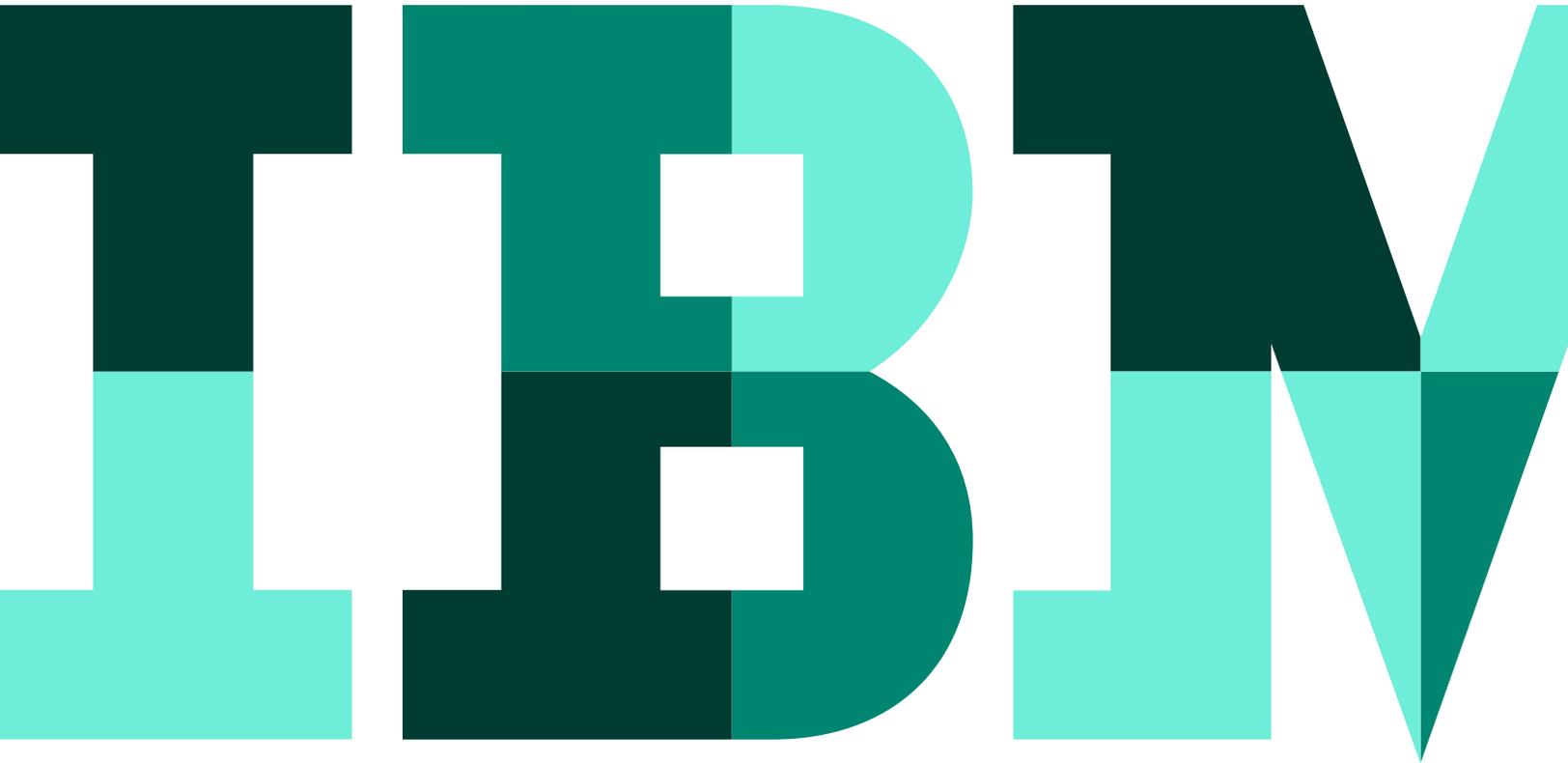


# Uncover possibilities with predictive analytics

*Unlock the value of data you're already collecting by extracting information that opens a window into customer behavior and buying patterns, then deploying that intelligence at the point of impact.*



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*Unlock the value of data you're already collecting by extracting information that opens a window into customer behavior and buying patterns, then deploying that intelligence at the point of impact. IBM SPSS® Modeler can help you uncover possibilities by identifying new revenue opportunities in the patterns and trends your data reveals. These insights can help you convert more prospects into customers—and improve service to retain existing customers.*

## Introduction

The amount of data businesses collect today is staggering, and much of it is stagnating in databases and other systems. Many businesses still rely on a single data point—or even intuition—to make sales and marketing decisions that can lead to new customers and new revenue. Predictive analytics helps you bring the future into focus with data-driven insights.

