The Total Economic Impact™ Of Cardlytics Purchase-Driven Marketing
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Executive Summary

Cardlytics commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying its purchase-driven marketing solution within the bank rewards channel. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of the Cardlytics program. The intended audience are those seeking to leverage this newer marketing channel and associated consumer data to ultimately improve online to in-store marketing effectiveness.

Cardlytics utilizes first-party consumer purchase data and an expansive banking network to provide a robust purchase-based targeting system that complements traditional marketing channels. Advertisers are able to dive deeper into consumer purchase insights and use precision targeting to drive consumers digitally to brick-and-mortar stores. Completing the solution is Cardlytics’ online-to-offline measurement, resolving a problem that has long puzzled digital marketers.

To better understand the benefits, costs, and risks associated with engaging Cardlytics, Forrester interviewed several customers with extensive experience using this purchase-driven marketing solution in the bank rewards channel. Prior to Cardlytics, customers had utilized incumbent marketing channels such as print, online, and TV. With consumer shopping habits constantly evolving, it was clear that the marketers would have to shift allocations toward digital mediums. Digital advertising created a new problem — the difficulty to attribute it to in-store sales. With Cardlytics, customers were able to improve targeting of consumers and understand the effectiveness of their marketing spend. Marketing mix was optimized and returns on ad spend improved. Said one digital marketing manager: “The quality of the [Cardlytics’] data has translated into extremely strong targeting. We see their product as a very strong channel and view the partnership as a success.”

CARDLYTICS DRIVES MEASURABLE IN-STORE PURCHASES

Our interviews with four existing customers and subsequent financial analysis found that a composite organization based on these interviewed organizations experienced the risk-adjusted ROI benefits and costs shown in Figure 1.¹

Driving our analysis was a delta in incremental return on advertising spend (IROAS) from 1.5:1 for traditional media versus 4:1 – 6:1 for Cardlytics. A reallocation of media spend to include Cardlytics in the pool with traditional advertising channels resulted in benefits of $13.8 million versus costs of $6 million, for a net present value (NPV) of $7.8 million and ROI of 129% over three years. The benefit and cost difference represents an improvement above and beyond that of the revenue uplift generated solely by traditional marketing channels.

FIGURE 1
Financial Summary Showing Three-Year Risk-Adjusted Results


Source: Forrester Research, Inc.
Benefits. The composite organization experienced the following risk-adjusted benefits that represent those experienced by the interviewed companies:

- Revenue uplift from Cardlytics’ purchase-driven marketing resulted in a nearly $12 million improvement over the original marketing mix. While keeping the marketing budget on its existing growth trajectory of 5% annually, the composite organization was able to drastically improve the marketing returns by gradually transitioning a percentage of TV and print spend to Cardlytics.

- Revenue uplift was created by utilizing advanced data analytics to optimize marketing strategies, independent of bank channel efforts. The quality and granularity of first-party data at the competitor and wallet level enabled the composite organization to form strategic store-level marketing choices with improved clarity. In turn, the uplift over a three-year study amounted to over $1.2 million.

- Cost avoidance of building and maintaining attribution measurement for Cardlytics equated to a savings of $586,927. Attribution models are difficult to create and often necessitate multiple analysts and/or marketing consultants over a long period of time to establish validity. The Cardlytics Viewed Purchase Rate (VPR) attribution metric relies on first-party purchase data and provided an immediate understanding of campaign performance, making incrementality testing a much easier exercise at the composite organization.

Costs. The composite organization experienced the following risk-adjusted costs:

- Cost of initial attribution validation equated to $378,843. As with most new marketing efforts, incremental uplift needs to be proven, often with the help of outside consultants. The costs were primarily front-loaded in the initial year, with smaller portions to revalidate in subsequent years to verify continued performance.

- Cost of Cardlytics bank rewards campaigns, which includes the cost of customer rewards, amounted to $5.6 million. The cost of campaigns includes the cost of offering promotions to customers to draw in customers. The promotional values were variable but averaged less than half the cost of campaign costs paid to Cardlytics.

Disclosures

The reader should be aware of the following:

- The study is commissioned by Cardlytics 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 Cardlytics purchase-driven marketing.

- Cardlytics 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.

