Capgemini

Top 10 Trends in Property & Casualty Insurance 2018

What You Need to Know

Contents

Introduction

Technology is evolving rapidly and disrupting the way business processes are handled. Emerging technologies are transforming every aspect of the insurance business and property and casualty insurers are adjusting by adapting InsurTech capabilities.[1] As consumers are becoming increasingly tech savvy, they demand seamless access to personalized offerings via a choice of channels. Moreover, insurers are facing pressure to optimize costs and improve operational efficiency.

Enhanced customer experience is top on mind for insurance executives. So, it is not surprising that property and casualty insurers are embracing a customer-centric approach and transitioning to business models that allow easy access to services, similar to that of utilities. Additionally, insurers are using connected devices to capture more data about customers and insured properties, which enables them to mitigate risk and provide value-added services.

Firms are also adding digital proficiencies as they strive to automate processes across the value chain using Artificial Intelligence (AI) and Robotic Process Automation (RPA), and blockchain (distributed ledger) technology.

For instance, drones can enable faster, more efficient property assessment, Application Programming Interfaces (APIs) offer seamless integration with other stakeholders, and blockchain technology has the potential to eliminate errors and detect fraudulent activity.

These digital capabilities will enable insurance firms to effectively reduce operational costs and human errors, improve speed and accuracy, and help provide a better customer experience.

Moreover, insurers are implementing advanced analytics to provide personalized offerings and improve underwriting operations with better risk-assessment models.

While some traditional property and casualty insurers are developing in-house solutions, most of them are preferring to collaborate with InsurTech firms for inculcating digital and advanced analytics capabilities. Also, for quick deployment and efficient maintenance of the new systems, they are focusing on a cloud-native approach.

By adopting emerging technologies, insurance firms can realize business benefits such as increased revenue, reduced risk, improved operational costs, better underwriting margins through tighter pricing accuracy, and trimmed claims leakage (especially during times of a catastrophe). Clearly, these technologies offer early adopters a competitive advantage.

1 In the context of this report, 'InsurTech' refers to the technology-based capabilities that have specific application in insurance, whereas 'InsurTech firms' refers to new firms with offerings based on InsurTech capabilities, that are less than five years old and have a relatively small but growing customer base.

The 10 technological trends identified in this report affect a variety of P&C business goals, as outlined in Table 1.

Table1: Business Impact of the Top-10 Technology Trends in P&C Insurance

	Revenue Growth	Cost Optimization	Enhancing Customer Engagement	Risk Reduction	Improving Pricing Accuracy	Reducing Claims Leakage
Connected Devices for Mitigating Risk and Providing Value-Added Services	Low	Medium	High	High	Medium	High
Insurers are Exploring New Business Models	High	Low	High	High	High	High
Increase in Automation of Processes using RPA and AI	Medium	High	High	Medium	High	High
Increasing usage of Drones for Property Assessment	Low	High	High	Low	High	High
Autonomous Vehicles are poised to disrupt auto insurance business models	Low	High	Low	High	High	High
Insurers are Experimenting with Blockchain Technology	Low	High	Low	Medium	Low	High
Developing New Applications Leveraging APIs	Medium	High	High	Low	Medium	Low
Leveraging Advanced Analytics for Pricing Accuracy and Emerging Risk Identification	High	Medium	High	High	High	High
Collaboration with InsurTechs to Inculcate InsurTech Capabilities	Medium	High	High	Low	Medium	Medium
Cloud-Native Approach to Implement New Technologies	Medium	High	Medium	Low	Low	Low

Source: Capgemini Financial Services Analysis, 2017

Because these emerging technologies are interconnected, implementation and effective performance of one technology often requires support from another related technology. For example, connected devices require advanced analytics to process data in real-time and APIs can help with seamless integration. Future-focused insurance firms are implementing synergistic InsurTech capabilities to offer customers convenience, agility, and personalization while ensuring profitable firm growth.

Trend 01: Connected Devices Help Insurers to Proactively Mitigate Risk and Provide Value-Added Services

P&C insurers are leveraging connected devices for proactive risk mitigation and for providing value-added services to customers

Background

- Connected devices offer business value that goes beyond operational cost savings and provides an opportunity for P&C insurers to develop innovative solutions that explore real-time data
- Thus, these devices are gaining popularity among P&C insurers to leverage relevant real-time data for improving customer engagement, mitigating risk proactively, and providing value-added services

Key Drivers

- Multiple forecasts predict that the connected devices market will grow heavily in the next 4-5 years to become a multi-billion-dollar industry:
  - Statista predicts that the total connected devices (IoT) installed base globally will increase from 20.4 billion devices in 2017 to 75.4 billion devices in 2025 at a CAGR of 17.8% during this period[2]
  - According the *World Insurance Report (WIR)* 2016 from Capgemini and Efma, more than one-third (34.2%) of customers think they will adopt smart ecosystems, and 32.4% of the insurers surveyed say they will adopt smart ecosystems in the next five years[3]
- Insurers are looking for ways to differentiate their offerings from the competition, avoid commoditization, and be more customer-centric in their approach:
  - Connected devices enable P&C insurers to support quick, convenient, and personalized interactions, mitigate risk, and provide value-added services to customers

Trend Overview

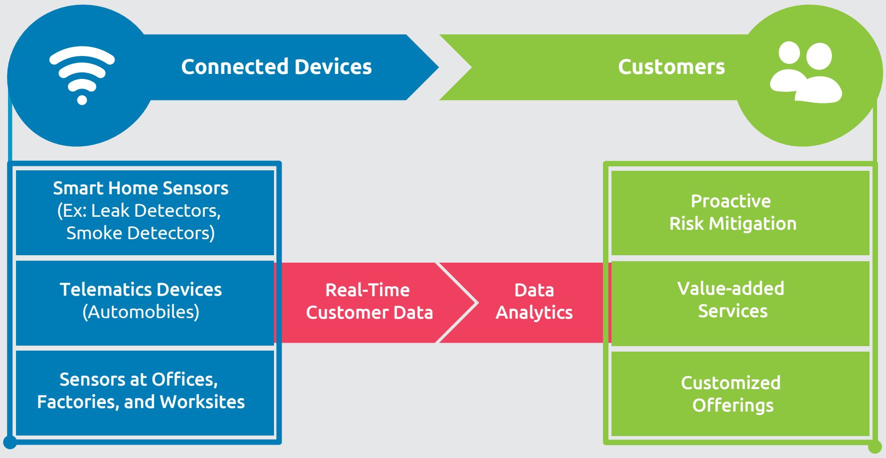
- P&C insurers are seeking to be more customer-centric and looking for ways to improve customer engagement and experience by leveraging connected devices
- Through connected technologies such as home sensors and telematics devices, P&C insurers can get real-time data on customer's loss exposure and respond with timely interventions at any sign of danger in advance so that property damage can be prevented or minimized
- Early adopters of connected devices in the P&C insurance industry have a compelling value proposition to demonstrate that data from connected devices can be leveraged to grow new business, improve risk assessment, and proactively engage with customers in loss mitigation:
  - E.g., Allianz has partnered with Panasonic to provide better service to customers. In case of danger in the customer's home, Panasonic sensors send alerts to the user's mobile device, as well as to Allianz. Allianz then dispatches repair teams to quickly address the issue and mitigate damage[4]

