A Forrester Total Economic Impact™ Study
Commissioned By SAS

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The Total Economic Impact™ Of SAS Customer Intelligence Solutions —Intelligent Advertising For Publishers

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ABOUT FORRESTER CONSULTING

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

Executive Summary

> **The organization that Forrester interviewed used SAS Intelligent Advertising and realized benefits by:**
>
> - **Increasing sales 18%, without adding traffic or changing the sales organization. Impact: $155,776 in profit.**
> - **Retiring disparate software tools and eliminating manual processes. Impact: $592,592 in avoided costs.**

In January 2014, SAS commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying SAS Intelligent Advertising for Publishers.

The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of the Intelligent Advertising for Publishers on their organizations. To better understand the benefits, costs, and risks associated with SAS Intelligent Advertising for Publishers, Forrester interviewed an existing customer with experience using Intelligent Advertising.

Prior to Intelligent Advertising for Publishers, the organization had several disparate systems to track sales, manage inventory, and analyze results. The systems did not integrate properly, requiring the organization to conduce several manual steps in the middle to make data flow correctly. Costs were steadily increasing with the license fees scheduled for significant year-over-year increases and managing the systems internally was “onerous.”

“With SAS Intelligent Advertising for Publishers, we consolidated multiple systems and standardized operational processes. We eliminated the manual steps, which also eliminated a lot of errors, and using SAS as a service eliminated the burden of internal hosting,” said the director of sales automation. By using SAS Intelligent Advertising for Publishers, the organization gained visibility into its content inventory. “We now get accurate forecasts. We squeezed a lot more out of our existing traffic by making sure that our content delivers ad sales.”

With Intelligent Advertising for Publishers, sales increased by 18% without increases in traffic or operational costs.

USING SAS INTELLIGENT ADVERTISING FOR PUBLISHERS INCREASES SALES BY 18%

Our interview with an existing customer and subsequent financial analysis found that the organization Forrester interviewed experienced the risk-adjusted ROI, benefits, and costs shown in Figure 1. The analysis points to benefits of $902,790 versus costs of $556,510, adding up to a net present value (NPV) of $346,280.

FIGURE 1
[Composite Organization] [Three-Year] Risk-Adjusted Sales Growth/ROI/TCO

ROI: 62%	**NPV benefit: $346,280**	**Payback period: 1.1 months**	**Increase in sales: 18%**

Source: Forrester Research, Inc.

- **Benefits.** The organization experienced the following risk-adjusted benefits:
    - **Increased sales by 18% from the same level of traffic.** Before adopting SAS Intelligent Advertising for Publishers, the organization’s sales reached $1 million, so that using SAS Intelligent Advertising for Publishers resulted in an additional $180,000 in sales during Year 1 and a risk-adjusted total of $540,000 over three years.
    - **Avoided costs for software tools of $714,870.**The cost of several disparate systems was $195,000 per year, plus an additional 30% overhead for hosting the software internally, for a total risk-adjusted cost that the organization avoided over three years of $714,870.
- **Costs.** The organization experienced the following risk-adjusted costs:
    - **Subscription and configuration costs of $556,510.**The organization paid $180,000 per year to subscribe to SAS Intelligent Advertising for Publishers and paid $11,000 in professional services at the outset to configure and set up the environment. The total risk-adjusted cost over three years is $556,510.

Disclosures

The reader should be aware of the following:

- The study is commissioned by SAS and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.
- Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in SAS Intelligent Advertising for Publishers.
- 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 names for the interviews but did not participate in the interviews.

TEI Framework And Methodology

INTRODUCTION

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing SAS Intelligent Advertising for Publishers. The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision.

APPROACH AND METHODOLOGY

Forrester took a multistep approach to evaluate the impact that SAS Intelligent Advertising for Publishers can have on an organization (see Figure 2). Specifically, Forrester:

› Interviewed SAS marketing, sales, and/or consulting personnel, along with Forrester analysts, to gather data relative to Intelligent Advertising for Publishers and the marketplace for Intelligent Advertising for Publishers.

› Interviewed an organization currently using SAS Intelligent Advertising for Publishers to obtain data with respect to costs, benefits, and risks.

