The Total Economic Impact Of SAS Customer Intelligence Solutions — Marketing Automation

Project Director: Michelle S. Bishop, Principal Consultant
March 2013
TABLE OF CONTENTS

Executive Summary.................................................................................................................................................. 2

SAS Marketing Automation Improves Efficiency And Scalability Of Marketing Campaigns.......................... 2

Factors Affecting Benefits And Costs.................................................................................................................. 3

Disclosures............................................................................................................................................................ 3

TEI Framework And Methodology.......................................................................................................................... 5

Analysis..................................................................................................................................................................... 7

Interview Highlights................................................................................................................................................ 7

Costs........................................................................................................................................................................ 8

Benefits...................................................................................................................................................................... 10

Unquantified Benefits............................................................................................................................................... 15

Flexibility.................................................................................................................................................................. 16

Risk........................................................................................................................................................................... 16

Financial Summary.................................................................................................................................................. 19

SAS Marketing Automation: Overview.................................................................................................................... 21

Appendix A: 'Total Economic Impact’ Overview................................................................................................. 22

Appendix B: Glossary................................................................................................................................................. 23

© 2013, Forrester Research, Inc. All rights reserved. Unauthorized reproduction is strictly prohibited. Information is based on best available resources. Opinions reflect judgment at the time and are subject to change. Forrester®, Technographics®, Forrester Wave, RoleView, TechRadar, and Total Economic Impact are trademarks of Forrester Research, Inc. All other trademarks are the property of their respective companies. For additional information, go to www.forrester.com.

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 www.forrester.com/consulting.
Executive Summary

In January 2013, SAS commissioned Forrester Consulting to examine the total economic impact and potential return on investment (ROI) that enterprises may realize by implementing SAS Marketing Automation, a component of SAS Customer Intelligence solutions. SAS Marketing Automation improves marketing effectiveness and efficiency through a comprehensive approach to planning, analysis, execution, and measurement. SAS Marketing Automation includes: 1) customer segmentation, profiling, and testing; 2) campaign planning, execution, and management; 3) campaign measurement and analysis; and 4) advanced analytics. The purpose of this study is to give readers a framework with which to evaluate the potential financial impact of investments in SAS Marketing Automation.

SAS Marketing Automation Improves Efficiency And Scalability Of Marketing Campaigns

Total Economic Impact™ (TEI) is a standard methodology developed by Forrester Research that captures and quantifies the voice of the customer relative to technology investments. In this study, we interviewed one current SAS Marketing Automation customer who is a top-five retailer in the office supplies industry. This organization has more than 50,000 employees and has retail and distribution operations across the globe. Forrester’s financial analysis shows that the organization experienced significant risk-adjusted ROI, costs, and benefits (see Table 1).

Table 1
Three-Year Risk-Adjusted ROI

<table>
<thead>
<tr>
<th>ROI</th>
<th>Payback period</th>
<th>Total benefits (PV)</th>
<th>Total costs (PV)</th>
<th>Net present value (NPV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>358%</td>
<td>4.1 months</td>
<td>$3,889,610</td>
<td>($849,928)</td>
<td>$3,039,682</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.

- **Benefits.** The organization identified the following benefits from its SAS Marketing Automation implementation:
  - **Increased sales with more-targeted marketing.** With SAS Marketing Automation, the organization stated that it was now able to “identify the right offers to the right customers.” Enhanced segmentation and personalization in marketing campaigns allowed the retailer to increase contact frequency results without a significant decrease in customer response rates. One representative campaign using SAS Marketing Automation resulted in additional revenue of more than $2.5 million for the organization over three years.
  - **Enhanced marketing productivity and process efficiency.** SAS Marketing Automation enabled the organization to break down silos between analysts and marketers, allowed the campaign execution team to reuse modules of code for different campaign contexts, and provided faster speed-to-market for campaigns. This improved efficiency brought $720,000 in contractor resource savings over the three-year analysis.
• **Improved scalability of campaigns.** In the first year of implementation, the team’s campaign load increased by 20% even with reduced contractor headcount. Currently, the organization conducts twice as many campaigns with half as many staff members compared with the year prior to implementing SAS Marketing Automation. Over the life of the implementation, the retailer saved more than $1.4 million in marketing resources and $114,000 in IT resources.

• **Improved flexibility and reusability of assets for campaigns.** The organization now has the ability to reuse code from other projects, leading to quick and effective iteration for their campaigns. This increased flexibility also led to higher productivity for new hires, reducing ramp-up time by 83%, which represents $50,000 in productivity savings.

• **Reduced customer attrition with more-targeted marketing (non-quantified).** SAS Marketing Automation enabled the organization to quickly use and leverage models for customer behavior in a timely and effective manner to present highly personalized offers to at-risk customers, resulting in lower customer attrition.

