InsurTech Insights

How InsurTechs are transforming (re)insurers

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InsurTech Insights

Introduction

The insurance sector is changing due to emerging risks, shifting demographics, and new entrants, forcing traditional players to adapt. Technology, in our view, is the primary catalyst that is transforming the insurance industry.

We see technological innovation impacting the industry in a number of ways:

1. InsurTechs are transforming the existing value chain

Transformation of the value chain through customer engagement or the development of digital distribution platforms. In many cases, data driven process optimization is having a large impact as new firms seek to harness technology to drive productivity and cost efficiencies through data analytics, artificial intelligence, blockchain, or other emerging technologies.

2. InsurTechs are enabling new capabilities

Harnessing emerging technologies and products to provide (re)insurers with new value-added competencies such as the ability to assess claims through drone inspections, dramatically decreasing claims processing times.

3. InsurTechs are innovating new products

The emergence of new products such as cyber insurance, or usage based insurance is providing opportunities to InsurTechs and industry incumbents alike, to capitalize on these new, fast growing markets. A plethora of start ups are now working with and against insurers to develop new products, or assist in underwriting these new risks.

4. InsurTechs are breaking boundaries beyond insurance

InsurTechs are also supporting insurers to innovate beyond the existing value chain into new industries, providing access to new customers and markets. This trend is evidenced in our recent Breaking Boundaries report released in conjunction with Startupbootcamp InsurTech in London. The majority of new startups were beyond insurance, i.e. focused on developing products that were either in a different industry, or industry agnostic, but still with a large value add to the insurance industry.

InsurTech is now 'everyday business' and demands strategic consideration, with focused investments and partnerships. In fact, PwC's 2017 Global Fintech Report identified that 84% of insurers expect to increase Fintech partnerships in the next three to five years.

On the following pages we highlight strategic investments and partnerships made by (re)insurers as they look to capitalize on the technological innovation impacting the industry. ***We expect this trend to continue as (re) insurers seek to remain competitive and responsive to InsurTech's impact.***

InsurTechs are transforming the existing value chain

From reinventing customer engagement and experience, to using data-driven processes to optimize operating models creating expense and productivity efficiencies

Product	Marketing & Distribution	Data & Underwriting	Claims Management
Figo	*Coverwallet*	*Cape Analytics*	*Clara Analytics*

illustrative InsurTechs

Reimaging the core market and product	*Redesigning the customer experience*	*Reinvent the use of data and analytics*	*Reconstruct the operating and expense structure*
• Reaching the un(der) insured • Emerging solutions for new markets • Usage or behavior based personalized insurance	• Online aggregation and comparison • Personalized customer engagement platforms • New models of holistic advice (i.e. robotic / artificial)	• Remote data capture and analysis • Quantification of emerging risks • Emergence of blockchain, AI, and other technologies	• Robotics and automation in core insurance • Cloud based as-a-service platforms solutions

Investments / partnerships example: Cloud-based platforms

Cloud-based platforms and on-demand infrastructure facilitates (re)insurers ability to go to market quickly and efficiently

More than 70%[1] of traditional (re)insurers use cloud-based solutions

- Only 10%[1] run most of their digital infrastructure using the cloud

Cloud-based services will lower the barrier to entry for InsurTech companies and innovative (re)insurers, increase marketplace competition, and drive customer value innovation

- New players will be able to instantly stand-up all insurance-related processes to provide a digital experience to consumers

Traditional (re)insurance incumbents will have the opportunity to run business model trials at higher frequency and lower cost structures – either through InsurTech partnerships or proprietary projects

Global cloud and IP utilization will grow 3.3x[2] in the next 5 years, and will account for 95%[2] of data center traffic

July 2018

XL Catlin	
Slice Labs	

- Slice Labs' ICS (Insurance Cloud Services) platform will serve as the base platform from which XL Catlin will introduce their new ***on-demand cyber infrastructure insurance, tailored for small / medium businesses***
- ICS provides a cloud-based platform that ***supports the full insurance value chain,*** enabling XL Catlin to go to market quickly

