

A Forrester Total Economic Impact™  
Study Commissioned By GumGum  
February 2020

# The Total Economic Impact™ Of GumGum's Advertising Solution

Cost Savings And Business Benefits  
Enabled By GumGum's Advertising  
Solution

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## ABOUT FORRESTER CONSULTING

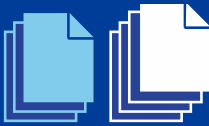
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## Benefits And Costs



Risk- and value-adjusted ROAS:  
**\$2.79**



Incremental customer spending  
due to the GumGum campaign  
**\$331,200**



Campaign cost  
**\$100,000**

## Executive Summary

Artificial intelligence is leading a revolution in marketing.<sup>1</sup> Marketers are rapidly seizing this opportunity; 58% of marketing decisions-makers with data and analytics budgets anticipate that their budgets will increase next year.<sup>2</sup> GumGum uses applied artificial intelligence and computer vision to place ads in highly visible, brand-safe, and contextually relevant locations. GumGum works with brands to create sophisticated cross-channel ad solutions. In combination, GumGum enables brands to reach targeted audiences with attractive, engaging ads.

GumGum commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return an enterprise may experience by engaging with GumGum on an advertising campaign. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of GumGum's advertising solutions on their organizations. Given the nature of the product and campaign, Forrester determined that the best framework for illustrating GumGum's impact is ROAS (return on advertising spend). ROAS in this analysis is the incremental sales per dollar spent on advertising and media agency labor.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed a media supervisor at a media agency representing a large food and beverages brand. Prior to working with GumGum, the interviewed media agency wanted to increase engagement by deploying custom creative content and placing its advertisements in the most contextually relevant locations. However, prior attempts yielded limited success, leaving the customer with nonoptimized engagement levels. The media agency executed an 11-week, seasonal campaign with GumGum for one of the brand's main product lines. The campaign delivered laser-like targeting that resulted in increased customer spending. In line with Forrester's standard methodologies, we have calculated a risk- and value-adjusted ROAS of \$2.79, which reflects risks and media agency labor.

### Key Findings

**Quantified benefits.** The interviewed organization experienced the following risk-adjusted quantified benefit:

- › **Customer spending increased as a result of the seasonal campaign.** Customer spending on the brand's key products grew by an average of \$0.16 per household. Over the 11 weeks of the campaign, this resulted in risk-adjusted additional revenue of \$331,200.

**Unquantified benefits.** The interviewed organization experienced the following benefits, which are not quantified for this study:

- › **Powerful contextual targeting put the right ads in the right place at the right time.** Thanks to GumGum's rigorous computer vision technologies, all campaign advertisements were in highly visible and contextually relevant placements. This increased the value of each interaction and enhanced the value of the overall campaign investment.
- › **White-glove service made content creation and deployment a breeze.** GumGum's commitment to superior customer service resulted in a smooth and seamless process. The media agency supervisor reported that GumGum was highly responsive to requests, even in the



**Benefits**  
**\$331,200**



**Costs**  
**\$118,900**

face of rapidly updating requirements. The result was a sophisticated solution to the brand's needs.

- › **Creative content was beautiful and engaging.** GumGum's wide variety of capabilities enabled the campaign to deploy unique advertisements. These advertisements stood out from the crowd and resulted in higher levels of user engagement.
- › **Brand safety was paramount.** GumGum leveraged computer vision technology to detect unsafe text and imagery. There was no worry about accidental brand harm from inappropriate placement.

**Costs.** The interviewed organization experienced the following risk-adjusted PV costs:

- › **Campaign cost.** The cost of the campaign, from content creation to deployment, was encapsulated in one fee paid to GumGum by the brand.
- › **Campaign planning and management costs.** Forrester quantified the cost to the brand of the media agency's involvement within the campaign.

Forrester's interview with an existing customer and subsequent financial analysis found that the brand organization experienced benefits of \$331,200 versus costs of \$118,900, adding up to a risk and value adjusted ROAS of \$2.79.

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

## TEI Framework And Methodology

From the information provided in the interview, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing GumGum's advertising solution.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that GumGum's advertising solution can have on an organization:



### **DUE DILIGENCE**

Interviewed GumGum stakeholders and Forrester analysts to gather data relative to Advertising Solution.



### **CUSTOMER INTERVIEW**

Interviewed one organization using GumGum to obtain data with respect to costs, benefits, and risks.



### **FINANCIAL MODEL FRAMEWORK**

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



### **CASE STUDY**

Employed four fundamental elements of TEI in modeling GumGum's advertising solution's impact: benefits, costs, flexibility, and risks. Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester's TEI methodology serves to provide a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

## DISCLOSURES

Readers should be aware of the following:

This study is commissioned by GumGum and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROAS 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 GumGum.

