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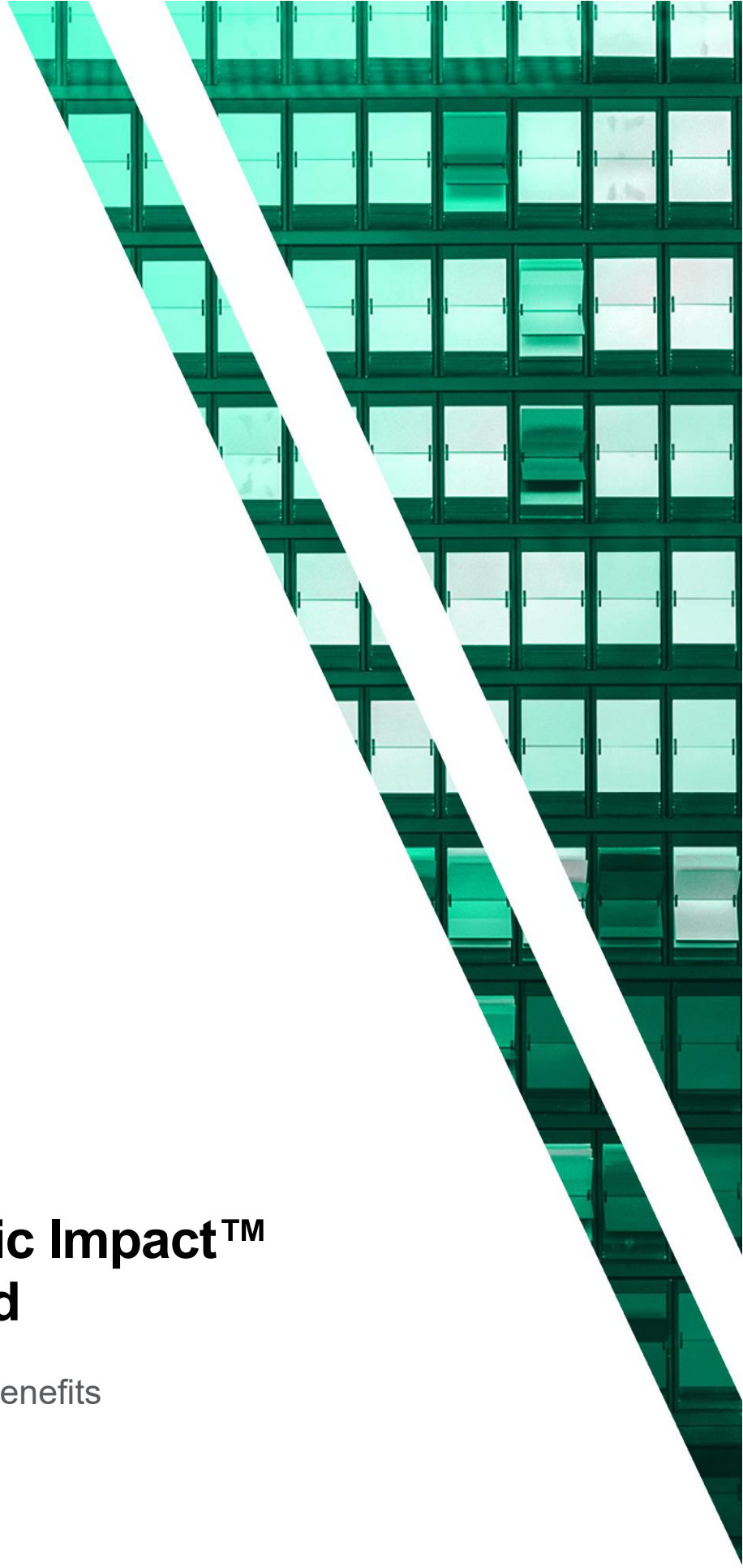