• **Increased use of existing technology for faster speed-to-market for campaigns (non-quantified).** Relying on the organization’s existing set of expert SAS coders, the circulation and analytics teams could deliver campaigns faster, even as campaign complexity grew.

**Costs.** The company we interviewed incurred the following costs:

• **SAS Marketing Automation upfront and ongoing fees.** The upfront fee for the organization was $500,000. The company also pays $200,000 per year in ongoing fees for SAS Marketing Automation.

• **Internal labor costs for implementation.** The organization spent $25,846 in internal labor costs over an eight-week implementation period.

**Factors Affecting Benefits And Costs**

Table 1 above illustrates the risk-adjusted financial results that the interviewed organization would expect. The risk-adjusted values take into account potential uncertainty or variance that exists in estimating the costs and benefits, which produces more conservative estimates. The following factors may affect the financial results that an organization may experience:

• The environment prior to a SAS Customer Intelligence Solutions- Marketing Automation implementation. The degree of benefits may range, as organizations may have a mix of manual procedures with custom-coded homegrown solutions or use of other tools.

• The variability in the size of the implementation, including the scope of the business, number of channels, etc. using SAS Marketing Automation for their campaigns.

**Disclosures**

The reader should be aware of the following:

• The study was commissioned by SAS and delivered by the Forrester Consulting group.
• 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 SAS Customer Intelligence solutions.

• SAS 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.

• SAS provided the customer for the interviews.
TEI Framework And Methodology

Introduction
From the information provided in the interviews, Forrester has constructed a TEI framework for those organizations considering engaging SAS Marketing Automation. The objective of the framework is to identify the costs, benefits, flexibility, and risk factors that affect the investment decision. TEI is a standard methodology developed by Forrester Research that enhances an organization’s technology decision-making processes.

Approach And Methodology
Forrester took a multistep approach to evaluate the economic impact that SAS Marketing Automation can have on an organization (see Figure 1). Specifically, we:

- Interviewed SAS product management and marketing executives and Forrester Research analysts to gather data relative to the customer intelligence market in general.
- Interviewed one organization currently using SAS Marketing Automation, a component of SAS Customer Intelligence solutions, to obtain data with respect to costs, benefits, risks, and flexibility.
- Constructed a financial model representative of the interviews using the TEI methodology. The financial model is populated with the cost and benefit data obtained from the interviews with the organization.

Figure 1
TEI Approach

Source: Forrester Research, Inc.

Forrester employed four fundamental elements of TEI in modeling the financial implications of using SAS Marketing Automation:

1. Costs.
2. Benefits to the entire organization.
3. Flexibility.
4. Risk.
Forrester’s TEI methodology provides a complete picture of the total economic impact of technology investment decisions. Please see Appendix A for additional information on the TEI methodology.
Analysis

Interview Highlights
The customer interviewed for this study is one of the largest office supplies retailers in the world. The company has operations in North America, Europe, and Asia, with more than 50,000 employees.

These interviews uncovered a number of important insights about the company’s experience with SAS Marketing Automation:

- Prior to its SAS Marketing Automation implementation, the organization had been using several components of SAS for a number of years. It had deep expertise in using SAS for its statistical models.

- The circulation and analytics team replaced an existing legacy tool with SAS Marketing Automation. The legacy tool was very procedural, and team members characterized it as “not graphical or user friendly.” The legacy tool required a high learning curve, and it ultimately proved not powerful enough for the advanced type of segmentation that they needed. As the organization stated, “We wanted to modernize and keep up to speed with better tools. Implicit in our implementation of SAS Marketing Automation was the expectation of speed, efficiency, and flexibility.”

- The organization uses SAS Marketing Automation for marketing campaigns for both its retail and delivery businesses. The majority of its delivery business is through its online channel.

- Before choosing SAS, the organization undertook an evaluation of the best players in the space. The final three contenders also included marketing automation solutions that had localized implementations in other business units. The organization ultimately chose SAS Marketing Automation due to the ability to integrate existing SAS models into the solution to improve targeting on direct marketing campaigns. The ability to expand functionality in the future was also another major point of consideration.

- The organization’s director of circulation and analytics also noted that the organization was “impressed with the graphical interface” of SAS Marketing Automation and that there was “no tradeoff between ease of use and power of the tool.” SAS Marketing Automation proved to be “very intuitive,” and analysts found it easy to adopt the new tool.

- The feature of SAS Marketing Automation that the organization finds most valuable is the ability to dynamically score models, which interviewees said “has been and continues to be a big win for us.” This feature allows the analytics team to skip the multi-step process of prescoring and importing the SAS model.

