A Forrester Total Economic Impact™ Study

Commissioned By GumGum

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The Total Economic Impact™ Of GumGum's In-Image And In-Screen Advertising Solutions

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Executive Summary

GumGum commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) publishers may realize by deploying in-image and in-screen advertising solutions. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of a GumGum partnership on their organizations to increase incremental revenue through new advertising units.

To better understand the benefits, costs, and risks associated with an in-image and in-screen advertising solution, Forrester interviewed three stakeholders at one of the largest US publishers. With GumGum, publishers have the opportunity to increase their revenue by adding new forms of advertising units to their existing image libraries, turning photos into profitable advertising inventory. They monetize by either sharing revenue with GumGum for indirect advertising sales or by enabling their direct advertising sales force to sell in-image and in-screen advertising.

GumGum in-image and in-screen advertising provides a new type of advertising unit that does not cannibalize existing placements. It offers a new revenue stream for publishers.

One of the largest US publishers that partnered with GumGum experienced the following benefits (modeled over three years):

- **Net-new advertising units and revenue stream with an 81% viewability rate.**
- **A 2% increase in digital advertising from units sold by GumGum's sales team, or around $6 million.**
- **A 3% increase in digital advertising from units sold by the publisher's direct sales team, or around $8 million.**
- **Near-immediate payback with limited implementation requirements.**

Prior to the GumGum partnership, the publisher did not have an opportunity to monetize images as advertising units. While the publisher was working with many partners for video, sponsored, and banner advertisements, it was intrigued by the opportunity to harness a new advertising type. With in-image and in-screen advertising, the publisher was able to net new revenue with a brief implementation effort and no impact to the user experience. Furthermore, the GumGum advertising units were easy to implement and integrated with the publisher's ad server, DoubleClick. Once implemented and tested, GumGum provided an immediate new revenue stream. Although the units were a small percentage of total advertising revenue for a large publisher, the sales of these units are expected to grow as over 200 direct advertising sales team members are trained to sell in-image and in-screen advertising. Said one VP of digital: "GumGum was offering a new way to monetize the Web, and we have a lot of images. The projected revenue against the product is exciting and new to our group — it's not cannibalizing existing revenue. We think it will drive more than 10% in ad revenue for digital display."

GUMGUM GENERATES NEW INCREMENTAL ADVERTISING REVENUE

Our interviews with one existing customer and subsequent financial analysis found that the interviewed organization experienced the benefits and costs shown in Figure 1.[1]

Over three years, the analysis points to benefits of $15,468,437 versus implementation costs of $347,365, adding up to a net present value (NPV) of $15,121,073. With in-image and in-screen advertising, the publisher was able to monetize very quickly after a short rollout and testing process with no disruption to existing advertising revenue streams.

FIGURE 1

Financial Summary Showing Three-Year Risk-Adjusted Results

Increase in digital advertising revenue: 5%	**NPV: $15.1M**	**Payback period: < 1 month**

Source: Forrester Research, Inc.

TABLE 1

Summary Of Revenue Benefits And Costs By Publisher Size

Publisher Size	Average Monthly Page Views	Average Monthly Revenue	Percentage Of Revenue Attributed To GumGum	Costs To Implement GumGum
Small publisher; single property; one key contact for implementation	250,000 – 1,000,000	$20,000	10% – 25%	Minimal; < 1 hr. to implement
Midsize publisher; one web content management system to manage all content; two to three stakeholders involved in implementation	2,000,000 – 100,000,000	$30,000 - $100,000	5% – 30%	< $3,000 over 3 years
Large publisher; 20+ properties; multiple web content management systems; > 10 people involved in implementation	100,000,000+	$200,000 - $1,000,000	2% – 5%; Could grow to 10% as direct sales team sells GumGum ad units	~ $100,000 annually

Source: Forrester Research, Inc.

› **Benefits.** The interviewed organization experienced the following risk-adjusted benefits, modeled over three years:

- **Increased indirect advertising revenue sold by the GumGum sales team.** The publisher, working in a revenue-share agreement with GumGum, increased its indirect advertising sales by 2% of total digital advertising sales over three years, equaling around $6 million.
- **Increased direct advertising revenue from the direct publisher sales team of in-image and in-screen advertising units.** After implementation, the publisher trained half of its direct sales team to sell the in-image and in-screen advertising units for a larger share of revenue. This increased its direct advertising sales by 3% of total digital advertising sales over three years, totaling about $8 million.
- **Increased viewability of advertising units.** The GumGum advertising units had higher viewability than other forms of digital advertising, which increased its potential to earn the publisher a higher cost per thousand impressions (CPM).

› **Costs.** The interviewed organization experienced the following risk-adjusted costs, modeled over three years. Small and midsize publishers would incur minimal costs; the following costs reflect those of one of the largest publishers in the US:

- **Implementation effort costs of $225,827.** These are a combination of initial, one-time costs paid to developers to set up the publisher properties for the new advertising unit and the initial and ongoing quality assurance oversight to ensure that the ads serve properly.
- **Partner management oversight fees of $74,584.** These are initial and ongoing partner management costs required to initiate and oversee the implementation of the advertising partnership.
- **Sales training costs of $46,954.** These costs are gradually incurred as sales team members are ramped up and trained on the GumGum partnership and advertising unit offerings.