2 "Internet of Things (IoT) connected devices installed base worldwide from 2015 to 2025 (in billions)", Statista, accessed October 2017 at https://www.statista.com/statistics/471264/iot-number-of-connected-devices-worldwide/

3 *World Insurance Report* 2016, Capgemini, 2016, accessed October 2017 at https://www.worldinsurancereport.com

4 Allianz website, accessed October 2017 at https://www.allianz.com

Exhibit 1: Connected Devices in P&C Insurance



Source: Capgemini Financial Services Analysis, 2017

- By leveraging connected devices, P&C insurers increase risk assessment precision and provide value-added services to customers:
  - E.g., Security First Insurance's Security First Mobile app helps customers plan their routine in case of adverse weather conditions. The interactive hurricane tracking feature helps customers plot their property address on the map and check an active storm's projected path. It also shares information on Red Cross shelters and evacuation routes[5]
- Another example of proactive risk mitigation and increased customer engagement is that of Esurance, which launched its DriveSafe teen driver program to help parents monitor their teens' driving behavior through a telematics device. This can be done by setting preferences on their personalized Esurance DriveSafe site where they can opt for customized alerts for unsafe driving behavior and review trip details[6]

Implications

- With real-time data from connected technologies on customer risk exposure, P&C insurers can respond with timely interventions at any sign of hazard or peril for risk reduction
- With the help of smart home ecosystems and telematics, P&C insurers are providing value-added services in multiple areas such as home monitoring and assistance, driving assistance, and so on
- P&C insurers carry significant benefits of providing value-added services to customers such as competitive differentiation, increased customer retention, additional revenue streams, and lower claim costs:
  - Value-added services benefit P&C insurers as a means for competitive differentiation. Providing innovative and useful services can help insurers stand out among their competitors and realize increase in customer mindshare
  - As value-added services enhance customer experience through relevant and meaningful engagement, customer retention could be improved for the insurers
  - As many of the value-added services are directed toward proactive risk mitigation, they can also help lower the overall cost of claims for P&C insurers by helping customers avoid risks in their daily lives

5 Security First website, accessed October 2017 at http://www.securityfirstflorida.com/resources-and-advice/security-first-mobile

6 Esurance website, accessed October 2017 at http://blog.esurance.com/introducing-esurance-drivesafe

Trend 02: New Business Models are Explored

P&C firms are adopting new, more flexible business models with the potential to transform the way clients consume insurance offerings

Background

- Technological advancement is enabling the introduction and viability of new insurance business models – such as usage-based, on-demand, and peer-to-peer insurance – which are transforming the way people consume insurance offerings
- The new business models are focused on evolving customer needs, bridging the gaps in insurance offerings, and catering to unexplored/ underserved markets
- Traditional P&C insurers seek to introduce new offerings based on new business models, mostly by collaborating with InsurTech firms

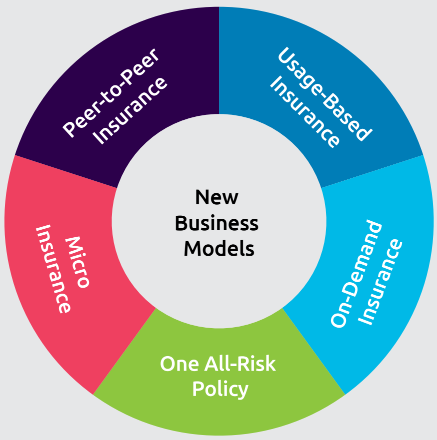
Key Drivers

- The advent of dynamic risk modeling techniques, driven by real-time access to customer data via social media and IoT, and advancement in analytics capabilities are enabling the new business models
- InsurTech firms that provide innovative offerings based on the new business models are driving traditional insurance firms to explore similar products and services leveraging digital technologies
- Customer demand for more flexibility and easier access while researching or buying insurance coverage is also encouraging the growth of new business models

Trend Overview

- The *World Insurance Report* (WIR) 2017 from Capgemini and Efma found that usage-based insurance, on-demand insurance, and all-in-one risk policies are more relevant to P&C insurers (according to more than 75.0% of executives interviewed), followed by flexible coverage options, micro insurance, and peer-to-peer insurance[7]

Exhibit 2: New Business Models Relevant to P&C Insurers



Source: Capgemini Financial Services Analysis, 2017

7 *World Insurance Report 2017*, Capgemini, 2017, accessed October 2017 at https://www.worldinsurancereport.com/

- Usage-Based insurance can incentivize less risky behavior and mitigate moral hazard problems. Insurance firms can also leverage the infrastructure for providing value-added services to reduce claims incidents:
  - For example, Nationwide is running a pay-as-you-drive insurance program named SmartRide, where users can get up to 40% reduction on premiums for safe driving behavior and get personalized inputs for making safer driving decisions[8]
- On-Demand insurance offers customers the flexibility to activate an insurance coverage as-and-when they require. As the on-boarding and claims processing is quick and hassle-free, this business model is expected to bring more people under insurance coverage:
  - For example, Tokio Marine allows customers to buy short-term insurance policies that cover travel and sporting activities. Customers can instantly purchase polices by completing an application form and paying through a mobile app[9]
- Instead of having various policies to cover multiple risks, one all-risk policy can cover all the risks of a customer in one policy:
  - This will make it easier for customers to manage their policy details
  - Insurers too can benefit through lower marketing and administrative costs
- By providing insurance policies with lower premiums, micro insurance policies aim to bring economically weaker sections under insurance coverage:
  - For example, Allianz Africa offers standard and simple micro insurance policies and it has insured more than 600,000 people in Africa[10]
- Peer-to-peer insurance enables a group of people to insure themselves by pooling premiums, and the group members can receive a portion of the premium back if the total value of claims is lesser than the premiums received. Members of the group are also involved in critical decisions including claims adjudication:
  - For example, InsurTech firm besure provides a platform where people with similar insurance needs are grouped in a pool. Members of the pool take care of claims settlement process[11]

Implications

- As gaps in insurance offerings are addressed, new business models will generate new revenue streams for the insurers
- Insurers can enhance customer experience as insurance offerings can be accessed seamlessly, like a utility service
- Business models such as usage-based insurance will help insurers to perform better risk assessment and price the products more accurately
- Since claims are reviewed by a closed group of peers in peer-to-peer insurance model, the losses can be predicted accurately, thus reducing claims leakage
- New business models will have cost implications that can be mitigated by emerging technologies such as blockchain and automation tools

