A Forrester Total Economic Impact™ Study
Commissioned By Acoustic
January 2019

# The Total Economic Impact™ Of Acoustic Experience Analytics

## Cost Savings and Business Benefits of Acoustic Customer Behavioral Analytics solutions

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ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. Ranging in scope from a short strategy session to custom projects, Forrester's Consulting services connect you directly with research analysts who apply expert insight to your specific business challenges. For more information, visit forrester.com/consulting.



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## Benefits

Increase in online conversion rate:
**3.6%**
Increase in mobile conversion rate:
**2.5%**

Percent reduction in time to reproduce online errors:
**90%**
Percent reduction in time to reproduce mobile errors:
**70%**

Percentage improved productivity across key customer behavioral analytics users:
**40%**

# Executive Summary

Organizations are focused on delivering outstanding customer experiences and creating omnichannel interactions that live up to the expectations of their customers. In order to increase future revenues, improve customer satisfaction and maintain strong customer relationships, organizations must have a deep understanding of how customers interact with their company across channels.

To deliver these exceptional customer interactions, companies require the right tools to understand, improve and optimize the digital experience. As the ways to interact with an organization grow, organizations must likewise increase and expand their ability to understand customer behaviors. To better understand this, organizations need a way to have visibility into their customers' online and mobile experiences. Companies must be able to quickly gather and analyze data across channels in a way that allows them to pull and act on valuable, data-backed insights to optimize their channels' usability, understand where customers struggle, and understand where revenue opportunities exist. This means organizations need a solution that will help them understand their customers' experiences across channels, and ultimately enable organizations to transform their digital channels for superior customer experiences.

Acoustic commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Acoustic Experience Analytics (formerly Tealeaf), and related customer analytics solutions like journey analytics and Acoustic Exchange. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Acoustic Experience Analytics and related customer behavior analytics solutions on their organizations, which includes anomaly detection, struggle analytics, session replay, usability analytics, eventing and alerting capabilities.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four customers with years of experience using Experience Analytics, and also conducted an online survey of 37 Acoustic customer behavior analytics users with multiple years' experience using the solution within their organizations. Acoustic customer behavior analytics provide quantitative and qualitative information necessary to understand customers' digital experiences. The solution helps organizations gather information to better understand customer behavior across web and mobile platforms. Those organizations that integrate journey analytics with Experience Analytics technology gain deeper insights into how and why customers engage or abandon across channels.

## Key Findings

**Quantified benefits.** The following risk-adjusted present value (PV) quantified benefits are representative of those experienced by the companies interviewed and surveyed. Based on these results, Forrester estimated the financial impact on a composite organization described in this case study:

**ROI**
**243%**

**Benefits PV**
**$14.3. million**

**NPV**
**$10.2 million**

**Payback**
**Less than**
**6 months**

- **Incremental revenue from increases in conversion and upsell rates.** By using Experience Analytics to understand the customer experience of their online and mobile users, organizations gained visibility into each customers interaction and eliminated key issues that led to abandonment of transactions. Due to this, the composite organization increased its conversion rate by 3.6% for online transactions and by 2.5% for mobile transactions. Additionally, the organization has increased its upsell rate by 1%. This led to an increase in incremental revenue of over $11.9 million over the three years.
- **Improved efficiency of business operations valued at $2.4 million.** The organization reduced the runtime for supply chain analytics in SAP APO from 32 hours to seven hours, which changed the frequency of analysis, making the company nimbler to change and able to resolve supply chain issues faster.
- **Incremental revenue resulting from increases in customer retention.** Experience Analytics enabled organizations to improve the overall customer experience, resulting in a 1.6% increase for online customer retention and a 1.75% increase for mobile customer retention. This results in $783,523 in additional revenue over the three years.
- **Reduction in time spent on reproduction of online and mobile issues.** Experience Analytics increased the ease with which online and mobile issues were reproduced, reducing the reproduction time by 90% by Year 3 for online issues and by 70% for mobile issues. This led to over $1 million in saved time over the three years.
- **Cost savings from development prioritization.** The composite organization used the data produced by Experience Analytics to better identify and understand the impact of usability and design issues on its customers, and it was able to better prioritize its development efforts to focus on only the most beneficial issues. This led to a savings of $238,688 over the three years.
- **Improved productivity of key users.** The data from Experience Analytics impacts a wide variety of roles across the organization and enables these users to make better, smarter decisions. Experience Analytics makes customer behavior analytics easily accessible to the business user; they no longer are struggling to collect data from various places, making it easier for a wider variety of individuals to access and utilize the data and insights, enabling them to make better decisions and be more productive. Over the three years, this saves the composite organization approximately $272,941.

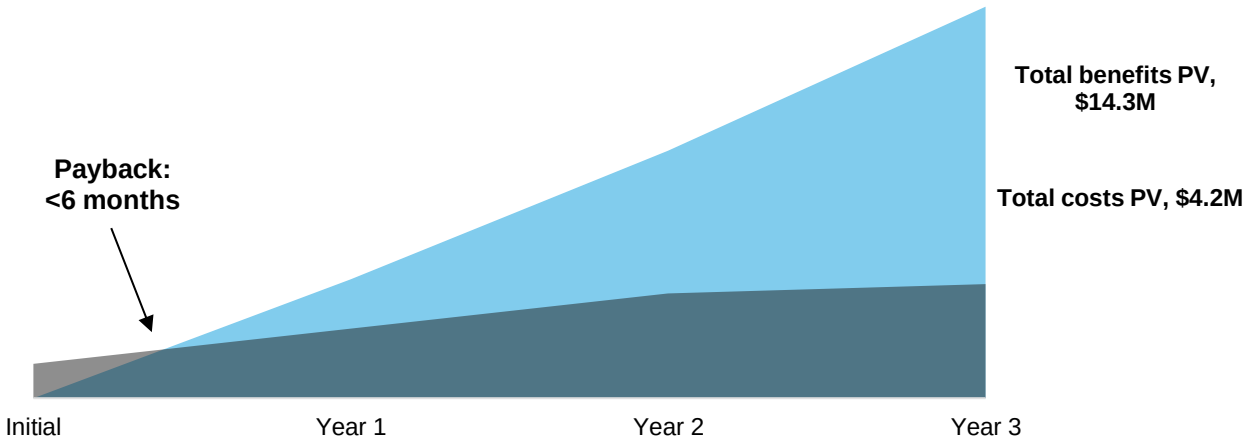
**Costs.** The interviewed organizations experienced the following risk-adjusted PV costs. The composite organization incurred the following costs associated with its deployment of Experience Analytics. Note that costs will vary depending on deployment, with on-premises deployment demanding higher upfront cost and more specialized resources than the easier to implement and more user-friendly cloud deployment model:

- **Experience Analytics licensing, professional services and training costs.** These represent fees paid to Acoustic for licensing; support provided by Acoustic on planning and implementing the solution; and training for IT and the customer experience team responsible for supporting the solution.

