪ BDC Capital ▪ Foundation Capital ▪ Manulife Financial ▪ OMERS Ventures ▪ Portag3 Ventures ▪ Power Financial ▪ Quantum Valley ▪ Real Ventures ▪ Royal Bank of Canada	▪ Mobile employee benefits platform that aims to connect employees to a network of health services and benefits
21	Hixme Insurance Solutions	25.3	▪ Kleiner Perkins ▪ Propel Venture Partners ▪ Rosemark Capital ▪ Transamerica Ventures ▪ Undisclosed Investors	▪ Technology-enabled employee benefits platform that streamlines the purchasing and management process for employers
22	hCentive	25.0	▪ Undisclosed Investors	▪ Cloud-based technology service provider that integrates and consolidates benefits and HR management
23	hibob	25.0	▪ Arbor Ventures ▪ Battery Ventures ▪ Bessemer Ventures ▪ Eight Roads Ventures ▪ Local Globe ▪ Taavet Hinrikus	▪ Israel based cloud-enabled system that integrates HR, employee benefits, pension and auto insurance enrollment and associated data into a secure online data storage platform for small businesses
24	UniRisX	22.3	▪ Delaware Crossing ▪ JumpStart Angel Network ▪ Robin Hood Ventures ▪ Undisclosed Investors	▪ Global provider of digitally integrated, end-to-end insurance product and policy solutions enabling clients to launch, distribute and manage insurance products anywhere in the world
25	Joyowo.com	15.0	▪ Greenwoods Inv. ▪ Meridian Capital ▪ Sequoia Capital China ▪ Tsing Ventures	▪ China based human resources and benefits management outsourcing solution

Q4 2017 Industry Theme

Business Process Enhancement

The Sobering of InsurTech: Adapting Business Models for Incumbents

Business Process Enhancement Example – massUp

"Plug and Sell" White-Label SaaS Offering Technology to Sell Through Every Channel

Founded in 2015, Germany based massUp offers a turn-key B2B white label solution for insurers and other financial distribution channels to sell micro-insurance policies for individual personal items directly to consumers, and commercial lines products through a network of independent agents. The solution includes all necessary services, including policy issuance, payments and contract management. The company offers a growing list of (re)insurance partners access to internally designed, innovative insurance products distributed through a variety of direct-to-consumer sales channels. massUp also enables its (re)insurer clients to leverage its diverse distribution capabilities to sell their existing products through a variety of digital and offline channels and will manage that process for them, integrating massUp's software solutions with a client's existing systems.

massUp's products are tailored to modern millennial consumers that expect to be able to buy insurance online, through apps, in shops, banks and/or via online payment systems. The company offers (re)insurance partners a comprehensive, low-touch solution to manage distribution processes for small-ticket personal lines and small business insurance products through a variety of sales channels.

To date, approximately 70% of massUp's revenue has come from back-end technology services, with the remaining 30% from MGA distribution of the company's internally developed insurance products. Over time, massUp intends to become a Lloyd's cover holder and build out its MGA capabilities to increasingly market massUp's products direct-to-consumers and through agents.

To gain a better understanding of massUp's business model and strategic direction, we spoke to Founder & CEO Fabian Fischer. His responses to a series of questions are listed on the following page.

massUp Delivers a Complete Solution "Off The Digital Shelf"

Risk	Product	Plug-In	Services	Sales (Client)
Covering risk globally, backed by global insurance partners	*Product design, pricing and underwriting*	*Technical "Plug & Play" solution for all channels*	*Payment, contract and claims management*	

massUp Products

massUp Front-End Solutions

Q4 2017 Industry Theme

Business Process Enhancement

The Sobering of InsurTech: Adapting Business Models for Incumbents

Business Process Enhancement Example – **massUp**

Fabian Fischer – massUp Founder & Chief Executive Officer

- 15+ years of experience in digital business for insurers and banks
- Previously served as Partner and as Managing Director at mediaman, a digital agency providing strategy execution and operations for brands' digital platforms
- Graduated from the University of Tübingen

Describe massUp's insurance services solution. How is it different from similarly focused offerings in the market?

Baised in Mainz and Munich, Germany, massUp is a B2B provider of digital products and services to the (re)insurance industry. We offer access to our internally designed, innovative insurance products to (re)insurers and enable financial and industrial partners to sell them everywhere with our digital services. Our own products are predominantly in specialty lines for the personal and commercial markets. The products are designed with millennials in mind, and those who expect to be able to buy insurance online, through apps, in shops, banks and/or via online payment systems. We offer front-end service provisions and back-end software based solutions. With all that combined we offer a "one for all" solution, very unique and new to the market.

Given that our products are digitally designed, developed and delivered, we offer extremely competitive prices with reduced distribution costs. The products and systems themselves are geography and capacity agnostic, and they are modular so that they can be integrated into nearly any legacy software system, anywhere in the world. Our instant sales plug in directly within every digital channel, ensuring that we are offering a genuinely differentiated business model. But, not only are we providing off-the shelf ready-made products, we also provide comprehensive fulfillment services required to sell these products. Lastly, our back-end service provision supports our clients from within; from claims handling to administrative procedures. We really are a complete solutions house for any (re)insurer who is looking to develop a digital/online presence, looking to sell products through the banks and retailers and is looking to improve its back office capabilities.

What are the largest challenges insurers face bringing new products to the market? How does massUp's insurance services solution address these challenges?

A significant number of (re)insurers are encumbered by large, inflexible legacy systems which preclude them from being agile. This can mean that they cannot easily offer new products to their market, or react quickly to changes in technology. This kind of infrastructure is simply not designed to offer smaller products, the kinds of products that we're designing. Our target markets are often considered to be cost ineffective for larger insurers because the price of procurement often outweighs the potential gains. Our systems are so low cost and light touch, however, that with our tools, those markets start to make a lot of economic sense in targeting. Also, we designed our business model so that our products do not require carrier partners to take risk if they do not want to, so they can enter new markets for the first time with limited downside. Because of massUp's business model, we can develop products that other carriers may not be able to develop, and offer them to carriers. We are enablers in this way, making (re)insurers as efficient and relevant as possible. Finally, massUp has distribution relationships from outside of the (re)insurance industry, which we can offer to carriers as new lines of business. Because we work so closely with the banking and retail sectors, we are aiming to bring those markets to our (re)insurance partners.

Describe massUp's revenue model. What is the implementation timeline for Massup's solutions. What level of participation is required from the client during the integration process?

massUp is a true partner to our (re)insurance clients. We develop new products (or digitize existing products), that are tailored to the modern-day needs of consumers. Our business model operates in conjunction with our partners – premium comes through our systems on behalf of the partner (which can be white-labeled and branded for the partner) and we earn a fee based on a percentage of these premiums for our services. If our partners in the market are not taking risk, we also pay them a commission share of premium income. We do not charge retainer licenses or fees. In doing so, we earn fees and grow together with our clients. It is in our mutual interest to offer the marketplace best-in-class products and services. For our particular revenue model, our partners do not need specific technical capabilities themselves.

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Business Process Enhancement

Business Process Enhancement Example – massUp

How did your prior experience with WeChat impact the way that you set up and operate massUp?

The broader massUp group, including our pivotal founding staff, spent over a decade working and gaining experience in the Chinese markets. During that time, we worked extensively with WeChat [(a)] for our clients. We saw first hand the development of an app which provides a "one-stop shop" for so many processes and functions pertaining to personal insurance. We thought to ourselves, how could we provide the (re)insurance industry with something similar? I thought this idea was really fascinating. Naturally in European markets, this theoretical idea is not quite so straightforward in reality, particularly in terms of the cultural transition required. But from a pure business perspective, it made a lot of sense to me. The idea that you can concentrate all requirements and services into one platform was something that the market didn't really have. I wanted to create a space for (re)insurers where they could sell products at the point of sale or through digital channels with just a swipe, like we now do with so many other things in our lives. massUp was born out of the belief that it could be done – we wanted to make massUp the WeChat of the insurance industry. In order to achieve that, you need to have the technology and the right product design. At massUp, we have made technical support and product delivery as seamless and efficient as possible, and we have put it in one convenient place.

Describe massUp's client base. Discuss the types of insurers that have contracted with massUp. Are they concentrated in any specific geographies or lines of business?

Initially, our clients were mostly banks looking to improve their back-end services. We then started working with banks that were delivering insurance products for their clients through banking software. Since that time we have integrated dozens of different global clients onto our platform. We are working with the likes of Societe Generale (or MLP), one of the largest financial distributors in Germany, for their direct insurance business and smaller distribution models. Germany is still our major market but we are rapidly scaling up and are already breaking into international markets with lots of success.

What key performance indicators do you use to track massUp's growth?

The primary growth metrics we use are the total number of insurance products sold and the premium income we pass through our systems. Given that we are still relatively early stage, we plow the vast majority of this back into the business to continue to develop more and more products for the market. 2017 marked our first year shifting away from being a pure technical solution, to also offering front-end services including product development and distribution. Within a couple of months of this shift, we were already into the millions of premium revenue. For us, this is a solid start, but we are extremely ambitious and we also want to continue to develop our offering and focus on delivering these solutions more efficiently. As we are significantly reliant on strategic (re)insurer partnerships, we cannot always move as quickly as we would like. This is something which we are managing but things get easier for us with every successful partnership.

What percentage of massUp's current revenue is comprised of sales of its technology services to insurers compared to MGA distribution of insurance products? How do you expect this figure to change over time?

massUp started as software-as-a-service (SaaS) solution. We have only been offering our own products since the beginning of 2017. As such, about 70% of our earnings to date have come from technological services. Given the trajectory we have had over the last 12 months, however, we are anticipating that we will have an equal split next year between revenues which we derive from our front-end and from our back-end functions. In 2019, we forecast that 70 to 90% of our revenues will come from commissions generated from offering our products to the (re)insurance market. In the next five years, we hope to become a fully-fledged specialty lines MGA, at which point our revenue model will naturally alter.

Describe massUp's strategic partnership with Willis Towers Watson. Does massUp have any other strategic partnerships? How do these partnerships benefit massUp's clients?

Our partnership with Willis Towers Watson is a perfect combination of joint interests. Willis Towers Watson, among other things, seeks to offer its clients best-in-class risk consultancy, supported by software solutions and innovative products. We have partnered with Willis Towers Watson because it shares and supports our long-term vision. We can offer Willis Towers Watson's clients the tools necessary to be more competitive and relevant in today's market. Working with Willis Towers Watson allows us to scale much faster than we could before, and we can also enter global markets with less friction and better local expertise. We remain independent to the extent that we are still very much our own business, developing our own products etc., but we are able to rely on Willis Towers Watson's product knowledge and market expertise to make sure that what we are developing is truly relevant to the market. We also maintain independence in our relationships, with partners with whom we worked prior to our partnership with Willis Towers Watson, local businesses and certain non-insurance distribution channels. Our overall strategic alliance, however, is completely with Willis Towers Watson and, in that sense, this really is a very unique relationship for us. Our clients and partners will benefit from it directly; we can offer even more innovative and competitive products that give them a huge advantage for their businesses.

(a) WeChat is a social media application based in China that is primarily used for instant messaging and transferring funds.

Q4 2017 Industry Theme

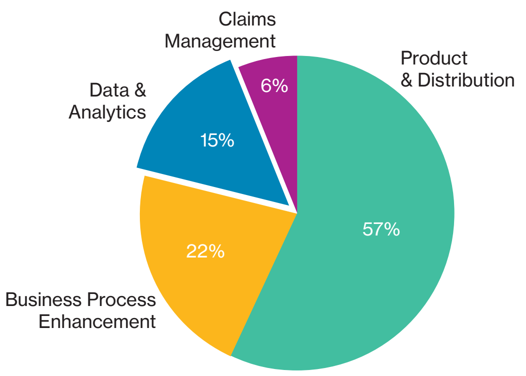
The Sobering of InsurTech: Adapting Business Models for Incumbents

Data & Analytics

3 Data & Analytics

70	Companies
$0.5 billion	Funding Volume to Date

InsurTechs by Subsector



- Category includes 70 companies (~15% of InsurTech universe) primarily focused on analyzing new sources of open source or other external data and/or extracting insights to enable data-driven decision making
  - Data mining and modeling companies quantifying emerging risks, analytical platforms and tools and businesses developing or offering automated machine learning capabilities
- Incumbents seeking to leverage new sources of data from sensors and communications technology to inform underwriting and pricing decisions
  - Automated machine learning supplementing human decision making, though industry expertise continues to be required to effectively extract insights from data and analytical tools to inform product development
- *Significant competition will persist and potentially accelerate due to widespread availability of open source data; leading platforms will covet opportunities to collaborate with (re)insurers and gain access to valuable experience data*

Data & Analytics

Cyber

CYENCE, cloudcover, sensor, UTOCAT

Diversified

Analyze Re, QuanTemplate, Cytora, KYLEGA, Prospx, HYPERLIFT, O2OBOTS, eagleeye analytics, TYCHE, Vericred, LAPETUS, Dynamis, ThreatInformer, TRICAST, innovation group, REVOLUTION Insurance Technologies, STATES TITLE, justInCase, Colibrium, Digitteria, datacubes, FRISS, acturis, Groundspeed, conservis, SSP, domotz, CoVi Analytics, PLEX.AI, RateFilings.com

Property Catastrophe

THE CLIMATE CORPORATION, ClimateSecure, CAPE ANALYTICS, VALEN ANALYTICS, Praedicat, PILLAR TECHNOLOGIES, insurdata, Weather Analytics

Telematics

OCTO, Driveway, THE FLOOW, drivefactor, Zendrive, crashboxx, Silicon savannah ltd, AMODO, CityMile, acculitx, TrueMotion, Zoie, insure the box, KATSANA, DRIVE SPOTTER

Social

DIGITAL FINEPRINT, WRISK, clearsurance, CARPE DATA, PremFina, stik, Agent Review

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Data & Analytics

Data & Analytics – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
1	The Climate Corporation (Monsanto)	108.8	▪ Monsanto	▪ Advanced analytics platform that combines hyper-local weather monitoring, agronomic data modeling and high resolution weather simulations to help farmers protect and improve farming operations ▪ Authorized provider of the U.S. Federal crop insurance program ▪ Acquired by Monsanto for $930 million in October 2013
2	Cyence (Guidewire)	40.0	▪ Guidewire Software	▪ Data analytics and risk modeling software provider that provides customized solutions for addressing cyber risk ▪ Acquired by Guidewire Software in October 2017 for ~$275 million
3	PremFina	36.0	▪ Draper Esprit ▪ Emery Capital ▪ Fineqia International ▪ Microsoft Accelerator ▪ Other Investors [a]	▪ UK based white labeled software-as-a-service solution for insurance brokers enabling customized marketing and distribution ▪ Fineqia International made a corporate minority investment in December 2017 (terms undisclosed)
4	Weather Analytics	32.8	▪ Tokio Marine HCC ▪ W. R. Berkley ▪ Other Investors [b]	▪ Technology-driven provider of global climate intelligence ▪ Aggregates historical, current and forecasted weather content in online database with risk mitigation tools and predictive analytics
5	ProspX	27.6	▪ Adams Capital ▪ HPI Real Estate Services ▪ Undisclosed Investors	▪ Insurance industry data analytics platform that harvests and consolidates relevant information and business intelligence
6	Conservis	26.7	▪ Cultivian Sandbox ▪ Heartland Advisors ▪ Middleland Capital ▪ Undisclosed Investors	▪ Software solutions provider that aims to help employers reduce costs of managing risk and compliance ▪ Services include developing and implementing ISO compliance and performance tracking and management tools ▪ Also provides automated record keeping and farm operating process management services for agricultural producers and crop insurance agents
7	Zubie	24.0	▪ Best Buy ▪ Castrol innoVentures ▪ Melody Capital ▪ NGP Capital ▪ Other Investors [c]	▪ Mobile automobile diagnostic software that provides real-time maintenance alerts, driving insights and engine diagnostics
8	Friss	19.1	▪ Aquiline ▪ BlackFin Capital ▪ VentureClash	▪ Netherlands based insurance compliance and fraud detection analytics software provider
9	Valen Technologies (Insurity)	16.0	▪ Insurity	▪ P&C analytics company that builds, develops and deploys predictive models for underwriting and claims fraud ▪ Acquired by Insurity in January 2016

(a) Includes Rakuten Ventures, Rubicon Venture Capital, Talis Capital and Thomvest Ventures.
(b) Includes In-Q-Tel, Maryland Department of Business and undisclosed investors.
(c) Includes Comporium, Magna International, October Capital and OpenAir Equity Partners

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Data & Analytics

Data & Analytics – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
10	The Floow	15.9	▪ Direct Line Group ▪ Fosun ▪ United Electronics	▪ UK based autonomous telematics systems provider ▪ Clients include insurers and auto organizations
11	Zendrive	15.0	▪ BMW i Ventures ▪ First Round Capital ▪ Nyca Partners ▪ Other Investors (a)	▪ Data analytics platform that monitors driving patterns and helps drivers make better decisions ▪ MGA operation distributes auto insurance coverages
12	Cape Analytics	14.0	▪ Data Collective ▪ Khosla Ventures ▪ Montage Ventures ▪ XL Innovate ▪ Other Investors (b)	▪ Data analytics service provider that leverages machine learning and geospatial imagery to quantify property risk
13	Praedicat	12.0	▪ RAND Corporation ▪ RMS ▪ Rustic Canyon Partners	▪ Catastrophe risk modeling and consulting services provider that combines data analytics with geo-footprint mapping ▪ Partnership with Allianz to provide catastrophe liability risk management prediction services
14	TrueMotion	12.0	▪ Bain Capital Ventures ▪ General Catalyst ▪ Lakestar ▪ Undisclosed Investors	▪ Data analytics technology platform that enables insurers to distinguish between safe and risky drivers and reward safe drivers with discounts on their insurance through mobile app Mojo
15	Driveway Software	11.6	▪ AltaIR Capital ▪ Ervington Investments ▪ Kernel Capital ▪ Plug & Play Accel. ▪ Other Investors (c)	▪ Driver feedback mobile app that analyzes driving habits and behavior and identifies patterns
16	States Title	10.2	▪ Bloomberg Beta ▪ Fifth Wall Ventures ▪ Foundation Capital	▪ Next generation predictive analytics platform for title insurance
17	Vericred	9.7	▪ FCA Venture Partners ▪ Undisclosed Investors	▪ Health care information services company developing a cloud-based SaaS ecosystem for compliance and risk management ▪ Data solutions reduce costs for health and InsurTech companies; modern API enables hassle-free data delivery to insurers

(a) Includes Expansion VC, Fontinalis Partners, Sherpa Capital, Thomvest Ventures, Trucks VC and undisclosed investors.
(b) Includes Formation 8, Lux Capital, Promus Ventures and Rich Boyle.
(c) Includes Gigi Levy, IMI.VC, Peter Wolken and TechAviv Angels.