8 "Nationwide Promotes Safe Driving Through Usage-Based Insurance Program", Body Shop Business, accessed October 2017 at http://www.bodyshopbusiness.com/nationwide-promoting-safe-driving-usage-based-insurance-program/

9 "Tokio Marine partners with NTT DoCoMo to offer One Time Insurance", The Digital Insurer, accessed October 2017 at https://www.the-digital-insurer.com/dia/tokio-marine-partners-with-ntt-docomo-to-offer-one-time-insurance/

10 Allianz website, accessed October 2017 at http://www.allianz-africa.com/africa/index.php?option=com_content&view=article&id=7%3Amicro-assurance&catid=3%3Aproduits&lang=en

11 besure website, accessed October 2017 at https://besure.com/

Trend 03: Increase in Automation of Processes leveraging RPA and AI

P&C insurers are increasingly automating processes across the value chain by leveraging technologies such as RPA and AI

Background

- In the P&C insurance industry, the scale and impact of automation have increased drastically in recent years with the advent of Robotic Process Automation (RPA) and Artificial Intelligence (AI). The efficiency of underwriting and claims processing can be improved by implementing RPA and AI
- According to the *World Insurance Report* (WIR) 2017, RPA and AI are considered important by 63.2% and 69.0% of the surveyed insurers respectively, and more than 80.0% of the executives surveyed indicated that insurers are either already investing or planning to invest during the next three years in RPA and AI[12]

Key Drivers

- New channels for collecting customer data, advanced data processing capabilities, and improvements in artificial intelligence algorithms are powering the automation agenda
- Cost optimization and improved operational efficiency are key strategic priorities being used more and more to justify the case for automation
- Quick, error-free, and personalized customer service is expected to remain competitive and can be achieved via automation

Trend Overview

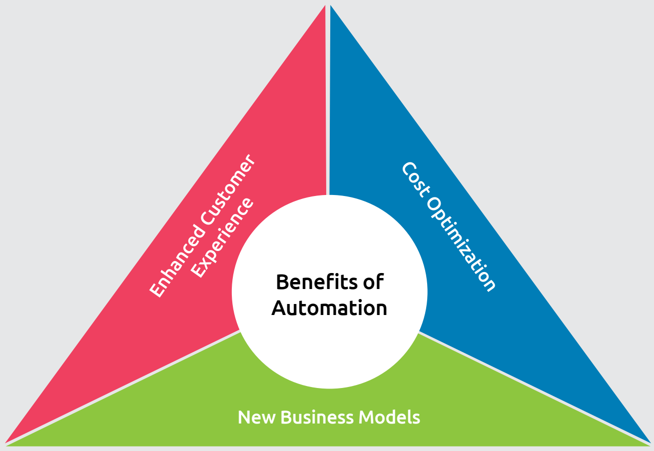
- In P&C insurance, RPA and AI are finding applications across the value chain to significantly expedite processes and also explore new models of engagement
- P&C insurers are using bots to automate processes such as policy servicing and claims management and thus providing much faster and more personalized service to customers:
  - In the front office, chatbots can be used to interact with customers to gain a better understanding of their needs so that the customer can be provided personalized quotes:
    - For example, SPIXII is an automated insurance agent that customers can interact with, through a native mobile app or other messenger platforms, to buy the right coverage for their requirements[13]
  - In policyholder servicing, chatbots can be used to manage simpler queries more cost-effectively and speedily:
    - For example, Geico's virtual assistant Kate answers customer queries about their policies and payments[14]

12 *World Insurance Report* 2017, Capgemini, 2017 accessed October 2017 at https://www.worldinsurancereport.com/

13 "SPIXII: Making insurance simple, accessible and personal for everyone", Roger Peverelli, Reggy de Feniks, Digital Insurance Agenda, May 4, 2017, accessed October 2017 at http://www.digitalinsuranceagenda.com/102/spixii-making-insurance-simple-accessible-and-personal-for-everyone/

14 "Move Over Adjusters and Underwriters, the Bots Are Coming", Denise Johnson, Claims Journal, June 6, 2017, accessed October 2017 at https://www.claimsjournal.com/news/international/2017/06/06/278804.htm

Exhibit 3: Key Benefits of Automation



Source: Capgemini Financial Services Analysis, 2017

- In claims management, bots can be used to assess and pay out smaller claims, which is cost efficient and can also considerably enhance customer experience at a vital touchpoint:
  - E.g., Lemonade's insurance claims bot, A.I. Jim, set a record by assessing and paying out a property claim in only 3 seconds[15]
- RPA and AI can also act as the supporting tools for insurers to explore new offerings:
  - Automation will be a crucial component in the shift of P&C insurers toward risk-mitigation models that monitor real-time data via connected devices and notify customers of impending danger
  - Use of intelligent automation and connected devices can also enable insurers to explore parametric forms of insurance in more product lines
- P&C insurers can have significant cost savings and achieve operational efficiency by implementing automation:
  - Insurers can improve their process quality and regulatory compliance by automating the process
  - Automation solutions are highly scalable, and they can be implemented in phases without disrupting normal operations
  - RPA can be implemented for processes handling structured data. It can be deployed in a shorter period and provide higher return on investments:
    - For example, a leading insurer automated the policy renewal process using RPA and realized 30% - 40% increase in efficiency and around 50% reduction of FTEs. The firm was also able to increase the customer satisfaction with faster response times[16]
  - However, for processes handling unstructured data, AI solutions are implemented:
    - For example, InsurTech firm Tyche leverages AI for improving its claim likelihood model by accessing data from various sources. This will enable insurers to improve risk-assessment accuracy during underwriting, which can positively affect profitability[17]

15 "Lemonade Reports Insurance Claim Paid in 3 Seconds with No Paperwork", Anthony R. O'Donnell, Insurance Innovation Reporter, January 5, 2017, accessed October 2017 at http://iireporter.com/lemonade-reports-insurance-claim-paid-in-3-seconds-with-no-paperwork/

16 "Robotic Process Automation in Insurance", Capgemini, April 2017, accessed October 2017 at https://www.capgemini.com/wp-content/uploads/2017/07/robotic-process-automation-in-insurance-whitepaper.pdf

17 "The Impact of Artificial Intelligence on the Insurance Value Chain", Max Kraus, Logiq3, May 29, 2017, accessed October 2017 at http://www.logiq3.com/blog/artificial-intelligence-insurance-value-chain-part-1

Implications

- Personalized underwriting and instant claims-processing (achieved via RPA and AI) can enhance customer experience
- The reduction of human labor and faster processing times can optimize cost and operational efficiencies
- Operational efficiency and the ability to provide personalized services will bolster firms' market competitiveness
- By automating back-end systems, insurers can implement new business models such as on-demand insurance
- Automation makes it possible and affordable to bring previously-outsourced processes back in-house

