

# Recognizing the Full Value of Event Streaming

Beyond Messaging to Meaning



AN ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) eBook

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PREPARED FOR CONFLUENT

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# FROM TRANSFORMATION TO SUPERIORITY

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## The Current Digital Crisis

In the post-pandemic business environment, digital capabilities will define the future. Global lockdowns and stay-at-home orders put every organization to the test. Many leaders grew tired of the term “digital transformation” and claimed it was old news. However, within a week of the shutdown, every digital business model either failed or proved its resiliency in the new marketplace. As a result, organizations are looking for ways to put insight into the hands of more of their workforce and enable immediate responses to business events.

## The Quest for Digital Superiority

As a result of this new urgency, the pursuit of digital transformation turned into the quest for digital superiority. This unique point in time opens the door for major disruption in every industry all around the globe. Organizations that quickly operationalize agile, resilient business models will go beyond digital transformation to disruption.

## The Event-Centric Enterprise

To create an unfair advantage, business and IT leaders are setting a vision for the event-centric enterprise as a core strategy for digital superiority. New cloud-based event streaming platforms remove the complexity of do-it-yourself data pipeline engineering, reduce excessive data management costs, and enable enterprise-wide, real-time, intelligent responses to events. Entire workforces will make instantaneous decisions based on the automation of insight-driven event streams. With fully managed cloud-based event streaming, executives, managers, and individual contributors gain access to real-time intelligence and the enterprise will achieve unprecedented momentum and material gain. At the core of the event-centric enterprise, event streaming platforms become the nervous system of business ecosystems.

*This unique point in time opens the door for major disruption in every industry all around the globe. Organizations that quickly operationalize agile, resilient business models will go beyond digital transformation to disruption.*



# THE POTENTIAL VALUE OF CUSTOMER EVENTS

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No relationship is more valuable to a company than the relationship with customers. Understanding, creating, and delivering an exceptional customer experience (CX) tops the list of every digital transformation project. Nothing matters more.

## Challenge or Opportunity

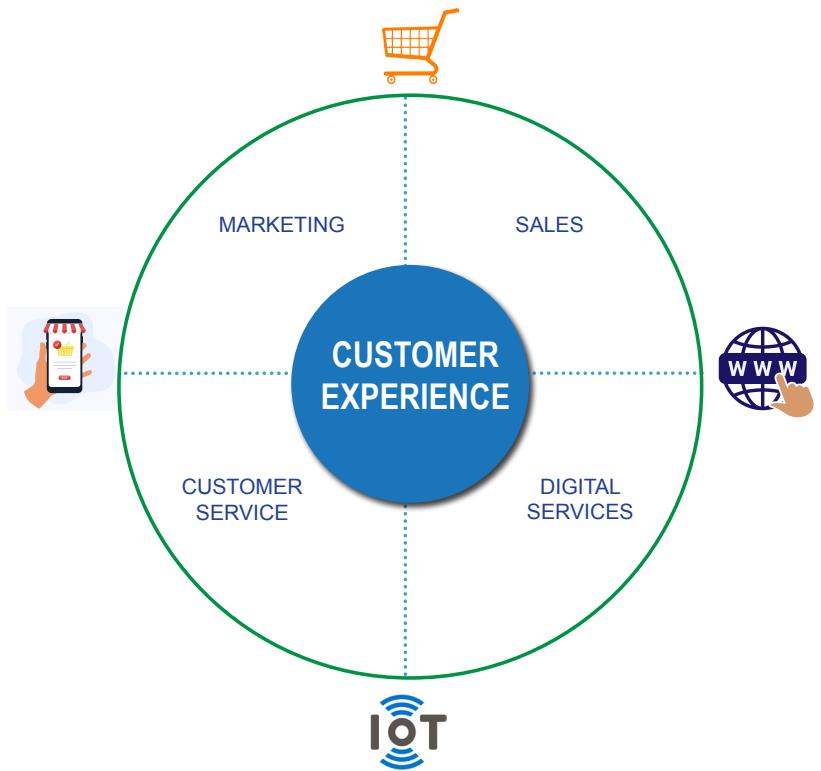
While it is difficult to understand a 360-degree view of each customer, the most menacing challenge is the changing nature of every individual customer. EMA research shows that customer engagement on mobile and internet applications is the top driver for real-time event streams.<sup>1</sup> Every time a prospect or customer interacts with a company, their customer profile changes.