Disclosures

The reader should be aware of the following:

› The 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 benefits 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's in-image and in-screen advertising solution.

› 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 publisher 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 GumGum's in-image and in-screen advertising solution. The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision, to help organizations understand how to take advantage of specific benefits, reduce costs, and improve the overall business goals of winning, serving, and retaining customers.

APPROACH AND METHODOLOGY

Forrester took a multistep approach to evaluate the impact that GumGum's in-image and in-screen advertising solution can have on a publisher (see Figure 2). Specifically, we:

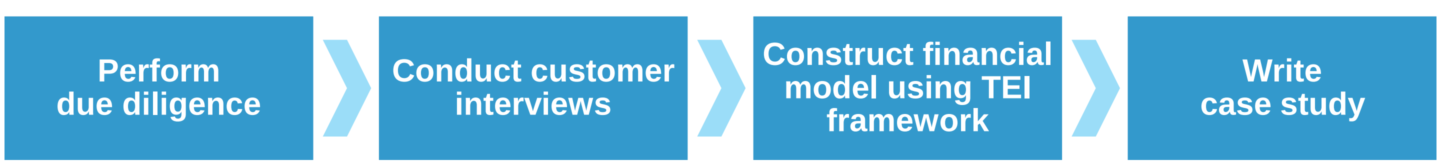
- Interviewed GumGum marketing, sales, and consulting personnel, along with Forrester analysts, to gather data relative to in-image and in-screen advertising and the marketplace for in-image and in-screen advertising solutions.
- Interviewed several stakeholders from one publisher currently using GumGum's in-image and in-screen advertising solution 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.
- Risk-adjusted the financial model based on issues and concerns the interviewed publisher highlighted in interviews. Risk adjustment is a key part of the TEI methodology. While the interviewed publisher 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 are detailed in each relevant section.

Forrester employed four fundamental elements of TEI in modeling GumGum's in-image and in-screen advertising solution: 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

ORGANIZATION

For this study, Forrester interviewed three key stakeholders from a large publisher headquartered in New York City that has 30 online properties. The stakeholders had the following roles within the organization:

- The VP of digital was the key stakeholder in the GumGum implementation. The VP's role is to evaluate all potential advertising partners and assess the benefit and viability of partnering with them. As the key stakeholder, she is responsible for ensuring that the advertising units generate net-new revenue without cannibalizing other revenue sources or creating a negative customer experience.

- The manager of digital served the role of project manager during the GumGum implementation. Her role is also to serve as the intermediary between the GumGum team and the resources required on the publisher's side. She serves as the ongoing partner manager for the relationship post-implementation, balancing her time on GumGum and other advertising partnerships.

- The ad product technology lead oversees the technical implementation of the GumGum partnership. She and her team are the self-described "gatekeepers" of the ad server and the ads that serve to the publisher's sites. They ensured that each of the 30 properties' websites was prepared and tested for placement of a new ad unit type, ensured integration with the ad server, and tested the overall solution.

The business, technical, and editorial teams took the following steps to establish the partnership with GumGum:

- The business leaders researched options and partners by attending advertising industry conferences and consulting with colleagues, agencies, and advertising partners about the benefits of in-image advertising.

- Once the advertising partnership team determined that GumGum provided a unique offering, it met with the editorial staff. In these meetings, they discussed in-image and in-screen advertising, how it works, and how it would integrate with the content and images on web pages. Once they gained buy-in from the editorial staff that the advertising units would not impinge on user experience, they decided to move forward.

- The publisher then structured an agreement with GumGum that established two monetization opportunities. The first was an advertising revenue share for advertising units sold by GumGum sales staff. The second was an agreement around the advertising revenue share for advertising units sold by the publisher's sales team.

- They began the implementation process once the partnership terms were established. The first step was to assign a partner manager to the effort who could oversee the technical and project management milestones for the rollout.

> *"In the ad world, everyone is looking for the next 'new thing,' something that can catch the audience's eye and be different. They want to add something that doesn't involve a huge execution process that takes weeks to build like big, flashy units with rich media. GumGum offers additional inventory to add to the site that's in the image. It's unique because they're additional ad units that didn't exist before."*
>
> ~ Manager of digital, publisher

- Next, the technical resource on the publisher side added GumGum code to the ad server, which was a minimally time-consuming process because GumGum integrates with the type of server the publisher was using.
- Next, the publisher identified web developers from each of the different properties (which are managed independently) to create placeholders for the unique in-image and in-screen advertising units (“1x6”) that would display on the web pages. Because these web pages are pre-defined templates for content and image layout, the code could be added and tested within about five templates and worked across the site.
- The technical quality assurance process was managed centrally across all 30 properties. The rollout took approximately two months, and as properties completed the technical step, the quality assurance was conducted for testing the tags and ensuring that advertisements served through the ad server displayed properly. Because the properties had different web content management systems and technical resources available to the effort, the rollout occurred in waves.
- Once all properties were rolled out and fully operational, the organization began to see a regular monthly stream of revenue coming from the GumGum in-image and in-screen advertising unit. It then turned its focus to educating its direct advertising sales team about the new offering.