The Total Economic Impact™ Of Confluent Cloud

Cost Savings And Business Benefits Enabled By Confluent Cloud

FEBRUARY 2022

Table Of Contents

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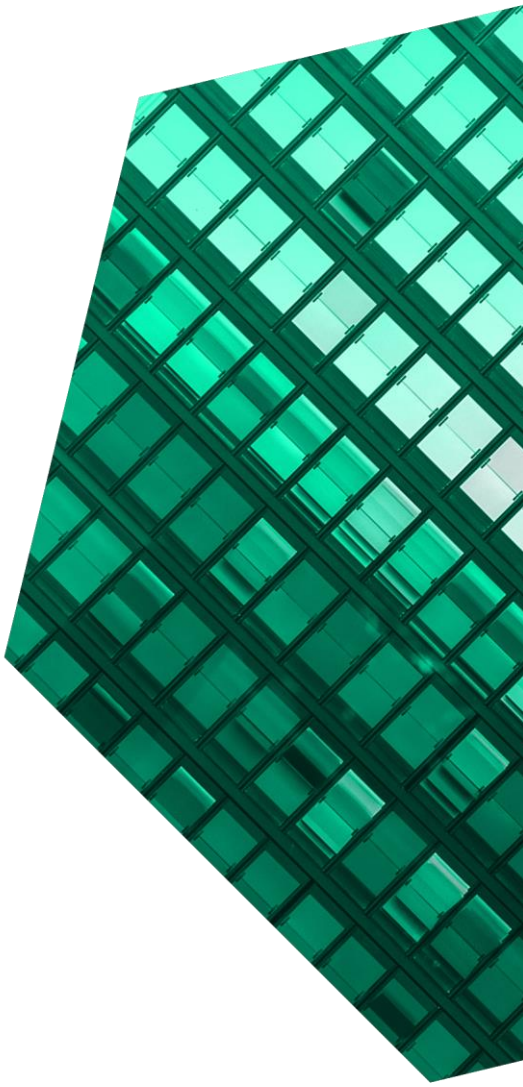


Executive Summary

As organizations seek more efficient ways to stream data, they are learning that self-managing a Kafka environment can be costly. Many are turning to Confluent Cloud, which enables them to connect, stream, and process events in the cloud, across multiple clouds, and hybrid/on-premises. Working with Confluent Cloud allows organizations to avoid infrastructure management, Kafka operation burdens and risks to focus on building mission-critical applications that differentiate their businesses.

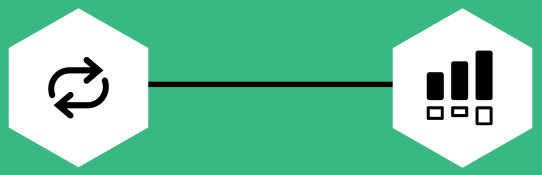
Confluent Cloud is a cloud service that enables organizations to run Apache Kafka at scale and meet the bulk of an enterprise's data streaming needs. It provides room to securely and quickly build applications using real-time events across multiple clouds and hybrid/on-premises regardless of where data is generated or resides.

Confluent commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI)[1] study and examine the potential return on investment (ROI) enterprises may realize by deploying Confluent Cloud. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Confluent Cloud on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four decision-makers with experience using Confluent Cloud. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single composite organization.

Interviewees said that prior to using Confluent Cloud, their organizations struggled with open-source Kafka platforms. Prior attempts yielded limited success and left them with inefficient solution-building processes on top of Kafka, along with high costs for infrastructure management and operations. These limitations led to difficulties advancing test/staging environments into production or scaling small production environments to support mission-critical applications.

KEY STATISTICS



Return on investment (ROI)
257%

Net present value (NPV)
$1.86M

With Confluent Cloud, the interviewees' organizations have a single integrated solution that can aggregate, enhance, filter, and connect streams of data for building real-time applications. Key benefits from the investment include Kafka development and operations cost savings, scalability savings, and infrastructure cost savings.

KEY FINDINGS

Quantified benefits. Risk-adjusted present value (PV) quantified benefits include:

- **Development and operations costs savings of more than $1.4 million.** Interviewees' organizations reduced the number of FTEs used for development and operation of open-source Kafka platforms by moving to Confluent Cloud. They said their organizations achieved this because Confluent Cloud is equipped to deliver and process streaming data across on-prem and

multi-clouds to support numerous data pipelines. It has many fully managed connectors already developed to quickly deliver streaming data to and from various systems. Confluent Cloud also has many enterprise-level security and compliance options already built in, which reduces the need for expansive development and operations teams.

Scalability savings of $601,600. Interviewees said their organizations saved money when they scaled workloads to meet growing business demands, and that Confluent Cloud automates and orchestrates expansion behind the scenes. They also acknowledged that at smaller cluster levels, it was easy to manage Kafka with open-source platforms. But as more topics were created, managing more brokers and partitions became more complex — even more so as workloads scaled to enterprise levels. But Confluent Cloud only charges for resource utilization, so it reduced both the time needed to scale operations and the cost.

- **Infrastructure cost savings of $567,900.** To maintain high availability at service-service-level agreements (SLAs) over 99.95%, organizations need robust infrastructure with redundancy and failover capabilities. To support service levels and required throughput, the organizations paid thousands of dollars each month for open-source Kafka infrastructure costs. Confluent Cloud abstracted away this need because infrastructure is included in its cost.

