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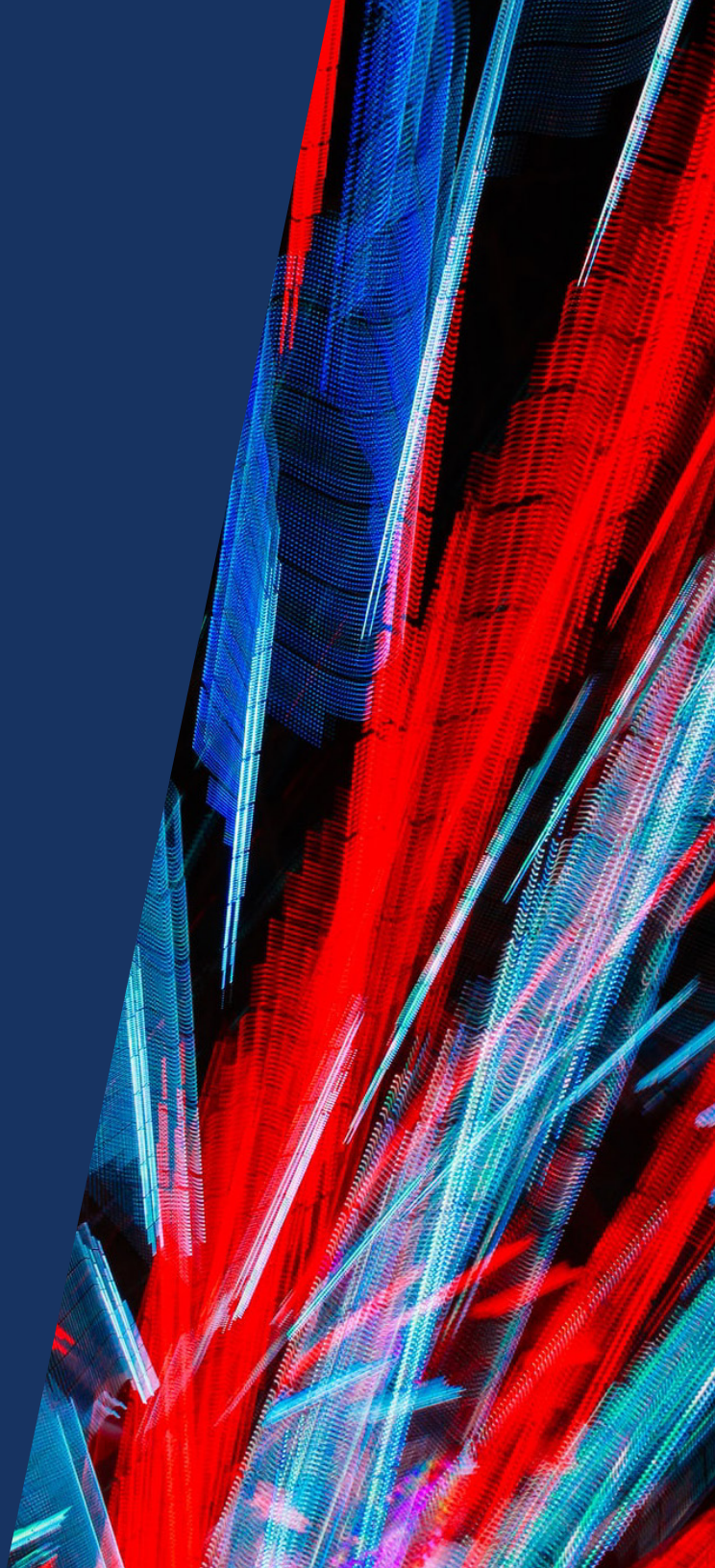
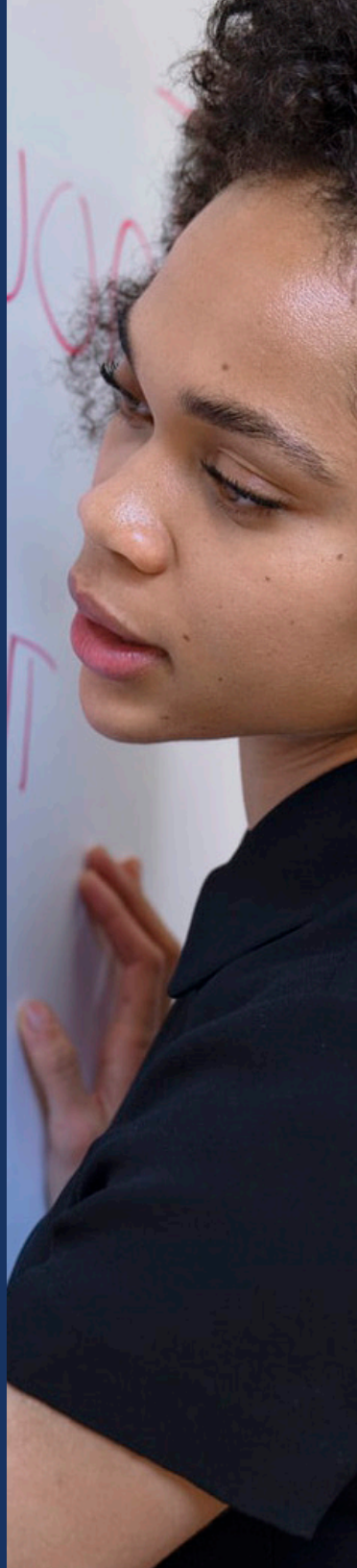
5 Event Streaming Use Cases That Transform Business