- **Implementation and planning costs.** These represent the costs for internal resources for the initial planning, implementation and deployment of Experience Analytics. Forrester estimates the organization will spend approximately 300 person-hours over a 2-month period to plan and prepare to implement Experience Analytics.
- **Incremental customer experience staff.** With the deployment of Experience Analytics, the composite organization hires staff to be the key champion of Experience Analytics. They are responsible for the day-to-day management of Experience Analytics and support other individuals across the organization to set up and monitor reports and to prioritize and escalate usability and customer experience issues.
- **Incremental IT administration support staff.** The IT team provides minimal administration support for Experience Analytics, requiring about 15% of one FTE's time for support.
- **Additional bandwidth.** As Experience Analytics is a SaaS deployment, the composite organization required more network bandwidth to ensure proper performance. This will vary based on an organization's existing infrastructure.

Forrester's interviews with four existing customers and survey of 37 additional users and subsequent financial analysis found that an organization based on these interviewed organizations experienced benefits of over $14.3 million over three years versus costs of nearly $4.2, adding up to a net present value (NPV) of $10.2 million (the value of the project in today's dollars) and an ROI of 243%.

**Financial Summary**



## TEI Framework And Methodology

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing Experience Analytics.

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 Experience Analytics can have on an organization:

The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

**DUE DILIGENCE**
Interviewed Acoustic stakeholders and Forrester analysts to gather data relative to Experience Analytics.

**CUSTOMER INTERVIEWS AND SURVEY**
Interviewed four organizations and surveyed 37 organizations using Acoustic customer behavior analytics solutions to obtain data with respect to costs, benefits, and risks.

**COMPOSITE ORGANIZATION**
Designed a composite organization based on characteristics of the interviewed 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 interviewed organizations.

**CASE STUDY**
Employed four fundamental elements of TEI in modeling Experience Analytics' impact: benefits, costs, flexibility, and risks. Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester's TEI methodology serves to provide 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 Acoustic 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 Acoustic Experience Analytics.

Acoustic 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.

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

# The Acoustic Experience Analytics Customer Journey

**BEFORE AND AFTER THE EXPERIENCE ANALYTICS INVESTMENT**

## Interviewed Organizations

For this study, Forrester conducted four interviews with Experience Analytics customers. Interviewed customers include the following:

| INDUSTRY | REGION | INTERVIEWEE | NUMBER OF ONLINE AND MOBILE VISITORS |
|---|---|---|---|
| Technology | Global, Headquartered in North America | Senior web analyst; Program manager, digital customer experience management; Director, digital tools | 500 million a year |
| Retail | Global, Headquartered in North America | Analyst, e-commerce and marketing | 7 million a year |
| Retail | Global, Headquartered in North America | Senior manager, product support | 292 million a year |
| Insurance | Headquartered in North America | Lead technical engineer | 250 million a year |

In addition, Forrester surveyed 37 North American Experience Analytics users. Online survey respondents included line-of-business and IT professionals who make, influence or have knowledge around decisions related to customer experience technology. While a wide variety of industries were represented, most respondents were from financial services or retail organizations. These organizations had an average number of 60.6 million visitors a year.

## Key Challenges

The interviewed and surveyed organizations represent businesses across a variety of industries with a strong digital presence. Each desired to create impactful customer experiences across their digital channels but struggled to truly understand their customers' interactions and struggles with their mobile and online sites. Specifically, the companies faced the following challenges:

- Organizations desire greater visibility into their customers' behaviors and to improve their experience... The organizations Forrester interviewed and surveyed highlighted how customers have more choices and greater expectations out of the brands they interact with. Yet, they continued to struggle with gaining clear visibility into how their customers interact with their organization, what was working, and what was not. "We got a lot of survey feedback about user struggle and all the various issues they experienced on the site. But often, the clarity wasn't there – we didn't necessarily have visibility into the type of device they are using, the pages they are on. We had directional data – it gave us an indication that there is an opportunity to improve, but we couldn't always define where." Having this visibility would enable these organizations to improve the overall customer experience; in fact, from surveyed organizations Forrester learned that the two biggest drivers for investing in customer behavior analytics solutions were to improve cross channel experience of customers, and to get visibility into customer data and be able to see that in context. These organizations know

> "We could see issues, changes in metrics, but we couldn't tell why. We needed to determine why."
>
> *Director, digital tools, Technology*

that their customers have come to expect top-notch customer experiences and will move on to other organizations if they are unable to get what they need. In order to stay competitive, these organizations wanted to understand how to optimize their channels and provide exceptional customer experiences in order to win and retain customers.

- **…and they needed technology to support their understanding of the customer experience.** The interviewed companies noted that their existing internal solutions, whether in-house solutions or third-party solutions, were not able to give them the visibility they required. One organization noted: "We used a QA team that was more on the lines of business analyst that was just doing normal testing, looking for bugs. We had no idea how big an issue was, we weren't following the user experience design issues that may be impacting their experience." From the survey, organizations noted they either lacked needed data or did not have a holistic view into their existing data. These organizations required technology that would support their ability to make better, smarter, more informed decisions to improve their customers' experiences. To be able to better understand their customers and overall improve the cross-channel experience of their customers, companies are looking for solutions that will help them quickly uncover valuable insights. As the overall customer analytics solutions market continue to expand, these organizations look to find solutions that create easy, immediate access to actionable customer insights that enable them to create exceptional customer experiences built on real-life customer data.

> "What we were really missing before was the need to get additional visibility into the application. We're now able to make less subjective and more objective calls – we're able to measure and understand issues now."
>
> *Senior manager, product support, Retail*

- **Companies are looking to make long-term impact on customer experience.** The companies Forrester spoke with want to not only discover key quick-fixes that were currently impeding the customer experience, but also gain insights into higher-level trends to create continuous customer experience improvements. "I think it's one of those things where you can use it to just find and fix errors, and the benefits you see will pay for the tool, but if you use it for anything over that, you're going to see exponential benefits." The organizations understood that they need to have a better, deeper understanding of why their customers are succeeding or failing so they can act to address the customer experience issues before they become a larger problem. Companies want to make continuous customer experience improvements to grow and retain their customer loyalty.