Trend 04: Drones Take on an Important Role for Insurance Firms

Drones are increasingly used by P&C insurers to improve the accuracy and speed of underwriting and claims processing

Background

- Manual inspection of roofs is risky, and during catastrophic events, roof inspections become an even more significant challenge
- Drones with sophisticated cameras can capture high-resolution images of the property, and these photos can facilitate remote property assessment. Hence, the use of drones is gradually rising for property assessment by P&C insurers

Key Drivers

- Customers expect a quicker resolution of claims (especially after CAT events)
- Manual claims inspection takes lot of time and involves high cost as it can be handled only by experts
- Drone and imaging technology advancements help insurers to obtain high-definition images that facilitate remote and accurate property estimations

Trend Overview

- The Federal Aviation Administration of the U.S. estimates that the sales of commercial drones will increase drastically to reach 2.7 million in 2020[18] and insurance industry is one of the earliest adopters of drones for commercial usage
- Globally, traditional insurance firms are also increasingly exploring and deploying drones for property assessment:
  - For example, in the United States, to assess the damages due to hurricane Harvey, leading insurance firms including Allstate, Farmers, and State Farm deployed drones[19]
  - To evaluate earthquake damages in Ecuador, QBE leveraged drones and settled 90% of large-loss claims within 90 days[20]
  - In Australia, IAG used drones to determine damages caused to homes by bushfires[21]
- There are several InsurTech firms who are specializing in operating drones and analyzing the images. Traditional firms are collaborating with them for scaling up their property assessment capabilities:

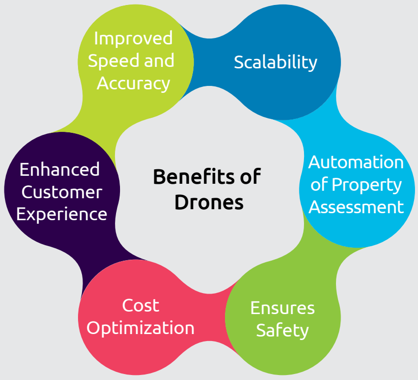
18 “FAA Releases 2016 to 2036 Aerospace Forecast”, Federal Aviation Administration, March 24, 2016, accessed October 2017 at https://www.faa.gov/news/updates/?newsId=85227&cid=TW414

19 “Harvey offers preview of how drones could be used to speed up rebuilding”, Melissa Repko, Dallas News, September &, 2017, accessed October 2017 at https://www.dallasnews.com/business/technology/2017/09/07/harvey-offers-preview-drones-used-speed-rebuilding

20 “QBE deploys drones to assess insurance claims”, Allie Coyne, itnews, February 27, 2017, accessed October 2017 at https://www.itnews.com.au/news/qbe-deploys-drones-to-assess-insurance-claims-452739

21 “How Drones & UAVs Are Changing The Insurance Industry”, Christine Thelander, Canstar, April 26, 2017, accessed October 2017 at https://www.canstar.com.au/home-insurance/home-and-contents-insurance/the-future-of-insurance-claims-is-drones/

Exhibit 4: Key Benefits of Using Drones



Source: Capgemini Financial Services Analysis, 2017

  - For example, InsurTech firm Betterview offers solutions for analyzing the roof, estimating claims of roof damages, thermal scans for determining risks to property due to trapped moisture or overheating electrical wiring, and predicting wildfire risks[22]
- Some firms also provide on-demand drone services to claims adjusters:
  - E.g., DropIn Inc. has an Uber-like network of drone operators, and insurance adjusters can access their services for capturing the images or video of the site under investigation[23]
- However, drone operators must comply with regulations, which varies across geographies:
  - The USA has relaxed the rules, exempting drone operators from medical examinations and liability insurance and drones can fly up to 400 feet above ground level (AGL)[24]
  - In the UK, drone operators should have liability insurance and drones are not allowed to fly within 50 meters near buildings, and for congested spaces, it is 150 meters[25]
  - In Germany, drone operators can fly drones less than take-off mass of 5 KG below 100 meters AGL[26]

Implications

- Drones can improve property assessment accuracy, which will help insurers adjust pricing accuracy and reduce claims leakage
- Using drones, insurance companies can resolve claims quickly, which will enhance the customer experience
- The inspection infrastructure can be scaled up in a shorter span of time to handle more significant number of properties and cost incurred for property assessment will be lesser than manual inspection
- Combined with advanced image and data processing capabilities, drones can also facilitate automation of property assessment for claims, minimizing the need for a manual adjuster
- Regulatory constraints, privacy concerns, and limited availability of trained staff are some key challenges in widespread adoption of drones

22 Betterview company website, accessed October 2017 at https://www.betterview.net/what-we-offer/

23 "Uber-Like Video Service DropIn Lets Adjusters Assess Damage from Their Desks", Andrew G. Simpson, Insurance Journal, September 2, 2016, accessed October 2017 at http://www.insurancejournal.com/news/national/2016/09/02/425370.htm

24 Global Drone Regulations Database, accessed October 2017 at https://www.droneregulations.info

25 Ibid

26 Ibid

Trend 05: Autonomous Vehicles are Poised to Disrupt Auto Insurance Business Model

Autonomous vehicles are poised to shake up the business model of auto insurance industry by reducing the probability of accidents to a greater extent

Background

- Around 94% of vehicle crashes can be attributed to human errors[27], and self-driving software will decrease the risk of accidents by eliminating accidents caused by rule-breaking, lapses in human judgment, or fatigue
- Apart from increased road safety, autonomous vehicles also offer higher fuel efficiency and can reduce road congestion by about 25% [28]
- The advent of autonomous vehicles has numerous implications for auto insurers, with the potential to redefine the auto insurance business

Key Drivers

- Auto tech funding is on an increasing trajectory,[29] and experts estimate that by 2020 there will be 10 million self-driving vehicles on the road[30]
- Increasing capabilities of devices, technologies, algorithms, and processing speed are aiding development of autonomous vehicles

Trend Overview

- More available data from connected devices in autonomous vehicles will increase transparency and reduce risk in auto insurance processes such as product development, underwriting, and claims processing
- The shift to an ecosystem of self-driving vehicles will change the nature and ownership of risk:
  - With increasing adoption of autonomous vehicles, the cause of accidents will gradually shift from human error to failure of mechanical part, device, or control systems
  - The reduction of risk arising due to human errors will shift risk from vehicle owners to vehicle manufacturers
- The changing nature of risk, its transparency, and ownership, will change the business model of auto insurance firms:
  - The overall reduction in risk exposure of the customer will gradually reduce the market for traditional personal auto insurance products as the risk will change into commercial product liability[31]

27 "4 Benefits of Autonomous Vehicles You May Not Have Considered", Jessie Robinson, Fleetio, April 25, 2017, accessed October 2017 at https://www.fleetio.com/blog/4-benefits-of-autonomous-vehicles