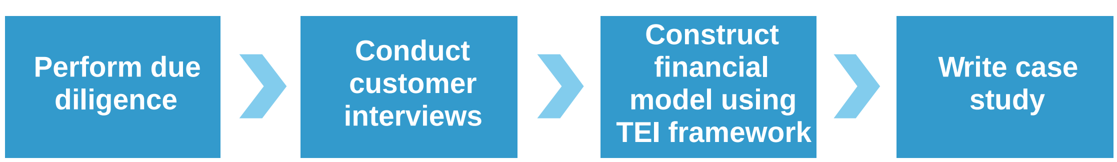
› Constructed a financial model representative of the interviews using the TEI methodology. The financial model is populated with the cost and benefit data obtained from the interviews as applied to the composite organization.

› Risk adjustment is a key part of the TEI methodology. While interviewed organizations provided cost and benefit estimates, some categories included a broad range of responses or had a number of outside forces that might have affected the results. For that reason, some cost and benefit totals have been risk-adjusted, and is detailed in each relevant section.

Forrester employed four fundamental elements of TEI in modeling SAS Intelligent Advertising for Publishers' service: benefits, costs, flexibility, and risks.

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

FIGURE 2
TEI Approach



Source: Forrester Research, Inc.

Analysis

INTERVIEW HIGHLIGHTS

The organization that Forrester interviewed is a global company.

Situation

Before adopting SAS Intelligent Advertising for Publishers, the organization was struggling with:

- Disparate systems for managing inventory, tracking sales, and running analytics.
- Manual steps were required to create a single flow of data between systems.
- Executives had no insight into available inventory in different geographical regions.
- License fees for software tools were increasing dramatically in the coming fiscal year.

Solution

The organization began evaluating most of the big players across the industry, including SAS Intelligent Advertising for Publishers. After five months of evaluation, the organization chose SAS for three reasons: First, the overall cost of the solution; second, the quality of user interfaces; and third, the responsiveness of SAS as a vendor throughout the evaluation process. After signing a contract with SAS, the organization redesigned its site (and pages) to fit within a structure of tags and targets instead of a media tree.

Results

Forrester's interview revealed that the organization:

- **Realized an 18% boost in sales.** Without making any changes to the sales organization, sales processes or methodology, or paying to increase traffic, the organization realized an 18% increase in sales — or $180,000 per year. The increase in sales came from having visibility into inventory, getting accurate forecasts, and being able to leverage existing traffic more effectively.
- **Avoided costs for software tools.** By adopting SAS Intelligent Advertising for Publishers, the organization eliminated license fees for several disparate applications and the internal resources that were allocated to hosting and managing those tools.
- **Eliminated manual processes.** The previous software tools did not integrate and required manual processes to move data. Because SAS Intelligent Advertising for Publishers provides an end-to-end experience, the organization eliminated human errors.

> *Having a seamless, end-to-end system allows us to eliminate human errors in our inventory system. That benefit alone is worth the transition.*
>
> ~Director, sales automation

- **Identify and target new customer segments.** As the organization focused on optimizing sales, the analytics capabilities within SAS Intelligent Advertising for Publishers allowed the organization to identify and target new segments of customers.

BENEFITS

The organization experienced quantified benefits in this case study of:

› Increased sales by 18% from the same level of traffic.

› Avoided costs for software tools of $714,870 over three years.

Increased Sales By 18% From The Same Level Of Traffic

The organization realized an 18% increase in sales from the same traffic without changing the sales organization. In the words of the director of sales automation, "SAS gives us a lot more transparency into our inventory. We now get accurate forecasts. We squeezed a lot more out of our existing traffic by making sure that our content delivers."

The organization had previously grown its online sales to $1 million annually. The 18% boost from using SAS Intelligent Advertising for Publishers provides a $180,000 increase per year in sales.

The impact that using SAS Intelligent Advertising for Publishers will have on an organization's current sales activity depends on the number of existing systems and manual processes that are similar to the organization that Forrester interviewed. In this case, Forrester adjusts the benefit down by 13% to account for the risk that other organizations are likely to experience a less-pronounced impact, making the risk adjusted benefit $62,640 per year.

TABLE 1
Increased Sales By 18% From The Same Level Of Traffic

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Increase in sales	18%	$180,000	$180,000	$180,000
A2	Average profit margin		40%	40%	40%
At	Profit from increased sales	A1*A2	$72,000	$72,000	$72,000
	Risk adjustment		↓ 13%	28,500	30,000
Atr	Profit from increased sales (risk-adjusted)		$62,640	$62,640	$62,640

Source: Forrester Research, Inc.

Avoided Costs For Software Tools

The organization avoided costs for three systems — sales tracking, inventory management, and sales analytics — and the cost of hosting the systems internally, which was described as being “onerous.” The total cost for software licenses and hosting costs totals $253,500 per year.