> *“One of the reasons our sellers like this product is the high viewability rate versus other ad units — it’s in the line of sight of where consumers are engaging with content. It’s a very critical and top-of-mind topic today.”*
>
> ~ VP of digital, publisher

Situation

Large publishers rely increasingly on digital advertising as a new area to grow revenue. Because circulation of printed magazines and newspapers is declining on a steady basis, the organization was seeking digital advertising partnerships to increase its revenue share from digital advertising. The publisher had existing video, banner, and paid advertisement partners and had not used in-image advertising before encountering the GumGum solution.

- The head of digital wanted to increase digital advertising partnerships with partners that would not cannibalize existing advertising revenue streams.
- The head of digital wanted to partner with an organization that integrated easily with the publisher’s ad server and required little technical support.
- The organization wanted to work with a partner that would enable and train its direct advertising sales force to sell the advertising units.
- Agency and advertising partners of the publisher were interested in using in-image and in-screen advertising and were asking the publisher when they’d be able to purchase that type of ad unit.

The publisher selected the GumGum in-image and in-screen advertising partnership for its unique advertising unit type, collaborative partnership, and ease of technical implementation.

Results

The interview revealed that:

- **Overall digital advertising increased 5% over three years.** The most significant benefit experienced was in the increase of digital advertising sales. This resulted from the combination of both indirect sales — advertising placements sold by GumGum sales team members — and direct advertising sales. Leveraging its own advertising sales team, the publisher expects to increase digital advertising revenue even more substantially.

- **Advertising units were well-received by consumers and the editorial team and didn't garner complaints.** The publisher partners with many advertising technology providers. Many advertising units can be perceived as "intrusive" by either the editorial team that writes the content on the page or the consumers who visit the properties. The publisher's partner management team was pleased that neither the editorial nor consumer stakeholders complained about the new in-image and in-screen advertising units. Said the advertising partner manager: "It's definitely a concern from those colleagues who manage our properties — how intrusive is this [ad unit] going to be to our users . . . that was something we explored before signing the contract. We addressed it, but after launching we still wanted to be mindful of it. Every time I've been served a GumGum ad, it fits within the page, and it has good quality ads — not the belly flab advertisements. When launching a new ad unit, you never know how the sites and users are going to react — we prepare for some feedback or complaints. Usually, I would receive a complaint email, and I was surprised because I didn't."

- **The GumGum partnership provides flexibility and committed collaboration.** The publisher did not enter into the GumGum partnership without undergoing a significant vetting process. The publisher was aware of the advertising units from industry events and had even heard demand for them from their own advertisers. These advertisers came across GumGum ad units on other publisher sites and wanted the opportunity to reach consumers in this new way. The publisher and GumGum teams carefully crafted a partnership that would ensure a fair revenue sharing agreement with metrics built in to motivate both sides to meet the objectives. The GumGum team has to sell the advertisements at an attractive price by emphasizing those impression metrics. The publisher sales team can concurrently sell the ad units on its properties to advertisers directly, which motivates the sales team members because they can receive a higher percentage of the take-home from the revenue split. The GumGum publisher success and technical teams provide ongoing, customized technical support to ensure that the ad units are served properly on the publisher's sites. In turn, the publisher commits to placing the ad units on more of its pages so that maximum impressions can be attained.

"There are a lot of benefits to GumGum; a lot of it is they have great metrics in terms of viewability — in-image and in-screen has great rates. The market is very focused right now on that and it's a great selling point. If we want to directly sell GumGum ad units it is a good point for our sellers to make. It's additional inventory to add to the site since it's in the image; the ad units didn't exist before. It's unique, new ad units and additional revenue."

~ Partner manager, publisher

BENEFITS

The interviewed organization experienced a number of quantified benefits in this case study:

- **Increased indirect advertising revenue sold by the GumGum sales team.** The publisher, working in a revenue share agreement with GumGum, increased its indirect advertising sales by 2% of total digital advertising sales over three years, equaling about $6 million

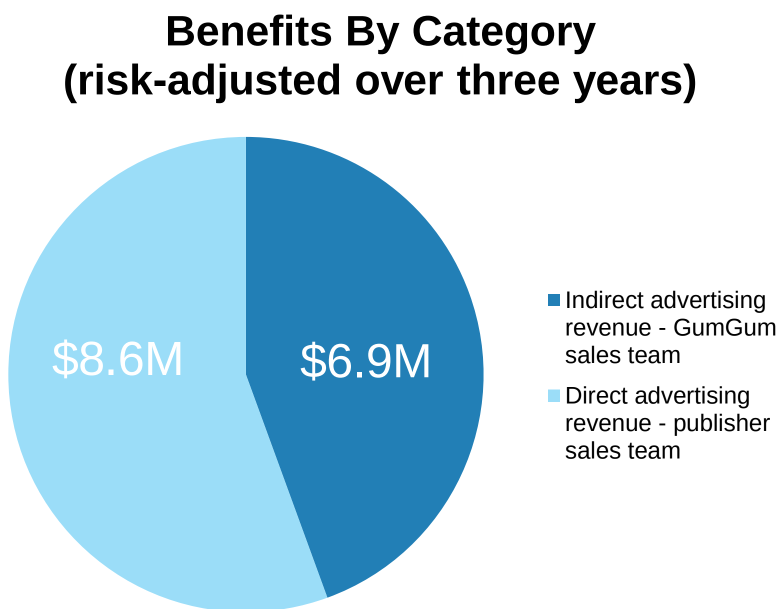
- **Increased direct advertising revenue from the direct publisher sales team of in-image and in-screen advertising units.** After implementation, the publisher trained its direct sales team to sell the in-image and in-screen advertising units for a larger share of revenue and expects about half to begin selling in years 2 and 3. This increased its direct advertising sales by 3% of total digital advertising sales over three years, totaling about $8 million.

