

FORRESTER®

The Total Economic Impact™ Of Fastly Network Services

Cost Savings And Business Benefits
Enabled By Fastly Content Delivery Network

JULY 2023

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ABOUT FORRESTER CONSULTING

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Executive Summary

Companies face increasing pressure to seamlessly deliver dynamic digital content to consumers while creating engaging online platforms that keep customers coming back. Fastly Network Services delivers high availability and performance for content delivery while enabling companies to make faster, smarter decisions on design, site content, and technical support. Organizations can drive savings on internally managed hardware and connections, top-line revenue growth, and operational productivity gains.

Fastly Network Services offers companies a fully configurable content delivery network (CDN) utilizing a modern network design with instant purging and edge caching to optimize website and application performance across digital and mobile platforms. Through end-to-end data and insights and real-time logging visibility into consumer behaviors, companies can enhance site features and content while improving customer engagement and retention. Moreover, reducing manual processes, improving self-service capabilities, and decommissioning legacy equipment can lead to cost savings for operational efficiencies and internally managed expenses.

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

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed

KEY STATISTICS



Return on investment (ROI)

189%



Net present value (NPV)

\$5.72M

five representatives from four organizations with experience using Fastly CDN. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single composite organization: an omnichannel B2C that generates more than \$1 billion in revenues annually across 20 countries globally.

Interviewees stated that prior to investing in Fastly CDN, their organizations dealt with slow performance for web and streaming services coupled with high costs for on-premises hardware and data center interconnectivity, as well as high volumes of technical and security issues. Previous CDN solutions were disjointed, offered limited visibility into website activity, and limited teams' ability to make design and content changes, encumbering operational processes. This led to missed opportunities for customer retention and conversions.

With the investment in Fastly CDN, interviewees shared that their organizations saw improved web

Improved mean time to
deploy changes:

10x



performance and scalability by serving content closer to customers through superior edge caching, reduced purging time, and optimized load balancing. With Fastly, companies were able to realize cost savings by decreasing investments in internal hardware, software, and data egress while streamlining processes and improving business agility to drive speed to deployment of site features and content. These advancements led to improved digital traffic delivery, enhanced customer conversions, and increased top-line revenue growth. Operational efficiency gains allowed organizations to redeploy resources to higher-value tasks while improving the end-to-end experience for consumers.

KEY FINDINGS

Quantified benefits. Three-year, risk-adjusted present value (PV) quantified benefits for the composite organization include:

- **Reduced internally managed hardware and data center interconnectivity costs generated \$2 million savings over three years.** As the composite organization utilizes Fastly CDN to shift the delivery of more content to the edge for more dynamic and efficient CDN performance, the organization significantly reduces the cost for servers, circuits, and other physical hardware. The composite organization can simplify its internal network infrastructure and decrease data egress costs. Overall, the composite organization saves 20% on the cost of connections and 10% on internally managed hardware.
- **Increased online traffic by 30% over three years.** Improved performance, higher confidence, and programmability through Fastly allow for quicker throughput on design and feature delivery for the composite organization. Significantly improved mean-time-to-deploy changes enables the company to address technical issues and optimize the customer experience. Overall, the organization sees gains of more than \$2.7 million.
- **Increased customer conversions leading to gains of \$3.2 million.** Fastly CDN enables the composite organization to improve insights into customer behaviors while delivering increased capabilities and self-service to operational users. The company can positively influence consumer engagement online through increased observability of end-to-end behaviors. The composite organization sees a 10% gain in conversions for customers compared to its previous solution.
- **Increased productivity leading to gains of \$329,000.** Through enhanced programmability and the simplification of internal processes, the composite organization sees operational efficiency benefits from website feature changes, technical support, and content management. By improving development cycle times and decreasing security incidents, the composite sees up to a 25% gain in productivity achieved from operational teams interacting with Fastly CDN.
- **Gained \$518,000 from eliminated current point solutions.** With the investment in Fastly

“The ability to serve content closest to the customer [with Fastly] — even though your infrastructure might be on the other side of the world — it’s critical. We have statistical evidence that conversion rate is almost linearly correlated with performance.”

Director of engineering, travel and hospitality

CDN, the composite organization retires legacy imaging software and CDN solutions, driving a three-year benefit of \$518,000.

“Faster development times, increased site performance, cross-platform functionality, and front-end flexibility are all attributable to shifting into Fastly.”

*Chief security officer,
e-commerce*

Unquantified benefits. Benefits that provide value for the composite organization but are not quantified in this study include:

- **Improvements in security.** The composite organization can reduce cyberattacks and automatically stop malicious activity through layered security features, including distributed denial of service (DDoS), delivered through Fastly CDN. The composite sees a decrease in website downtime from improved agility to react to traffic surges and quickly address security incidents. It also sees a 15% decrease in unauthorized streaming across its digital platforms.
- **Increased employee and customer satisfaction.** Fastly enables teams to focus on completing higher-value tasks and innovation instead of troubleshooting issues. With improved quality of content and better site performance, customers get a better digital experience.

Costs. Three-year, risk-adjusted PV costs for the composite organization include:

- **Enterprise license fees of \$2.6 million.** Fastly CDN costs depend on the scope of bandwidth, file requests, supporting features, and level of support deployed. During the three-year investment period, costs for the composite organization are slightly less than \$2.6 million.
- **Implementation, configuration, and maintenance costs of \$472,000.** The composite organization uses internal resources for the planning, integration, and testing of Fastly during implementation. The composite company incurs ongoing costs based on IT engineering support for configuration and maintenance tasks. Overall, these costs represent 16% of the total investment in Fastly CDN for the composite organization.

