Increasing marketing campaign profitability with predictive analytics

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Introduction
Most companies rely on some form of direct marketing to acquire new customers and generate additional revenue from existing customers. The challenges, however, are many. In any given market, hundreds of companies compete for the minds and wallets of the same group of consumers. Million-dollar marketing campaigns may fail to generate the response necessary to create revenue or even cover the cost of the campaign. Consumers today have many choices, but when they’re inundated with mass marketing in their mailboxes and e-mail inboxes, and through their telephones, they often choose to simply ignore the messages. And with the growing popularity of personalization and infinite segmentation, consumers are conditioned to expect more targeted offerings. All of this means that the complexity of marketing campaigns—and the difficulty of reaching receptive consumers—will only continue to increase.

To help keep pace with today’s consumers, many companies have implemented campaign management systems that enable them to generate many more campaigns than was previously possible. While these systems increase the number of campaigns that a company can run, they don’t necessarily improve campaign effectiveness. In fact, by generating more campaigns than ever—without improving targeting—campaign management systems can actually contribute to the growing epidemic of consumer dissatisfaction.

Is there a more effective approach to running outbound marketing campaigns? Yes, there is. By moving from large, unfocused campaigns toward highly targeted campaigns that address the needs of individual customers, many companies have achieved substantial improvements in campaign effectiveness and profitability, and significant increases in conversion rates and customer satisfaction.

Focusing on the customer for better results
It may sound simple, but by building a campaign strategy around customer needs, rather than simply around internal priorities, companies achieve the double benefit of increasing revenue and customer satisfaction. To put it another way, rather than choosing the best customers for each campaign, these companies choose the best campaign for each customer. By gaining an in-depth understanding of the needs and preferences of each customer, these companies are able to make very targeted offers that have a high likelihood of acceptance. And they accomplish this without increasing their marketing staff or budget.

Sound impossible? It’s not. In fact, it’s not even very difficult. Companies are able to achieve these remarkable results using PredictiveMarketing, a solution for campaign creation, optimization, and execution that combines predictive analytics technology and business logic to help companies determine what their customers and prospects want, and how to meet their needs in a way that satisfies customers and generates maximum revenue.

PredictiveMarketing accomplishes this by helping companies answer four crucial questions:

- Who should I contact?
- What should I offer?
- When should I make the offer?
- How should I make the offer?
When companies know how to reach the right customer with the right offer at the right time, through the right channel, they have the key to truly successful direct marketing campaigns. And when companies enable marketers to optimize campaigns without depending on statisticians to build models, they improve productivity and efficiency throughout the campaign process.

**Anticipating customer needs with predictive analytics**

Predictive analytics analyzes historical and current customer data to create predictions about future behavior, preferences, and needs. SPSS, a leader in the analytics field for more than 35 years, has incorporated its most advanced predictive analytics into PredictiveMarketing, in a way that enables marketers to maximize the potential of this technology.

PredictiveMarketing gives marketing departments the analytical power that was previously available only to statisticians—without the complexity. By incorporating predictive analytics into their daily campaign processes, and adding their business expertise, marketers are able to understand and reach customers to an unprecedented degree, resulting in more effective campaigns and significant increases in revenue.

**Optimizing campaigns with PredictiveMarketing**

In order to optimize their marketing campaigns, companies need to be able to answer the four critical questions mentioned earlier: who to contact, what to offer, when to make the offer, and how to make the offer. PredictiveMarketing enables marketers to find the answers quickly, and to create and execute campaigns around this simple but effective process.

First, marketing analysts create predictive models to efficiently find appropriate customers and discover the best timing, channel, and message for each customer. Then, marketers add business information such as contact restrictions, budget guidelines, and campaign objectives. Before sending the campaigns, they review the projected size and cost of each campaign, as well as the response and revenue that each campaign is expected to generate. Finally, the marketers execute the approved campaigns. When the campaigns are finished, they use PredictiveMarketing to compare actual results to the projections, and incorporate information that can improve the effectiveness of future campaigns.

This process is accomplished in PredictiveMarketing’s two main modules, the Analytic Center and the Interaction Center (see Figure 1). The Analytic Center is used to create the predictive models that enable companies to anticipate the needs and preferences of individual customers. The Interaction Center is used to create, optimize, and execute campaigns based on the customer needs predicted by models created in the Analytic Center. Together, the Analytic Center and the Interaction Center enable companies to answer the “who, what, when, and how” of successful campaign marketing.