Another important feature for the circulation and analytics team is the code nodes that analysts can use in creating campaign diagrams. Previously written code is shareable through SAS Marketing Automation, eliminating the need to create custom code. As an example, when marketing to business or consumer households, the circulation and analytics team now had a way to qualify these addresses based on different specifications without having to create custom code per specification, as compared to their previous environment using their legacy tool. The team’s director remarked, “Analysts can drag these nodes to campaigns as if it’s an
out-of-the-box feature.” The benefit of having reusable customized code was a recurring theme throughout the interview.

- The organization also noted that an internal audit was run on the SAS Marketing Automation implementation, as this was a requirement on all of the company’s capital projects. Results of the audit showed that the project generated a positive return on investment based on resource savings and increased productivity benefits alone. When discussing the internal audit findings, the director for circulation and analytics noted, “It was a slam dunk.”

Framework Assumptions
The discount rate used in the present value (PV) and net present value (NPV) calculations is 10%; the time horizon used for the financial modeling is three years. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult with their respective company’s finance department to determine the most appropriate discount rate to use within their own organizations. Other assumptions are shown in later tables.

Costs
The main costs associated with a deployment of SAS Marketing Automation are: 1) software license and maintenance fees, and 2) implementation costs. The following are the cost inputs to the financial analysis.

SAS Marketing Automation Fees
With its deployment of SAS Marketing Automation, the interviewed organization paid upfront fees of $500,000 and ongoing fees of $200,000 in subsequent years. Upfront fees also include the implementation services provided by SAS. Total cost to the organization for SAS Marketing Automation fees is $900,000 over the three-year analysis.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>SAS Marketing Automation Fees</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>SAS Marketing Automation upfront fees</td>
<td>($500,000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>($500,000)</td>
</tr>
<tr>
<td>A2</td>
<td>Software maintenance fees (yearly)</td>
<td></td>
<td>$0</td>
<td>($200,000)</td>
<td>($200,000)</td>
<td></td>
<td>($400,000)</td>
</tr>
<tr>
<td>A3</td>
<td>SAS Marketing Automation fees</td>
<td>($500,000)</td>
<td>$0</td>
<td>($200,000)</td>
<td>($200,000)</td>
<td></td>
<td>($900,000)</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.
Implementation Costs: Internal Labor

“SAS had several teams where all they do is implementation. They really ask the right questions and challenge your thinking. So we put the time upfront to document current and future wants. It was time well-spent.”

(Director of circulation and analytics, Fortune 500 office supplies retailer)

The organization interviewees noted that their campaign execution and marketing analytics team “spent a lot of time” on documentation and requirements-gathering to identify pain points before the implementation. This pre-implementation period lasted two weeks, while actual implementation took six weeks. SAS also worked with the organization’s campaign execution team post-implementation to build complex campaigns for training purposes. Seven people for the marketing analytics and IT team worked on the pre-implementation and implementation at 30% of their time. At an average annual fully loaded cost of $80,000 per FTE, total implementation cost to the organization was $25,846.

Table 3
Implementation Costs: Internal Labor

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Per period</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>Number of people</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>B2</td>
<td>Fully loaded hourly rate per person</td>
<td>$80,000/2,080 hours</td>
<td>$38.46</td>
</tr>
<tr>
<td>B3</td>
<td>Hours</td>
<td>(8/52 weeks)<em>2,080 hrs</em>30%</td>
<td>96</td>
</tr>
<tr>
<td>Bt</td>
<td>Implementation costs: internal labor</td>
<td>B1<em>B2</em>B3</td>
<td>$25,846</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.

Additional Hardware, Software, And Network

The organization runs SAS Marketing Automation in an Oracle environment and leveraged current infrastructure and licenses at no additional cost.

Total Costs

Total costs for the interviewed organization’s deployment of SAS Marketing Automation are shown in the following table.
Table 4
Total Costs (Non-Risk-Adjusted)

<table>
<thead>
<tr>
<th>Costs</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAS Marketing Automation upfront fees</td>
<td>($500,000)</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>($500,000)</td>
</tr>
<tr>
<td>Software maintenance fees</td>
<td>$0</td>
<td>$0</td>
<td>($200,000)</td>
<td>($200,000)</td>
<td>($400,000)</td>
</tr>
<tr>
<td>Implementation costs: internal labor</td>
<td>($25,846)</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>($25,846)</td>
</tr>
<tr>
<td>Total</td>
<td>($525,846)</td>
<td>$0</td>
<td>($200,000)</td>
<td>($200,000)</td>
<td>($925,846)</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.

Benefits
In interviews with the SAS customer, Forrester identified several benefits of implementing SAS Marketing Automation. These quantified benefits include: 1) higher sales due to better-targeted marketing; 2) more efficient campaign execution; 3) improved scalability of campaigns and 4) increased flexibility and reusability of campaigns.