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Data & Analytics

Data & Analytics – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
18	Cytora	8.8	▪ Cambridge Seed ▪ Parkwalk Advisors ▪ QBE Ventures ▪ Starr Companies ▪ Plug & Play Accel. ▪ Fintech Innov. Lab ▪ Other Investors [(a)]	▪ UK based data analytics solutions provider ▪ Cytora's risk engine captures the online footprint of risks clients continually face from crawling data from company websites, news articles and government datasets, and processes data using AI algorithms to predict future claims, attractive risk profiles and quality of risk ▪ Strategic partnerships with QBE, Starr and XL Catlin
19	QuanTemplate	11.3	▪ Allianz Ventures ▪ Anthemis Group ▪ Route 66 Ventures ▪ Techstars ▪ Transamerica Ventures ▪ Undisclosed Investors	▪ Developer of insurance reporting and analytics software built for wholesale reinsurance markets ▪ Comprehensive outsourced technology solution enabling efficient importing, analyzing, modeling and reporting of data, allowing users to manage their workflow
20	Carpe Data	7.9	▪ Aquiline ▪ Social Intelligence	▪ Data mining company that utilizes social and web data to help insurers improve rating processes and identify fraudulent claims
21	DriveFactor (CCC Information Services)	6.2	▪ CCC Information Services	▪ Driver feedback software that offers recommendations and feedback on driving habits and analyzes driver risk ▪ Acquired by CCC Information Services, an auto claims manager, in April 2015 for US$22 million
22	Lapetus Solutions	4.7	▪ Plug & Play Accel. ▪ Undisclosed Investors	▪ Life insurance risk management provider using data analytics to provide real-time insight into an insured's health status
23	Stik	6.2	▪ Detroit Venture Ptnrs. ▪ Draper Associates ▪ NorthCoast Tech Investors ▪ Other Investors [(b)]	▪ Service industry search platform that helps users find and review local professionals in a variety of industries, including real estate, lending, insurance, health care and others
24	Clearsurance	6.0	▪ Davis Capital Partners ▪ Michael Crowe ▪ Undisclosed Investors	▪ Insurance reviews site allowing consumers to share and compare experiences on personal lines coverages
25	Dynamis Software Corporation	4.3	▪ Golden Angels Network ▪ Undisclosed Investors	▪ Health insurance sales support tools provider servicing insurance brokers to increase efficiencies and improve sales

(a) Includes Alan Morgan, Cambridge Innovation Capital, Ilkka Paananen, Matthew Grant, Parkwalk Advisors, Paul Foster and iLexIR.
(b) Includes Automation Alley, FirstStep Fund and MEDC.

Q4 2017 Industry Theme

Data & Analytics

The Sobering of InsurTech: Adapting Business Models for Incumbents

Data & Analytics Example – **Cytora**

Data Liquidity in Commercial Insurance

Spun-out of Cambridge University in 2014, Cytora is building a new way to conceptualize, price and deliver insurance, underpinned by liquid access to data in a technology-enabled economy. Initially focused on extracting insights from a wide array of disparate data sources to quantify and manage economic, environmental and social risk, Cytora has adapted its technology to focus on addressing the "low-resolution" nature of commercial underwriting, which Cytora contends is currently characterized by weak differentiation between risks and increasing claims costs and underwriting expenses. Believing (re)insurer underwriting advantage will erode rapidly in areas where underwriter judgment is privileged but the underlying risk can be understood in an enhanced way using data and machine learning models, the company developed the The Cytora Risk Engine. This platform uses artificial intelligence and machine learning to transform billions of external data points into a risk targeting, selection and pricing advantage that drives both revenue and profitability for commercial lines insurers.

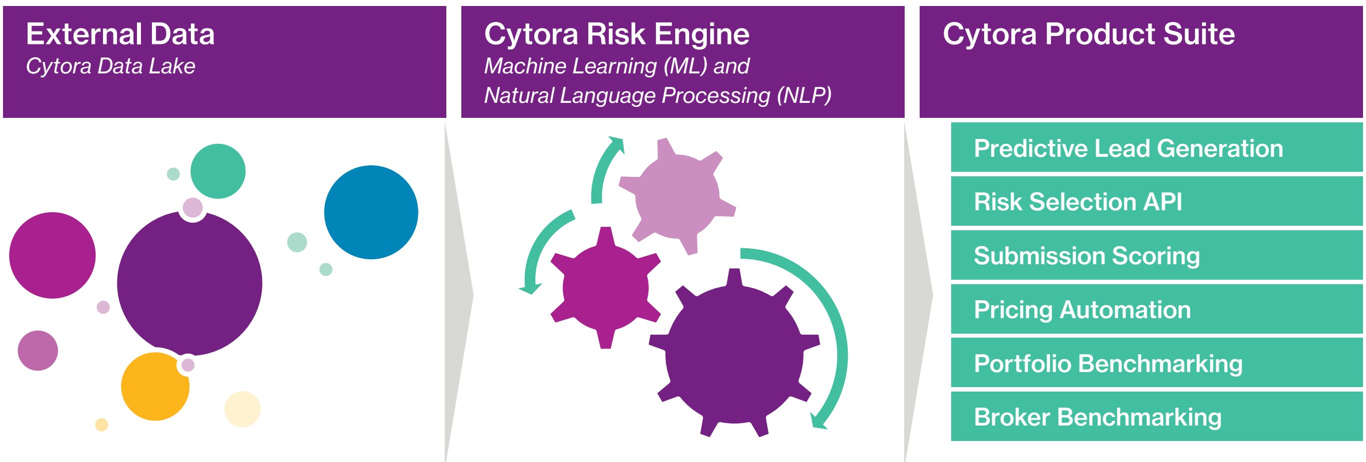
Cytora's solution simultaneously improves the accuracy and sophistication of risk selection and removes friction associated with the insurance buying process by replacing questions with thousands of data inputs. This means risks can be selected and bound within seconds, making insurance companies an order of magnitude easier to trade with, benefiting both brokers and businesses buying insurance directly.

Validating Partnerships & Investments

Led by co-founders, Richard Hartley (CEO), Aeneas Wiener (CTO), Joshua Wallace (CRO) and Arezej Czapiewski (CCO), Cytora has raised $8.8 million to date, including a $5.9 million December 2017 Series A financing round funded by Starr Companies and QBE Ventures, among other angel and venture capital investors. The investment followed an earlier Q4 announcement that XL Catlin intends to deploy the Cytora Risk Engine internationally across property and casualty business lines. QBE and Starr each announced similar strategic partnerships in conjunction with their investments. The company's initial capital was provided by FinTech Innovation Lab, Cambridge Enterprise Seed Funds and Parkwalk Advisors in 2015, while Plug & Play Accelerator, iLexIR and several angel investors subsequently provided seed and Series A capital to the company.

The Cytora Risk Engine has produced attractive results for (re)insurer clients in Europe, North America and Australia. Two use cases are provided on the next page, followed by a brief Q&A with Cytora CEO Richard Hartley focused on Cytora's progress to date, its recent financing and the company's vision for the future of its platform.

Leveraging AI to Ingest, Structure & Transform External Data into Underwriting Advantage



Data Sources Continuously Refined | ***Models Continuously Refined*** | ***Improve Loss and Expense Ratios and Grow Premium***

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Data & Analytics

Data & Analytics Example – **Cytora**

Cytora Value Proposition – Selected Use Cases

Client	UK Commercial Insurer	Global P&C Insurer
Challenge	▪ Increase profitability by reducing underwriting and distribution costs in SME segments ▪ Design and implement direct distribution strategy coupled with an underwriting engine to reduce underwriting expenses and enable underwriters to re-focus time on complex referrals in profitable areas	▪ Following strong commercial property segment growth after a new product launch, insurer experienced attritional loss ratio erosion from 61.4% to 65.7% within 18 months, reflecting rising rate pressure and unchanged portfolio mix amidst fluctuating losses across core segments ▪ Validate whether loss experience resulted from short-term deviation or secular, more fundamental change and assess vulnerability of portfolio to adverse selection from more analytically sophisticated competitors
Solution	▪ Augment internal pricing with technical risk price for every potential customer in market from Cytora Risk Engine ▪ Phased integration equipping insurer's systems to consume technical prices and adaptive rating questions from Cytora APIs to automate risk selection and pricing process across pipeline of live submissions from panels and aggregators ▪ Micro-segments ranked according to loss ratio, enabling the insurer to continuously assess the portfolio mix against the total population to ensure that they target the most profitable consumers ▪ Insight fed back into marketing and customer acquisition process to focus on bringing in profitable sub-segments of the total population	▪ Compare insurer's portfolio against peer frequency, severity and loss costs with Cytora Portfolio Benchmarking ▪ Recommended that insurer shrink or exit eight underperforming segments and grow in six outperforming segments ▪ Identified 20 attractive micro-segments (within six outperforming segments) to target based on desirable burn rate loss trends which had reduced 50% LTM; insurer had low volatility over last three years and less than 5% market share in each micro-segment ▪ Integrated Cytora Submission Scoring and Cytora Pricing Automation into existing underwriting workflow to enable underwriters to access information outside of question sets and base risk selection and pricing on market-wide experience instantly at the point of quote and renewal ▪ Monitor performance following integration of new strategy; focus on winning most attractive risks to enhance submission conversion in high priority segments
Results	▪ Underwriting expenses reduced by 60% ▪ Insurer was able to shift to quarterly model validation approach ▪ Unprofitable sub-segments excluded and marketing campaigns refined to ensure client targeted the most profitable segments of the total population	▪ Commercial property loss ratio reduced by 18% from 65.7% to 47.7% over the following underwriting year ▪ Improved submission conversion in target segments by 8%

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Data & Analytics

Data & Analytics Example – **Cytora**

Richard Hartley – Cytora Co-Founder & Chief Executive Officer

- 7+ years of experience in the insurance and technology industries
- Served as Product Manager at eBaoTech Corporation, a technology-enabled insurance solutions provider offering cloud and software based solutions for life, general and health (re)insurers
- Holds BA from University of Manchester and MSc from University College of London

Describe Cytora's insurance solution. How is it different from competing products in the market?

Cytora transforms the way insurers select, target and price risk by applying artificial intelligence to identify patterns of good and bad risks over time. The Cytora risk engine enables insurers to improve loss ratios and drive premium growth while delivering fairer prices to customers. By using hundreds of thousands of external data points, our technology simultaneously removes the friction of buying insurance and improves underwriting performance.

What are the biggest challenges associated with risk targeting, selection and pricing for commercial insurers?

Commercial pricing is low resolution – risks that have vastly different characteristics and loss probabilities appear equivalent and are priced identically at the point of underwriting. At the same time, the underwriting process is subjective and backwards-looking. Assumptions made 10-20 years ago define segment selection and underwriting choices today. Instead of observing the entire population and then choosing segments based on optimal loss ratios and profitability, insurers typically only see their own exposure (often 5% of total insurable risk) and are constrained to specific sectors where they have incrementally built claims experience. Both of these factors have a negative impact on underwriting profitability and premium growth.

Describe Cytora's current client base. Are clients concentrated in any specific geographies or commercial insurance sectors?

Cytora currently serves leading commercial insurers throughout Europe, North America and Australia. Cytora is a trusted partner to the commercial insurers including QBE, XL Catlin and Starr.

How does Cytora enable its clients to achieve premium growth and improve profitability?

Cytora uses machine learning to extract and fuse together billions of online data points relevant to commercial risk, enabling insurers to differentiate risks at a highest level of granularity and discover new segments in areas where they have zero underwriting experience and claims history. Cytora brings three specific innovations to the industry:

Population-scale: *Cytora operates at the scale of the total insurable population. This means the platform pre-computes a technical price for every insurable risk within the population outside of any data received from a broker or insured. In doing this, Cytora supports customers in moving towards questionless underwriting and provides a frictionless experience for the insured. This expands an insurer's view from one limited to their historical exposure to a view of the entire population.*

Continuous pricing: *Insurers typically see static data at the time of underwriting new business and renewals. Cytora dynamically prices risk through time, regardless of underwriting choices or whether they are part of an insurer's book. This allows continuous optimization of risk selection decisions at both new business stage and renewal based on predictive modelling of future claims.*

High resolution data: *Cytora brings high resolution data to a data poor area. The Cytora risk engine increases resolution by capturing and connecting massive volumes of data, much of which is unknown by the insured at the point of underwriting. It would take a human five years to read all the information that our algorithms process in a single day. This allows greater differentiation between risks that in current pricing practice may appear identical – enabling improved risk selection.*

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Data & Analytics

Data & Analytics Example – Cytora

Are you focused on, or have you identified any opportunities for future expansion outside of the Cytora Risk Engine for commercial insurance?

Cytora powers frictionless and fair business insurance, providing the building blocks needed for the insurance companies of the future across risk targeting, selection and pricing. In the coming years, Cytora will build tools that help businesses to mitigate and reduce their risk, and enable insurers to create new, automated products in emerging and underserved areas of demand based on superior underlying data.

Describe Cytora's strategic partnerships with strategic (re)insurers (XL Catlin, QBE and Starr). Are you focused on any new opportunities for Cytora in partnership with either of its strategic (re)insurer investors following completion of Cytora's latest financing round?

XL Catlin and QBE are deploying the Cytora Risk Engine internationally across property and casualty lines. The Cytora Risk Engine will be used to generate risk scores and prices, providing enhanced insight into expected claims activity on the whole portfolio and also at an individual risk level.

****Willis Towers Watson Securities facilitated an introduction between Cytora and Starr Companies prior to completion of Cytora's most recent financing round, which included an investment from Starr Companies, among other investors.****

"Willis Towers Watson Securities developed a deep understanding of Cytora's technology, identifying synergies that lead to an introduction to Starr, one of the fastest growing commercial insurers. Starr is a company with huge global ambition who was ready to shift towards data-driven risk selection and pricing underpinned by machine intelligence. Starr's collaborative approach to innovation has created the perfect environment for us to embed our technology and achieve significant progress."

– Richard Hartley, Cytora Co-Founder & Chief Executive Officer

"Starr was first made aware of Cytora at a meeting with the Willis Towers Watson's Securities team. With ever-increasing levels of available data, Starr's interest in the benefits that artificial intelligence and other similar technological advances bring to the industry are aligned with the work that Cytora was focusing on. Following introductions, we better understood the capabilities of Cytora and how they could optimize Starr's underwriting approach. We are now excited to be partnering with Cytora as they continue to expand their work within the insurance industry."

– Steve Blakey, Starr Insurance Holdings President and Chief Executive Officer

Q4 2017 Industry Theme

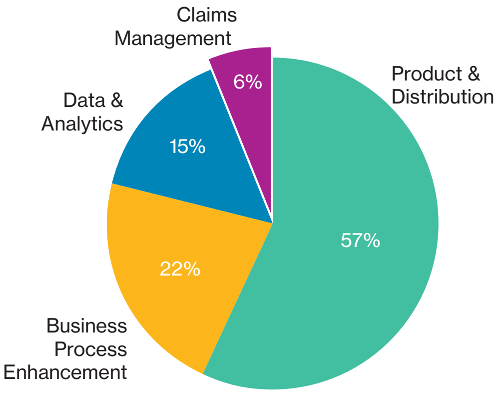
The Sobering of InsurTech: Adapting Business Models for Incumbents

Claims Management

4 Claims Management

25	Companies
$0.2 billion	Funding Volume to Date

InsurTechs by Subsector



- Category includes 25 companies (~6% of InsurTech universe) primarily focused on streamlining and automating claims management processes
  - Claims processing software and mobile applications leveraging AI and machine learning to improve customer communication, data capture and analysis and/or automation throughout the claims cycle
  - Selected companies provide solutions for managing drones or other technologies providing or enabling remote inspection capabilities
- Claims process is historically a crucial customer pain point for insurers
  - Industry executives estimate a customer experiencing a personal auto claim could be up to 40% less likely to renew, regardless of the outcome
- *Claims represent a customer's most meaningful interaction with their insurer and demonstrate the true value of the product – effective low cost, automated claims management solutions will remain in demand by (re)insurers wary of the level of investment required to develop comparable capabilities internally; claims specialists will be increasingly active acquirors of leading businesses*

Claims Management

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Claims Management

Claims Management – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
1	Snapsheet	49.9	▪ Commerce Ventures ▪ IA Capital Group ▪ Intact Ventures ▪ Liberty Mutual Ventures ▪ Lightbank ▪ OCA Ventures ▪ Plug & Play Accelerator ▪ Pritzker Group Ventures ▪ USAA ▪ Other Investors (a)	▪ Self-service mobile app for estimating auto claims by photo ▪ Offers a full suite of products to help carriers, adjusters and customers analyze claims efficiently ▪ Enables insurers to handle approximately 90% of auto claims virtually within ~30 days ▪ Clients receive claims estimates in an average of 2.7 hours after photos are received ▪ Hired Andy Cohen as COO in June 2017 (previously CNA VP of Worldwide Field Operations)
2	Shift Technology	39.7	▪ Accel Partners ▪ Elaia Partners ▪ General Catalyst ▪ Iris Capital	▪ Software-as-a-service offering insurance fraud detection and claims handling automation using mathematical algorithms
3	Wefox	39.3	▪ AngelList ▪ Horizons Ventures ▪ Salesforce Ventures ▪ Other Investors (b)	▪ Germany based tech-enabled service provider that streamlines the claims process by allowing users to upload photographic notice of loss through their phones and connect instantly to a large managed repair network
4	CLARA analytics	22.9	▪ Oak HC/FT Partners ▪ Undisclosed Investors	▪ Easy-to-use, AI-enabled claims management software for workers' compensation insurance ▪ Connects insured workers to a large network of top-rated health care providers ▪ Full automation of simple claims with 99% accuracy
5	Tractable	9.8	▪ Ignition Partners ▪ Zetta Venture Partners ▪ Other Investors (c)	▪ UK-based artificial intelligence systems provider that uses machine learning to provide automated solutions for claims management
6	Estify	8.6	▪ Cultivian Sandbox ▪ Heartland Advisors ▪ Middleland Capital ▪ Undisclosed Investors	▪ Software developer that helps auto repair shops create and deliver efficient pricing estimates for auto insurers
7	ClaimKit	7.5	▪ Flyover Capital ▪ Mid-America Angels ▪ Plug & Play Accelerator ▪ QBE Ventures ▪ Undisclosed Investors	▪ Third party claims handling service that deploys experienced claim consultants to collect documents and data which is consolidated and uploaded for easy access through a proprietary platform
8	Betterview	3.7	▪ 500 Accelerator ▪ 500 Startups ▪ Arena Ventures ▪ Chestnut Street Ventures ▪ Maiden Re ▪ Plug & Play Accelerator ▪ Router Ventures ▪ Winklevoss Capital ▪ Other Investors (d)	▪ Utilizes a network of independent UAV operators to inspect properties in the U.S. for various needs across insurance, construction and real estate ▪ Provides insurers and loss adjusters with access to a nationwide network of independent UAV operators to inspect commercial and residential properties and infrastructure, software and analysis tools for use in underwriting and claims processes ▪ Imagery is analyzed qualitatively by human experts and analysis is included in an actionable report

(a) Includes F-Prime Capital, Montage Ventures, Tola Capital and undisclosed investors.
(b) Includes Davidson Growth Debt, IDInvest Partners, Lena Meyer-Landrut, Samuel Skoblo, Seedcamp, SpeedInvest, Target Global and Victory Park Capital.
(c) Includes Andy Homer, Entrepreneur First, Greg Gladwell, Scott Roza, Stuart Bartlett and Tony Emms.
(d) Includes 645 Ventures, Arab Angel Fund, Compound, Haystack Partners, Meta Prop and undisclosed investors.