Each customer interaction creates an event that presents both a challenge and an opportunity. The challenge comes in trying to capture the event as it occurs and formulate an intelligent response. The opportunity comes in understanding and linking events together and either averting the associated risk or investing in customer relationships.

## Value Creation

The opportunity is to build value into customer relationships and to generate value for stakeholders. Companies that identify the potential of intelligent, real-time responses to customer events will create an exceptional customer experience across every customer touchpoint.

- In marketing, responding in real time with the right offer at the right price can increase response rates dramatically.
- In sales, identifying the real-time triggers that serve as buying signs and moving the customer forward in the buying cycle can speed time to new revenue.
- In customer service, seeing the signs of churn or dissatisfaction in real-time interactions with the customer can turn negative interactions into positive outcomes.
- In digital service delivery, automated, intelligent responses can ensure personalized, remarkable customer experiences that exceed expectations.



## EVENT STREAMING PLATFORMS ENABLE AN EXCEPTIONAL CX.

Event streaming helps companies derive insights that open new revenue streams, shorten sales cycles, and enable the delivery of real-time customer experiences. To learn more, visit [confluent.io/customer-360](https://confluent.io/customer-360).

<sup>1</sup> "Modern Data Integration: Managing a Complex Portfolio of Data Pipelines," EMA, 2020.

# THE POTENTIAL VALUE OF OPERATIONAL EVENTS

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Every operational event potentially creates value for organizations and feeds value into the customer experience. Understanding when and how each business process contributes to value creation is essential. An intelligent response to each event multiplies the potential for positive outcomes.

## The Opportune Moment

We live in a time when business operations run as part of a complex ecosystem of customers, influencers, partners, employees. Complex delivery systems make it difficult to know when events occur that place value creation at risk. Even more critical, business opportunities may not surface until after the opportune moment has passed.

## Value Creation

The opportunity is to build value into relationships and to generate value for stakeholders. Companies that identify the potential of intelligent, real-time responses to operational events will contribute to customer relationships and optimize logistics across every aspect of the business ecosystem.

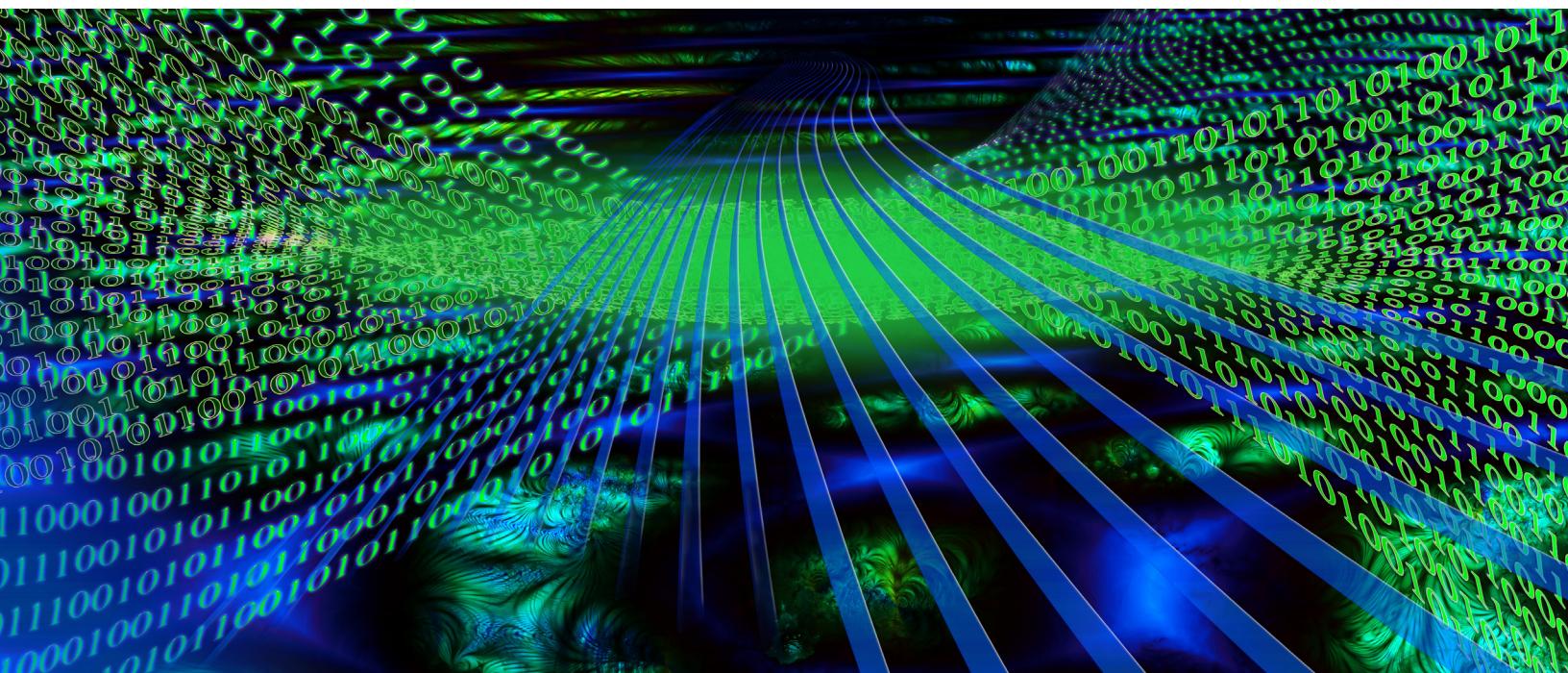
- In a supply chain, knowing the real-time indicators that impact product development and delivery can make the difference between satisfied and dissatisfied customers.
- In modern applications, the real-time capture of transactions can speed intelligent responses and improve usability exponentially.
- In the Internet of Things, a connected vehicle with multiple sensors can lead to the prediction of mechanical failures and improve the in-car experience.
- In the handling of sensitive information, immediate visibility can prevent security breaches and fraudulent activity.