![figure1](image-url)

**Figure 1:** Marketing analysts create predictive models of customer behaviors and preferences in the Analytic Center. The models are then used by marketers to create and optimize campaigns in the Interaction Center. New interaction data is sent back to the Analytic Center to refine and enhance the predictive models.
Building and using predictive models
Predictive analytics enables companies to use their existing customer information to model many different types of future customer behavior. Predictive models make marketing campaigns more effective and profitable by enabling marketers to include only customers that are likely to accept a particular offer or respond to a certain message. Most companies run a variety of campaigns to accomplish specific goals, such as acquisition, cross-selling, and retention. PredictiveMarketing creates a range of models, including:

- **Acquisition models.** Acquisition models predict how likely it is that a prospect will convert, or buy a company’s product or service.
- **Cross-sell models.** Cross-sell models predict the likelihood that an existing customer will buy an additional product or service.
- **Up-sell models.** Up-sell models determine how likely it is that an existing customer will make an additional investment in a product or service, such as upgrading to a more expensive wireless telephone plan.
- **Attrition models.** Attrition models predict the likelihood that a customer will stop buying or using a company’s products or services.

Other types of predictive customer behavior models include:

- **Value models.** Value models can be used to predict several different value measurements, such as a customer’s expected lifetime value, or the expected value generated if the customer buys a specific product.
- **Tone-of-voice models.** Since different messages resonate with different customers, companies use tone-of-voice models to predict which message is best for each customer.
- **Risk models.** Risk models enable companies to predict the likelihood of fraudulent activity or loan defaults. Claim and loan approval departments use these models, which can also be used to exclude high-risk customers from marketing campaigns and to warn branch offices and employees about potential risks.

Companies typically create models for each product and channel. The total number of models used, therefore, depends on the number of products and channels. Companies often create models for new product and service launches as well.

Some companies may already be familiar with predictive analytics and predictive modeling. For companies that have built a predictive analytics foundation, PredictiveMarketing provides the essential campaign optimization capabilities that enable companies to fully leverage their predictive insights. By incorporating results from existing models, and adding new modeling and optimization capabilities, PredictiveMarketing enables companies to use their predictive models and methodologies to greater advantage.

Creating predictive models efficiently
Given the number of models that a company may need, and the importance of these models to the success of marketing campaigns, it’s imperative that companies have a streamlined model-building process. Companies may be surprised to learn that they don’t need a team of statisticians to accomplish this. Using PredictiveMarketing, marketing analysts can quickly create, validate, and assess models, through a unique combination of proven SPSS predictive analytics and an intuitive model-building environment.
What used to take days now takes just a few hours by following four simple steps in PredictiveMarketing:

**Step 1: Set up the analysis**
In the first step (illustrated in Figure 2), the marketing analyst sets the campaign objective, which in this case is to create a cross-sell model. The analyst then selects the product or service to offer, in this case the Europe Investment Fund, and the channel to use, which in this case is branch offices.

**Step 2: Create the model**
Using the choices made in Step 1, PredictiveMarketing creates a predictive model designed to optimize the Europe Investment Fund cross-selling campaign for branch offices. PredictiveMarketing begins by automatically finding the customer segments that are most likely to respond to this campaign.

**Step 3: Assess the business impact**
PredictiveMarketing provides information such as group size and response probability, which gives the marketing analyst an indication of the model’s quality. To understand the business impact of the model, however, the analyst needs more information. PredictiveMarketing uses business parameters, such as the cost of an interaction (both fixed campaign and unit costs), the cost of product delivery, and the profit margin of a product, to assess the profit contribution, as well as individual customer and product profitability. PredictiveMarketing automatically computes the profit margin for each segment.

Figure 2: PredictiveMarketing’s three-step process makes it easy to set the campaign objective, and choose the offer and channel.
PredictiveMarketing provides an overview of each campaign’s projected costs, revenue, and profit, versus its size (see Figure 3). This chart helps companies keep campaign sizes in line with marketing and business objectives.

**Step 4: Apply business knowledge**

After determining the impact of the models, marketers and marketing analysts apply their business knowledge to further refine the models. They can interactively change rules to reflect best practices, incorporate specific knowledge (such as excluding a segment of younger customers that has responded poorly to recent campaigns), and immediately assess each campaign’s impact on response probability and profitability.

