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Prepared for Adobe

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Measuring The Total Economic Impact Of Customer Engagement

A Multi-Company ROI Analysis

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Executive Summary

In June 2008, Adobe commissioned Forrester Consulting to examine the total economic impact and potential return on investment (ROI) that enterprises may realize by increasing their investment in initiatives designed to engage their customers with an emphasis on both existing and emerging technology touch points. Engagement is the deep connection a company or brand creates with a customer that drives purchase decisions, interaction, and participation over time. Engaged customers exhibit strong positive feelings toward a brand that not only encourages greater brand involvement and interaction but also cultivates customers as brand advocates. All interactions between an organization and its customers, can enhance the value of engagement over time, and this is especially true with regard to technology touch points. Engaging experiences are readily available, collaborative, rich and compelling, easy to use, personalized, and responsive to customer needs through investment within the Web channel.

Investments in Adobe technology can play a key part in improving customer engagement within an organization's online presence. In conducting in-depth interviews with six existing Adobe customers, Forrester found that increasing investment in online customer engagement through the Internet channel improved the efficiency and effectiveness of customer interactions and improved the customer experience. Improved efficiency translates to reduced overall cost of sale as well improved internal staff productivity. Improved effectiveness translates to improved top line revenue resulting from higher purchasing frequency and improved customer value.

Purpose

The purpose of this study is to provide readers with a framework for evaluating the potential financial impact of projects designed to improve customer engagement within their organizations. Forrester's aim is to clearly show all calculations and assumptions used in the analysis. Readers should use this study to better understand and communicate a business case for increasing their investment in customer engagement initiatives.

Methodology

Adobe selected Forrester for this project because of its industry expertise in measuring the impact of customer engagement and Forrester's Total Economic Impact™ (TEI) methodology. TEI not only measures costs and cost reduction (areas that are typically accounted for within IT) but also weighs the enabling value of a technology in increasing the effectiveness of overall business processes.

For this study, Forrester employed four fundamental elements of TEI in modeling the impact of customer engagement:

1. Costs and cost reduction
2. Benefits to the entire organization
3. Risk
4. Flexibility

Given the increasing sophistication that enterprises have regarding cost analyses related to IT investments, Forrester's TEI methodology serves an extremely useful purpose by providing a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

Approach

Forrester used a six-step approach for this study:

1. Forrester gathered data from existing Forrester research relative to customer engagement and measuring customer impact.
2. Forrester conducted a broad survey commissioned by Adobe of more than 200 business decision-makers — including customer service, support, and marketing professionals.
3. Forrester interviewed Adobe marketing and sales personnel to fully understand the impact that Adobe solutions have on a company's ability to engage its customers.
4. Forrester conducted a series of in-depth interviews with six organizations currently using Adobe solutions as part of their overall customer engagement efforts to understand the financial impact of their investment in engagement.
5. Forrester constructed a financial model representative of the interviews. This model can be found in the TEI Framework section below.
6. Forrester created a sample organization that represents an aggregate of what we heard in the interviews and populated the framework using data from the interviews as applied to the composite sample organization.

Key Findings

Forrester's study yielded three key findings:

- **For most companies, ROI is positive and relatively fast.** The ROI for our composite company is 66%, with a breakeven point (payback period) of less than 12 months after deployment (see Table 1). ROI, or Return on Investment is defined as the ratio of total incremental net benefits to total incremental costs.
- **Primary benefits are greater efficiency and effectiveness of customer interactions.** Forrester found that an increase in investment around customer engagement resulted in improvements in efficiency and effectiveness of customer interactions. Improved efficiency translates to reduced overall cost of sale as well improved internal staff productivity. Improved effectiveness translates to improved top line revenue resulting from higher purchasing frequency and improved customer value.
- **Costs.** Costs to improve customer engagement fall into three categories: 1) technology, 2) people, and 3) process-related costs. Technology costs include the cost of additional software and hardware as well as the cost of hosting and professional services. People costs include the costs of development and initial internal strategy costs. Process-related costs include the costs of training and workflow reengineering.

Table 1 illustrates the risk-adjusted cash flow for the representative organization, based on data obtained during the interview process. Forrester adjusts these values for risk to take into account the potential uncertainty that exists in estimating the costs and benefits of a technology investment. The risk-adjusted value is meant to provide a conservative estimate, incorporating any potential risk factors that may later impact the original cost and benefit estimates. For a more in-depth explanation of risk and risk adjustments used in this study, please see the Risk section.

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Table 1: Composite Company ROI, Risk-Adjusted¹

Ref.	Total benefits	Initial	Year 1	Year 2	Year 3	Total	NPV
H1	Total costs	\$141,900	\$1,305,880	\$1,205,880	\$1,205,880	\$3,859,540	\$3,231,654
L1	Total benefits		\$1,576,533	\$3,153,067	\$3,153,067	\$7,882,667	\$6,407,998
P2	Total	-\$141,900	\$270,653	\$1,947,187	\$1,947,187	\$4,023,127	\$3,176,344
P3	Return on investment	66%					
P4	Payback period	12 months					

Source: Forrester Research, Inc.

Forrester found that higher ROIs were realized by organizations that were able to develop a deep connection with their customers via the online channel. Companies that used the Internet to communicate and foster dialogue with their customers were able to provide an effective alternative channel through which to provide product and services information, which ultimately raised customer awareness and purchase intent.

Disclosures

The reader should be aware of the following:

- The study is commissioned by Adobe and delivered by the Forrester Consulting group.
- Adobe 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.
- The customer names for the interviews were provided by Adobe.
- Forrester makes no assumptions as to the potential return on investment that other organizations will receive. Forrester strongly advises that readers should use their own estimates within the framework provided in the report to determine the appropriateness of an investment in customer engagement.
- This study is not meant to be used as a competitive product analysis.

¹ For a more detailed explanation of the summary financial calculations used as part of this analysis, please see Appendix C.

Customer Engagement: Overview²

With greater access to information, more sensitivity to price, and less sensitivity to advertising, today's customers are harder to win and keep. The key to acquiring and retaining customers in this environment is to engage them — to participate in an ongoing, two-way conversation with customers that creates:

- **A deep emotional connection with the brand.** Engaged customers have strong positive feelings about a brand ranging from high brand affinity to passionate zeal.
- **High levels of active participation.** Engaged customers don't just feel strongly about a brand, they act on those feelings. These individuals proactively visit stores or Web sites to check out what's new, talk about the brand with family, friends, and colleagues, visit online forums to get advice from professional peers, provide feedback that makes products and services better, and contribute content that helps other people buy, try, or use the company's products more effectively.
- **A long-term relationship.** Engaged customers interact with their favorite or most useful brands regularly. And with each positive interaction, their affinity for the brand is strengthened, making them more likely to return, repurchase, or extend a contract.