The representative interviews and financial analysis results showed that a composite organization experiences benefits of \$8.75 million over three years versus costs of \$3.03 million during this time period, adding up to a net present value (NPV) of \$5.72 million and an ROI of 189%.



ROI
189%

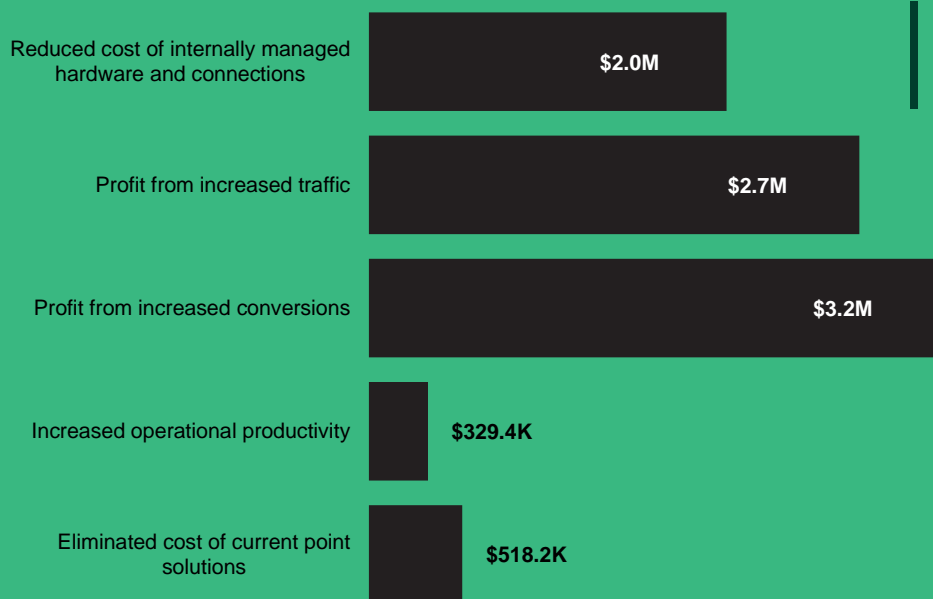


BENEFITS PV
\$8.75M



NPV
\$5.72M

Benefits (Three-Year)



Interviewees' companies saw a 20% decrease in data egress costs and a 10% decrease in hardware costs.

“Ease of use, speed of product delivery, and being able to keep up with the latest and greatest web performance or application development trends are key value drivers [of Fastly].”

— Chief security officer, e-commerce

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 Fastly CDN.

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 Fastly CDN can have on an organization.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Fastly 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 Fastly CDN.

Fastly 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.

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



DUE DILIGENCE

Interviewed Fastly stakeholders and Forrester analysts to gather data relative to Fastly CDN.



INTERVIEWS

Interviewed five representatives at four organizations using Fastly CDN 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 interviewees.



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.

The Fastly CDN Customer Journey

■ Drivers leading to the Fastly CDN investment

Interviews			
Role	Industry	Geography Of Operations	Revenue
Chief security officer	E-commerce	Global — 195 countries	\$1 to \$10 billion
Director of engineering	Travel and hospitality	United Kingdom	\$10 to \$100 million
Senior software developer	Media and entertainment	North America	\$10 to \$50 billion
Senior principal architect Digital release manager	Financial services	Global — 20 countries	\$1 to \$10 billion

KEY CHALLENGES

Prior to investing in Fastly CDN, interviewees came from widely distributed companies that were typically using a combination of CDN, content management, and analytical tools to support their website and streaming platforms. Although their organizations came from different industries and have a diverse array of customers, they shared an increased need to deliver robust global websites and streaming platforms to their consumers.

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

- **Slow performance for website and streaming services.** Interviewees discussed how their prior solutions were not adequate to deliver a fast and seamless experience for their customers. Slow load times on web pages caused elevated customer churn rates and premium subscription cancellations. The director of engineering in a travel and hospitality organization shared their experience: “[Prior to Fastly], our site couldn’t cope with the amount of users that were using it. There was no ability to cache any of the services or serve faster content to the customer.”
- **Technical issues negatively impacted website uptime and customer experience.** Engineers

spent significant time dealing with technical issues and reacting to malicious activities based on a lack of visibility with the previous solution. Persistent technical issues negatively impacted consumers, leading to lost revenue opportunities as users abandoned the site. The senior software developer in a media and entertainment organization shared, “A lot of our time would be wasted troubleshooting customer problems and tickets, which was a symptom of having an underperforming CDN.”

“The biggest differentiator from Fastly is the sheer level of configurability. You can change practically anything within the network services stack to manipulate requests, enhance them, send something to a different back-end system or to a different origin.”

Director of engineering, travel and hospitality

- **Lack of self-service and limited ability to innovate with prior solutions.** Software developers and marketing teams were dependent on third-party support and technical engineers to effect change to their companies' website and streaming platforms. Without the ability to self-serve, deployment of new features and strategies was limited. The chief security officer in e-commerce described their experience: "The product suite [with our previous CDN provider] was kind of discombobulated [and] not very well integrated. They have a control panel which felt clunky to use, and they were slower to roll out features than Fastly."
- **Elevated costs for on-premises hardware and data center interconnectivity to support website and streaming services.** Companies maintained excess equipment, capacity, and operational support staff due to inefficiencies with their prior solutions. The senior software developer in a media and entertainment firm shared, "We were spending money on enhancing our origin servers and adding capacity to our on-premises and origin network because CDN offload was not being handled properly [with our previous provider]."