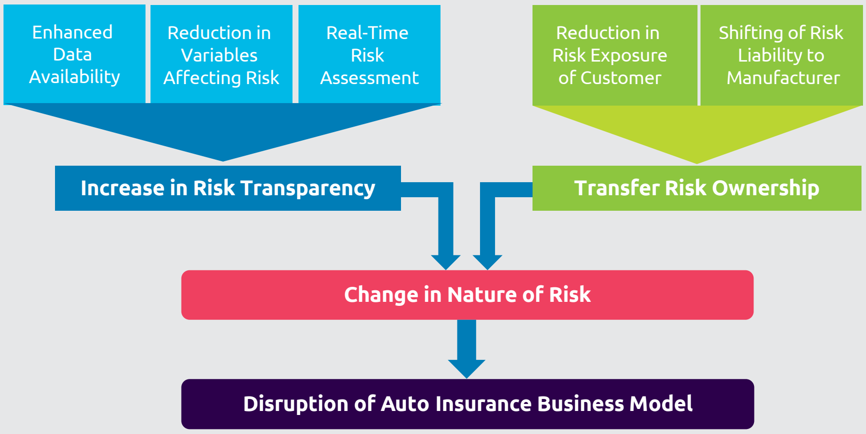
28 Ibid

29 "Auto Tech Startup Financing Tops $1 Billion In 2016", CB Insights, January 12, 2017, accessed October 2017 at https://www.cbinsights.com/research/auto-tech-startups-2016-recap/

30 "10 million self-driving cars will be on the road by 2020", BI Intelligence, June 15, 2016, accessed October 2017 at http://www.businessinsider.com/report-10-million-self-driving-cars-will-be-on-the-road-by-2020-2015-5-6?IR=T

31 "*World Insurance Report 2016*, Capgemini, 2016, accessed October 2017 at https://www.worldinsurancereport.com/

Exhibit 5: Autonomous Vehicles Can Disrupt Auto Insurance Business Model



Source: Capgemini Financial Services Analysis, 2017

- Auto insurers will also likely face issues in determining the liability of an accident between the possible causes such as the vehicle manufacturer, the sensor manufacturer, or the autonomous system
  - Data from connected devices and sensors will be critical in such a case for finding the cause of accident
- The role of regulators will also define developments in this space. For instance, The Department for Transport, UK is coming up with new two-in-one insurance product plans for autonomous cars, covering the driver when they are driving and the car when it is in autonomous mode[32]

Implications

- Real-time data from connected devices in self-driving vehicles will deliver critical insights to improve underwriting profitability and reduce claims leakage
- The changing nature of risk may alter traditional P&C business models and regulators will be critical in defining the path forward
- Auto insurers will need comprehensive strategies to prepare for the disruptions caused by autonomous vehicles

32 "Driverless car owners will need 'two-in-one' insurance policies under new Government plans", Katie Morley, The Telegraph, February 9, 2017, accessed October 2017 at http://www.telegraph.co.uk/news/2017/02/09/driverless-car-owners-will-need-two-in-one-insurance-policies/

Trend 06: Blockchain has the Potential to be a Game Changer

Blockchain technology has the potential to be a key game changer in the insurance industry

Background

- P&C insurers are handling multiple policies for customers, and the volume of data generated by customers is increasing exponentially. For sharing and combining data obtained from various sources and to have an easy and controlled access to the data, insurers have already started experimenting with blockchain technology
- According to the *World Insurance Report* (WIR) 2017, blockchain may gradually gain traction, with 59.1% of the executives surveyed agreeing that insurers are already experimenting and will be investing in next three years in this technology[33]

Key Drivers

- With huge volumes of data generated for each customer and the data having to be processed in real-time/ near real-time by multiple departments, there is a business need for easy and secure transfer of data across the organization and with multiple stakeholders
- There is a need for auto-initiation of insurance claims and quicker claims processing for better customer experience
- New business models, especially those that handle high volumes and low margins, need an infrastructure that optimizes operational costs

Trend Overview

- Several P&C insurers are experimenting with blockchain technology or collaborating with InsurTech firms to create prototypes related to insurance offerings:
  - Sompo Japan Nipponkoa Holdings is collaborating with InsurTech firm Soramitsu to develop a prototype of a catastrophe insurance platform[34]
  - The industrywide Blockchain Insurance Industry Initiative (B3i) explores potential blockchain applications in insurance and as of October 2017, it is supported by 38 insurance/ reinsurance companies including AIG, Allianz, Chubb, Liberty Mutual, Swiss Re, Tokyo Marine, and Zurich:
    - B3i launched a beta version of blockchain-based solution for the re/ insurance industry that is expected to be deployed in 2018[35]
  - Ruschlikon, an industry wide initiative leveraging blockchain for insurance claims, is focusing on increasing the speed of claims processing by 30%, leveraging blockchain technology[36]

33 *World Insurance Report* 2017, Capgemini, 2017, accessed October 2017 at https://www.worldinsurancereport.com/

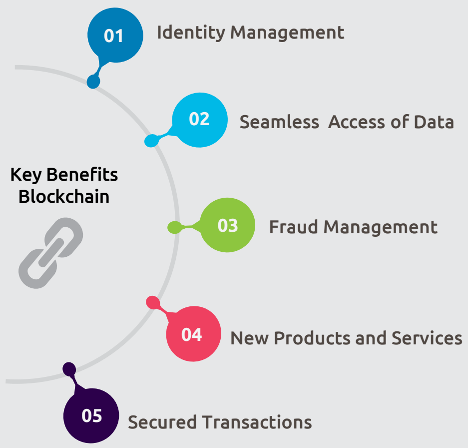
34 "P&C Insurer Trials Blockchain for Catastrophe Coverage", Stan Higgins, coindesk, September 26, 2016, accessed October 2017 at https://www.coindesk.com/pc-insurer-trials-blockchain-catastrophe-coverage/

35 "B3i expands with new members joining its prototype Market Testing phase", B3i, October 2, 2017 accessed on October 2017 at http://b3i.tech/single-news-reader/press-release-3.html

36 "Ruschlikon – Blockchain consortium aims to speed claims processing by 30%", The Digital Insurer, accessed October 2017 at https://www.the-digital-insurer.com/dia/ruschlikon-an-industry-wide-effort-to-implement-acord-global-reinsurance-and-large-commercial-grlc-messaging-standards/

- Blockchain can be updated by multiple parties at the same time without altering the existing data. Therefore, customer data captured from various sources can seamlessly and securely be accessed by several participants:
  – Customer identities can be shared among organizations for better identity management
  – Captured customer data can be used in multiple applications including core processes such as underwriting and claims processing
  – Claims processing details can be stored in blockchain and shared within the organization/ across organizations to reduce fraud associated with multiple claims for a single incident
- For profitable and sustainable operations, on-demand business models require quick access to data, and microinsurance requires cost optimization. Blockchain can ensure data availability while reducing operational costs to a large extent
- Moreover, Decentralized Autonomous Organizations (DAOs) can aid effective policy management while Smart Contracts can support automatic policy execution