> "The team is now at the point where not only is Experience Analytics helpful, but it's something they require to get the job done. They have come to expect it, they're so in tune with it solving their problems easily and quickly."
>
> *Lead technical engineer, Insurance*

## Solution Requirements

The interviewed organizations searched for a solution that could:

- Enable the organization to better understand what behaviors lead to desired customer actions, and highlight what actions or activities impede these desired outcomes.
- Support the organization's goals to optimize the digital experience for customers.
- Improve the conversion rate of customers across channels.
- Retain existing customers, and better understand their best customers.
- Assist staff across the organization in better understanding customers' experiences and how the organization can improve them.

After an extensive RFP and business case process evaluating multiple vendors, the interviewed organizations chose Experience Analytics and began deployment:

- The organization worked with professional services team at Acoustic to implement its customer behavior analytics solution program.
- The organization now has 125 million events per month captured by Experience Analytics.

## Key Results

The interviews revealed that key results from the Experience Analytics investment include:

- **Through creating a deeper understanding of customer experience and customer struggles, organizations saw improved conversion rates and increased customer retention.** Organizations used the data gathered with Experience Analytics to better understand the customer experience of its online and mobile users. These organizations gained visibility into each customer's actual web or mobile interaction, and learned about key issues that led to struggles across multiple digital channels, applications and devices. With this data, they were able to improve the usability of their digital channels, and saw a reduction in transaction abandonment rates, and improvement in customer retention.

  Those organizations that integrate AI-enabled journey analytics with their existing Experience Analytics technology gained deeper insights into how and why customers engage or abandon across channels:

  - With features like AI struggle analytics, Experience Analytics integrated with customer journey analytics automatically detects when and where a customer is struggling on the site, allowing organizations to identify and pinpoint exactly where the struggle occurs. One organization explained how the struggle analytics capability enabled them to improve conversion rates: "Struggle analytics helped us find a problem with a coupon. After we fixed the coupon, we saw about a 2% net increase in conversion rates".
  - The usability analytics capabilities provide organizations with clear, granular-level visibility into the usability of their sites. Features like replays, heatmaps and form analytics provided organizations with valuable data to understand usability flaws that caused customers to struggle. One organization explained "our design team leverages functionality like the session heat maps to better understand where a user is specifically clicking and how the site can be improved". Another shared "We found the password reset flows were really convoluted for the customer and were able to use data from the tool to fix that."
  - Anomaly detection helped organizations proactively monitor events, comparing it to a baseline of "normal" activity. If that event then starts to deviate away from that baseline, Experience Analytics integrated with Acoustic Analytics proactively notifies the user that this event or report is deviating away from its norm and requires action. In addition to just showing an anomaly within the reporting data, it also shows the contribution analysis based on other attributes the solution knows about that session to the user as reasons of why that anomaly is happening. As one organization explained, "this has

> "Experience Analytics has enabled us to see massive usability improvements. We discovered decision we made were having very negative effects on the customer experience. We've done a lot of work to understand and improve on that. We've revamped a lot by utilizing data from the tool."
>
> *Senior manager, product support, Retail*

> "The struggle analytics helped us identify unknown struggle areas. After we fixed a bug that was causing a struggle, we could see the conversion rate increase."
>
> *Analyst, e-commerce and marketing, Retail*

> "The Journey Analytics feature allowed us to see what it took for customers to convert and what were the best times to communicate with them. We could then understand how to best target them at a given point in time that we haven't necessarily had before."
>
> *Analyst, e-commerce and marketing, Retail*

really helped us be proactive rather than reactive as well as how we approach issues as they arise in real time."

- Customer journey analytics capabilities helped organizations to better understand how customers act across interactions, providing a visual display of the most common and successful journeys across channels, enabling organization to identify what is working, and where opportunities for improvement lie. As one organization explained "Before we had issues where we would send emails too frequently. Journey analytics allowed us to be more measured with our communications and invest appropriately at the key times that the customer wants to hear from us. We are definitely seeing an up-tick in engagement by reducing the frequency of our outreach on some channels. Because of that, we've seen an increase in engagement and overall dollars."

> "Before Experience Analytics, we spent so many hours trying to replicate an issue. It was not an efficient use of time. Now, we can replicate and prioritize the issues that most impact the bottom line."
>
> *Analyst, e-commerce and marketing, Retail*

Our survey findings highlighted that 95% of respondents felt that "Acoustic's integrated customer behavior analytics solutions and capabilities helped us make smarter investment decisions". Pulling all this together in one integrated solution enabled our interviewed and surveyed organizations to engage with their customer in more meaningful ways, creating more impactful customer interactions and increasing the bottom line. Experience Analytics integrated with journey analytics allowed these organizations to create a holistic view of the customer journey to better understand trends and opportunities, ultimately improving conversion rates and customer retention.

› **Provide instant visibility into how users interact across channels and bring instant credibility to issues.** Interviewees told us that they were impressed with the level of visibility the solution created into their individual customer interactions. Gaining visibility into customer interactions and being able to see it in context was the second most common reason organizations chose to implement Experience Analytics according to survey findings. Additionally, Experience Analytics provides the ability to pinpoint the exact reason a customer struggled or abandoned a transaction. With the proliferation of browsers and devices, organizations previously struggled to reproduce an issue. With Experience Analytics, organizations can immediately understand where and how an issue occurred. Experience Analytics enables organizations to see firsthand the various issues their clients are experiencing; it gives credibility to issues that were otherwise not seen with previous tools, and it enables teams to create a business case to handle these issues. Our survey findings highlighted that 92% of respondents felt that "Acoustic's customer behavior analytics solutions brings credibility to issues by pinpointing the reason for customer experience issues or failed interactions". Not only does Experience Analytics create visibility into and credibility around issues, but, due to the level of granular detail that shows the exact issue and how the customer experienced it, organizations have drastically improved internal communication around supporting customer struggles. There's so much power in presenting to other people and being able to show them what happened instead of trying to tell them. People will take a bigger stand on your behalf if they've seen it themselves."

