TADA
Beyond data.

Big Data & Analytics

The new face of insurance and how it impacts you

CONTENTS

INTRODUCTION

One out of every 10 insurance claims in the United States is a fraudulent claim and according to the Federal Bureau of Investigation, the total cost of non-health insurance fraud alone is estimated to be more than $40 billion USD per year. That translates into an increase in annual premiums for the average U.S. family of between $400 and $700.[1] Imagine then, the global impact.

It is no secret that the insurance industry has long been afflicted by challenges such as insurance fraud, policy lapse prevention, risk assessment, litigation and a host of other pressures that impact insurer revenues, underwriting decisions and premium rates assessed to consumers. But there is a new dynamic that is opening the door for long overdue transformation and helping reshape an ever-changing industry that is notorious for playing catch-up with technology to minimize its challenges. The game changer? Big Data and Analytics.

NEW SOURCES OF DATA

Big data and analytics are drastically changing business models across industries, and in an ecosystem driven by real-time data, insurance is finding ways to transform traditional models too. From data gleaned from online behaviors to sensors in a proliferation of data, presenting unprecedented opportunities to use advanced analytics to leverage new information – about potential markets, risks, customers, competitors and natural disasters."[2]

Researchers have identified two new sources of data that are particularly relevant to the insurance industry:

1. **Auto-Generated and Stored Data** – Data that is directly linked to our online behavior. This includes data shared via social media channels, online shopping, and personal search and browsing activities.

2. **Sensor Data** – Data that streams from sensors built into consumer goods such as appliances, automobiles, tech wearables, and drones. This data tends to be more fragmented and specific to real-life functions.[3] This data may also be drawn from IoT-connected devices.

So, what does each of these new sources of data tell us and how is insurance impacted? Personal data tied to online behavior can reveal information about habits and lifestyle. This data may be used to complement or substitute more traditional forms of data collected by insurers and insurance agents and may in turn be used in scenarios such as reducing the time and effort involved in risk assessment and underwriting decisions.

Sensor data is key to helping insurers expand their service capabilities by delivering a better overall customer experience. One such example is using data from an IoT-connected automobile to provide parking or roadside assistance to customers. For a connected home, automated responses to sensor-detected issues such a water leak could be an insurer provided service. A water leak would, as another example, automatically dispatch a plumber to the home.[4]

[1] "Insurance Fraud." Federal Bureau of Investigation, https://www.fbi.gov. 2 "Advanced Analytics for Insurance." Ernst & Young 3 Benno Keller. "Big Data and Insurance: Implications for Innovation, Competition and Privacy." The Geneva Association, March 2018. 4 "IoT, Sensor Data, and the Future of Insurance." Digitalist Magazine, https://www.digitalistmag.com/iot/2017/01/24/iot-sensor-data-future-of-insurance-04870488. 5 Zingales, L. and Rolink, G. (2017) "A Way to Own Your Social-Media Data". New York Times, June 30, 2017.

HOW IT IMPACTS YOU

Impact On Carriers

The promise big data and analytics holds for insurance carriers is, well, big. Consider these numbers: A 1% improvement in the loss ratio for a $1 billion insurer is worth more than $7 million on the bottom line.[6]

Opportunities for carriers can be best defined using three general categories:

1. **New propositions:** Data has a direct effect on the development of new products and alternative business models, including peer-to-peer insurance, on-demand insurance, usage-based insurance, product bundling, as well as insurance products covering new types of risk.

2. **New Engagement and Distribution Models:** Improving customer interaction by means of virtual assistants, digital brokers, chatbots and robo-advisers and using big data and artificial intelligence for enhanced customer segmentation, targeted marketing and dynamic pricing helps carriers create a connected ecosystem with consumers.[7]

3. **Process automation:** The goal of process automation is to automate or improve efficiency of internal processes using big data and artificial intelligence. Straight-through processing enables the automation of parts of the value chain or even the entire value chain, including underwriting, claims handling, risk management, finance and investment management as well as litigation, regulatory reporting and compliance.