Exhibit 6: Key Benefits of Blockchain Technology



Source: Capgemini Financial Services Analysis, 2017

Implications

- Customer details required for "Know Your Customer" (KYC) process can be shared easily among firms, which enables quick customer onboarding and instant policy issuance to enhance customer experience
- During claims incidents such as fire incidents and vehicle accidents, blockchain based smart contracts can execute automatically with inputs received from connected devices. This can lead to a drastic reduction in operational costs
- Blockchain in P&C insurance can potentially ensure transparency in transactions

Trend 07: Traditional P&C Insurers Realize APIs' Importance

APIs enable traditional insurers to develop new applications at a faster pace and facilitate seamless integration with other stakeholders

Background

- Application Programming Interface (API) enables sharing of data between systems in a defined manner, thereby simplifying and streamlining the development and integration of systems
- APIs fuels partnerships, fast-tracks innovations and helps its providers achieve broader audience by allowing easy and efficient sharing of information

Key Drivers

- P&C insurers need to integrate data from various sources and third parties, including connected devices, for generating more compelling insights
- APIs can enable faster pace of innovation for traditional insurers, helping them to capitalize on the digital advances

Trend Overview

- The advancement in technologies and the recent surge in usage of connected devices has opened up new avenues for P&C insurers
- Insurers are using APIs to integrate data from multiple sources for deriving valuable insights and creating compelling offerings for customers:
  - For example, Allstate has created its 'GoodHome' tool by utilizing proprietary claims data, Google Maps APIs, weather API, and public data[37]:
    - Users can look at their house, visualize significant risks in their area, and receive techniques to mitigate such risks through this tool
    - GoodHome enabled Allstate to improve customer engagements and build better customer relationships, and the insurer found that a user of this tool is more likely to request for an insurance quote than a non-user by over 350%[38]
- APIs are also enabling insurers to integrate into the connected devices ecosystem and provide value-added services to the customers:
  - For example, Nationwide's usage-based auto insurance program, SmartRide, uses IMS's connected car platform[39]:
    - APIs are used to retrieve vehicle information and the driver's behavioral data from the onboard diagnostics device
    - The insurer has a SmartRide web portal as well as a mobile app where the enrolled users can view their driving trends, receive personalized feedback, and view their trips on maps[40 41]

37 Allstate GoodHome website, accessed October 2017 at https://goodlife.allstate.com/goodhome/

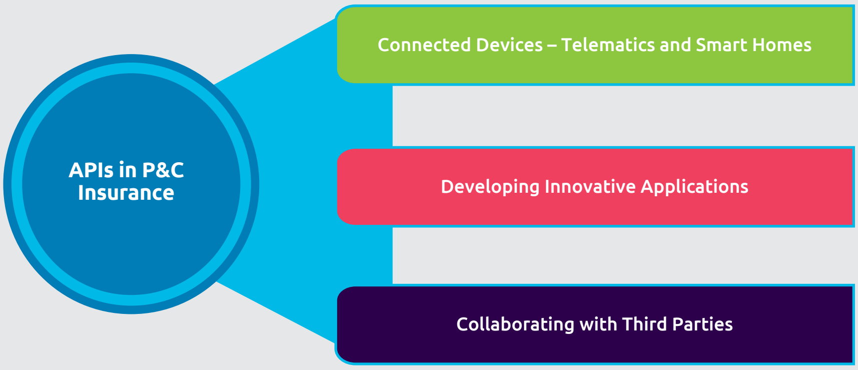
38 "Allstate helps people uncover risks to their homes using Google Maps", Elizabeth Schreier, Google Cloud Blog, March 10, 2015, accessed October 2017 at https://cloud.googleblog.com/2015/03/Allstate-helps-people-uncover-risks-to-their-homes-using-Google-Maps.html

39 "Customer Case Study: Nationwide", IMS, accessed October 2017 at https://www.intellimec.com/telematics-insurance-case-study

40 Nationwide SmartRide Website, accessed October 2017 at https://www.nationwide.com/smartride.jsp

41 Nationwide SmartRide App on – Android's Google Play Store and Apple's App Store, accessed October 2017

Exhibit 7: Usage of APIs in P&C Insurance



Source: Capgemini Financial Services Analysis, 2017

- Insurers are opening API developer portals for data scientists and app developers to rev up the pace of experimentation and innovation:
  - For example, a new open API developer portal by Liberty Mutual Insurance's Solaria Labs combines proprietary insurance knowledge with public data, such as auto theft and parking citations, to help scientists and developers create user safety apps[42]
  - Another example includes InsurHack, an insurance software development challenge organized by Zurich Insurance Group, where participating teams can access simulated customer data via APIs to work on their idea and create a working prototype[43]

Implications

- APIs will help insurers provide customers with innovative personalized offerings to improve their overall experience
- Third-Party collaborations will help streamline services and expand overall customer reach, opening up possibilities for top-line revenue growth
- Fast-Pace innovation will allow P&C insurers to align with customer demands for advanced technologies

42 "Liberty Mutual Insurance's Solaria Labs Unveils New Developer Portal", Liberty Mutual, January 4, 2017, accessed October 2017 at https://www.libertymutualgroup.com/about-lm/news/news-release-archive/articles/solaria-labs-unveils-new-developer-portal

43 Zurich InsurHack Website, accessed October 2017 at https://www.zurich.de/de-de/insurhack

Trend 08: More P&C Insurers Embrace Advanced Analytics

P&C insurers are increasingly leveraging advanced analytics to price risks accurately and identify emerging risks for more fine-tuned underwriting

Background

- Advanced analytics tools enable P&C insurers to effectively leverage internal and external data to carve-out granular insights that allow them to tailor services based on a customer's situation, behavior, preferences, and risk profile
- Advanced analytics offer the promise of creating new tools designed to generate insight and foresight by allowing P&C insurers to test alternative scenarios and to extend accomplished thinking on plausible events
- Thus, P&C insurers can identify new risks and accurately develop underwriting strategies, paving the path for new lines of business and revenue sources

Key Drivers

- Advances in computing technology (e.g., processing structured and unstructured data together) and an influx of data from various sources are driving P&C insurers to adopt advanced analytics tools
- Novel business activities, emerging technologies, and the sharing economy are inciting new risks such as cybercrime and digital identity theft
- Customers are expecting Amazon-like experience from P&C insurance when it comes to speed, convenience, personalization, and price

