

IBM Customer Experience Suite and Predictive Analytics



Introduction to the IBM Customer Experience Suite

In order to help customers meet their exceptional web experience goals in the most efficient and flexible manner possible, IBM has recently released a new offering that is designed to help organizations create highly engaging, personalized, and differentiated web experiences. This new offering is called IBM® Customer Experience Suite

With the IBM Customer Experience Suite, organizations can:

- Create highly personalized customer interactions by analyzing and then adapting to the preferences, behaviors, location, products owned, device, and sentiments of each visitor.
- Support conversations with and between customers through online communities.
- Empower business owners to manage the creation and delivery of content, rich media, and campaigns.
- Deliver rich and engaging experiences without sacrificing flexibility, scalability, or security
- Compose seamless Web experiences by connecting into the necessary back-end applications, commerce solutions, social media sites, and cloud-based services.
- Offer consistent experiences across multiple online channels.

Predictive Analytics Solutions

Predictive analytics solutions, such as IBM SPSS, provide the ability to capture customer input across multiple-touch-points, as well as discover patterns and trends within vast amounts of customer data. SPSS can be used today to optimize marketing efforts, increase customer loyalty, and reduce customer churn. Customers today can leverage SPSS's ability to analyze sentiment on the web, and then use that information to make necessary changes to the online experience.

As the IBM Customer Experience Suite evolves, solutions will provide even tighter integration between the web experience line of products and SPSS, resulting in pre-integrations that make it quick and easy to feed the real-time decisions, recommendations, and customer insights coming from SPSS into the Customer Experience Suite's personalization capabilities.

Uncovering Customer Needs

Identifying the needs of individuals requires a comprehensive understanding of multiple types of data. The most traditional and easily obtained types of data are Descriptive and Behavioral. Descriptive data reveal who the customer is and include general attributes and demographic data such as age, marital status and family makeup, and socioeconomic indicators. Behavioral data give insight into what an individual has done as a consumer and refers to transactional activities, such as purchases, claims submitted, types of policies held, returned products, or credit and payment history.

Two additional forms of data will provide significantly greater insight into an individual's motives: Interaction and Attitudinal. Attitudinal data comprise an individual's opinions, preferences, needs and desires (both articulated and unarticulated), and his or her general positions on a variety of topics ranging from satisfaction with a product or service to motivations behind a particular purchase. Interaction data represent the other key type, and is often a rich source of Attitudinal data when the latter cannot be collected directly.

As more organizations and customers, and people continue to interact with each other, there continues to be an explosion in the amount of unstructured data generated, making Interaction data a very important source. Interactions can occur through a

multitude of channels, including discussion boards, call center case notes, telephone conversations, e-mails, blogs and social media like Twitter. Because these data are typically in a more candid form (vs. a formal survey, for example), they can reflect more authentically an individual's underlying or unarticulated beliefs and experiences and, if mined, can reveal a rich source of Attitudinal information.

Consider this example: A woman receives an email campaign with a coupon promoting certain products available on a consumer website. These could also be just recommendations for content or products she might be interested in. Since the website may have her as a registered user or has web analytic solution implemented, the organization may be able to identify her as a regular customer (demographic data) and track her purchase history (behavioral data). Combining these two types of data, the consumer website's marketing department may have sent an email coupon based on past historical behavior, however, the consumer website was not aware of why she purchased those particular products or why she even shopped on that website (attitudinal data), hence the coupon offer was based solely on static information – purchase history – and if her preferences/desires for certain products have changed, the offer becomes instantly obsolete.

Without proper solutions in place, Identifying needs is difficult because each customer has his or her own unique hierarchy of needs, comprising articulated and unarticulated, conscious and unconscious needs. Therefore, driving customer interactions in aggregate, or based on a segment, will likely result in a large number of irrelevant interactions.

Although text is difficult and time-consuming to analyze, text responses complement other data, providing more varied and detailed information about what respondents or visitors think,

feel, and do. A key advantage of SPSS is that it gives you the ability to analyze respondents' attitudes and opinions. As a result, you gain a clearer understanding of what people like or don't like—and why. When you understand what people think and feel in their own words, you can draw more reliable conclusions about their future behavior and use that predictive insight to meet their needs more successfully.