Other benefits noted by the customer but not quantified in the study include: 1) lower customer attrition with more targeted marketing, and 2) faster speed-to-market for campaigns by leveraging existing SAS technology.

More-Targeted Marketing Resulting In Revenue Gains

“We now get more segmentation and personalization [of campaigns] with more data available that we can integrate through the tool. We want to, and have to, leverage that data to keep our campaigns relevant.”
(Director of circulation and analytics, Fortune 500 office supplies retailer)

The customer noted that the primary benefit of its SAS Marketing Automation implementation has been the ability to create more-targeted campaigns. The organization uses SAS Marketing Automation for outbound campaigns. The customer used to do more “batch and blasts,” but with more data available that it can easily integrate into the tool through its SAS Marketing Automation deployment, it can create more-targeted campaigns by leveraging that data to keep the messaging relevant to customers. As the director of circulation and analytics noted, “We can do it analytically, and the SAS Marketing Automation tool allows us to easily transition that analytical work into a deliverable campaign.”

Prior to the SAS Marketing Automation deployment, less than 10% of the organization’s marketing circulation on a monthly basis was personalized. Currently, 80% of the marketing is personalized. More-targeted marketing results in better customer response rates. As the organization noted, “When we last looked at the benefit of personalized versus nonpersonalized for identical segments, we found that to be in the 35% to 40% range. If you map that all out and think of the massive amounts of direct mail that we send out, that’s easily in the hundreds of millions of dollars in terms of incremental benefits.”
To quantify the value of more-targeted marketing campaigns for the interviewed customer as enabled by SAS Marketing Automation in the TEI financial model, Forrester conservatively estimates this benefit in terms of only one representative marketing campaign.

In this particular campaign, the organization sends out an email once a week to the entire customer base that has shopped in its retail stores in the past 12 months. This particular campaign brings attributable sales of $0.70 per email, on average, without personalization. With targeting and segmentation, attributable sales increased. The best-performing segment saw a sales lift of 30%, corresponding to attributable sales of $1 per email. Overall incremental sales lift across the entire circulation of the campaign was, on average, $0.05 per email. SAS Marketing Automation enables the circulation and analytics team to dynamically change the targeting and roll out the campaigns once a week. Without SAS Marketing Automation, this campaign could only be executed once a month. SAS Marketing Automation enables three additional campaigns per month, equivalent to 12 additional campaigns per year. With 12 million emails sent out per campaign, and average percentage revenue of sales at 3.93% for the organization, the quantified benefit of more-targeted marketing enabled by SAS Marketing Automation is valued at $2.5 million for a three-year run of that representative email campaign.

**Table 5**

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Average additional sales per email campaign as a result of targeting</td>
<td>12 million*$0.05</td>
<td>$600,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td>Incremental number of campaigns enabled by SAS Marketing Automation per year</td>
<td>3 in a month</td>
<td></td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>% revenue of sales</td>
<td>3.93%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ct</td>
<td>Revenue gains from more-targeted marketing campaigns</td>
<td>C1<em>C2</em>C3</td>
<td>$848,880</td>
<td>$848,880</td>
<td>$848,880</td>
<td>$2,546,640</td>
</tr>
</tbody>
</table>

*Source: Forrester Research, Inc.*

**Improved Campaign Efficiency: Reduction In Contractor Headcount**

“*We now have faster time-to-market and better targeting [with SAS Marketing Automation], and that shows in increased response, and thus increased ROI and profitability for these campaigns.*” (Director of circulation and analytics, Fortune 500 office supplies retailer)

Improved campaign efficiency was one of the main benefits of SAS Marketing Automation cited by the interviewed organization. “*We could now reuse modules of code in different campaign contexts,*” the director of circulation and analytics observed. In addition to the modular construction of campaigns, the availability of tools and models in SAS Marketing Automation made it easier for analysts and marketers to work together. “*We have been able to share the*
great work that our statistical people are doing with their models and heavy-duty SAS coding,” the organization’s
director of circulation and analytics noted, “and now we have much-improved targeting and faster churn-through of
the campaigns.” The previous tool would have required this statistical data to be exported then imported into the
system. Now this data is automatically loaded through SAS Marketing Automation, eliminating the delay. The
organization noted that faster time-to-market and better targeting enabled by SAS Marketing Automation have resulted
in increased response, increased ROI, and increased profitability for these campaigns.