Trend Overview

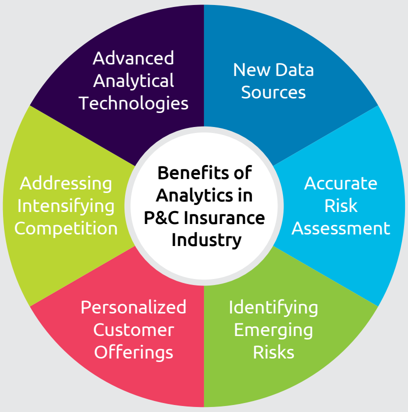
- With data more available than ever before and with advancements in analytical capabilities, P&C insurers can now drive profitable growth by accurately pricing risk and by identifying new risk factors:
  - With integrated, up-to-date, and organized data, analytics will help P&C insurers assess risks across the firm and the market:
    - For example, Willis Towers Watson employs predictive analytics software to model complex customer behaviour which enables the firm to enhance its pricing accuracy. The software also reduces the decision cycle times significantly[44]
  - Advanced analytics allow P&C insurers to protect the firm from evolving risk exposures, optimize business strategies, and identify new growth opportunities
  - With analytics, auto insurers can adjust policy prices dynamically, monitor prices for special segments on price-comparison websites and adjust fees each night until they reach their targeted saturation for the segment

44 Willis Towers Watson enhances its predictive modelling software", Paolo Taruc, Insurance Business Asia, October 25, 2017, accessed October 2017 at http://www.insurancebusinessmag.com/asia/news/breaking-news/willis-towers-watson-enhances-its-predictive-modelling-software-82884.aspx

- E.g., MetLife Auto & Home launched an online platform through which policies may be purchased in minutes because data and analytics are leveraged to assess pricing and risk in real time :[45]
  - The entire process, from policy purchase to premium payment to claims, is paperless and the website is designed with simplified digital processes to improve the customer experience

- One of the biggest challenges for P&C insurers includes emerging risks such as cyber-security. Today, the new data sources combined with advanced analytical tools, such as predictive analytics, are offering new solutions to not only identify the emerging risks but also to create new service offerings around them:
  - For Example, Allianz Global Corporate & Specialty (AGCS) has partnered with Zeguro, a software company having expertise in cyber-security, to streamline cyber-security and risk management for small to medium-sized businesses (SMBs):[46]
    - Zeguro will serve as a virtual Chief Information Security Officer (CISO) for Allianz's cyber insurance customers and manages the firm's cyber exposure and decreases the overall risk of financial loss following a cyber attack

Exhibit 8: Benefits of Analytics in P&C Insurance Industry



Source: Capgemini Financial Services Analysis, 2017

Implications

- Analytics and risk modeling offer P&C insurers a quick way to consistently and accurately price and reduce risks
- By leveraging analytics, P&C insurers can offer highly personalized products and customized services to enhance customer experience
- With advanced analytics, insurers can develop a list of emerging risks, and develop as well as implement underwriting strategies accordingly to enhance firm competitiveness

45 "MetLife Auto & Home® Introduces 100% Digital Products on Guidewire Platform", October 04, 2017, accessed October 2017 at http://www.businesswire.com/news/home/20171004006344/en/MetLife-Auto-Home%C2%AE-Introduces-100-Digital-Products

46 "Who's using what in P&C insurance", PropertyCasualty360, October 09, 2017, accessed October 2017 at http://www.propertycasualty360.com/2017/10/09/whos-using-what-in-pc-insurance-oct-9-2017?t=agency-technology?ref=channel-news

Trend 09: Collaboration with InsurTech Firms Heats Up

More and more, traditional P&C insurers are collaborating with InsurTech firms and investing in emerging technologies

Background

- Increasing number of InsurTech firms are providing innovative offerings in P&C space, including auto, homeowners, and cyber insurance, with global investments in P&C InsurTech space having crossed $2 billion as of 2016[47]
- The growth of InsurTech firms and the innovative offerings is stimulating traditional P&C insurance firms to acquire InsurTech capabilities. Several P&C insurers are already collaborating with InsurTech firms via partnerships, accelerators/ incubators, VC funds, or by acquiring some of these start-ups

Key Drivers

- There is an increasing demand for innovative products and services from customers, particularly Gen-Y or millennials
- The cost of establishing and maintaining an in-house R&D center is high, and it usually takes some time to establish a tech culture in the firm. Collaborating with InsurTech firms can provide much faster results to traditional insurers
- On the other hand, InsurTech firms also need to collaborate with traditional insurance firms for customer base, funding, and business know-how

Trend Overview

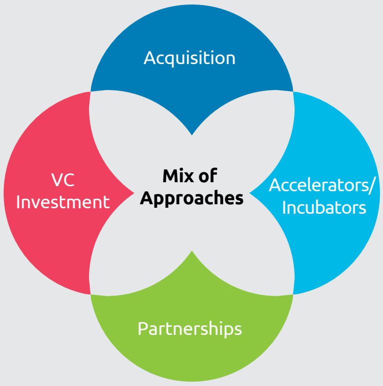
- To implement innovations, traditional insurers prefer associating with InsurTech firms rather than developing in-house capabilities:
  - According to the *World Insurance Report* (WIR) 2017, 52.9% of interviewed insurance executives wanted to partner with InsurTech firms to leverage digital technologies, compared with 35.6% executives favoring in-house development[48]
- InsurTech companies operate across the P&C insurance value chain including front-end services such as policy comparison, policy application, or renewals and back-end services such as underwriting and claims processing:
  - Added to that, they provide unique services that help traditional insurance firms to enhance their customer experience and data processing capabilities
- Partnering with InsurTech firms will enable traditional insurance firms to acquire InsurTech capabilities more quickly, as it requires minimal changes in infrastructure to introduce new offerings:
  - For example, Allianz has partnered with the InsurTech firm Visicover for providing aircraft insurance. The partnership will enable Allianz to serve customers via digital distribution channels[49]

47 "Broker Software, Digital Distribution, And More: Activity Booms In Property & Casualty Insurtech", CB Insights, December 13, 2016, accessed October 2017 at https://www.cbinsights.com/research/property-casualty-insurance-tech/

48 *World Insurance Report* 2017, Capgemini, 2017, accessed October 2017 at https://www.worldinsurancereport.com/

49 "Allianz Global Corporate & Specialty Announces Online Aircraft Insurance Partnership with Visicover", Allianz, July 18, 2017, accessed October 2017 at http://www.agcs.allianz.com/global-offices/united-kingdom/news-press-uk/allianz-global-corporate-specialty-announces-online-aircraft-insurance-partnership-with-visicover/

Exhibit 9: Traditional Insurance Firms and InsurTechs – Various Collaboration Approaches