SPSS, Predictive Analytics: Right Interaction, Right Customer, Right Time

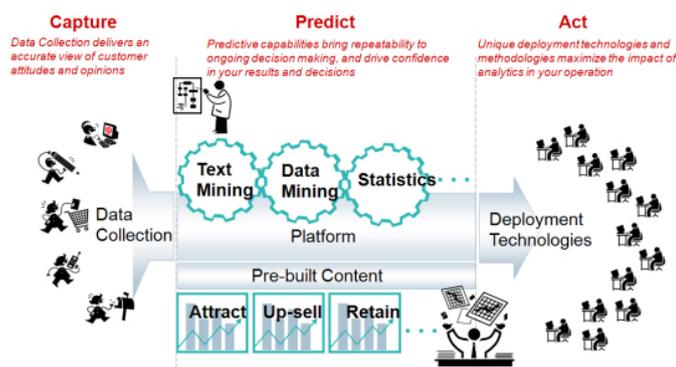
The key to driving the right interaction at the individual level at the right time is to understand the customer need at various points in time and to do so at an individual level. Predictive Analytics from SPSS, makes it possible to leverage the distinct multi-channel nature of any organization —both the wealth of data available and the numerous points of interaction—to gain new insights into customer behavior and preferences.

With SPSS predictive analytics, organizations are:

- Successfully acquiring new customers and retaining old ones by leveraging precise and timely targeted information that delivers compelling offers to prospects and keeps costs low
- Acquiring the right customers cost-effectively, growing these relationships through real-time interactions, and detecting and preventing fraudulent activity
- Minimizing customer acquisition costs by predicting which marketing programs will generate the highest responses—before investing limited marketing budgets in the wrong campaigns or inaccurate targets
- Pursuing aggressive customer growth strategies through cross-selling and up-selling by capitalizing on all customer touch points
- Uncovering complex insurance purchasing behavior and identify events that reveal new policyholder needs

- Achieving targeted customer service levels while minimizing ordering costs and inventory holding costs
- Conducting both multimodal and multilingual research, and analyze collected data quickly and efficiently
- Learning about their customers, (call center notes and transcripts, e-mails, online surveys, blogs, wikis, ratings) for opinions and suggestions
- Generating advanced insights into the attitudes and behavior of customers and prospects by planning effective marketing programs and campaigns

Figure 1: Capture, Predict, and Act with SPSS



IBM Advantage: SPSS and IBM Customer Experience Suite

The IBM Customer Experience Suite provides rich technology that allows organizations to take advantage of the different channels to deliver visitors and customers a rich and personalized experience. By combining IBM Customer Experience Suite with Predictive Analytics, organizations can also adjust to online behavior and attitudinal patterns by mining the ongoing interactions with customers. By understanding current web interaction needs, the right interaction can be crafted and delivered at the right time.

Additionally, the combined solution uncovers the true individual needs and preferences based on complete, comprehensive data, and then predict individual behaviors before they happen. Ultimately, this means organizations can actively manage both the content of the interaction as well as the timing of it, ensuring that it is relevant and meaningful to the customer – and, in turn, profitable for the organization.

Let's understand how an organization could potentially combine SPSS and IBM Customer Experience Suite to capture people's attitudes and opinions, predict outcomes of future customer interactions, and then acts on these insights by embedding analytics to deliver an Exceptional Web Experience.

Capture, Predict, Act

Organizations, in the past few years, have recognized the importance of having a web property. Compared to the year 2000¹, there has been a 230% increase in online activities pertaining to researching products and services. Similarly, there has been a 277% increase in consumers purchasing products online. Not to mention a 500% increase in use of online banking. Social software, a non-existing market in the year 2000, is being used by almost 50% of internet users and 1/3rd of the users read user generated content such as Blogs and Wikis. As you can see, the power of an engaging web property is no more looked upon as a mere online presence for providing some basic data or information. Although there is rise in publishing audio and video on web properties, much of the information that is available on a website these days is still text based.

