CONFLUENT

# The Ongoing Disruption of Insurance

## A Shift to Real-Time Data Streaming

Insurance has always been and will always be a data-driven business. Every pricing and risk decision must be backed by data, which once meant relying on limited internal data that was hard to work with. The ability to customize premiums for customers and offer personalized experiences was limited. In addition, a lot of complex paper-based processes made every insurance workflow from underwriting to claims processing laborious and time-consuming. Add regulatory complexity and capital requirements to the mix, and new contenders rarely tried to enter the market. The upside? There was limited competition for established insurance companies.

Today, with connected devices everywhere we look, insurance companies have abundant data available to personalize services, from customer behavior data to external weather and satellite imagery. But capturing the full value of that data is still challenging. There is also increased competition from digital-born insurtech entrants leveraging connected devices and third-party data to provide new ways of handling premiums, boosted by investors with capital helping them navigate regulatory requirements.

- Lemonade, a mobile insurance startup offering homeowners, renters, and pet health insurance, **logged the best IPO of 2020** when it went public in June, with shares doubling on the first day of trading.
- In the life insurance arena, insurtech startups collaborate with stalwart companies to offer more agile products and onboard higher volumes of members. Ethos **uses a variety of data sources** such as motor vehicle and prescription drug records to speed up life insurance policies from the standard weeks to just ten minutes.
- Root Insurance, an insurtech contender in auto insurance, went public in October 2020 as the biggest IPO in Ohio history, raising **an impressive initial $724 million**

# The infinite possibility of data

Data, and all its possibility, is still growing too. To stay competitive into the future of insurance, companies must build with flexibility in mind, enabling teams to capture the value of data in real time, from multiple sources, and use it to power applications as they emerge. When data can be extracted from multiple applications and external sources, centralized and processed in real time, then applied to any number of use cases across the organization, that's event streaming.

Event streaming is the path to the future for both insurance stalwarts and startups. It's the technology that will help companies improve pricing, personalize premiums, precisely target offers, and ultimately, boost revenue. It's also the answer to becoming more cost-efficient by applying automation across the full customer journey, while reducing fraud and security risks and staying compliant with ever-changing regulations.

To better envision what this looks like, let's touch on a few standard business challenges within the insurance industry, and how companies are solving them by moving from a legacy past to a bright new future.

*There is a growing recognition across the financial services sector that, while banking and capital markets built up a considerable weight advantage by starting their FinTech journeys earlier, it is the insurance industry that will ultimately see the greatest benefit—and the highest levels of disruption—from this global upsurge of innovation.*

**— Accenture**

## Events

Every customer transaction creates data. Developers call it an ***event***. This includes payment of premiums, claims filing, and account notifications of life changes.

## Event streaming

Also known as event stream processing (ESP), real-time data streaming, and complex event processing (CEP), event streaming is the continuous processing of real-time data directly as it is produced or received—as opposed to the old paradigm of batch processing.

## Event-driven architecture

When an event streaming platform is at the core of an organization's architecture, it becomes possible to centralize all data and distribute it to every application or system within the organization.

# 1

# Reduce operating costs with automated digital experiences

*Automation is helping early adopters improve underwriting results, accelerate faster go-to-market for new products, and grow premium income while freeing up time for their agents and advisors to focus more on critical tasks.*

**— Claims Journal**

Technology can reduce the burden on agents and advisors while simultaneously making operations more efficient and effective. Automated, digital experiences lead directly to high-value customer experience across the chain. Making every transaction, inside and outside the company, faster and more user-friendly translates into customer satisfaction—and loyalty.

## How it was then

It used to be that nearly every customer touch point required human agent intervention. In the customer's mind, a task such as "file a claim" might seem quick and easy, but in reality would become a lengthy process involving several agents and, sometimes, multiple phone calls or even physical visits. With all this data manually input and paperwork passed from team to team, errors were frequent. Every insurance process was tedious, time-consuming, and fraught with obstacles, costing money to service and negatively impacting customer experience.