The recent revolution in data infrastructure and application architecture has transformed the way all kinds of organizations, from the traditional to the digital native, work with data. But to truly take advantage of event streaming as the most strategic platform within your company, it must move from the domain of one-off engineering initiatives into a central nervous system for the enterprise.

Transformation takes thoughtful strategy with specific business impact in mind. Knowing what business use cases other companies are putting into best practice is a great way to start envisioning—and enabling—your own shift to a centralized event streaming paradigm.

Read on to discover five of the top use cases Confluent has witnessed, with real-world customer examples and insights into how your organization can make the leap.



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Customer 360° and website clickstream analysis

As customers discover more and more ways to interact with a brand, getting a complete view of customer data has become more difficult for the enterprise. The original use case that spawned the creation of Apache Kafka® was to give LinkedIn a deeper, more comprehensive understanding of who is clicking on what and serve users personalized, contextual, and targeted content. The ability to conduct website clickstream analysis now enables brands to examine user behavior as they go from touchpoint to touchpoint. Creating such customer 360° profiles renders the ability to serve up content that will resonate with the end user, in a real-time way, at massive scale.

While customer 360° is often thought of as a retail capability, the reality is that all kinds of companies can profit from it, from banking to digital media. Event streaming can improve not just customer marketing and transactions but enable matching of real-time inventory and stock management.

A flawless retail launch with Apache Kafka

Urban Outfitters was founded in disaffected Gen X times, but that was a few generations ago. Today, Gen Z and millennial buyers expect highly personalized options and absolute ease. The company's newest brand, Nuuly, is a clothing rental subscription service stocked with up-and-coming designers, iconic labels, and unique vintage finds. To reach customers in a new, hands-on way, Nuuly needed superior data handling capability.

Created on a foundation of real-time event streaming architecture based on Confluent Cloud and Kafka, Nuuly was built from the ground up in under six months. The team used Kafka Connect to write services that link Kafka with BigQuery. The results?

- → A flawless launch executed in half the expected time (six months versus one year) that could handle traffic spikes and worked well from both a systems perspective and engineering perspective
- → This enabled a real-time inventory system, offering superb customer experience, so customers could click on garments, knowing exactly what was available and when
- → Stable production operations set up in a week (vs. the six months it had taken previously) even as more and more subscribers sign up—and Nuuly addressed the unique challenge of building its own warehouse management and order management systems within a year
- → Administrative overhead reduced by 10 people, thanks to Confluent's managed event streaming platform, Confluent Cloud, enabling Nuuly to offload all the responsibilities of setting up and operating a Kafka infrastructure to the experts

We truly think of Confluent Cloud and Kafka as the central nervous system of our business, spanning everything from the customer-facing applications to distribution center operations from a technology perspective.

