Making the most of survey research data

How analytics can help determine what customers really want

Virtually all survey research begins with a question. *When do you plan to make a purchase? How much are you willing to pay? What do you need to do your job better? Why is this important?* In fact, not much has changed about the types of questions that survey researchers have been asking for the better part of a century.

Just about everything else has changed, however. Today's survey researchers can complete simple studies in less than a day. And the complex ones can go from questionnaire development to final analysis of the results in a week. Easy-to-use online tools make it possible for just about anyone to design, conduct and complete a survey with just a few clicks.

Survey research has grown to involve more than simply asking people questions. It's become an increasingly important and sophisticated tool for decision makers who need to gain insights into potential problems and opportunities. These

days, however, even the fastest—and most sophisticated—survey research can miss important input. But by combining traditional survey research results with predictive analytics and text analytics, it's possible to develop models that can help predict behavior. And that can help identify what drives the target audience to take action.

A question of insight

The words people use to answer a question can tell you a lot more about what they think and feel than a simple "yes," "no" or multiple-choice response. Open-ended questions allow surveys to probe for richer, more nuanced responses that offer deeper insights. But categorizing survey text responses can be time-consuming, tedious and expensive work. Not surprisingly, it's often a limiting factor in determining how much value you're able to get from those responses.

How predictive analytics works

While many standard reporting and analytics applications—including spreadsheets—can be useful for some tasks, most are designed to focus on the past, describing what has happened and delivering a retrospective analysis. They're helpful for identifying historical trends, but won't, by themselves, help predict which customers are most likely to respond to specific offers or which marketing campaigns will deliver the greatest return.

Unlike in the past, when survey research focused mainly on numerical and categorical data, the emphasis today has shifted considerably toward understanding what customers are actually saying about organizations, brands and products.

Predictive analytics uncovers patterns, trends and relationships hidden within all types of data—including unstructured text—and then uses that input to predict future outcomes and help you make smarter decisions. Advanced algorithms analyze

relevant events, terms and phrases (including acronyms, emoticons and slang) in the right context, process historical data and create models that can show you how your decisions are likely to impact current or future cases.

Although predictive analytics is rooted in statistical techniques and mathematical equations, it doesn't end there. The process combines data-driven insights with human experience, intuition and situational understanding. In other words, predictive analytics goes beyond computational science by applying human insights to the data, putting it all into an organizational context. This allows decision makers to develop a plan of action that's based not only on knowing what's happened in the past, but also on understanding what's likely to happen in the future. It's a "closed loop" solution that continually incorporates valuable feedback into the decision-making process, using the outcome of today's decisions to guide tomorrow's.

Of course surveys aren't the only way to learn how customers, constituents and employees think and feel. Today they can share their thoughts across multiple platforms—from email and online comments to social media, generating massive quantities of data. Meanwhile, decision makers across virtually every discipline have discovered that the data their organizations collect can offer unique insights into just about every aspect of everything they do. The questions they ask no longer focus on how to collect important data. Instead, they now look for technologies to help interpret that data and put it to use.

Predictive analytics offers organizations—both public and private—an opportunity to learn more about what people think about them, and to combine that new knowledge with what they learn from survey research, to help them predict what will happen next. With those kinds of insights, they can develop new positioning and messaging, identify new audience segments and define new targeting strategies.

Deciding what you need to decide

Predictive analytics solutions typically comprise two basic elements. The first part involves identifying and articulating a specific type of decision that could yield stronger results if the decision-making process were driven by data. In other words, "If we could make better decisions about [a specific task], we could deliver greater value by [taking specific action]." For example:

- If we could reliably predict which types of customers were most likely to switch brands in the coming year, we could intervene with offers making it more attractive to extend their loyalty.

- If we knew how likely it was that any given customer (or set of customers) would respond to a particular type of campaign, we could reduce the size and cost of that campaign by targeting only those customers most likely to respond, while avoiding "offer fatigue" among the customers who would be least likely to respond.
- If we could accurately pinpoint those clients who are in a position to "recruit" additional clients, we could create an incentive to encourage them to do so.

The second element in developing predictive analytics solutions involves the analytical process that produces the desired results. The analytic process usually includes three basic steps:

- Align your data to create a holistic view of each respondent or respondent group, taking into account descriptive data, behavioral data, interaction data and attitudinal data.
- Anticipate outcomes in current or future situations by using advanced algorithms to analyze the data and create predictive models.
- Act on the results of the analysis, by determining which possible actions are the right ones to take and then integrating those actions into existing plans and systems.

It's a process that starts with data and then employs advanced analysis to help achieve improved results. In fact, the process is actually a cycle designed to produce continuous improvement. New data captured from further surveys or during customer interactions, for example, enhances the insights offered by the analysis. And that allows for more accurate predictions, which can drive better decisions. As the cycle continues, you're likely to see a greater proportion of positive outcomes and, ultimately, higher returns.

Trade show and exhibit organizer gets feedback 80 percent sooner

A European-based organizer of trade and consumer exhibitions in 32 countries offers event management, advertising services and conferences for businesses. Assembling more than 90,000 suppliers and four million buyers around the world to its trade shows, the company has been staging trade and consumer exhibitions for some 50 years. But it was having difficulty both understanding its customers' expectations and providing the top-notch customer service during and after trade shows.