INVESTMENT OBJECTIVES

The interviewees' organizations searched for a solution that could:

- Serve more content closer to the customer to deliver improved website and streaming performance on a global scale.
- Enable more internal innovation through self-service of design and marketing deployments with improved programmability.
- Mitigating risk for content downtime and malicious site traffic.

The chief security officer in e-commerce described: "The challenge was trying to democratize the edge

layer. So effectively shift it so that the developers could own their own edge configuration."

After a request for proposal (RFP) and business case process evaluating multiple vendors, the interviewees' organizations chose Fastly CDN based on their superior service, reputation with existing clients, and available features.

- Interviewees felt Fastly outshone competitors with its superior web performance, configurability, and ease of use, leading to faster product delivery.
- The director of engineering in travel and hospitality discussed their company's evaluation criteria: "[The first criterion was] time to first byte with Fastly compared to all other content delivery networks. Second was the additional features giving us control of image optimization to reduce page load, improve developer experience, and enhance configurability. Fastly was generally better at all of them."

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 five interviewees from four organizations, and it is used to present the aggregate financial analysis in the next section. The composite organization has the following characteristics:

Description of composite. The omnichannel B2C supports multiple brands and maintains a high stock-keeping unit (SKU) count of products across its e-commerce and digital operations. The company generates more than \$1 billion in annual revenue and is supported by 5,000 employees internationally, including 10 software developers, six security engineers, and 20 digital experience managers. The composite organization is headquartered in the United States with 250 million site visits to its online platforms spread across 20 countries globally.

Deployment characteristics. The composite organization deploys Fastly CDN over a three-month period including the planning process and integration within their technical infrastructure. A six-person implementation team of software developers, engineers, and customer experience managers helps support the initial transition to the new platform. The organization decommissions its legacy CDN solution shortly after implementation of Fastly CDN.

Key Assumptions

- **Omnichannel B2C**
- **Over \$1 billion revenue**
- **250 million annual site visits**
- **5,000 employees**

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	Reduced cost of internally managed hardware and connections	\$800,000	\$800,000	\$800,000	\$2,400,000	\$1,989,482
Btr	Profit from increased traffic	\$1,000,000	\$1,100,000	\$1,210,000	\$3,310,000	\$2,727,273
Ctr	Profit from increased conversions	\$1,168,750	\$1,285,625	\$1,414,188	\$3,868,563	\$3,187,500
Dtr	Increased operational productivity	\$132,473	\$132,473	\$132,473	\$397,418	\$329,440
Etr	Eliminated cost of current point solutions	\$127,500	\$255,000	\$255,000	\$637,500	\$518,238
	Total benefits (risk-adjusted)	\$3,228,723	\$3,573,098	\$3,811,660	\$10,613,480	\$8,751,933

REDUCED COST OF INTERNALLY MANAGED HARDWARE AND CONNECTIONS

Evidence and data. Through improved efficiencies for edge caching, load balancing, and dynamic content delivery with Fastly CDN, interviewees' companies were able to reduce their investment in internal servers, equipment, and data center interconnectivity. Interviewees described how their companies were able to realize significant savings for internally managed infrastructure and data egress costs with the transition from legacy solutions.

- Representatives discussed how their organizations were able to save on physical equipment including servers and circuits previously used to cache data or as load balancers to manage online traffic.
- The chief security officer in e-commerce discussed their experience: "Another benefit was the image compression technology, Fastly Image Optimizer, which has had a significant impact on end-user experience because pages and images load faster with higher quality and [a] smaller number of bytes. We were able to shut off or

deprecate internal legacy software that was processing images and was not able to keep up."

- The director of engineering in travel and hospitality discussed how Fastly helped their company simplify their internal infrastructure and processes: "Because we were able to cache at the top level with Fastly, we removed multiple hops where we had Varnish caching, and we removed a lot of complexity in network layers between Fastly to our load balancer to Kubernetes to our service that was serving up the website."
- Companies were able to save on data egress costs with their investment in Fastly CDN. One representative shared that their company realized more than a 30% savings on egress bandwidth based on network optimization and efficiencies compared to alternative options.

Decreased data egress costs



Modeling and assumptions. To reflect the interviewees’ experiences, Forrester assumes the following about the composite organization:

- The composite has annual costs of \$4 million to maintain data center interconnectivity to its websites and streaming platforms and \$2 million for internally managed hardware and infrastructure.
- After deployment of Fastly CDN, the organization sees a 20% decrease in the cost of connections and a 10% decrease in internally managed hardware.

Flexibility. Forrester traditionally views flexibility benefits as future supplemental value enabled by longer-term added investments. Flexibility can also be applied to nearer-term and alternative scenarios by considering the potential of investment decisions beyond a benefit’s financial measurement, providing relevancy to readers.