> "We basically get business cases from our 2,000 internal users. We've got people from the IT side, people from the marketing side, sales, all different parts of [our organization]. We use their business cases to help show them where the best day is for their particular business question."
>
> *Program manager, digital customer experience management; Technology*

- **Allows for the prioritization of issues to maximize benefits by helping organizations understand the extent of an issue and how many users are affected and avoid the issue in the future.** Experience Analytics not only enabled organizations to pinpoint where an error occurred, but it also allows organizations to understand just how many of their customers may be impacted. This enables organizations to focus their resources on the most important issues and helps to remove friction from interactions between technical and business colleagues responsible for deciding which updates take priority. "With one payment issue, we had a growing customer base that was having a poor customer experience. With Experience Analytics, we were able to quickly identify what was happening, where it was happening, on what device and operating system, and could quickly replicate it for our development team. Before, we could not do that. We were quickly able to show the extent of the issue and escalate it quickly and appropriately." With features like eventing and alerting, organizations can avoid these and other issues in the future. Experience Analytics enables organizations to create events to proactively look for specific error message and report if there is an increase above a threshold in those messages. This enabled organizations to immediately identify and tackle events that may impede customers.

> "By looking at the Experience Analytics data, we could help IT prioritize issues by what had the highest impact on customers."
>
> *Program manager, digital customer experience management; Technology*

- **With Experience Analytics, teams across the organization were able to improve collaboration and increase productivity.** The data from Experience Analytics impacts a wide variety of roles across the organization. Those organizations Forrester spoke with that take the time to educate, evangelize, train and expand the use of Experience Analytics data received a higher financial impact than those organizations who utilize Experience Analytics within only one or two teams. Experience Analytics makes customer behavior analytics easily accessible to the business user, making it easier for a wider variety of individuals to access and utilize the data and insights; it also frees up the time of the Experience Analytics administrators when business users can access the data they need on their own. As one organization told Forrester: "There are only four of us in the department, so we don't have time to do all the analytics. But we have a team of about 37 data ambassadors outside of our team. They range from directors to analysts. They're all in different roles but experts in their particular area of the company and they're the most engaged people with the Experience Analytics data." Organizations who put in the upfront time and training saw great cross-functional collaboration – across roles like marketers, executive leadership, IT, customer experience professionals and customer service representatives. "We have cross-functionally worked with the design team, the customer service team to better understand what customers are experiencing and how to fix it." This resulted in a more cohesive customer strategy moving forward. Many roles made better, smarter, data-driven decisions more quickly with access to Experience Analytics data.

> "Experience Analytics was our way into different groups [within the organization]. I can show them exactly what is going on with things like overlays, click rates, hover time and the like, and it's absolutely beneficial to their team. They love it They are now learning how to integrate the data into their day to day activities."
>
> *Lead technical engineer, Insurance*

## Composite Organization

Based on the interviews, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected. The composite organization is representative of the four interviewed and 37 surveyed companies that Forrester collected data from and is used to present the aggregate financial analysis in the next section. The composite organization that Forrester synthesized from the customer interviews has the following characteristics:

- **Description of composite.** The US-based retail organization has a global presence, with annual revenues of $2.45 billion, with a strong online and mobile presence, as well as brick-and-mortar locations in the US and key global cities, such as London and Paris.
- **Deployment characteristics.** The organization has about 135,000 daily visitors to its online sites and 84,500 daily visitors to its mobile platforms (more than 49.2 million a year and 30.8 million a year, respectively.) The organization deployed Experience Analytics to better understand the customer's experience across digital channels, and integrated it with journey analytics. The organization now has 125 million events per month captured by Experience Analytics.

It is important to note that while the composite organization focuses on a retail organization, Forrester interviewed a variety of organizations, including financial services, insurance, and technology organizations, as well as retail. The purpose of this document is to build out a framework an organization can use to determine its potential ROI, regardless of industry.

**Key assumptions of composite organization**

US-based, with global presence

$2.45 Billion in annual revenues

Over 80 million unique visitors each year

# 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 | Incremental revenue from increased conversion and upsell rates | $4,026,939 | $4,739,116 | $5,812,862 | $14,578,918 | $11,944,768 |
| Btr | Incremental revenue from improved customer retention | $175,053 | $297,577 | $503,720 | $976,350 | $783,523 |
| Ctr | Time saved in reproduction of issues | $391,950 | $419,738 | $447,525 | $1,259,213 | $1,039,441 |
| Dtr | Cost savings from development prioritization | $114,075 | $114,075 | $114,075 | $342,225 | $283,688 |
| Etr | Improved productivity of key Experience Analytics users | $67,500 | $94,500 | $126,000 | $288,000 | $234,128 |
| | Total benefits (risk-adjusted) | $4,775,517 | $5,665,005 | $7,004,182 | $17,444,705 | $14,285,548 |

## Incremental Revenue From Increased Conversation And Upsell Rates

A key benefit experienced by the composite organization was the improvement in the conversion and upsell rate of both online and mobile sales and transactions. The composite organization used the data gathered with Experience Analytics to better understand the customer experience of its online and mobile users. With Experience Analytics, the composite organization was able to gain visibility into each customer's actual web or mobile interaction and learn about key issues that led to the abandonment of a transaction. These issues may include adding an item to the cart, completing the checkout steps, or entering account information. With Experience Analytics, the composite organization was able to understand and address these issues and reduce customer abandonment rates, ultimately capturing more sales. Additionally, the composite organization was able to use Experience Analytics integrated with journey analytics to better understand the customer journey in context and the most effective touchpoints, enabling the composite organization to better understand where and how to offer additional products, increasing the upsell rate.

Organizations used key features of its Experience Analytics integration with journey analytics to improve the customer experience and increase conversion and upsell rates. The composite organization uses the usability analytics capabilities to gain a better understanding of exactly how their customers were interacting with the site. With AI-powered struggle analytics and anomaly detection, organizations were able to automatically detect struggle, and easily identify when key metrics are not acting within normal limits, and advise as to why this may be occurring. With journey analytics, the composite organization can better understand the most successful path to purchase, allowing them to better understand opportunities for improving the customer journey. The composite organization was able to use these features to optimize the customer experience by eliminating key obstacles, improve the customer journey and ultimately capture more sales.

For the composite organization, Forrester assumes that:

The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total benefits to be a PV of more than $14 million.