- **Increased viewability of advertising.** GumGum cites an 81% viewability rate for its in-image and in-screen advertising units, as measured by analytics firm Moat, when optimized for maximum viewability. This translates to higher CPMs for publishers.

Increased Indirect Advertising Revenue

The publisher indicated that a key benefit from the in-image and in-screen advertising partnership was an increase in indirect advertising revenue with little cost to the publisher. Because this publisher has very desirable properties for advertisers, it frequently “maxed out” on advertising placements and was limited in the amount of advertising revenue it could sell. After partnering with GumGum, the publisher was able to add a new source of indirect advertising revenue. Because GumGum’s advertising sales teams, rather than the publisher’s, are selling the units, there is even less work required by the publisher to earn revenue. After working out a revenue share agreement, the publisher was able to recognize revenue almost immediately and realize a return on its implementation investment. Said the VP of digital: “The biggest surprising benefit is being able to extend our inventory into new formats that are interesting to advertisers. Most of our sites’ [advertising opportunities] sell out and are in demand. Now there is more to sell.”

FIGURE 2
Increased Advertising Revenue — Direct And Indirect Sales



Source: Forrester Research, Inc.

Following the GumGum implementation, the publisher was able to increase its indirect digital advertising revenue by 2% over three years. Given that this is a unique and noncannibalistic advertising revenue stream that was not available before, it was an attractive partnership to form. The average monthly revenue is expected to grow steadily over the next two years and will likely vary depending on the seasonality of the events related to the consumer sites. For example, a sports property will sell more advertising surrounding large events, such as the Super Bowl or World Cup. A travel site may sell more advertising at peak travel times in the winter and summer. For the purpose of this model, conservative estimates were used to pace the publisher's plan to open traffic flow for in-image and in-screen advertising. However, these averages could be much higher if the publisher's ad impressions reach beyond the million-dollar mark. The publisher may earn as much as $1 million in a single month according to the terms of its revenue split agreement.

This publisher and others using this model to estimate potential digital advertising revenue return have uncertain and widely varying monthly numbers of site visitors and "eyeballs" on the advertisement placements. Furthermore, not all publishers can demand the same CPM as the publisher interviewed for this study. To compensate, this benefit was risk-adjusted and reduced by 10%. The risk-adjusted total benefit resulting from increased indirect advertising revenue over the three years was $6,872,457. See the section on Risks for more detail.

TABLE 2
Increased Indirect Advertising Revenue — GumGum Advertising Sales Team

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
A1	Monthly indirect revenue, implementation period	$80,000		$160,000		
A2	Monthly indirect revenue, post-implementation	$100,000		$1,000,000		
A3	Monthly indirect revenue, average ongoing Year 2	$300,000			$3,600,000	
A4	Monthly indirect revenue, average ongoing Year 3	$400,000				$4,800,000
At	Indirect advertising revenue -— GumGum sales team	A1+A2+A3+A4	$0	$1,160,000	$3,600,000	$4,800,000
	Risk adjustment	↓10%				
Atr	**Indirect advertising revenue — GumGum sales team (risk-adjusted)**		**$0**	**$1,044,000**	**$3,240,000**	**$4,320,000**

Source: Forrester Research, Inc.

Increased Direct Advertising Revenue From Direct Publisher Sales

The publisher indicated that a key future benefit of the GumGum partnership is the opportunity for its direct digital advertising sales team to sell the in-image and in-screen advertising units directly to its advertising and agency partners. The publisher sales team, numbering around 400 direct sales team members, is eager for the opportunity to sell new types of advertising units that can push its contract sizes higher. Prior to the GumGum in-image and in-screen advertising partnership, direct sales team members had maxed out on the type of advertising placements they could sell, especially because the publisher needs to be cautious not to overwhelm a reader with a high frequency of ads. Furthermore, more intrusive ad types that mask or limit access to content are not well-liked by consumers, and they complain readily when this is the case. Customers may also abandon the site altogether if the advertising provides a negative user experience. Because in-image and in-screen advertising melds existing content images with advertising appended to the image or hovering at the bottom of the screen, they are not perceived to be invasive. This is a win-win for the consumer and the publisher because this new advertising unit type means more net-new revenue with no negative impact to the customer.

