FORRESTER®

The Total Economic Impact™ Of FullStory's Digital Experience Analytics Platform
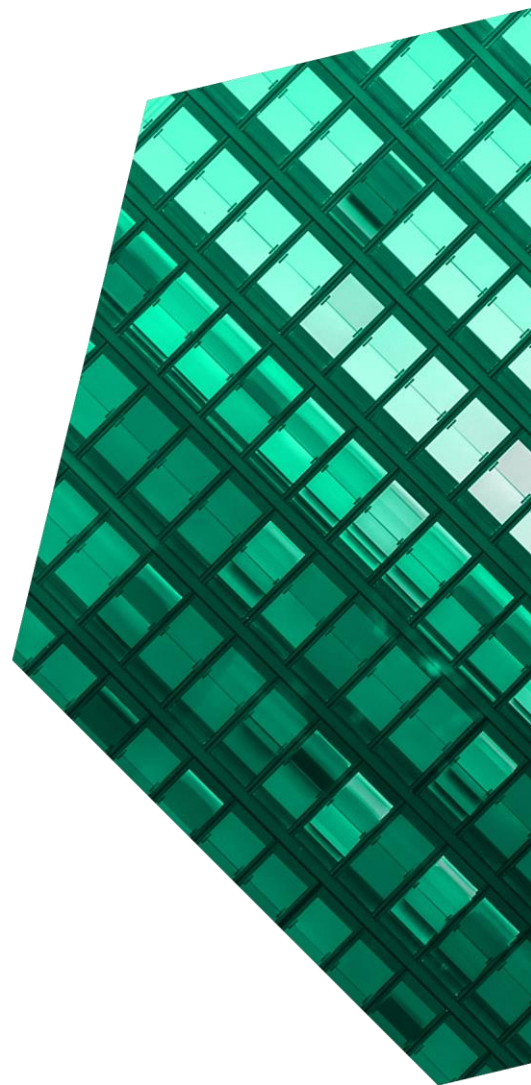
Cost Savings And Business Benefits
Enabled By FullStory

OCTOBER 2020

Table Of Contents

Consultant: *Rachel Ballard*

Executive Summary

> E-commerce enterprises rely on strong customer relationships and positive customer experiences to drive their online sales presence, which is especially important during times of crisis, such as the COVID-19 pandemic. FullStory offers organizations the ability to identify their customers' digital points of friction and quickly remediate them, thereby enhancing the customer journey, resulting in higher conversion rates, average order values (AOVs), and increased net sales.

FullStory commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying FullStory. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of FullStory on their organizations. FullStory is a digital experience analytics platform that provides complete digital interaction data, surfacing both quantitative and qualitative insights. The platform identifies, prioritizes, and helps address friction points within the digital experience, which can favorably impact an organization's bottom line.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed representatives of an organization with experience using FullStory. Forrester used this experience to project a three-year financial analysis.

Prior to using FullStory, the interviewed organization lacked access to the level of analytics it needed to make fully informed, real-time decisions. It relied on manual searches and customer feedback to find and fix issues in an effort to improve the customer experience and to enhance its checkout process. Limitations in visibility prevented the organization from efficiently identifying and eliminating friction in the customer journey, and digital visibility is especially critical for pandemic preparedness and recovery. When uncertainty is rampant and customers are having to relearn how to interact with brands, now at home on digital channels,

KEY STATISTICS

Return on investment (ROI)
411%

Net present value (NPV)
$5.63M

organizations need to make better, faster decisions to remain competitive.

After the investment in FullStory, the organization was able to extensively monitor site visits or sessions, as well as to see online consumer behavior in detail. With clear identification of pain points in its customer conversion funnel, it could now focus on quick and efficient remediation. FullStory provides a robust set of analytics that empowers employees to find and fix issues in a timelier manner, freeing up time for staff to perform more value-added work.

Cart conversion margin increase from net new sales:

$4.5 million

KEY FINDINGS

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

- **Cart conversion margin increase from net new sales.** With enhanced data available, the organization can identify areas of friction and resolve them before losing potential online customers. More site visitors have a positive experience, translating to lower cart abandonment, a higher AOV, and an increase in sales. The annual cart conversion increase results in a three-year, risk-adjusted PV of $4.5 million.