Increase in online conversion rate:
3.6%

Increase in mobile conversion rate:
2.5%



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- There are 135,000 daily visitors to its online sites and 84,500 daily visitors to its mobile platforms (more than 49.2 million a year and 30.8 million a year, respectively.)
- The average order value for an online purchase is $325; the average order value for a mobile purchase is $150.
- While conversion rates vary from industry to industry, Forrester applied industry knowledge and information gathered from surveys and interviews to determine an online conversion rate of 4% prior to the implementation of Experience Analytics, and a mobile conversion rate of 2.55%.
- Over a three-year period, the composite organization used the analyses from the solution to increase both its online and mobile conversion rates. As the organization became more comfortable using and analyzing the data from Experience Analytics and utilized it in a variety of ways to improve the usability of the site and the overall customer experience, it increased the online conversion rate by 3.25% in Year 1 to 3.6% in Year 3; likewise, the organization increased the mobile conversion rate by 2.5% by Year 3.
- Through better understanding the customer's path to purchase and where and how to offer additional products, the company can improve its upsell to 1% of online and mobile customers by Year 3. The average upsell value per transaction is about 5% of the average order value.
- A gross margin of 20% is used to calculate the profit that accrues to the company.

The incremental revenue from increased conversion and upsell rate will vary with:

- The number of online and mobile visitors.
- The average order value.
- Prior conversion rate.
- How the insights from Experience Analytics are applied and used to improve the customer experience.

To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year risk-adjusted total PV of over $11.9 million.

Impact risk is the risk that the business or technology needs of the organization may not be met by the investment, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for benefit estimates.

| Incremental Revenue From Increased Conversion and Upsell Rates: Calculation Table | | | | | |
|---|---|---|---|---|---|
| **Ref.** | **Metric** | **Calculation** | **Year 1** | **Year 2** | **Year 3** |
| A1 | Annual number of online visitors | 135000/day * 365 days | 49,275,000 | 49,275,000 | 49,275,000 |
| A2 | Average online order value | | $325 | $325 | $325 |
| A3 | Online conversion rate | | 4% | 4% | 4% |
| A4 | Increase in online conversion rate | | 3.25% | 3.45% | 3.60% |
| **A5** | **Incremental revenue from increased online conversion rate** | **(A1*A2*A3*A4)** | **$20,818,688** | **$22,099,838** | **$23,060,700** |
| A6 | Increase in online upsell rate | | 0.25% | 0.50% | 1.00% |
| A7 | Uplift in upsell order value | (average of 5% of order value) | $16 | $16 | $16 |
| **A8** | **Incremental revenue from increased online upsell rates** | **(A1*A6*A7)** | **$2,001,797** | **$4,003,594** | **$8,007,188** |
| A9 | Annual number of mobile visitors | 84500/day * 365 days | 30,842,500 | 30,842,500 | 30,842,500 |
| A10 | Average mobile order value | | $150 | $150 | $150 |
| A11 | Mobile conversion rate | | 2.55% | 2.55% | 2.55% |
| A12 | Increase in mobile conversion rate | | 1.50% | 2.00% | 2.50% |
| **A13** | **Incremental revenue from increased mobile conversion rate** | **(A9*A10*A11*A12)** | **$1,769,588** | **$2,359,451** | **$2,949,314** |
| A14 | Increase in mobile upsell rate | | 0.25% | 0.50% | 1.00% |
| A15 | Uplift in upsell order value | (average of 5% of order value) | $8 | $8 | $8 |
| **A16** | **Incremental revenue from increased mobile upsell rates** | **(A9*A14*A15)** | **$578,297** | **$1,156,594** | **$2,313,188** |
| A17 | Gross margin | | 20% | 20% | 20% |
| At | Incremental revenue from increased conversion and upsell rates | (A5+A8+A13+A16)* A17 | $5,033,674 | $5,923,895 | $7,266,078 |
| | Risk adjustment | ↓20% | | | |
| Atr | Incremental revenue from increased conversion and upsell rates (risk-adjusted) | | $4,026,939 | $4,739,116 | $5,812,862 |

## Incremental Revenue From Improved Customer Retention

As we have seen, Experience Analytics enabled the composite organization to eliminate many problems that affected the overall customer experience across its sites. The organizations Forrester spoke with found that if customers had difficulty utilizing an online or mobile site or a mobile application, they were unlikely to try again, resulting in lost revenues. The composite organization spent its initial months of using Experience Analytics finding and fixing key user experience issues. As the organization's use of Experience Analytics integrated with journey analytics matured, it continued to optimize customer journey, leading to more satisfied customers. Satisfied customers are more likely to be repeat users of online sites or mobile apps, and this helped to gradually improve the number of repeat purchasers for the composite organization.

For the composite organization, Forrester assumes that:

- The number of online transactions per year is over 1.9 million, and the number of mobile transactions per year is 848,169.
- Prior to the use of Experience Analytics, our composite organization experienced an average online retention rate of 25% and an average mobile retention rate of 18%, similar to that of the interviewed and surveyed organizations.
- With Experience Analytics, the organization was able to improve the retention rate of online users gradually over the three years of the analysis, improving by 1.6%. Similarly, it was able to use insights from Experience Analytics to improve the overall mobile experience for users. Due to this, the composite organization was able to improve the retention rate of mobile users, gaining a 1.75% increase by Year 3 of the study.

Improvement in online customer retention:
1.6%

Improvement in mobile customer retention:
1.75%

The incremental revenue from improved customer retention will vary with:

- The number of transactions online and mobile visitors.
- Prior retention rate.
- How the insights from Experience Analytics are applied and used to improve the customer experience.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year risk-adjusted total PV of $783,523.

