

# Purchase Probability Modeling: Lead Classification System for a Cloud-Based Product

Case History

**Category:** *B2B Software*

**Methods:** *Purchase Probability Modeling, Predictive Modeling, Business-to-Business (B2B) Research, Sales Lead Classification, International Research*

## Summary

An international, high-tech software company wanted to boost sales of its business-to-business hosted software service. A logistic regression model was developed that predicted the likelihood that a prospect would consider subscribing to the hosted service. The model was incorporated into an interactive scoring tool that allowed the sales force to enter prospect responses for each of the model predictors and forecast the likelihood of prospects to accept an offer of service. After the model was validated by the client company, the model was implemented across its sales force.



## Strategic Issues

In the midst of a struggling world economy, an international, high-tech software company wanted to boost sales of its business-to-business hosted software service. The company's sales force had some success in selling the service. But opinion was divided on which factors were most important when targeting potential customers. The sales force wanted to pin down the ideal customer profile so that they did not waste valuable resources (time and money) pursuing bad sales leads.

## Research Objectives

The purpose of the research was to understand the factors (business, technology and infrastructure-related) influencing adoption of the hosted service among small and medium-sized businesses in the U.S. and Germany. Specifically the goals were to:

- Build a sales-lead classification model to identify predictive factors/criteria.
- Develop an interactive tool that would allow the sales force to quickly determine a potential customer's likelihood to purchase.

## Research Design and Methods

An online survey was fielded in the U.S. and Germany among information technology decision-makers in small and medium companies. Both current users and nonusers of a hosted service were interviewed. Variables likely to be useful as predictors were included in the survey, including number of employees, years in business, industry segment, revenue, and attitudinal elements.

Logistic regression, accompanied by more sophisticated (bootstrapping) modeling techniques, was employed to obtain a stable and effective model. The goal of the modeling process was to identify the predictors (i.e., the variables) that differentiated likely service subscribers from those unlikely to subscribe. The dependent variable was the probability of responding positively to an offer to subscribe. Once it was determined that the final predictor variables were stable across training samples, an additional bootstrapping technique was used to settle on optimum coefficient values for the predictors. The output of the modeling exercise was an equation that yielded the probability of positive response to an offer to subscribe to the hosted service.

## Results

An interactive scoring tool was developed that allowed the client's sales force to enter responses for each of the model predictor questions and forecast the likelihood that the prospect would accept an offer of service. The client company subsequently validated the model in a preliminary fashion by surveying a sample of current customers (of other products) and correlating their model-predicted likelihood to subscribe to their actual stated likelihood to subscribe. The resulting correlation was strong enough to warrant implementation of the predictive model across the sales force.

The client subsequently commissioned research to build a predictive model for another country.