- Companies may measure value as improved business agility based on decreasing their reliance on hardware infrastructure with the investment in Fastly CDN. Representatives’ organizations were better able to rapidly scale their website platforms globally and improve time to market by leveraging Fastly CDN capabilities. The digital release manager in financial services discussed: “We have confidence that Fastly gives us the scale that we need. Traditionally, we would have been spending a lot more time preparing for each site launch and doing a lot

more due diligence. We don’t have to go back to the drawing board and go through all of those approval steps, which could take months and slow the marketing teams down.”

He continued with an example: “During the 2020 lockdown, we launched 14 new websites in 14 days. We didn’t have to stand up more servers or put through more requests and get additional sign-off. Fastly gave us that ability to scale with our current architecture.” With scalability, organizations can more quickly expand to new users and markets, leading to new sales opportunities.

- Companies could realize additional hardware and connections savings based on their investment in other product features offered through Fastly. The senior principal architect in financial services shared how their company was using Fastly’s Compute@Edge product: “The ability to have Compute@Edge has allowed us to do things which would not have been possible in the normal infrastructure or would require much more underlying hardware to support it.”

“Instead of having to buy new hardware or do new rentals, we were able to downsize or reduce without having to reinvest. We’ve also been able to get rid of load balancers on-prem. We just shifted the traffic flow through Fastly.”

Chief security officer, e-commerce

Risks. The value of this benefit may vary in other organizations due to:

- The cost of managing the organization’s existing data infrastructure and connections.
- The previous solutions deployed, which could impact the magnitude of efficiencies gained by utilizing Fastly CDN.

- The scope of features utilized through Fastly.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of almost \$2 million.

Reduced Cost Of Internally Managed Hardware And Connections					
Ref.	Metric	Source	Year 1	Year 2	Year 3
A1	Cost of connections prior to Fastly	Composite	\$4,000,000	\$4,000,000	\$4,000,000
A2	Reduction in cost of connections through Fastly	Interviews	20%	20%	20%
A3	Subtotal: Reduced cost of connections	A1*A2	\$800,000	\$800,000	\$800,000
A4	Cost of internally managed hardware prior to Fastly	Composite	\$2,000,000	\$2,000,000	\$2,000,000
A5	Reduction in internally managed hardware with Fastly	Interviews	10%	10%	10%
A6	Subtotal: Reduced cost of internally managed hardware	A4*A5	\$200,000	\$200,000	\$200,000
At	Reduced cost of internally managed hardware and connections	A3+A6	\$1,000,000	\$1,000,000	\$1,000,000
	Risk adjustment	↓20%			
Atr	Reduced cost of internally managed hardware and connections (risk-adjusted)		\$800,000	\$800,000	\$800,000
Three-year total: \$2,400,000			Three-year present value: \$1,989,482		

PROFIT FROM INCREASED TRAFFIC

Evidence and data. Making the transition to Fastly CDN enabled interviewees' organizations to improve performance across their website and streaming platforms while supporting rapid content changes and agile development of new software and feature enhancements. Representatives shared how software development and marketing teams were able to improve speed to deployment and quickly address technical issues. Ultimately, companies saw increased site traffic based on improved customer retention and engagement online.

- The chief security officer in e-commerce shared the impact that Fastly CDN had for their company: "Traffic went up 20% to 30% after [Fastly]. The page speed scores, Lighthouse scores have all improved. It was an enabler, and without it, our time to market would have been much longer."
- Representatives shared that their organizations saw a 10x improvement for mean-time-to-deploy changes. In addition, when an issue occurred, companies saw a significant improvement in the ability to revert changes without impact to customers. With higher confidence and programmability, development and content management teams were better able to experiment with feature improvements and campaigns to improve the user experience.

"Confidence has gone up and complexity has gone down when it comes to [release] cycle time with Fastly."

Chief security officer, e-commerce

"The performance [with Fastly] is, quite frankly, stellar. Our videos' rebuffering numbers have dropped by up to 75%."

Senior software developer, media and entertainment

- The director of engineering in travel and hospitality shared the key features of Fastly CDN that were helping speed to deployment for their company: "The zero-downtime continuous ability to deploy changes to the CDN [is key]. We use Terraform to do all of the configuration changes with Fastly, and it is seamless."
- Interviewees discussed how their companies saw improved page speeds and decreased technical incidents for B2B and B2C customers. These improvements led to improved customer engagement sitewide and lower customer churn.

Modeling and assumptions. For the financial analysis, Forrester assumes:

- The composite organization converts 2% of 250 million site visits across its online platforms prior to investing in Fastly CDN.
- The composite experiences a 10% increase in site traffic annually over three years as improved site performance leads to decreased customer churn.
- The average order value of each transaction is \$25. A 10% profit margin is applied to these sales to account for indirect costs.
- The composite sees a 10% improvement in site traffic annually and an overall increase of more than 30% over a three-year period.

Flexibility. Forrester traditionally views flexibility benefits as future supplemental value enabled by longer-term added investments. But flexibility can also be applied to nearer-term investments and scenarios that are not factored into the composite organization analysis but may be relevant to many readers.

For example, companies using a streaming services model could measure Fastly CDN impact to top-line revenues through subscription volumes. The senior software developer in media and entertainment shared that their company saw a 60% drop in cancellations for video quality of its premium subscription package. With improved rebuffering and the ability to refresh dynamic content at the edge, interviewees shared that customers were staying longer and were better engaged in the long term.