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What do firms do to engage with customers in this way? To find out, Forrester Consulting conducted a survey commissioned by Adobe of more than 200 business decision-makers — including customer service, support, and marketing professionals — from around the world about their customer engagement efforts. Results show that:

- **Engagement activities span channels.** The Web might be more ubiquitous, addressable, and measurable, but physical locations and interpersonal interactions still matter. More than 70% of respondents to our survey said that their primary customer engagement programs involve both offline and online touch points (see Figure 1).
- **Online engagement programs will skyrocket this year.** Although most companies said they use the Web to engage customers in some way today, only 41% said they rely heavily on digital technologies to drive customer engagement. But when we asked how heavily they will rely on these technologies 12 months from now, this number jumped to 70%.
- **Technology choices focus on making the Web site more engaging.** More than 60% of respondents said their firms use Rich Internet Applications and multimedia on their Web sites, both of which have the potential to enhance interaction (see Figure 2). A similar percentage use online forms that enable customers and prospects to complete key transactions online and companies to gather information about buyers and influencers who are willing to provide personal information.
- **Firms plan to experiment with new forms of technology-enabled participation.** Many respondents to our survey said they plan to add technologies such as online customer reviews, mobile Web sites, and user-generated content to their portfolios over the next year. This comes as no surprise, given that tools like these offer customers a new way to

² Extracted from "Measuring Customer Engagement," a commissioned study conducted by Forrester Consulting on behalf of Adobe Systems Incorporated, May 2008



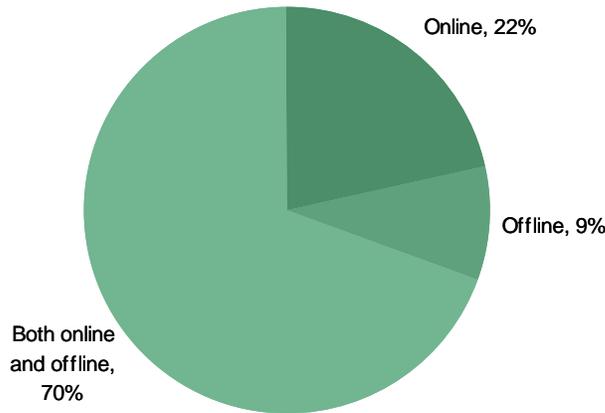
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engage with brands. And, when implemented properly, this type of technology also provides a reason for customers to return to a Web site again and again.

Figure 1: Most Firms' Top Engagement Strategy Has Online And Offline Components

“Would you categorize this strategy, program, technology, or tool to enhance customer engagement as online, offline, or both?”

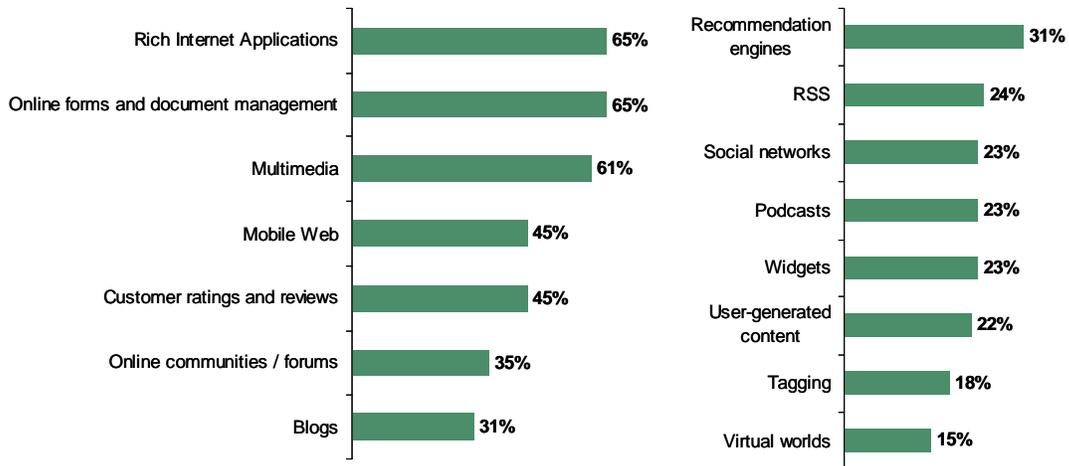


Base: 213 global executives involved in customer engagement

Source: “Measuring Customer Engagement,” a commissioned study conducted by Forrester Consulting on behalf of Adobe Systems Incorporated, May 2008 (Percentages do not total 100% due to rounding)

Figure 2: The Most-Used Digital Technologies Make Web Sites More Engaging

“Does your company currently use or participate in any of the following types of interactive / digital technologies or tactics to enhance your customers’ engagement with your company or brand?”



Base: 213 global executives involved in customer engagement

Source: “Measuring Customer Engagement,” a commissioned study conducted by Forrester Consulting on behalf of Adobe Systems Incorporated, May 2008

. . . And Expect Engagement To Drive Higher Loyalty And Sales

Given the time and energy firms spend on customer engagement, we wanted to understand how companies expect to benefit from those efforts. The data shows that firms expect customer engagement programs to affect the business by creating a customer base that:

- **Is more loyal.** Increased customer loyalty and retention was the most common business goal for customer engagement programs among survey respondents, with 69% of firms citing this as a key objective
- **Buys, renews, or upgrades more products, more often.** Almost as many respondents, 68%, said they expect higher customer engagement to lead to increased sales. Follow-up questions showed that firms expect at least some of those increases to come from existing customers who, when more engaged, make more frequent purchases.
- **Recommends the brand to others.** Past Forrester research shows that firms also believe engaged customers will advocate on their behalf and promote the company's brand to friends, peers, colleagues, family, and even strangers online in a way that fuels customer acquisition. Word-of-mouth consumers not only help bring in new customers, but they are also more likely to be loyal themselves: 67% of consumers who give and receive advice about products express significant loyalty to that brand.

Analysis

Forrester took a multistep approach to evaluate the impact that investing in improving online customer engagement can have on an organization:

- Interviews with Adobe marketing and sales personnel.
- In-depth interviews of six organizations that have increased their investment in customer engagement.
- Construction of a common financial framework for the implementation of increasing an organization's investment in customer engagement.
- Construction of a composite organization based on characteristics of the interviewed organizations.