## Understand prospect behavior

Predictive analytics software such as IBM SPSS® Modeler helps you analyze all available data for the insights you need to direct actionable marketing and sales responses, such as analyzing prospect behavior to determine where individuals land in the buyer's journey, or whether they're ready for a sales conversation. For example, a prospect who has become more engaged on your website in the past few weeks may be signaling purchase intent.

Your first task is to identify exactly what it is you want to predict. Do you want to know if your prospects are likely to respond to a specific marketing campaign? Or predict whether or not they will make a purchase? Or predict what combination of products they are likely to purchase? If you don't have a specific question or problem to solve, your analysis will not be meaningful.

Next, you need to ensure that you have captured data about what your customers and what they have done in the past, such as any demographic data available, their purchase histories, web site or call center behavior, survey responses, to name a few. Once you know what other people have done prior to responding or purchasing, you can build a predictive model to match.

You'll also want to consider what you will do with the predictions. What decisions will be driven by the insights? What actions will you take? For example, you may want to "blast" an offer such as a discount or coupon out to a large group of people who may or may not respond. Or, you may wish to individually tailor offers based on a customer's interaction with your web site or call center, using the information collected during that interaction to launch an appropriate offer in near real time.

**Finally, you'll build a predictive model based on what you found during the analysis of your past campaigns. This model will enable you to score each of your customers according to their likelihood to buy, and will tell you:**

- Which type of customer is most likely to make a future purchase
- When they're likely to buy
- What they're likely to buy
- How they like to be marketed to

By looking at your customers' past buying behavior and seeing which campaigns they responded to, you can create a predictive model that directly targets those customers most likely to buy in the future. You can then spend your marketing dollars on the group that's most likely to give you the biggest return on your marketing investment.

## Spot buying patterns and trends

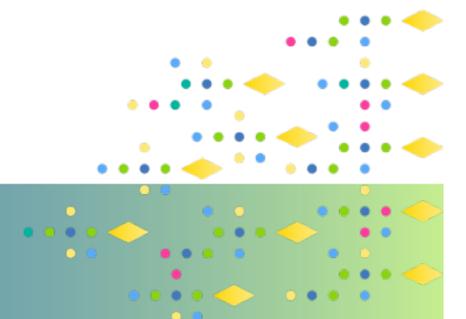
The ability to know what people want before they know it themselves is every marketer's dream. Using predictive analytics, you can benefit from discovering correlations, patterns, and trends in existing data that are not immediately obvious. The data may reveal products, channels, industries, and geographies with buying patterns that are opportunity areas the business has never before considered. Analysis can also identify companies with equipment or technologies complementary to a business's product offering, or seasonal patterns of a company's purchasing habits.

In retail, for example, both online and offline customer behavior can be measured. That data can be compared with external data, such as the time of the year, economic conditions and even the weather, to build up a detailed picture of what customers and prospects are likely to buy, and when.

By **segmenting** your customers, you can more easily identify hidden patterns and trends in data. In addition, approaches such as market basket analysis—looking at combinations of products purchased together to increase total value of sale—can help you focus your marketing programs more effectively.

**Forecasting** is another commonly-used technique that can help determine seasonal purchasing patterns and correlate marketing activities to projected trends. To reduce returned goods and save costs, a European bakery chain was looking for precise sales predictions for each branch based on the day's weather. Using predictive analytics, the company developed precise, accurate sales forecast models based on weather data, historical sales and information about other contributing factors to ensure they had the right combination of goods available for purchase on that particular day.

Marketers can also perform **sequence analysis** to identify a subsequent purchase of a product or products given what a customer has previously bought. For instance, buying an extended warranty is more likely to follow the purchase of an automobile. Sequence rules, however, are not always that obvious and sequence analysis helps you extract such rules no matter how hidden they may be in your data. You can also use sequence analysis to predict the web pages people will visit next, or other actions.