- Cardlytics 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 Cardlytics. 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 Cardlytics purchase-driven marketing can have on an organization (see Figure 2). Specifically, we:

› Interviewed Cardlytics marketing, sales, and/or consulting personnel, along with Forrester analysts, to gather data relative to Cardlytics and the marketplace for purchase-driven marketing.

› Interviewed four organizations currently using Cardlytics to obtain data with respect to costs, benefits, and risks.

› Designed a composite organization based on characteristics of the interviewed organizations.

› 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-adjusted the financial model based on issues and concerns the interviewed organizations highlighted in interviews. 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 are detailed in each relevant section.

Forrester employed four fundamental elements of TEI in modeling Cardlytics’ service: benefits, costs, flexibility, and risks.

Given the increasing sophistication that enterprises have regarding ROI analyses related to their marketing programs, 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

| Perform due diligence | Conduct customer interviews | Design composite organization | Construct financial model using TEI framework | Write case study |

Source: Forrester Research, Inc.
Analysis

COMPOSITE ORGANIZATION

For this study, Forrester conducted a total of four interviews with representatives from the following companies, which are Cardlytics customers based in the US:

› A large national pet supplies retailer conducting omnichannel business through their eCommerce site and US-based brick-and-mortar stores.
› A large national chain of hair salons that is using Cardlytics to drive digital traffic to in-store sales.
› A large national omnichannel sporting goods retailer that uses Cardlytics to drive both online and offline purchases.
› A global polished casual dining restaurant chain that leverages Cardlytics to complement its other digital marketing efforts to drive diner traffic.

Based on the interviews, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected. The composite organization that Forrester synthesized from these results represents an organization with the following characteristics:

› A US-based big-box retailer that has a well-known online presence and also hundreds of physical locations.
› This big-box retailer sells traditional hard goods and also subscription goods like that of cellular phone plans and satellite television plans.
› Is in a mature market segment that is slightly lagging behind national GDP growth.
› Its annual revenue is over $2 billion.
› It runs an annual marketing budget of $60 million, of which $40 million is dedicated media buys.
› It has traditionally retained an external advertising firm to aid in marketing decisions due to a lack of strong advertising attribution.

After an extensive RFP and business case process evaluating multiple vendors, the composite organization chose Cardlytics and began deployment:

› Implementation started with the testing of Cardlytics purchase-driven marketing in a random, small sample of national locations, over a period of three months. The results were compared against multiple baseline control samples that were of similar demographics and size, among many other factors, to gauge the true incrementality effect of the new marketing.
› Following metrics that substantiated improved ad spend to return ratio, the Cardlytics campaign was expanded to the majority of the organization’s locales.
› Investment in the Cardlytics program was increased to include analytics data as the organization sought deeper insight into consumer spending habits.

“To be able to track an online marketing campaign with bank data, and then measure the impact for offline – that’s pretty powerful. We never had that aside from email marketing before Cardlytics.”

~ Senior manager of strategic environment, pet supplies retailer
Situation

The composite organization makes a variety of media buys to complete its marketing efforts. With much of its sales attributable from its physical channels, there was a push to ensure media buys of all types (digital and traditional mediums) had a positive effect and limited cannibalization of the brick-and-mortar stores’ revenue stream. With online sales growth outpacing that of the brick-and-mortar outlets, the organization desired to use a marketing mix that would make the channels mutually complementary and in turn grow both market segments.

Existing marketing efforts included:

• Print — freestanding news inserts and targeted mailers.
• Online CPM campaigns — banner and link ads.
• Online video advertising — in-stream, overlay, etc.
• Mobile advertising.
• Television.

With increased competition from online retailers operating at razor-thin margins, the pressure on the marketing team was to produce campaigns and allocate spend in a way that would improve targeting and attribution. As marketing avenues continued to evolve, it became readily evident to the organization that it needed to explore newer channels to adequately meet the changing media consumption and spending habits of consumers.

Primary focus points for the reallocation of marketing spend required the following high-level needs to be met:

› Improve targeting. With a diverse consumer base, the organization required improved targeting to engage consumers beyond demographic, economic, and interest profiles and instead reach in-market individuals exhibiting attractive spend history in related market segments. Moreover, populations are now more discriminate with spending tools with access to online review and price comparison spending tools, making it particularly important for the organization to use precision targeting to maximize the return on ad spend.