> **The top consideration for moving to Confluent Cloud was scalability. And the second was to relieve our engineers from operation and maintenance duties.**
>
> — Manager of data engineering, Internet TV services

Unquantified benefits. Benefits that are not quantified for this study include:

- **A comprehensive platform that combines stream governance and stream processing.** In the past, organizations needed many tools and processes to consolidate all their real-time data streams. But interviewees said Confluent Cloud is a single integrated solution that can aggregate, enhance, filter, and connect streams of data from multiple unrelated sources across environments and teams for building real-time applications.
- **Subject matter expert (SME) support.** Interviewees lauded having availability and access to experienced Kafka SMEs. They said this support was very helpful each time they needed help understanding how to best leverage their Confluent Cloud Kafka deployment.
- **Availability at SLA over 99.95%.** Interviewees exalted having the ability to run mission-critical applications on Kafka without fear of business-disrupting downtime.
- **Real-time data.** Interviewees said there was value in having real-time data for faster decision-making.

Costs. Risk-adjusted PV costs include:

- **Confluent Cloud Spend.** Confluent charges a consumption-based fee for its software-as-a-service (SaaS) offering. This fee is broken into two parts: a Cloud consumption fee and a service support fee.

The decision-maker interviews and financial analysis found that a composite organization experiences benefits of $2.58 million over three years versus costs of $722,300, adding up to a net present value (NPV) of $1.86 million and an ROI of 257%.

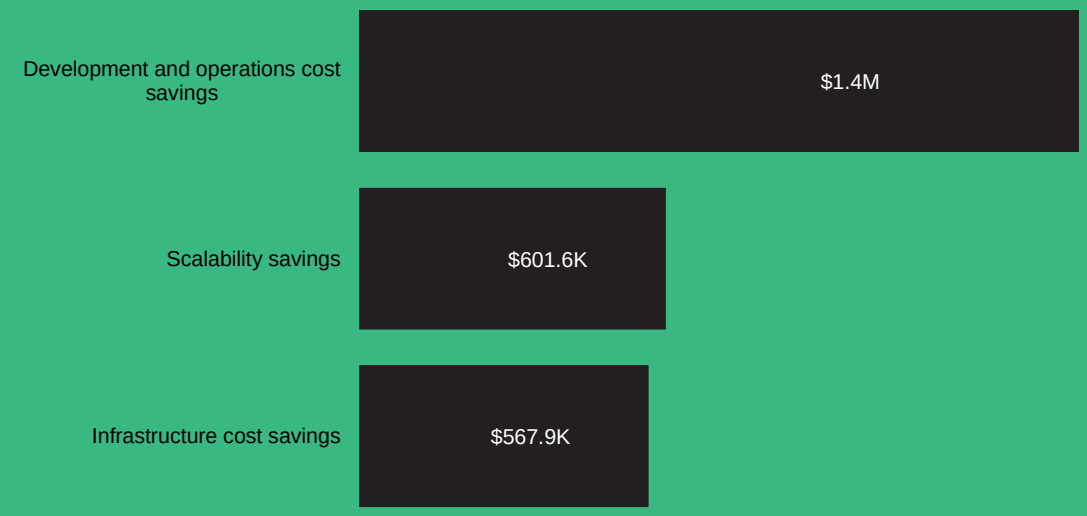
ROI
257%

BENEFITS PV
$2.58M

NPV
$1.86M

PAYBACK
<6 months

Benefits (Three-Year)



TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in Confluent Cloud.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that Confluent Cloud can have on an organization.

DUE DILIGENCE

Interviewed Confluent stakeholders and Forrester analysts to gather data relative to Confluent Cloud.

DECISION-MAKER INTERVIEWS

Interviewed four decision-makers at organizations using Confluent Cloud to obtain data with respect to costs, benefits, and risks.

COMPOSITE ORGANIZATION

Designed a composite organization based on characteristics of the interviewees' organizations.

FINANCIAL MODEL FRAMEWORK

Constructed a financial model representative of the interviews using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the decision-makers.

CASE STUDY

Employed four fundamental elements of TEI in modeling the investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Confluent and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the study to determine the appropriateness of an investment in Confluent Cloud.

Confluent reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

Confluent provided the customer names for the interviews but did not participate in the interviews.

The Confluent Cloud Customer Journey

Drivers leading to the Confluent Cloud investment

Interviewed Decision-Makers

Interviewee	Industry	Region	Annual Revenue
Vice president of data	Automotive logistics	North America	$300 million
Manager of data engineering	Internet TV services	North America	$1 billion
Senior staff engineer	Software publishing	South Asia	$360 million
Head of data engineering and integration	E-commerce	Europe	$1.4 billion

KEY CHALLENGES

Interviewees told Forrester about the importance of event streaming in their organizations. In search of a solution to use for high-performance data pipelines, streaming analytics, data integration, and deployment of mission-critical applications, their organizations each turned to some variation of Kafka-based solution. Some started out using self-managed open-source Kafka distributions, while others engaged other third-party supported platforms.