GumGum 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.

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

# The GumGum Advertising Solution Customer Journey

## BEFORE AND AFTER THE GUMGUM INVESTMENT

### Interviewed Organization

For this study, Forrester interviewed a supervisor at a media agency representing a multinational food and beverages brand.

### Key Challenges

B2C marketers operate in an increasingly complex environment of fragmented, multidevice consumer behavior. Emerging technologies and shifting cultural norms fuel an atmosphere in which consumers have ever-increasing expectations of experiences and interactions with brands. Consumer targets are more demanding and difficult to please than ever. As a result, brands need to make every impression count, so they are not lost in the pack.

- › **Advertising should be engaging — not annoying.** The food and beverages brand was competing for limited views in a crowded environment. Ads need to be engaging without being intrusive. Creative, beautiful, and well-placed ads are a better experience for the consumer.
- › **Privacy regulations limit behavioral advertising.** With legislation like GDPR in 2018 and the California Consumer Privacy Act (CCPA) in 2020, advertisers are increasingly limited in their usage of cookie-based behavioral advertising. Contextual advertising places the right advertisements in the right places at the right time — without infringing on existing laws.

The media agency approached GumGum to create an engaging and highly targeted campaign. The agency found GumGum's advertisements to be unique and compelling and was impressed with the experience of collaborating with GumGum on a campaign.

### Key Results

The interview revealed several key results from the GumGum campaign investment:

- › **Customer spending increased.** Over the period of the campaign, consumers spent an additional \$331,000 on the advertised product. These incremental sales were spread across both brand-loyal and new customers. Forrester has accounted for the costs of labor and the campaign and calculated that the GumGum engagement had a risk- and value-adjusted ROAS of \$2.79.
- › **Consumer targeting was “laser-like.”** GumGum's proprietary image recognition, semantic parsing, and contextual analysis ensured that all advertisements were highly visible and appropriately placed. In comparison to other campaigns, the GumGum campaign needed to reach a significantly smaller pool of consumers to generate the same number of high-value views.

“We went with GumGum because we really like their creative unit, and we found them really appealing in conjunction with their placement and their unique targeting capabilities.”

*Supervisor, media agency*



“I find most of our communication to be really valuable. . . . It was really truly a campaign partnership.”

*Supervisor, media agency*



- › **Creative content was attractive and engaging.** The campaign met the brand's needs: It was interactive, nonintrusive, and memorable. Unique ad formats, like lightboxes that revealed seasonal recipes, differentiated the campaign from other food and beverage advertisements. Lightboxes are product features that host images or videos and, when clicked by a user, expand into a full-screen experience that dims out the rest of the content on the web page.
- › **Brand safety was assured.** GumGum's technology screens both text and images for context to both enhance ad placement and to avoid unsafe placements. Thanks to GumGum, the agency did not place advertisements in potentially compromising positions. Both media agency and brand could rest assured that there would be no embarrassing — or dangerous — placements.

"It's such a no brainer to say, 'Oh yes, we can work with GumGum, they do great work, they're really quick.' I find them easy to work with."

*Supervisor, media agency*



# Analysis Of Benefits

## QUANTIFIED BENEFIT DATA

### Total Benefits

REF.	BENEFIT	TOTAL
Atr	Incremental customer spending	\$331,200
	Total benefits (risk-adjusted)	\$331,200

## Incremental Customer Spending

GumGum's advertising solution increased customer spending on the brand's key products. Households that viewed GumGum's custom advertising spent on average an additional \$0.16 during the 11-week duration of the campaign. This incremental customer spending added up to a significant benefit when multiplied across the millions of households reached by the campaign.

Forrester calculated incremental customer spending by examining the number of households reached and the incremental sales per exposed household. NCS, formerly known as Nielsen Catalina Solutions, partnered with GumGum to track customer advertisement exposure and spending trends. Forrester corroborated NCS's findings with the interviewee and with a review of industry standards.

When modeling this benefit, Forrester assumed:

- › The GumGum campaign drove more than 10 million impressions and reached approximately 2.3 million households during the brand's 11-week seasonal advertising campaign.
- › NCS calculated increased spending per household by comparing the spending of households that viewed GumGum's advertisements to the spending of households that did not view the advertisements. This was done to account for reasonable variability and the effects of any unrelated advertising campaigns.

During GumGum's campaign, there was a 3.4% sales lift in households that viewed the advertisements. These households spent \$4.69 on average, compared to the other households spending of \$4.53. This resulted in \$331K in additional revenue for the brand over an 11-week period.

One interesting finding, which is not modeled in this benefit, is that customers who had previously purchased from the brand were responsible for the majority of spending attributable to the campaign. These brand loyalists spent an additional \$0.48 over eleven weeks, as opposed to brand neophytes who made average increased purchases of \$0.04. The brand is a well-known food and beverages organization; this finding demonstrates the value of advertising even for well-established brands.