The publisher expects the direct advertising sales to be an increasingly large share of the revenue it earns from the GumGum partnership, increasing digital advertising revenue by 3% over three years. A conservative estimate was used for the purpose of modeling, but the publisher expects that if the advertising unit performs as well as expected, it could increase digital advertising revenue by 10% overall. That equates to about $20 million annually. In this model, it was assumed that the adoption rate of the sales team incorporating the new ad unit types in its sales conversations would be paced slowly, with 75 of the 400 sales team members selling $100,000 in in-image and in-screen advertising in the second year and 100 of the 400 sales team members selling about $200,000 in in-image and in-screen advertising in the third year. Direct advertising revenue was not calculated in the first year, assuming that the sales team needs to be trained on the new offering and will not see the results of selling the new ad type until the average sales cycle has ended. A conservative 45% profit margin was used for this calculation, but publisher advertising profit margins can be as high as 60%. Furthermore, publishers cannot predict the pricing of advertising units in the future, since they are sensitive to supply and demand. To compensate, this benefit was risk-adjusted and reduced by 10%. The risk-adjusted total benefit resulting from direct advertising sales revenue over the three years was $11,137,500. See the section on Risks for more detail.

TABLE 3
Increased Direct Advertising Revenue — Publisher Advertising Sales Team

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
B1	Number of direct advertising sales team members				75	100
B2	Average annual direct advertising sales revenue for GumGum advertising units (assuming more than 1.5 million impressions)				$100,000	$200,000
B3	Profit margin	45%			45%	45%
Bt	Direct advertising revenue — publisher sales team	B1*B2*B3	$0		$3,375,000	$9,000,000
	Risk adjustment	↓10%				
Btr	**Direct advertising revenue - publisher sales team (risk-adjusted)**		**$0**	**$0**	**$3,037,500**	**$8,100,000**

Source: Forrester Research, Inc.

Increased Viewability

Although not measured in the financial model, the publisher cited that a key benefit of working with GumGum as a partner is the high viewability rates of the in-image and in-screen advertising units. GumGum cites an 81% viewability rate, as measured by Moat, when optimized for maximum viewability. According to a Forrester report, on average, about 56% of impressions are not seen due in part to the ad placement and size.[2] Because of poor viewability metrics, the Media Rating Council (MRC) that maintains oversight for such viewability tracking has established standards. Moat, which "measures real-time Attention Analytics," works with publishers and marketers and its standard is respected by both.[3] Therefore, GumGum's performance on this metric weighed heavily in the publisher's decision to partner with it. High viewability for the publisher translates to higher CPMs because it can promise more eyeballs on advertisements and, thus, command a higher price for the placements. Furthermore, the GumGum ad units are designed using responsive design and are cross-platform enabled, so they render effectively for all audiences across devices. The consumer experience is positive with these types of ads and they are visible: typically appended to an image or located at the bottom of a web page and scroll with the user's scroll.

Total Benefits

Table 4 shows the total of all benefits across the two 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 $15,468,437.

TABLE 4
Total Benefits (Risk-Adjusted)

Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Atr	Indirect advertising revenue — GumGum sales team	$1,044,000	$3,240,000	$4,320,000	$8,604,000	$6,872,457
Btr	Direct advertising revenue — publisher sales team	$0	$3,037,500	$8,100,000	$11,137,500	$8,595,980
	Total benefits	**$1,044,000**	**$6,277,500**	**$12,420,000**	**$19,741,500**	**$15,468,437**

Source: Forrester Research, Inc.

COSTS

The interviewed publisher experienced a number of costs associated with the GumGum in-image and in-screen advertising partnership:

› Implementation costs.

› Partnership management costs.

› Sales training costs.

These represent the mix of internal and external costs experienced by the interviewed organization for initial planning, implementation, and ongoing maintenance associated with the solution.

Implementation Costs

For this publisher, the implementation costs for GumGum included developer work, testing, and quality assurance oversight. However, not every GumGum implementation requires more than adding the GumGum code to an ad server. Because this large publisher has 30 distinct properties and chose to place an exclusive, hard-coded ad call that was dedicated to GumGum on its sites, a resource had to add it manually. Furthermore, this publisher uses multiple web content management systems to manage and serve editorial content, which caused the technical rollout to last around two months. In the first phase of the rollout, the technical lead for the publisher added the GumGum code to the ad server, which took very minimal effort. Next, a developer representing each of the 30 properties hard coded the addition of the ad placement (called “1x6” by this publisher) to its content templates. The developers’ availability and the level of technical complexities varied among the publisher’s websites, so the model estimates an average of 10 developer hours to add the GumGum ad types to properties and test them. Meanwhile, the central technical resources had to contribute around 60 hours of quality assurance and testing oversight. This included creating test pages and testing each property’s site as it rolled out GumGum. After two months, these initial costs were over and the ongoing quality assurance and oversight continued. The most likely scenarios requiring maintenance work are if a property updates its website or a new property is acquired. This model assumes that every quarter, a conservative 24 hours — or about three days of work — is required for half of the publisher’s properties. Said the manager of ad product technology, “The implementation has been seamless. GumGum ad units are really nice and not intrusive. Aside from initial tweaks about how and where ads are served, it has been ‘set it and forget it.’” The publisher incurred implementation costs of $196,371 over three years, $24,480 of which was experienced in the initial period.

Implementation timelines and the underlying technologies used to run web properties and ad servers vary among publishers. To compensate, this cost was risk-adjusted up by 15%. The risk-adjusted cost of software over the three years was $225,827. See the section on Risks for more detail.