The circulation and analytics team originally had six campaign execution marketers, three of whom were contractors.
With the increased campaign efficiency through SAS Marketing Automation, the organization was also able to
eliminate all of their contractor headcount in the first year of implementation. As the organization noted, “We were
now doing more campaigns with half the staff. So even if we didn’t do anything additional and incremental, the cost
savings from not paying the contractors would have paid for the tool in two-and-a-half years.” The total savings of these
three contractor resources at $80,000 per contractor is valued at $720,000 over the three-year analysis.

### Table 6

**Improved Campaign Efficiency — Reduction in Contractor Resources**

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>Number of contractors (saved)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D2</td>
<td>Annual fully loaded rate per person</td>
<td>$80,000</td>
<td></td>
<td></td>
<td>$80,000</td>
<td></td>
</tr>
<tr>
<td>Dt</td>
<td>Contractor resource savings</td>
<td>D1*D2</td>
<td>$240,000</td>
<td>$240,000</td>
<td>$240,000</td>
<td>$720,000</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.

**Improved Scalability Of Campaigns — Labor Cost Avoidance Savings**

The customer noted that its old marketing campaign execution tool was extremely limited: “You couldn’t run more
than one campaign at a time on a database.” With SAS Marketing Automation, it can now run multiple campaigns at
the same time. This significant increase in scalability, enhanced by features such as dynamic scoring of models and
reusability of custom code, enabled the circulation and analytics team to ultimately double their campaign load even as
they reduced resources by half.

In the first year of implementation, the organization increased its campaign load by 20% even as it eliminated
contractors, resulting in resources at half the pre-SAS Marketing Automation level. Interviewees noted, “With [SAS
Marketing Automation] releases with more powerful functionality, we’re now doing double the amount of campaigns
than when we first installed it.” In quantifying the value of this increased scalability for them, the organization noted
that it would have had to hire at least six more marketing analysts to deliver the current campaign load at the same level
of complexity. The director of circulation and analytics also said, “But now the campaigns are even beyond that. Before
[SAS Marketing Automation] we’d have to run those campaigns one after another.”
With SAS Marketing Automation, the customer was able to run more campaigns with less staff. The value of improved scalability is quantified as a function of the cost avoidance of hiring an additional six marketing analysts. At an annual fully loaded compensation of $80,000, the total analyst resource cost avoidance savings is valued at $1.4 million over three years.

**Table 7**
Improved Scalability Of Campaigns - Cost Avoidance Of Hiring Additional Marketing Personnel

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>Number of marketing analysts</td>
<td>E1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E2</td>
<td>Annual fully loaded rate per person</td>
<td>$80,000</td>
<td></td>
<td></td>
<td></td>
<td>$80,000</td>
</tr>
<tr>
<td>E3</td>
<td>Marketing resource savings</td>
<td>E1*E2</td>
<td>$480,000</td>
<td>$480,000</td>
<td>$480,000</td>
<td>$1,440,000</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.

In addition to marketing resource savings, the director of circulation and analytics also noted that the team is now “extremely self-sufficient” in their interaction with the IT department. He added, “We still have an IT partner, but whereas before we were taking up 0.5 of an FTE, now we are taking up 0.1 FTE, if that.” These savings of 40% of IT resource time is quantified at $114,000 over a three-year analysis.

**Table 8**
Improved Scalability Of Campaigns — Reduction In IT Resource Time

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Number of workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2</td>
<td>Annual fully loaded rate per person</td>
<td>$95,000</td>
<td></td>
<td></td>
<td></td>
<td>$95,000</td>
</tr>
<tr>
<td>F3</td>
<td>Productivity improvement</td>
<td>40%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F4</td>
<td>IT productivity savings</td>
<td>F1<em>F2</em>F3</td>
<td>$38,000</td>
<td>$38,000</td>
<td>$38,000</td>
<td>$114,000</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.

*Increased Flexibility And Reusability — Faster Ramp-Up For New Hires*
Another SAS Marketing Automation benefit experienced by the interviewed customer was increased flexibility of its campaigns due to improved ability of analysts to reuse assets. Code that one analyst wrote for a particular market...
segment, such as buyers of ink and toner, could easily be tweaked and repurposed for another segment, such as buyers of paper, without much recoding effort. This flexibility through SAS Marketing Automation allows the organization to have quick and effective iteration for its campaigns. This increased flexibility also results in faster speed-to-market for its campaigns. As an example, the organization noted that sending out an email campaign to a particular group of customers with any changes would take three times longer in the old tool versus using SAS Marketing Automation. In the previous environment, any changes that were made would have to be manually coded, thus adding to the processing time.

Another byproduct of this increased flexibility noted by the organization is that the SAS tool gives even an inexperienced analyst the ability to leverage the power that an analyst using SAS Marketing Automation for six years has because of the structure and code base available. With the ability to drag and drop already written code into their campaign diagrams, new analysts would not be limited to running simple campaigns. As the director of circulation and analytics noted, “Now everybody is as good as our best analyst.”