The interviewees noted how their organizations struggled with common challenges, including:

- **High development and operations costs.** They said self-managed Kafka platforms were expensive to develop and manage and that it took large teams and didn't always lead to reliable availability. A head of data engineering and integration at an e-commerce firm said: "After switching to Confluent Cloud, the engineering workload on maintenance and operation reduced almost down to nothing, compared to our prior state. We used to have at least two dedicated engineers to monitor, maintain, and upgrade."
- **High infrastructure costs.** Interviewees at organizations with prior self-managed environments told Forrester that infrastructure costs were high. Those organizations had to pay for the underlying infrastructure as well as its management before the Kafka software development and operations costs. A head of data engineering at an e-commerce firm said: "What we could see at the time was that the footprint needed more than 12 different virtual instances for the Kafka deployment itself. That meant performing ongoing maintenance across each of those 12 instances to make sure they were patched, held the right security settings, etc."
- **Challenges avoiding costly downtime.** Interviewees' organizations experienced downtime and couldn't support mission-critical applications. A senior staff engineer at a software publishing company explained: "We were hitting certain downtimes when we were self-managing the cluster. This is a very important piece of technology that plays across products. So, we needed the expertise where people could help us in running this. That's the reason we moved to Confluent."

  Scaling up with increasing workloads. A major pain point for each interviewee was needing the ability to scale at reasonable costs. With minor throughput increases, their organizations had to incur exorbitant costs to scale up due to manual

processes. A senior staff engineer at a software publishing company explained: “We had a team of people who were working on the open-source solution and how to host it. But they were facing problems on how to scale and manage with little downtime, and that is one of the reasons we moved to Confluent Cloud.”

We are extremely happy with how Confluent Cloud has been helping us move forward, handling our scaling issues and growing business demands.
Manager of data engineering, Internet TV services

SOLUTION REQUIREMENTS/INVESTMENT OBJECTIVES

The interviewees’ organizations searched for a solution that could:

- Alleviate the need for managing infrastructure so that valuable and highly compensated FTEs could focus on building mission-critical applications.
- Have adequate internal storage to support mission-critical applications depending on their business needs.
- Ensure scalable elasticity so they didn’t have to overprovision capacity during fluctuating business circles.
- Provide support and expertise so they would not have to train and maintain large teams to manage the underlying Kafka platform instead of building mission-critical applications operating on it.

COMPOSITE ORGANIZATION

Based on the interviews, Forrester constructed a TEI framework, a composite company, and an ROI analysis that illustrates the areas financially affected. The composite organization is representative of the four decision-makers that Forrester interviewed and is used to present the aggregate financial analysis in the next section. The composite organization has the following characteristics:

Description of composite. The composite organization is data-intensive and heavily influenced by short-term market conditions. It needs to access events in real time so it can rapidly adjust business tactics and strategy.

To support a rapidly changing landscape, the organization is transitioning more workloads from traditional batch-data processing to real-time data integration, processing, and analyses yearly.

The organization requires 99.95% SLA availability from its Kafka environment to be able to support mission-critical applications.

Deployment characteristics. The composite organization exhibits some key event streaming needs and Confluent Cloud characteristics over three years. Major among these characteristics is a Confluent specific parameter: Confluent Units for Kafka (CKUs). CKUs are a unit of horizontal scalability in Confluent Cloud that provide a pre-allocated amount of resources. The amount that can be ingested and streamed per CKU depends on a variety of factors including client application design and partitioning strategy. These characteristics differ over three years as follows:

- **Year One:** The composite operates two Kafka environments: one staging environment and one production environment. It runs one dedicated cluster in each environment, and each cluster has two CKUs for a total of four CKUs. The

composite organization uses two managed connectors to connect with other applications/data systems. It has a write/read throughput of 1MBps/3MBps respectively. Data retention is seven days, and the composite has Confluent support. Two internal FTEs can support this deployment.