TABLE 5
Implementation Costs

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
C1	Developer time required to position ads on each property		10			
C2	Number of properties		30			
C3	Hourly rate of a developer	$150,000 annually	$72			
C4	Quality assurance and testing oversight — total hours in implementation period		60			
C5	Quarterly quality assurance and testing oversight -— total hours in ongoing maintenance (e.g., site redesign and tag testing)			24	24	24
C6	Number of properties requiring adjustment due to changes in website or content management system			15	15	15
C7	Hourly rate of a quality assurance professional	$100,000 annually	$48	$48	$48	$48
Ct	Implementation costs	Initial = (C1*C2*C3)+(C4*C7) Years 1-3 = C5*C6*4 quarters	$24,480	$69,120	$69,120	$69,120
	Risk adjustment	↑15%				
Ctr	**Implementation costs (risk-adjusted)**		**$28,152**	**$79,488**	**$79,488**	**$79,488**

Source: Forrester Research, Inc.

Partnership Management Costs

The publisher incurred costs to institute and manage the GumGum partnership. Although the role of manager of digital is intended to serve in the advertising partner management capacity across several partners and programs, the resource needed to dedicate time to the launch of the partnership and provide project management oversight for it to be successful. In the initial eight weeks of the implementation, the partner manager dedicated her attention full-time to the partnership, spending about 40 hours a week. In this time, the partner manager served as the primary liaison between GumGum and the publisher and ensured the coordination of all technical and editorial resources. Once the partnership was launched successfully, the partner manager could reduce her time spent with the advertising technology partner to approximately 5 hours per week. This management oversight is expected to continue for the life of the partnership, and this publisher spent around $67,000 for partner management. However, there are ebbs and flows of intensity around managing the relationship amid business and technical changes. To compensate, this cost was risk-adjusted up by 10%. The risk-adjusted cost of annual maintenance over the three years was $74,584. See the section on Risks for more detail.

TABLE 6
Partner Management Costs

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
D1	Project management oversight — weekly hours in implementation period		40			
D2	Number of weeks		8			
D3	Partner management oversight — weekly hours ongoing maintenance and reporting			5	5	5
D4	Hourly rate of project manager, fully loaded	$150,000 annually	$72	$72	$72	$72
D5	Weeks per year	Excluding vacation		50	50	50
Dt	Partner management oversight	Initial= D1*D2*D4 Years 1-3= D3*D4*D5	$23,040	$18,000	$18,000	$18,000
	Risk adjustment	↑10%				
Dtr	**Partner management oversight (risk-adjusted)**		**$25,344**	**$19,800**	**$19,800**	**$19,800**

Source: Forrester Research, Inc.

Sales Training Costs

The publisher is expected to incur sales training costs to enable its direct sales team members to sell the new in-image and in-screen advertising units. While this requires a minimal investment of the sales professionals' time, it is an important step in the process of them incorporating the new type of ad units in their portfolio. With a sales team numbering around 400 and training occurring in Year 1, we assumed that 100 salespeople would begin selling the ad units in the second year and then 200 in the third year. As such, the training costs were based on this timeline and pattern and are assumed to cover 2 hours of presentation and self-directed consumption of sales materials. The training cost over three years was $44,718. Because the skill levels of sales team members vary and the length and amount of training will vary until they become capable of selling the new advertising type, this cost was risk-adjusted up by 5%, for a total cost of $46,954.

TABLE 7
Sales Training Costs

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
E1	Number of salespeople				100	200
E2	Hours of training required				2	2
E3	Hourly rate of a sales professional, fully loaded	$200,000 annually			$96	$96
Et	Sales training — direct sales team	E1*E2*E3		$0	$19,200	$38,400
	Risk adjustment	↑5%				
Etr	**Sales training — direct sales team (risk-adjusted)**		**$0**	**$0**	**$20,160**	**$40,320**

Source: Forrester Research, Inc.

Total Costs

Table 8 shows the total of all costs as well as associated present values (PVs), discounted at 10%. Over three years, the publisher expects total costs to be a PV of $347,365.

TABLE 8
Total Costs (Risk-Adjusted)

Ref.	Cost Category	Initial	Year 1	Year 2	Year 3	Total	Present Value
Ctr	Implementation costs	$28,152	$79,488	$79,488	$79,488	$266,616	$225,827
Dtr	Partner management oversight	$25,344	$19,800	$19,800	$19,800	$84,744	$74,584
Etr	Sales training — direct sales team	$0	$0	$20,160	$40,320	$60,480	$46,954
	Total costs (risk-adjusted)	**$53,496**	**$99,288**	**$119,448**	**$139,608**	**$411,840**	**$347,365**

Source: Forrester Research, Inc.

RISKS

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 in-image and in-screen advertising 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 in-image and in-screen advertising, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for cost and benefit estimates.

TABLE 9
Benefit And Cost Risk Adjustments

Benefits	Adjustment
Indirect advertising revenue	↓ 10%
Direct advertising revenue	↓ 10%

Costs	Adjustment
Implementation costs	↑ 15%
Partner management oversight	↑ 10%
Sales training	↑ 5%

Source: Forrester Research, Inc.