With improved site traffic and site performance after investing in Fastly CDN, companies could see benefit from increasing marketing revenue on their online

platforms as well as reducing marketing costs on third-party sites. The director of engineering in travel and hospitality shared that Fastly was helping their company improve marketing campaign efficiencies by 10%, with improved ad ratings driving lower rates for paid search.

Risks. The value of this benefit may vary in other organizations due to:

- The organization’s relative size, customer base, industry, and geography of operations.
- The previous solutions deployed impacting the magnitude of efficiencies gained by utilizing Fastly CDN.
- The scope of features utilized through Fastly.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV of over \$2.7 million.

Profit From Increased Traffic					
Ref.	Metric	Source	Year 1	Year 2	Year 3
B1	Annual site visits before Fastly	Composite	250,000,000	275,000,000	302,500,000
B2	Percentage increase in site visits after Fastly	Interviews	10%	10%	10%
B3	Annual site visits after Fastly	$B1*(1+B2)$	275,000,000	302,500,000	332,750,000
B4	Conversion rate before Fastly	Composite	2.0%	2.0%	2.0%
B5	Average order value	Composite	\$25	\$25	\$25
B6	Profit margin	TEI standard	10%	10%	10%
Bt	Profit from increased traffic	$(B3-B1)*B4*B5*B6$	\$1,250,000	\$1,375,000	\$1,512,500
	Risk adjustment	↓20%			
Btr	Profit from increased traffic (risk-adjusted)		\$1,000,000	\$1,100,000	\$1,210,000
Three-year total: \$3,310,000			Three-year present value: \$2,727,273		

PROFIT FROM INCREASED CONVERSIONS

Evidence and data. Beyond increasing overall site traffic, interviewees shared that their companies were able to increase conversion rates based on the investment in Fastly CDN. With improved insights, enhanced programmability, and expanded capabilities through Fastly's platform, organizations improved the end-to-end customer experience to influence the time customers engaged with their online platforms and increase top-line revenue.

- The director of engineering in travel and hospitality discussed how Fastly CDN's capabilities helped their company efficiently test new features and improve customer conversion rates: "The experimentation platform [through Fastly] runs in microseconds, which means that it has no impact on our network's infrastructure. We've run multiple tests over the years, and those tests have each had an incremental uplift of 1% to 3% on conversions."
- Representatives' organizations had better visibility into website activity and customer behavior through log streaming and reporting in Fastly. The director of engineering in travel and hospitality shared: "Log streaming was a huge benefit because we never had that sort of visibility from all of our traffic and the content delivery network. We could spot issues that we might never have seen before."
- With smarter and faster capabilities, interviewees' organizations significantly improved conversion rates, with one company seeing an increase of more than 100% since deploying Fastly CDN.

Modeling and assumptions. To reflect the interviewees' experiences, Forrester assumes the following about the composite organization:

- The composite organization has 275 million annual site visits in its first year after deploying Fastly CDN, which grows to more than

330 million visits in Year 3 as site traffic increases.

- The composite converts 2% of visits to sales at an average order value of \$25 prior to its investment in Fastly CDN.
- After deployment of Fastly, the composite sees a 10% lift in conversions based on improved customer engagement.
- Net profit margin is assumed to be 10% for the composite.

"I think Fastly are leaders in observability, which improved our ability test. We've seen our performance improve over time and have visibility from web analytics and log analytics that we get straight from Fastly."

Director of engineering, travel and hospitality

"We have more customers staying longer and streaming longer, so there's more retention of people's attention [with Fastly]."

Senior software developer, media and entertainment

Risks. Several factors may affect the impacts organizations experience, including the following:

- The organization’s relative size, customer base, industry, revenue model, and geography of operations.
- The previous solutions deployed, which could impact the magnitude of efficiencies gained by utilizing Fastly CDN.
- The scope of features utilized through Fastly.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of \$3.2 million.

Profit From Increased Conversions					
Ref.	Metric	Source	Year 1	Year 2	Year 3
C1	Annual site visits after Fastly	B3	275,000,000	302,500,000	332,750,000
C2	Conversion rate before Fastly	Composite	2.0%	2.0%	2.0%
C3	Net increase in conversion rate with Fastly	Interviews	10%	10%	10%
C4	Conversion rate after Fastly	$C5*(1+C3)$	2.2%	2.2%	2.2%
C5	Average order value	Composite	\$25	\$25	\$25
C6	Profit margin	TEI standard	10%	10%	10%
Ct	Profit from increased conversions	$C1*(C4-C2)*C5*C6$	\$1,375,000	\$1,512,500	\$1,663,750
	Risk adjustment	↓15%			
Ctr	Profit from increased conversions (risk-adjusted)		\$1,168,750	\$1,285,625	\$1,414,188
Three-year total: \$3,868,563			Three-year present value: \$3,187,500		

INCREASED OPERATIONAL PRODUCTIVITY

Evidence and data. Improved ease of use, quicker time to value, and decreased security incidents through Fastly CDN led to operational gains and smarter decision-making at interviewees' organizations.

- Based on interviewee responses, organizations were better able to self-service website changes after the investment in Fastly CDN. With rapid optimization for web platforms and improved programmability over legacy solutions, companies were able to improve process efficiencies across development and digital experience teams.
- The director of engineering in travel and hospitality shared how Fastly CDN had simplified and improved their internal processes: "We've now implemented a redirect service in Fastly that our team can control, which means that there are no engineering changes they need to do. Every time the engineer or the content editor wants to add a redirect, they can do it directly with Fastly."
- Security incidents decreased for representatives' companies as they spent less time troubleshooting customers issues. One company saw a 40% decrease in security incidents with the deployment of Fastly CDN.