May 2018

Nephila	*Markel*
RenaissanceRe	*Boost Insurance*

- Boost Insurance provides an insurance-as-a-service platform designed to provide backend infrastructure for InsurTech startups, digital platforms, and insurance products. It has partnered with Nephila Capital to offer a ***dedicated reinsurance facility*** with additional capacity provided by Markel and RenaissanceRe
- Boost Insurance also serves as a general agency for its carrier partners and assists in product development, underwriting, compliance, and distribution

March 2017

Markel	*Figo*
HCS Capital	

- HCS Capital Partners has invested ***$4M*** in Figo Pet Insurance, a pet insurance platform that is underwritten by Markel Specialty Reinsurance
- Figo Pet Insurance differentiates itself by offering an ***integrated cloud-based pet platform*** with customizable healthcare, enabling pet owners to manage their pet's life

[1] Novarica: Cloud Adoption in Insurance,

[2] Cisco: Global Cloud Index: Forecast and Methodology 2016-2021

InsurTechs are enabling new capabilities

The emergence of new capabilities fundamentally changes not only the existing value chain but the industry overall, as more incumbents adopt these capabilities through investments or partnerships to compete effectively

Capabilities are new technologies utilized to provide ***value add to the existing value chain*** whether through increased efficiency, or ability to execute ***new tasks or analyses***

Examples include:

- Use of aerial drones after weather catastrophes to assess losses enabling insurers to process claims significantly faster than before
- Advances in data analytics and catastrophe modelling through using weather, atmospheric, or maritime data to better underwrite risk
- Mobile app based technology for claims adjusting including functionality to upload photos
- Utilizing artificial intelligence to answer customer queries, process claims, or to better understand and compare insurance policy language

Loveland Innovations – *Underwriting solutions utilizing drone technology*

KatRisk – *Catastrophe modeling focused on flood and wind risk*

Snapsheet – *Mobile app streamlining the claims process*

Risk Genius – *Platform that applies artificial intelligence to insurance policies*

illustrative InsurTechs

[1] Aon – Weather, Climate, and Catastrophe Insight

[2] Hurricanes Harvey, Maria, and Irma occurring August 25-September 2, September 18-September 22, and September [4]September 12 respectively

[3] October Northern California Wildfires and December Southern California Wildfires

[4] Summer flooding in China and India and January flooding in Thailand

Investments / partnerships example: Drones and weather analytics

Increasing severity and frequency of natural catastrophes has created demand for innovative claims solutions

In 2017 there were:

710[1] natural catastrophes, 93%[1] of which were weather-related

$310B[1] in overall losses of which only $133B[1] was insured

83%[1] of CAT losses occurred in North and Central America (incl. Caribbean)

Increased levels of heat and moisture in the atmosphere leads to more unusual weather patterns and increases the risk of extreme catastrophe events

- 2017 was the 41st[1] consecutive year of above average global land and sea surface temperatures

Natural disasters in 2017 were among the highest ever recorded

Event	Deaths[1]	Economic Loss (USD)[1]	Insured Loss (USD)[1]
Atlantic Hurricanes[2]	4,000+	$220B	$80B
California Wildfires[3]	43	$13B	$11B
Floods in Asia[4]	116	$7.5B	300M

(Re)insurers have the opportunity to further deploy InsurTech capabilities in claims processing and predictive weather analytics to help bridge the gap between economic and insured losses

July 2018

XL Catlin / *Windward*

- XL Catlin has invested ***$16.5M*** in Windward, a maritime risk analytics startup, during a Series C capital raise
- Based in Tel Aviv, Windward uses ***proprietary technology to monitor and analyze ship activity*** including: how they navigate, when they operate, fortitude in rough water, and how they maneuver in ports

Sept 2016/ Jan 2018

Maiden Re / *Betterview* / *Munich RE*

- Maiden Re participated in a ***$2M seed*** round for Betterview, a leading platform and service provider for capturing and analyzing data from drones
- Additionally, Betterview later ***partnered with Munich Re to offer drone imagery***, analysis, and reporting to Munich Re's insurance company clients