Quantitatively capturing implementation 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.

The following impact risks that affect benefits are:

› This publisher and others using this model to estimate potential digital advertising revenue return have uncertain and widely varying monthly numbers of site visitors and “eyeballs” on the advertisement placements. Furthermore, not all publishers can demand the same CPM as the publisher interviewed for this study. To compensate, the indirect advertising revenue was risk-adjusted and reduced by 10%.

› Publishers cannot predict the pricing of advertising units in the future since they are sensitive to supply and demand. To compensate, the direct advertising revenue benefit was risk-adjusted and reduced by 10%.

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

› Implementation timelines and the underlying technologies used to run web properties and ad servers vary among publishers. To compensate, the implementation cost was risk-adjusted up by 15%.

› Because there are ebbs and flows of intensity around managing the relationship amid business and technical changes, the partnership management costs are variable. To compensate, this cost was risk-adjusted up by 10%.

› Because the skill levels of sales team members vary and the length and amount of training will vary until they become capable of selling the new advertising type, this cost was risk-adjusted up by 5%.

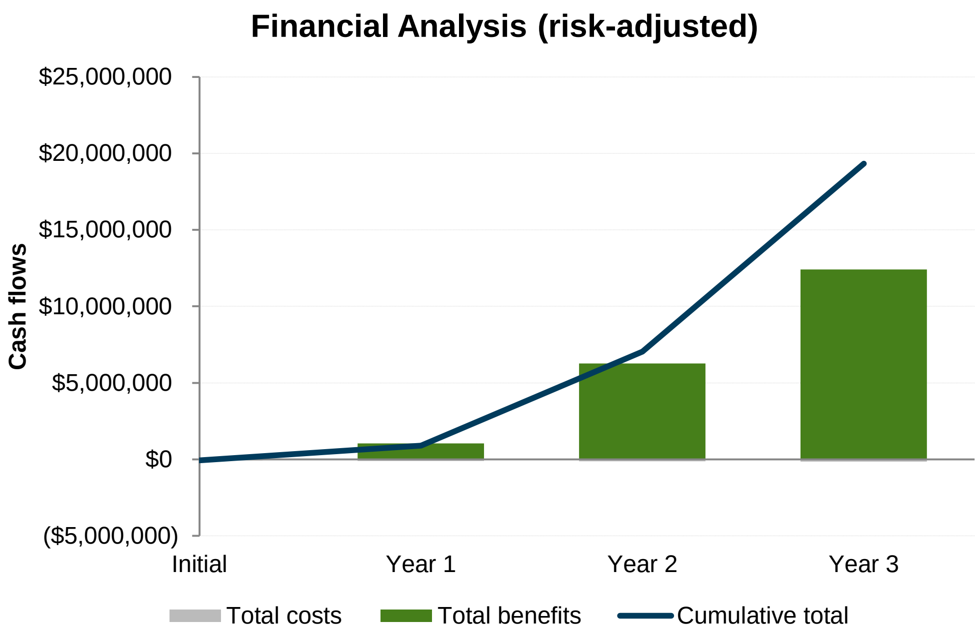
Table 9 shows the values used to adjust for risk and uncertainty in the cost and benefit estimates for the interviewed organization. Readers are urged to apply their own risk ranges based on their own degree of confidence in the cost and benefit estimates.

Financial Summary

The financial results calculated in the Benefits and Costs sections can be used to determine the NPV and payback period for the interviewed publisher's investment in the in-image and in-screen advertising partnership.

Table 10 below shows the risk-adjusted NPV and payback period values. These values are determined by applying the risk-adjustment values from Table 9 in the Risks section to the unadjusted results in each relevant cost and benefit section.

FIGURE 3
Cash Flow Chart (Risk-Adjusted)



Source: Forrester Research, Inc.

TABLE 10
Cash Flow (Risk-Adjusted)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Costs	($53,496)	($99,288)	($119,448)	($139,608)	($411,840)	($347,365)
Benefits	$0	$1,044,000	$6,277,500	$12,420,000	$19,741,500	$15,468,437
Net benefits	**($53,496)**	**$944,712**	**$6,158,052**	**$12,280,392**	**$19,329,660**	**$15,121,073**
Payback period						**0.7 months**

Source: Forrester Research, Inc.

GumGum In-Image And In-Screen Advertising: Overview

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

As the inventor of in-image advertising, GumGum is the digital marketing platform for the visual web. Its technology unlocks the value of connected images and delivers highly visible campaigns and rich insights to marketers. Reaching over 400 million visitors as they view images and content across more than 2,000 premium publishers, GumGum ads consistently achieve an 81% viewability rate and deliver 10 times better engagement than traditional display options, resulting in superior brand lift for marketers and increased revenue for publishers. Powered by its core image recognition technology, GumGum also offers Mantii, a real-time image recognition tool for brands to identify and activate their most important images and engage their top influencers on social media.

With GumGum, leading brands from AdAge's top 100 US advertising spenders list, including Disney, L'Oreal, and Toyota, can target audiences with contextually relevant content through in-image and in-screen ads, including native, video, and programmatic options. GumGum is headquartered in Santa Monica, California, with six additional offices in the US and the UK. Founded in 2007, GumGum is backed by investors including Morgan Stanley, NEA, Upfront Ventures, First Round Capital, and Crosscut Ventures.