In the pre-SAS Marketing Automation environment, newly hired analysts would take at least six months before they could be relatively independent and performing at a high level of productivity. With the graphical interface and ease-of-use of the new tool, the organization observed that its new hires can now run moderate-to-complex campaigns inside of a month. Assuming that the company hires one new analyst per year starting from Year 2, these five months of additional full productivity are valued at $25,000 per year or $50,000 over the three-year period.

### Table 9
Increased Flexibility And Reusability — Faster Ramp-Up For New Hires

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>Number of new hires per year</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>G2</td>
<td>Annual fully loaded rate per person</td>
<td>$60,000/2,080 hours</td>
<td></td>
<td>$28.85</td>
<td>$28.85</td>
<td></td>
</tr>
<tr>
<td>G3</td>
<td>Number of hours saved</td>
<td>(5/12 months)∗2,080 hours</td>
<td>867</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gt</td>
<td>Increased flexibility and reusability—faster ramp-up for new hires</td>
<td>G1∗G2∗G3</td>
<td>$0</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$50,000</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.

**Total Benefits**
Table 10 summarizes the quantified benefits from an investment in SAS Marketing Automation for the interviewed organization.
### Table 10
Total Benefits (Non-Risk-Adjusted)

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gains from more-targeted marketing</td>
<td>$848,880</td>
<td>$848,880</td>
<td>$848,880</td>
<td>$848,880</td>
<td>$2,546,640</td>
</tr>
<tr>
<td>Improved campaign efficiency — reduction in contractor resources</td>
<td>$240,000</td>
<td>$240,000</td>
<td>$240,000</td>
<td>$240,000</td>
<td>$720,000</td>
</tr>
<tr>
<td>Improved scalability of campaigns — cost avoidance for hiring additional marketing resources</td>
<td>$480,000</td>
<td>$480,000</td>
<td>$480,000</td>
<td>$480,000</td>
<td>$1,440,000</td>
</tr>
<tr>
<td>Improved scalability of campaigns — reduction in IT resource time</td>
<td>$38,000</td>
<td>$38,000</td>
<td>$38,000</td>
<td>$38,000</td>
<td>$114,000</td>
</tr>
<tr>
<td>Increased flexibility and reusability — faster ramp-up for new hires</td>
<td>$0</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$50,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,606,880</strong></td>
<td><strong>$1,631,880</strong></td>
<td><strong>$1,631,880</strong></td>
<td><strong>$1,631,880</strong></td>
<td><strong>$4,870,640</strong></td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.

### Unquantified Benefits
Other qualitative benefits cited by the organization interviewed but not quantified in this study include the following.

**Lower Customer Attrition Due To More-Targeted Marketing**

“We had the model, but the ability to use this data and leverage it in a timely and effective manner requires SAS Marketing Automation.” (Director of circulation and analytics, Fortune 500 office supplies retailer)

Another benefit of more-targeted marketing enabled by SAS Marketing Automation for the interviewed organization was lower customer attrition. The interviewed organization created models that could track customers’ purchasing history of consumable office supplies and identify when these customers were at risk of attrition. This would then trigger a marketing action, such as a discount coupon that could be redeemed in-store or online. This “seamless and ultra-personalized” marketing campaign was enabled by the SAS Marketing Automation, and the organization could now score the models for customer attrition-tracking “on-the-fly” and run them weekly. This lack of latency was very important to these campaigns, as the relevancy of the marketing action offer (the discount coupon) was perishable. The organization noted that this effort would have been hard to “production-ize” and “campaign-ize” without SAS Marketing Automation.

**Improved Ability To Leverage Standard Analytics**

The organization had also been using SAS extensively in other areas of its business. With the SAS Marketing Automation implementation, the organization could take advantage of its in-house SAS capabilities for its marketing campaigns. As the director of the circulation and analytics team noted, “Most of our analysts can’t write custom SAS
code. The tool allows us to leverage the SAS expertise that is found in other areas of our business.” These expert coders can build models and write code for complex requirements that the circulation and analytics team can use instantly through the SAS Marketing Automation tool. “It’s a great win,” the director added.

**Flexibility**

“The great thing about SAS as a company is that they are ahead of the curve in anticipating what we as marketers are going to really want to do.” (Director of circulation and analytics, Fortune 500 office supplies retailer)

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for some future additional investment. This provides an organization with the “right” or ability to engage in future initiatives, but not the obligation to do so. From our interviews, we’ve found that there are scenarios in which a customer deployed SAS Marketing Automation now and later realizes additional uses and business opportunities.