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Claims Management

Claims Management – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
9	Rightindem	3.4	▪ Eos Venture Partners ▪ Startupbootcamp	▪ Web-based self-service insurance claims platform servicing auto, home and marine coverage claims
10	ClaimForce	2.0	▪ MK Capital ▪ Origin Ventures ▪ Undisclosed Investors	▪ Claim service and communications platform that enables insurance claim professionals and fully vetted claim service providers to interact efficiently through a single point of access ▪ Flexible platform can be used by claims representatives directly or ClaimForce can help manage the process ▪ Clients receive access to a nationwide network of over 22,000 claim service providers
11	FraudScope	1.6	▪ GRA Venture Fund ▪ Other Investors (a)	▪ Data analytics company that uses novel techniques to investigate and uncover claims fraud
12	Better	1.1	▪ Designer Fund ▪ Initialized Capital ▪ Undisclosed Investors	▪ Mobile app for managing health insurance and out-of-pocket medical bills ▪ Users enter information and upload photos of medical bills ▪ Software reviews bills, identifies incorrect/missing information and files claims with insurers
13	getmeIns	1.0	▪ Insurtech Israel ▪ Jerusalem Ventures	▪ Sophisticated and systematic insurance fraud analytics company ▪ Utilizes multiple disciplines such as link analysis, open source intelligence, visual intelligence, signal processing and more
14	OpenClaims	0.6	▪ Undisclosed Investors	▪ Netherlands based online platform for motor insurance claims ▪ Offers insurers, leasing companies and fleet owners an online platform to manage their customers' motor insurance claims with access to a managed repair network of auto body repair shops
15	Insurello	0.3	▪ DHS Venture Partners ▪ Individual Investors	▪ Sweden based digital platform for pursuing personal injury claims ▪ Fee-based compensation of 25% of successful claims
16	MotionsCloud	0.0	▪ Global Ins. Accelerator ▪ Protechting	▪ Germany based mobile claims app for property & contents claims ▪ Helps claims adjusters improve productivity, reduce cycle time, get claims estimation in real-time and improve customer
17	Fluttrbox	0.0	▪ Global Ins. Accelerator	▪ Canada based on-demand aerial imaging and mapping application
18	AutoClaim (ABT Holdings)	–	▪ ABT Holdings	▪ Advanced proprietary real-time mobile claims documentation and management system ▪ Allows user to place, track and manage claims and access legal, health, driver assistance, managed repair and rental car services ▪ Application can be utilized by all drivers including commercial fleets, municipalities and government agencies ▪ Acquired by ABT Holdings, a diversified investment holding company, in June 2015

(a) Includes Atlanta Startup Battle, Mosley Ventures, Service Provider Capital, Spider Capital Partners and TechSquare Labs.

Q4 2017 Industry Theme

Claims Management

The Sobering of InsurTech: Adapting Business Models for Incumbents

Claims Management – Selected Companies

(US$ in millions)

#	Company	Total Funding	Investor(s)	Description
19	BrightClaim (Genpact)	–	▪ Genpact	▪ Catastrophe and liability claims manager and TPA ▪ Acquired by Genpact (NYSE:G), a BPO provider, in May 2017
20	ControlExpert	–	▪ General Atlantic	▪ Germany based automotive industry service provider that develops products and services to digitize manual claims and maintenance processes for insurers, fleet operators, leasing firms, repair shops, car dealers, auto manufacturers and motor vehicle experts
21	Enservio (Solera)	–	▪ Solera Holdings	▪ Technology-enabled claims management platform ▪ Acquired by Solera Holdings in July 2016
22	Livegenic	–	▪ Ben Franklin Partners ▪ Plug & Play Accel.	▪ Mobile first platform offering simplified claims handling services
23	eCOIDA	–	▪ Barclays Accelerator	▪ South Africa based claims management platform
24	Spex (J.S. Held)	–	▪ J.S. Held (majority) ▪ Management	▪ Digital property inspection & reporting platform for managing disaster-related claims with collaborative interface enabling mobile devices in the field to interact with desktop software ▪ Professional inspectors are primary users; clients include P&C carriers, agencies, TPAs, claims adjusters, restoration firms, PSP's, contractor networks, residential and commercial contractors, FEMA, NFIP, government, structural engineers and hazmat specialists ▪ Acquired by J.S. Held, a construction consulting portfolio company of Lovell Minnick, in May 2017
25	TensorFlight	–	▪ Boost VC ▪ Hemi Ventures	▪ Analyzes satellite, aerial, drone, and street view imagery in order to automate manual in-person property inspections ▪ Assists property insurers with underwriting, reinsurance, risk and claims

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Claims Management

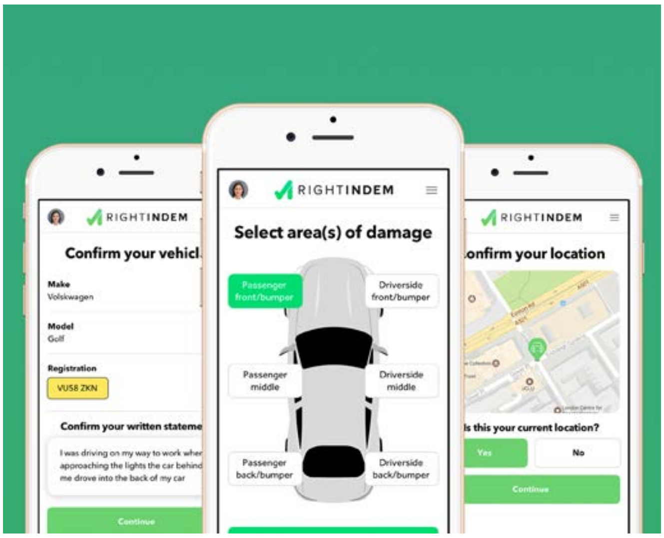
Claims Management Example – RightIndem

The Claims Management Problem

London based software firm RightIndem was founded in January 2016 by CEO Dave Stubbs and COO Graham Blaney as a solution to improve the insurance claim customer experience.

A well chronicled pain point in the insurance industry, the claims experience, which represents a customer's most meaningful interaction with their insurer and occurs following a significant financial and potentially emotional loss, is often a call center managed process that leaves customers frustrated and confused. Industry executives estimate that a customer who experiences a personal auto claim could be up to 40% less likely to renew their policy, regardless of the outcome. RightIndem suggests that according to industry research, approximately 50% of claims management call center calls are just for a status update, while 80% are wholly unproductive in terms of moving the claim forward. Taken together, these statistics indicate that traditional claims management processes are leaving customers generally dissatisfied, reducing retention rates for insurers, even as the same insurers overpay for call center claims management services, getting only 20 cents of value for every dollar spent on call centers.

Simple Intuitive Customer Journey



The Digital Third Party Administrator Enabling Customer Managed Claims

RightIndem, armed with more than £2.5 million of capital, including £786,000 of seed funding and a €2 million Series A convertible note from private angel investors from the insurance and banking industries in the UK, Germany, Switzerland and U.S., is attempting to facilitate a seismic shift in the insurance industry from "Insurer Administrated" to "Customer Managed" claims, improving customer satisfaction while delivering right and fair indemnity.

RightIndem provides a white-label SaaS claims solution which improves customer engagement in the claims process with purpose-built, intuitive software that enables insureds to manage their own claims quickly and easily, from first notice of loss (FNOL) to claim settlement. The platform simplifies communication between carriers, insureds and repair providers by allowing insureds to report a claim, document circumstances of the incident and loss suffered, provide scans and photos of required documents and engage with the insurer to agree upon the most appropriate indemnity course. Multiple communication modes are available, including text and video phone conversations, reducing the need for phone calls between the different parties.

Results have been impressive to date. The RightIndem solution is reducing claims cycle times, handling claims up to 21x faster than the UK average, with reduced leakage accomplished via accurate and transparent market valuations, increasing customer satisfaction while improving retention and reducing claims expenses for insurers.

With personal and commercial lines proof of concept completed in collaboration with insurers in the UK, U.S. and Germany, RightIndem now has more than 15 active engagements underway and a robust future pipeline of more than 40 potential engagements from P&C and L&H focused insurers in several countries.

A Q&A with RightIndem co-founders David Stubbs and Graham Blaney with more information on RightIndem's business and strategic plans begins on the next page.

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Claims Management

Claims Management Example – RightIndem

David Stubbs
Co-Founder & Chief Executive Officer

- Serial entrepreneur with 14 years of experience of running a claims third party administrator (TPA)
- Former senior manager in the European auto industry including roles at BMW, GM and Ford
- Former management consultant with AT Kearney's financial services practice in London
- Educational background in behavioral science, prior to completing an MBA from Warwick Business School

Graham Blaney
Co-Founder & Chief Operating Officer

- 15+ years of experience in business process outsourcing (BPO), IT outsourcing (ITO) and SaaS within the insurance sector
- Co-founder of Buying Butler, a UK based free concierge buying service founded in 2012
- Held various roles with technology-enabled BPO and ITO providers, including Atos and Capita
- Represented GB in canoe slalom and coached elite athletes using neuro-linguistic programming

Describe RightIndem's insurance claims solution. What business lines are you focused on? How is it different from other claims management solutions for these business lines in the market today?

RightIndem eliminates claims friction, and is proven to turn a claim from something that can kill customer loyalty to an experience that builds it. To date, RightIndem is delivering in both personal and commercial lines across motor, marine and cargo. The key differentiator for the platform is self-service "Customer Managed Claims," which benefit insurers and customers alike, greatly reducing carrier claims costs as well as customer churn. For customers, the transparent service helps them understand their cover, then quickly, fairly and effectively manage their claim while repairing or replacing their damaged or stolen item. Other market solutions focus on the insurer managing the claim while the customer dictates the claims incident and background over the phone; this is where the airline industry was with bookings in the last century, now booking flights online is the norm.

From an insurer's perspective, what are the biggest challenges associated with managing claims?

Claims represent the moments when insurers are expected to deliver on the promise of insurance, the moment when any of us expect our insurer to return us to the position we were in prior to the incident as quickly as possible with the minimum of fuss. The reality is interactive voice response (IVR) phone systems with long wait times, scripted claims handlers reading compliance statements and complex forms sent in the post and all of this is just the start of a claims journey where the end result across both personal and commercial lines is 40% customer churn post claim [a].

The biggest challenge is therefore meeting a customer's expectation in an environment where all of us as consumers measure our customer experience against benchmarks that have been set by the likes of Amazon, Apple, John Lewis, etc. It's of no use for insurers to measure themselves against their peers when all of us have expectations set from outside of the insurance industry. Therefore 40% churn is not at all surprising when the current approach is used. Customers want choice and flexibility to fit their personal situation – analogue, digital, repairer selection, etc., and within a digital experience, they want choice of how to interact, the device they use and the time they initiate communication… no one likes a mandated approach with no transparency, fixed positions and having to chase insurers while you are at work.

How do insurers typically measure claims management efficiency? Do you believe these metrics accurately reflect the effectiveness of an insurer's claims management processes?

In our experience, claims metrics used by insurers do vary, but generally focus on the number of claims calls handled each day by claims handlers, the number of settlements reached, the settlement costs and elapsed claims time. While these are all worthy metrics, they sometimes promote the wrong behaviors. Customers can be prone to feel as if they are "just a number" being processed through "the machine," as they interact with a claims handler that is dealing with their 50th call of the day! Customer renewals and recommendations are the ultimate form of loyalty and, although sometimes measured, these metrics typically sit outside of the claims department, despite a clear positive correlation between these factors. Our most mature product is motor total loss, where insurers typically overpay customers relative to the actual market value of the car AND manage to do it in such a way that 40-50% of customers leave their insurer after a total loss claim!

The easiest way to deal with a customer correctly is to let the customer choose the claims path they want, without forcing the customer to fit within a process that has become elongated and bloated. To date, RightIndem has delivered 10x improvement in claims handler productivity, 14% reduction in settlements (leakage) and a five-fold reduction in elapsed claims time, all of this is great for both the insurer and the customer, but the most important metric is improving customer renewals by 62% when compared against existing claims processes.

(a) Source: QB Insights – Insurance Claims, August 2017.

Q4 2017 Industry Theme

The Sobering of InsurTech: Adapting Business Models for Incumbents

Claims Management

Claims Management Example – **RightIndem**

How many clients does RightIndem have today? Are they concentrated in any specific geographies or lines of business?

RightIndem's customer-centric claims approach delivers a 14:1 ROI that has secured paid pilots with insurers in the UK, Mainland Europe and the U.S. across both personal and commercial lines. Our first category was motor claims, followed by marine and cargo claims in both the UK and U.S., where the client has moved from pilot to production and white-labeled the platform across multiple parties (the insurer, brokers and TPAs). We expect to secure new contracts during the first half of 2018 in APAC covering gadget claims and yacht claims within Europe, but our main focus will remain motor/auto claims within both personal lines and commercial lines (fleet).

What key performance indicators do you use to track RightIndem's growth?

We can't disclose contract details, but the key metrics cover the following areas:

- *Number of customers – a balanced mix across both personal and commercial lines with a mix of tiered insurers*
- *Transactional claim volumes – we are a SaaS business, this is an important metric as the platform is hugely scalable*
- *Claims categories – motor is our main focus but the platform is configurable and can support multiple claims types*
- *Geographies – the platform is a content management system (CMS), so it is capable of accommodating different languages and currencies*

Is RightIndem currently focused on any strategic initiatives or growth/expansion opportunities?

Having proved the initial platform and benefits (V1), then updated this to accommodate content management system (CMS) capabilities (V2), we are releasing V3 in February 2018 which includes:

- *New design thinking (easier and quicker for the customer to use)*
- *Integration of third party point solutions (fraud detection, estimatics solutions, AI services, etc.)*
- *Linking with our other modules for end-to-end claim self-service (eFNOL links to repair or total loss, which links to car replacement)*

We will continue to deliver additional enhancements with each bi-weekly sprint and, for the second half of 2018, we will also deliver greater configurability, integration options (APIs and RPA) and a metrics dashboard that converts our current metrics into business metrics (LAEs and loss & expenses ratios – our moonshot target is 3% improvement on loss ratio and 5% on the expense ratio). To achieve this last point, we have built a team of expert advisors with significant collective claims experience, including the former leader of McKinsey's Insurance Claims Advisory team, a former Global Analytics Head for one of the world's largest insurance services groups and two c-suite executives from another large insurance services firm with meaningful domain expertise and a strong understanding of the unique value that RightIndem can deliver to the insurance market.

Based on your responses to the prior questions, RightIndem has experienced exceptional growth relative to the amount of capital the company has raised to date. Describe the future role you anticipate for RightIndem within the insurance value chain, with consideration for any additional capital necessary to achieve this vision.

We've been very fortunate in that, although we're a business that is only two years old, RightIndem was formed through a combination of the unique and highly complementary backgrounds and skills of the two of us as its founders. Collectively, we bring 12 years of experience running a TPA, eight years running a business selling BPO, ITO and SaaS services to insurers, experience running a white-label B2B2C tech start-up backed by Microsoft and expertise in behavioral science and neuro-linguistic programming (NLP). Combining these elements and 14 years of relevant IP to build RightIndem provided a massive head-start, which enabled us to bring on board some great advisors and build a management team that understands both the insurance and software markets.

With the strategy we have in place for 2018, I see RightIndem evolving and enhancing our value proposition to enable our channel partners to engage with insurers and underwrite and improve the KPIs by which insurers measure their businesses. To execute on our vision, we will look to raise further money this year to enable us to support more channel partners in new geographies and to build even better products that meet the needs of both customers and insurers – in short, enabling insurers to better deliver on their promise.

Incumbent InsurTech Strategy

(Re)insurance Innovation Survey

(Re)insurance Innovation Benchmarking

To better understand the state of innovation in the (re)insurance market heading into 2018, we partnered with CB Insights to develop a (re)insurance innovation benchmark survey, which was distributed to subscribers of CB Insights' weekly insurance technology newsletter beginning in December 2017. The survey received responses from nearly 600 (re)insurance and investment professionals, the majority of which described themselves as senior level executives with intimate knowledge of their company's innovation strategy.

Key findings from the survey are summarized on the right side of the page. Participant demographics are outlined below and charts depicting the complete survey results are provided on the following pages.