*"From cameras in their processing facilities that alert factory managers about potential drops in efficiency to delivery truck GPS data that predicts arrival times, to weather data that helps companies understand how traveling conditions affect product quality and animal welfare - we can deliver business-critical insights for its customers' operations."*

- Confluent Customer

## EVENT STREAMING PLATFORMS ENABLE EXCEPTIONAL EFFICIENCIES.

Event-driven architectures make it easier to power business operations with services capable of immediately responding to the countless actionable events occurring every day. To learn more, visit [confluent.io](https://www.confluent.io).



# THE CASE FOR IMMEDIACY

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In the digital world, the failure to respond within a time window results in missed opportunities. Legacy platforms and systems were built to record transactions and run queries, not to respond quickly to events. Companies trying to close the time gap with open-source and manual coding are failing. As a result, most organizations are suffering from revenue leakage, increased risk, and efficiency drags.

Revenue leakage occurs when there are streams of opportunities passing by and we are unable to respond to them. Risk increases when a time-sensitive detection does not elicit the right response. Efficiency drag happens when inefficiencies slow down operational activities.

EMA research reveals the top three reasons for a move to modern, event streaming platforms: excessive time testing and deploying, slow response to real-time events, and a strategic move to the cloud.<sup>2</sup>

## Human Expectations

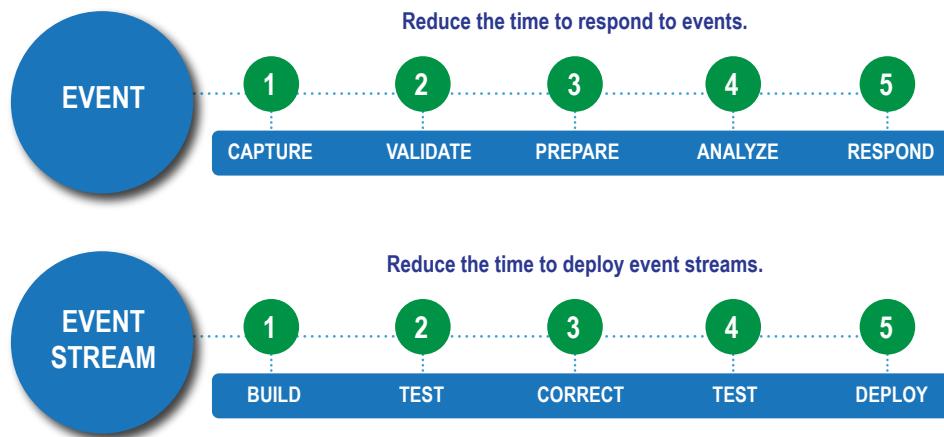
The internet experience and mobile applications have created a society that expects an immediate digital response. If expectations are not met, other options are always available. In the rush to capture new revenue a quick response is great, but if it is the wrong offer or the wrong price, the opportunity passes. Immediacy is all-important.