› Improve advertising attribution. With so many marketing channels, it became increasingly difficult for the organization to determine what was working and what wasn’t. Attribution was clearly a challenge with more traditional methods of marketing. It was an even more difficult exercise for marketers to tie digital marketing campaigns to in-store sales impact.

› Acquire better quality and substantially more consumer data to improve analytical ability. Having worked with ample third-party data in the past, it was readily evident that the quality and reliability of consumer data was lacking. The organization desired to use first-party consumer data and greatly increase the quality of data to make better decisions on where and to whom to market. Moreover, the consumer data acquired from other data providers just did not have the depth and household coverage

“Where Cardlytics has really helped is showing us purchase behavior — who our customers are shopping with, down to the competitor name level, how often they are buying, and what the basket sizes are at the ZIP code level. We take these insights and make better decisions on how to operate in those markets.”

~ Senior manager of strategic environment, pet supplies retailer
that was necessary to convert into useful insights.

› **Reach consumers where they are receptive.** More and more consumers are shopping online and, at the very least, are strongly guided by online resources for their purchases. The composite organization needed to market to the consumer on online and mobile destinations that are more effective at driving offline consumption.

**Solution**

The composite organization ultimately selected Cardlytics for its ability to provide an online-to-offline marketing solution that was extremely targeted and measureable, helping the organization make immediate evaluations on performance. Other factors such as reach across geographies and depth of data also played a role in choosing the Cardlytics solution. Prior to selecting Cardlytics, the organization investigated increasing digital media spend and other merchant-rewards programs, but none could offer the combinations of advantages found with the Cardlytics platform. The decision was then made to shift some marketing spend from print and TV to Cardlytics purchase-driven marketing.

**Results**

The interviews revealed that:

› **Traditional advertising channels are still generally effective, but newer channels like digital marketing and especially purchase-driven marketing have dramatically higher IROAS.** Many interviewed organizations stated that older advertising formats still brought a positive return on ad spend for the most part. And while the return values varied between different verticals, the general consensus was a downward trend on the effectiveness of TV and print advertising. Digital advertising mediums were hard to gauge in their effectiveness to translate into offline sales, but the aggregated responses indicated a higher return than TV and print. The composite organization represents the results fielded from the interviewed companies — and indicate a significantly improved incremental return on ad spend with Cardlytics.

› **Marketers had more actionable insights going forward with the depth and reliability of first-party data.** First-party data, analyzed and dashboarded by Cardlytics, provided insights for in-store consumption that would otherwise be difficult and costly to aggregate and evaluate. Prior to Cardlytics, the composite organization purchased market data from third-party sources and built its marketing imperatives around information that often lacked the reliability and granularity it now found with Cardlytics.

› **Incrementality is difficult to measure, but made easier with a tested attribution model.** What good would actionable insights be if they are not measureable? With Cardlytics, the composite organization was able to test marketing incrementality and trust the validity of the Cardlytics attribution model. In an equation made of many variables and noise, many of the interviewers said the Cardlytics attribution model reduced the haze for online-to-offline attribution and served as a useful tool to:

  • Further calibrate the accuracy of internally developed attribution models.
  • Create incrementality tests across diverse demographics and geographies.

“We old print (advertising) vehicles were poor at targeting, and we had very little power to direct customers to the stores we wanted. The targeting ability of Cardlytics has been huge for us; we get both of these elements now.”

~ VP of pricing and analytics, national hair salon
The US household reach of the Cardlytics banking network offered incredible reach while remaining targeted. Having ties to more than 1500 banks operating in the United States, the Cardlytics program had reach into over 120 million accounts. Competing advertiser rewards programs had a limited household reach, especially with programs being offered by individual banks (as opposed a diverse network of banks).

“Between the Cardlytics data and our existing modeling, we got a much better sense of the impact of our efforts. At that point, we were able to say, ‘Hey, here are some results that we can point to that say this is working.’”

~ Senior manager of strategic environment, pet supplies retailer
BENEFITS
The composite organization experienced a number of quantified benefits in this case study:

› Revenue uplift from Cardlytics purchase-driven marketing efforts, in an optimized marketing mix.
› Revenue uplift from analytics-driven in-store marketing optimization, independent of purchase-driven marketing efforts.
› Cost reduction from building and maintaining attribution measurement with Cardlytics.