To measure customer satisfaction and expectations—so it can adjust services and anticipate trends—the company conducts 40 marketing studies every year to capture exhibitor and visitor feedback before, during and after the events.

Looking to make these studies as accurate as possible, the company implemented IBM® SPSS® Modeler Server software to collect and analyze large volumes of data from quantitative and qualitative marketing surveys. In addition, it implemented IBM SPSS Text Analytics for Surveys software to analyze comments from questionnaires, blogs and social media to produce better predictive analysis.

The solution provided the company with an annual barometer of customer profiles—including geography, age and profession—for each trade show. It also produces detailed analyses on the evolution of performance indicators. What's more, it delivered available reporting in less than one week after the end of a trade show, which translates into an 80 percent increase in report productivity.

What's more, the company can now process unstructured information—including 1,000 pages of comments per online survey. Within a few days, it can access a synthesis of the survey results in an easily readable format, with graphics and custom cross-tabulations to assist in the decision making process, allowing the company transform customer responses into action plans.

Four keys to unlocking success with predictive analytics

How can you take advantage of predictive analytics to gain deeper insights from your survey research projects? There are four elements that form the foundation for survey research success with predictive analytics.

Gather more detailed data by including open-ended questions in your surveys. Text analytics allows you to extract key concepts automatically from responses to open-ended questions, so you can create and refine categories and categorize responses. Once you're satisfied with your results, you can quickly summarize your findings and share them with others or export them for analysis and graphing.

Gain a broader point of view by collecting social media posts about your specific survey research topic. Combining text analytics and predictive analytics to analyze relevant social media content can provide you with a more comprehensive understanding of attitudes and opinions and allow you to offer more targeted recommendations about what next steps should be.

Predict what people want by taking advantage of predictive analytics software to analyze consolidated information—and help anticipate what your survey respondents expect and what they're likely to do next. For example, predictive analytics can determine how likely it is for an individual customer or categories of customers to respond to a specific marketing campaign. Analytics can also predict what type of actions you can take build long-term, profitable relationships with specific customer types. In addition, you can deploy decision optimization programs to help determine how to most effectively use the insights offered by analytics, such as identifying the best types of campaign messaging or pricing "sweet spots."

Optimize future predictions by building on the information you gather and the insights you gain by analyzing the results of each new marketing campaign or outreach program. Each customer or constituent contact offers you a new opportunity to enhance your understanding of their responses by incorporating more data sources into the analytic process and refining existing sources. And that means you can isolate key performance predictors to help guide future efforts—by understanding why certain tactics worked and others didn't. So you can lower your costs while improving efficiency and results.

The successful implementation of predictive analytics for survey research is really an iterative process. And incremental improvements in that process occur with the completion of each survey and each marketing campaign. As you collect more data—and more kinds of data—you continually deepen your understanding of your customers and prospects and can better predict campaign outcomes.

Why IBM?

IBM offers a comprehensive suite of predictive analytics software to support your survey research program. This software supports businesses, agencies and organizations, helping them anticipate, understand and accommodate customer and constituent attitudes, needs and behaviors.

IBM SPSS Modeler software is one example. This predictive analytics platform employs an easy-to- use interface to help bring predictive intelligence to organizational decisions. IBM SPSS Modeler software provides a range of advanced algorithms and techniques, including text analytics, entity analytics and decision management and optimization analytics, to help you determine which actions could potentially increase your opportunities for success.

IBM predictive analytics solutions can help streamline the analytical process, automatically refreshing predictions to sharpen their accuracy, boost response rate, and manage customer relationships and strategies. For example, IBM SPSS Text Analytics for Surveys allows virtually all types of organizations to use text analytics to uncover insights from such sources as open-ended survey responses, social media, blogs and other types of unstructured text. It lets you quantify text responses for analysis along with other survey data and categorize the text input—using either predefined categories or ones you create yourself. And once you've identified the sentiments found in the text, you can take advantage of IBM SPSS Modeler to predict customer behavior.

Most important, organizations can incorporate predictive analytics into their everyday business processes, typically without the need for outside analytics help.

IBM predictive analytics applications can help organizations to:

- Gather customer data sources, structured and unstructured, from wherever they are stored in the system in preparation for predictive analysis
- Analyze information to gauge customer sentiment
- Quickly build and deploy predictive models that increase the success of marketing efforts
- Deliver predictive intelligence to decision makers, front-line systems and stakeholders across the organization
- Integrate predictive insights with business intelligence for a forward-looking view of the organization's marketing strategy

In a competitive business environment, companies need more efficient, effective sales and marketing capabilities. Predictive analytics can help, providing a means by which companies can understand, anticipate and accommodate customer needs in order to increase the success of their marketing efforts. Using IBM predictive analysis software, businesses can build stronger customer and supplier relationships, increase sales and reduce marketing costs.

For more information

To learn more about how IBM predictive analytics solutions can assist your business, agency or institution make the most of your survey research projects, please contact your IBM representative or IBM Business Partner, or visit the following website:

For higher education organization
ibm.biz/SPSS-SurveyResearch