Interview Highlights

A total of six interviews were conducted for this study, involving representatives from the following organizations:

1. A North American provider of proprietary payment processing products and services that sought to increase customer engagement by providing form automation to the customers it serves.
2. MTV Italia, the Italian entertainment and media organization, which partnered with an external design firm, 01design, to produce an application using Adobe Flash solutions that delivers content directly to subscribers on their mobile devices (e.g., cell phones, PDAs).

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3. A European-based news magazine with both print and online presence that used Adobe Creative Suite to provide customized content and advertising online to its print subscriber base.
4. A North American transportation and logistics organization that developed a series of Rich Internet Applications with the help of Adobe Flex to provide detailed content for products and services.
5. A global provider of media and entertainment services providing its users both on demand and downloaded entertainment applications, allowing the organization to promote and advertise third-party content and products.
6. A European-based provider of online and direct mail retail services that partnered with Adobe Scene7 to develop a content rich online catalogue allowing users to create color and fabric combinations in different settings.

The six in-depth interviews uncovered several key common challenges and themes that drove their investment in improving customer engagement³. These included:

- **Customer Interaction.** Interviewed organizations were looking for ways to enhance their presence in established and emerging customer channels. Several organizations noted in particular the need to expand their Web presence through additional applications, pages, and functionality to meet the increasing number of customers online while at the same time maintaining the brand presence within other customer channels.
- **Customer Intimacy.** Several interviewed organizations sought to increase online customer engagement by creating and delivering personalized, innovative content to customers. Their goal was to make online interactions as interactive and rich as experiences in other existing sales channels
- **Customer Involvement.** This component is the most basic measurement of engagement and reflects the measurable aspects of an individual's relationship with a company or brand. Several organizations realized that engaging with customers online created a powerful feedback mechanism, which allowed the organization to quickly respond to customers' changes in demand. Prior to investing in customer engagement, these organizations had limited ways to capture the voice of the customer electronically.
- **Customer Influence.** Customer influence is providing a way to spread the organization's message through its customers. Interviewed organizations felt the need, particularly with online presence, to be able to create the ability of their existing customers to be able to share and communicate their online experience with others, increasing overall brand awareness.

³ For additional explanation into Forrester Research's Customer Engagement Framework, please see the August 8, 2007, report "Marketing's New Key Metric: Engagement" by Brian Haven.

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The composite organization created from the results of the customer interviews represents a North American-based services organization with 12,000 employees and 4.5 million annual customers in both North America and Europe. The organization generates \$800 million in revenue per year and interacts with its customers through a variety of channels. These include 80 physical locations, two 400 employee call centers, as well as online Web presence. The organization saw improvement in customer engagement impacting the business in two distinct ways. These included:

- Maintaining high levels of customer interaction while at the same time optimizing channel cost. The organization had undergone a period of operational cost cutting measures with the mandate to improve spend efficiency where possible. As part of this process, the organization wanted to provide the same level of engagement to its customers while potentially channeling certain transactions and queries to lower-cost customer channels. As a result, the organization realized the need to enhance its online user experience.
- Engaging existing online customers in new and innovative ways. The organization realized that in order to attract and keep new customers while at the same time building customer loyalty, it needed to create a Web experience that fostered two-way communication while at the same time opening up the opportunities for customer to interact and purchase products and services online. This ultimately would increase the organization's top line revenue.

TEI Framework

Introduction

From the information provided in the in-depth interviews, Forrester has constructed a TEI framework for those organizations considering increasing their investment in customer engagement. The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that impact the investment decision.

Framework Assumptions

Table 2 lists the discount rate used in the present value (PV) and net present value (NPV) calculations and time horizon used for the financial modeling.

Table 2: General Assumptions

Ref.	General assumptions	Value
	Discount rate	10%
	Length of analysis	Three years

Source: Forrester Research, Inc.

Organizations typically use discount rates between 8% and 16%, based on their current environment. Readers are urged to consult with their finance departments to determine the most appropriate discount rate to use within their own organizations.

In addition to the financial assumptions used to construct the cash flow analysis, Table 3 provides salary assumptions used within this analysis.

Table 3: Salary Assumptions

Ref.	Metric	Calculation	Value
A1	Hours per week		40
A2	Weeks per year		52
A3	Hours per year (M-F, 9-5)		2,080
A4	Hours per year (24x7)		8,736

Source: Forrester Research, Inc.

Costs

Costs of improving customer engagement will vary by organization. However, our research provides a snapshot of the types of costs that organizations incur in order to execute customer engagement initiatives.

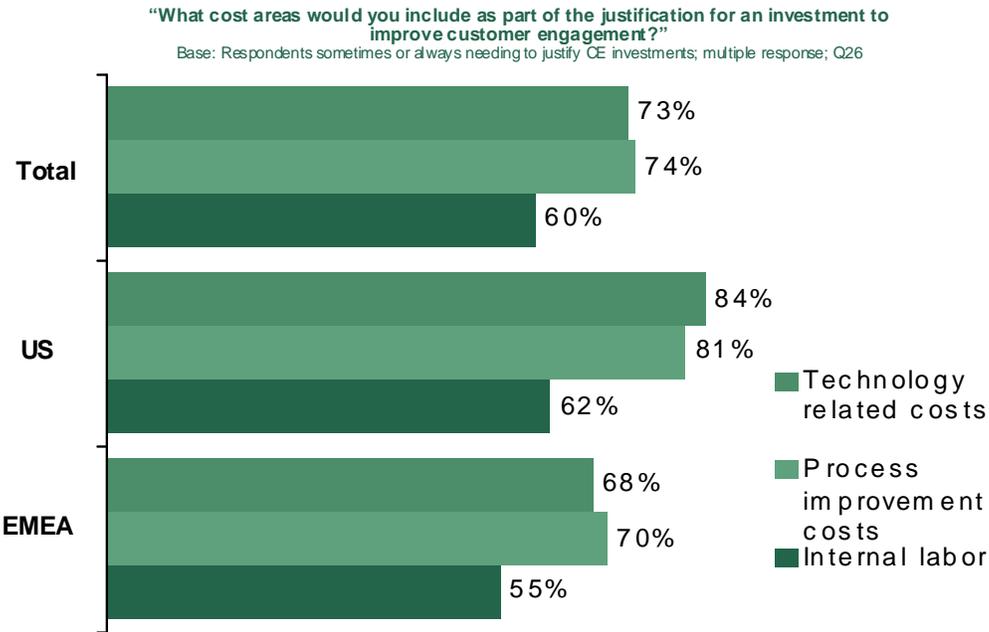
A couple of common cost-related themes emerged from our research, including:

- Incremental investments in customer engagement require a combination of technology, process, and labor costs. The majority of respondents to our survey indicated that they would include all three costs as part of the investment (see Figure 3).
- Increasing customer engagement typically requires a partnership between IT, sales, and marketing. As a result, to invest in customer engagement, groups across the organization were required to commit to investing budget dollars to customer engagement projects.
- Investing in customer engagement also required organizations to take into account both direct and indirect costs to maximize the success of their investment. For example, indirect investment in training and upfront strategy is incorporated with direct investments in hardware, software, and development to achieve maximum impact.