Source: Capgemini Financial Services Analysis, 2017

- By taking part in accelerators/ incubators for InsurTech firms, traditional insurers can stay close to latest trends in innovation by closely working with start-ups, and this approach also allows the insurers to identify potential partners:
  - For example, leading P&C insurers including Zurich, Farmers, and USAA are partnering with Plug and Play accelerator, which operates in 22 global locations[50]
- Some traditional insurance companies invest in InsurTech firms via investment arms that provide returns on investment along with insights on latest trends in innovation:
  - For example, XL Innovate, investment arm of XL Catlin, has invested in several InsurTech firms including Lemonade and Slice Labs[51]
- Traditional P&C insurers can also acquire InsurTech firms to bolster their competitive market advantage
- Established firms also follow a mix of approaches depending on their innovation objectives and business goals. *The World Insurance Report* 2017 found that 37.9% of surveyed insurers voted in favor of a mix of the various approaches.[52]

Implications

- Customer experience can be enhanced with value-added services and offerings based on new business models
- Innovative products and services can ensure profitability by generating new revenue streams and reducing operational costs
- By collaborating with InsurTech firms, traditional financial services firms can inculcate innovation in their offerings in a more flexible and cost-effective manner as compared to in-house innovation. Collaboration is a win-win situation for both InsurTech firms and traditional insurers, as both have complementary strengths

50 Plug and Play website, accessed October 2017 at http://plugandplaytechcenter.com/

51 "Broker Software, Digital Distribution, And More: Activity Booms In Property & Casualty Insurtech", CB Insights, December 13, 2016, accessed October 2017 at https://www.cbinsights.com/research/property-casualty-insurance-tech/

52 *World Insurance Report* 2017, Capgemini, 2017, accessed October 2017 at https://www.worldinsurancereport.com/

Trend 10: P&C Insurers Adopt a Cloud-Native Approach

P&C insurers take to the cloud in efforts to adopt new technologies and deploy customer-centric innovations

Background

- Cloud-native applications, designed specifically for cloud, are built and run using Platform-as-a-Service (PaaS) model
- Insurers are already creating 16% of their new applications using a cloud-native approach[53]

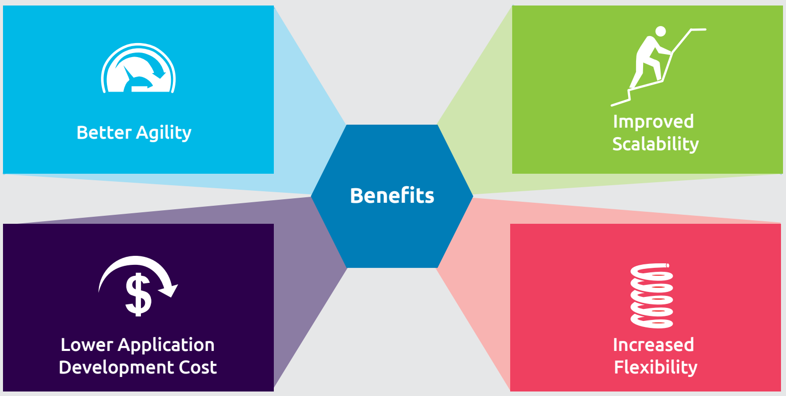
Key Drivers

- Insurers need to achieve faster time-to-market and adjust quickly to shifting market conditions such as customer demand, technological developments, regulatory reforms, and a competitive environment
- Reducing IT costs is the most important priority of business managers,[54] and the flexibility offered by the cloud can help insurers reduce IT costs related to application development and deployment

Trend Overview

- Microservices architecture in a cloud-native application allows design, testing, deploying, or replacing selective services in an application without impacting other services, thus supporting continuous development and delivery:
  - P&C insurers can utilize cloud-native methods to improve their response to market requirements

Exhibit 10: Benefits of Cloud Native Applications for P&C Insurers



Source: Capgemini Financial Services Analysis, 2017

53 "Cloud Native Comes of Age", Capgemini, accessed October 2017 at https://www.capgemini.com/service/cloud-native/
54 Ibid

- E.g., Liberty Mutual is using cloud-native and agile methods to quickly deliver innovative products:
  - The P&C insurer developed and deployed a cloud-native portal within six months for underwriters in the accident and health insurance space in Australia[55]
  - The insurer took only 28 days to launch a Minimum Viable Product (MVP), allowing users to buy motorcycle insurance via an app[56]
- Cloud-Native applications enable smooth horizontal scaling according to the demand:
  - Applications can move from testing phase to market deployment in minimal time, extending better flexibility to the insurers:
    - For example, Allstate's CompoZed Labs, using Pivotal Cloud Foundry for creating cloud-native applications, empowers the developers to create an MVP, test it quickly, and if successful, scale it up in a very shorter period of time[57]
  - Internet of Things (IoT) projects can also leverage cloud-native methods to achieve better scalability, reliability, and business agility[58]
    - In the context of P&C insurance, this means that cloud-native approach can empower insurers to better manage the connected devices such as telematics or smart home systems

Implications

- Cloud-Native approach will reduce cost and time during development and deployment of new applications
- Faster development cycles will allow insurers to respond quickly and more frequently to market requirements, which will enhance their competitive position
- Cloud-Native applications, with their ability to run on any cloud without modification, will provide greater flexibility to insurers

55 "Liberty Mutual Delivers an Insurance App in 6 Months with Cloud Foundry", Alesia Bulanok, Altoros, July 6, 2017, accessed October 2017 at https://www.altoros.com/blog/liberty-mutual-delivers-an-insurance-app-in-6-months-with-cloud-foundry/

56 Ibid

57 "How Insurance Giant Allstate Is Using Cloud Tech to Build New Businesses", Barb Darrow, Fortune, June 19, 2017, accessed October 2017 at http://fortune.com/2017/06/19/allstate-insurance-cloud/

58 "Cloud-Native Architecture and the Internet of Things", Open Connectivity Foundation, June 8, 2017, accessed October 2017 at https://openconnectivity.org/wp-content/uploads/2016/03/OCF_Cloud-Native-IoT-White-Paper.pdf

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4. "Broker Software, Digital Distribution, And More: Activity Booms In Property & Casualty Insurtech," CB Insights, December 13, 2016, accessed October 2017 at https://www.cbinsights.com/research/property-casualty-insurance-tech/

5. "The Insurance Industry's Game Of Drones," Craig Casazza, Forbes, April 24, 2017, accessed October 2017 at https://www.forbes.com/sites/ccasazza/2017/04/24/the-insurance-industrys-game-of-drones/#66b5e71c7225

6. "Blockchain in insurance: promise for the future," Mark Breading, Property and Casualty 3600, December 2, 2016, accessed October 2017 at http://www.propertycasualty360.com/2016/12/02/blockchain-in-insurance-promise-for-the-future?slreturn=1509006971

7. "10 Million Self-Driving Cars Will Hit The Road By 2020 -- Here's How To Profit", Olivier Garret, Forbes, March 3, 2017, accessed October 2017 at https://www.forbes.com/sites/oliviergarret/2017/03/03/10-million-self-driving-cars-will-hit-the-road-by-2020-heres-how-to-profit/

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