**Incremental Revenue From Improved Customer Retention: Calculation Table**

| Ref. | Metric | Calculation | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|
| B1 | Number of online transactions per year | 135000/day * 4% conversion rate * 365 days | 1,971,000 | 1,971,000 | 1,971,000 |
| B2 | Percent online retention rate | | 25.0% | 25.0% | 25.0% |
| B3 | Percentage improvement in online customer retention rate | | 0.5% | 0.9% | 1.6% |
| B4 | Average online order value | A2 | $325 | $325 | $325 |
| B5 | Number of mobile transactions per year | 84500/day * 2.75% conversion rate *365 days ROUNDED | 848,169 | 848,169 | 848,169 |
| B6 | Percent mobile retention rate | | 18.00% | 18.00% | 18.00% |
| B7 | Percentage improvement in mobile customer retention rate | | 1.00% | 1.35% | 1.75% |
| B8 | Average mobile order value | A10 | $150 | $150 | $150 |
| B9 | Gross margin | A17 | 20% | 20% | 20% |
| Bt | Incremental revenue from improved customer retention | (B1*B2*B3*B4*B9)+ (B5*B6*B7*B8*B9) | $205,945 | $350,090 | $592,612 |
| | Risk adjustment | ↓15% | | | |
| Btr | Incremental revenue from improved customer retention (risk-adjusted) | | $175,053 | $297,577 | $503,720 |

## Time Saved in Reproduction of Issues

Experience Analytics enabled the composite organization to reproduce and identify usability issues more quickly than before, resulting in significant time savings. Interviewed organizations reported that they often purchased Experience Analytics to help their teams investigate web and mobile incidents, although they now leverage it more strategically to drive incremental revenues. Prior to Acoustic's solution, the composite organization relied solely on customer descriptions to try and determine an issue, which could take many hours. When considering the impacts on mobile sites and applications, the development team also needed to have the customer explain the type of device, the operating system, and the steps that caused the issue. Often, these organizations had trouble recreating the issue, if they were able to reproduce it at all. With Experience Analytics, the composite organization was able to quickly identify and investigate issues using session recordings, saving time for developers and customers alike. Additionally, with the proliferation of devices and operating systems, Experience Analytics helped the composite organization quickly identify the issues when helping its mobile customers.

Reduction in time spent to reproduce online error:
90%

Reduction in time spent to reproduce mobile error:
70%

For the composite organization, Forrester assumes that:

- There are 250 online incidents and 300 mobile incidents a year that use Experience Analytics to help identify the issue.
- Prior to the implementation of Experience Analytics, the composite organization spent an average of 20 hours to reproduce an online issue and 15 hours to reproduce a mobile issue.
- Note that while the calculation focuses on the time spent by developers, many of these issues also required the time of the customers. While the customers' time was not directly calculated, it is important to note that Acoustic's solution ensures that customers do not need to spend their valuable time helping the composite organization reproduce the issue.
- Using Experience Analytics, by Year 3, the composite organization was able to reduce the time spent to reproduce an online error by 90% and reduce the time spent to reproduce mobile issues by 70%.

The time saved in reproduction of issue will vary with:

- The number of online and mobile issues each year.
- The average number of hours spent prior to Acoustic Experience Analytics
- Developer average hourly salary.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of over $1 million.

| Time Saved In Reproduction of Issues: Calculation Table | | | | | |
|---|---|---|---|---|---|
| Ref. | Metric | Calculation | Year 1 | Year 2 | Year 3 |
| C1 | Average number of hours required to reproduce an online issue before Experience Analytics | | 20 | 20 | 20 |
| C2 | Percent reduction in time to reproduce online error with Experience Analytics | | 80% | 85% | 90% |
| C3 | Annual number of online incidents that use Experience Analytics | | 250 | 250 | 250 |
| C4 | Average number of hours required to reproduce a mobile issue before Experience Analytics | | 15 | 15 | 15 |
| C5 | Percent reduction in time to reproduce mobile error with Experience Analytics | | 60% | 65% | 70% |
| C6 | Annual number of mobile incidents that use Experience Analytics | | 300 | 300 | 300 |
| C7 | Hourly rate for developer | | $65 | $65 | $65 |
| Ct | Time saved in reproduction of issues | (C1*C2*C3*C7)+ (C4*C5*C6*C7) | $435,500 | $466,375 | $497,250 |
| | Risk adjustment | ↓10% | | | |
| Ctr | Time saved in reproduction of issues (risk-adjusted) | | $391,950 | $419,738 | $447,525 |

## Savings from Development Prioritization

Interviewed and surveyed organizations highlighted that a key benefit of Experience Analytics was how it prioritized development efforts by helping them understand which issues affect the most customers. Experience Analytics enables organizations to more easily identify and understand the extent of a problem to best understand where to focus development resources. In particular, today's mobile environment creates complex issues for development. With the proliferation of devices and operating systems, it is often difficult to have enough visibility into the mobile user landscape to understand where to concentrate. With many organizations feeling the strain of limited, scarce, and expensive development resources, being able to prioritize their time is key.

Low-priority projects avoided due to improved prioritization:

**33 projects**

Prior to using Experience Analytics, interviewed and surveyed organizations shared how development issues were largely handled ad hoc or treated with the same importance across the board with limited visibility into an issue's impact on customers. This could lead to valuable resources spending time on projects that had little impact on the overall customer experience. Now, with Experience Analytics, organizations can analyze and prioritize development projects. The development team can use Experience Analytics capabilities to help them understand if there are specific operating systems, browsers, or mobile devices that are causing issues. The solution helps organizations prioritize development issues, ensuring they address the most significant issues quickly, and improve the mobile experience for the majority of their customers. This ensures that the development team spends its time wisely, and ultimately saves money.

For the composite organization, Forrester assumes that:

› Each year, there are 30 potential online projects and 20 potential mobile projects for the development team to work on.

- In years past, the development team would have worked on each of these projects without a clear picture of the impact or priority of each issue. By using the solution's analysis of the problem and gaining visibility into the size of the issue, the team can prioritize the potential projects and focus on 35% of these issues, or only 17 projects. This means the development team avoids taking on 33 projects each year.
- Each issue takes an average of 60 hours of development time.

The time saved in reproduction of issue will vary with:

- The number of potential projects each year.
- The size/impact of each project
- Time spent on each project.
- Developer average hourly salary.

To take these into consideration, Forrester risk-adjusted and reduced the benefit by 10%, resulting in a three-year risk-adjusted total benefit of $238,688.