Revenue Uplift From Cardlytics Marketing Efforts, After Marketing Mix Optimization
A key benefit experienced by the composite organization was the revenue uplift as a result of Cardlytics purchase-driven marketing efforts. In reducing spend on print and TV advertising, the organization was able to shift spend to Cardlytics without increasing the overall media buy budget. Following initial incrementality testing involving the use of multiple control groups and establishing the validity of the Cardlytics online-to-offline attribution model, the organization expanded the use of the Cardlytics program nationally and experienced an initial incremental return on advertising spend of $4 for every dollar spent. By its second year, the composite organization had improved its return on advertising with Cardlytics to $6 for every dollar spent. The following drivers made these rates of return possible at the organization:

› Precision targeting capabilities.
  • ZIP-code-level targeting, targeting the most profitable customers, and not necessarily the customers who are closest in proximity or those who are the largest aggregate spenders.
  • Purchase-behavior-based targeting, revealing basket size and spend at competitors to determine which customers truly shop in the advertiser’s specific category
  • Tracking against closely related advertiser categories to draw in similar customer subsets

› Targeting consumers at the point when they are thinking about money and spend — on digital bank statements.
  • Consumers often don’t make their purchases online, diminishing the effect of standard digital ad campaigns. Tying promotions to when consumers are thinking about spending, future and past, to specific advertisers makes for a more solid connection.
  • The targeting is done on mediums that are commonly accessed by active consumers today: the Web, mobile apps, and email.

Following the adoption of the Cardlytics platform, the composite organization increased its average return on ad spend steadily, without completely removing existing advertising channels. Impact risk was minimized with this incremental shift toward advertising with Cardlytics. The initial year of working with Cardlytics resulted in an uplift improvement over the existing advertising mix of nearly $2 million, over $7.4 million in the second year and $9.3 million in the third year.

Interviewed organizations provided a range of incremental return on ad spend ratios, between 3:1 and 8:1. We expect that some of these differences are a result of particular vertical characteristics and the accompanying volume and gross margins of the products/services sold. To compensate, this benefit was risk-adjusted and reduced by 20%. The risk-adjusted total benefit resulting from Cardlytics uplift over the three years was $11,987,986, PV. See the section on Risks for more detail.
<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Aggregate organization marketing media buy spend, annually</td>
<td></td>
<td>$15,000,000</td>
<td>$15,000,000</td>
<td>$15,000,000</td>
<td>$15,000,000</td>
</tr>
<tr>
<td>A2</td>
<td>Media buy spend growth, annually as a percent</td>
<td></td>
<td></td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>A3</td>
<td>Traditional media spend percentage — TV and print</td>
<td></td>
<td>70%</td>
<td>65%</td>
<td>60%</td>
<td>58%</td>
</tr>
<tr>
<td>A4</td>
<td>Digital media spend percentage — videos, banner, and links</td>
<td></td>
<td>30%</td>
<td>30%</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>A5</td>
<td>Cardlytics purchase-driven marketing spend percentage</td>
<td></td>
<td>0%</td>
<td>5%</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>A6</td>
<td>Traditional media spend, in dollars</td>
<td>(A1 \times A3 \times (1 + A2)^n)</td>
<td></td>
<td>$10,500,000</td>
<td>$10,237,500</td>
<td>$9,922,500</td>
</tr>
<tr>
<td>A7</td>
<td>Digital media buy spend — videos, banner, and links, in dollars</td>
<td>(A1 \times A4 \times (1 + A2)^n)</td>
<td></td>
<td>$4,500,000</td>
<td>$4,725,000</td>
<td>$4,961,250</td>
</tr>
<tr>
<td>A8</td>
<td>Cardlytics purchase-driven marketing spend (within the bank channel) in dollars</td>
<td>(A1 \times A5 \times (1 + A2)^n)</td>
<td>$0</td>
<td>$787,500</td>
<td>$1,653,750</td>
<td>$2,083,725</td>
</tr>
<tr>
<td>A9</td>
<td>Incremental revenue uplift per dollar spent on traditional media</td>
<td></td>
<td></td>
<td>$1.50</td>
<td>$1.50</td>
<td>$1.50</td>
</tr>
<tr>
<td>A10</td>
<td>Incremental revenue uplift per dollar spent on digital marketing, non-purchase-driven</td>
<td></td>
<td></td>
<td>$2.80</td>
<td>$2.80</td>
<td>$4.20</td>
</tr>
<tr>
<td>A11</td>
<td>Incremental revenue uplift per dollar spent on purchase-driven marketing</td>
<td></td>
<td></td>
<td>$4.00</td>
<td>$4.00</td>
<td>$6.00</td>
</tr>
<tr>
<td>A11</td>
<td>Revenue uplift from Cardlytics purchase-driven marketing efforts, after marketing mix optimization</td>
<td>((A11 - A9)(A8))</td>
<td>$0</td>
<td>$1,968,750</td>
<td>$7,441,875</td>
<td>$9,376,763</td>
</tr>
<tr>
<td>Atr</td>
<td>Risk adjustment</td>
<td>↓20%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atr</td>
<td>Revenue uplift from Cardlytics purchase-driven marketing efforts, after marketing mix optimization (risk-adjusted)</td>
<td></td>
<td>$0</td>
<td>$1,575,000</td>
<td>$5,953,500</td>
<td>$7,501,410</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.
Revenue Uplift From Analytics-Driven In-Store Marketing Optimization, Independent Of Bank Channel Efforts

