Refining Customer Relationships

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REFINING CUSTOMER RELATIONSHIPS

A story about beer and diapers has become a cliché in the annals of business intelligence. But it remains a classic example of how "discovery-driven inquiry," also called data mining, can pay for itself.

A giant U.S. retailer wanted to know what were its most frequently linked purchases. It used data-mining techniques to search its database and found the unlikely combination of – beer and diapers.

"When these two items were placed next to each other in the stores, sales of both soared," reports Nirmalya Kumar, professor of marketing and retailing at IMD, the international business school in Lausanne, Switzerland.

A discovery-driven inquiry is a data search for patterns and classifications in the absence of directed questions. It finds relationships and niche segments that would remain undiscovered by traditional methods of statistical analysis. It doesn't give answers, but it does offer points of further inquiry.

McDonald's uses data-mining tools from IBM to analyze its menus and sales and the profitability of combinations of products at various price points. Victoria's Secret found that black lingerie sells better in the North, other colors in the South, and that white is the top choice of brides.

Spain's Banco Credito Hispanoamericano used IBM's Intelligent Miner to bolster use of its phone-banking service. The bank had determined that the number of potential customers for phone banking was 1 million, but only 8,000 had signed up. So they used those 8,000 to develop a profile of likely prospects, then did a mailing to potential customers whose characteristics matched those culled from mining. The response was "very satisfactory," says Herbert Budd of IBM's Business Intelligence Solutions unit.

Who can use data mining?

Howard Dresner, vice president and research director of the Gartner Group, a technology consulting company, estimates that a company should have about $100 million in sales to use data mining, but the volume of data is more important than the volume of sales. A mail-order house with sales of $20 million is a likely candidate for data mining, he believes, because of the large volumes of customer information available. "By using these tools they can save money and increase productivity," he says.

No more than 5 percent of large businesses are currently using data mining, according to some analysts. But everyone is thinking about "whole-life customer profitability." That diaper-buying beer drinker is worth $18,000 to a U.S. brewer over a lifetime, and the diapers are worth another $7,000.

Loyalty cards provide a wealth of data about a business's most faithful — and often most profitable — customers. U.S. retailer Sears mines the data of its 120 million loyalty-card holders and groups them into buying pattern clusters that can then be targeted with promotions and coupons and special marketing programs.

Safeway Stores PLC in the United Kingdom is using IBM's Intelligent Miner to increase average sales per square foot in its stores. Safeway used to carry 28 different brands of orange juice, but was able to identify the eight best-selling brands through mining and has increased sales as a result. Managers also wanted to reduce some of the 200 cheese brands they stocked. With data mining, they discovered that some of their lowest-selling cheeses were purchased by their top-spending customers.

Retailers aren't the only ones who can benefit from data mining. Financial services and telecommunications companies are using these tools as well. Mr. Kumar cites the case of a bank that learned its check-bouncing customers were among its most profitable clients.

Customer retention is also the objective of telecoms company MCI, which is using data mining to address the problem of churn (customer turnover). MCI can detect when a customer is about to leave and can initiate marketing efforts to retain them if it wants to.

An emerging use of data mining is on a company's Web site. IBM has developed a tool called SurfAid that uses data-mining techniques to analyze activity on a company's site. It tracks Web site visitors, identifies what they like and provides that information to the business so the site can be personalized for every customer.

Every gold rush produces fool's gold, and the gold found in data mining is no exception. Warns IBM's Mr. Budd, "You can wind up with some totally useless information, like the possibility that people whose names have an 'e' as the third letter are the least profitable." IMD's Mr. Kumar cites the fact that 82 percent of motorcycle owners buy frozen fish food.

Perhaps the greatest discovery of data mining is that human insight remains paramount.