- **Avoided cost to remediate online customer fraud**. When a fraudulent checkout transaction is detected, the FullStory platform allows the organization to capture a malicious user's actions, enabling quick remediation by the development team. Forrester assumes that, with FullStory, the avoided customer fraud cost totals $1 million per year, resulting in a three-year, risk-adjusted PV benefit of $2.2 million.

> "The data from FullStory is very detailed. It can pick up every session and have a list of characteristics that give us more site performance than we expect. It also gives us more perspective into how the consumer is reacting to the site performance, helping us identify any little glitch that may deter from their experience."
>
> VOC manager, large retailer

- **Efficiencies gained in defect resolution.** With FullStory monitoring the organization's customer sessions, internal teams can resolve issues more efficiently than in their previous environment. Specifically, the product management team saves 20 hours per defect, and it eliminates its reliance on other teams to address issues, saving 8 hours per defect. The three-year PV, adjusted for risk, is $261,000.

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

- **Increases visibility.** Rather than relying primarily on individual customer feedback, which can be time-consuming to interpret and often requires staff from multiple teams, FullStory provides its users visibility to detect areas of friction on a large scale, prioritizing improvements with the most impact.

- **Encourages innovation.** With up-to-date information regarding a customer's journey, product developers, owners, and managers gain insight into the needs and desires of the organization's consumer. These insights are valuable, as they can direct future site, banner, and product line enhancements.

- **Provides instrumentation-free analytics.** The organization no longer needs to "tag" all possible customer behaviors. A tagging requirement can create gaps if the predicted behavior is incorrect. Instrumentation-free analytics allow the organization to automatically index every customer interaction, eliminating the need to predict behavior and providing the organization with real-time, accurate data.

- **Eliminates information silos.** Users across the organization gain efficiencies, as they can now access the same accurate digital experience data, reducing time needed to share details when issue resolution is required.

- **Offers simple integration and a user-friendly interface.** According to one interviewee, FullStory integrates well with other implemented, cloud-based solutions, enhancing the features already benefiting the organization. Additionally, the user-friendly interface enables new users to quickly adopt and realize the value of FullStory.

Costs. Risk-adjusted PV costs include:

- **Annual platform fee.** FullStory charges the interviewed organization a yearly platform fee of $492,500 per year, resulting in a three-year PV of $1.2 million. Note that this pricing reflects the needs of a very large organization and is not fixed.

- **Initial and ongoing costs.** The risk-adjusted initial and ongoing costs total $146,779 over three years. These costs include internal labor required for implementation as well as a one-time onboarding fee. The ongoing costs represent the internal labor necessary to maintain the platform, performing updates as needed.

Avoided cost to remediate online customer fraud:

—

$2.2 million

The interview and financial analysis found that this customer experiences benefits of $7.0 million over three years versus costs of $1.37 million, adding up to a net present value (NPV) of $5.63 million and an ROI of 411%.

ROI
411%

BENEFITS PV
$7.0M

NPV
$5.63M

PAYBACK
<3 months

Benefits (Three-Year)

