



(left to right) Martine George (ING), Pieter Dyserinck (ING), Geert Verstraeten (Python), Wouter Buckinx (Python)

# EFFECTIVE RESPONSE MODELING

SAS and Python Predictions enable the creation of ING's Proactive Targeting Framework

## Industry

Banking

## Business Issue

Customer response modeling.

## Solution

SAS® Customer Intelligence, SAS® Enterprise Miner.

## Benefits

More effective targeting of marketing campaigns.

Flexibility – quick and easy expansion of any system with new data and predictive models.

Time gain – increased efficiency provides for quick access to correct information.

**“Our new Proactive Targeting Framework will greatly improve the efficiency and success rate of our Customer Intelligence Department.”**

**Dr. Martine George**  
Head of Customer Intelligence, ING

Which customers will respond best to a given product offering? It remains a central question in any business. The Customer Intelligence Department at ING Belgium relies on response modeling software to provide the answer. In 2006, ING and Python Predictions developed a new tool – the Proactive Targeting Framework. Based on SAS software, it predicts customer behavior in a fast, effective, flexible, and user-friendly manner.

### Intelligent actions with customer intelligence

The ING Financial Services group was founded in the Netherlands in 1991. Since then, the company has expanded throughout the world, setting up operations in more than 50 countries. Today, it is the sixth financial player in Europe and among the top 15 in its sector worldwide.

In recent years, the Customer Intelligence (CI) Department of the company has used internal customer data to guide its marketing decisions. “Historically, we were considered as an operational partner, delivering target groups at the request of other departments. Today, we have truly become a proactive player in the development of efficient and actionable marketing campaigns,” states Dr. Martine George, head of the CI Department at ING Bank Belgium.

### Rapidly changing environment calls for new modeling

In 2006, the local CI department at ING Belgium decided it was time to refine its response models. In order to gain a

competitive advantage in analytics, Dr. George and her team defined five cornerstones that would be indispensable in the new targeting mindset:

- **Predictive.** An excellent predictive performance is the key to any targeting campaign.
- **Interpretable.** The output should be accompanied by the construction of a detailed customer profile of the target group(s).
- **Actionable.** The focus lies on the construction of smaller, high quality target groups, which are aligned with branch capacities and tap into the present availability of alternative channel opportunities.
- **Customized.** The capability to deliver either the right target group for a given product or – increasingly – the right product offering for a given customer.
- **Proactive.** Developing a toolbox of predictive models available a priori, even before a detailed and planned conceptualization of a particular campaign.

“A first step was the construction of a data matrix containing more than 300 distinct pieces of information that are available for every client on a monthly basis,” explains Pieter Dyserinck, Senior Customer Intelligence Analyst at ING Belgium. “While these indicators had proven their value in previous targeting projects, we were looking for an expert partner to help us mold this mass of information into a more powerful, flexible, and interpretable solution.”

“The SAS software modules are capable of managing large amounts of information and offer the best flexibility. These are the key ingredients we need to develop efficient response models.”

**Dr. Wouter Buckinx**  
Partner, Python Predictions

### Efficiently predicting customer behavior

ING teamed up with SAS partner Python Predictions to develop the Proactive Targeting Framework, based on SAS software modules. “Due to the existence of the data matrix, only a limited amount of time was needed for data preparation. Instead, we were able to focus on constructing a battery of predictive models,” recalls Dr. Wouter Buckinx, Partner at Python Predictions.

In a close collaboration between the internal and external experts, the newly created models were carefully benchmarked with former modeling practices at ING. This not only demonstrated their superior technical performance, the process also resulted in a

fruitful knowledge transfer for all parties involved. “We rigorously compared different algorithms using the flexible programming power of SAS software. Together with the internal experts, we carefully retained interpretable models, containing no more than 15 variables, which provided lean but powerful predictive performance,” recalls Dr. Buckinx. “Additionally, we have implemented the selected final models into the SAS® Enterprise Miner environment, which offers the business users a powerful, flexible, and easy-to-use interface.” Furthermore, the framework features a built-in quality check – a tool that automatically indicates when and where future adjustments are required.

### When easy expansion is key

Due to the success of the Proactive Targeting Framework, an expansion is already planned for the near future. Additional response models will be developed on a regular basis. From the creation of variables to the generation of a list of targets, ING’s new Proactive Targeting Framework relies on SAS software. This provides a powerful, performing, user-friendly, and dynamic solution, where it is particularly easy to integrate new models or to adapt and update the current properties. “In short, the new Proactive Targeting Framework will surely help improve the efficiency and success rate of ING’s Customer Intelligence Department,” concludes Dr. George.



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