## Detection Execution

Increased cyber-attacks and more sophisticated fraudulent actors have turned risk into a timed chess game with dire consequences. A response that worked yesterday may not work today. Unless people can capture events in real time and provide an intelligent response, risk will turn into loss of both resources and reputation. Detection and prevention must be immediate.

## Operational Efficiencies

Digital competition is stiff, and digital disruption is increasingly common. When applications and interactions are unresponsive, the time lapse drags us down. There is always someone out there better and faster. Since time is money, the most efficient companies will be the survivors. Every business event presents an immediate opportunity to improve efficiency.



*"Confluent Cloud is the core infrastructure that is enabling us to realize our vision of having a single, always-up-to-date view of customer data and our vision of real-time, self-optimizing journeys, which will maximize uplift by identifying the optimal campaign for each customer."*

- Confluent Customer

## EVENT STREAMING PLATFORMS MAKE REAL TIME REAL.

Businesses across every industry use real-time event streaming platforms to power applications that deliver value by responding immediately to triggering events. To learn more, visit [confluent.io/customers](https://confluent.io/customers).

<sup>2</sup> "Data Lakes for Business – Big Data 2018 End-User Research Results," EMA, 2018.

# THE CASE FOR RELIABILITY

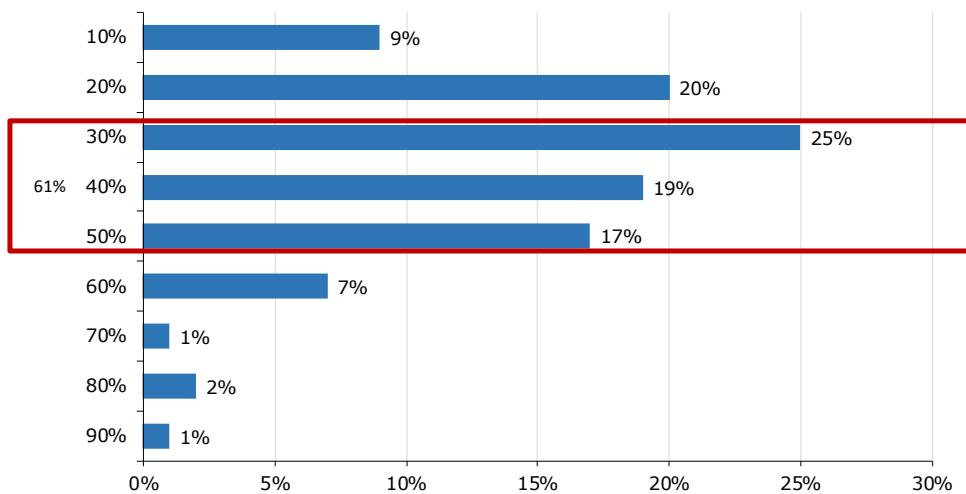
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EMA research shows that the number-one shortcoming of current streaming data platforms is the inability to deploy error-free data pipelines.<sup>3</sup> In fact, 61% of research respondents are spending between 30% and 50% of their time fixing breaks in data pipelines.<sup>4</sup> In short, error-prone data pipelines are killing the massive event stream opportunity.

Behind the breakage challenge, data drift—the continuous changing of data structures, relationships, and formatting—wreaks havoc with both data pipelines and analytic applications, skewing or tainting results. Valuable data engineering and analyst time is being wasted, especially in those organizations trying to build their own real-time platform.

Implementing a modern event stream platform with built-in reliability drives insight, innovation, and immediacy.

## On average, what percentage of your time do you spend managing break and fix issues for data pipelines?



## Reliability Drives Insight

When event streams operate reliably, data and insights fuel immediate responses to critical business events. Reliability turns engagement into amazing customer experiences and immediate operational efficiency.