Another key area of benefit identified by the organization is the uplift enabled by the data analytics from Cardlytics and its role in helping to create DMA and ZIP-code-level marketing optimizations. The business intelligence gave the organization a clearer picture of individual store performance as gauged against local competitors and ultimately brought store-level marketing customizations on the 4P’s: product mix, promotion amount, pricing levels, and placement of products. Improved outcomes amounted to $1,560,668 over three years with a conservative implementation of this data.

The interviewed organizations showcased a varying degree of usage of the analytics data; some were just not quite ready for the data, or others did not manage marketing at the local level. As a result, we have risk-adjusted and reduced this benefit by 10%. The risk-adjusted total benefit resulting from data-analytics-driven in-store marketing optimization over the three years was $1,270,958, PV. See the section on Risks for more detail.

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>Organizational annual revenue</td>
<td>$500,000,000</td>
<td>$500,000,000</td>
<td>$500,000,000</td>
<td>$500,000,000</td>
<td></td>
</tr>
<tr>
<td>B2</td>
<td>Revenue growth</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B3</td>
<td>Percentage of revenue derived from in-store sales</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B4</td>
<td>Percentage of physical stores using Cardlytics analytics data</td>
<td>6%</td>
<td>10%</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B5</td>
<td>Increase in topline revenue from promotion and pricing optimization, as a percentage</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bt</td>
<td>Revenue uplift from analytics-driven in-store marketing optimization, independent of purchase-driven (alt. bank channel) marketing efforts</td>
<td>$0 \times B1 \times B3 \times B4 \times B5 \times (1+B2) \times year _n</td>
<td>$0</td>
<td>$378,000</td>
<td>$661,500</td>
<td>$694,575</td>
</tr>
<tr>
<td>Btr</td>
<td>Revenue uplift from analytics-driven in-store marketing optimization, independent of bank channel efforts (risk-adjusted)</td>
<td>$0 \times \downarrow 10% \times B1 \times B3 \times B4 \times B5 \times (1+B2) \times year _n</td>
<td>$0</td>
<td>$340,200</td>
<td>$595,350</td>
<td>$625,118</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.
Cost Reduction Of Building And Maintaining Attribution Measurement With Cardlytics VPR

Said a chief brand officer of a national restaurant chain: “Our digital marketing has been extremely targeted, and that’s its biggest benefit. The problem is attribution. There is a big disconnect from the time that the customer clicks on our ads online and actually comes in to dine in our restaurants, but this has always been very difficult in our space.”

Unlike existing digital advertising, the Cardlytics solution provides an attribution metric, VPR, and charges for performance after consumers have made a purchase. Even so, the composite organization took a cautious approach and implemented the Cardlytics program on a national level only after an attribution validation period. Following a number of pilot runs with control groups and incrementality testing, the organization was able to validate the Cardlytics online-to-offline attribution model and reduce effort on an ongoing basis to make marketing decisions. The benefit of reducing external marketing data purchases and reallocation of some internal marketing analysts equated to a total of $586,927 PV over the three-year period.

