

Making personalized e-relationships a reality

Data mining makes the difference™



Today, there is more interest, more discussion and more hype than ever about “e.” The Web, e-commerce and e-business undoubtedly hold an important key to every organization’s future success. Unfortunately however, it’s not as easy as simply adding an “e” in front of your current business strategy. How do you cut through the clutter and build an e-strategy that really works? Can technology really make interactions more personal? Does your Web site have the intelligence to know what your customers and visitors want?

A strategic focus on the whole customer experience is critical to survival in our increasingly global and competitive marketplace. How do you get from where you are today to real-time personalized interactions via the Web?

If you wait, your competition will pass you by in no time. Or worse – competition you don’t have and can’t even imagine today will totally change the rules of the game. Yet if you start in haste, you are doomed to fail. According to a recent Gartner Group report, 75 percent of e-business projects will fail because of poor business planning.

The good news is that the same rules of business apply whether you want to:

- Increase online sales to your e-commerce site
- Manage your e-business more effectively
- Improve relationships with Web visitors
- Improve your overall relationship with customers

Start with a sound business plan and leverage your data to find valuable information, make predictions and support your decisions with facts. While new technologies are speeding up the pace and changing the ways you implement your business strategies, the same rules that made organizations successful yesterday are still the best foundation of where to start today.

No matter where you are today you can start taking steps now to learn more from your data and put it to work on your Web and at all your customer “touchpoints,” or points of customer interaction. This paper provides guidelines to help you plan and implement data mining to make personalized e-relationships a reality.

Focus your goals, begin with the end in mind

Imagine if you could...

- Increase purchases off your Web site by determining who visitors are and dynamically adjust site content to match their interests
- Show your customers that you understand their needs by suggesting products and services that pertain to them
- Help your visitors find what they want – faster – by designing paths that are easier to navigate
- Get visitors to stay on your Web site longer with custom content and offers designed exclusively for them
- Maximize your Web’s ROI by spending resources according to predicted lifetime value of visitors and customers
- Make your e-business programs more responsive, direct and successful by evaluating your efforts to know what’s working and what’s not

- Get a complete picture of your customers by connecting information from the Web to information from all other touch points
- Put better information into the hands of decision makers, faster

One-to-one marketing is the vision of now. When are you going to get there? How? Will you act quickly enough to ensure your window of opportunity doesn't pass you by? With unlimited resources, you could make anything happen. But with tight budgets, changing market preferences and technologies and information overload, the reality is that you don't have the resources you need to tackle everything at once.

Alas, all is not lost. With some careful planning and focus, you can greatly improve your chance of success even with tight resources.

Start by evaluating where you are today in the big picture: What are your strengths today? Biggest weaknesses? The context for data mining is the things that are critical for your organization's success. Discuss your key business challenges. What percentage of your business is shifting to online sales? How rapidly? Do you need to increase online sales now? Or, is there a more immediate threat of losing your most loyal existing customers? What does one-to-one marketing mean for your organization? To win in the long-term, a focus on the customer is essential. You'll need an integrated view of the customer from all touchpoints. To get the answers you need, you've got to ask the tough questions today.

Data mining enables one-to-one responses at every customer touchpoint

Imagine if when selling face-to-face, your sales reps could have the customer intelligence to recommend the products and services that are most likely to be purchased.

Imagine if you could personalize the content for each visitor to your Web site with products and services they are most likely to want to buy.



Imagine if customer service representatives could respond to customer calls for service with personalized actions.

Imagine if when designing new marketing campaigns, you knew which of your many target prospects were most likely to respond and be profitable customers.

Next, focus your objectives. Start in data mining by doing a project that is clearly linked to what you want to accomplish and start small. When you state specific objectives with critical success factors up-front, you improve delivery of short-term, tangible results. What is your most urgent challenge? What will it take for you to be successful in the next six months? What information do you need to make decisions that get things back on track? Is one of your customer touchpoints more important than others in the short term? If it is the Web, what systems do you have in place today? What are your technology resources? Will you be successful if you can increase average cross-selling success by 30 percent?

A sound plan is critical to success and must include clearly defined business goals. The bottom line: keep it simple. Know where you are headed and what you want to achieve. Align and communicate your goals to maximize your chance at success.

Make data your best friend, know the data you have and need

What do you know about your customers today? Web visitors? How are your Web shoppers different than your traditional customers? What do you know about customers that come to multiple touchpoints? How are the preferences of your traditional customers changing? With data, you can learn more about customers and answer key business questions. But, do you know what data you need?