"We have the confidence with Fastly to run any campaign at scale without worrying if we are ready or needing monthslong collaboration [with third-party partners]."

Senior principal architect, financial services

"When complaints went away [after deploying Fastly], that freed up a lot more time for people to do innovative work. In terms of bottom line, it means more customer retention because a happy customer won't cancel the service."

Senior software developer, media and entertainment

Modeling and assumptions. For the financial analysis, Forrester assumes:

- The composite organization utilizes 50% of the time of 10 software developers, 50% of the time of six security engineers, and 25% of the time of 20 digital experience managers to manage online platforms across web and mobile.
- With the investment in the Fastly CDN platform, the composite sees a 10% to 25% improvement in performance across teams.
- The company maintains current staffing despite significantly increased website traffic and transactions based on efficiencies gained with Fastly CDN.
- The average fully burdened annual salaries for impacted teams are \$148,500 for software developers, \$132,500 for security engineers, and \$93,150 for digital experience managers.
- The productivity recapture rate for efficiency gains is assumed to be 50% for the composite organization, as not all recaptured time will be repurposed for value-adding work.

Risks. The value of this benefit may vary in other organizations based on the following:

- The organization’s relative size, customer base, industry, and location of operations.
- The skill level, efficiency, and salaries of the employees within the organization

- The relative maturity of the company’s digital platforms and the strength of the previous solutions.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of more than \$329,000.

Increased Operational Productivity					
Ref.	Metric	Source	Year 1	Year 2	Year 3
D1	Software developer FTEs	Composite	10	10	10
D2	Time spent on website development	Interviews	50%	50%	50%
D3	Software developer fully burdened annual salary	TEI standard	\$148,500	\$148,500	\$148,500
D4	Increase in productivity with Fastly investment	Interviews	25%	25%	25%
D5	Subtotal: Increased software developer productivity	D1*D2*D3*D4	\$185,625	\$185,625	\$185,625
D6	Security engineer FTEs	Composite	6	6	6
D7	Time spent on technical support	Interviews	50%	50%	50%
D8	Security engineer fully burdened annual salary	TEI standard	\$132,500	\$132,500	\$132,500
D9	Increase in productivity with Fastly investment	Interviews	20%	20%	20%
D10	Subtotal: Increased security engineer productivity	D6*D7*D8*D9	\$79,500	\$79,500	\$79,500
D11	Digital experience manager FTEs	Composite	20	20	20
D12	Time spent on website optimization	Interviews	25%	25%	25%
D13	Digital experience manager fully burdened annual salary	TEI standard	\$93,150	\$93,150	\$93,150
D14	Increase in productivity with Fastly investment	Interviews	10%	10%	10%
D15	Subtotal: Increased digital experience manager productivity	D11*D12*D13*D14	\$46,575	\$46,575	\$46,575
D16	Productivity recapture rate	TEI standard	50%	50%	50%
Dt	Increased operational productivity	(D5+D10+D15)*D16	\$155,850	\$155,850	\$155,850
	Risk adjustment	↓15%			
Dtr	Increased operational productivity (risk-adjusted)		\$132,473	\$132,473	\$132,473
Three-year total: \$397,418			Three-year present value: \$329,440		

ELIMINATED COST OF CURRENT POINT SOLUTIONS

Evidence and data. After adopting Fastly CDN, interviewees’ companies were able to retire legacy imaging software, content management systems, and CDN solutions due to Fastly’s improved features and functionality.

- The senior principal architect in financial services discussed, “The main criterion was finding a cost-effective solution, and Fastly had features which were more advanced than what normal CDNs can offer.”
- The chief security officer in e-commerce shared that their company saw savings for eliminated current point solutions equal to their entire investment in Fastly.

Modeling and assumptions. For the financial analysis, Forrester assumes the following:

- The composite organization migrates from its legacy CDN solution immediately after Fastly CDN implementation.
- The nature of some licensing agreements and other considerations means costs for some legacy systems are still paid for the first six months after the deployment of Fastly CDN. Despite the overlap, the composite still sees value in deploying Fastly before its legacy contracts end.

- Overall, the composite organization sees savings of \$150,000 in the first year and annual savings of \$300,000 in subsequent years.

Risks. The total eliminated cost of current point solutions benefit will vary with:

- The existing capabilities of deployed tools prior to implementing Fastly CDN.
- The number and cost of legacy tools and solutions.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of \$518,000.

“There [are] features, products, and flags that we enable in Fastly that would never have been possible with any other CDN provider. This is absolutely invaluable.”