May 2017

Tokio Marine / W.R Berkley / *Weather Analytics*

- Tokio Marine HCC and W. R. Berkley have invested ***$17M*** into Weather Analytics during a ***Series B*** round
- Weather Analytics provides ***predictive weather insights*** by collecting atmospheric data and leveraging a team of ***experienced meteorologists***

InsurTechs are innovating new products

InsurTechs are assisting incumbents in creating new products or lines of business within the insurance industry, unlocking new markets and opportunities

Many incumbents are underwriting these new risks via ***partnerships*** or by ***making investments*** in innovative InsurTechs

	Cyber Insurance	*Usage-based or on-demand insurance*	*Insurance for the sharing economy*
illustrative InsurTechs	*CyberCube*	*Trōv*	*Slice Labs*
	Zeguro	*Metromile*	*Guardhog*

[1]Juniper Research: The Future of Cybercrime & Security

[2]McAfee: Economic Impact of Cybercrime – No Slowing Down,

[3]NetDiligence: 2017 Cyber Claims Study

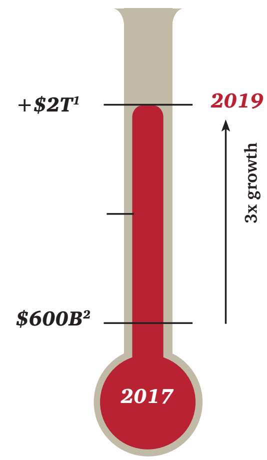
Cybercrime will cost the global economy over

$2T[1] in 2019

Investments / partnerships example: Cyber Security

Escalating threats associated with data breaches and cyber attacks have prompted (re)insurers and brokers to offer risk mitigation solutions

Global Annual Cost of Cybercrime



Cybercrime will cost the global economy over $2T[1] in 2019

- Annual cost of cybercrime is growing faster than services provided

Growing frequency of attacks due to:

- Limited understanding of common vulnerabilities
- Unpredictable scale of damage on critical infrastructure
- Data scarcity impedes development of cyber insurance

Average cost of a cyber breach was $349,000[3] for small companies, reaching an average cost of $3.2M[3] for big organizations

July 2018

JLT
CyberCube

- AXA has selected SecurityScorecard, a ***leader in cyber security ratings***, to provide security ratings as part of the underwriting process for AXA's rapidly growing cybersecurity business
- SecurityScorecard platform will provide AXA's underwriters with an overall risk rating and detailed view into the ***cyberhealth of AXA insureds***

June 2018

AXA
SecurityScorecard

- JLT and CyberCube will partner to enhance ***cyber strategy and risk modelling capabilities*** for clients
- CyberCube's robust and innovative analytics include fully ***probabilistic capabilities*** and a wide range of possible ***loss scenarios***

November 2017

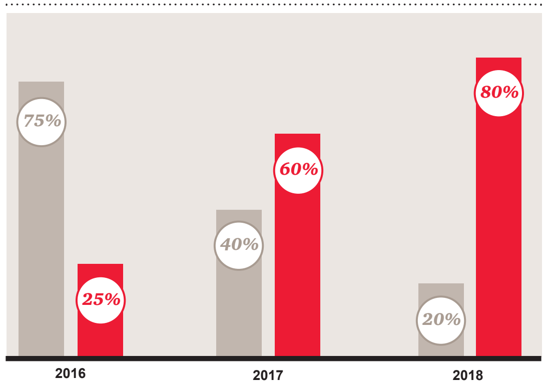
Hartford Steam Boiler
At-Bay

- Hartford Steam Boiler (Munich Re) participated in a $6M investment seed round for At-Bay, a digital insurance platform that helps organizations mitigate cyber risk
- At-Bay leverages ***real-time data collection*** and ***active client monitoring*** to predict future risks rather than analyze historical attacks