## How it is now

Most insurance is moving in the direction of being largely self-service. Customers can autonomously compare products and policy details via websites and apps and access their own accounts and personal information via digital portals. Still, there are key parts of the customer journey that remain manual, and for the most part, the products themselves haven't changed. A somewhat more satisfying experience for customers hasn't yet translated into operational efficiency for insurance companies.

Some industry leaders and insurtech startups are using artificial intelligence (AI) and machine learning (ML) to analyze policy and claims data, while others don't have the data architecture in place to support AI and ML.

In addition, most of these technology solutions were developed for other industries and aren't specifically designed for insurance. They could be much more highly tailored to insurance-specific tasks and projects. For instance, a customer uploads photos to start a claim, and a model quickly analyzes those images to estimate the settlement based on reported damage, geolocation data, and policy coverage information. Based on that claim value, agents and adjusters can prioritize the next steps in their investigation.

## The future, with event streaming

Insurers have tremendous opportunity to enhance customer experiences while simultaneously reducing agent involvement to save money and scale down errors.

McKinsey predicts that by 2030, "technology investments will have paid off, and manual pricing and underwriting will cease to exist for most personal and small commercial products across life and P&C insurance." Thanks to machine learning models and analytics from abundant customer data, pricing will become automated by more than 90% in some cases: auto, personal liability, and home insurance. Underwriters won't spend time on rekeying data or manually executing analyses, McKinsey assures us. Claims will be equally automated, taking advantage of both human and artificial intelligence in optimal ways. Even backend processes such as HR and finance will lower the bottom line by taking advantage of centralized reporting and "common dashboards," in McKinsey's informed vision.

Event streaming will provide the modern, scalable data architecture that will enable insurers to bring previously siloed data and applications together in order to power real-time automation and help insurers build AI and ML-powered applications that can provide more customer-friendly digital experiences. Workflows behind claims processing and other previously time-consuming tasks will become much more efficient and less costly to the insurance enterprise.

# 2

# Personalize the customer experience to boost revenue

*Ten years from now, leading insurance carriers will have mastered their omnichannel approach. A customer might start with online research and switch seamlessly to receiving personalized advice from an agent through a videoconference. Innovative online portals will be available to customers who need to manage their policies after they've made purchases.*

**— McKinsey**

For most insurance companies, customer acquisition is only the initial aspiration. Building a lifetime relationship with customers is the true goal. While excellent customer service is certainly an asset, it's table stakes for most companies at this point. It's become increasingly important to get to know customers and provide a customized experience, with data as the driver.

With a comprehensive view of the customer, insurance companies can personalize pricing of premiums and offers to grow the customer's lifetime value (LTV)—the projected revenue that a customer will generate during their lifetime. For instance, if a customer institutes an address change with a live representative over the phone, the address change is automatically propagated to all other systems in real time so the customer doesn't have to repeat the information in any future interaction. Premiums are also automatically updated to reflect that new geographic information when the customer next searches for a new policy via an app or web portal.

## How it was then

With customer service the one-and-only way to a customer's heart, insurance companies relied on one-on-one relationships between agents and customers to sway customer sentiment. Yet, since most people judge their insurance experience on how *infrequently* they have to spend time dealing with their policies, more conversations detracted from the perceived quality of insurance care. It was a tricky balance, and data was limited to static fields on a paper form, which was not always updated between the local office and centralized customer management system. Renewals kicked in automatically, unless the customer or agent initiated a change.

## How it is now

We're deluged in data points far beyond what a customer initially enters on a policy application. Connected devices are starting to reveal customer behavior over time, and external data can further inform policy decisions. In theory, this emerging data landscape can help insurers make real-time tailored decisions about premiums and other interactions with customers. There are way more opportunities to deliver timely offers for additional products or to make adjustments to policies around renewal time—for instance, offering discounts or increased coverage opportunities to help build a longer-term relationship with customers.

But while the data is there, it's not always easy to use across applications, and certainly not in real time. Particularly for insurance companies with legacy technology architectures that would be expensive and daunting to abandon, modern tools may not yet be in place to tap into data across the enterprise at its full potential.