Many organizations have similar configurations of disparate, poorly integrated tools, and are likely to experience similar results by transitioning to SAS Intelligent Advertising for Publishers. Forrester adjusts the benefit down by 6% to a risk-adjusted benefit of $238,290 per year.

TABLE 2
Avoided Costs For Software Tools

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	Avoided cost of software licenses	From interview	$195,000	$195,000	$195,000
B2	Internal hosting of software	B1*30%	$58,500	$58,500	$58,500
Bt	Avoided cost of software tools	B1+B2	$253,500	$253,500	$253,500
	Risk adjustment		↓ 6%		
Btr	Avoided cost of software tools (risk-adjusted)		$238,290	$238,290	$238,290

Source: Forrester Research, Inc.

Total Benefits

Table 3 shows the total of all benefits across the five areas listed above, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total benefits to be a PV of $748,368.

TABLE 3
Total Benefits (Risk-Adjusted)

Benefit	Initial	Year 1	Year 2	Year 3	Total	Present value
Profit from increased sales	$0	$62,640	$62,640	$62,640	$187,920	$155,766
Avoided cost of software tools	$0	$238,290	$238,290	$238,290	$714,870	$592,592
Total benefits	**$0**	**$300,930**	**$300,930**	**$300,930**	**$902,790**	**$748,358**

Source: Forrester Research, Inc.

COSTS

The organization incurred subscription fees for SAS Intelligent Advertising for Publishers and initial costs to configure and set up the environment. The subscription fees totaled $180,000 per year.

Configuration Costs

The organization had to rethink its site — including pages — to fit within a structure of tags and targets instead of a media tree. The organization "had a lot of meetings with developers to show them how to redo the old tags. We also had to get some projects moved up in the development queue." The organization spent $11,000 in professional fees for configuration and setup services.

TABLE 4
License And Configuration Costs

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
C1	Subscription fees		$0	$180,000	$180,000	$180,000
C2	Configuration and setup costs		$11,000	$0	$0	$0
Ct	Total software costs (not risk-adjusted)	C1+C2	$11,000	$180,000	$180,000	$180,000
	Risk adjustment		↑ 5%			
Ctr	Total software costs (risk-adjusted)		$11,110	$181,800	$181,800	$181,800

Source: Forrester Research, Inc.

Total Costs

Table 5 shows the total costs, as well as associated present values, discounted at 10%.Over three years, the organization spends $556,510, which calculates to a PV of $463,220.

TABLE 5
Total Costs (Risk-Adjusted)

Cost	Initial	Year 1	Year 2	Year 3	Total	Present value
Subscription and configuration fees	$11,110	$181,800	$181,800	$181,800	$556,510	$463,220
Total costs	**$11,110**	**$181,800**	**$181,800**	**$181,800**	**$556,510**	**$463,220**

Source: Forrester Research, Inc.

FLEXIBILITY

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 the ability to engage in future initiatives but not the obligation to do so. There are multiple scenarios in which a customer might choose to implement Intelligent Advertising for Publishers and later realize additional uses and business opportunities. Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix A).

After using SAS Intelligent Advertising for Publishers for about one year, the organization refined its ability to identify and target ads to specific audiences — audiences that would have gone unnoticed without the refined targeting and measuring capabilities within SAS Intelligent Advertising for Publishers. Although the benefit has not yet been measured by the organization that Forrester interviewed, the ability to identify, target, and track performance to highly specific market segments has exponential potential on the growth and profitability of the organization.

RISK

Forrester defines two types of risk associated with this analysis: “adoption risk” and “impact risk.” “Adoption risk” is the risk that a proposed investment in Intelligent Advertising for Publishers 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 Intelligent Advertising for Publishers, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for cost and benefit estimates.

TABLE 6
Benefit And Cost Risk Adjustments

Benefits	Adjustment
Profit from increased sales	↓ 13%
Avoided cost of software tools	↓ 6%
Costs	**Adjustment**
SAS subscription and configuration fees	↑ 5%

Source: Forrester Research, Inc.