Cart conversion margin increase from net new sales	$4.5M
Avoided cost to remediate online customer fraud	$2.2M
Efficiencies gained in defect resolution	$260.7K
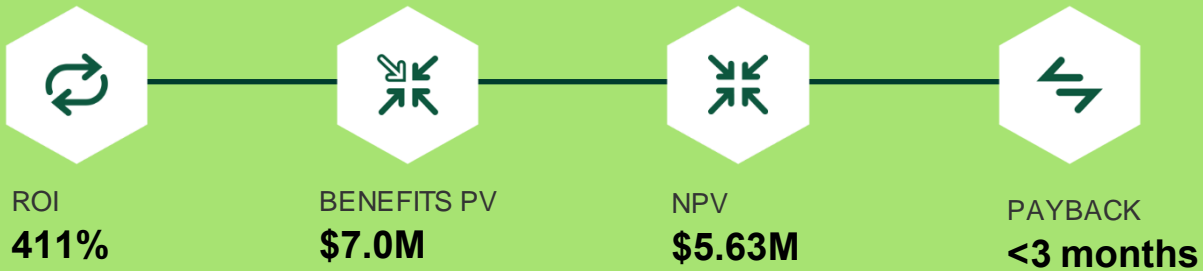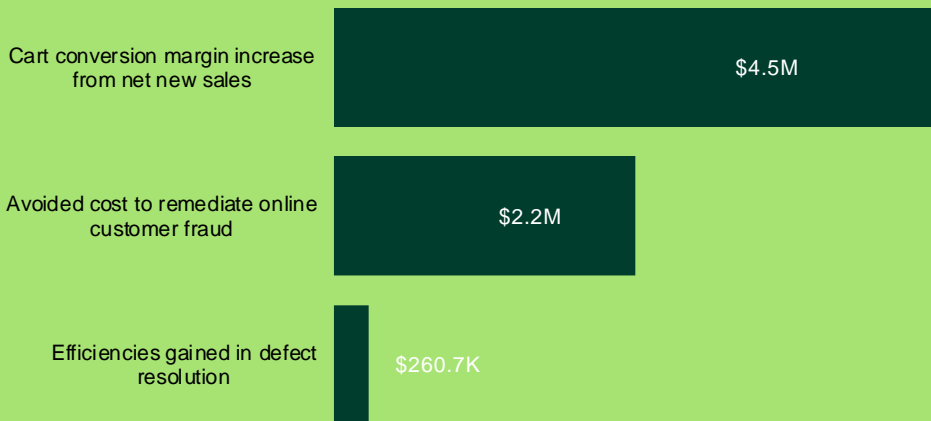
3% increase in cart conversion

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 FullStory.

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 FullStory can have on an organization.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by FullStory 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 report to determine the appropriateness of an investment in .

FullStory 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.

FullStory provided the customer name for the interview but did not participate in the interview.

DUE DILIGENCE
Interviewed FullStory stakeholders and Forrester analysts to gather data relative to the investment.

CUSTOMER INTERVIEW
Interviewed decision makers at an organization using FullStory to obtain data with respect to costs, benefits, and risks.

FINANCIAL MODEL FRAMEWORK
Constructed a financial model representative of the interview using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewed organization.

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.

INTERVIEWED ORGANIZATION

Forrester interviewed a FullStory customer with the following characteristics:

- The customer is a large, North American online retailer with several banners.

- Multiple teams within the organization use FullStory.

- The organization has experienced customer checkout fraud in the past.

KEY CHALLENGES

Before implementing FullStory, the organization did not have access to detailed analytics regarding the customer experience. Friction in the customer journey was not easily identified and, therefore, it could remain unsolved and negatively impact the customer relationship at a cost to the retailer.

- **Friction in the digital customer experience.** To discover the pain points that were causing customers to drop off the journey, the organization relied on manual tests, in-house searches, and customer feedback.

- **Time-consuming remediation.** The organization made improvements as it discovered them without the needed data to help prioritize and scale modifications. This time-consuming process left other customer sessions vulnerable to friction or fraud.

- **Lack of accurate data and analytics.** The organization lacked visibility into details regarding customer issues, such as site abandonment at key steps in the conversion journey. When problems arose, it was difficult to determine causation, resulting in time-consuming resolution.

SOLUTION REQUIREMENTS/INVESTMENT OBJECTIVES

The interviewed organization searched for a solution that could:

- Improve site performance by monitoring customer sessions and rapidly diagnosing performance issues. It also sought a solution that could automatically surface other defects, such as bugs or user experience (UX) issues.

> **"If an issue is identified, we can immediately see the FullStory session and figure out what is the pain point. Or, if a customer can't find a product, we are able to use the FullStory session to see what kind of keyword was typed. We may extend the keyword search engine based on customer behavior."**
>
> *Product manager, large retailer*

- Produce a secure environment, identifying and addressing customer fraud issues while also offering strong data security through privacy controls, ensuring protection of end-user and consumer data.

- Supply accurate consumer data that is useful across teams relevant to the customer experience.

- Offer customer behavior insights that individual contributors and decision-makers can use to improve future customer experiences.