## The future, with event streaming

Event streaming will play a big part in giving insurance companies real-time access to all kinds of data, so that goals they have now—personalized customer experience, improved pricing, real-time notifications, targeted offers—will be much easier to achieve. The capabilities event streaming makes possible are profound, from enabling real-time claims notifications to omnichannel policy quotes and friction-free customer service touch points. Event streaming can connect data even across legacy architectures, enabling a single source of truth for all data across the organization. On top of this centralized data source, insurance companies can build applications, services, and experiences designed to increase customer loyalty, with highly personalized, timely offers and updates.

# 3

# Mitigate risks with real-time fraud and security analytics

*The FBI estimates that the total cost of insurance fraud (excluding health insurance) is more than $40 billion per year. Insurance fraud costs the average U.S. family between $400 and $700 per year.*

**— Insurance Information Institute**

The surge in data from connected devices and constant interactions has been matched by the volume of sophisticated bad actors who seek to take advantage of digital transactions. To help prevent this, regulations on the insurance industry constantly increase in complexity and can differ from region to region. National insurers have a lot to consider when they store, manage, and analyze personal and property data—all of which can be highly valuable to bad actors. According to Deloitte's 2020 report on "The four trends that define insurance in 2020," 95% of insurers expect an increase in the use of advanced analytics over the next three years. For most of them, a more scalable, flexible, reliable, secure infrastructure will be a fundamental piece in the transformational jigsaw.

## How it was then

Traditional fraud management didn't involve a lot of data. Fraudulent activities were often limited to criminals opening fake accounts or civilians padding single claims. Fraud simply wasn't high on the radar of insurance companies.

## How it is now

Then data got complicated. Now, there's a lot more data at stake, but we also have advanced modeling capabilities and expanded controls and monitoring. With AI-enabled anomaly detection applied to text, voice, and image data, insurance companies can suss out strange behavior in data patterns and pinpoint fraudulent activity. But without an integrated data architecture, bad actors can still use siloed systems to their advantage—for example, filing inflated claims on unrelated losses across states.

Data management has gotten much more complex, and the insurance industry now has to properly store and send data across globally distributed locations that serve regional markets. This drives the need for large-scale, real-time security analytics with the goals of reducing the risk of data breaches and meeting complex regulatory requirements.

## The future, with event streaming

As use of data becomes more sophisticated, so will cybercriminals and bad actors. Insurance companies will have to improve their internal capabilities in order to monitor and mitigate the business risk coming from suspicious activity in the form of claim fraud and cybersecurity risks.

Aggregating previously siloed data will help reveal previously unknown schemes and connect entities to operate at scale. Analyzing data in real time will also be increasingly important, so insurance companies that can build data lakes to enable that activity, accelerating time to insight with real-time analytics, will be better protected. Keeping data in sync will contextualize the relationship with the customer as well as third-party data to shed more light on red flags. As bad actors and cybercriminals become more sophisticated, scalable event streaming will help insurance companies keep ahead of them. And when it comes to big-picture cybersecurity, reducing disparate systems and consolidating data will give insurance companies better control and visibility, which will help with evolving data regulation into the future.

# Confluent as the launching pad of the future of insurance

*Those that succeed over the next decade will leapfrog the competition with more efficient and resilient organizations. Insurance leaders need to plan ahead, engage the gamut of strategic and tactical levers, and use radical transparency to advance change. Standing still is not an option in these uncertain times.*

**— McKinsey**

Confluent provides a flexible and secure data platform that helps insurers deploy modern, sub-second, real-time analytics to reduce business risk and increase opportunity. At the same time, event streaming helps break down data silos so companies can truly understand their data footprints and stay ahead of new regulatory standards.

For more on why leading insurance companies trust Confluent as an event streaming platform, download an overview.



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## ABOUT CONFLUENT

Confluent, founded by the original creators of Apache Kafka®, pioneered the enterprise-ready event streaming platform. With Confluent, organizations benefit from the first event streaming platform built for the enterprise with the ease of use, scalability, security, and flexibility required by the most discerning global companies to run their business in real time. Companies leading their respective industries have realized success with this new platform paradigm to transform their architectures to streaming from batch processing, spanning on-premises and multi-cloud environments. Confluent is headquartered in Mountain View and London, with offices globally.

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