- **Year Two:** The composite operates three Kafka environments: one development, one staging, and one production environment. It runs one basic cluster in the development environment and two dedicated clusters (one each in staging and production environment). Each dedicated cluster has two CKUs for a total of four. The composite organization uses four managed connectors. It has a write/read throughput of 5MBps/15MBps. Data retention is seven days, and the composite has Confluent support. Two internal FTEs can support this deployment.
- **Year Three:** The composite operates three Kafka environments: one development, one staging, and one production environment. It runs one basic cluster in the development environment and two dedicated clusters (one in each staging and production environment). Each dedicated cluster has two CKUs for a total of four. The composite organization uses six managed connectors. It has a write/read throughput of 10MBps/30MBps. Data retention is seven days, and the composite has Confluent support. Three internal FTEs can support this deployment.

Key assumptions

- **$877,000 spend over three years**
- **4 CKUs each year**
- **Higher throughput each year**
- **Data retention of 7 days**

Analysis Of Benefits

Quantified benefit data as applied to the composite

Total Benefits

Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Atr	Development and operations cost savings	$272,000	$544,000	$952,000	$1,768,000	$1,412,111
Btr	Scalability savings	$65,250	$198,000	$504,000	$767,250	$601,617
Ctr	Infrastructure cost savings	$102,000	$204,000	$408,000	$714,000	$567,859
	Total benefits (risk-adjusted)	$439,250	$946,000	$1,864,000	$3,249,250	$2,581,587

DEVELOPMENT AND OPERATIONS COST SAVINGS

Evidence and data. Interviewees said development and operations costs were a major expense in running an open-source Kafka deployment. Their organizations had to employ teams to perform development, operations, and maintenance tasks.

- A head of data engineering and integration at an e-commerce organization explained: “Ongoing development and maintenance of Kafka brokers, zookeeper, and the nodes underneath needed two or more dedicated operations engineers to keep Kafka up and running at a production grade of 99.9%-plus availability. Going to Confluent Cloud, we removed some of the heavy lifting from development teams. They would have needed to have at least some knowledge around things like creating new topics or seeing what the metrics for a given consumer was. All of these things already come with Confluent Cloud.”
- A senior staff engineer at a software publishing company said his organization didn’t have to worry about development and operations. He said: “We are able to focus more on working and satisfying business needs rather than worrying about our cluster. We are doing a much better job on our services rather than focusing on cluster development and maintenance.”

“Rather than having a load of Kafka knowledge, by going to Confluent Cloud, we handed that off so that our engineers could spend more time on building features. Instead of spending 40% to 50%, it was chopped down to maybe 5% to 10% understanding how Kafka works, and not how the Kafka deployment itself operates within our organization”
Head of data engineering and integration, e-commerce

Modeling and assumptions. Forrester modeled this benefit by factoring the FTE resources needed to develop and support an open-source Kafka solution for the composite organization listed above.

- To support a 99.95% SLA as demand grows, the composite organization needs four FTEs to operate the solution in Year 1, six in Year 2, and 10 in Year 3.

- Using Confluent Cloud, two FTEs operate the solution in years 1 and 2. This number increases to three FTEs in Year 3.
- The annual fully burdened pay for a skilled Kafka FTE is $160,000.

Risks. The decision-makers interviewed for this study came from diverse industries, economic zones, and event streaming use cases. This injected numerous risks in the modeling of this benefit:

- The average annual pay for skilled Kafka FTEs varied widely across economic/geographical zones.
- Individual organizations needed different proportions of virtual machines (VMs), disks, storage, and other resources to form a stackable package conducive for their unique use case.
- The number of FTEs to develop and manage their open-source Kafka solutions varied based on the complexity and volume of individual use cases.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $1.4 million.

Development And Operations Cost Savings

Ref.	Metric	Source	Year 1	Year 2	Year 3
A1	Number of FTEs needed before Confluent Cloud	Interviews	4	6	10
A2	Number of FTEs used with Confluent Cloud	Interviews	2	2	3
A3	Dev and ops FTEs saved	A1-A2	2	4	7
A4	Average FTE pay per year	Assumption	$160,000	$160,000	$160,000
At	Development and operations cost savings	A3*A4	$320,000	$640,000	$1,120,000
	Risk adjustment	↓15%			
Atr	Development and operations cost savings (risk-adjusted)		$272,000	$544,000	$952,000
	Three-year total: $1,768,000			**Three-year present value: $1,412,111**	

SCALABILITY SAVINGS

Evidence and data. Interviewees told Forrester that to satisfy the need for real-time event streaming, their organizations were constantly transitioning new workloads to Kafka. This meant they had to scale often and needed a solution that didn't overwhelm budgets each time they needed more capacity.