- Provide easy integration with other software-as-a-service (SaaS) solutions and a user-friendly interface.

After a request for proposal (RFP) and the business case process evaluating multiple vendors, the interviewed organization chose FullStory and began deployment.

- The organization executed thorough proofs of concept (POC) with two vendors, including FullStory.

- The organization selected FullStory based on its features, ease-of-use, and company reputation.

- FullStory was adaptable across the organization, creating efficiencies and enhancing overall site performance.

USE CASE DESCRIPTION

The organization adopted FullStory to eliminate friction, to reduce customer fraud exposure, and to gain greater insight into the customer experience. The breadth and depth of customer digital interaction data provided by FullStory offers the organization increased efficiencies across departments and enables it to improve relationships with consumers on its banners and applications significantly, leading to higher conversion rates and increased revenue.

For this use case, Forrester has modeled benefits and costs over three years.

Key assumptions
- **Large online retailer of three prominent brands**
- **Online presence through websites and applications**
- **Organizationwide teams use the solution to improve consumer digital experience**
- **An increase in cart conversions of 3%**
- **Online customer fraud risk identified and eliminated**

Analysis Of Benefits

Quantified benefit data

Total Benefits						
Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Atr	Cart conversion margin increase from net new sales	$1,809,600	$1,809,600	$1,809,600	$5,428,800	$4,500,207
Btr	Avoided cost to remediate online customer fraud	$900,000	$900,000	$900,000	$2,700,000	$2,238,167
Ctr	Efficiencies gained in defect resolution	$104,832	$104,832	$104,832	$314,496	$260,702
	Total benefits (risk-adjusted)	$2,814,432	$2,814,432	$2,814,432	$8,443,296	$6,999,076

CART CONVERSION MARGIN INCREASE FROM NET NEW SALES

Evidence and data.

- One interviewee was able to proactively identify more friction points in the customer's digital experience upon implementation of FullStory. With rich analytics and session replay, the team could see exactly what the user was seeing, including pages visited and items selected, and it could pinpoint the defect impacting the customer's workflow resulting in funnel abandonment.

- With useful analytical tools, issue resolution across websites and applications became more efficient. Timely remediation led to an increase in the funnel conversion rate and the AOV, resulting in a corresponding increase in sales.

- FullStory's comprehensive data allowed the organization to make improvements to its existing payment checkout conditions. One interviewee noted: "FullStory played an important role in the redesign of our checkout process. They were able to answer hard questions about what was happening in the checkout funnel at any given point in the session. Among other things, the data allowed us to infer how many choices of shipping options or payment options were too many."

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

- The organization reports an average of 400 million sessions per year.

- The organization identifies an average of five new issues per week, resulting in a 3% increase in cart conversions.

- The average cart is $260. Forrester assumes a $30 increase to the AOV, totaling $290, which corresponds to the conversion rate increase.

> **"FullStory allows us to see exactly where an experience breakdown is happening."**
>
> *VOC manager, large retailer*

Risks. There are risks, both quantitative and qualitative, that can impact the level of this benefit. Therefore, the cart conversion margin increase will vary with:

- Level of difficulty identifying causation.

- Number of features an organization fully utilizes.

- Cart conversion rate and AOV.

To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $4.5 million.

Cart Conversion Margin Increase From Net New Sales					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Sales conversion rate	Interview	1.3%	1.3%	1.3%
A2	Total sessions per year		400,000,000	400,000,000	400,000,000
A3	Average cart ($)	Interview	$290	$290	$290
A4	Total online annual sales	A1*A2*A3	$1,508,000,000	$1,508,000,000	$1,508,000,000
A5	Increase in cart conversions	Interview	3.0%	3.0%	3.0%
A6	Operating margin		5%	5%	5%
At	Cart conversion margin increase from net new sales	A4*A5*A6	$2,262,000	$2,262,000	$2,262,000
	Risk adjustment	↓20%			
Atr	Cart conversion margin increase from net new sales (risk-adjusted)		$1,809,600	$1,809,600	$1,809,600
	Three-year total: $5,428,800		Three-year present value: $4,500,207		

AVOIDED COST TO REMEDIATE ONLINE CUSTOMER FRAUD

Evidence and data.