– CHIRAG DADIA
Director of Engineering, Nuuly

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Legacy IT modernization

Nearly every enterprise business today is engaged in updating core technology infrastructure and applications and migrating data and processes to the cloud. Some are further along on this transformation journey than others. Many banks, for example, still have old mainframes dating back to the 1960s, even as they add online banking and apps to their service repertoire.

For companies with legacy mainframe systems, enabling the mainframe for event streaming can also help the organization get started with microservices. Doing so reduces loads on costly systems, lowers operating expenses, and enables business processes to transition from batch queries to real-time processing. Data from various systems can be integrated without having to write code for multiple microservices.

A traditional insurance company sped up with modern infrastructure

A few years ago, Generali Switzerland was competing in the challenging European insurance market on top of a stagnating economy and increased regulatory pressure. The time was right to launch a modernization initiative. To handle rising customer expectations and the 24/7 demands of today's market, the company replaced its existing infrastructure with the Generali Connection Platform, a new IT architecture based on event streaming with Confluent Platform and Apache Kafka.

An entirely new enterprise-scale event streaming platform was rolled out in just one year, and as a result, Generali experienced:

- → Core data systems now linked with new business applications and channels
- → IT teams empowered to do their jobs faster and with higher efficiency
- → Data replication and streaming times reduced from hours or even days to just seconds

The Connection Platform is a game changer for Generali. The data streaming solution we built with Attunity and Confluent allows us to replicate and stream data—not in hours or days as in the past, but in a few seconds.

– CHRISTIAN NICOLL
Director of Platform Engineering and Operations, Generali

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Single view of the business

As more apps, data platforms, and standalone cloud services are added throughout the enterprise, data silos quickly emerge. Without any connection between these disparate datasets, the business is blocked from using data to its full capacity. It's impossible to gain insight without a single view of the business.

Event streaming can be used to integrate multiple event types into a single enterprise-wide platform. This allows the business to:

- → Create business analytics apps, including machine learning and AI-fed models
- → Take advantage of SIEM (Security Information and Event Management) capability that aggregates logs and event data generated by all users, servers, networking devices, and firewalls
- → Provide real-time streams of regulatory information for reporting purposes, stitching together various sources of information that previously might have taken days, weeks, or even months to create and require ETL and batch processing of heavy data loads

Innovating the bank customer experience with a centralized event streaming platform

Canada's biggest bank, Royal Bank of Canada (RBC), serves 16 million clients in Canada, the U.S., and 35 other countries, providing world-class products and services to clients. Its diversified business model has a major focus on both internal and customer-facing innovation.

RBC's Data and Analytics (DNA) and Enterprise Cloud teams joined forces to build a real-time, scalable, event-driven data architecture for the bank's growing number of cloud, machine learning, and AI initiatives. RBC selected Confluent Platform based on Apache Kafka, and wrote a microservice to significantly reduce the reads on the mainframe, saving RBC fixed infrastructure costs (OPEX). The results RBC has experienced since implementing the streaming platform include:

- → Increased efficiency in app building
- → Anomaly detection time lowered from weeks to real time
- → Data reuse implemented across teams for relevant business insight

There isn't another product that competes with Confluent Platform. Streaming data as events enables completely new ways for solving problems at scale.

– MIKE KROLNICK
Head of Engineering, Enterprise Cloud, RBC

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Next-gen apps

Streaming media, virtual assistants, fitness watches, innovative healthcare IoT devices that save and improve lives—objects and their humans are more connected than ever before. Audi, for instance, has leveraged the ability to connect, process, and analyze IoT car data and interpret it in order to provide a better all-around customer experience with services like satellite navigation, predictive maintenance, and in-car entertainment.