## Nurture and progress leads

Understanding where in the purchasing cycle a prospect is at any given time can not only help your marketing and sales teams nurture those leads, but can also enable them to determine which materials and tactics are most likely to convert them into customers.



**Your data contains the insights you need to move your prospects along your sales funnel and predictive analytics can help you leverage the data to tell you:**

- Who clicked on one or more links contained in a lead nurturing email message
- Who clicked on a link within an email and completed a desired action
- How long it takes for a lead to become a customer
- How much it costs to acquire a new customer

**Segmentation** techniques are critical to segment your customer and prospect lists by stage of the buying cycle, role, persona or product.

Predictive **lead scoring** offers a data-driven method for determining the likelihood that your customers and prospects will take a particular action and makes it easy for sales to take action on the highest-scoring leads. You can feed your data into a predictive model and let the algorithms determine how the lead should be scored, then progress the lead to the next step in the marketing or sales process.

## Improve customer retention and loyalty

It can cost up to seven times more to acquire new customers than to keep your existing ones, so you need to make every effort to reduce or eliminate customer attrition. If your data exposes customers at risk of ending the relationship, you can take action quickly, offering incentives for the customer to stay.

In these scenarios, you'll typically have lots of information about your customer – what they've purchased, or any contracts or subscriptions they may have with your organization. You'll use this knowledge to **create a profile** of customers who have left, and **build a model** to help identify others at risk of leaving. Then, when a customer contacts your call center the model can be deployed in real time to determine if they are an attrition risk. This enables the call center rep to make a retention offer, such as a discount or free service, which can ultimately prevent the customer from defecting to a competing company.

XO Communications, a telecommunications provider, used this approach to detect the early warning signs of customer churn. These insights are enabling the company to take proactive steps to head off defections, achieving a 47 percent reduction in churn and US\$15 million in "saved" revenue.

## IBM SPSS Modeler: Your toolkit for more effective marketing

You have a wealth of customer information stored across multiple enterprise systems: marketing, sales, finance, technical support, and customer relationship management (CRM). SPSS Modeler enables you to pull all of this data together to create a complete profile for analysis. The software takes advantage of all the data you have available regardless of its format—spreadsheets, databases, text, web, transactional, geospatial—and extracts value from it by discovering untapped insights about your workforce.

Typically, much of this data will not be ready for analysis, and will need to be prepared and cleaned before you can work with it. SPSS Modeler provides automatic data preparation to speed the process, so that you can spend more time on analysis and communicating results to your key marketing decision-makers and stakeholders.

SPSS Modeler delivers a range of data analysis techniques and predictive models that enable organizations to better understand customers and prospects and conduct more effective, profitable marketing campaigns. Here are a few of the techniques that are most valuable to marketers:

- **Classification algorithms:** This data mining function assigns your customers and prospects to target categories or classes. The goal of classification is to accurately predict the target class for each case in the data. For example, a classification

model could be used to identify customers or prospects with a low, medium or high probability of making a purchase.

- **Segmentation algorithms:** These techniques group people or detect unusual patterns in your customers or prospects. Marketers frequently use segmentation algorithms to divide a broad target market into subsets of people that have or appear to have common needs, interests, and priorities, and then design and implement strategies to target them.
- **Association algorithms:** These techniques look for relationships between fields—for example, a certain percentage of customers who have purchased both product "A" and product "B" also have purchased product "C." Using this insight, you can make more effective up-sell and cross-sell recommendations to customers at the time of purchase.
- **Time-series modeler:** This technique creates models for time series and produces forecasts. It includes an Expert Modeler that automatically determines the best model for each of your time series.

SPSS Modeler includes the most popular types of classification, segmentation and association models, in addition to many advanced analytics techniques for solving just about any business challenge.

Using SPSS Modeler software, you can import and analyze data from a broad range of sources by using APIs to integrate with other data systems. SPSS Modeler uses a graphical approach that requires no programming, so it is designed for use by a wide variety of professionals, whether or not they are trained programmers or analysts. You don't even need to know which technique to choose; the SPSS software will suggest



options that are applicable to your project and help you to choose the best approach.

## Try IBM SPSS Modeler for better results today

Now that you have a clearer understanding of the many uses for predictive analysis to uncover possibilities in sales and marketing, you are ready to try IBM SPSS Modeler.

[Download our 30-day trial](#) to discover how you can transform your data into insights that can make your organization more profitable and competitive.



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Somers, NY 10589  
U.S.A.

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