- FullStory provided evidence to the organization that bad actors had committed customer fraud during the primary conversion process.

- One interviewee cited example that involved customers transacting without paying. They said, "We were able to use FullStory to find out how people were checking out without paying anything." Without its identification and remediation by FullStory, this one incident alone would have resulted in the loss of several million dollars.

40%

$2.2 million

three-year benefit PV
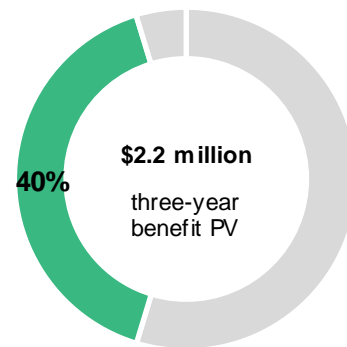
Avoided cost to remediate online customer fraud

- FullStory offered visibility into the steps the cybercriminals performed, and it provided a timely solution to correct the issue. The

organization can now set parameters to look for similar behavior and avoid the cost of future fraudulent attacks.

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

- The organization avoids one fraudulent incident per year.

- The annual cost avoided is $1 million.

Risks. The avoided customer fraud cost will vary with:

- The skillset and experience of the team managing FullStory.

- The severity and sophistication of online customer fraud attacks.

- The frequency and success rate of online customer fraud attempts.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $2.2 million.

Avoided Cost To Remediate Online Customer Fraud					
Ref.	**Metric**	**Calculation**	**Year 1**	**Year 2**	**Year 3**
B1	Avoided cost to remediate online customer fraud	Interview	$1,000,000	$1,000,000	$1,000,000
Bt	Avoided cost to remediate online customer fraud	B1	$1,000,000	$1,000,000	$1,000,000
	Risk adjustment	↓10%			
Btr	Avoided cost to remediate online customer fraud (risk-adjusted)		$900,000	$900,000	$900,000
	Three-year total: $2,700,000		**Three-year present value: $2,238,167**		

EFFICIENCIES GAINED IN DEFECT RESOLUTION
**Evidence and data.**

- The organization was able to save considerable employee time identifying and resolving issues after implementing FullStory.

- Prior to the adoption of FullStory, each defect required 10 additional development, IT, or QA hours.

- The organization also realized efficiencies across teams in resolving defects. They no longer needed to meet to share information as all necessary teams could now access customer session data through FullStory.

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

- FullStory helps the organization detect two defects per week.

- Defects detected per year total 104, and 20 FTE hours are required to resolve each defect.

- Additional organizationwide hours save a total of 8 per defect.

- The average hourly rate is $50 for staff members involved in issue resolution.

Not all productivity gains translate into additional work being completed. Therefore, Forrester applied an 80% productivity capture to the efficiencies gained.
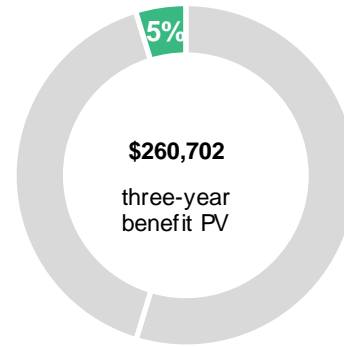
> "It's definitely more efficient because we are now avoiding all the back and forth between teams. Less communication is required between development, product, QA, and business teams to resolve an issue impacting the customer experience."
>
> *Product manager, large retailer*

$260,702
three-year benefit PV

5%

Efficiencies gained in defect resolution

Risks. The efficiencies gained in defect resolution will vary with:

- The skill level and knowledge of the development and QA teams.
- Wages, according to skill level and geography.
- Complexity of defects identified.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $260,702.