- A manager of data engineering at an internet TV services organization explained: "Before Confluent Cloud, when we had to scale up, we had to actually put off the second pipeline. That meant the monthly cost would just double instantly. We couldn't just go in increments of 10%, 20%, or so."
- A head of data engineering and integration at an e-commerce organization said scaling became much more convenient after moving to Confluent Cloud. They said: "What we got was a platform that scaled automatically rather than needing to try to manage that scaling when the need arose. In the past, when we got to peak periods where the throughput was far higher than we'd get on a normal day, that entailed manually scaling up to

get ready for that day and then manually scaling down afterwards. But what we have through Confluent Cloud is that it scaled with demand. So, we paid for the usage rather than paying for provisioned capacity."

Modeling and assumptions. To model this benefit, Forrester compares an equal-capacity baseline for a composite organization using an open-source platform against one using a Confluent Cloud subscription. Forrester also makes the following assumptions:

- The baseline cost of self-supporting the open-source Kafka platform is 50% more expensive than a Confluent Cloud subscription.
- Capacity is scaled once each year.
- Open-source cost doubles each time capacity is scaled up while Confluent Cloud cost is pegged to usage, where the rate of cost increase improves with additional usage.

Risks. Interviewees for this study had diverse explanations about how and why scalability impacted their organizations. This diversity introduced varying risk for the calculation of this benefit:

- How often an organization had to scale impacted the underlying cost to provision instances, as they deploy and add Kafka brokers into clusters to gain extra capacity.
- The skill set of Kafka FTEs varied widely between organizations.
- The size of the scale increase also impacted cost and, thus, savings from transitioning to Confluent Cloud. Organizations with many smaller increases had to spend more than those with fewer larger increases.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $601,600.

Scalability Savings

Ref.	Metric	Source	Year 1	Year 2	Year 3
B1	Open-source scale increases (cost doubles with each increase)	Interviews	$217,500	$435,000	$870,000
B2	Confluent Cloud scale increases (cost regresses with consumption)	Interviews	$145,000	$215,000	$310,000
Bt	Scalability savings	B1-B2	$72,500	$220,000	$560,000
	Risk adjustment	↓10%			
Btr	Scalability savings (risk-adjusted)		$65,250	$198,000	$504,000
	Three-year total: $767,250			**Three-year present value: $601,617**	

INFRASTRUCTURE COST SAVINGS

Evidence and data. Interviewees told Forrester that each time their organizations had to increase capacity, they needed to provision new infrastructures to support open-source Kafka. When their organizations moved to Confluent Cloud, infrastructure costs were included with the cloud service based on actual utilization.

- A head of data engineering and integration at an e-commerce organization explained: "We paid for VM instances during proof of concept at relatively low cost, averaging about $3,000 a month. Once we got to production, it at least quadrupled. But that was a ramped-down environment, so we had expected it to quadruple if not a little bit more. It

was probably $12,000 to $15,000 per month just on infrastructure."

- A vice president of data at an automotive logistics company said: "For infrastructure, we were using a cloud infrastructure provider at the time, maybe a few thousand dollars a month is what we were paying for what we were utilizing it for. The issue is, we were only using that for a particular use case. It was siloed and not enterprise-wide at all." This illustrates how easily cost can rise when added across multiple silos.

Modeling and assumptions. To model this benefit, Forrester calculated the infrastructure cost needed for an open-source platform. This infrastructure cost was then compared against an organization using Confluent Cloud where the infrastructure cost is included based on utilization. Forrester also makes the following assumptions:

- The composite organization uses infrastructure leased from a cloud infrastructure provider.
- The initial open-source platform requires infrastructure leased for $120,000 per year.
- Yearly scale increases require double the amount of infrastructure needed in the prior year.

Risks. The interviewees' organizations have different event-streaming needs. Some have large volumes of homogenous events that could flow through the same data pipelines while others have smaller volumes of heterogeneous events that flow through independent data pipelines. Attributing this benefit for each organization is impacted by the amount of infrastructure needed to support its unique use case and:

- The diversity of data types within an organizations' business environment.
- The diversity of data sources within the organization.
- Internal business policies and data governance guidance within each organization.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of $567,900

Infrastructure Cost Savings

Ref.	Metric	Source	Year 1	Year 2	Year 3
C1	Infrastructure	Interviews	$120,000	$240,000	$480,000
C2	Confluent Cloud infrastructure (included in subscription)	Interviews	$0	$0	$0
Ct	Infrastructure cost savings	C1-C2	$120,000	$240,000	$480,000
	Risk adjustment	↓15%			
Ctr	Infrastructure cost savings (risk-adjusted)		$102,000	$204,000	$408,000
	Three-year total: $714,000			**Three-year present value: $567,859**	

UNQUANTIFIED BENEFITS

Additional benefits that customers experienced but were not able to quantify include:

- **A comprehensive platform that combines stream governance and stream processing.** Interviewees identified Confluent Cloud as a single integrated solution that can aggregate, enhance, filter, and connect streams of data from multiple unrelated sources for building real-time applications. They said Confluent's Stream Governance and stream processing with ksqlDB are integrated into Confluent Cloud and that they saved critical FTE developer hours.