The following factors may account for variability from the model:

- › Incremental sales per exposed household will vary across products and industries.
- › Effectiveness of creative content may vary across campaigns.

To account for these risks, Forrester adjusted this benefit downward by

The table above shows the total of all benefits across the areas listed below. During the duration of the campaign, this comes to a total more than \$330K.



The brand's  
campaign generated  
a **3.4%** sales lift.

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



10%, yielding a risk-adjusted value of \$331,200.

### Incremental Customer Spending: Calculation Table

REF.	METRIC	CALCULATION	TOTAL
A1	Households reached	Nielsen research	2,300,000
A2	Incremental sales per exposed household	Nielsen research	\$0.16
At	Incremental customer spending	A1*A2	\$368,000
	Risk adjustment	↓10%	
Atr	Incremental customer spending (risk-adjusted)		\$331,200

## Powerful Contextual Targeting

AI, machine learning, and contextual targeting are poised to cause a renaissance in the marketing world.<sup>3</sup> Marketers can use these applications to reach the viewers who are most likely to engage with their campaigns. GumGum’s advanced computer vision and natural language processing technology enable brands to deliver content in only contextually relevant settings. This increases the value of every impression and brings marketers closer to the ideal of “right message, right moment, right person.” GumGum accomplishes this by using machine learning to review text, images, and videos. Forrester has classified GumGum as a “late stage provider” of AI services for rich media and GumGum is the only late-stage provider offering both image and video analysis.<sup>4</sup>

The seasonal campaign contextually targeted seasonal grillers who frequently visit food and drink, lifestyle, travel, and sports sites throughout the GumGum publisher network. GumGum placed brand messaging around images and keywords relevant to grilling, BBQ, holidays, dinner recipes, cooking, and more. The media supervisor whom Forrester interviewed described GumGum’s targeting as a “laser shot, as opposed to a scattershot” when compared to standard displays. The interviewee extrapolated that, due to the advanced nature of GumGum’s technology, the campaign was able to generate as many meaningful impressions as a campaign 150% its size.

“The GumGum team was truly easy to work with.”

*Supervisor, media agency*



## White-Glove Service

GumGum provides high-quality white-glove service for the length of a campaign and beyond. The effortlessness of working with GumGum differentiates it from similar agencies. The media supervisor commented: “The GumGum team was truly easy to work with. I found them to be really responsive and very helpful in the multitudes of revisions that we asked for on creative.”

GumGum worked as a collaborator with the media agency and brand throughout the campaign, providing relevant insight and assistance. GumGum’s communication was timely, relevant, and focused on producing the optimal outcome for the brand. To quote the interviewee: “I find most of our communication to be really valuable. . . . It was really truly a campaign partnership.”

“I think of GumGum as almost like a video partner. . . . They’re not, but their units and their engagement are compelling, which is why I put them in the premium digital bucket.”

*Supervisor, media agency*



## Engaging Custom Creative Solutions

GumGum creates engaging custom creative solutions for brands.

GumGum’s creative capabilities include difficult-to-miss advertisements that are integrated within relevant visual content. In the case of the seasonal campaign, GumGum designed lightboxes that expanded when clicked to reveal seasonally relevant recipes and cooking tips. The media supervisor explained: “The types of unit that they made with the animation and the branding are beyond the capabilities that we have with our internal teams. . . . [Working with GumGum was like] leaning on them like another creative team.” The value of these creative units was such that the media supervisor said: “I think of GumGum as almost like a video partner. . . . They are not, but their units and their engagement are compelling, which is why I put them in the premium digital bucket.”

## Increased Brand Safety

The effects of inappropriate ad adjacency can range from embarrassing to highly deleterious to a brand.<sup>5</sup> In recent years, brands across industries have fallen victim to poor placement. With its machine learning capabilities, GumGum reviews text, video, and image content before placing an ad — thus greatly reducing the chance of harmful content adjacency.

## Flexibility

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

- › **Expedited future start-ups.** As the agency continues to engage with GumGum, the partnership relationship will further develop. This will enable campaigns to move from conceptualization to deployment faster, which will result in time and labor savings.

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix A).

“There’s always a little bit of inherent risk when you’re working with a new partner. Just because you haven’t seen for your own how it performs and how well it goes. I think what was helpful was the GumGum team was so upfront and so communicative and so honest with me throughout the whole process.”