The model developed for this analysis includes all three of the cost categories identified: technology, people, and process-related costs (see Figure 3). Technology costs include the cost of additional software and hardware as well as the cost of hosting and professional services. People costs include the cost of development and initial internal strategy costs. Process-related costs include the costs of training and workflow reengineering.

Figure 3: Typical Investment Costs — Customer Engagement

Investing in Engagement Typically Include Investments People, Process, and Technology Costs



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Source: “Measuring Customer Engagement,” A commissioned study conducted by Forrester Consulting on behalf of Adobe, May 2008

Technology-Related Costs

Infrastructure Costs

Several of the organizations that we interviewed needed to purchase additional server resources for their development test environment to support customer engagement programs. While some organizations were able to repurpose or reallocate existing server resources, the model assumes the composite organization did incur an infrastructure expense to support customer engagement work.

The model assumes that the organization must purchase two development servers at a cost of \$8,000 per server. In addition, the model assumes that the organization incurs an annual recurring cost of \$2,880 to support and maintain these servers, or 18% of total server cost. Table 4 illustrates the calculations used.

Table 4: Cost Of Server Infrastructure

Ref	Metric	Calculation	Value
B1	Number of servers purchased		2
B2	Cost per server		\$8,000
B3	Annual operations cost as a % of total		18%
B4	Initial cost	$B1*B2$	\$16,000
B5	Annual recurring cost	$B3*B4$	\$2,880

Source: Forrester Research, Inc.

Software Costs

In addition to incremental hardware costs, another common cost category was an investment in software as part of the investment in customer engagement. Interviewed organizations purchased a variety of software applications including both Adobe and non-Adobe software solutions. Based on the results of the interviews, the model assumes the organization will incur development license and maintenance costs for the Adobe Creative Suite as well as incremental costs for Web analytics. The additional investment in Web analytics will enable the organization to gain a greater understanding of the impact of its campaigns with the presence of greater interactive content.

To calculate these costs, the model assumes the organization will need to purchase licenses for Adobe Creative Suite as well as a Web analytics platform. As part of the investment, the organization purchases four development Creative Suite licenses and two licenses for Web analytics software. Assuming the cost per license of Creative Suite is \$3,000 with a 20% annual maintenance, the total cost of the Adobe solutions is \$12,000 for the licenses and \$2,400 for annual maintenance. The total cost of the Web analytics software equates to \$70,000 per year, assuming the organization purchases two licenses as a software-as-a-service (SaaS) model. Tables 5 and 6 illustrate the calculations used.

Table 5: Software Costs — Adobe

Ref	Metric	Calculation	Value
C1	Number of licenses purchased — Creative Suite		4
C2	Cost per license		\$3,000
C3	Annual maintenance — % of total		20%
C4	Initial cost	$C1*C2$	\$12,000
C5	Annual recurring cost	$C3*C4$	\$2,400

Source: Forrester Research, Inc.

Table 6: Software Costs — Web Analytics

Ref	Metric	Calculation	Value
D1	Number of licenses purchased — Web analytics		2
D2	Annual cost per license		\$35,000
D2	Annual software cost	D1*D2	\$70,000

Source: Forrester Research, Inc.

Hosting And Professional Services Costs

In addition to developing Rich Internet Applications and content internally for customer experience, several of the organizations had invested in external providers to manage and host their Web content and campaigns. For example, an online retail organization invested in Scene 7 to develop an interactive Web site allowing organizations to dynamically change colors and patterns on sample products. Several organizations saw the need to partner with external groups to help design and develop content as part of their Web strategy.

As part of this model, we assume the organization will invest in external resources to build and host several specific campaign initiatives. This fee is separate from internal development work completed for the company's core Web presence. While the actual monthly costs may vary depending on the size and scope of the initiative, the model assumes an average monthly cost based in part on the data from the interviewed customers. Table 7 illustrates the equation used.

Table 7: Hosting And Professional Services Costs

Ref	Metric	Calculation	Value
E1	Monthly billable cost — hosting		\$30,000
E2	Monthly billable cost — professional services		\$20,000
E3	Number of months		12
E4	Annual development cost	(E1+E2)*E3	\$600,000

Source: Forrester Research, Inc.

People-Related Costs

Development Costs

The cost of internal development represents another area of investment for organizations thinking about increasing their customer engagement. Development costs would include the internal development costs of developing and testing Rich Internet Applications, developing tools to improve internal workflows, and updates to site-specific content not managed by external hosting providers.

The model assumes the composite organization will devote an average of 400 development hours per campaign at a development cost per hour of \$120. The organization produces 10 campaigns per year, resulting in a total development cost of \$480,000. Table 8 illustrates the calculation used.

Table 8: Development Cost

Ref	Metric	Calculation	Value
F1	Development hours per campaign		400
F2	Number of campaigns		10
F3	Development cost per hour		\$120
F4	Annual development cost	$F1 * F2 * F3$	\$480,000

Source: Forrester Research, Inc.

Initial Strategy Costs

The interviewed organizations indicated that a key component in the success of building customer engagement was developing a clear, upfront strategy and roadmap to make measured improvements across customer channels. Most of the interviewed organizations indicated that they relied on their own internal staff for upfront strategy and implementation of incremental software purchases. Specific tasks would include both coordinating and identifying key external software and services partners to help develop and implement the strategy, as well as creating a formal set of requirements for each customer channel. Table 9 illustrates the equation used.

Table 9: Initial Strategy Costs

Ref	Metric	Calculation	Value
G1	Hours devoted to initial strategy		400
G2	Cost per hour		\$150
G3	Total cost	$G1 * G2$	\$60,000

Source: Forrester Research, Inc.

Process-Related Costs

Training Costs

The cost to train the individual developers on Adobe solutions (including Flash and Flex) was another cost cited by interviewed organizations. While several of the organizations noted that their developers had previous experience developing on Adobe platforms, the model conservatively estimates a nominal level of additional training to allow the developers to be fully comfortable in building out Rich Internet Applications. Table 10 illustrates the calculations used to estimate the cost of this training.

Table 10: Training Costs

Ref	Metric	Calculation	Value
H1	Training — cost per hour		\$80
H2	Number of hours per developer		60
H3	Number of developers		10
H4	Total cost	$H1*H2*H3$	\$48,000

Source: Forrester Research, Inc.