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. TEI assists technology vendors in winning, serving, and retaining customers.

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.

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. However, having the ability to capture that benefit has a PV that can be estimated. The flexibility component of TEI captures that value.

RISKS

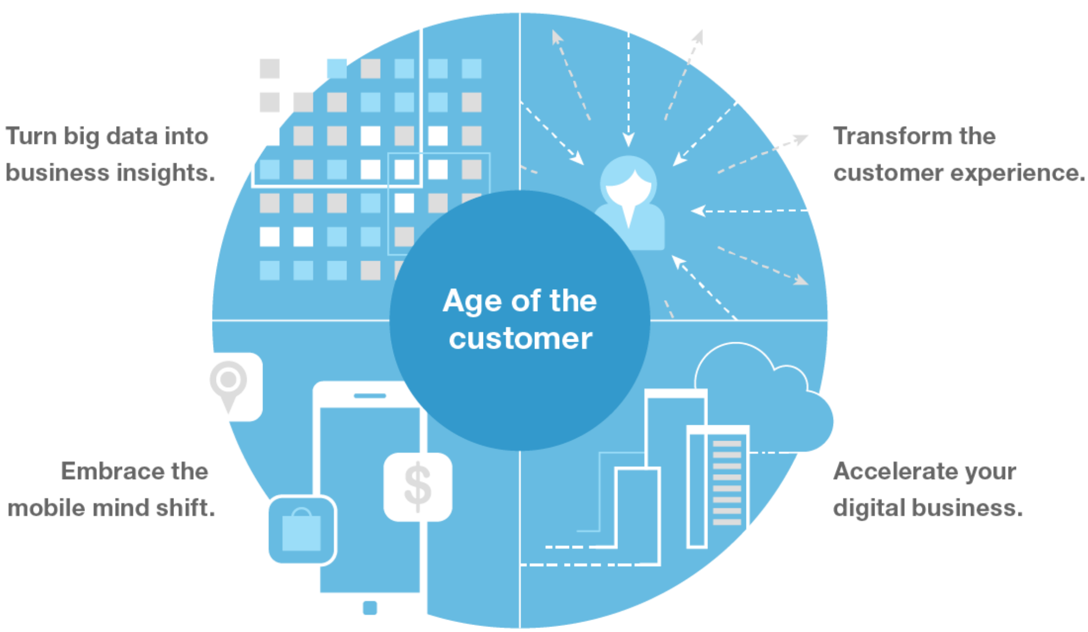
Risks measure the uncertainty of benefit and cost estimates contained within the investment. Uncertainty is measured in two ways: 1) the likelihood that the cost and benefit estimates will meet the original projections and 2) the likelihood that the estimates will be measured and tracked over time. TEI risk factors are based on a probability density function known as "triangular distribution" to the values entered. At a minimum, three values are calculated to estimate the risk factor around each cost and benefit.

Appendix B: Forrester And The Age Of The Customer

Your technology-empowered customers now know more than you do about your products and services, pricing, and reputation. Your competitors can copy or undermine the moves you take to compete. The only way to win, serve, and retain customers is to become customer-obsessed.

A customer-obsessed enterprise focuses its strategy, energy, and budget on processes that enhance knowledge of and engagement with customers and prioritizes these over maintaining traditional competitive barriers.

CMOs and CIOs must work together to create this companywide transformation.



Forrester has a four-part blueprint for strategy in the age of the customer, including the following imperatives to help establish new competitive advantages:

Transform the customer experience to gain sustainable competitive advantage.

Accelerate your digital business with new technology strategies that fuel business growth.

Embrace the mobile mind shift by giving customers what they want, when they want it.

Turn (big) data into business insights through innovative analytics.

Appendix C: Glossary

Discount rate: The interest rate used in cash flow analysis to take into account the time value of money. Companies set their own 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. PV calculations are calculated for each total cost and benefit estimate. NPV calculations are not calculated until 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.

TABLE [EXAMPLE]
Example Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3

Source: Forrester Research, Inc.

Appendix D: Supplemental Material

Related Forrester Research

"The Only Impression Worth Advertisers' Money Is A Viewable Impression," Forrester Research, Inc., September 2, 2015

"Drive Publishers' Revenue With High-Performance Yield Management," Forrester Research, Inc., May 1, 2015

"Savvy Publishers Deploy DMP Insights Across Their Organizations," Forrester Research, Inc., January 26, 2016

"Programmatic Selling Drives Publishers' Revenues," Forrester Research, Inc., October 15, 2014

"'Viewability' Brings Transparency To The Display Ads Market," Forrester Research, Inc., July 11, 2013

Online Resources

More information about viewability metrics is available at www.moat.com.

Appendix E: Endnotes

[1] Forrester risk-adjusts the summary financial metrics to take into account the potential uncertainty of the cost and benefit estimates. For more information, see the section on Risks.

[2] Source: "The Only Impression Worth Advertisers' Money Is A Viewable Impression," Forrester Research, Inc., September 2, 2015.

[3] Source: Moat (http://www.moat.com/).