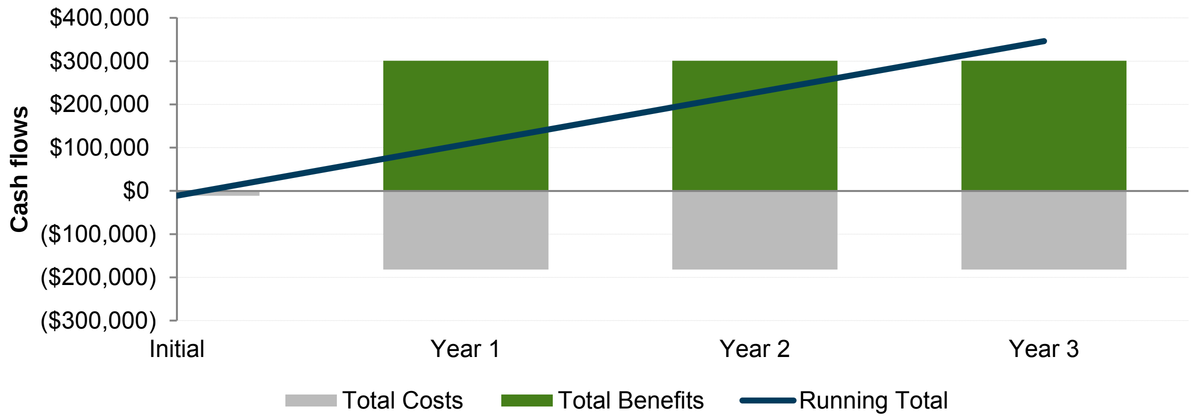
Quantitatively capturing investment risk and impact risk by directly adjusting the financial estimates results provides more meaningful and accurate estimates and a more accurate projection of the ROI. In general, risks affect costs by raising the original estimates, and they affect benefits by reducing the original estimates. The risk-adjusted numbers should be taken as “realistic” expectations since they represent the expected values considering risk. Readers are urged to apply their own risk ranges based on their own degree of confidence in the cost and benefit estimates.

Financial Summary

The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the organization's investment in SAS Intelligent Advertising for Publishers.

Figure 3 below shows the risk-adjusted ROI, NPV, and payback period values. These values are determined by applying the risk-adjustment values from Table 6 in the Risk section to the unadjusted results in each relevant cost and benefit section.

FIGURE 3
Cash Flow Chart (Risk-Adjusted)



Source: Forrester Research, Inc.

TABLE 7
Cash Flow: Risk-Adjusted

	Initial	Year 1	Year 2	Year 3	Total	Present value
Costs	($11,110)	($181,800)	($181,800)	($181,800)	($556,510)	($463,220)
Benefits	$0	$300,930	$300,930	$300,930	$902,790	$748,368
Net benefits	($11,110)	$119,130	$119,130	$119,130	$346,280	$285,149
ROI						62%
Payback period						1.1 months

Source: Forrester Research, Inc.

SAS Intelligent Advertising For Publishers: Overview

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

SAS Intelligent Advertising for Publishers includes capabilities for:

› **Sales order management.** Ad servers and workflow solutions have historically been difficult to integrate and maintain due to their differing taxonomies and data elements. All too often, integration between third-party providers and common ad delivery engines creates both data leakage and technical management problems. SAS Intelligent Advertising for Publishers creates a seamless information flow — from RFP to proposal to approvals to insertion order to campaign to flight — which eliminates the need to re-key data.

› **Simulation-based forecasting.** Historically, ad inventory pricing and placement decisions were made based on gut feel. However, accurately forecasting future inventory is essential for allocating impressions appropriately and optimizing the use inventory. Because the solution's forecasting and fulfillment systems are linked, the decision and delivery systems accurately depict inventory availability, as well as all product packaging and delivery rules.

› **Optimized ad serving.** A flexible, scalable decision engine helps optimize advertising inventory decisions — on price, channel, size, number of impressions, time of ad delivery, etc. Users can prioritize and optimize competing business rules to ensure assigned delivery rules will best match customer needs.

› **Reporting.** SAS Intelligent Advertising for Publishers provides a comprehensive overview of revenue opportunities. Dashboards let users monitor sales performance and rate card adherence. Detailed views enable users to identify revenue trends by product, salesperson and advertiser.

› **Data visualization.** Data visualization capabilities enable you to quickly analyze large amounts of data to get fast, accurate insights on:

- Campaign delivery.
- Inventory availability or placement.
- Historical performance.
- Products that need to be sold.

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, flexibility, and risks.

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 form 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 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. Companies set their own 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 organizations 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 NPV of cash flows.

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

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 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 are the sum of the initial investment and the discounted cash flows in each year.

TABLE [EXAMPLE]
EXAMPLE TABLE

Ref.	Metric	Calculation	Year 1	Year 2	Year 3

Source: Forrester Research, Inc.