**Cost Savings From Development Prioritization: Calculation Table**

| Ref. | Metric | Calculation | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|
| D1 | Number of potential online projects | | 30 | 30 | 30 |
| D2 | Number of potential mobile projects | | 20 | 20 | 20 |
| D3 | Percent of projects undertaken with Experience Analytics | | 35% | 35% | 35% |
| D4 | Number of projects avoided with prioritization with Experience Analytics | (D1+D2)-((D1+D2)*D2) | 33 | 33 | 33 |
| D5 | Average number of developer hours spent on a project | hours | 60 | 60 | 60 |
| D6 | Hourly rate of developers | C7 | $65 | $65 | $65 |
| Dt | Cost savings from development prioritization | D4*D5*D6 | $126,750 | $126,750 | $126,750 |
| | Risk adjustment | ↓10% | | | |
| Dtr | Cost savings from development prioritization (risk-adjusted) | | $114,075 | $114,075 | $114,075 |

## Improved Productivity Of Key Experience Analytics Users

Our final benefit explores how the data from Experience Analytics and its integration with complementary Acoustic Analytics solutions such as journey analytics impacts a wide variety of roles across the organization and enables these users to make better, smarter decisions. The list of stakeholders across the organization is very widespread. Experience Analytics (along with complementary Acoustic Analytics) provides improved visibility into customer experience data, including deeper insights and analysis capabilities that were not previously available to users. Experience Analytics makes customer behavior analytics easily accessible to the business user; they no longer are struggling to collect the data they from various places, making it easier for a wider variety of individuals to access and utilize the data and insights, enabling them to make better decisions and be more productive. Experience Analytics enables organizations to create cross-functional collaboration – across roles like marketers, executive leadership, IT, customer experience professionals and

customer service representatives – resulting in a more cohesive customer strategy moving forward.

For the composite organization, Forrester assumes that:

- Our composite organization has a number of teams that use data from Experience Analytics. These include executive leadership, customer experience, customer service and call center representatives, marketers, business analysts, development team members, and managers of different lines of business.
- in Year 1, 300 users across the organization are using Experience Analytics data to support their decision making within their specific job roles. As the organization begins to use Experience Analytics data more often and learns the different types of roles that could benefit from the data, use expands across the organization, and by Year 3, 400 people are using the data.
- Forrester conservatively estimates that these employees use the data from Experience Analytics for about 10% of their work hours per week, and many will use it more than this.
- Based on feedback from the interviewed organizations, Forrester estimates that in Year 1, these employees see an average productivity improvement of 30%. As they become more accustomed to using the data and understand where and how to apply the insights, this increases to 40% by Year 3.

Percentage improved productivity across key customer behavioral analytics users:
40%

The improved productivity of keyExperience Analytics users will vary with:

- Adoption and use of the data.
- Actual efficiency gained from more easily accessible data
- The average salary.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk adjusted total PV of $272,941.

**Improved Productivity Of Key Experience Analytics Users: Calculation Table**

| Ref. | Metric | Calculation | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|
| E1 | Number of employees using Experience Analytics data | | 250 | 300 | 350 |
| E2 | Average percent time using customer behavior analytics data per week | | 10% | 10% | 10% |
| E3 | Average number of hours per year using Experience Analytics data | (40 hour work week * E2 * 50 weeks per year) | 200 | 200 | 200 |
| E4 | Average blended hourly salary | | $50 | $50 | $50 |
| E5 | Percentage of time saved due to Experience Analytics | | 30% | 35% | 40% |
| Et | Improved productivity of key Experience Analytics users | E1*E2*E3*E4*E5) | $75,000 | $105,000 | $140,000 |
| | Risk adjustment | ↓10% | | | |
| Etr | Improved productivity of key Experience Analytics users (risk-adjusted) | | $67,500 | $94,500 | $126,000 |

## Flexibility

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. There are multiple scenarios in which a customer might choose to implement Experience Analytics and later realize additional uses and business opportunities, including:

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a future additional investment. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so.

- **Integrating with Journey Analytics.** With Acoustic Analytics, Journey Analytics provides users a full picture of your customers behavior:
  - Clearly visualize your customers purchase cycle across channels and devices with a true omni-channel analysis.
  - Automatically captures and displays customer paths and customer journeys.
  - Drill down into a journey and see what channels and digital assets your customer interacts with, what paths they take, who completes high-value purchases and where they exit the interaction.
  - Provides a highly visual view of the successes and failures in your customer brand experiences.
  - This allows users to gain the insight to engage with them at the right place and in the right way to
  - Increase customer conversions
  - Shorten the buying cycle
  - Ultimately deliver better user experiences
- **Leverage Mindset analysis capabilities.** Mindset Analysis helps organizations understand how customers are engaging as they move towards their purchase. This capability helps to identify wherein the journey the customer is and ties an action to each part of the customer journey. Organizations can leverage mindset analysis to better understand which events during a customer's journey impact discovery, purchase consideration and advocacy. Understanding these mindsets can help increase conversion rates, revenue and customer retention.
- **Using Experience Analytics to detect fraud and cyber attacks.** Experience Analytics solutions provide organizations with visibility into their customers' online experiences by capturing each customer's individual interactions. Experience Analytics can help:
  - **Detect**. Become aware of malicious bot or user activity.
  - **Stop**. Block access to the site or prevent the goods from leaving (time-delayed).
  - **Research/investigate**. Experience Analytics captures the whole stream of traffic, facilitating forensic discovery for organizations researching potential fraud.
  - **Report impact**. Enables organizations to understand the extent of fraud or cyberattacks, such as which accounts have been breached, or what Personally Identifiable Information (PII) was displayed and to whom.
  - **Remedial action.** When an attack succeeds, organizations must notify affected parties. If this information is unknown, then organizations are responsible for notifying their entire user base. Experience Analytics solutions keep a constant record of what is happening on an organization's site, helping to better understand the breadth of attack, and narrowing the scope of remediation to the truly affected parties.

- **Using Experience Analytics to support call center optimization.** Experience Analytics' Customer Service Optimization improves communication between a company's call center and its web operations for more effective customer service in multichannel environments. It helps customer service representatives understand the full context of a customer's online sessions by preserving online interactions. Acoustic Customer Service Optimization products help resolve customer disputes faster, increase first-call resolution rates and reduce costly escalations.
- **Using Experience Analytics for Behavioral Marketing Segmentation –** Acoustic Experience Analytics can create segments of customers based on online behavior (such as cart or form abandonment) and these segments can be exported to marketing automation systems for retargeting.