The ability to use events in real time, at scale, enables businesses to create innovative next-gen applications and services. This is critical in the drive to build omnichannel experiences that keep customers connected to a brand experience across platforms and devices.

Putting Kafka in place to support event streaming lays a foundation for building new applications, but to truly take advantage of multiple sources of data and build apps that are central to the business, a single event streaming platform must act as common ground.

A scalable, cutting-edge solution even a small team can maintain

Headquartered in Germany, the Bosch Group is a leading global supplier of technology and services—an enterprise with a diverse lineup of innovative offerings, from mobility to industrial technology to consumer goods. It's also a leading IoT company, powering smart homes and cities as well as connected manufacturing.

To align the Bosch Power Tools division with its overall digital transformation initiative, the Bosch Group aimed to personalize the user experience of products with an IoT solution that would leverage sensor data from smart power tools and a new mobile app.

A critical component of this IoT architecture is Confluent Cloud, which enables asynchronous communication between applications and microservices with real-time, event-based streaming and persistent storage of events. Confluent Cloud and Kafka serve as the backbone for building new applications on top of event streams. The outcome included:

- → A low-maintenance, scalable event streaming platform that allows data to be shareable across projects and between previously disconnected teams, like sales and marketing
- → The ability to hold a cutting-edge technology position with a relatively small team
- → A new foundation for innovation

Confluent Cloud and Kafka are the heart of all our projects, serving as a backend for new mobile apps and for collecting data from assembly lines and legacy systems.

– RALPH DEBUSMANN
Solution Architect, Bosch Power Tools BDO Digital Offerings

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Real-time analytics

The big data era is over—or at least, the term *big data* is falling out of use, and for good reason: the phrase *big data* has become synonymous with legacy technology such as Apache Hadoop. Whatever language and lexicon we use, data remains central to every single enterprise today. But rather than focusing on storing massive amounts of data in warehouses or lakes, today's data move is about application building and real-time analytics.

Getting real, usable insight from data is the point. Event streaming platforms enable that effort for both customer-facing and backend systems and services, while simultaneously providing real-time fraud detection and prevention.

Insight at scale for a communications platform and its enterprise customers

8x8 is a leading cloud communications platform provider enabling more than a million business users to work smarter with voice, video, chat, and contact center solutions on a unified global platform. This is all complemented by real-time analytics for enterprise customers.

Implementing an event streaming platform that could scale quickly as new customers were added was table stakes for 8x8. The company chose Apache Kafka and Confluent Platform, in part because Kafka is considered the "de facto standard for streaming analytics," according to Manu Mukerji, 8x8's Senior Director of ML, AI, and Analytics.

Using Confluent Platform to create a reliable, secure, scalable event streaming platform that collects and analyzes calls and other events, 8x8 can produce real-time dashboards for enterprise customers.

Kafka [through Confluent] enables us to translate all of an organization's real-time communications into actionable insights that allow organizations to grow and ultimately transform their businesses.

– MANU MUKERJI
Senior Director of ML, AI, and Analytics, 8x8

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How event streaming drives business value overall

Beyond the specific use cases in this ebook, event streaming enables companies to use the data that results from all kinds of events and respond to those events in real time. Today, when customers expect responsive services 24/7, this capability is critical for enterprise companies across industries.

Event streaming unlocks new use cases and benefits specific to just about every industry, but a few of the most common are:

- → Improving the customer experience, managing data in real time, and driving loyalty, which in turn drives up revenue
- → Saving costs by doing more, with less, and with greater agility, which helps lower the bottom line
- → Mitigating risk with a capability such as fraud detection and prevention—ultimately another money saver

A lot of companies have invested in event streaming use cases here and there, but true transformation does not happen until event streaming becomes core to the way the business operates, driving strategic initiatives from a centralized platform.

For more on the journey to event streaming maturity, read:

5 Steps to Event Streaming: The Pivot from Projects to a Platform ▸

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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.

To learn more, please visit
www.confluent.io

Download Confluent Platform and Confluent Cloud at:
www.confluent.io/download