Workflow Reengineering Costs

Several customers saw the need to improve the efficiency of their customer-facing processes as a means of driving higher customer engagement. In particular, organizations saw the potential to move some of their manual order and query forms to an electronic format as they increased their Web channel capabilities, allowing back-end staff to reduce the amount of manual effort to process queries and forms.

In order to perform this workflow reengineering, the model assumes the representative organization allocates roughly 2 FTEs over a period of three months to implement the change in back-end process. Assuming an average cost per hour of \$80, the total cost of workflow reengineering equates to \$96,000. Table 11 illustrates the calculation used.

Table 11: Workflow Reengineering Costs

Ref	Metric	Calculation	Value
I1	Number of hours		1200
I2	Cost per hour		\$80
I3	Total cost	$I1*I2$	\$96,000

Source: Forrester Research, Inc.

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Total Costs

Table 12 illustrates the total cost components for the representative organization, including both upfront and recurring costs.

Table 12: Total Costs — Non Risk-Adjusted

Cost Category	Initial	Year 1	Year 2	Year 3	Total	PV
Cost of server infrastructure	\$16,000	\$2,880	\$2,880	\$2,880	\$24,640	\$23,162
Cost of Adobe software	\$12,000	\$2,400	\$2,400	\$2,400	\$19,200	\$17,968
Cost of Web analytics software		\$70,000	\$70,000	\$70,000	\$210,000	\$174,080
Hosting and professional services		\$600,000	\$600,000	\$600,000	\$1,800,000	\$1,492,111
Development costs		\$480,000	\$480,000	\$480,000	\$1,440,000	\$1,193,689
Strategy development costs	\$60,000				\$60,000	\$60,000
Training cost	\$48,000				\$48,000	\$48,000
Workflow reengineering costs		\$96,000			\$96,000	\$87,273
Total costs	\$136,000	\$1,251,280	\$1,155,280	\$1,155,280	\$3,697,840	\$3,096,283

Source: Forrester Research, Inc.

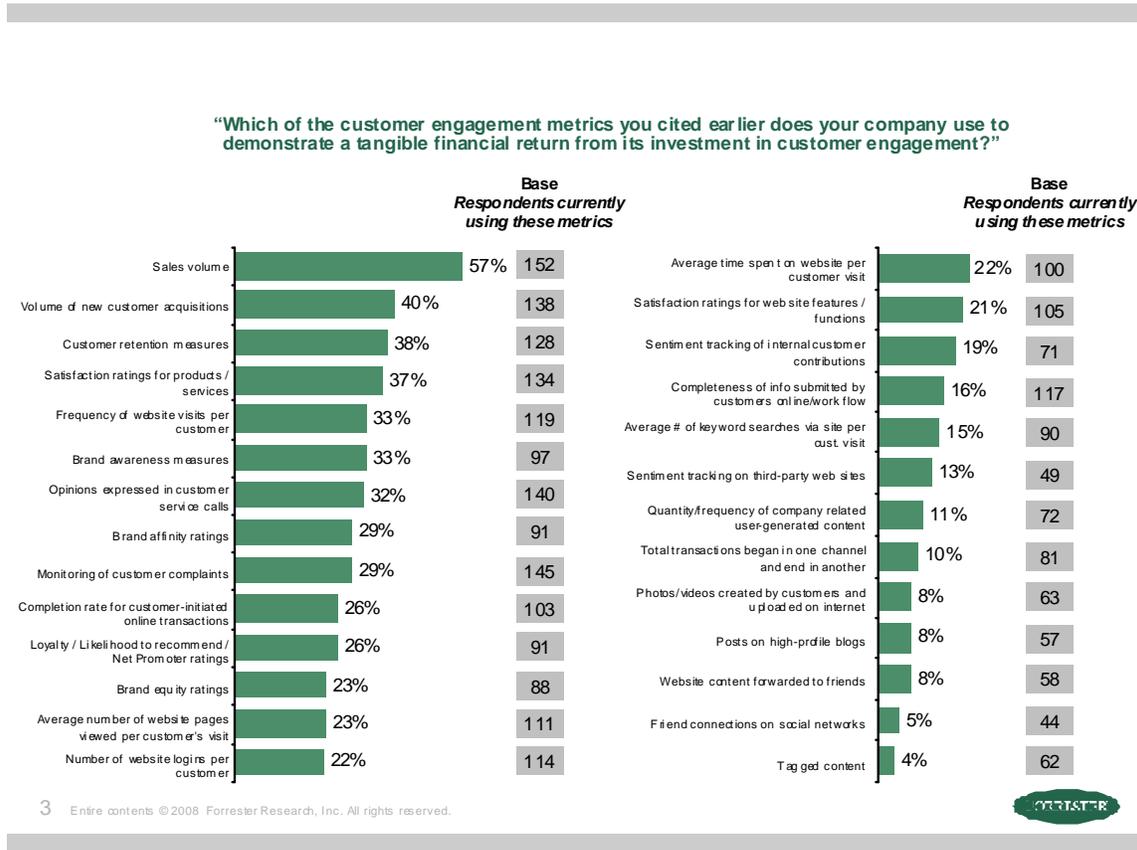
Benefits

Benefits are the positive impact the representative organization receives from its investment in improving customer engagement. As with costs, while the benefits of better customer engagement will vary by organization, our research did provide a snapshot of the key drivers of financial return on engagement.

A couple of common themes emerged:

- The desire to increase sales volume is one of the primary drivers of investment in customer engagement. Of the respondents in our survey, 57% said improved sales volume is the key determinant in the success of an organization's customer engagement initiatives, followed by new customer acquisition (40%), and customer retention (38%) (see Figure 4).
- For most of the interviewed customers, increased sales volume and higher overall revenue were key measures of success. However, customers saw the need to balanced improved effectiveness in customer interactions with the need to drive higher internal efficiency, ultimately leading to a lower cost of sale. This included, for example, being able to channel customer interactions online, reducing the cost burden within other sales channels.

Figure 4: Common Financial Measures Of Customer Engagement



Source: “Measuring Customer Engagement,” A commissioned study conducted by Forrester Consulting on behalf of Adobe, May 2008

Greater Sales Volume — Existing Customers

A key part in measuring the success of customer engagement for both interviewed organizations and broader survey respondents was the measure of the impact on sales volume. Several interviewed customers saw building out new rich interactive media as a means of fostering a deep connection and presence that will ultimately influence a user’s purchase decision around a product or service.