> *"The growing adoption of Big Data technologies has brought about an array of benefits for insurers and other stakeholders. Based on feedback from insurers worldwide, these include but are not limited to an increase in access to insurance services by more than 30%, a reduction in policy administration workload by up to 50%, prediction of large loss claims with an accuracy of nearly 80%, cost savings in claims processing and management by 40-70%, accelerated processing of non-emergency insurance claims by a staggering 90%; and improvements in fraud detection rates by as much as 60%."*
>
> *- Market Report: Big Data in the Insurance Industry*

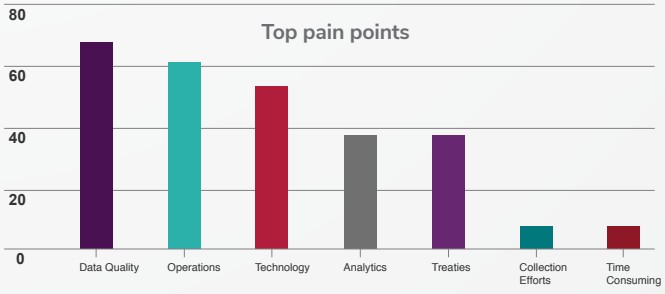
Impact on Brokers and Agencies

For agencies, big data means customer acquisition tools and insight into key business performance improvements such as pinpointing tasks that need to be automated to optimize operations and increase margins. "It's also super useful for aligning staff towards overall goals and giving them an indication of how they're doing day-to-day quantitatively in reaching those goals."[8]

Impact on Re-Insurers

Enhancements in technology and data are bringing new light to the concept of risk assessment for re-insurers. One of the most transformational areas of risk assessment is the ability to determine "emerging risk," such as climate change, genetically altered crops, and a host of other factors that have the potential to impact claim rates. However, despite the opportunities big data and analytics offers re-insurers, according to a recent Deloitte reinsurance administration survey, data quality, technology and analytics are among the top four pain points for reinsurers.[9]

FIGURE 1:
Top pain points for reinsurance groups



Percentage total to more than 100%, as respondents could make multiple selections.
Source: Reinsurance administration survey, Deloitte Advisory, 2016-2017

As a result, many reinsurers are more focused than ever on getting their data story straight. With proper implementation and tools, re-insurers have the opportunity to use new sources of big data to move past data silos and open up insights to save margins and streamline operations.

6 SAS Institute, Inc. 7 Benno Keller. "Big Data and Insurance: Implications for Innovation, Competition and Privacy." The Geneva Association, March 2018 8 "Are insurance groups making the most out of big data?" Insurance Business America, https://www.insurancebusinessmag.com/us/ 9 "Modernizing Reinsurance Administration." Deloitte, 2018.

Impact on the Consumer

61% of organizations say that forming better relationships with their customers provides a competitive advantage.[10] It's no surprise then that carriers, brokers, agencies, and re-insurers alike have their eye on improving the customer experience. Using data and analytics, consumers can expect benefits such as:

- Lower premiums
- Opportunity to correct premium-impacting behaviors to avoid increased premiums (thanks to digital monitoring and communication by the carrier or broker/agent)
- Products tailored to meet the specific needs of consumers
- Customizations
- On-demand insurance

GOING BEYOND DATA

Market Perspectives

In the Excellence in Risk Management XVI survey conducted by Marsh LLC in early 2019, improving the use of data and analytics in insurance was the top risk management priority for nearly half of survey respondents (47% to be exact). But other industry surveys signal that while big data and analytics is of key importance, 50% of CEOs do not believe their organizations are able to innovate effectively.

FIGURE 2:
Skills shortages hold back innovation & growth

QUESTION:
What impact is 'availability of key skills' having on your organization's growth projects.

Asked of those who selected 'extremely concerned' for 'availability of key skills'.
Source: PwC's 22nd Annual Global CEO Survey
Base: Insurance CEOs (140)

This inability to innovate has carriers & agencies alike turning to experts and solutions who can augment their internal capabilities and extract siloed data to create connected, insightful and ROI-impacting results across operations.