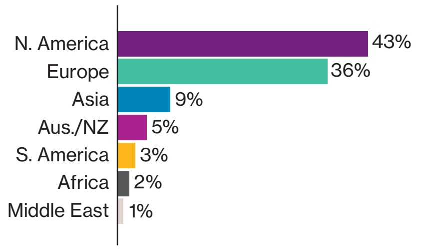
Summary of Survey Findings

- 58% rate their company's financial performance as "high" or "very high" vs. competitors, but 55% rate their company's innovation as average or worse and 59% do not think their companies are risk-seeking when it comes to innovation
- 76% believe their company is "moderately" to "extremely" at-risk of disruption, even as 72% of company resources are devoted to incremental innovation and 46% describe their company's innovation philosophy as "ad-hoc"
- Munich Re, Lemonade, AXA and Swiss Re are viewed as most innovative by peers
- Innovation reports to the C-level at more than half of participants' companies
- Only 12% of participants believe acquisitions are their organization's primary orientation toward innovation, with 88% more inclined to develop internally or partner
- Accelerators/incubators are viewed as the most valuable external innovation partners; customers and employees are viewed as the most valuable internal sources of innovation
- More than 55% of participants believe each of the value chain functions of marketing & distribution, underwriting, customer service, claims and customer retention are "extremely" or "very" in need of innovation at their company

Survey Participant Demographics

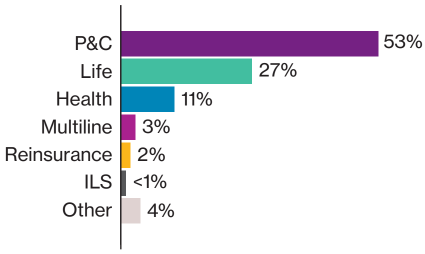
Headquarters

79% work for a North American or European (re)insurance company



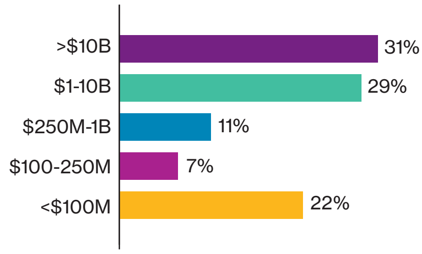
Product Focus

53% work for a P&C focused (re)insurance company



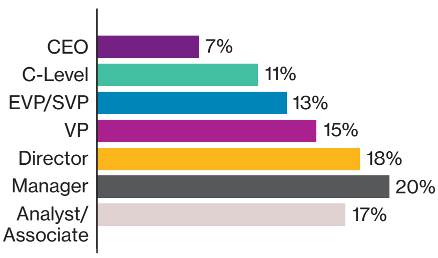
Premium Volume

60% work for a company with >$1 billion of premium



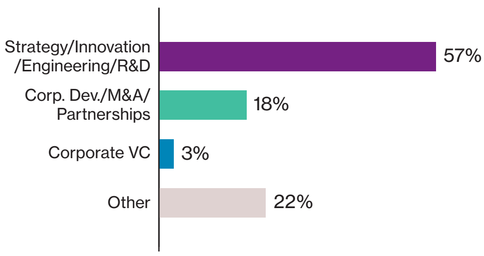
Participant Job Level

18% are CEO or C-Level and 83% are senior executives



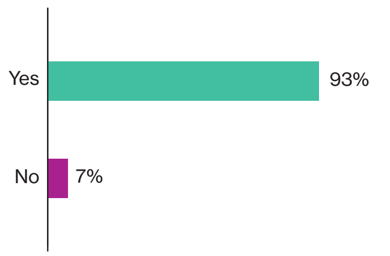
Participant Job Function

57% are involved in strategy/ innovation/engineering/R&D



Knowledge of Company Innovation Strategy

93% are knowledgeable about their company's innovation strategy

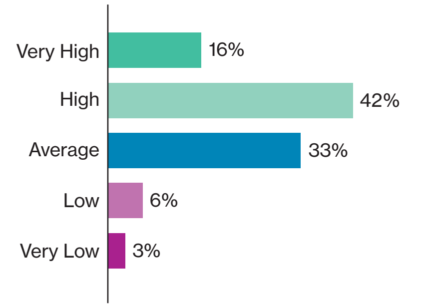


Incumbent InsurTech Strategy

(Re)insurance Innovation Survey

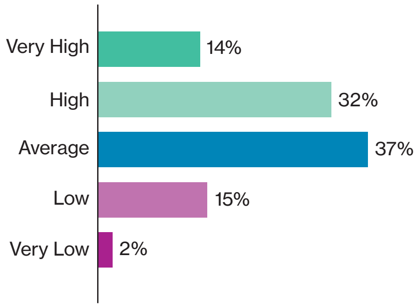
Financial Performance vs. Competitors – LTM

58% rate their company's financial performance as "high" or "very high" vs. primary competitors...



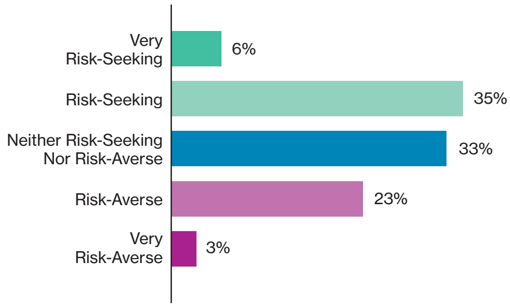
Level of Innovation vs. Competitors – LTM

...But 55% rate their company's innovation as average or worse



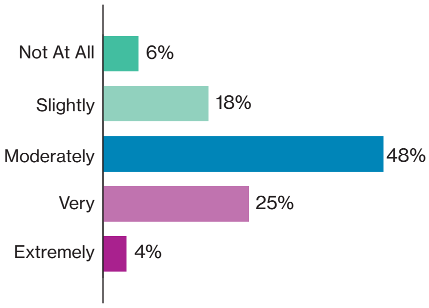
Appetite for Risk Associated with Innovation

...And 59% do not think their companies are risk-seeking when it comes to innovation



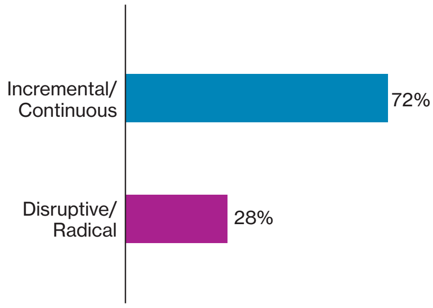
Risk of Disruption from Emerging Technologies

3 out of every 4 respondents believe their company is moderately to extremely at-risk of disruption...



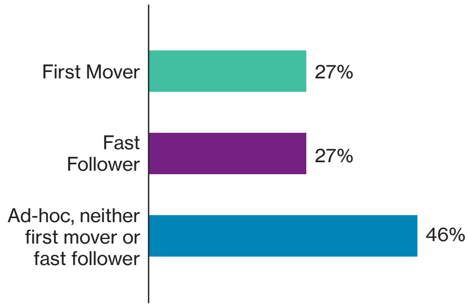
Innovation Resource Allocation

...But 72% of company resources are devoted to incremental innovation (vs. disruptive/radical)



Innovation Philosophy

...And 46% describe their company's innovation philosophy as "ad-hoc"



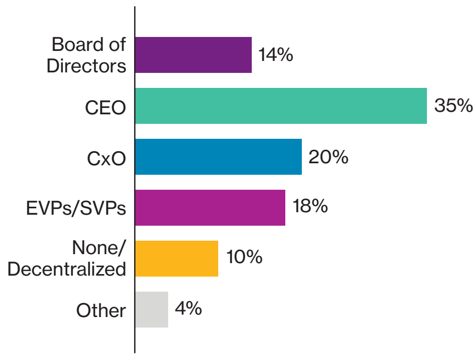
Most Innovative (Re)insurance Company

Munich Re, Lemonade, AXA and Swiss Re viewed as most innovative

>10% of Responses	Munich RE, Lemonade
>5% of Responses	AXA, Swiss Re
>2% of Responses	American Family Insurance, 众安保险 ZhongAn Insurance, 中国平安 PING AN 保险·银行·投资, Allianz, USAA, oscar, PROGRESSIVE

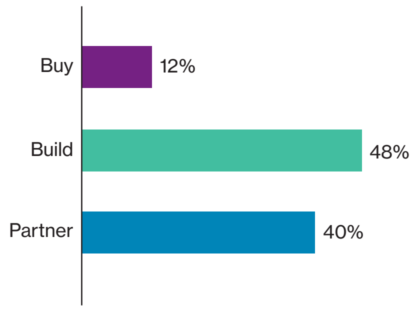
Level at Which Innovation Function Reports

Innovation reports to the C-level at more than half of companies



Primary Orientation Toward Innovation

Only 12% believe acquisitions are their organization's primary orientation toward innovation

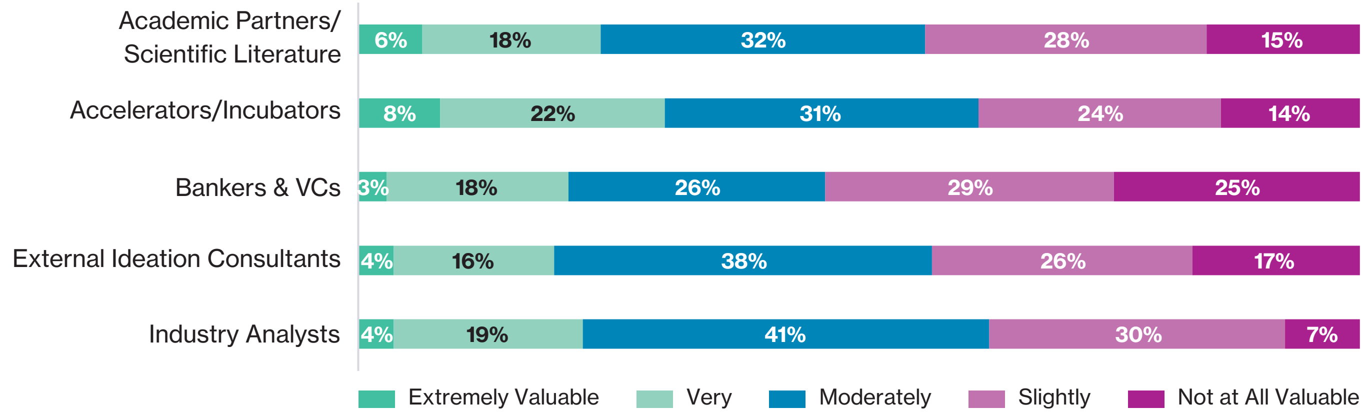


Incumbent InsurTech Strategy

(Re)insurance Innovation Survey

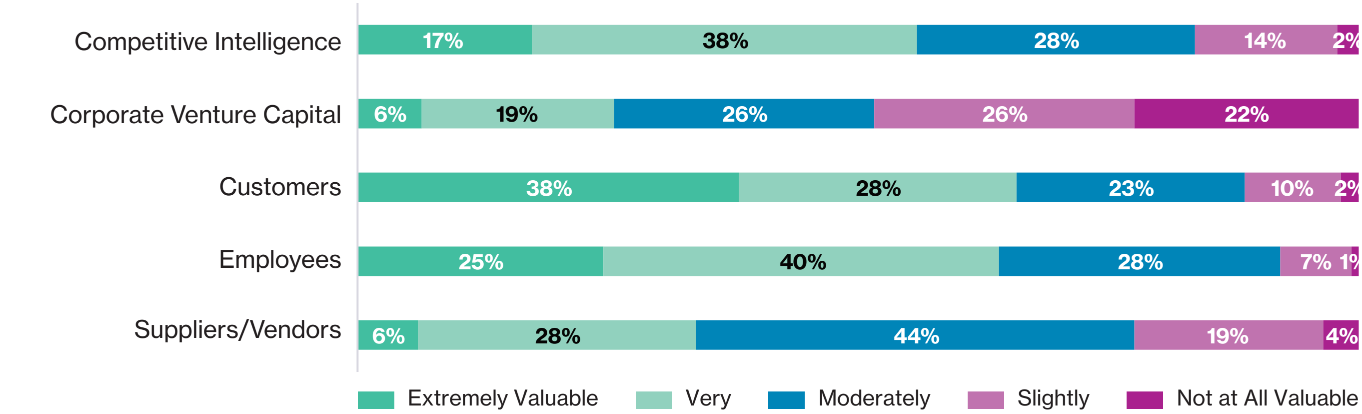
Value of External Innovation Partners

Accelerators/incubators viewed as most valuable external innovation partners



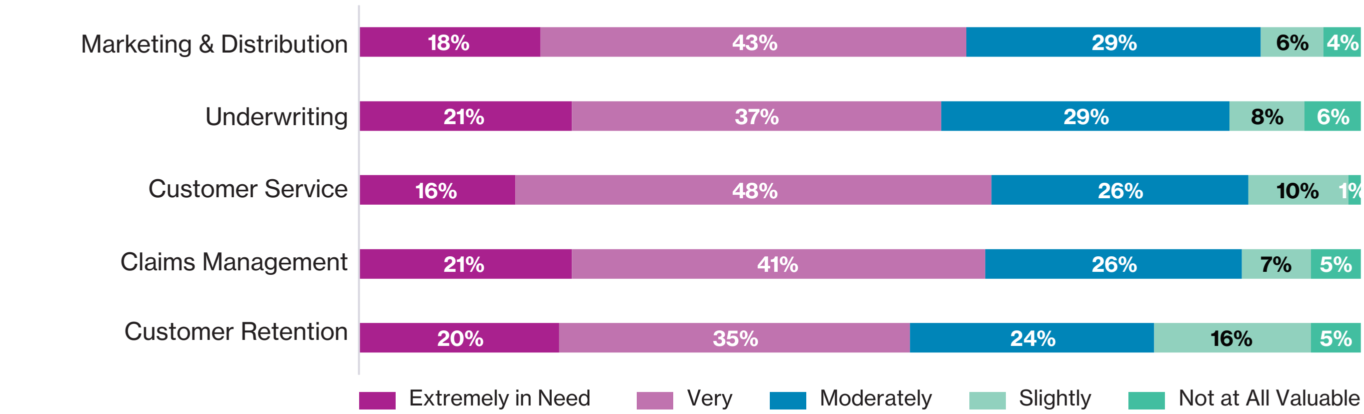
Value of Internal Innovation Sources

Customers and employees viewed as most valuable internal sources of innovation



Innovation Needs at Insurance Value Chain Functions

More than 55% of participants believe each of the following value chain functions is "extremely" or "very" in need of innovation at their company



Transaction Spotlight

Guidewire Acquisition of Cyence

"21st Century Risks" in Focus

Guidewire's acquisition of cyber risk modeling start-up Cyence, announced in early October, marked one of the largest and highest profile InsurTech investments to date. The US$275 million ($265 million net of $10 million of cash on hand) transaction came hardly over a year after Cyence launched out of stealth after securing a total of $40 million of funding from New Enterprise Associates (NEA), Institutional Venture Partners (IVP) and Dowling Capital Partners. Guidewire expects Cyence to contribute $9 – $11 million in revenue in fiscal year 2018 post purchase price adjustments.

Founded in 2014 by data science specialists to serve the P&C industry, Cyence employs a highly technical team of 90+ cloud engineers, data scientists, modelers and P&C experts, primarily based in its San Mateo, CA headquarters. Cyence's scalable subscription-based data listening and risk analytics solution combines internet-scale data collection, adaptive machine learning and insurance risk modeling to empower P&C insurers to model, underwrite and price "21st century risks," beginning with cyber. Cyence enables insurers to underwrite new products and improve profitability through accurate pricing, underwriting and reserving. After increasing sales ~60% in 2017, Cyence's client base now includes more than 30 (re)insurers, brokers, regulators and rating agencies. Going forward, products will be marketed and sold by Guidewire under the Cyence Risk Analytics brand.

Transaction Highlights	
$275 million	Total consideration, gross of $10 million of cash on hand
~$130 million	Net cash consideration
~1.7 million	Shares of newly issued Guidewire stock, including:
~250,000	Shares in the form of deferred equity consideration

Strategic Rationale

Guidewire

- Addresses key problem insurers face as they seek to underwrite 21st century risks
- Aligns with industry platform aspiration through provision of new data-based service
- Augments Guidewire's IP and talent within rapidly evolving field of data science
- Strong cultural fit

Cyence

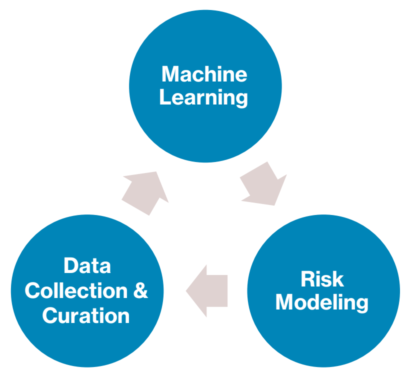
- Integrates Cyence data science and intelligence into core operations
- Access to Guidewire's global reach and scale
- Shared mission and focus serving P&C insurers
- Strong cultural fit

Cyence Approach to 21st Century Risks

Data Sources

- Public
- Open Source
- Proprietary
- Customer
- Third Party

Data Listening & Risk Analytics



Application Framework

Cyber	Business Interruption	Future Lines of Business

Underwriting

Pricing

Accumulation

Source: Company filings.

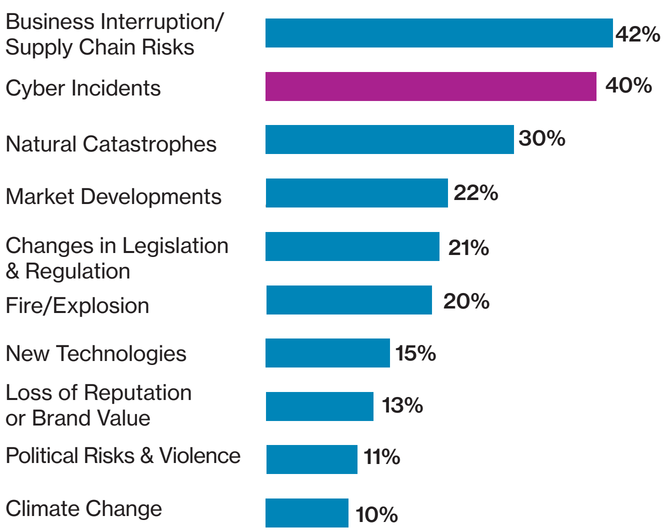
Transaction Spotlight

Guidewire Acquisition of Cyence

Anticipating the Cyber Insurance Revolution

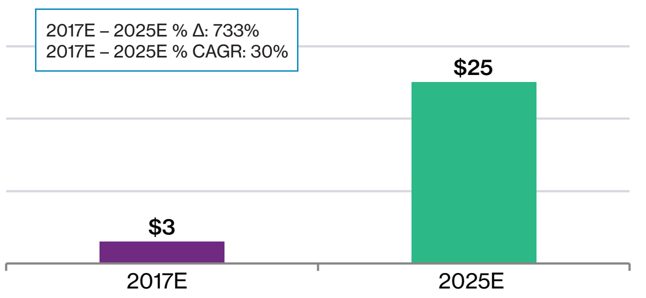
If Guidewire's acquisition of Cyence is purely an attempt to improve the company's ability to capitalize on the impending cyber insurance revolution, it's easy to understand the appeal. According to Allianz's 2018 Risk Barometer report, cyber incidents now represent the second largest business risk globally, even as premiums continue to lag significantly behind more established insurance markets. U.S. companies paid just $1.3 billion for stand alone cyber insurance in 2016, with approximately 50% of U.S. companies electing to operate without any cyber insurance coverage at all. While industry sources peg the global cyber insurance market around $3 billion today, expectations for significant premium growth are easily justified based on current penetration relative to the potential severity of perceived risk. In recently published research, Allianz contends that the global cyber insurance market could increase by more than 700% from current levels to reach $25 billion of premium by 2025. However, the cyber insurance market today continues to reflect long established challenges associated with the lack of historical exposure data and standardized coverages. Cyence's strong growth trajectory and positive reviews from its high profile client base suggest that the company may have developed a compelling solution for the cyber risk modeling dilemma that has obstructed a cyber insurance revolution that often appears overdue.