In particular, one way to increase sales volume is to get existing customers to increase the frequency of products or service purchases or potentially to cross-sell additional products or services to those same existing customers. One example from existing customers include a retail organization which provides the ability to view multiple products in the same environment, increasing the likelihood that customers will pair their purchases increasing their average sale. Being able to create a meaningful experience, allowing the user to evaluate a product or solution in new ways is one of the key financial levers in customer engagement and ultimately increasing the frequency of purchases. One organization noted: “Driving sales volume is key for us to measure how engaged our customers are. It is how we turn improvements on our Web site into tangible business impact.”

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Prior to investing in meaningful customer engagement, the organization had limited ways to sell its products and services over existing Web channels. Its existing Web site was primarily meant to provide static information about the company's products and services. Customers did not have the ability to submit electronic order forms, interact with customer service agents, or view Rich Internet Applications that provide greater access around the company's products and services. In addition, marketing campaigns were limited in scope and did not draw users into the organization's Web site to learn and understand more around its products or services.

Through enhancing customer engagement, the organization substantially increased interactions with its existing customers. To increase engagement, the company targeted marketing campaigns so more people would click on them, improved both content and the way that content is presented (via RIAs), and added the ability to complete transactions online. The impact of these changes was higher sales in the form of more first time purchases, more frequent purchases, and higher cross-sell instances. Marketing campaigns are targeted to match products and services to a particular demographic. The company's Web presence is greatly enhanced by providing a rich multimedia experience to users that explains how different products and services are related and how to pair products and services together. The net result is existing customers who are more likely to increase their buying frequency throughout the year and who generate higher annualized revenue.

To calculate this benefit, the model assumes the organization has roughly 4.5 million existing customers. The organization categorizes its customers by value, based on annual revenue, into three tiers: low, medium, and high. Prior to investing in meaningful customer engagement, 20% of customers were classified as high-value customers, providing on average \$200 in revenue per year, while 30% were classified as medium-value, providing on average \$120 in revenue per year. As a result of the investment, the organization projected it could conservatively shift roughly 5% of its medium-value customers to the high-value cohort. Assuming a 20% customer margin, we can calculate the total annual revenue resulting from the shift at \$1,080,000. Table 13 illustrates the calculation used.

Table 13: Increased Sales Volume — Existing Customers

Ref	Metric	Value
A1	Total existing customers	4,500,000
A2	% customers — high value	20%
A3	% customers — medium value	30%
A4	Average annual spend — high value	\$200
A5	Average annual spend — medium value	\$120
A6	Expected impact shift — medium to high	5%
A7	Customer margin	20%
A8	Total annual revenue	\$1,080,000

Source: Forrester Research, Inc.

Greater Sales Volume — New Customers

In addition to enhancing the user experience for existing customers, a key way to increase customer engagement in the organizations that we interviewed was to attract new customers to interact with the company through multiple channels. In particular, the companies saw building and enhancing their Web sites as a way to attract potential customers of different customer demographics.

Prior to investing in customer engagement, the organization had no way of effectively tying their outbound marketing campaigns to Web content to bring new customers into the existing Web channel. Campaigns were not integrated, and there was no incentive for bringing a new potential customer onto the Web to engage and interact.

To measure the impact of engagement, the representative organization assumes an average audience per campaign of 200,000 prospects with 10 campaigns per year. Prior to the investment, the conversion ratio of moving qualified prospects to customers was estimated to be 10%. The organization projects a 20% increase in its conversion ratio as a result of enhancing its engagement with its customers. The model conservatively estimates that the new customers will move into the low value cohort, on average \$80 per year. Assuming the product sales margin of 20%, we can calculate the annual revenue gain is \$640,000. Table 14 illustrates the calculation used.

Table 14: Greater Sales Volume — New Customers

Ref	Metric	Calculation	Value
B1	Average audience per campaign		200,000
B2	Total campaigns per year		10
B3	Existing conversion ratio		10%
B4	Percent increase in conversion		20%
B5	Average annual spend — low value		80
B6	Product sales margin		20%
B7	Total annual revenue	$B1*B2*B3*B4*B5*B6$	\$640,000

Source: Forrester Research, Inc.

Higher Channel Partner Revenue

While customer and sales revenue was a common theme in driving benefit, a key component for several of the interviewed organizations was being able to provide additional advertising and partner revenue streams. For example, one media organization was able to create customized content to its customers, allowing advertisers to target their content to specific demographics. In addition, MTV/Italia and a US-based media and entertainment organization developed rich media applications, allowing partners and advertisers to provide content as part of the application. This provided these organizations with a key revenue stream used to justify the changes in customer engagement. One organization noted: “Improving customer engagement enhances our advertising relationship by providing great content in a way that attracts and keeps customers on the site.”

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To measure this impact on the representative organization, the model assumes it currently partners with an organization to sell additional services through the organization's Web site. For each click through, the organization receives a commission. With the increase in traffic resulting from the investment in Web channel customer engagement, the organization expects to receive roughly \$240,000 in additional revenue per year a result of Web visitor click throughs to the third-party site. Table 15 illustrates the calculation used.

Table 15: Higher Channel Partner Revenue

Ref	Metric	Calculation	Value
C1	Number of third-party advertisements		20
C2	Monthly click throughs		20,000
C3	Revenue per 10,000 click throughs		5,000
C4	% increase in monthly click throughs		10%
C5	Incremental revenue increase	$C1 * C2 * (C3 / 10,000) * C4 * 12$	\$240,000

Source: Forrester Research, Inc.

Improved Employee Productivity

While top line impacts were the key driver of ROI from improving customer engagement for many of the organizations interviewed, several organizations did note the need to maintain or increase the efficiency of their existing customer-facing workflows as part of their investment in customer engagement. This was seen from several different perspectives. In one case, an organization saw enhancing their online experience as a way of channeling customer queries away from more expensive call centers while at the same time providing a valuable experience to their customers. Another organization saw the potential of creating electronic versions of existing paper order forms, reducing the face-to-face impact of order process while at the same time making the customer experience at physical locations as meaningful and productive as possible. One organization that had created automated forms where previously it had been a manual process noted: "Sales, operations, back office started seeing the benefits of using one single tool in order to track problems and issues and in getting work done and got rolled out to other departments as well." Another customer noted: "By providing rich content to our existing and future customers, we have a greater likelihood that those customers will find the information they need through our Web channel, rather than call our customer service center for basic informational questions."

To calculate these benefits of improved efficiency at our representative organization, we assume the organization is able to divert customer queries away from both its call centers and physical locations. Tables 16 and 17 provide an illustration of the calculation used.