Although data for calculating the value of these flexibility options was insufficient when this study was conducted, our interviews, as well as Forrester research, identified areas that could produce flexibility options based on real next-stage options. These include:

- New channels such as social media and mobile may provide opportunities for the team to use SAS Marketing Automation for these campaigns, bringing additional revenue benefits and cost savings for the company from these channels. The company just recently launched a new mobile application, and using SAS Marketing Automation with this application for more-targeted marketing in the future may yield further gains.

- With the tools available through SAS Marketing Automation and, if needed, use of other solutions from the SAS Customer Intelligence suite, the organization can use big data and leverage its web assets for more detailed information on online customer behavior and use this for a higher level of customer relevance and personalization in its campaigns. The organization talked about future opportunities for integrating all new and disparate sources of data — such as browsing behavior and geocoding — and using new SAS functionality for these campaigns. At the time of the interview, this expanded level of personalization had yet to be implemented.

The value of flexibility is unique for each organization, and the willingness to measure its value varies from company to company (see Appendix A for additional information regarding the flexibility calculation).

**Risk**

Forrester defines two types of risk associated with this analysis: implementation risk and impact risk. “Implementation risk” is the risk that a proposed investment in SAS Marketing Automation may deviate from the original or expected requirements, 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 investment in SAS Marketing Automation, 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 impact risks by directly adjusting the financial estimates results in more meaningful and accurate estimates and a more accurate projection of the ROI. In general, risks affect costs by raising the original estimates, and they affect benefits by reducing the original estimates. The risk-adjusted numbers should be taken as realistic expectations, as they represent the expected values considering risk.

The following implementation risk that affects costs has been identified as part of this analysis:

- Internal labor for implementation may increase from initial estimates depending on the size and scope of the project.

The following impact risks that affect benefits have been identified as part of this analysis:

- IT and analyst resource and productivity savings may vary, depending on the structure of the team and the tools used prior to the SAS Marketing Automation implementation.

- Organizations’ quantification of additional gains from more-targeted marketing and choice of a representative campaign to quantify may vary.

Table 10 shows the values used to adjust for risk and uncertainty in the cost and benefit estimates. The TEI model uses a triangular distribution method to calculate risk-adjusted values. To construct the distribution, it’s necessary to first estimate the low, most likely, and high values that could occur within the current environment. The risk-adjusted value is the mean of the distribution of those points. Readers are urged to apply their own risk ranges based on their own degree of confidence in the cost and benefit estimates.
### Table 11
Cost And Benefit Risk Adjustments

<table>
<thead>
<tr>
<th>Costs</th>
<th>Low</th>
<th>Most likely</th>
<th>High</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAS Marketing Automation license fees</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Software maintenance fees</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Implementation costs: internal labor</td>
<td>100%</td>
<td>100%</td>
<td>200%</td>
<td>133%</td>
</tr>
<tr>
<td><strong>Benefits</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gains from more targeted marketing</td>
<td>80%</td>
<td>100%</td>
<td>103%</td>
<td>94%</td>
</tr>
<tr>
<td>Improved campaign efficiency — reduction in contractor resources</td>
<td>92%</td>
<td>100%</td>
<td>105%</td>
<td>99%</td>
</tr>
<tr>
<td>Improved scalability of campaigns — cost avoidance of hiring additional marketing resources</td>
<td>92%</td>
<td>100%</td>
<td>105%</td>
<td>99%</td>
</tr>
<tr>
<td>Improved scalability of campaigns — reduction in IT resource time</td>
<td>92%</td>
<td>100%</td>
<td>105%</td>
<td>99%</td>
</tr>
<tr>
<td>Increased flexibility and reusability — faster ramp-up for new hires</td>
<td>92%</td>
<td>100%</td>
<td>105%</td>
<td>99%</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.
Financial Summary

The financial results calculated in the Costs and Benefits sections can be used to determine the ROI, NPV, and payback period for the organization’s investment in SAS Customer Intelligence Solutions—Marketing Automation. These are shown in Table 12.

Table 12
Cash Flow — Non-Risk-Adjusted

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
<th>PV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs</td>
<td>($525,846)</td>
<td>$0</td>
<td>($200,000)</td>
<td>($200,000)</td>
<td>($925,846)</td>
<td>($841,398)</td>
</tr>
<tr>
<td>Benefits</td>
<td>$0</td>
<td>$1,606,880</td>
<td>$1,631,880</td>
<td>$1,631,880</td>
<td>$4,870,640</td>
<td>$4,035,517</td>
</tr>
<tr>
<td>Net benefits</td>
<td>($525,846)</td>
<td>$1,606,880</td>
<td>$1,431,880</td>
<td>$1,431,880</td>
<td>$3,944,794</td>
<td>$3,194,118</td>
</tr>
<tr>
<td>ROI</td>
<td>380%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payback period</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.9 months</td>
<td></td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.
Table 13 shows the risk-adjusted ROI, NPV, and payback period. These values are determined by applying the risk adjustment values from Table 10 in the Risk section to the cost and benefits numbers in tables 4 and 10.