Top Business Risks – 2018 [a]



(US$ in millions)

Global Cyber Insurance Premium



Augmenting the Guidewire Value Proposition

Though a core component of Guidewire's strategic rationale for the transaction appears responsive to the widely held expectation in the insurance industry for significant growth in cyber, the deal is also noteworthy for its potential to expand Guidewire's distribution capabilities. While Guidewire boasts over 300 P&C insurance clients today, the process of bringing on new customers is typically a lengthy sales cycle that requires participation and engagement from the client's full organization, including IT support. Meanwhile, purchases of Cyence's modeling solutions are typically sponsored by an insurer's chief risk or chief underwriting officer. Guidewire CEO Marcus Ryu described this opportunity for Guidewire on an analyst call shortly after the acquisition was announced.

"In our diligence process, most Cyence customers described it having very modest or no IT involvement involved in the selection and contracting process, but that the business case development followed a somewhat different channel than what has been Guidewire's experience historically. We see that as an intriguing go-to-market motion that could complement our general need to build institutional consensus including IT before a company moves forward with us."

To get a better understanding of Cyence's business and its opportunities under Guidewire's ownership, we spoke to Cyence Risk Analytics Risk and Actuarial Director Visesh Gosrani and Solutions Manager Philip Rosace. Their responses to a series of questions are included on the following page.

(a) Source: Allianz Risk Barometer. Figures represent % of all relevant responses submitted multiple risks selected.
Source: Company filings, A.M. Best and Allianz research.

Transaction Spotlight

Guidewire Acquisition of Cyence

Visesh Gosrani – Risk and Actuarial Director, *Cyence Risk Analytics, Guidewire*

- 15+ years as an Actuary and Chief Risk Officer in the insurance industry
- Prior to joining Cyence, Visesh founded and served as COO of Shoal Insurance, a start-up offering home insurance
- Previously served as Chief Risk Officer of Asta Managing Agency and Managing Director at Cygnus Risk and Actuarial

Philip Rosace – Senior Solutions Manager, *Cyence Risk Analytics, Guidewire*

- Joined Cyence as its 6th employee in January 2015 as a domain expert and product manager for early stage product
- 5+ years of cyber insurance underwriting experience in various positions with Zurich and AIG

Describe Cyence's approach to cyber risk modeling. How is it different from other cyber risk models that have been developed for the insurance industry?

The cyber risk landscape is continuously shifting and insured risk profiles evolve as businesses adjust their technology and service provider usage. Additionally, a cyber intruder presents an active adversary who adjusts their efforts depending on a target's value. Given the complexity of risk measurement for individual companies and the accumulation of exposures, we take a data science approach leveraging data collection at internet scale, machine learning, game theory and behavioral economics to put cyber into dollars and probabilities for the insurance markets.

At Cyence, we have built a data listening platform that continually collects both technical and non-technical cyber risk information and leverages machine learning to model frequency, severity and the accumulation of cyber exposures. We have combined the expertise of economic risk modelers, data scientists, white hat hackers and insurance professionals all under the same roof. Our model can be deployed on all insureds, from small businesses to large commercial risks, analyzing both individual and accumulation risks in dollars and probabilities – all based on real exposure data.

What are the biggest challenges involved in modeling cyber and other 21st century risks?

21st century risks like cyber are difficult to model for a variety of reasons. The changing risk landscape and multitude of accumulation paths (including non-obvious ones) are the most evident from our perspective. Utilizing Cyence's data listening solution, we are able to collect a wide variety of accumulation data on insureds to help insurers model their value at risk from customizable disaster scenarios. Additionally, our models leverage machine learning techniques and real event data to keep pace with the changes in risks for individual companies and aggregate portfolio exposures.

How do you envision the growth trajectory of the global cyber insurance market? What are the biggest inhibitors to growth of cyber insurance today?

We believe that cyber insurance will grow as cyber risks continue to pervade throughout businesses' operations and products. Traditional data breach coverage should continue to grow from General Data Protection Regulation (GDPR) and other similar regulations expanding the uptake of this coverage globally, and current markets will likely continue to have increased penetration and higher limits sold. We see many insurers focusing on things like small business portals and health check reports to expand uptake rates in the SMB space – the key challenge here is keeping the underwriting process efficient and objective, and we have been able to deliver solutions that do both for our clients. Due to shared infrastructure and common use of technology products, it will also be important for insurers to evaluate and manage their accumulation of exposures based on real data with a software application like Cyence.

New products which cover cyber as a peril on other P&C lines of coverage also present opportunities for growth, but insurers will need to embrace non-actuarial approaches to model emerging exposures with little claim data available. Other coverages like reputational harm (from a cyber event or other type of event for that matter) present obvious business value to insureds, but challenge insurers from both the underwriting and claim valuation perspectives. Carriers will need to leverage new sources of data and actuaries will need to expand their tool kit to leverage data science and machine learning when tackling these problems.

Transaction Spotlight

Guidewire Acquisition of Cyence

How does Cyence enable its insurer clients to achieve premium growth and improve profitability?

We help insurers put cyber risk into dollars and probabilities to drive better underwriting, pricing and enterprise risk management decisions. This framework allows for a meaningful discussion of cyber risk throughout an insurance organization.

Our customers use our assessments to underwrite their small and large clients. We have built on-demand rating API's to power automated quoting portals and large account excess facilities utilize our analytics to communicate risk among syndicates. Our findings are used to ask fewer underwriting questions, evaluate the credibility of questionnaire responses and ask more targeted follow-up questions.

Product managers and actuaries leverage our economic risk analytics solution when examining and developing their segment and pricing strategies. Enterprise risk managers leverage Cyence Risk Analytics' exposure data and stochastic disaster scenario models to evaluate and manage tail risks. Executives benefit from a common risk language that puts exposures into dollars and probabilities and enables a data driven approach to strategic decisions.

Cyence also markets its solution to brokers, regulators and rating agencies. How do these clients leverage Cyence's cyber risk modeling capabilities? What benefits do they gain from their Cyence subscription?

These organizations also have an interest in understanding cyber risk for a variety of use cases. Insurance brokers provide value added services and consulting leveraging Cyence's analytics helping their clients understand and mitigate their own risk. Rating agencies leverage our analytics platform when evaluating the risk of their rated entities and incorporate that into their credit risk analysis. Regulators use Cyence's technology when examining insurer's risk during market conduct examinations and Lloyd's leverages Cyence's product when analyzing market exposure to disaster scenarios.

Are you focused on, or have you identified any opportunities for future expansion outside of Cyence's core cyber risk modeling solution?

Guidewire will continue to look for new ways to apply Cyence Risk Analytics' data listening technology. There is a new initiative under Guidewire's ownership of Cyence called Project Owl which was announced at the 2017 Connections conference in Las Vegas. This research initiative looks to find valuable insurance problems where data science can be helpful and build new solutions using Cyence's data listening engine. Guidewire's resources, customer base, and support will enable Cyence to continue to develop worthwhile data science solutions for the insurance industry.

Thought Leadership

2017: A Year of Transition for InsurTech Focus

James Kent (JK)
Global Chief Executive Officer, Willis Re

Alice Underwood (AU)
Global Head of Insurance Consulting and Technology, Willis Towers Watson

As Willis Re reviews the last 12 months of commercial and academic activity in the InsurTech world, one trend clearly emerged; the number of InsurTechs focusing their attention on back-end processes is growing faster relative to that of new ventures focused purely on front-end services.

At the beginning of 2017, we estimate that approximately 85% of InsurTechs globally focused the majority of their attention and technological implementation on front-end processes; customer acquisition, marketing and user experience in distribution and analyzing economic changes and new sources of available data for incorporation into product development. In the North American and European markets in particular, many InsurTechs which focused their attention on building full-stack insurer infrastructure and capabilities to support innovations in these areas of the market have found that the barriers to entry are simply too difficult to surmount. Notably, the tasks of navigating regulation, financing and cultural adoption have proved to be simply too prohibitive.

In 2016, a significant number of InsurTechs concentrated their efforts into becoming full-stack end-to-end digital insurers. At the end of the first quarter of 2017, however, we noted a decrease in InsurTechs focusing their business models towards this area relative to those who began focusing on digital distribution strategies and facilitation of agent/broker disruption. Though this model has achieved some degree of success, particularly within underserved markets where distribution costs have traditionally been cost ineffective for incumbents, costs of acquisition and cultural adoption have proven extremely challenging for new entrants. We do note however, that incumbents have made a number of notable acquisitions and licensing agreements for digital broking software in 2017.

Fast-forward another 10 months and we are observing another notable change, as InsurTechs are grappling with determining whether the cost effectiveness of attempting to disrupt the (re)insurance industry head on represents the most effective way to utilize the innovative technologies and applications they have developed. Furthermore, in cases where InsurTechs have collaborated with incumbents seeking to leverage their front-end services, most (re)insurers have realized a relatively small degree of genuine improvement and financial returns; whether that is in the form of growth in new business lines or fortification of their existing portfolios.

Some real gains have been achieved in areas where new technologies and applications have been employed in middle and back-end processes within existing software systems, or (re)insurance company operational infrastructure. For example, InsurTechs have added value to incumbents in pricing and underwriting, claims handling and administration, fraud detection, predictive analytics and through implementation of and integration with improved software systems which have become more adept at extracting data to enable quicker and more informed decision-making leveraging artificial intelligence and machine learning.

Industry sources estimate that the number of InsurTechs globally increased by approximately 25% in 2017 [a]. Of the complete universe today, approximately 57% of InsurTechs continue to focus on front-end services, with 43% now primarily focused on back-end solutions. The decline in InsurTechs focused on front-end services resulted from a combination of established businesses transitioning towards more practical insurance applications, and an influx of back-end focused new entrants attracting investments in 2017.

(a) Source: Innovator's Edge research.

Thought Leadership

2017: A Year of Transition for InsurTech Focus

In this, our final Thought Leadership piece from our collaborative work with Willis Towers Watson Securities and CBinsights in 2017, Willis Re Chief Global Executive Officer James Kent and Willis Towers Watson Global Head of Insurance Consulting and Technology Alice Underwood provide their exclusive thoughts on this trend, why it is occurring and what it means for our industry looking forward into 2018 and beyond.

It is widely accepted that in the more mature (re)insurance markets, the number of InsurTechs focusing on solutions for middle and back-end processes, or (re)insurance company operational infrastructure, relative to front-end distribution and product innovation, is increasing. To which factors do you attribute this trend?

JK: *Insurance has some high barriers to entry, whether in terms of regulation, such as dealing with the DOIs to establish filings, accessing distribution chains that have been successfully established for decades, or simply the challenge of raising capital to support risk-taking as a start-up company with no track record. We at Willis Towers Watson were among a number of other industry observers, forecasting this outcome of a shift in emphasis among InsurTech start-ups towards software solutions supporting better operating processes.*

AU: *It's also the case that there is a lot of scope for improvement in (re)insurers' back-office systems and operational efficiency. Legacy systems that don't play well with one another, repetitive manual processes carried out by human beings, unstructured data that has lain fallow for years – all of these are overdue for modernization.*

Regulatory compliance, financing and cultural adoption – which of these three areas do you believe has represented the largest hurdle for most InsurTechs?

JK: *Without question I think it is compliance, or said differently, regulation, which is becoming increasingly complex in just about any market or geography that a (re)insurer seeks to operate within.*

AU: *Regulation is absolutely a challenge. But insurers have also been slow to change their corporate cultures – perhaps not so surprising in an industry that prides itself on managing and mitigating risk. Introducing automation or advanced analytics without gaining the buy-in of key internal constituencies can lay the foundation for failure.*

Do you believe that incumbents are taking the right steps to fully incorporate innovative technologies and applications developed by InsurTechs into their business models?

JK: *It seems mixed. Some (re)insurers are investing millions of dollars into the space with a view towards capturing market share should successful companies emerge, and I believe this is occurring as a result of incumbents seeking to harness the potential of these technologies to enhance operational efficiency and underwriting. Other companies seem more ambivalent and content to monitor activity from the side lines until a clearer picture emerges. I can speak for Willis Re that we believe in the opportunity and have invested significant resources into developing a framework for successful collaboration with InsurTechs, however with significant emphasis on discerning selectivity for potential partnerships.*

AU: *I agree with James – it's a mixed bag. There is a cost to being an early adopter of new technology; this investment can yield great reputational and financial benefits if handled well, but companies that position themselves as "fast followers" can reap a fair amount of benefit with relatively less risk. However, companies that wait too long may find they can't make up lost ground once anti-selection and other competitive pressures set in.*

What advice would you give to incumbents looking to InsurTech to strengthen their existing portfolio, grow in new areas of the market and improve operational efficiency?

JK: *I would recommend they partner with Willis Towers Watson to support all three targets as this is what we do for our clients! Willis Re's understanding of our clients' risk, combined with the technology and expertise of our Insurance Consulting and Technology business, offers unparalleled benefits. We have also undertaken a tremendous amount of research in assessing the complete universe of InsurTech companies, and have built an understanding that can be very helpful to (re)insurers seeking to understand where InsurTech can improve their business.*

AU: *Absolutely. Keep in mind, our Insurance Consulting and Technology business was a successful InsurTech business before InsurTech was cool! We understand how to leverage new technology and advanced analytics to produce meaningful improvements in risk selection, capital management and operational efficiency. Over 1,000 (re)insurers globally use our technology and software provisions.*

Thought Leadership

2017: A Year of Transition for InsurTech Focus

Do you anticipate that with time, incumbents will reduce or discontinue internal efforts to develop digital solutions in favor of outsourcing critical functions to InsurTech companies?

JK: *That seems a real possibility. Technology moves so quickly that many insurers are left with challenges associated with legacy systems with diminished relevance to the market today. This impact is often compounded in companies that have made multiple acquisitions resulting in different parts of their business operating on multiple and uncomplimentary platforms. Consequently many look for outside support and this would seem to be where InsurTech companies with leading technology can be winners.*

AU: *I would suggest that, with time, technology will become part of essentially every insurance business function – so the distinction between insurance and technology will gradually dissipate. Some insurers today outsource many of their functions; others prefer to keep everything in house. There is and will be room for many business models.*

When thinking about Willis Towers Watson's business model, where do you see InsurTechs being most complementary?

JK: *Our goal is to better serve clients across the risk and capital spectrum and having the tools and products to do this most effectively, whether from inside our company or through an InsurTech partnership, is the key to succeeding, especially if an InsurTech company has expertise or products in an area where we don't have specific capability or expertise.*

AU: *We have a rich array of insurance technology products and supporting services, and an amazing collection of innovative thought leaders – but even so, we can't expect that we will originate every great idea across all parts of the value chain ourselves. We're happy to partner with start-ups that can deliver new and innovative capabilities, leverage our scale and market presence, and bring business benefits to our clients. That's a win-win-win.*

Where do you see InsurTechs being most disruptive?

JK: *Sadly I think it will ultimately be people. If the InsurTech companies do generate operational efficiency through technology, which most industry observers view as inevitable, ultimately fewer people will need to be hired or retained for what is currently a heavily process driven business.*

AU: *That's true, but what our colleagues in the Willis Towers Watson Human Capital practice have found is that introducing automation also creates new and different jobs. For example, a workforce of 100 people doing rote, mechanical work might be replaced by an automated system plus 50 people doing more interesting and value-additive work. This can result in opportunities to resolve the demographic pressures of more experienced workers looking towards retirement while many younger workers seek a more flexible and rewarding work paradigm. I believe we are entering a critical period of time when insurers will look to the early stage company community to provide innovation opportunities because of their agility, speed and grasp of new technology. Over time, through partnerships, JVs, or acquisitions, they will embed the solutions that add the most value to their businesses. I think it will be challenging for many, larger insurers especially, to operate at the speed required to match the pace of change already occurring in the market today. So this represents an alternative path without the usual institutional barriers to change. Insurers may also benefit from using "low code" platforms. These allow new applications and solutions to be built from end-to-end without having to hire lots of full time coders. Such platforms can be linked into existing systems without much effort or business disruption.*

Finally, what advice would you give to a nascent start-up who is looking to play a role in the (re)insurance industry?

JK: *You have to be relevant and make a positive difference to a client's business. Ask to meet a client without anything specific to sell and you won't get many meetings, let alone succeed. Ask to meet a client with a message that you have tools that can help improve their operating income and enable them to become a more efficient & profitable business, and you're likely to get a meeting very quickly. Of course, this holds true for all companies, not just start-ups.*

AU: *Seek connections and partnerships with established players; learn about their issues, and be able to speak their language. Just because you have the smartest people in the room doesn't mean you have a solution that will actually work.*

Thought Leadership

Progression Towards Intelligent Automation in Insurance

Dave Ovenden

Global Director of Pricing, Product, Claims and Underwriting, Willis Towers Watson Insurance Consulting and Technology

The growing concentration of InsurTech businesses focused on "back office" insurance operations should help precipitate the development of more advanced decision support systems, and ultimately, intelligent automation

As Alice and James note in their thought leadership piece, there are a number of potential reasons for the recent shift in focus of many InsurTech businesses towards insurance operations support. In the short term, this shift is likely to bring new ideas and opportunities for extending the use of automation technology beyond robotic process automation (RPA) in order to lower expense ratios.

RPA effectively replaces a human with a robot to carry out repetitive tasks, and a number of incumbent insurers have already adopted it to varying degrees. But, by coupling RPA with layers of expert decision algorithms, robust data integration and a real-time decision support platform, it will be possible to deliver consistent, accurate and informed decisions in underwriting, pricing and claims – intelligent automation.