InsurTechs are breaking boundaries beyond insurance

InsurTechs are broadening their product offerings beyond insurance, causing a shift to more generalist business models. The graph below highlights the dramatic shift in Startupbootcamp InsurTech participants (2016-2018):

Categorization of Startupbootcamp InsurTech Participants



Within insurance
Startups focused on offerings specific only to the insurance industry

Beyond insurance
Startups focused on developing products that are either in an entirely different industry or industry-agnostic, but have large value add to insurance - like ***HealthTech***

The global telemedicine market will grow to $79B[1] during the period between 2018-2022

Source: Breaking Boundaries – How InsurTech is moving beyond insurance (Startupbootcamp, PwC),

[1]Global Telemedicine Market 2018-2022

[2]U.S. Census Bureau: An Aging Nation: The Older Population in the United States,

[3]AARP Survey: Livable Communities Baby Boomer Facts and Figures

Investments / partnerships example: HealthTech

HealthTech and wearable technology will enable (re)insurers to more accurately underwrite and price health insurance

Analysts forecast the global telemedicine market will grow to $79B[1] during the period between ***2018-2022***

- Growth is driven by increasing adoption of digital health platforms such as mobile-health, telehealth, electronic medical records, and other wireless technologies

Wearable HealthTech devices gather critical data – for both consumer and underwriter:

- Provide users with data necessary to make healthy changes in lifestyle
- Preemptively detect and cure life threating diseases

The U.S. eldercare population will become a significant addressable market given that approximately ***20%[2]*** of people will be ***age 65 or older by 2030***

- Currently, 87%[3] of adults age 65+ want to remain in their own home as they age, creating a demand for HealthTech solutions that permit or support independence

June 2018

Scor / Transamerica
iBeat

Scor Life & Health Ventures and Transamerica Ventures participated in a ***$10M*** seed round for iBeat

iBeat is a leading provider of a ***cardiac monitoring smartwatch*** that automatically notifies emergency help, family and friends of the users' status and location

September 2017

Generali
CareLinx

Generali Global Assistance acquired CareLinx, a leading tech-enabled caregiver marketplace with over ***200,000 caregivers*** on the platform

CareLinx partners with global health systems and insurance companies to offer a post-acute care solution that delivers ***on-demand comprehensive support and cloud-based tools for real-time interventions***

September 2016

Swiss Re
Sharecare

Swiss Re has formed a partnership with Sharecare, a ***health and wellness*** engagement solution providing people with ***personalized resources***

The partnership is focusing on helping people ***manage financial stress***, one of the leading causes of chronic health issues

Re(insurers) need to develop and implement focused InsurTech strategy

Conclusion

Historically, (re)insurance transactions were often focused on consolidating or diversifying books of business. With the emergence of InsurTech, many (re)insurers began to invest in new technologies for fear of 'missing out' but often without a strategic plan for the use of technology across the organization.

The InsurTech industry has continued to mature, technology adoption has become more widespread, and successful use cases have begun to emerge. We are seeing a shift to (re)insurers making targeted investments or partnerships to achieve strategic initiatives and augment (re)insurers' capabilities. InsurTech is also enabling (re)insurers to expand beyond insurance into adjacent markets that have value-add to their business models.

We have discussed four ways we see InsurTech impacting the industry and highlighted key strategic investments and partnerships. These have demonstrated the efforts of (re) insurers in transforming the existing value chain (through cloud-based platforms), unlocking new capabilities (with drone analytics), or creating access to new products or markets (with cyber security and HealthTech). There are other emerging trends that also merit focus. (Re)insurers are recognizing the impact of targeted investments or strategic partnerships which if executed and implemented properly, can unlock meaningful value for their organizations.

In order to compete effectively, (re)insurers need the right talent, strategy, ability to execute on deals/partnerships, and finally, a viable plan to implement the InsurTech's capability for their organization. We expect those who struggle on these fronts to fall behind their competitors.

*In order to compete effectively, (re) insurers need to **execute on deals and partnerships**, AND a viable strategic plan to implement the **InsurTech's capability** for their organization. Those without a technology strategy will be left behind.*

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