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Table 16: Improved Employee Productivity — Customer Service

Ref	Metric	Calculation	Value
D1	Number of agents		850
D2	Calls answered per agent per year		1,200
D3	% service (non-sales) calls		20%
D4	% of service calls diverted to lower cost channels		30%
D5	% savings per call to divert to lower cost channels		60%
D6	Average cost per customer call		15
D7	Total annual savings	$D1 * D2 * D3 * D4 * D5 * D6$	\$550,800

Source: Forrester Research, Inc.

Table 17: Improved Employee Productivity — Filed Sales

Ref	Metric	Calculation	Value
E1	Number of sales agents		1,100
E2	Customer interactions per agent per year		800
E3	% of interaction non sales-related		20%
E4	% of interactions diverted to lower cost channels		30%
E5	% savings per interaction to divert to lower cost channels		60%
E6	Average cost per customer call		\$30
E7	Total annual savings	$E1 * E2 * E3 * E4 * E5 * E6$	\$950,400

Source: Forrester Research, Inc.

Improved Workflow Efficiency

Improving the efficiency of the back-end process was another area of benefit mentioned by several of the interviewed organizations. Streamlining the number of manual steps required to take and process an order was in part achieved by allowing customers to submit forms online, reducing the time to process those forms once submitted, and reducing physical document processing costs. One organization noted: "Allowing our customers to interact with us using more efficient channels improves not only our customer satisfaction but improves our back-end process as well."

In addition to improving the productivity of internal workflows, the organization also saw the capability of reducing its document processing costs by moving to an electronic format. For this

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analysis, the model assumes it costs the representative organization on average \$25 to process a customer order submitted using paper-based forms. Assuming the organization receives on average 12,000 orders per year and with the new online channel capabilities it is able to divert 30% of existing orders to the Web channel, the organization can expect to save roughly \$90,000 in document processing costs. Table 18 provides an illustration of the equation used.

Table 18: Improved Workflow Efficiency

Ref	Metric	Calculation	Value
F1	Average workflow cost per order		\$25
F2	Orders per year		12,000
F3	% of orders diverted electronically		30%
F4	Estimated annual savings	$F1 * F2 * F3$	\$90,000

Source: Forrester Research, Inc.

Total Benefits

Table 19 illustrates the total benefits from an investment in improving an organization's customer engagement. Benefits are reduced by 50% in Year 1 to take into account the time to implement and begin receiving benefits from deployment.

Table 19: Total Benefits — Non Risk-Adjusted

Benefit category	Year 1	Year 2	Year 3	Total	PV
Increased sales volume — existing customers	\$540,000	\$1,080,000	\$1,080,000	\$2,700,000	\$2,194,891
Greater sales volume — new customers	\$320,000	\$640,000	\$640,000	\$1,600,000	\$1,300,676
Higher channel partner revenue	\$120,000	\$240,000	\$240,000	\$600,000	\$487,754
Improved productivity — customer call center	\$275,400	\$550,800	\$550,800	\$1,377,000	\$1,119,394
Improved productivity — sales	\$475,200	\$950,400	\$950,400	\$2,376,000	\$1,931,504
Improved workflow efficiency	\$45,000	\$90,000	\$90,000	\$225,000	\$182,908
Total benefits	\$1,775,600	\$3,551,200	\$3,551,200	\$8,878,000	\$7,217,127
Total cumulative benefits	\$1,775,600	\$5,326,800	\$8,878,000		

Source: Forrester Research, Inc.

Risk

Forrester defines two types of investment risk associated with this analysis: implementation risk and impact risk. **Implementation risk** is the risk that a proposed technology investment may deviate from original resource requirements needed to implement and integrate the investment resulting in

higher costs than anticipated. **Impact risk** refers to the risk that the business or technology needs of the organization may not be met by the technology investment, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for cost and benefit estimates. Quantitatively capturing investment risk by directly adjusting the financial estimates results in more meaningful and accurate estimates and a more accurate projection of the return on an investment.

The following implementation risks are identified as part of this analysis:

- The cost of software and hardware resources required is greater than anticipated.
- Internal development cost can be higher and may take longer than originally planned.
- The amount of time and effort spent building an effective strategy roadmap may be higher than originally planned.

The following impact risks are identified as part of the analysis:

- Actual increase in additional cross-sell and upsell opportunities may be lower than original expected.
- New customer acquisition may be lower due to changing market conditions.
- Ad and channel partner revenue may be lower than originally expected due to lower customer adoption of Web channel or Rich Internet Applications.
- Productivity gains for customer contact center and direct sales may be smaller and take longer to realize than originally anticipated.
- The number of online documents processed may be lower than originally anticipated, leading to reduced workflow reengineering cost savings.

Steps For Measuring Investment Risk

Risk is used in TEI to widen the possible outcomes of the costs and benefits (and resulting savings) associated with a project. TEI applies a probability density function known as triangular distribution to the values entered. At a minimum, three values are calculated to estimate the underlying range around each cost and benefit estimate. The expected value — the mean of the distribution — is used as the risk-adjusted cost or benefit number. The risk-adjusted costs and benefits are then summed to yield a complete risk-adjusted summary and ROI. In this study, incremental improvements in customer engagement is a relatively low-risk endeavor, as expressed by the interviewed organizations, and applied a risk factor of 103% to the costs and 98% to the benefits to arrive at a risk-adjusted number. Table 20 provides a risk-adjusted breakdown of the costs received. Table 21 provides a risk-adjusted breakdown of the benefits received.

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Table 20: Total Costs — Risk-Adjusted

Cost category	Initial	Year 1	Year 2	Year 3	Total	PV
Cost of server infrastructure	\$16,667	\$3,000	\$3,000	\$3,000	\$25,667	\$24,127
Cost of Adobe software	\$14,400	\$2,880	\$2,880	\$2,880	\$23,040	\$21,562
Cost of Web analytics software		\$72,000	\$72,000	\$72,000	\$216,000	\$179,053
Development costs		\$508,000	\$508,000	\$508,000	\$1,524,000	\$1,263,321
Hosting and Professional Services		\$620,000	\$620,000	\$620,000	\$1,860,000	\$1,541,848
Strategy development costs	\$61,500				\$61,500	\$61,500
Training cost	\$49,333				\$49,333	\$49,333
Workflow reengineering costs		\$100,000			\$100,000	\$90,909
Total costs	\$141,900	\$1,305,880	\$1,205,880	\$1,205,880	\$3,859,540	\$3,231,654
Total cumulative costs		\$1,447,780	\$2,653,660	\$3,859,540		

Source: Forrester Research, Inc.