Add to that some advanced analytics, machine learning capability (that actually learns rather than just applies rules) and short update cycle times of the type already available with Willis Towers Watson technology, and an insurer has the basis for a true AI system that can improve with time and data. An increasing number of clever and entrepreneurial businesses buzzing around and seeking openings in these areas should continue to push the automation envelope.

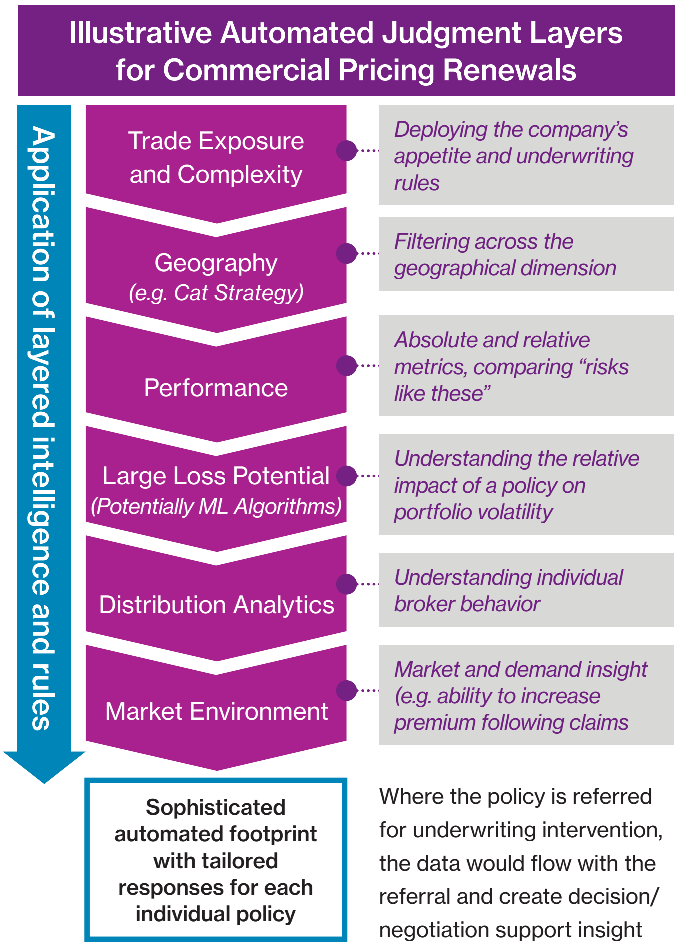
A lot of the focus in InsurTech to date has been on personal lines, owing largely to the generally more significant volumes of data available and the need for excellence in client experience. Expect that to continue. That said, with high levels of frictional cost, commercial insurance is certainly ripe for some operational transformation.

What Might Intelligent Automation Look Like?

Take commercial renewals, for example, which are generally neglected when it comes to innovation despite often representing greater than 80% of an insurer's total business. Premium size, complexity of risk, geography and distribution analytics are among the risk assessment variables that lend themselves to some automation. To contextualize the automation though, it would also need to define expert responses across a number of segments, combining layers of insight around factors such as:

- Absolute and relative risk performance of the account, e.g. loss history
- Intermediary behavior, e.g. how will the broker react to different price scenarios?
- Market norms – what adjustments are possible in the prevailing market?
- Large loss potential – an area where we have deployed machine learning algorithms

In this way, the expert environment can deploy smart decisions in relation to whether to automate or not, as well as in the actions taken.



Thought Leadership
Progression Towards Intelligent Automation in Insurance

The Role for InsurTech

The question then is what technology is needed to support such goals. Having worked with a number of insurers that are eyeing equivalent opportunities, often as part of developing a wider technology roadmap, we advise them of some essential component layers.

- Interface Layer – such as Willis Towers Watson's Brovada software, to support communication between the Frankenstein monster of legacy systems that often exists in insurers
- Decision Framework – to apply and interpret rules within the business, incorporating machine learning elements and capability where it can add value and enhance the quality of decisions
- Segmentation Framework – allowing appropriately granular segmentation recognizing different types of business, clients and financial objectives
- Real Time Decision Engine – software such as Willis Towers Watson's Radar Live serves the essential function of very quickly collating and outputting all the analysis taking place in the background to the end recipient, be it man or machine

The ability to acquire and integrate data across the layers is also a prerequisite. This includes the potential to augment analysis with third party data enrichment, including unstructured data assets and information from various fintech sources, such as survey data, that can contribute to a better outcome.

Eye on the Prize

Unsurprisingly, the outcome sought by virtually all insurers is to enhance business models while making substantial cost savings across product portfolios. Opportunities aren't confined to pure automation. Where, in commercial insurance for example, human intervention is required, the same technical environments and outputs will provide invaluable decision support for technical pricing, negotiation, and portfolio and market benchmarks.

Intelligent automation certainly appears to offer fertile ground for cooperation between incumbent insurers and companies with interesting technology, be they established or early stage. Those that can provide or support the ability to better use internal and external data assets, offer novel scoring algorithms, and enable cognitive insights from unstructured data assets should be in demand.

Dave Ovenden *is the Global Lead for Pricing, Product Management, Claims and Underwriting Consultancy in Willis Towers Watson's Insurance Consulting and Technology business.*

The Data Center

InsurTech by the Numbers

Deal Activity Accelerates to Near Record Level

- **InsurTech funding volume of $697 million in Q4 2017**
  - 123% increase from $312 million in Q3 2017; 157% increase year-over-year from $271 million in Q4 2016
    - ***53 total transactions in Q4 2017 represents second most transactions completed in any quarter to date;*** 10% increase from 48 transactions in Q3 2017 and 23% increase year-over-year from 43 transactions in Q4 2016
    - Increasing international activity – U.S. accounted for 62% of transactions since 2012 but only 41% in Q4 2017; five of top 10 largest investment rounds closed in Q4 2017 were in companies outside of the U.S.
    - Early stage momentum slowing; Seed/Series A transactions comprised 51% of total transactions in Q4 2017 compared to 64% of all such transactions since 2012
  - P&C funding volume increased 175% from Q3 2017 and 187% year-over-year from Q4 2016
    - 45 P&C transactions in Q4 2017 represents 80% increase from 25 P&C transactions in Q3 2017 and 67% increase year-over-year from 27 P&C transactions in Q4 2016
  - L&H funding volume increased 56% from Q3 2017 and 107% year-over-year from Q4 2016
    - Eight L&H transactions in Q4 2017 represents 65% decrease from 23 L&H transactions in Q3 2017 and 50% decrease year-over-year from 16 L&H transactions in Q4 2016
- **Seven $30+ million investments contributed to the third highest funding volume recorded in any quarter to date; investors making more concentrated and later stage bets in selected maturing companies**
  - Lemonade closed a $120 million Series C round in December 2017
  - BIMA closed a $97 million Series E/secondary market investment round in December 2017
  - PolicyBazaar closed a $77 million Series E round in October 2017
  - Devoted Health closed a $62 million Series A round in October 2017
  - Health IQ closed a $35 million Series A-III round in November 2017
  - Chechechexian closed a $30 million Series B round in November 2017
  - BankBazaar closed a $30 million Series D round in October 2017

Continued Concentration in Distribution Sector

- **62% of both Q4 2017 P&C and L&H transactions involved companies focused on insurance distribution, compared to 62% and 43%, respectively, of all such transactions since 2012**
  - Includes digital lead generation, brokerage and MGA platforms

Record Level of Incumbent Investment Activity

- ***35 private technology investments by (re)insurers in Q4 2017 represents most recorded in any quarter to date;*** **25% increase from 28 investments in Q3 2017 and 35% increase year-over-year from 26 investments in Q4 2016**
  - Second quarter since start of 2012 with 30+ private investments in technology companies by (re)insurers or their corporate venture arms (31 investments in Q2 2017)
  - ***120 private technology investments by (re)insurers in 2017 is the highest annual total recorded to date;*** represents 14% increase from 105 investments in 2016, which was previously the highest year recorded to date
- **(Re)insurers, directly and through corporate venture arms, are expanding their focus to invest in a broad range of technologies with potential applications to their core (re)insurance businesses**
  - Aegon, New York Life and Transamerica Ventures participated in a $40 million financing round for H20.ai, an artificial intelligence technology development company, in November 2017
  - Allianz Ventures participated in a $35 million financing round for 1QBit, a quantum computing software development company, in November 2017
  - RGAx participated in a financing round for Bitspark, a blockchain company offering simple money transfer services, in November 2017 (terms undisclosed)

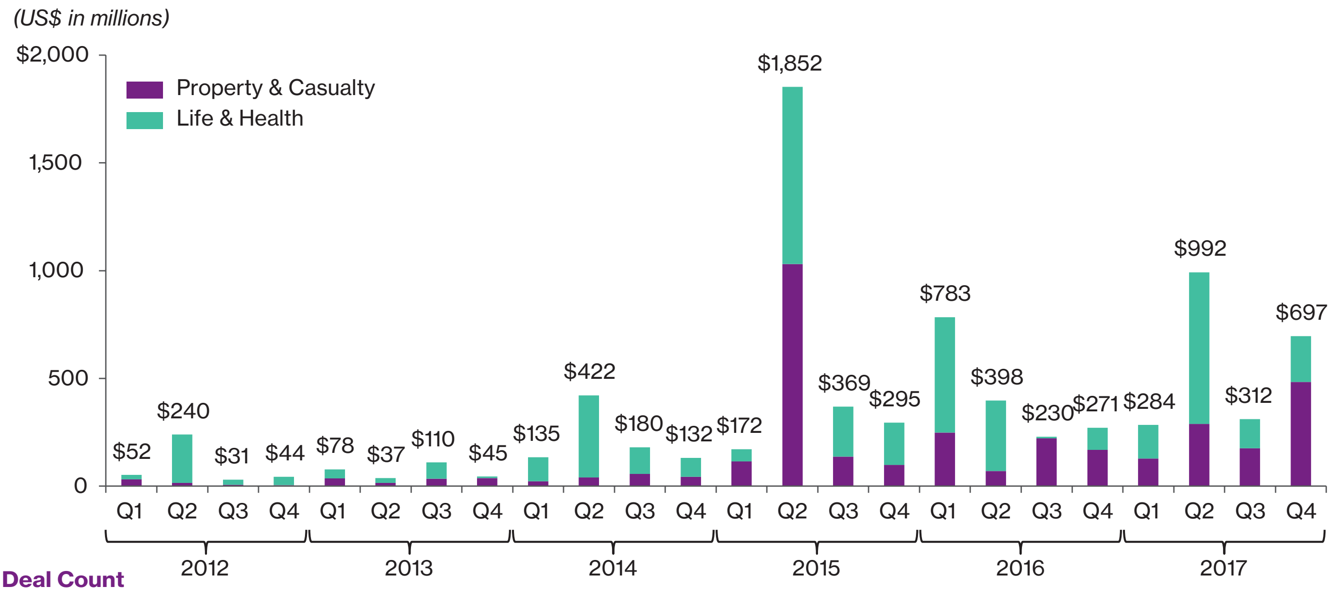
Back-End Administration and Processing Applications Emerging as Area of Focus

- **64% of investment rounds closed in Q4 2017 were for companies focused on front-end processes (product & distribution), while the remaining 36% of investment rounds closed during the quarter were for companies focused on back-end processes (business process enhancement, data & analytics and claims management)**
- **Selected back-end focused companies that raised capital during the quarter include:**
  - Shift Technology, a SaaS based claims management solution, raised $28 million in October 2017 to bring its total funding to $40 million
  - CLARA Analytics, an AI-enabled claims management solution, raised $11 million in November 2017 to bring its total funding to $23 million
  - Snapsheet, a self-service mobile application for claims management, raised $4 million in November 2017 to bring its total funding to $50 million
  - Cytora, a data analytics solutions provider, raised $6 million in December 2017 to bring its total funding to $9 million
  - Weather Analytics, a technology-driven provider of global climate intelligence, raised $4 million in December 2017 to bring its total funding to $36 million
  - QuanTemplate, a developer of insurance reporting software for wholesale reinsurance markets, raised $3 million in December 2017 to bring its total funding to $11 million
  - Friss, a Netherlands based insurance compliance and fraud detection software provider, raised $18 million in December 2017 to bring its total funding to $19 million

The Data Center

InsurTech by the Numbers

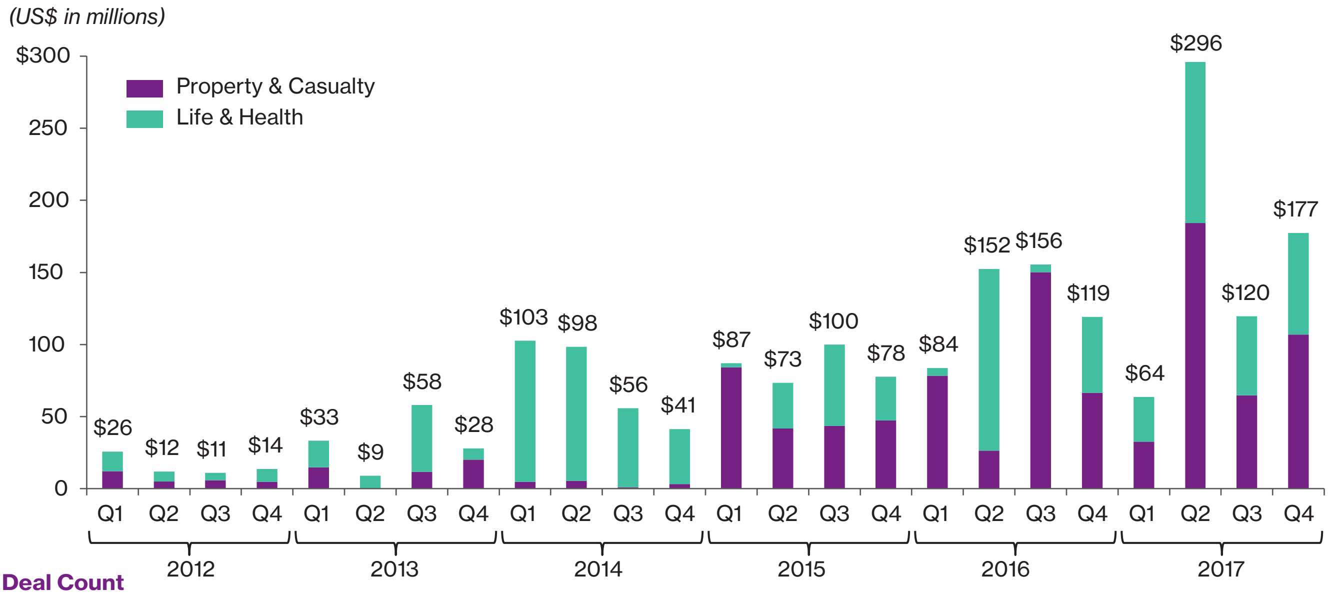
Quarterly InsurTech Funding Volume – All Stages



Deal Count

P&C:	5	2	4	3	5	4	11	8	8	6	11	8	12	13	13	18	42	18	30	27	22	33	25	45
L&H:	8	7	7	10	15	8	10	4	11	16	19	15	13	18	15	22	17	16	8	16	16	31	23	8

Quarterly InsurTech Funding Volume – Early Stage



Deal Count

P&C:	4	1	4	3	4	2	5	5	4	2	5	6	8	8	8	13	33	9	23	20	15	21	17	23
L&H:	6	3	6	7	8	4	6	4	7	9	16	8	7	8	10	18	8	9	4	11	10	19	15	4

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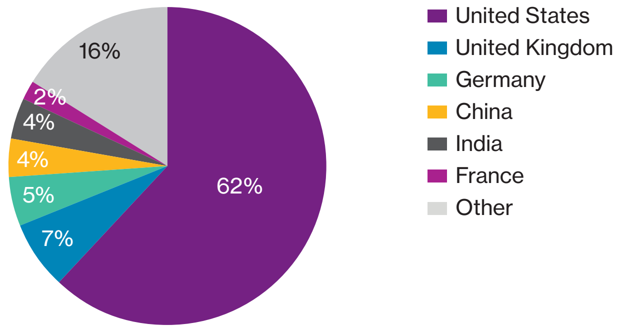
InsurTech by the Numbers

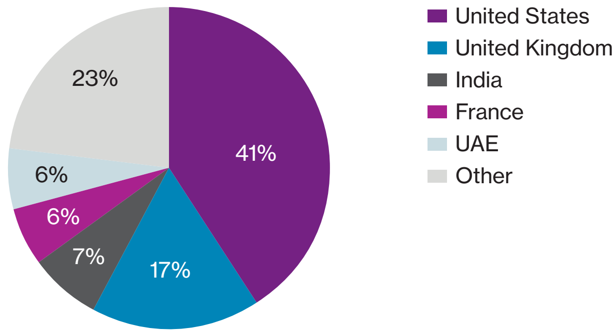
Quarterly InsurTech Transactions by Target Country

2012 – Present



2012 – Q4 2017 Transactions: 707

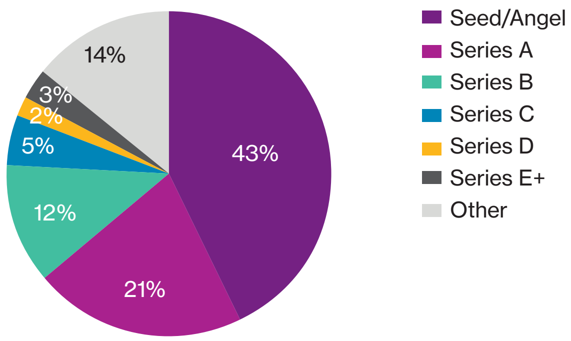
Q4 2017



Q4 2017 Transactions: 53

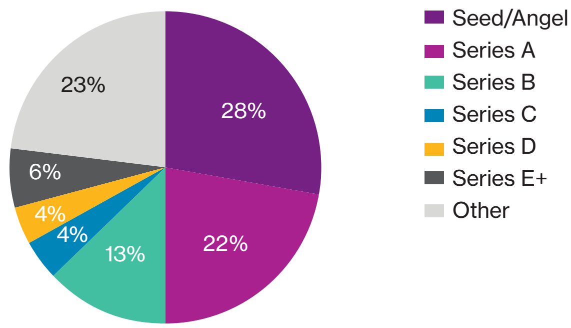
Quarterly InsurTech Transactions by Investment Stage