Capture

IBM Customer Experience Suite makes quality data available in a proper format that organizations can use with SPSS Analytics Too, making it easy for organizations to gain direct access to a well-maintained and easily referenced content. With IBM Customer Experience Suite, organizations have in their hand, an easy way to deliver rich web experiences simpler, faster, and in a cost effective manner. With out-of-the-box capabilities such Website Templates, Content Templates, Microsites, Blogs, Wikis, Tags, and Ratings, organizations can unleash the power of communities. With these features, organizations can:

- Improve content relevancy by enabling users to naturally describe products and services with tags for micro-targeted up-sell and cross-sell offerings
- Increase brand visibility by harnessing marketing with user generated ratings and comments
- Boost credibility of product and service benefits by leveraging user reviews
- Maximize content effectiveness by combining personalization, tags and ratings
- Ensure compliance in heavily regulated environments by using workflow to manage ratings and comments
- **And most importantly**, all the content that is generated is already available in a structured format for SPSS Text Analytics to use. Additionally, leveraging the flexibility of IBM Customer Experience Suite, organizations can easily integrate and associate web content with other related information stored in back-end content stores to collect that much more rich information and text.

Predict

Once the data has been collected, SPSS's predictive capabilities bring repeatability to ongoing decision making, and drive confidence in your results and decisions.

Statistical Analysis from SPSS can be used to drive confidence in your results and decisions. Additionally, it also provides advanced statistics and data management for analysts researching business problems, providing insight into a sample of data with capabilities for prediction and forecasting based on this data.

SPSS Modeling can bring repeatability to ongoing decision making. Using Data Mining, organizations can help their businesses uncover key insights, patterns, and trends in data, then use this insight to optimize business decisions. Additionally, Text Mining reveals conceptual meaning in varying bodies of text, making qualitative data (survey responses, documents, emails, call center notes, web pages etc.) more quantifiable.

Act

After the data has been collected and analyzed using SPSS's modeling tools, SPSS provides deployment capabilities that can maximize the impact of analytics in your operation, be it web property or even your offline properties. With a collection of tools for Decision Management, organizations automate high-volume decisions across the enterprise. Additionally, using SPSS Collaboration and Deployment Services, customers have the ability to deliver predictive analytical results and recommendations to online properties (Portals and Websites).

SPSS Decision Management for Customer Interactions lets business users adjust priorities and refine offers and processes in real time, without relying on other departments. This means they can adapt guidance immediately to market pressures or operational needs, and see these changes implemented as quickly as the next interaction. They can also capture the results of their deployed models and campaigns, creating a closed loop of information that enables them to refine future offers and achieve progressively better results.

Using SPSS with IBM Customer Experience Suite

The Personalization Engine in the IBM Customer Experience Suites can be used to present page and content based on rules. This included rule engine can utilize information from just about any source including profiles and predictions generated in real time by SPSS. This means that you'll have unprecedented flexibility in determining what is shown to your site's visitors

In addition to providing Real Time Web Analytic solutions to organizations, IBM Customer Experience Suite can also personalize the content delivery based on the user interaction. Using SPSS's Collaboration and Deployment Services, organizations can leverage the recommendations from the business friendly statistical models and recommendations from SPSS to websites powered by the IBM Customer Experience Suite. Since numerous customer contact points exist at the "front line" operations (such as a call center, branch office, retail store, Web site, point-of-purchase terminal or ATM), Decision Management from SPSS enables front-line business managers to manipulate business rules and models in order to obtain the most profitable outcomes from promotional campaigns and other customer contacts.

Summary

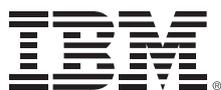
Combining the power of Predictive Analysis from SPSS, and Exceptional Web Experience from IBM Customer Experience Suite, organizations can:

Augment internally captured data with online sentiment and opinion data, and use this combination to deliver an accurate view of customer attitudes and opinions

Use Statistical Modeling to research business problems, provide insight into information with capabilities for prediction, uncover key insights, patterns, and trends in data, and use the collective bodies of data to gain insights to optimize business decisions

Maximize the impact of analytics in your operation by leveraging a collection of tools intended to help organizations automate high-volume decisions across the enterprise

¹ Pew Internet & American Life Project Tracking surveys (March 2000 – September 2009)



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