Efficiencies Gained In Defect Resolution

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
C1	Number of defects detected	2 defects/week*52 weeks	104	104	104
C2	Product management time saved per defect	2 FTEs*10 hours/defect	20	20	20
C3	Organizationwide collaboration time saved per defect	4 multiteam FTEs*2 hours/defect	8	8	8
C4	Hourly rate		$50	$50	$50
C5	Percent captured	80%			
Ct	Efficiencies gained in defect resolution	C1*(C2+C3)*C4*C5	$116,480	$116,480	$116,480
	Risk adjustment	↓10%			
Ctr	Efficiencies gained in defect resolution (risk-adjusted)		$104,832	$104,832	$104,832
	Three-year total: $314,496		**Three-year present value: $260,702**		

UNQUANTIFIED BENEFITS

Additional benefits that the customer experienced but was not able to quantify include:

- **Increases visibility.** FullStory provides its users large-scale visibility into customer friction points and consumer behavior. Rather than relying on dated customer surveys and online chat feedback alone (which represent just a fraction of total sessions), the organization can deep-dive into session replays and take timely, proactive corrective action. One interviewee said, "We get a bigger picture of the customer's voice with real-time data and that, quantifiability, is extremely important to our whole business."

- **Provides Instrumentation-free analytics.** Traditional web analytics often require the manual "tagging" of potential customer behaviors and actions, leaving room for error and lost data if customers behave in an unpredicted manner. FullStory offers its users instrumentation-free analytic capabilities that automatically capture and index customer behaviors, allowing organizations to capture every datapoint surrounding their customers' digital interactions in real time.

- **Encourages innovation.** With insights into online customer shopping, the organization can harvest valuable information about product demand and consumer preferences, allowing the organization to better direct its resources. Enhanced innovation can be critical during times of crisis such as the COVID-19 pandemic.

- **Eliminates information silos.** Customer friction and experience data are now available across departments. Teams performing different functions within the organization have access to the same information and have visibility into how other teams are responding to issues in the customer's online shopping journey.

- **Offers simple integration and user-friendly interface.** FullStory works seamlessly with other solutions, giving the organization a complete set of tools to analyze and improve its customer experience. One interviewee said, "The interface is more flexible, more intuitive, and easier to use than what we had in the past."

FLEXIBILITY

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

- **Enhanced A/B testing.** One interviewee reported that FullStory's analytics provide accurate, useful data and insights that high-level A/B testers can efficiently analyze and present. The interviewee said: "FullStory is very useful when you want to compare site features for efficacy. The data is very beneficial to the A/B testing team."

- **Unanticipated support for nontechnical teams.** Integrating a custom tool in FullStory, the organization was able to track internal statistics benefitting and empowering other teams, such as sales. One interviewee said, "With the custom tool that we implemented with FullStory, we are able to track a sale, verify the link to a particular live chat agent, and apply the appropriate sales commission credit."

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

Total Costs

Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Dtr	Annual platform fee	$0	$492,500	$492,500	$492,500	$1,477,500	$1,224,775
Etr	Initial and ongoing costs	$88,880	$22,880	$22,880	$22,880	$157,520	$145,779
	Total costs (risk-adjusted)	$88,880	$515,380	$515,380	$515,380	$1,635,020	$1,370,554

ANNUAL PLATFORM FEE

Evidence and data.

• The organization incurs an annual platform fee of $492,500.

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

• This fee would apply to all organizations in this industry, of this size, and with the same number of sessions. Note that this pricing reflects the needs of a very large enterprise and is flexible depending on organizational needs.

Forrester did not apply a risk adjustment to this cost as FullStory has a set pricing structure according to the number of users, features required, and sessions. This cost yields a three-year, risk-adjusted total PV (discounted at 10%) of $1.2 million.

$1.2 million

three-year cost PV

89%
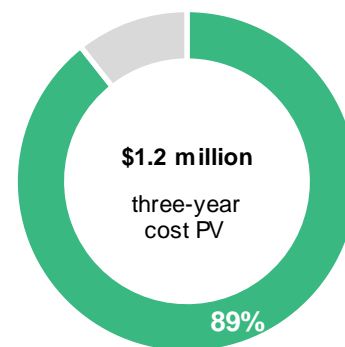
Annual platform fee

Annual Platform Fee

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
D1	Annual platform fee	FullStory		$492,500	$492,500	$492,500
Dt	Annual platform fee			$492,500	$492,500	$492,500
	Risk adjustment	0%				
Dtr	Annual platform fee (risk-adjusted)			$492,500	$492,500	$492,500
	Three-year total: $1,477,500			**Three-year present value: $1,224,775**		

INITIAL AND ONGOING COSTS

Evidence and data.