## Reliability Drives Down Cost

As budgets get tighter due to COVID-19, there is increased pressure to operate efficiently with much greater focus on cost reduction across all lines of business. System reliability is even more critical to keep companies on their release timelines and under budget.

## Reliability Drives Revenue

Organizations can reduce their large infrastructure costs with pay-as-you go pricing and usage-based commitments for cloud. They can also shift the resources focused on Kafka management to refocus on critical, revenue-generating projects.

*"Our hyper-personalized approach is delivering measurable results. In our A/B testing, we've seen a significant increase in customer conversion rates. That's proof that our decision to adopt a real-time event streaming approach was the right one. I expect even bigger benefits as we continue to grow our capabilities."*

- Confluent Customer

## EVENT STREAMING PLATFORMS MAKE REAL TIME RELIABLE.

To learn more about running mission-critical applications on a resilient, cloud-native streaming platform with a 99.95% uptime SLA, visit [confluent.io/confluent-cloud/](https://www.confluent.io/confluent-cloud/).

3 "EMA Research: Modern Data Integration – Managing a Complex Portfolio of Data Pipelines," EMA, 2020.

4 Ibid.

# THE CASE FOR INTELLIGENCE

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Unfortunately, most data engineers are using event streaming to build independent, underutilized pipelines. They have not realized the full value of highly performant, open-source technology like Kafka.

Migrations from legacy messaging systems, point-to-point API connectivity, and development-driven projects do not take advantage of advanced event streaming capabilities. The number-one driver for real-time streaming use cases is to deliver analytical responses to events.<sup>5</sup> Intelligent event streams managed in the cloud provide the most cost-effective means of responding to business events in real-time.

## Augmenting Data in Motion

Many event streams contain a combination of different types of data. Data diversity prevents organizations from achieving a real-time, 360-degree view of their business. To address this issue, mature event streaming platforms include prebuilt operators to cleanse, transform, filter, aggregate, correlate, or analyze data in motion. Platforms that also allow for SQL-like data manipulation will reach an even broader segment of digital business requirements and application development.

For example, data collected by sensors often includes irrelevant data and requires enrichment before it is analyzed. Data must be captured, filtered, and enriched before it is analyzed and elicits an intelligent response. If this can be done while the data is in motion, it is far more valuable.

## Asking Questions of Data in Motion

Modern, event-centric applications also require access to events when they occur, as well as data lookups from different points in time. Traditional architectures meet this requirement with multiple diverse systems. Mature event streaming platforms enable traditional database-like lookups on streaming events, combined with lookups on data at rest. This unique capability brings real-time intelligence to customer engagement, operational logistics, and any other time-sensitive transaction.

*"With Confluent Cloud and Kafka, we have a single source of truth where we can keep data indefinitely. More importantly, we can now build new applications on top of our event streams – as often as we want and as many as we want."*

- Confluent Customer

## EVENT STREAMING PLATFORMS MAKE REAL TIME INTELLIGENT.

Leading companies are responding immediately to events with real-time streaming applications that are built and deployed using only a few SQL statements. To learn more, visit [ksqldb.io/](https://ksqldb.io/).

*The number-one driver for real-time streaming use cases is to derive analytical responses to events.<sup>5</sup>*

5 "Data Lakes for Business – Big Data 2018 End-User Research Results," EMA, 2018.

# THE CASE FOR ACCURACY

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The only thing worse than no response to a customer or business opportunity is the wrong response. Irrelevant customer responses are ignored. Inaccurate operational responses to real-time events can be costly.

According to EMA research, most data engineers are spending from 30-50% of their time fixing broken data pipelines. Thirty-eight percent of respondents said that it is taking more than one 10-hour business day to repair breaks.<sup>6</sup> The result is hours and days of inaccurate data and insights flowing through the enterprise.

Event streaming platforms that monitor, audit, and automatically repair breaks will greatly reduce cost, free resources to focus on innovation, and ensure accurate, real-time insight delivery.

## Monitoring

Companies cannot be event-driven without an immediate view into what is happening in their network of event streams. Mature event streaming platforms enable consistent, reliable monitoring and alerts in a single view of data pipeline operations.



## Auditing

Whereas monitoring provides a view into what is happening in real time, auditing provides accountability and insight into what is being done with event streams. Event streams without governance quickly become a regulatory nightmare.