The increased demand for harnessing the opportunities of data and analytics in insurance is also the driving force behind what has been coined "Insurtech." A subclass of FinTech, Insurtech focuses on the technologies that lie behind the creation, distribution and administration of insurance business and most notably includes Big Data, Artificial Intelligence (AI) and the Internet of Things (IoT).[11]

Insurtech

Insurance companies are adopting digital strategies and new technologies. They're not simply doing it for savings and efficiency, but rather for increased customer satisfaction (which ultimately drives competitive advantage). And while many insurance companies are not shy about expressing their struggles to move from paper to digital and embrace InsureTech, keeping the customer at the center of change remains their focus. Here are just a couple examples of how companies are incorporating InsureTech into the mix:

- **Artificial Intelligence:** There is great potential for AI to impact nearly every aspect of the way insurance businesses are run. Specialized functions such as fraud prevention, anti-money laundering, underwriting, and pricing are poised to be transformed by this "transversal tech." Moreover, the data collection opportunities AI offers will help companies attain automation and enhance personalization.
- **Internet of Things:** By collecting data from IoT technologies such as connected cars, activity trackers, and consumer goods appliances (think the electric toothbrush you use every morning), carriers and brokers alike are able to better understand consumer needs and offer customized advice, coverage, and tailored pricing. One such example is usage-based insurance policies which collect customer data to charge users according to their individual needs and behaviors.[12]

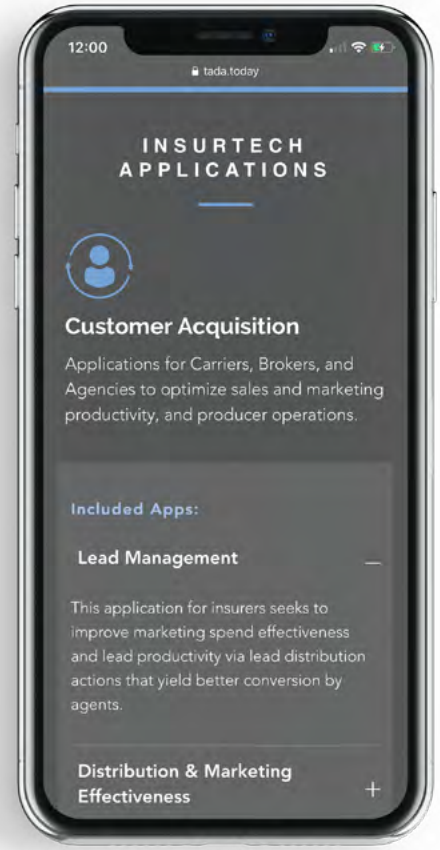
BEAM DENTAL

Beam Dental uses IoT technology to offer dental insurance. Customers receive a 'smart' toothbrush that tracks how well customers take care of their teeth and provides personalized insurance plans based on this teeth-brushing data. In doing so, the firm claims they can offer rates up to 25% cheaper than competitors – a deal customers are sinking their teeth into.[13]

10 "Top 10 data management stats for 2018." Experian, https://www.edq.com/resources/data-quality-infographics/top-10-data-management-stats-for-2018/ 11 "An Introduction to Insurtech: What You Should Know About This New Industry." Arrk 12 "Insurance technology trends that are shaping 2020." Board of Innovation 13 "How Companies Are Using Big Data to Boost Sales, and How You Can Do the Same." Entrepreneur

Insurtech Applications: Meet Tada

Driven by technology and data, the insurance industry faces massive digital disruption in every part of its value chain. With the Tada platform, insurance businesses can visualize their entire business end-to-end – thanks in great part to a proprietary Digital Duplicate® that uses the language of your business (the terms, metrics, and KPIs that matter to you) to organize information. This holistic perspective provides the opportunity to make informed operational decisions from customer acquisition to post purchase customer support and insight (and all the data-driven details in between).



> *Businesses that use big data saw a profit increase of 8–10% and a 10% reduction in overall cost.*[14]

As a decision maker, you can navigate your entire business ecosystem 10 times faster than the traditional approach of using consulting resources and Business Intelligence tools, by utilizing Tada's suite of highly customizable, purpose-built applications. Learn more about how we can help you tap into the power of data analytics in your day-to-day decision making here.

14 "How Companies Are Using Big Data to Boost Sales, and How You Can Do the Same." Entrepreneur

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