2012 – Q4 2017



2012 – Q4 2017 Transactions: 707

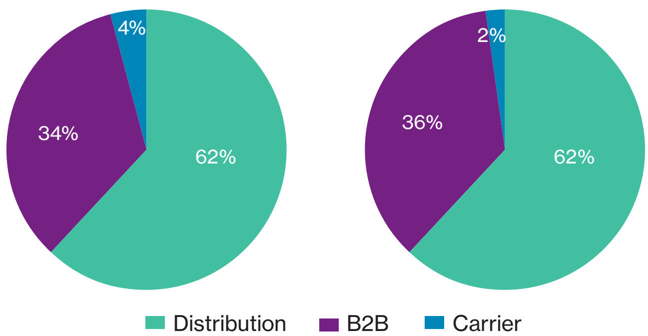
Q4 2017



Q4 2017 Transactions: 53

P&C InsurTech Transactions by Subsector

2012 – Q4 2017 | **Q4 2017**

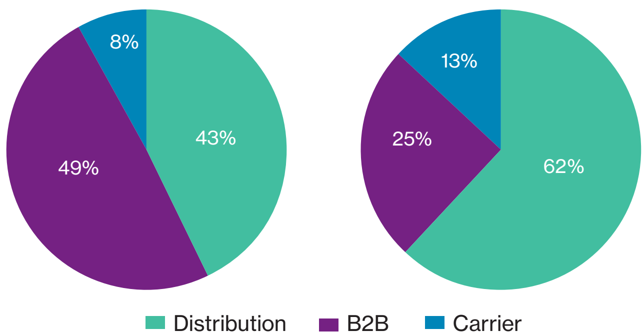


2012 – Q4 2017 P&C
Transactions: 370

Q4 2017 P&C
Transactions: 45

L&H InsurTech Transactions by Subsector

2012 – Q4 2017 | **Q4 2017**



2012 – Q4 2017 L&H
Transactions: 337

Q4 2017 L&H
Transactions: 8

The Data Center

Q4 2017 InsurTech Transactions – P&C

Date	Company	Funding ($mm) Round	Total	Investor(s)	Description
10/03/17	Canopy	2.1	2.8	▪ Direct Line Ins. Group ▪ FinTech Innovation Lab ▪ Individual Investors	▪ UK based technology-enabled portal fka. InsureStreet that distributes landlord and renters insurance that replaces the need for a security deposit ▪ Round Hill Capital made a subsequent Series A investment on 11/13/17 (terms not disclosed)
10/03/17	PremFina	–	36.0	▪ Draper Esprit ▪ Emery Capital ▪ Fineqia International ▪ Microsoft Accelerator ▪ Rakuten Ventures ▪ Rubicon Venture Capital ▪ Talis Capital ▪ Thomvest Ventures ▪ Undisclosed Investors	▪ UK based white labeled software-as-a-service solution for insurance brokers enabling customized marketing and distribution ▪ Fineqia International made a corporate minority investment in December 2017 (terms undisclosed)
10/03/17	Souqalmal	10.0	15.9	▪ 500 Accelerator ▪ Gocompare.com ▪ Hummingbird Ventures ▪ Taqnia ▪ UA Exchange Centre ▪ Womena	▪ Largest insurance and financial product aggregator in the UAE and Saudi Arabia allowing users to compare retail banking and insurance products
10/04/17	Clearsurance	4.0	6.0	▪ Davis Capital Partners ▪ Michael Crowe ▪ Undisclosed Investors	▪ Insurance reviews site allowing consumers to share and compare experiences on personal lines coverages
10/04/17	Pie Insurance	4.3	4.3	▪ Elefund ▪ Moxley Holdings ▪ Sirius Insurance Group	▪ Pre-launch worker's compensation insurer using data analytics to provide affordable policies for small businesses ▪ Targeted launch in early 2018
10/04/17	TensorFlight	–	–	▪ Boost VC ▪ Hemi Ventures	▪ Analyzes satellite, aerial, drone, and street view imagery in order to automate manual in-person property inspections ▪ Assists property insurers with underwriting, reins., risk and claims
10/05/17	CoverWallet	18.5	28.3	▪ Benzinga Global Fintech ▪ Foundation Capital ▪ Founder Collective ▪ Highland Capital Partners ▪ Index Ventures ▪ Starr Companies ▪ Two Sigma Ventures ▪ Union Square Ventures ▪ Undisclosed Investors	▪ Provides a concierge-like service that provides small businesses with insurance advice, quotes and policy management ▪ Proprietary intelligent assessment system will identify the insurance needed based on specific business inputs and find a policy that fits within a desired budget ▪ Offers GL, workers' comp, BOP, commercial property, commercial auto, umbrella and other commercial lines coverages
10/05/17	Slice Labs	11.6	20.3	▪ Horizons Ventures ▪ Munich Re / HSB Ventures ▪ Plug & Play Accelerator ▪ Sompo Holdings ▪ Tusk Ventures ▪ XL Innovate ▪ Undisclosed Investors	▪ The first on-demand insurance platform for the on-demand "gig" economy, providing pay-per-use insurance (e.g. ride sharing)
10/09/17	Coverfy	4.1	5.5	▪ K Fund ▪ Sabadell Venture Capital ▪ Seaya Ventures ▪ SeedRocket ▪ Individual Investors	▪ Spain based mobile application that allows users to compare prices, purchase or revise existing policies and report claims
10/11/17	ValueInsured	6.5	6.5	▪ Everest Re Group ▪ Houston Int'l Insurance	▪ Offers housing down payment protection coverage underwritten by Everest Re and Houston International Insurance ▪ Product will reimburse homeowners' down payment or refinanced equity in the event of a sale during fallen market prices

Note: Blue font denotes current round investors.

The Data Center

Q4 2017 InsurTech Transactions – P&C

Date	Company	Funding ($mm) Round	Funding ($mm) Total	Investor(s)	Description
10/12/17	PolicyBazaar	77.0	146.8	▪ ABG Capital ▪ IDG Ventures India ▪ Info Edge ▪ Intel Capital ▪ Inventus Capital Partners ▪ MakeSense Technologies ▪ Premjilnvest ▪ Ribbit Capital ▪ Steadview Capital ▪ Tiger Global Management ▪ True North ▪ Wellington Management ▪ Undisclosed Investors	▪ India based financial products comparison website offering personal lines P&C and life coverages, loans and credit cards ▪ Provides free insurance quotes and allows users to compare plans based on customizable filters
10/16/17	RenewBuy	9.2	10.2	▪ Amicus Capital Partners ▪ Mount Nathan Advisors	▪ Online auto insurance marketplace powered by algorithms identifying the lowest premiums across major insurers and returning customized results based on a customer's needs
10/16/17	SafeChain Financial	0.2	1.0	▪ Columbus Smart City Accel. ▪ Fintech71 ▪ Rise of the Rest ▪ Undisclosed Investors	▪ Pre-launch technology platform providing fraud prevention software for title professionals including title service offices and mortgage bankers
10/17/17	BankBazaar	30.0	109.0	▪ Amazon ▪ Eight Roads Ventures ▪ Experian ▪ Mousse Partners ▪ Sequoia Capital India ▪ Walden International	▪ India based online marketplace providing users with instant customized quotes for loans, credit cards and insurance products
10/20/17	Assurup	1.2	1.2	▪ Keyrus Innovation Factory ▪ Kima Ventures ▪ Individual Investors	▪ France based managing general agent offering professional liability insurance for start-ups and other small businesses ▪ (Re)insurance partners include AXA, SwissLife, Generali, Hiscox, AIG, Chubb and others
10/24/17	Insurdata	1.0	1.0	▪ Anthemis Group ▪ Baloise Group ▪ Menlo Ventures ▪ Plug & Play Ventures	▪ UK based technology firm providing (re)insurance underwriters with property-specific data to support pricing, underwriting and portfolio management decisions ▪ Specializes in high-resolution, peril-specific exposures and building-level risk data, using technology that includes mobile augmented reality and 3-D model creation
10/24/17	Yolo	1.2	1.2	▪ Barcamper Ventures ▪ Mansutti ▪ Miro Ventures	▪ Italy based digital platform offering diversified "pay-as-you-go" personal lines micro insurance coverages
10/24/17	Shift Technology	28.0	39.7	▪ Accel Partners ▪ Elaia Partners ▪ General Catalyst ▪ Iris Capital	▪ Software-as-a-service offering automated claims management and insurance fraud detection
10/25/17	RiskGenius	–	–	▪ QBE Ventures	▪ Applies machine learning to insurance policies to create structured content for customers to find and analyze insurance policy language and create more efficient underwriting workflows ▪ 2017 Entrepreneur of the Year by the Entrepreneurial Ins. Alliance ▪ Concurrent with the transaction, QBE entered into a multi-year commercial use agreement for the RiskGenius product
10/25/17	Homelyfe	3.2	3.2	▪ Peterson Ventures ▪ Talis Capital	▪ UK based mobile platform offering home buyer's insurance
10/26/17	ClaimKit	3.0	7.5	▪ Flyover Capital ▪ Mid-America Angels ▪ Plug & Play Accelerator ▪ QBE Ventures ▪ Undisclosed Investors	▪ Third-party claims handling service that deploys experienced claim consultants to collect documents and data which is consolidated and uploaded for efficient access through a proprietary platform
10/26/17	Naked	1.4	1.4	▪ Hollard Insurance ▪ Yellowwoods	▪ South Africa based pre-launch start-up providing transparent, flexible insurance products
10/30/17	Optisure	–	–	▪ Hiscox Holdings	▪ Germany based digital insurance broker providing coverages for the "gig economy" and other freelance workers and entrepreneurs

Note: Blue font denotes current round investors.

The Data Center

Q4 2017 InsurTech Transactions – P&C

Date	Company	Funding ($mm) Round	Total	Investor(s)	Description
11/02/17	Chechechexian	30.3	46.4	▪ China Broadband Capital ▪ China Capital Group ▪ Shunwei Capital Partners ▪ Zhongjin Huicai Inv. Mgmt.	▪ China based online platform that provides intelligent recommendations for auto coverages and immediate quotes
11/07/17	Matic	7.0	7.0	▪ Anthemis Group ▪ ManchesterStory Group ▪ Mr. Cooper ▪ National General Holdings ▪ Nationwide Mutual ▪ Plug & Play Accelerator	▪ Technology-driven insurance agency focused on helping lenders and loan officers better integrate homeowner's insurance into the lending process
11/13/17	CLARA Analytics	11.5	23.0	▪ Oak HC/FT Partners ▪ Undisclosed Investors	▪ Easy-to-use, AI-enabled claims management software solution for workers' compensation insurance ▪ Connects insured workers to a large network of top-rated healthcare providers ▪ Full automation of simple claims with 99% accuracy
11/15/17	Goji	15.0	109.9	▪ Coffin Capital & Ventures ▪ Five Elms Capital ▪ Hudson Structured Capital ▪ Thayer Street Partners ▪ Village Ventures ▪ Undisclosed Investors	▪ Leading independent online and offline data-driven personal lines insurance distribution platform combining digital quoting capabilities with personalized recommendations from licensed insurance agents and customer service representatives ▪ Carrier partners include Liberty Mutual (Safeco) MetLife, National General, Progressive, State Auto, Travelers and others
11/16/17	At-Bay	6.0	6.0	▪ Lightspeed Ventures ▪ LocalGlobe ▪ Shlomo Kramer	▪ Analyzes, models and predicts cyber risk to offer customized cyber insurance coverages designed to enable companies to innovate despite the threat of cyber risk ▪ Product development partnership with Munich Re/HSB Ventures
11/16/17	justInCase	–	–	▪ 500 Startups	▪ Japan based provider of AI-powered repair cost insurance for smartphone users
11/20/17	Zego	8.0	9.6	▪ Balderton Capital ▪ LocalGlobe ▪ Undisclosed Investors	▪ UK based distribution platform offering hourly insurance for commercial auto risks, primarily for "gig economy" workers ▪ Partnership with Aviva to offer pay-as-you-drive insurance for drivers in sharing economy companies, such as UberEATS, Deliveroo and Jinn
11/22/17	Snapsheet	4.4	49.9	▪ Commerce Ventures ▪ F-Prime Capital ▪ IA Capital Group ▪ Intact Ventures ▪ Liberty Mutual Ventures ▪ Lightbank ▪ Montage Ventures ▪ OCA Ventures ▪ Plug & Play Accelerator ▪ Pritzker Group VC ▪ Tola Capital ▪ USAA ▪ Undisclosed Investors	▪ Self-service mobile app for estimating auto claims by photo ▪ Offers a full suite of products to help carriers, adjusters and customers analyze claims efficiently ▪ Enables insurers to handle approximately 90% of auto claims virtually within ~30 days ▪ Clients receive claims estimates in an average of 2.7 hours after photos are received ▪ Hired Andy Cohen as COO in June 2017 (previously CNA VP of Worldwide Field Operations)
11/28/17	Fo-Sho	–	0.0	▪ Startupbootcamp ▪ Undisclosed Investors	▪ South Africa based mobile application distributing personal lines P&C coverages
12/06/17	Cytora	5.9	8.8	▪ Cambridge Seed Funds ▪ Cambridge Innovation Cap. ▪ Parkwalk Advisors ▪ QBE Ventures ▪ Starr Companies ▪ iLexIR ▪ Plug & Play Accelerator ▪ Fintech Innovation Lab ▪ Individual Investors	▪ UK based data analytics solutions provider ▪ Cytora's risk engine captures the online footprint of risks clients continually face from crawling data from company websites, news articles and government datasets, and processes data using AI algorithms to predict future claims, attractive risk profiles and quality of risk ▪ Strategic partnerships with QBE, Starr and XL Catlin
12/07/17	INZMO	1.2	1.8	▪ 500 Accelerator ▪ Helvetia Venture Fund ▪ UNIQA Insurance Group	▪ Estonia based mobile insurance comparison platform for everyday personal lines insurance products

Note: Blue font denotes current round investors.

The Data Center

Q4 2017 InsurTech Transactions – P&C

Date	Company	Funding ($mm) Round	Funding ($mm) Total	Investor(s)	Description
12/11/17	Weather Analytics	3.5	36.3	▪ In-Q-Tel ▪ Maryland Dept. of Business ▪ Tokio Marine HCC ▪ W.R. Berkley ▪ Undisclosed Investors	▪ Technology-driven provider of global climate intelligence ▪ Aggregates historical, current and forecasted weather content in online database with risk mitigation tools and predictive analytics
12/12/17	QuanTemplate	3.3	11.3	▪ Allianz Ventures ▪ Anthemis Group ▪ Route 66 Ventures ▪ Techstars ▪ Transamerica Ventures ▪ Undisclosed Investors	▪ Developer of Insurance reporting and analytics software built for wholesale reinsurance markets ▪ Comprehensive outsourced technology solution enabling efficient importing, analyzing, modeling and reporting of data, allowing users to manage their workflow
12/12/17	Friss	17.6	19.1	▪ Aquiline Capital Partners ▪ BlackFin Capital Partners ▪ VentureClash	▪ Netherlands based insurance compliance and fraud detection analytics software provider
12/13/17	Brokoli	0.7	0.7	▪ Lanai Partners ▪ Nuclio Venture Builder ▪ Individual Investors	▪ Spain based mobile insurance concierge that helps users manage their insurance policies and personal information
12/15/17	Digital Insure	–	–	▪ NewAlpha	▪ France based start-up specializing in personal protection with a comprehensive digital individual loan insurance offering
12/19/17	Coverfox	10.0	39.0	▪ Accel Partners India ▪ Catamaran Ventures ▪ InnoVen Capital ▪ IFC ▪ SAIF Partners ▪ Transamerica Ventures	▪ India based online insurance comparison and distribution platform offering personal lines, health and travel insurance coverages ▪ Offers 100+ products through relationship with 25 insurers
12/19/17	Lemonade	120.0	180.0	▪ Aleph ▪ Allianz Ventures ▪ General Catalyst ▪ Google Ventures ▪ Menlo Ventures ▪ Sequoia Capital ▪ SoftBank Group ▪ Sound Ventures ▪ Thrive Capital ▪ Tusk Ventures ▪ XL Innovate	▪ Licensed insurance carrier offering homeowners' and renters' insurance powered by artificial intelligence and behavioral economics through a direct-to-consumer online platform ▪ Targets urban dwellers promising zero paperwork and instant servicing (policy issuance, claims, communication, etc.)
12/20/17	123Seguro	3.0	3.0	▪ Alaya Capital Partners ▪ MercadoLibre ▪ NXTP Labs	▪ Argentina based online auto insurance broker
12/28/17	Go Maps	19.6	19.6	▪ Khosla Ventures ▪ Undisclosed Investors	▪ Innovative mobile application-based insurance broker allowing users to receive auto insurance quotes with just a picture of their driver's license ▪ Partnerships with leading insurers; reinsurance capacity provided by Munich Re

Note: Blue font denotes current round investors.

The Data Center
Q4 2017 InsurTech Transactions – L&H

Date	Company	Funding ($mm) Round	Total	Investor(s)	Description
10/02/17	Ensurem	14.0	14.0	▪ Angelrush Ventures ▪ A-CAP Holdings	▪ Nationwide online marketplace for L&H insurance-related products ▪ Generates insurance recommendations via proprietary risk assessment software ▪ Closed $12.25 million investment from A-Cap and separate $1.7 million angel investment from Angelrush on 10/2/17
10/05/17	myCOI	0.0	0.5	▪ Undisclosed Investors	▪ Supplier of certificate of insurance management software specializing in pharmaceutical, construction, banking, property management and municipal certificate management ▪ Allows organizations to automate collection, validation & tracking
10/20/17	Devoted Health	62.0	69.0	▪ Venrock	▪ Pre-launch health care start-up seeking to provide Medicare Advantage coverages and personal health care advisory services to senior citizens by 2019
10/23/17	Democrance	0.8	1.3	▪ Eos Venture Partners ▪ F-Horizon ▪ Fincluders ▪ Jabbar Internet Group ▪ Seedstars World ▪ TURN8 ▪ Undisclosed Investors	▪ UAE based insurance technology solutions provider that distributes diversified coverages through mobile platforms
11/15/17	Health IQ	34.6	81.6	▪ Andreessen Horowitz ▪ CRV ▪ First Round Capital ▪ Foundation Capital ▪ Greylock Partners ▪ Menlo Ventures ▪ Rock Health ▪ Western Tech Investment ▪ Undisclosed Investors	▪ Mobile life insurance underwriting platform that aims to provide customized coverage solutions ▪ Offers plans that can be tailored to different dietary and lifestyle choices order to avoid penalties that may apply to certain customers under traditional coverages ▪ Carrier relationships include Lincoln Financial, Brighthouse Financial, Transamerica, Berkshire Hathaway, Securian, SBLI, Manulife, Assurity, Prudential, Principal, Ameritas and others
12/05/17	Bayzat	5.0	12.5	▪ BECO Capital ▪ Hamed Kanoo Co. ▪ Precinct Partners ▪ Raed Ventures ▪ Silicon Badia ▪ Womena ▪ Undisclosed Investors	▪ UAE based cloud software solution that streamlines human resources processes and provides a health insurance marketplace which connects businesses with insurers
12/19/17	BIMA	97.0	114.2	▪ Allianz ▪ Axiata Digital Inn. Fund ▪ Kinnevik ▪ LeapFrog Investments ▪ Millicom International Cellular	▪ Leading mobile L&H insurance distribution platform operating in emerging markets ▪ Currently reaches 7 million people across eight countries in Africa, Asia and Latin America including Ghana, Senegal, Tanzania, Mauritius, Bangladesh, Sri Lanka, Indonesia and Honduras ▪ Allianz invested $30 million in Series E round and purchased $60 million of additional equity in secondary market

Note: Blue font denotes current round investors.