### TABLE 3
Cost Reduction Of Building And Maintaining Attribution Measurement With Cardlytics

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>External agency consultation and data acquisition</td>
<td></td>
<td>$120,000</td>
<td>$120,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td>Internal analysts — ongoing data analytics, modeling, and optimization</td>
<td></td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>Salary per internal analyst, fully loaded</td>
<td></td>
<td>$84,000</td>
<td>$84,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ct</td>
<td>Cost reduction of building and maintaining attribution measurement with Cardlytics</td>
<td>C1+(C2*C3)</td>
<td>$0</td>
<td>$0</td>
<td>$372,000</td>
<td>$372,000</td>
</tr>
<tr>
<td>Ctr</td>
<td>Cost reduction of building and maintaining attribution measurement with Cardlytics (risk-adjusted)</td>
<td></td>
<td>$0</td>
<td>$0</td>
<td>$372,000</td>
<td>$372,000</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.
Total Benefits

Table 4 shows the total of all benefits across the three 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 more than $13.8 million, with an incremental return on ad spend of 6:1 by the second year.

### TABLE 4
Total Benefits (Risk-Adjusted)

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Benefit Category</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
<th>Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atr</td>
<td>Revenue uplift from Cardlytics purchase-driven marketing/in-bank efforts, after marketing mix optimization</td>
<td>$0</td>
<td>$1,575,000</td>
<td>$5,953,500</td>
<td>$7,501,410</td>
<td>$15,029,910</td>
<td>$11,987,986</td>
</tr>
<tr>
<td>Btr</td>
<td>Revenue uplift from analytics-driven in-store marketing optimization, independent of purchase-driven marketing/in-bank marketing efforts</td>
<td>$0</td>
<td>$340,200</td>
<td>$595,350</td>
<td>$625,118</td>
<td>$1,560,668</td>
<td>$1,270,958</td>
</tr>
<tr>
<td>Ctr</td>
<td>Cost reduction of building and maintaining attribution measurement with Cardlytics</td>
<td>$0</td>
<td>$0</td>
<td>$372,000</td>
<td>$372,000</td>
<td>$744,000</td>
<td>$586,927</td>
</tr>
<tr>
<td></td>
<td><strong>Total benefits (risk-adjusted)</strong></td>
<td><strong>$0</strong></td>
<td><strong>$1,915,200</strong></td>
<td><strong>$6,920,850</strong></td>
<td><strong>$8,498,528</strong></td>
<td><strong>$17,334,578</strong></td>
<td><strong>$13,845,871</strong></td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.
COSTS

The composite organization experienced two categories of costs associated with the Cardlytics solution:

› Cost of attribution measurement validation.

› Cost of Cardlytics campaign, including the cost of customer rewards.

These represent the ongoing internal and external costs experienced by the composite organization for primary Cardlytics campaigns as well as data analytics purchased for overall optimization of marketing strategy.

Cost Of Attribution Measurement Validation

Many interviewed organizations found the Cardlytics attribution model to be of great benefit, but not without initial skepticism toward this newer advertising channel. The composite organization spent increased effort in periods of the campaign to validate Cardlytics-provided attribution, using both external marketing consultants and internal resources in the effort. Following initial testing in small pilot areas with reasonably impactful spend on Cardlytics, the composite organization validated the attribution model against control groups and reduced validation to periodic reassessments. The cost for attribution validation was $240,000 in the initial year and $80,000 for subsequent years.

External marketing assessment fees vary from organization to organization, considering varying complexities in different verticals, what other services may be used from the same vendor, and other discounts. To compensate, this cost was risk-adjusted up by 10%. The risk-adjusted present value cost of attribution validation over the three years was $378,843. See the section on Risks for more detail.

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>External consulting engagement to measure attribution of all cross-channel media buys</td>
<td>$240,000</td>
<td>$80,000</td>
<td>$80,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dt</td>
<td>Cost of attribution measurement validation</td>
<td>$0</td>
<td>$240,000</td>
<td>$80,000</td>
<td>$80,000</td>
<td></td>
</tr>
<tr>
<td>Dtr</td>
<td>Cost of attribution measurement validation (risk-adjusted)</td>
<td>$0</td>
<td>$264,000</td>
<td>$88,000</td>
<td>$88,000</td>
<td></td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.

Cost Of Cardlytics Campaign, Inclusive Of Customer Rewards

The composite organization incurred costs from Cardlytics for the campaign, as well as a small portion of costs for data analytics. As a requirement to run a Cardlytics campaign, the composite organization provided customer...
rewards valued at 10%. With the Cardlytics services, data analytics, and customer rewards, the total cost of the campaign was $1 million in the first year, growing to $2.6 million and $3.3 million in years 2 and 3 as the organization increased its marketing spend with Cardlytics.