As you plan, review your current customer data and information sources. Do you know where your customer information is coming from today? What data sources are missing? What is the status of your data integration today? To get a complete view of your customer in the long-term, you'll need integrated data. However, if your short-term focus is on better cross-selling via the Web, you could start with simple Web site activity data. Or you could match Web log data with visitor behavior, transaction information and even customer data for more comprehensive profiling.

Whether you have customer information in a sales force automation system, basic customer data in a simple database or an integrated customer data warehouse, you can start mining data now for better information. Better knowledge about what data you have helps you understand what you could be doing if you had data from other channels and additional types of data – and get you started on a realistic path.

Realize the power of data mining to predict the future

Can technology really make interactions more personal? Does your Web site have the intelligence to know what your customers and visitors want? Data mining turns data into actionable information that you can use to transform the way you interact with your customers. When you want to simply see what has already taken place, reporting and OLAP can serve as an easy to use rearview mirror. However, when you're driving at Internet speed, you need to predict what's ahead or risk missing a sharp curve. Data mining takes you beyond OLAP with the smarts to predict future needs. It enables you and your organization with the ability to proactively make changes that help you reach your goals.

How do you know which analytical approaches are best for answering your key business questions? Realizing the power of data mining and what it can do for your organization helps you employ the technology and people who can make it happen. As a decision maker, spend the time to understand the very basics about the data mining methods that can unlock key customer information. Armed with this knowledge, you'll be more effective at

bridging the gap between the analytical and technical experts. Work together and you'll be able to translate your key business problems into specific data mining strategies that align both your business and technology objectives.

Where to begin? Here's a table of key methods for mining Web and customer data:

Data mining method	What it does	What it enables you to do
<i>Customer profiling</i>	Identify customers who exhibit similar behaviors, who is most and least likely to purchase within specific affinity groups and model best customers in terms of purchase behaviors to identify events, attributes and behaviors (such as purchases) that occur together	Gain a deeper understanding of your customers and maximize your marketing ROI
<i>Campaign response modeling</i>	Predict who is the most likely to respond to different marketing programs	Develop targeted marketing programs and offers that match customers natural buying patterns to increase response
<i>Market basket modeling</i>	Model "market baskets" – which products and services are purchased together or in sequence	Recommend the mix of products, services and offers that customers are most likely to buy – at the optimal time – and increase sales
<i>Lifetime value modeling</i>	Model your customers in terms of lifetime value and profitability to your organization; identify risky and non-profitable customer groups	Spend resources wisely by matching spending relative to expected lifetime value and maximize customer profitability
<i>Classification and predictive modeling</i>	Refine surveys and forms with knowledge of the factors that are important and asking the right questions at the right time	Respect Web visitor's time and privacy by limiting the questions you ask them only those necessary to improve the relationship
<i>Churn and attrition modeling</i>	Model churn behaviors – look at customers who have left the organization and profile when and why they leave	Develop targeted customer retention and loyalty programs to reduce customer defection
<i>Satisfaction survey modeling</i>	Conduct customer satisfaction surveys, evaluate satisfaction levels and changes over time; combine satisfaction and customer profiles for models that identify programs and actions to take	Develop new product and service features based on what your customers value, increase satisfaction to extend your customer lifetime
<i>Sequence modeling</i>	Discover the major paths through your Web site, those that lead to successful outcomes and what content drives Web site performance	Improve Web site effectiveness and performance

Make it happen

Discovering information and profitable patterns in your data is of limited use if that decision-making information doesn't make it into the hands of decision makers. Planning the ways you use new information and data mining results is another critical step to realizing real-time changes in the way you interact with customers and prospects. What are your current outgoing initiatives to various customer touchpoints? When you are armed with answers to your key business questions, how will you transform your organization?

For example, if your goal is to increase revenue per Web shopper 30 percent by cross-selling more effectively, how do you make that happen? Data mining can model the market baskets and tell you which products and services are most likely purchased together, or in sequence. It can create customer profiles that tell you who has the highest propensity to purchase a certain mix of products and services. It can also create individual customer profiles in real-time, as a visitor or customer browses your Web site, you can determine what type of visitor is in session and dynamically adjust site content to match the visitors interests.

The final step is to pull together the resources you need and build your plan. Include your business goals and specific ways data mining results will be deployed in day-to-day decision making and customer interactions. As well as how you will evaluate success. Starting with a sound plan is the best way to maximize information about your customers and ensure that you use information effectively.

Revisit, reevaluate and adjust – constantly

How have your business challenges changed in the last month? Did you increase cross-selling revenues, but decrease new face-to-face sales? Did your competition respond with a similar program? How do you stay one step ahead of your competition and continue to improve your business? When you have addressed today's critical issues, new ones pop up due to changes in your market, the technology, etc.