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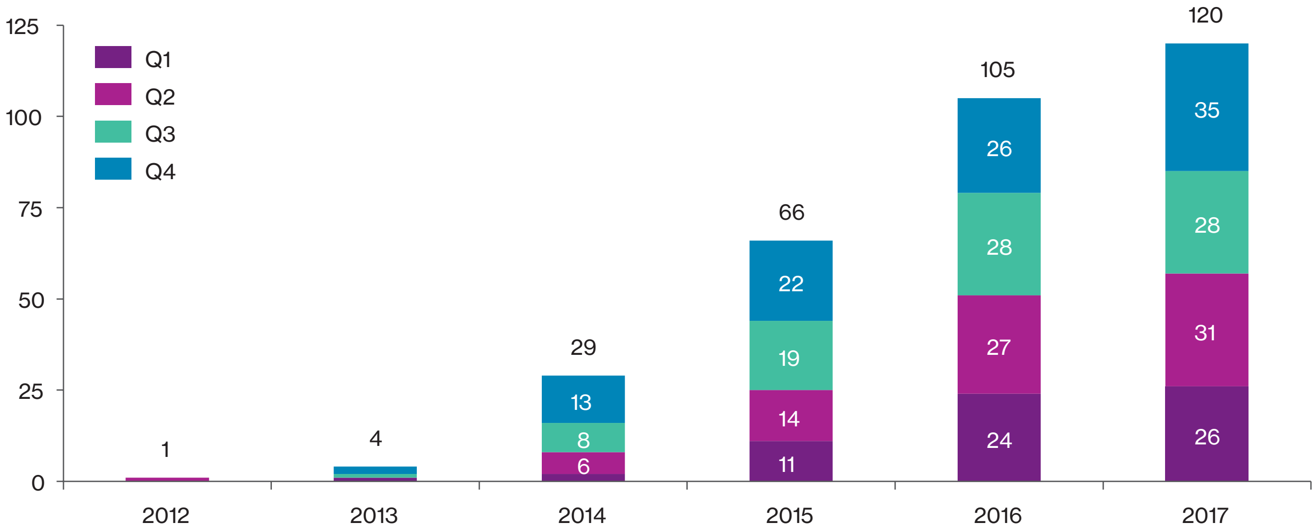
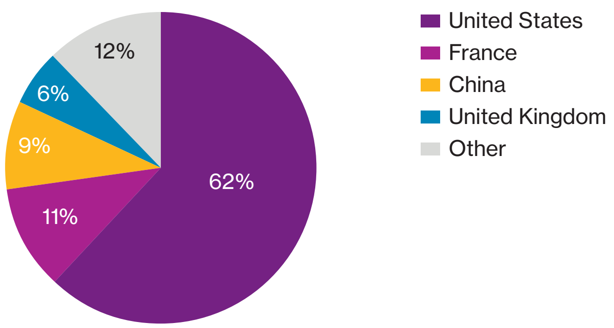
InsurTech by the Numbers

Private Technology Investments by (Re)insurers



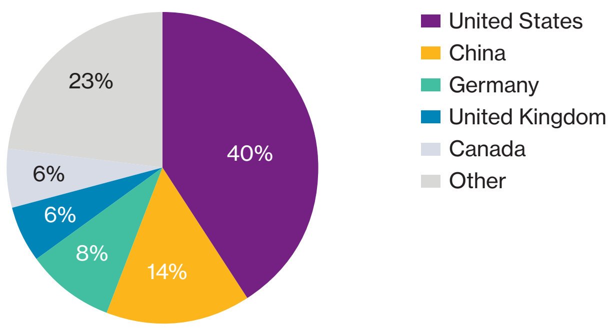
Private Technology Investments by (Re)insurers by Target Country

2012 – Q4 2017



2012 – Q4 2017 Transactions: 325

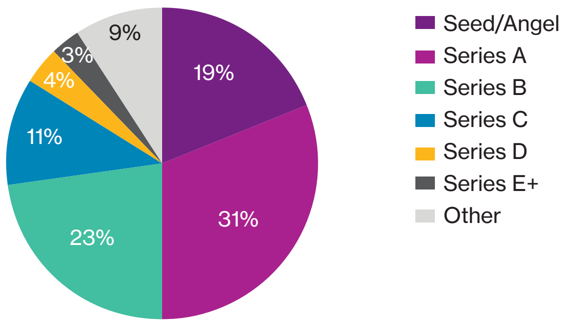
Q4 2017



Q4 2017 Transactions: 35

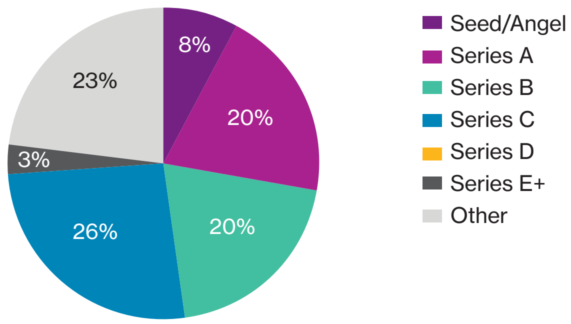
Private Technology Investments by (Re)insurers by Investment Stage

2012 – Q4 2017



2012 – Q4 2017 Transactions: 325

Q4 2017



Q4 2017 Transactions: 35

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Q4 2017 Private Technology Investments by (Re)insurers

Date	Company	Funding ($mm) Round	Total	(Re)insurer Investor(s)	Description
10/03/17	DavidShield	–	–	▪ White Mountains	▪ Israel based insurance services provider developing technological solutions for the health insurance and health care industries
10/05/17	Slice Labs	11.6	20.3	▪ Munich Re/HSB Ventures ▪ Sompo Holdings ▪ XL Innovate	▪ The first on-demand insurance platform for the on-demand "gig" economy, providing pay-per-use insurance (e.g. ride sharing)
10/10/17	Hangzhou KangSheng Health Consulting Co.	15.0	15.0	▪ Ping An Ventures	▪ China based software developer of Zhangshang Tangyi, a mobile application that allows users to record their personal health data and receive medical advice
10/11/17	ValueInsured	6.5	6.5	▪ Everest Re ▪ Houston International	▪ Offers housing down payment protection coverage underwritten by Everest Re and Houston International Insurance ▪ Product will reimburse homeowners' down payment or refinanced equity in the event of a sale during fallen market prices
10/12/17	SecurityScorecard	27.5	60.9	▪ AXA Strategic Ventures	▪ Cyber and data risk monitoring service that provides global threat intelligence and other risk management services content for customers to find and analyze insurance policy language and create more efficient underwriting workflows
10/25/17	RiskGenius	–	–	▪ QBE Ventures	▪ Applies machine learning to insurance policies to create structured content for customers to find and analyze insurance policy language and create more efficient underwriting workflows ▪ 2017 Entrepreneur of the Year by the Entrepreneurial Insurance Alliance ▪ Concurrent with the transaction, QBE entered into a multi-year commercial use agreement for the RiskGenius product
10/25/17	Farmobile	18.1	25.6	▪ AmTrust Financial Services	▪ Agricultural technology start-up offering real-time proprietary data collection tools through a mobile application
10/26/17	Naked	1.4	1.4	▪ Hollard Insurance	▪ South Africa based pre-launch start-up providing transparent, flexible insurance products
10/30/17	Optisure	–	–	▪ Hiscox Holdings	▪ Germany based digital insurance broker providing coverages for the "gig economy" and other freelance workers and entrepreneurs
10/31/17	Gainfully	2.5	2.7	▪ MassMutual Ventures	▪ Content marketing platform for financial services providers, assisting companies with distribution of online marketing content
10/31/17	We Predict	–	–	▪ Munich Re / HSB Ventures	▪ UK based company offering data analytics services for the auto warranty and health insurance industries
11/02/17	Annoroad Gene Technology	105.9	105.9	▪ Ping An Ventures	▪ China based research and development firm specializing in genomic research and analysis
11/06/17	Bitspark	–	–	▪ RGAx	▪ Hong Kong based blockchain and cryptocurrency platform offering easy-to-use money transfers
11/06/17	Volocopter	5.8	36.9	▪ Helvetia Venture Fund	▪ Germany based startup developing electric manned vertical takeoff and landing aircraft for urban consumer travel
11/07/17	Matic	7.0	7.0	▪ National General ▪ Nationwide Mutual	▪ Technology-driven insurance agency focused on helping lenders and loan officers better integrate homeowner's insurance into the lending process
11/09/17	MitrAssist	16.0	17.0	▪ Fosun Pharmaceutical ▪ Ping An Insurance	▪ Israel based medical implant developer that offers a mitral valve implant that provides a minimally invasive approach to mitral regurgitation treatment
11/09/17	Enveil	4.0	5.0	▪ USAA	▪ Data security company providing scalable commercial solutions for safeguarding proprietary and sensitive information
11/17/17	Prognos	20.5	42.5	▪ Cigna	▪ Health care start-up using data analytics and artificial intelligence to enable earlier patient diagnostics
11/20/17	Flo Technologies	11.5	14.5	▪ USAA	▪ Mobile application that monitors a user's home water supply to catch leaks, prevent water damage and promote conservation
11/28/17	1QBit Information Technologies	35.1	35.1	▪ Allianz Ventures	▪ Quantum computing software development company that offers an intuitive and accessible framework for users
11/30/17	H2O.ai	40.0	73.6	▪ Aegon ▪ New York Life ▪ Transamerica Ventures	▪ Open source predictive analytics platform for data scientists and application developers who need scalable and fast machine learning for smart business applications ▪ Applications include smart home appliances, self-driving cars, personalized digital content, smart assistants and others
12/01/17	Chexiang.com	151.1	151.1	▪ China Merchants Wealth ▪ China Taiping Insurance ▪ Ping An Insurance	▪ China based auto e-commerce platform that also offers complementary online and offline services for leasing and car maintenance

The Data Center

Q4 2017 Private Technology Investments by (Re)insurers

Date	Company	Funding ($mm) Round	Funding ($mm) Total	(Re)insurer Investor(s)	Description
12/05/17	RepairPal	14.6	35.9	▪ USAA	▪ Auto repair comparison website offering transparent pricing estimates and expert insights from certified mechanics
12/06/17	CHJ Automotive	151.0	367.8	▪ China Taiping Insurance ▪ Ping An Insurance	▪ China based smart electric vehicle developer and manufacturer seeking to provide next generation vehicles
12/06/17	ForceManager	12.0	15.8	▪ AXA Strategic Ventures	▪ Spain based consumer relationship management mobile application tailored for field sales teams
12/06/17	Cytora	5.9	8.8	▪ QBE Ventures ▪ Starr Companies	▪ UK based data analytics solutions provider ▪ Cytora's risk engine captures the online footprint of risks clients continually face from crawling data from company websites, news articles and government datasets, and processes data using AI algorithms to predict future claims, attractive risk profiles and quality of risk
12/07/17	Contrast Security	--	54.0	▪ AXA Strategic Ventures	▪ Technology security provider offering proprietary software applications to protect users against cyber attacks
12/07/17	relayr	19.9	56.4	▪ Munich Re / HSB Ventures	▪ Germany based company providing enterprise middleware and data analytics software for monitoring revenue streams
12/07/17	INZMO	1.2	1.8	▪ Helvetia ▪ UNIQA (a)	▪ Estonia based mobile insurance comparison platform for everyday personal lines insurance products
12/11/17	Biofourmis	5.0	6.0	▪ Aviva Ventures	▪ Singapore based health analytics start-up that uses AI-based software to analyze personal medical data ▪ Product can be paired with wearable fitness trackers, electronic medical records and individual lab reports
12/12/17	Tier1CRM	34.0	34.0	▪ MassMutual Ventures	▪ Canada based CRM and customer engagement software-as-a-service solutions provider for financial services companies
12/15/17	PriceHubble	--	--	▪ Helvetia Venture Fund ▪ Swiss Life	▪ Switzerland based machine learning software developer
12/19/17	BIMA	30.0	114.2	▪ Allianz	▪ Leading mobile L&H insurance distribution platform operating in emerging markets ▪ Currently reaches 7 million people across eight countries in Africa, Asia and Latin America including Ghana, Senegal, Tanzania, Mauritius, Bangladesh, Sri Lanka, Indonesia and Honduras
12/21/17	Rogrand	--	--	▪ Fosun RZ Capital ▪ Ping An Ventures	▪ China based third party pharmaceuticals e-commerce platform that also offers a smart clinic mobile service and online-to-offline health management tools
12/28/17	NextCapital	29.3	51.3	▪ Transamerica Ventures ▪ Manulife Financial (a)	▪ Open architecture digital data analytics platform offering personalized financial planning and managed account investment advisory services

(a) Denotes previous round investor that did not invest in current round.

The Data Center

Q4 2017 Strategic (Re)insurer Partnerships

Date	Company	(Re)insurer Partner(s)	Description
10/02/17	Nimbla	▪ Munich Re	▪ Nimbla has partnered with Munich Re to provide comprehensive credit management services for SMEs
10/02/17	Cytora	▪ XL Catlin	▪ XL Catlin will leverage Cytora's expertise in sourcing and analyzing datafrom multiple sources and combining them to create new risk insights ▪ Cytora's risk engine captures the online footprint of risks clients continually face from crawling data from company websites, news articles and government datasets, and processes data using AI algorithms to predict future claims, attractive risk profiles and quality of risk
10/04/17	Qover	▪ Munich Re	▪ Munich Re will provide capacity to Qover for motor coverages
10/04/17	Zeguro	▪ Allianz	▪ Zeguro has partnered with Allianz Global Corporate & Specialty to act as Chief Information Security Officer, offering its platform to Allianz clients to provide guidance on cyber risk
10/05/17	Captricity	▪ MetLife ▪ MassMutual	▪ Captricity has developed new intelligent automation solutions for life policy administration and underwriting with MetLife and MassMutual
10/10/17	Arity	▪ National General	▪ Allstate's connected-car data science unit, Arity, has signed its first third party client, National General ▪ National General will create a usage-based insurance program using Arity's mobile app telematics technology
10/11/17	INSHUR	▪ Munich Re	▪ INSHUR established a strategic partnership with Munich Re to design and distribute innovative commercial auto products through INSHUR's mobile-first technology platform
10/13/17	Tesla	▪ Liberty Mutual ▪ Aviva	▪ Tesla is working with Liberty Mutual and Aviva to provide custom insurance plans for Tesla's electric vehicles in North America
10/13/17	TrackActive	▪ Gen Re	▪ Gen Re has partnered with TrackActive to offer the start-up's mobile based musculoskeletal rehabilitation program to its policyholders
10/17/17	Hyperloop	▪ Munich Re	▪ Munich Re and Hyperloop are working together to develop a product to help the high-speed transportation system manage risk
10/19/17	Frontpoint	▪ American Family	▪ American Family established a partnership with Frontpoint to offer its policyholders a more affordable way to access Frontpoint's cutting edge home security systems
10/24/17	Rubica	▪ PURE	▪ PURE is launching a new cyber insurance product that will use Rubica's active cyber monitoring service as a risk management measure
10/25/17	RiskGenius	▪ QBE	▪ QBE Ventures closed its first investment into RiskGenius and has entered into a multi-year commercial use agreeement for RiskGenius' innovative underwriting software and platform
10/27/17	Beam Dental	▪ VSP	▪ Beam Dental is partnering with VSP Vision Care to offer VSP's vision benefit plans across 10 states, including CA, TX, IL, AZ, OH, CO, WA, UT, WI and KY
11/14/17	Waze	▪ Allstate	▪ Allstate Roadside Services is working with Waze to provide roadside assistance to Waze users
11/16/17	At-Bay	▪ Munich Re / HSB Ventures	▪ At-Bay, a technology-enabled cyber insurer, launched with backing from Munich Re / HSB Ventures
11/28/17	Carpe Data	▪ Allstate	▪ Allstate is working with Carpe Data to apply highly predictive online data analytics and fraud prevention to its claims management offering
11/30/17	TrueMotion	▪ Nationwide	▪ Nationwide has partnered with TrueMotion to enhance Nationwide's SmartRide mobile app focused on collecting distracted driving data
11/30/17	Lyft	▪ Cigna	▪ Cigna's ongoing partnership with Lyft to transport Cigna-HealthSpring Medicare Advantage members to doctor's appointments and pharmacies has resulted in 14,500 free rides and 90%+ member satisfaction
12/04/17	Tesla	▪ Direct Line	▪ Direct Line is offering Tesla drivers in Britain a 5% discount if they switch on their vehicle's autopilot system
12/06/17	Coalition	▪ Swiss Re ▪ Argo	▪ Coalition, a tech-enabled cyber risk MGA, has partnered with Swiss Re and Argo to underwrite cyber insurance products on their behalf
12/15/17	SizeUp	▪ Westfield	▪ Westfield has partnered with SizeUp to offer customized data analytics and market intelligence to its small business customers

Quarterly InsurTech Briefing
Additional Information

The Quarterly InsurTech Briefing is a collaboration between Willis Towers Watson Securities, Willis Re and CB Insights. Production is led by the following the individuals. For more information, or to discuss the results of this report, please direct inquiries to InsurTech@willistowerswatson.com.

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Willis Towers Watson Securities

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Quarterly InsurTech Briefing

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