Some organizations would prefer to purchase and consume more of the Cardlytics marketing insights, while most potential adopters of Cardlytics would use solely the in-bank channel product, leaving for a variance in potential cost. To compensate, this cost was risk-adjusted up by 10%. The risk-adjusted cost of the overall campaign and customer reward value over the three years was $5,661,344. See the section on Risks for more detail.

### TABLE 6
Cost Of Cardlytics Campaign, Inclusive Of Customer Rewards

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>Campaign costs paid to Cardlytics</td>
<td></td>
<td>$787,500</td>
<td>$1,653,750</td>
<td>$2,083,725</td>
<td></td>
</tr>
<tr>
<td>E2</td>
<td>Customer reward costs</td>
<td>At*10%</td>
<td>$196,875</td>
<td>$744,188</td>
<td>$937,676</td>
<td></td>
</tr>
<tr>
<td>Et</td>
<td>Cost of Cardlytics campaign, including customer reward</td>
<td>E1+E2</td>
<td>$0</td>
<td>$984,375</td>
<td>$2,397,938</td>
<td>$3,021,401</td>
</tr>
<tr>
<td></td>
<td>Risk adjustment</td>
<td>↑10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etr</td>
<td>Cost of Cardlytics campaign and customer reward (risk-adjusted)</td>
<td>$0</td>
<td>$1,082,813</td>
<td>$2,637,731</td>
<td>$3,323,541</td>
<td></td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.

**Total Costs**

Table 7 shows the total of all costs as well as associated present values, discounted at 10%. Over three years, the composite organization expects total costs to total a net present value of a little more than $6 million.

### TABLE 7
Total Costs (Risk-Adjusted)

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Cost Category</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
<th>Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dtr</td>
<td>Cost of attribution measurement validation</td>
<td>$0</td>
<td>($264,000)</td>
<td>($88,000)</td>
<td>($88,000)</td>
<td>($440,000)</td>
<td>($378,843)</td>
</tr>
<tr>
<td>Etr</td>
<td>Cost of Cardlytics campaign and customer reward</td>
<td>$0</td>
<td>($1,082,813)</td>
<td>($2,637,731)</td>
<td>($3,323,541)</td>
<td>($7,044,085)</td>
<td>($5,661,344)</td>
</tr>
<tr>
<td></td>
<td>Total costs (risk-adjusted)</td>
<td>$0</td>
<td>($1,346,813)</td>
<td>($2,725,731)</td>
<td>($3,411,541)</td>
<td>($7,484,085)</td>
<td>($6,040,187)</td>
</tr>
</tbody>
</table>

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 Cardlytics 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).

The composite organization was able to make market-specific tactical changes in many of its stores as stated in the benefit areas previously. Not quantified but certainly important is the ability to leverage the same Cardlytics-provided business intelligence to drive higher strategic initiatives such as: store openings and closures, overall marketing spend levels, and brand building. Readers should note that while some others in the space may use purchase data for marketing, Cardlytics can provide insights across channels and categories, giving visibility into detailed market share. The expectation is that longer-term business value can be built using Cardlytics insights and should not be overlooked.

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

| TABLE 8 |
| Benefit And Cost Risk Adjustments |

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue uplift from Cardlytics purchase-driven marketing efforts, after marketing optimization</td>
<td>↓ 20%</td>
</tr>
<tr>
<td>Revenue uplift from analytics-driven in-store marketing optimization, independent of purchase driven/in-bank efforts</td>
<td>↓ 10%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costs</th>
<th>Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of attribution measurement validation</td>
<td>↑ 10%</td>
</tr>
<tr>
<td>Cost of Cardlytics campaign and customer rewards</td>
<td>↑ 10%</td>
</tr>
</tbody>
</table>

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 identified as part of the analysis:

› Revenue uplift from Cardlytics purchase-driven marketing efforts in the new optimized marketing mix could vary depending on exact vertical and original marketing mix, and hence is risk-reduced by 20%. Our studies suggest that some organizations have seen higher return of ad spend than a 6:1 ratio; we’ve made the reduction in favor of conservatism.