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 |
|---|---|---|---|---|---|---|---|
| Ftr | Experience Analytics Licensing, Professional Services and Training Costs | $1,215,656 | $1,111,156 | $1,105,656 | $0 | $3,432,469 | $3,139,564 |
| Gtr | Implementation and planning costs | $17,955 | $0 | $0 | $0 | $17,955 | $17,955 |
| Htr | Incremental Customer Experience Staff | $0 | $154,000 | $308,000 | $308,000 | $770,000 | $625,950 |
| Itr | Incremental IT Administration Support Staff | $0 | $16,500 | $16,500 | $16,500 | $49,500 | $41,033 |
| Jtr | Additional bandwidth | $22,000 | $132,000 | $132,000 | $132,000 | $418,000 | $350,264 |
| | Total costs (risk-adjusted) | $1,255,611 | $1,413,656 | $1,562,156 | $456,500 | $4,687,924 | $4,174,766 |

## Overview of Costs

The composite organization incurred the following costs associated with its deployment of Experience Analytics. Note that costs will vary depending on deployment, with on-premises deployment demanding higher upfront cost and more specialized resources than the easier to implement and user-friendly cloud deployment model.

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total costs to be a PV of more than $4.1 million.

- **Experience Analytics Licensing, Professional Services and Training Costs:** These represent fees paid to Acoustic for licensing; support provided by Acoustic on planning and implementing the solution; and training for IT and the customer experience team responsible for supporting the solution.
- **Implementation And Planning Costs:** These represent the costs for internal resources for the initial planning, implantation and deployment of Experience Analytics. Forrester estimates the organization will spend approximately 300 person-hours over a 2-month period to plan and prepare for Experience Analytics.
- **Incremental Customer Experience Staff:** With the deployment of Experience Analytics, the composite organization hires staff to be the key champion of Experience Analytics. This employee is responsible for the day-to-day management of Experience Analytics and supports other individuals across the organization to set up and monitor reports and to prioritize and escalate usability and customer experience issues. As the composite organization begins to utilize and demand more data from Experience Analytics, the team supporting Experience Analytics grows to two FTEs to support the increased adoption.
- **Incremental IT Administration Support Staff:** The IT team provides minimal administration support for Experience Analytics, requiring about 15% of one FTE's time for support.
- **Additional Bandwidth:** as Experience Analytics is a SaaS deployment, the composite organization required more network bandwidth to ensure proper performance. This will vary based on an organization's existing infrastructure.

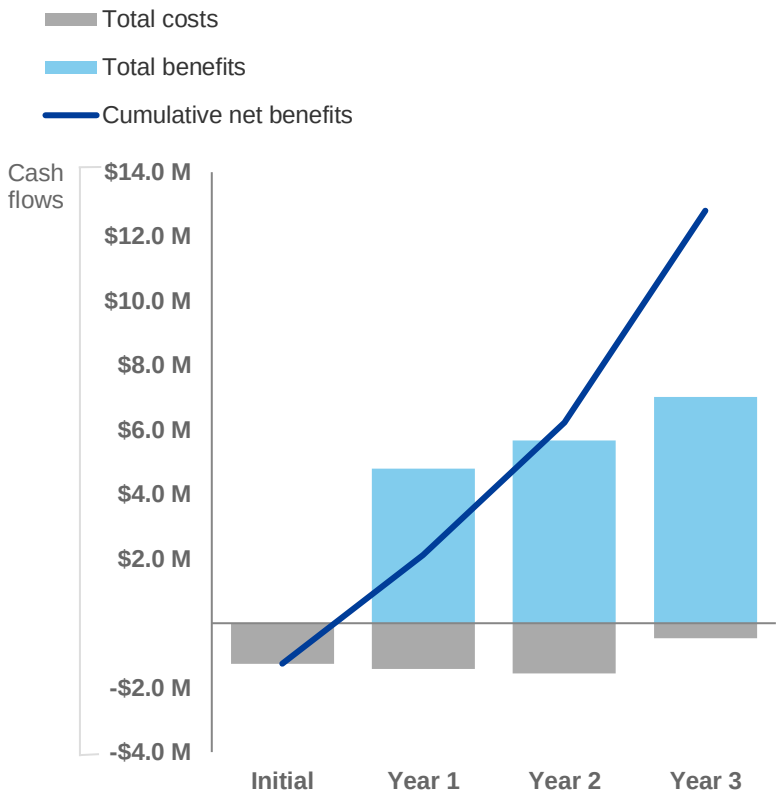
To account for risks associated with these costs, Forrester adjusted this cost

upward by 5% to 10%, yielding a three-year risk-adjusted total PV of $4.1 million.

# 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 Table (Risk-Adjusted)**

| | INITIAL | YEAR 1 | YEAR 2 | YEAR 3 | TOTAL | PRESENT VALUE |
|---|---|---|---|---|---|---|
| Total costs | ($1,255,611) | ($1,413,656) | ($1,562,156) | ($456,500) | ($4,687,924) | ($4,174,766) |
| Total benefits | $0 | $4,789,017 | $5,680,755 | $7,022,182 | $17,491,955 | $14,324,361 |
| Net benefits | ($1,255,611) | $3,375,361 | $4,118,599 | $6,565,682 | $12,804,032 | $10,149,595 |
| ROI | | | | | | 243% |
| Payback period | | | | | | <6 months |



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# Experience Analytics and complementary analytics solutions: Overview

The following information is provided by Acoustic. Forrester has not validated any claims and does not endorse Acoustic or its offerings.

AI powers the customer insight that drives differentiated digital experiences. Acoustic Experience Analytics maintains behavioral analytics leadership by delivering measurable business benefits around revenue, customer retention, and cost and time savings to organizations across industries.

**Customer behavior analytics:**

- Use customer experience analytics to transform the rich customer experience data set captured by the platform in near real time into visually replayable and searchable customer sessions.
- Enable proactive management by providing an early warning system that identifies significant changes in critical customer experience metrics, struggle scores, and key performance indicators (KPIs).

› **Usability analytics**. Help analyze and understand user intention across digital interaction points, such as web and mobile. Teams throughout the enterprise will be able to collaborate and quantify customer behavior data and turn it into real business insight.

› **Mobile analytics**. Enable companies to apply Acoustic's customer behavior analytics to their mobile websites, native applications, and hybrid applications, including support for HTML5 and responsive web design (RWD). Mobile analytics provides visibility into the mobile customer experience, helping to deliver more successful mobile products and services.

› **Acoustic Analytics including journey analytics capabilities** helps companies make smarter, faster marketing and CX decisions based on integrated insights into customers across touchpoints. Acoustic Analytics provides both quantitative and qualitative information necessary to understand customer's experiences, regardless of channel, application or device. With Acoustic Analytics, companies can better understand how customers interact with an organization on journeys across mobile, web, social, in-store and other channels, and which journeys drive the best business outcomes so you know where to invest.

# 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.