**Managing models**

PredictiveMarketing stores all complete and in-progress models in a central repository (see Figure 4) for easy access. Marketing analysts can use PredictiveMarketing’s model management capabilities to:

- Define the status of each model, such as in development, testing, in production, or obsolete
- Define the type of model, such as cross-sell or attrition
- Restrict access to certain models, such as those defined as in development or obsolete
- Apply versions, so that old models can be reused or compared to current versions
- Test models for quality and performance

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**Figure 3:** In this example, the company would achieve a $20,000 profit by targeting the best 4,700 customers. It could target up to 10,000 customers, but make less profit. Targeting more than 10,000 customers could result in a loss of $20,000 or more.

**Figure 4:** PredictiveMarketing stores all models in an easy-access repository.
Creating, optimizing, and executing campaigns

The conventional campaign approach
Most companies take a conventional approach to direct marketing, launching between 10 and 50 large, calendar-driven campaigns each year. The marketing department runs its car insurance campaign in January, for example, its property insurance campaign in March, and its travel insurance campaign in May. This approach primarily focuses on internal company processes, rather than focusing on the needs and preferences of its customers.

As part of the traditional campaign approach, marketers typically select customers using a few basic selections or exclusions. They may exclude customers who already own the product or who are on an opt-out list, or include only groups within certain geographic boundaries. Response to these types of conventional campaigns is generally low—often less than one or two percent.

The PredictiveMarketing approach
PredictiveMarketing’s focus on customer needs and preferences enables marketing departments to develop campaigns that generate high response rates. By selecting the right customer, channel, timing, and offer, PredictiveMarketing gives marketers the information they need to create compelling, profitable campaigns.

Select the right customer
First, the marketer selects an appropriate predictive model from PredictiveMarketing’s repository, and uses it to determine which customers or customer segments to target. The use of predictive models often significantly reduces the number of customers contacted, which results in measurable cost reductions. As a result of this first step alone, PredictiveMarketing typically reduces campaign costs by 25 to 40 percent, while maintaining or even increasing response rates.

Select the right channel
At this stage of the campaign process, marketers determine how best to contact each customer. By using each customer’s preferred channel, companies increase response rates. PredictiveMarketing enables marketing departments to optimize their outbound campaigns across channels, by selecting the best channel for each customer (based on channel preferences and predicted response), balancing expected profits with the cost of the channel, and taking channel constraints into account. If a channel reaches capacity, for example, PredictiveMarketing switches to a backup channel to ensure completion of the campaign.

Select the right time
Consumers today have many choices for meeting their needs. That’s why it’s critical to reach customers in a timely manner when their behavior indicates an unmet need or a risk of defection or attrition. PredictiveMarketing continually scans customer databases for just such events, and triggers specific campaigns when a need or risk is detected. This event-marketing approach can result in as much as double the typical response rate.

Some companies increase the frequency of campaigns to improve the chances of reaching customers at an ideal time. Rather than offering a certain product once each year, they run campaigns for that product every month or week. These campaigns target fewer customers, but the customers they do target have a high likelihood of response. PredictiveMarketing enables marketers to schedule recurring campaigns, and to use predictive models and event triggers to select the appropriate customer targets. PredictiveMarketing scales to run hundreds or even thousands of campaigns each year.
Select the right offer

When companies increase the number of campaigns they run, they risk alienating their customers by overloading them with offers. Conventional campaign management tools are not designed to address the potential overlap. PredictiveMarketing, however, reduces this risk through a comprehensive campaign optimization process. It begins by making the customer—not the campaign—the focus. For each customer, PredictiveMarketing evaluates all of the available campaigns and selects the one that best balances the customer’s likelihood to respond with the profit potential of the campaigns. It also takes into account suppressions and contact restrictions, such as “do not call” or “do not contact more than once every two months.”

This customer focus, combined with the ability to optimize campaigns around restrictions and preferences, has enabled companies to report a profit increase of between 25 and 50 percent.

As companies transition from large, unfocused marketing campaigns to highly targeted, event-based campaigns across multiple channels, their marketing departments go through several stages (see Figure 5). PredictiveMarketing enables companies to run more effective campaigns at each stage of the transition.