› Revenue uplift from analytics-driven in-store marketing optimization relies heavily on organizations being able to optimize tactically at a store level. For some organizations, pricing, placement, product, and promotion are managed by individual stores and therefore do not fully take advantage of or do not subscribe to the business intelligence that Cardlytics offers. Accordingly, we’ve reduced this benefit category by 10%.

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

› Cost of attribution measurement validation could be much greater for large organizations doing pilot programs in multiple areas, especially with variability on external consulting fees for this type of engagement. We adjusted the cost of validation up by 10%.

› Cost of Cardlytics campaign and merchant promotional costs vary depending on type of product or service being sold. Organizations with more marketing spend may also be able to reduce campaign-related costs, and thus, this cost category has been risk adjusted up by 10%.

Table 8 shows the values used to adjust for risk and uncertainty in the cost and benefit estimates for the composite 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 ROI, NPV, and payback period for the composite organization’s investment in Cardlytics.

Table 9 below shows the risk-adjusted ROI, NPV, and payback period values. These values are determined by applying the risk-adjustment values from Table 8 in the Risk section to the unadjusted results in each relevant cost and benefit section.

![Financial Analysis (risk-adjusted)](source: Forrester Research, Inc.)

**TABLE 9**
Cash Flow (Risk-Adjusted)

<table>
<thead>
<tr>
<th>Summary</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
<th>Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total costs</td>
<td>$0</td>
<td>($1,346,813)</td>
<td>($2,725,731)</td>
<td>($3,411,541)</td>
<td>($7,484,085)</td>
<td>($6,040,187)</td>
</tr>
<tr>
<td>Total benefits</td>
<td>$0</td>
<td>$1,915,200</td>
<td>$6,920,850</td>
<td>$8,498,528</td>
<td>$17,334,578</td>
<td>$13,845,871</td>
</tr>
<tr>
<td>Total</td>
<td>$0</td>
<td>$568,388</td>
<td>$4,195,119</td>
<td>$5,086,986</td>
<td>$9,850,492</td>
<td>$7,805,684</td>
</tr>
</tbody>
</table>

ROI 129%

Payback period (months) Within 6 months

Source: Forrester Research, Inc.
Cardlytics: Overview

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

Cardlytics® is a purchase-based data intelligence platform that makes marketing more relevant and measurable. Their patented technology measures and connects trillions in purchases to millions of consumers. Cardlytics partners with major financial institutions, including Bank of America, Lloyds Banking Group and FIS, to provide Card-Linked Loyalty programs, which deliver savings to customers and revenue to banks, securely and without any personally identifiable information ever leaving the bank.

Cardlytics’ view into consumer spending, and purchase-based targeting and measurement, helps thousands of companies in the US and UK connect advertising directly to in-store sales lift. Cardlytics is headquartered in Atlanta, with offices in London, New York, Chicago, and San Francisco.

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The Power of Purchase Intelligence

With more data than ever before, marketers are still hard pressed to fully understand their customers and the impact of their marketing campaigns. With Cardlytics 1:1 purchase intelligence, gain insight into how your customers spend – both with you and your competitors – to measure and strengthen the effectiveness of your marketing efforts.

Comprehensive View of Consumer Behavior
Our robust view into consumer spend delivers reliable metrics and rich insights.

We Use Actual Purchases
Make decisions using reliable 1st party purchase data – free of proxies, panels, and surveys.

Native Bank Advertising Channel

Reach consumers through our exclusive native online and mobile banking network. By targeting individuals based on where they actually spend, you can deliver compelling rewards that generate strong interest and measurable sales.
Platform Solutions  The power of purchase intelligence, now available beyond our native bank channel.

Use the most likely predictor of future purchases – past purchases – to target custom audiences with highly relevant campaigns across connected media, including display, mobile, TV, and more.

Understand the true sales impact, both in-store and online, of your marketing campaigns. With real revenue results, you can measure and optimize your strategies with the metric that matters most: sales.

Discover where else your customers are spending to make smarter decisions across your business, including marketing, merchandising, store operations, and real estate planning.
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 (shown in the Framework Assumptions section) 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>
<thead>
<tr>
<th>TABLE [EXAMPLE]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Table</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Calculation</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
</table>

Source: Forrester Research, Inc.
Appendix D: Supplemental Material

Related Forrester Research

“Measure The Impact Of Cross-Channel Attribution,” Forrester Research, Inc., June 4, 2014

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.