Table 21: Total Benefits — Risk-Adjusted

Benefit category	Year 1	Year 2	Year 3	Total	PV
Increased sales volume — existing customers	\$468,000	\$936,000	\$936,000	\$2,340,000	\$1,902,239
Greater sales volume — new customers	\$293,333	\$586,667	\$586,667	\$1,466,667	\$1,192,287
Higher channel partner revenue	\$108,000	\$216,000	\$216,000	\$540,000	\$438,978
Improved productivity — customer call center	\$244,800	\$489,600	\$489,600	\$1,224,000	\$995,017
Improved productivity — sales	\$422,400	\$844,800	\$844,800	\$2,112,000	\$1,716,893
Improved workflow efficiency	\$40,000	\$80,000	\$80,000	\$200,000	\$162,585
Total benefits	\$1,576,533	\$3,153,067	\$3,153,067	\$7,882,667	\$6,407,998
Total cumulative benefits		\$1,576,533	\$4,729,600	\$7,882,667	

Source: Forrester Research, Inc.

TEI Framework: Summary

Considering the financial framework constructed above, the results of the costs, benefits, and risk sections using the representative numbers can be used to determine a return on investment, net present value, and payback period. Table 22 shows the consolidation of the numbers for the composite organization.

Table 22: Composite Company ROI, Risk-Adjusted

Ref.	Total benefits	Initial	Year 1	Year 2	Year 3	Total	NPV
H1	Total costs	\$141,900	\$1,305,880	\$1,205,880	\$1,205,880	\$3,859,540	\$3,231,654
L1	Total benefits		\$1,576,533	\$3,153,067	\$3,153,067	\$7,882,667	\$6,407,998
P2	Total	-\$141,900	\$270,653	\$1,947,187	\$1,947,187	\$4,023,127	\$3,176,344
P3	Return on investment	66%					
P4	Payback period	12 Months					

Source: Forrester Research, Inc.

It is important to note that values used throughout the TEI Framework are based on in-depth interviews with six organizations and the resulting composite organization built by Forrester. Forrester makes no assumptions as to the potential return that other organizations will receive within their own environment. Forrester strongly advises that readers use their own estimates within the framework provided in this study to determine the expected financial impact of investing in customer engagement.

Study Conclusions

Forrester's in-depth interviews with organizations, which had made tangible improvements in customer engagement, yielded several important observations:

- Based on information collected in interviews with current Adobe customers, Forrester found that organizations can realize benefits in the form of improved effectiveness of the Internet channel (improved top line revenue resulting from higher purchasing frequency and improved customer value) and improved efficiency to support and interact with their customers (reduced overall cost of sale as well improved internal staff productivity).
- Of the customers interviewed, several factors contributed to the difference in ROIs. Organizations with higher returns were able to develop a deep connection with their customers using the online channel to communicate and foster dialogue with their customers and provide an effective alternative channel to provide product and services information in a way not possible using other customer channels, which ultimately raises customer awareness and purchase intent.

The financial analysis provided in this study illustrates the potential way an organization can evaluate the financial impact of increasing customer engagement. Based on information collected in six in-depth customer interviews, Forrester calculated a three-year risk-adjusted ROI of 66% for the composite organization with a payback period of 12 months. All final estimates are risk-adjusted to incorporate potential uncertainty in the calculation of costs and benefits.

Based on these findings, companies looking to increase customer engagement can see benefits in terms of customer effectiveness and efficiency. Using this TEI framework, many companies may find the potential for a compelling business case to make such an investment.

Appendix A: Total Economic Impact™ Overview

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.

The TEI methodology consists of four components to evaluate investment value: benefits, costs, risks, and flexibility. For the purpose of this analysis, the impact of flexibility was not quantified.

Benefits

Benefits represent the value delivered to the user organization — IT and/or business units — by the proposed product or project. Often product or project justification exercises focus just on IT cost and cost reduction, leaving little room to analyze the effect of the technology on the entire organization. The TEI methodology and the resulting financial model place 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. Calculation of benefit estimates involves a clear dialogue with the user organization to understand the specific value that is created. In addition, Forrester also requires that there be a clear line of accountability established between the measurement and justification of benefit estimates after the project has been completed. This ensures that benefit estimates tie back directly to the bottom line.

Costs

Costs represent the investment necessary to capture the value, or benefits, of the proposed project. IT or the business units may incur costs in the forms of fully burdened labor, subcontractors, or materials. Costs consider all the investments and expenses necessary to deliver the proposed value. In addition, the cost category within TEI captures any incremental costs over the existing environment for ongoing costs associated with the solution. All costs must be tied to the benefits that are created.

Risk

Risk measures the uncertainty of benefit and cost estimates contained within the investment. Uncertainty is measured in two ways: the likelihood that the cost and benefit estimates will meet the original projections and the likelihood that the estimates will be measured and tracked over time. TEI applies a probability density function known as "triangular distribution" to the values entered. At a minimum, three values are calculated to estimate the underlying range around each cost and benefit.

Flexibility

Within the TEI methodology, direct benefits represent one part of the investment value. While direct benefits can typically be the primary way to justify a project, Forrester believes that organizations should be able to measure the strategic value of an investment. Flexibility represents the value that can be obtained for some future additional investment building on top of the initial investment already made. For instance, an investment in an enterprisewide upgrade of an office productivity suite can potentially increase standardization (to increase efficiency) and reduce licensing costs. However, an embedded collaboration feature may translate to greater worker productivity if activated. The collaboration can only be used with additional investment in training at some future point in time. However, having the ability to capture that benefit has a present value that can be estimated. The flexibility component of TEI captures that value.

Appendix B: Glossary

Discount rate: The interest rate used in cash flow analysis to take into account the time value of money. Although the Federal Reserve Bank sets a discount rate, companies often set a discount rate based on their business and investment environment. Forrester assumes a yearly discount rate of 10% for this analysis. Organizations typically use discount rates between 8% and 16%, based on their current environment. Readers are urged to consult their organization to determine the most appropriate discount rate to use in their own environment.

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.

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

Payback period: The breakeven point for an investment, or the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

Return on investment (ROI): A measure of a project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits minus costs) by costs.

A Note On Cash Flow Tables

The following is a note on the cash flow tables used in this study (see the Example Table below). The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1. Those costs are not discounted. All other cash flows in Years 1 through 3 are discounted using the discount rate shown in at the end of the year. Present value (PV) calculations are calculated for each total cost and benefit estimate. Net present value (NPV) calculations are not calculated until the summary tables and are the sum of the initial investment and the discounted cash flows in each year.

Example Table

Ref.	Category	Calculation	Initial cost	Year 1	Year 2	Year 3	Total

Source: Forrester Research, Inc.

Appendix C: References

May 2008, "Measuring Customer Engagement," a commissioned study conducted by Forrester Consulting on behalf of Adobe.

August 8, 2007, "Marketing's New Key Metric: Engagement" by Brian Haven.