## Autonomous

As event streams expand throughout the business ecosystem, autonomous repair of conflicts or breaks in pipelines becomes critical. For many organizations, every event represents potential value and opportunity. Downtime translates into risk and loss.

*"As the largest bank in Indonesia, we rely on Confluent Cloud and Google Cloud to build and deploy real-time, event-driven systems that beat out the competition in terms of reliability, security and customer satisfaction."*

- Confluent Customer

## EVENT STREAMING PLATFORMS MAKE REAL TIME ACCURATE.

Capabilities such as automated cluster configuration, GUI-driven monitoring, and role-based access control simplify the deployment, management, and auditing of Kafka-based event streaming platforms. To learn more, visit [confluent.io/product/confluent-platform/](https://www.confluent.io/product/confluent-platform/).

<sup>6</sup> "EMA Research: Modern Data Integration – Managing a Complex Portfolio of Data Pipelines," EMA, 2020.

# THE POWER OF SYSTEMATIC THINKING

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One event stream by itself has some value, but it is only as valuable as the data itself. Organizations that are using event streaming as a replacement for messaging or as a simple point-to-point API connector are missing a massive opportunity.

Companies adopting systematic thinking see their business as a connected ecosystem. Because of this, they are already using event streaming platforms to reduce the overall cost of event stream management, to standardize all data and insight sharing, and to advance their journey as an event-centric organization.

## Multiple Event Streams

The first step toward becoming an event-centric organization is to understand the increased value of combining multiple event streams.

For example, a customer-facing application may require web stream data, mobile app data, raw text from email, and structured data from both marketing and sales automation systems. The ability to combine all these streams in a single event streaming platform enables a real-time, 360-degree view of the customer. Customer experience is a great place to begin using event streaming to operate a business as a connected ecosystem.

## Reusable Event Streams

The next step toward building an event-centric ecosystem is standardizing critical event streams and reusing them in multiple applications to deliver consistent data and insight.

For example, supply chains tend to be very complex, with many moving parts that require coordination. Logistics frequently change based on decisions with multiple dependencies. When deploying event streams in these complex ecosystems, there is not enough time to build everything from scratch. Standardization and reuse of the most constant or consistent event streams enables the rapid expansion of the connected business ecosystem. In addition, the more quickly an organization can respond to logistical events, the more likely they will be to avoid any impact on product delivery.

*"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."*

- Confluent Customer

## EVENT STREAMING PLATFORMS CREATE MORE BUSINESS VALUE.

Businesses are working with event streaming experts to accelerate streaming platform adoption and make event streams the central nervous system for information flow across every part of the organization. To learn more, visit [confluent.io/services](https://confluent.io/services).



# ACCELERATING YOUR EVENT-CENTRIC JOURNEY

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The race for digital superiority is on. Organizations that neglect intelligent responses to business and customer events will be left behind. Leaders who enable the continuance of do-it-yourself event streaming will be disrupted. Companies that adopt an event-centric approach with event streams as the nervous system of the enterprise will be the leaders in their industries. Many digital-first organizations have already arisen and disrupted entire industries. The next wave of the digital tsunami is about to hit with the rise of event-driven leaders.

To accelerate your event-centric journey, EMA recommends the following steps:

## 1 Identify your most valuable event streams.

Follow the money. Where is there the most potential for value or the greatest value at risk?

## 2 Secure a fully-managed, cloud-based streaming platform.

Do not try and build it yourself. The most cost-effective solution is cloud-based event streaming.

## 3 Create your first set of response streams.

Feed the insight. What events require a rapid or immediate response?

## 4 Construct the beginning of your streaming network.

Find the multipliers. What combinations of event streams create the most value?

## 5 Expand your streaming network to create a connected business ecosystem.

Fabricate the ecosystem. What business areas will benefit most from a continuous connectivity?

# ABOUT CONFLUENT

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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](http://www.confluent.io). Download Confluent Platform and Confluent Cloud at [www.confluent.io/download](http://www.confluent.io/download).

## About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates® (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals, and IT vendors at [www.enterprisemanagement.com](http://www.enterprisemanagement.com) or [blog.enterprisemanagement.com](#). You can also follow EMA on [Twitter](#), [Facebook](#), or [LinkedIn](#).

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