  A vice president of data at an automotive logistics company said: "I find streaming governance very helpful. It gives the ability to visually see your producers and consumers, essentially your microservices talking to Kafka consuming or producing to a topic, and how those topics consume or produce and talk to other things. Because I can see how I'm connecting and what I'm talking to, it enables me visually to be able to quickly debug."

- **SME support.** Interviewees told Forrester that in open-source environments, their organizations had to employ large teams and try to resolve problems by themselves. But they said going to Confluent Cloud eliminated that because it provides support services from experienced Kafka SMEs.

  A senior staff engineer at a software publishing company said: "We face some problems every now and then, so the Confluent support team helps us in answering those questions. We have weekly calls with the Confluent team. They help us answer if there was any issue with our Confluent cluster and investigate how well we are doing around other data metrics. Every now and then, they take some sessions to tell us the best ways to use Kafka, and what other technologies within Confluent that we can use."

  A manager of data engineering at an internet TV services company went even further and said Confluent Cloud support teams are integral to their organization. They said: "Confluent is providing a professional service to our team. Next week, we have a two-week, full-time professional services team engagement from Confluent coming to look at our development and our applications, and to go over the architecture design. We want to hear some experts' views on that, and how we communicate with Kafka. All these things were not available when we were using open source, which is extremely valuable right now. That's the expertise they provide to help us to keep moving. It's very valuable."

- **High availability with SLAs over 99.95%.** Each of the interviewees told Forrester their organization runs mission-critical applications on Kafka. Many also said that internal teams were unable to guarantee uptime, and that was one of the main reasons their organization migrated to Confluent Cloud.

  A senior staff engineer at a software publishing company said: "We started with an in-house cluster. There was a team that was working on the solution and how to host it. But they were facing problems on how to scale and manage with little downtime, and that's the reason we moved to Confluent Cloud." Though none of the interviewees was able to quantify this benefit, each spoke about its value to their organization.

  A head of data engineering and integration at an e-commerce company said: "We considered what the future looked like for Kafka, looked within the organization, and listed what we could do with it. We could either carry on down the self-hosting route with the OSS version. That would have meant some significant investment in hiring, training, and getting the expertise in to make sure

that it was production-grade at 99.9% availability. Or we could look at managed options in the market. We went with Confluent Cloud."

- **Real-time data.** Interviewees also talked about a benefit in having real-time data for faster decision-making and digital consumer experiences. A VP of data at an automotive logistics organization said: "We need to meet a quick real-time data expectation. I just need the data when I need it and whenever I want to deal with it. What Confluent Cloud gave me is that ability. It allows me to connect to all the data sources that my organization has and to bring it all into one central place very quickly in real time. Confluent gives me the ability and allow me to then move that data to a data-at-rest situation so I can do analysis very quickly, continuously, and constantly."

FLEXIBILITY

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement Confluent Cloud and later realize additional uses and business opportunities, including:

- **Opportunities to explore new uses for data.** Interviewees told Forrester that with Confluent Cloud, they now see new opportunities to explore and experiment with event data.

  A head of data engineering and integration at an e-commerce organization explained: "With the investment in Confluent Cloud, flexibility comes as more people are onboarded onto the platform itself. As we've got more data in Confluent Cloud, it gives us more flexibility to try new things with that data. Right now, what we can see is that data scientists can look at this new event data and see if there are opportunities for us to try new things. Because that data is available offline for data scientists but also online for development teams, we can quite quickly spin something out to see if it makes a difference or not. We expect that flexibility will grow over time, and we see it opening more and more opportunities as well."

- **Improved productivity and speed-to-market.** Interviewees explained that using Confluent Cloud has released experts to focus on next-generation applications, bringing them to market faster. When asked about the flexibility that Confluent Cloud affords his team, a manager of engineering at an internet TV services company said: "Our team is developing the next iteration or the new generation of a system right now. Only four engineers were able to be working on it before Confluent Cloud. Now, the entire team of six engineers are working on that. This has reduced their delivery time on that application. It was originally scheduled for end of next year. Now, it has come down to the second quarter. So, we reduced the delivery date by six months."

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix A).