<table>
<thead>
<tr>
<th>Stage</th>
<th>1: Right customer</th>
<th>2: Right channel</th>
<th>3: Right time</th>
<th>4: Right offer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective</td>
<td>Select the best customers for each campaign</td>
<td>Select the best channel for each customer</td>
<td>Contact each customer at the right time</td>
<td>Select the best offer for each customer</td>
</tr>
<tr>
<td>Enabling Technology</td>
<td>Predictive analytics</td>
<td>Channel optimization</td>
<td>Event marketing</td>
<td>Campaign optimization</td>
</tr>
<tr>
<td>Strategy</td>
<td>Predict who is likely to respond to a campaign and balance that information against expected revenue</td>
<td>Balance each customer’s channel preference against channel costs and capacity</td>
<td>Move towards small, frequent campaigns and use event triggers to select customers</td>
<td>Balance the customer’s likelihood to respond against the profit potential of each campaign</td>
</tr>
<tr>
<td>Benefit</td>
<td>25 to 40 percent reduction in direct marketing costs</td>
<td>Decreased costs of interaction</td>
<td>Up to double the response to marketing campaigns</td>
<td>25 to 50 percent profit increase</td>
</tr>
</tbody>
</table>
Assessing the impact of campaign decisions

After marketers create campaigns, PredictiveMarketing eliminates the guesswork of determining which ones to run. Marketers view detailed, interactive charts that show the projected revenue impact of each campaign (see Figure 6). This helps marketers know in advance which campaigns are likely to be the most successful at reaching a specific goal, such as retaining at-risk customers or selling a particular product. It also shows which campaigns are not likely to be profitable. By running only the campaigns that have the greatest potential for success, companies achieve positive financial results.

<table>
<thead>
<tr>
<th>Events</th>
<th>Initial</th>
<th>Requested</th>
<th>Current</th>
<th>Ideal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Limit Retention Program(f)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected Profit</td>
<td>Normal</td>
<td>2350</td>
<td>2354</td>
<td></td>
</tr>
<tr>
<td>Conversion</td>
<td>100</td>
<td>114</td>
<td>108</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>2000</td>
<td>857</td>
<td>861</td>
<td></td>
</tr>
<tr>
<td>Investment Fund Purchase Program(f)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected Profit</td>
<td>Normal</td>
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<td>49005</td>
<td></td>
</tr>
<tr>
<td>Conversion</td>
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<td>342</td>
<td>336</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>2000</td>
<td>1785</td>
<td>1785</td>
<td></td>
</tr>
<tr>
<td>Overdraft Engagement Program(f)</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Expected Profit</td>
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<tr>
<td>Conversion</td>
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<td>194</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>2000</td>
<td>859</td>
<td>859</td>
<td></td>
</tr>
<tr>
<td>Stock Account Stimulation Program(f)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected Profit</td>
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<td>5134</td>
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<tr>
<td>Conversion</td>
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<td>92</td>
<td></td>
</tr>
<tr>
<td>Size</td>
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<tr>
<td>Totals</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event Constraints</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected Profit</td>
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<td>66977</td>
<td>79699</td>
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<tr>
<td>Conversion</td>
<td></td>
<td>713</td>
<td>1060</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td></td>
<td>6867</td>
<td>11005</td>
<td></td>
</tr>
<tr>
<td>Display Constraints</td>
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<td>2215</td>
<td></td>
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<tr>
<td>Budget</td>
<td></td>
<td></td>
<td>945</td>
<td></td>
</tr>
</tbody>
</table>

Figure 6: In this example, there are four potential campaigns: Credit Limit, Investment Fund, Overdraft Account, and Stock Account. PredictiveMarketing enables the marketer to define the required conversion and budget constraints for each campaign (see the Requested column). Based on this information, PredictiveMarketing determines the best campaign for each customer (within these constraints) and computes the campaign size and expected conversions for each campaign (see the Current column). For example, the Overdraft Account campaign will be sent to 2,000 customers, of which 194 are expected to respond, exceeding the 100 target conversions specified in the Requested column. Optimizing all four campaigns in this way is expected to result in a $65,977 profit. PredictiveMarketing also calculates the expected profit if budget constraints are loosened (see the Ideal column), which in this case would be $76,699. The marketer can then interactively adjust the campaign constraints to achieve higher overall revenue.

Monitoring and improving campaigns

Monitoring is key to successful campaign optimization. Feedback from campaigns enables the marketing department to measure the actual results of campaigns, as well as adjust in-progress campaigns when the initial results are not as positive as expected.

PredictiveMarketing stores all campaign interaction information, such as the offer made, the campaign used to make the offer, and the models used in the campaign. This enables users to monitor:

- Campaign-level performance, such as actual response versus expected response, so users can see which segments and groups performed well
- Customer performance, such as customer profitability, cross-sell ratios, and attrition risk
- Channel performance, such as expected load on a channel versus planned load, and channel effectiveness for each campaign
- Predictive model performance, in order to assess which models to continue to use and which to revise or refine.