Senior software developer, media and entertainment

Eliminated Cost Of Current Point Solutions

Ref.	Metric	Source	Year 1	Year 2	Year 3
E1	Eliminated cost of current point solutions	Interviews	\$150,000	\$300,000	\$300,000
Et	Eliminated cost of current point solutions	E1	\$150,000	\$300,000	\$300,000
	Risk adjustment	↓15%			
Etr	Eliminated cost of current point solutions (risk-adjusted)		\$127,500	\$255,000	\$255,000
Three-year total: \$637,500			Three-year present value: \$518,238		

UNQUANTIFIED BENEFITS

Interviewees mentioned the following additional benefits that their organizations experienced but were not able to quantify:

- **Improved security for online platforms.** With Fastly CDN's core capabilities, interviewees shared how their companies were able to reduce cyberattacks and malicious traffic with layered security features that would kick in automatically. The chief security officer in e-commerce discussed: "We turned Fastly on, and suddenly all the malicious stuff, all the basic application-level attacks that used to trigger our operations center and response on our side, were just automatically dealt with. [It's] hard to quantify cost or value on that, but I can sleep better."
- **Reduced website downtime.** Interviewees shared that their companies were able to decrease downtime on their websites based on Fastly's capabilities to stop malicious activity and quickly react to traffic surges. The director of engineering in travel and hospitality shared: "Fastly, in multiple situations, blocked large swaths of traffic hitting us, which then in turn prevented us from going down because we couldn't have coped with that sort of scale-up. Those incidents could have lasted several hours where we were trying to scale back up for that traffic surge."

shared that their organizations were able to reduce unauthorized streaming by 15%.

"Fastly can deal with a lot more than the services we build internally. We are able to cache things at the edge, as well as serve up fast content and big content that is not going to affect any of our downstream services if we get hit by some bad actor."

Director of engineering, travel and hospitality

- **Improved employee satisfaction.** Interviewees shared how their organizations were able to leverage Fastly delivery to improve the quality of the experience for customers while redeploying employees to higher-value tasks. The senior software developer in media and entertainment described their experience: "Faster response times with Fastly for live events means you get to see what's happening with very little delay, which is great. Additionally, that just makes our lives easier on the technical side because we get to continue doing what we're doing instead of having to continuously troubleshoot, fix problems, and put out fires."
- **Increased Net Promoter ScoresSM (NPS).²** Interviewees noted that their companies saw improvements to customer satisfaction, with a 5% increase in NPS scores after their investment in Fastly CDN.
- **Best-in-class support.** All of the interviewees shared that Fastly had superior end-to-end support compared to legacy providers. The director of engineering in travel and hospitality

Improved NPS scores:

5%



- **Reduced unauthorized traffic.** Interviewees from companies with streaming capabilities

shared their experience: “I’ve worked with the Fastly engineers for quite some time. I think they’re exceptional, and they help a lot with figuring out bugs or helping us think about new or different ways of doing things.”

FLEXIBILITY

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

- **Simplified and holistic platform.** Interviewees shared how their companies were utilizing Fastly to simplify their technology stack and internal processes. Representatives shared how their organizations were investing in multiple Fastly products based on the holistic capabilities of the platform and the amplified benefits for their companies such as Fastly’s web application firewall (WAF) solution, Next-Gen WAF. The chief security officer in e-commerce described the impact for their company: “Another part of the economic impact is the web application firewall. Imagine all your traffic going to the edge: You check a box in Fastly, and it detects and removes attacks.”
- **Improved sustainability for data infrastructure driving lower costs.** Interviewees told Forrester that compared to their legacy on-premises data requirements, Fastly CDN aided their companies in advancing sustainability practices while reducing internal costs. The senior software developer in media and entertainment shared, “When we use Fastly services, we’re not spending money on running a data center just for ourselves, and we’re not overbuilding things.”

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

“Prior to us enabling WAF as part of the Fastly [platform], our engineers were getting two or three escalations per week during nonbusiness hours. After they implemented the security tools from Fastly, that went to nearly zero.”

Chief security officer, e-commerce

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
Ftr	Enterprise license fees	\$0	\$938,700	\$1,032,570	\$1,135,827	\$3,107,097	\$2,560,091
Gtr	Implementation, configuration, and maintenance costs	\$51,750	\$169,050	\$169,050	\$169,050	\$558,900	\$472,152
	Total costs (risk-adjusted)	\$51,750	\$1,107,750	\$1,201,620	\$1,304,877	\$3,665,997	\$3,032,243

ENTERPRISE LICENSE FEES

Evidence and data. Enterprise license fee costs for Fastly CDN are dependent on the bandwidth and file requests deployed through online platforms, features utilized, and the level of support the company uses.

Modeling and assumptions. For the analysis, Forrester assumes that the following about the composite organization:

- The composite utilizes enough bandwidth and file requests to service 100% of its online domains starting in Year 1.
- The organization utilizes Fastly services including instant purging, Fastly Image Optimizer, load balancing, and enterprise support for websites across its international brands.

- Pricing may vary. Contact [Fastly](#) for additional details.

Risks. Licensing fees will vary from company to company based on:

- The size of an organization and the overall scale of its engagement with Fastly.
- The licensing agreement and specific features an organization chooses.

Results. To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of less than \$2.6 million.

Enterprise License Fees							
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3	
F1	Enterprise license fees (annual)	Interviews		\$894,000	\$983,400	\$1,081,740	
Ft	Enterprise license fees	F1	\$0	\$894,000	\$983,400	\$1,081,740	
	Risk adjustment	↑5%					
Ftr	Enterprise license fees (risk-adjusted)		\$0	\$938,700	\$1,032,570	\$1,135,827	
Three-year total: \$3,107,097				Three-year present value: \$2,560,091			

IMPLEMENTATION, CONFIGURATION, AND MAINTENANCE COSTS

Evidence and data. Implementation, configuration, and maintenance costs to the Fastly CDN solution varied based on the size of the engagement sought by the interviewees and the overall size of the companies involved.