Analysis Of Costs

Quantified cost data as applied to the composite

Total Costs							
Ref.	**Cost**	**Initial**	**Year 1**	**Year 2**	**Year 3**	**Total**	**Present Value**
Dtr	Confluent Cloud spend	$66,000	$175,450	$260,150	$375,100	$876,700	$722,318
	Total costs (risk-adjusted)	$66,000	$175,450	$260,150	$375,100	$876,700	$722,318

CONFLUENT CLOUD SPEND

Evidence and data. Interviewees told Forrester that Confluent Cloud is priced using a consumption-based model that was broken into two main components: cloud consumption and support services fees.

Interviewees' organizations provided usage volume and throughput estimates and Confluent used a proprietary measurement unit called CKUs (Confluent unit for Kafka) to generate the consumption and support services fees.

Modeling and assumptions. Forrester developed a composite organization from an aggregation of characteristics of the interviewee's organizations. Forrester made the following assumptions:

- The composite organization's data streaming needs grow each year.
- For simplicity, Forrester assumes that consumption level is constant during a year and is scaled to the next level at the beginning of each year.
- Confluent provided the price for the composite organization's needs each year depending on consumption forecast.

Risks. Interviewees' organizations faced different event-streaming needs. The frequency and breadth of events among other factors influence Confluent Cloud usage. This resulted in various risks for modeling the cost for the composite organization because many factors impact Confluent Cloud spend, including:

- The types of Kafka environments used. Prices can change depending on the type of cluster used (e.g., from development to staging to production environments).
- The number of clusters in each environment operated and whether they are basic or dedicated environments.
- The number of managed connectors needed to support the environments.
- The write/read throughput required to serve use cases for individual organizations.
- The data retention duration.
- The level of support services required, etc.

Results. To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $722,300.

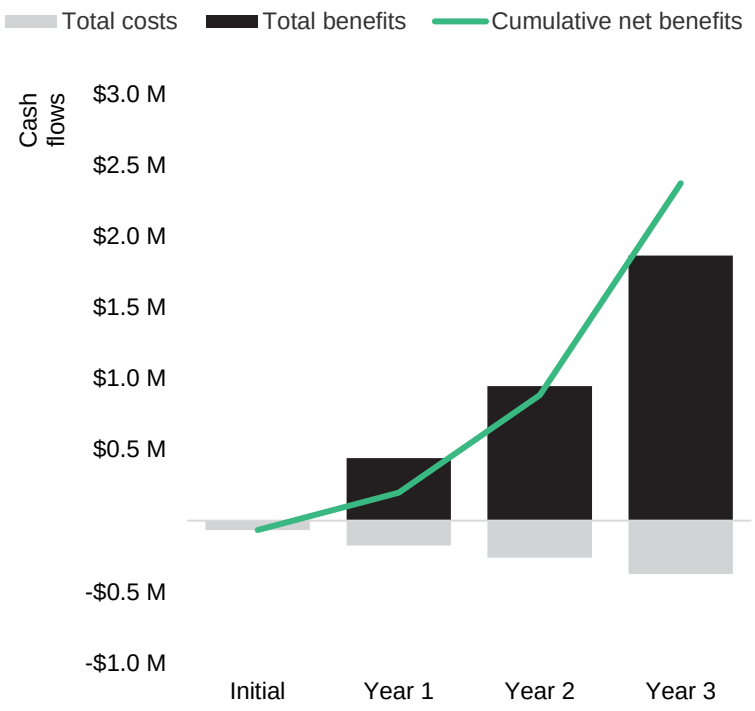
Confluent Cloud Spend

Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
D1	POC	Interviews	$60,000			
D2	Cloud consumption	Confluent		$145,000	$215,000	$310,000
D3	Support services fees	Confluent		$14,500	$21,500	$31,000
Dt	Total Confluent Cloud spend	D1+D2+D3	$60,000	$159,500	$236,500	$341,000
	Risk adjustment	↑10%				
Dtr	Total Confluent Cloud spend (risk-adjusted)		$66,000	$175,450	$260,150	$375,100
	Three-year total: $876,700			**Three-year present value: $722,318**		

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.

Cash Flow Analysis (Risk-Adjusted Estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	($66,000)	($175,450)	($260,150)	($375,100)	($876,700)	($722,318)
Total benefits	$0	$439,250	$946,000	$1,864,000	$3,249,250	$2,581,587
Net benefits	($66,000)	$263,800	$685,850	$1,488,900	$2,372,550	$1,859,269
ROI						257%
Payback						<6 months

Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

TOTAL ECONOMIC IMPACT APPROACH

Benefits represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

Costs consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.

Flexibility represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

Risks measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.

PRESENT VALUE (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.

NET PRESENT VALUE (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.

RETURN ON INVESTMENT (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.

DISCOUNT RATE

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.

PAYBACK PERIOD

The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

Appendix B: Endnotes

[1] Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders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