PredictiveMarketing uses data from recent campaigns to further refine its models.

By tracking the performance of models and campaigns, companies create a “feedback loop” of information and refinement that enables them to create even more effective campaigns and achieve progressively better results.
Increasing marketing productivity

PredictiveMarketing not only helps companies increase response and profits, it helps marketing departments become more productive. The productivity enhancements result from two important capabilities. First, the streamlined campaign creation and execution process allows marketers to send more campaigns in less time. Many companies are able to reduce their campaign creation time from a few days to just a few hours. This increased productivity helps companies achieve better results without increasing personnel and resources, and gives marketers more time to develop new campaign concepts. The second productivity enhancement is the marketer’s ability to optimize campaigns without help from statisticians. This eliminates the potential for bottlenecks, which occur when statisticians can’t keep up with the volume of campaigns. PredictiveMarketing puts the tools and capabilities that marketers need literally at their fingertips, so they can achieve significant marketing campaign results in less time.

Adhering to internal and external restrictions

As important as it is to reach interested customers with compelling offers, it’s just as important to respect customers’ contact and channel preferences. PredictiveMarketing enables companies to incorporate critical preference information such as internal opt-out lists and external do-not-call lists. In addition, restrictions on the frequency of contact for specific channels and customers are incorporated into the campaign optimization strategy. PredictiveMarketing’s automated deselection process eliminates the need for manual cross-checking of target lists, resulting in considerable time savings. And it enables companies to focus on receptive customers and preferred channels, increasing the likelihood of positive customer response.

Integrating with existing systems

PredictiveMarketing integrates with all major databases and campaign management systems, including legacy systems, which enables a smooth implementation and helps companies achieve results in less time. While some companies use PredictiveMarketing on its own to support the campaign process, marketing departments that already have campaign management tools are able to use PredictiveMarketing to get better results from the high volume of campaigns they already produce.

For example, Corona Direct, Belgium’s second-largest direct insurance company, uses PredictiveMarketing to optimize its customer acquisition campaigns. Within six months of implementation, PredictiveMarketing enabled Corona Direct to increase its profits enough to cover the cost of the application. Another PredictiveMarketing customer increased conversion rates by 40 percent and decreased mailing costs by 35 percent within the first year of implementation.

Optimizing interactions across all channels

In addition to PredictiveMarketing, SPSS Inc. offers predictive analytic applications that automate and optimize your entire customer interaction process, from marketing to sales and services. These applications integrate across channels and processes to predict and effectively respond to customer needs, preferences, and behaviors. For example, our PredictiveCallCenter application enables you to turn inbound customer service calls into sales opportunities, providing a new revenue-producing channel. By implementing predictive applications in your inbound and outbound call centers, direct mail operations, and Web site, you see immediate improvements in customer response and satisfaction, and increased revenues across these channels. And our applications leverage your existing databases, systems, and processes to deliver results quickly and generate measurable business value.
Conclusion

The challenges faced by marketing departments today are not significantly different than they have been in the past. As always, the main goals are to convert more prospects into customers, and retain and increase revenue from existing customers. What has changed, though, is the complexity of the marketing landscape. Due to the rise of personalization and segmentation, customers expect to receive highly targeted communications. The number of channels through which to reach customers has expanded to include e-mail and the Web. And today's customers often use more than one channel to find information and purchase products and services. In addition, companies must adhere to new legislative restrictions on certain types of customer contact.

Predictive analytics cuts through much of the complexity by improving customer understanding and, in turn, campaign targeting. Companies that use predictive analytics are better able to convert prospects and cross-sell to existing customers. PredictiveMarketing's campaign optimization capabilities leverage predictive analytics to provide an unprecedented level of targeting and coordination across all outbound channels.

This unique campaign optimization approach quickly results in decreased costs and increased revenue, as companies target the right customers at the right time, through the right channel. With typical profit increases of between 25 and 50 percent, PredictiveMarketing customers are able to make a significant, positive financial impact on their companies.

About SPSS Inc.

SPSS Inc. [NASDAQ: SPSS] is the world's leading provider of predictive analytics software and services. The company's predictive analytics technology connects data to effective action by drawing reliable conclusions about current conditions and future events. More than 250,000 commercial, academic, and public sector organizations rely on SPSS technology to help increase revenue, reduce costs, improve processes, and detect and prevent fraud. Founded in 1968, SPSS is headquartered in Chicago, Illinois.