- Representatives said their companies utilized internal teams of two to 12 individuals to complete end-to-end planning and integration into their technology stacks, initial configuration, and testing for each of their platforms. Time to complete implementation ranged from one to six months depending on the number of resources deployed, the size and complexity of the organization's existing infrastructure, and the scope of services transitioning to Fastly.
- The senior software developer in media and entertainment discussed the experience for their company: "They helped us configure our initial setup and environment, and then because of the way that Fastly is designed, our team members took away their learnings and it was quite simple. I think from the time that we started until the time we were happy with the initial configuration, it was six months, which for an organization of this size and the way we do things is a very quick turnaround."
- Interviewees' companies described ongoing expenses for incremental configuration and maintenance to administer Fastly CDN as being relatively low compared to prior solutions. Most of the time was spent on site management, redirecting traffic, and maintaining security rule sets. Companies were able to maintain costs throughout their investment despite increased website content and traffic due to greater efficiencies with Fastly.

Modeling and assumptions. Forrester assumes the following conditions for the financial analysis:

- The composite organization utilizes 25% of the time of a team of six individuals over a three-month period to deploy the Fastly CDN platform across its online properties.
- The composite uses 30% of the time of four IT engineers to support configuration and maintenance for the Fastly CDN platform over the three-year investment period.
- The average fully loaded annual salaries for a planning and implementation team FTE and an IT engineer are \$120,000 and \$122,500, respectively.
- Overall, implementation, configuration, and maintenance costs represent 20% of the total costs for the composite organization.

“After one phone call with Fastly, we provided a copy of the existing configuration for a different provider, and Fastly matched the configuration one to one on their side. We were using it within three or four days of signing.”

Chief security officer, e-commerce

Risks. These costs will vary for different organizations based on the following factors:

- The skill set and salary levels of the planning and implementation team.
- The size and complexity of the organization's existing internal infrastructure and digital platform.

- The organization's requirements for internal risk management and compliance standards.

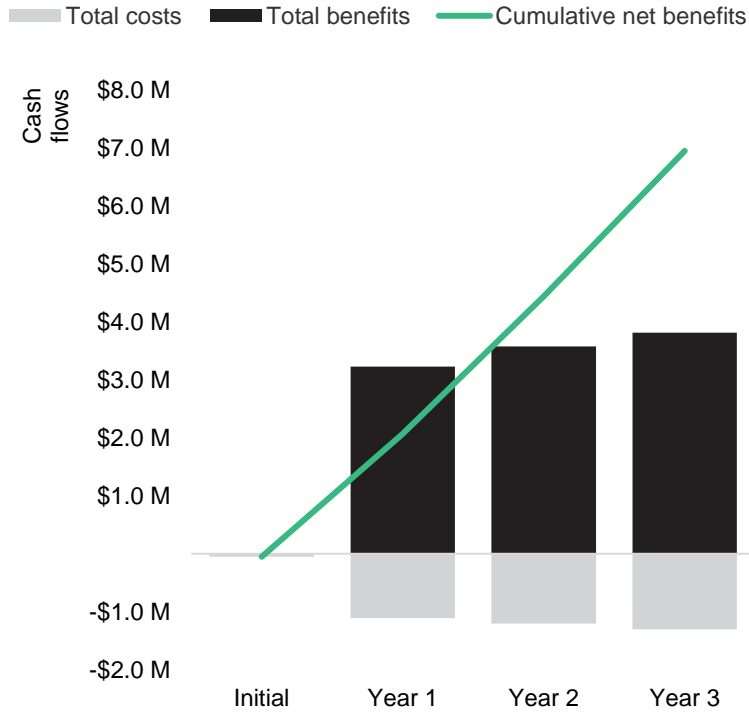
Results. To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of \$472,000.

Implementation, Configuration, And Maintenance Costs						
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
G1	Planning and implementation team FTEs	Interviews	6			
G2	Implementation period (months)	Interviews	3			
G3	Percentage of FTE time spent on planning and implementation	Interviews	25%			
G4	Planning and implementation team member fully loaded annual salary	TEI standard	\$120,000			
G5	Subtotal: Planning and implementation costs	$G1*(G2/12)*G3*G4$	\$45,000			
G6	IT engineer FTEs supporting configuration and maintenance updates	Interviews		4	4	4
G7	Time spent on configuration and maintenance updates	Interviews		30%	30%	30%
G8	IT engineer fully loaded annual salary	TEI standard		\$122,500	\$122,500	\$122,500
G9	Subtotal: Configuration and maintenance costs	$G6*G7*G8$		\$147,000	\$147,000	\$147,000
Gt	Implementation, configuration, and maintenance costs	$G5+G9$	\$45,000	\$147,000	\$147,000	\$147,000
	Risk adjustment	↑15%				
Gtr	Implementation, configuration, and maintenance costs (risk-adjusted)		\$51,750	\$169,050	\$169,050	\$169,050
Three-year total: \$558,900			Three-year present value: \$472,152			

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 and NPV for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI and NPV 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	(\$51,750)	(\$1,107,750)	(\$1,201,620)	(\$1,304,877)	(\$3,665,997)	(\$3,032,243)
Total benefits	\$0	\$3,228,723	\$3,573,098	\$3,811,660	\$10,613,480	\$8,751,933
Net benefits	(\$51,750)	\$2,120,973	\$2,371,478	\$2,506,783	\$6,947,483	\$5,719,690
ROI						189%

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%.

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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