- The organization reported initial costs, which include internal labor required for implementation and a one-time onboarding fee.

- Ongoing management represents the internal labor required to maintain the platform and the relationship with FullStory.

> **"We have a FullStory success manager, and he's great. When we need a training session, we just ask him, and he organizes it."**
>
> *Product manager, large retailer*

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

- Implementation requires two FTEs for one year at 10% time.

- The organization incurs a one-time $60,000 onboarding fee.

- Ongoing management necessitates one FTE at 20% time.

- The wage per hour is $50.

Risks. The initial and ongoing costs will vary with:

- Experience and sophistication of the staff assigned to the implementation or ongoing management.

- Industry and size of the organization.

- Wage according to skill level and geography.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV of $145,779.

11%

$145,779
three-year
cost PV
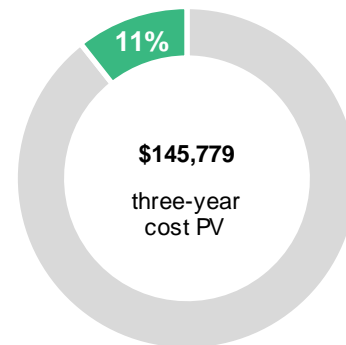
Initial and ongoing costs

Initial And Ongoing Costs

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
E1	Initial internal labor	2 FTEs*2,080 hours/year *$50/hour*10% time	$20,800			
E2	One-time onboarding fee	FullStory	$60,000			
E3	Ongoing management	1 FTE*2,080 hours/year *50/hour*20% time		$20,800	$20,800	$20,800
Et	Initial and ongoing costs	D1+D2+D3	$80,800	$20,800	$20,800	$20,800
	Risk adjustment	↑10%				
Etr	Initial and ongoing costs (risk-adjusted)		$88,880	$22,880	$22,880	$22,880
	Three-year total: $157,520			**Three-year present value: $145,779**		

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

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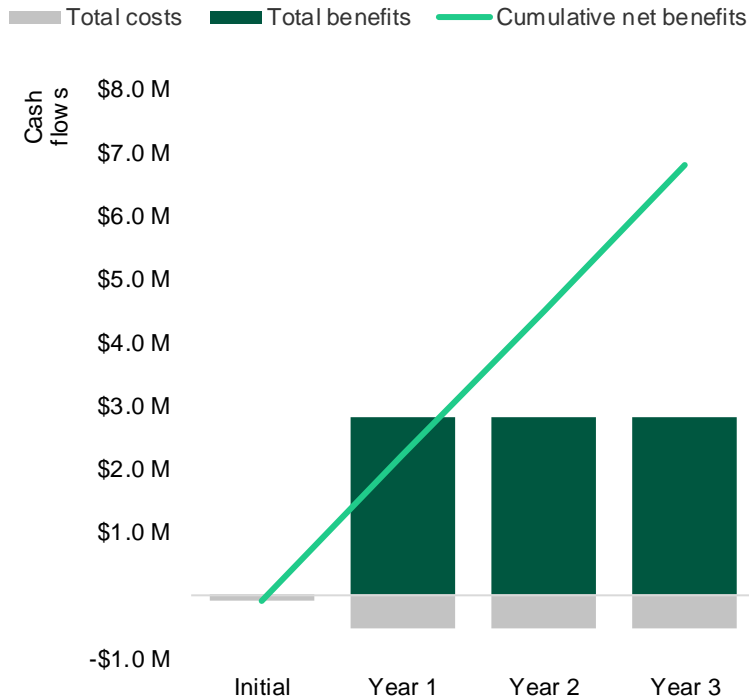
The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

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	($88,880)	($515,380)	($515,380)	($515,380)	($1,635,020)	($1,370,554)
Total benefits	$0	$2,814,432	$2,814,432	$2,814,432	$8,443,296	$6,999,076
Net benefits	($88,880)	$2,299,052	$2,299,052	$2,299,052	$6,808,276	$5,628,522
ROI						411%
Payback period (months)						<3

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."

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.

FORRESTER®