Data mining is a journey – an ongoing initiative – not a project. Plan for growth and consider scalability (the ability to work with very large datasets) and flexibility (the ability to apply the technology to a variety of situations). Review the ways that your competition and other market-leading organizations are using data to build better customer relationships. Measure your success, revisit objectives and adjust – constantly.

Data mining makes the difference™

By applying sophisticated data mining techniques to your Web and customer data, you can discover patterns and develop insights that enable you to build strong, one-to-one relationships. Turn to SPSS people, process and technology to apply leading-edge data mining techniques so you can make sound decisions based on reliable results. SPSS brings additional skills and experience to your data mining initiative, reduces the learning curve and gets your organization started quickly.

Build a clear vision and make it a reality. SPSS people and eMine services provide sound, objective advice to make better use of data and technology to improve customer relationships at every point of customer contact. We team with you to bridge the gap between the varied analytical and technical knowledge and your business expertise. Along the way, we educate your staff, provide recommendations and build a repeatable process so your organization is equipped with the skills and tools they need to easily proceed on their own.

Start and stay on track with the best practice approach to data mining, Cross-Industry Standard Process for Data Mining (CRISP-DM). CRISP-DM is a comprehensive data mining methodology and process model that makes large data mining projects faster, more efficient and less costly by enabling users to take advantage of an already proven process. SPSS subscribes to this best practice approach to data mining, which it

co-authored with several other leading companies, and brings it to your organization to deliver actionable results. For more information about CRISP-DM, see www.crisp-dm.org.

SPSS' end-to-end analytical technology enables you to collect customer data from every touchpoint, mine the data to create in-depth profiles, and deploy it back to the touchpoints providing real-time, personalized responses. Drawing from a broad range and depth of analytical capabilities, SPSS delivers models that offer the best fit for you – specific business issues and data. Better models mean more predictive power – which translates to more profitable e-businesses and customer relationships.

From A to “e”

SPSS eMine services are designed to take you from A to “e.” Approach your business challenges with confidence based on a sound action plan for building powerful data mining into your programs. Improve your knowledge about customers. Increase your success with specific data mining goals and measurable success criteria. Get started more quickly and stay on track more easily, guided by a road map and a team of experts. SPSS eMine services and end-to-end analytical technology help you:

- Know your customers, their purchase patterns, buying behaviors and demographic profiles and predict who is most likely to purchase specific products or services
- Determine which products are often purchased together and create product “bundles”
- Identify the Web visitor “type” based on online behaviors
- Identify characteristics of Web visitors and customers who are registered users of your Web site
- Identify factors that impact online sales of a specific product or service
- Pinpoint which Web pages are key to successful outcomes (i.e., purchases)
- Identify customers who are likeliest to leave and why
- Determine which products are often purchased sequentially and create product suggestions, offers or coupons to promote them
- Understand who buyers are, where they visit and which content is most effective at gaining sales
- Identify when a visitor may be about to leave your site and why
- Find the most common and direct paths to outcome with sequence analysis
- Understand how visitors use your Web site with visual individual visitor pathways with tree diagrams
- Evaluate where your visitors are coming from and what they are looking for; text analysis determines the common ways a visitor finds your site from a search engine as well as the terms that are used within your site search facility
- A geo map provides raw number of visitors, proportion of visitors, visitors by visitor groups, visitors by success criteria and more
- Know more about your Web visitors by classifying their session behavior, including type of information read, directness of visit, time spent in session
- Identify all unnecessary pages from point A to Z with sequence analysis that finds common paths
- Assess page and content category performance by looking at the average time spent on pages
- Determine which pages are being read and which are being skimmed with the ratio of read speed to the number of words per page
- Identify trends and predict needs by building reliable forecasting models on hit data

Begin the journey to personalized e-relationships with data mining today

The Web is changing the world we live in. While new technologies are speeding up the pace and changing the ways you implement your business strategies, the best foundation starts with a sound business plan for data mining.

Today, data mining makes the difference in every industry in every area of the world. You can do data and Web mining – and use the results to make proactive, positive change in your e-business, your organization and with your customers. The question is, if you don't start data mining today, will your organization be around in the next few years?

About SPSS

SPSS Inc. provides analytical software and service solutions that help people turn data into information they can use to take action. Using SPSS solutions, organizations leverage information to increase revenues and improve processes. SPSS is a leader in business intelligence, especially data mining, customer relationship management and survey/market research. Founded in 1968, the company has more than 40 offices worldwide with corporate headquarters in Chicago. For more information, visit www.spss.com.

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