*Supervisor, media agency*



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

# Analysis Of Costs

## QUANTIFIED COST DATA

Total Costs		
REF.	COST	TOTAL
Btr	GumGum campaign cost	\$100,000
Ctr	Campaign planning and management	\$18,900
	Total costs (risk-adjusted)	\$118,900

### GumGum Campaign Cost

The GumGum campaign cost is an inclusive fee for the content creation, ad placement, and deployment of the seasonal campaign. This fee was negotiated between GumGum and the media agency and was paid by the brand. The following factors may affect the cost of other campaigns:

- › **Content format.** GumGum supports a variety of different advertising capabilities, such as lightboxes and in-picture overlays. The creative requirements of the campaign will impact the pricing.
- › **Campaign size.** The duration and reach of the campaign will affect the cost of the campaign. The campaign in this analysis lasted 11 weeks and generated 10 million impressions.

Because the pricing was custom for this particular campaign, Forrester did not risk-adjust the cost, yielding a total of \$100,000.

The table above shows the total of all costs across the areas listed below. The interviewed organization expects risk-adjusted total costs to be \$118,900.

Implementation risk is the risk that a proposed investment may deviate from the original or expected requirements, resulting in higher costs than anticipated. The greater the uncertainty, the wider the potential range of outcomes for cost estimates.

GumGum Campaign Cost: Calculation Table			
REF.	METRIC	CALCULATION	TOTAL
B1	GumGum campaign cost		\$100,000
Bt	GumGum campaign cost	B1	\$100,000
	Risk adjustment	0%	
Btr	GumGum campaign cost (risk-adjusted)		\$100,000

### Campaign Planning And Management

The brand worked with a media agency for the creation of the seasonal advertising campaign. In the case of this study, the brand and the media agency are long-standing partners with an annual contract. The media agency and the brand collaborate on at least 20 campaigns of varying size per year. As a result, it is not possible to extrapolate the costs of a single GumGum seasonal campaign from the other value that the media agency provides to the brand throughout the year.

To represent the cost of a brand collaborating with a media agency, Forrester has modeled the hourly costs of engaging a prototypical media agency. In the case of this campaign, the time between partner selection and campaign execution was approximately four weeks. Administrative costs will vary across markets, campaign types, and industries and thus should be considered speculative.



**Four weeks**  
Between partner  
selection and  
campaign deployment

To account for these risks, Forrester adjusted this cost upward by 5%, yielding a risk-adjusted total of \$18,900.

<b>Campaign Planning And Management: Calculation Table</b>			
<b>REF.</b>	<b>METRIC</b>	<b>CALCULATION</b>	<b>TOTAL</b>
C1	Number of people		3
C2	Campaign implementation length (weeks)		4
C3	Percent of time spent on campaign		30%
C4	Hours per week		40
C5	FTE hours spend on campaign	$C1 * C2 * C3 * C4$	144
Ct	Campaign planning and management	Forrester calculation	\$18,000
	Risk adjustment	↑5%	
Ctr	Campaign planning and management (risk-adjusted)		\$18,900

# GumGum Advertising Solution: Overview

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

"GumGum is a technology and media company with a focus on computer vision and natural language processing. Our mission is to solve hard problems by teaching machines to see and understand the world. With over a decade experience applying advanced machine learning techniques, we have become proficient at extracting value from text, images and videos. Since 2008, we have applied that expertise in a variety of industries from advertising to professional sports.

For advertisers who strive to deliver their brand message with precision and in brand safe environments, we offer a full suite of pioneering future-proof solutions. Our multimodal contextual advertising technology Verity gives marketers the ability to develop a comprehensive understanding of web content to safely deliver contextually relevant ads where users are most likely to see them. Combining that contextual targeting and brand safety intelligence with our proprietary ad formats, GumGum's advertising solutions deliver industry leading efficiency, accuracy, and performance."

# Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

## Total Economic Impact Approach



**Benefits** represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.



**Costs** consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.



**Flexibility** represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.



**Risks** measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.



**Present value (PV)**

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



**Net present value (NPV)**

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.



**Return on investment (ROI)**

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.



**Discount rate**

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.



**Payback period**

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

## Appendix B: Endnotes

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<sup>1</sup> Source: “Artificial Intelligence Will Spark A Real Marketing Renaissance,” Forrester Research, Inc., August 3, 2018.

<sup>2</sup> Source: Forrester Business Technographics Global Marketing Survey, 2019.

<sup>3</sup> Source: “Artificial Intelligence Will Spark A Real Marketing Renaissance,” Forrester Research, Inc., August 3, 2018.

<sup>4</sup> Forrester classifies GumGum as a late-stage provider of AI services for rich media based on its funding level, company tenure and number of employees. Source: “New Tech: AI Services For Rich Media, Q3 2019,” Forrester Research Inc., September 3, 2019

<sup>5</sup> Source: “How AI Is Transforming Advertising And What You Should Do About It,” Forrester Research Inc., January 24, 2019.