### Table 13
Cash Flow — Risk-Adjusted

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
<th>PV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs</td>
<td>$(534,375)</td>
<td>0</td>
<td>$(200,000)</td>
<td>$(200,000)</td>
<td>$(934,375)</td>
<td>$(849,928)</td>
</tr>
<tr>
<td>Benefits</td>
<td>0</td>
<td>$1,548,367</td>
<td>$1,573,117</td>
<td>$1,573,117</td>
<td>$4,694,602</td>
<td>$3,889,610</td>
</tr>
<tr>
<td>Net benefits</td>
<td>$(534,375)</td>
<td>$1,548,367</td>
<td>$1,373,117</td>
<td>$1,373,117</td>
<td>$3,760,226</td>
<td>$3,039,682</td>
</tr>
<tr>
<td>ROI</td>
<td>358%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payback period</td>
<td>4.1 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.

The data collected in this study indicates that deploying SAS Marketing Automation has the potential to provide a solid ROI through quantifiable benefits from revenue gains from more-targeted marketing, reduced contractor headcount, cost avoidance of marketing analyst and IT resources, and improved productivity for new hires. The risk-adjusted ROI of 358%, along with a 4.1 month payback period (breakeven point), raises confidence that the investment is likely to produce a positive outcome, especially after the risks and uncertainty that may affect the project have been considered, quantified, and incorporated into the business case.
SAS Customer Intelligence Solutions: Overview

According to SAS, marketing in the digital age is bringing new challenges to marketing executives—and new opportunities for being seen as strategic business advisors to the entire organization. The key lies in demonstrating marketing’s value as a profitable growth engine. SAS provides leading-edge solutions to help companies find the most profitable growth opportunities. … Take the best action to fully exploit those opportunities. … And maximize cross-business impact.

SAS’ Customer Intelligence solutions have been helping companies achieve a customer-centric business strategy with an integrated marketing management approach to solving critical challenges across marketing—including planning customer-centric strategies, gaining insight from big data and analytics, optimizing customer interactions, and understanding the customer experience. With SAS’ Customer Intelligence solutions, organizations can realize the following:

Plan and manage marketing programs – start to finish – more efficiently and effectively than ever before.

- Streamline marketing operations by integrating and automating key processes and workflows.
- Know which marketing activities are working and which ones aren’t – and why – by using a single, consolidated marketing dashboard to measure and analyze all your marketing projects.
- Link marketing strategy and performance to real revenue using financial management capabilities for collaborative planning, allocation, budgeting and program execution.
- Get the most value out of your digital assets with content management capabilities that offer a secure infrastructure for managing and distributing your digital assets.

Make smarter, fact-based decisions with insights derived from relevant data and powerful analytics.

- Develop more relevant, targeted campaigns using modern data classification techniques – segmentation, clustering, social network analysis, etc. – to understand your customers better than ever.
- Trust your data and the decisions they fuel by infusing data quality and data management into your processes for data that is consistent, accurate and timely, and ready for analysis.
- Predict how customers will act in the future, based on past behaviors, using leading-edge forecasting and modeling routines to analyze past customer behavior gleaned from your organizational information.
- Know which customers are most and least valuable to you – and why – by calculating customer lifetime value and profitability a more granular level than has ever been possible.

Make customer offers and interaction relevant and personal.

- Know what your customers say about you in social media – and who is listening to them – and tie that information back into customer profile data.
- Understanding online customer behavior and navigation by capturing every website interaction across all your online properties.
- Deliver well-timed, personalized offers by acting on customer behaviors – e.g., website abandonment or certain navigational paths – in real time.
- Generate a complete customer profile view by combining customer experience data with offline data from other channels.

Turn customers into brand evangelists by offering exceptional customer experiences.

- Produce analytically driven customer communications – both inbound and outbound – using best-in-class campaign management software.
- Make the most of each customer contact by optimizing marketing campaigns to deliver the right offer via the right channel at the right time.
- Enhance campaign effectiveness by delivering customer communications across all channels – point of sale, social, online, mobile, etc.
- Build stronger, more profitable customer relationships by using event- or trigger-based marketing to treat customers as individual “segments of one.”
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.

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: 1) the likelihood that the cost and benefit estimates will meet the original projections, and 2) 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 respective 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 at 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. 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
For 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 the Framework Assumptions section) 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.

### Table [Example]

Example Table

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Category</th>
<th>Calculation</th>
<th>Initial cost</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
</tr>
</thead>
</table>

Source: Forrester Research, Inc.