

OPTIMIZING DEBT COLLECTION WITH PREDICTIVE ANALYTICS

Why predicting the recovery probability increases the recovery rate



SUMMARY

For each and every company, unpaid invoices have a clear negative impact on the bottom line. Therefore, many companies use preventive mechanisms to avoid customer debt, and when needed, they apply internal processes in their attempt to recover unpaid bills – a process often referred to as *dunning*. A last phase in a collection process usually exists in collaborating with external collection partners.

In this context, eni and Python Predictions have developed a predictive collection model to estimate individual recovery probability. This indicator resulted into detailed insights and an adapted remuneration plan for the external collection partners, which led to a higher overall recuperation rate.

ABOUT ENI

eni is an ambitious Italian utility company, with activities all over the world. eni produces, sells and delivers electricity, gas, oil and additional services to residential as well as professional customers. In Europe, eni has more than 9 million customers. In the Belgian market, eni is one of the main challengers – with a top 3 position in the supply of energy.

BAD PAYMENT

The energy market today is a strictly regulated market, where companies are obliged to guarantee supply during a certain period of time, even for those customers exhibiting bad payment behavior. Therefore, recuperation of overdue bills is a very important issue. For eni it is crucial to limit losses due to bad payment as much as possible, and optimize the return on investments of recovering outstanding debts.

RECOVERY PROCESS

To collect the outstanding debts, eni employs different initiatives. First, an internal recovery process is used with different recuperation actions. If this does not result in a payment of the invoice, eni collaborates with specialized external collection partners. To get the most out of these alliances, it is important to accurately assess the expected recovery probability of each individual bad debt case. A good estimation makes it possible to distinguish good and bad invoices, which is useful information to focus on interesting targets and increase ROI. Besides, the estimations are important to set motivating objectives for the partners: for 'difficult' cases, partners would require higher fees, since the efforts (and the costs) of recovering these cases increase. An overall increase of the commission rate is not an optimal solution, because eni would only be interested to augment fees for cases more difficult to recover.

PREDICTIVE COLLECTION MODEL

In 2011, eni collaborated with Python Predictions to develop a predictive model to estimate individual recovery probabilities for eni customers in debt.

Generally, predictive models make efficient use of all available information, to assess the outcome of future events, and improve decision making processes. Based on stored customer characteristics, bad debt attributes, regional information about the location of bad payers, and the results of previous collection actions, eni and Python Predictions have built a custom-made predictive model. In total more than 800 predictors were evaluated, to end with a final model of 9 variables, coming from different data sources. The performance of this model is remarkable: in comparison to an existing system, the predictive model shows an improvement of more than 30% in terms of ranking good and bad invoices.

Moreover, the outcome of the modeling process showed interesting information about the drivers of repayment behavior, which was useful for management to obtain better insights on this topic.

THE BENEFITS

Bad payment is a permanent concern at eni, hence an enduring cooperation exists with collection offices. Today, the predictive model is used recurrently as an additional source of information for these partners, in order to improve their selection procedure, and increase the recovery rates of their efforts. Besides, eni uses the probabilities to finetune its remuneration plan. Eni assures that expectations are set realistic, and partners are motivated to recover also invoices which are more difficult to recuperate by setting higher recovery fees for clients with higher expected difficulties. This new method positively impacted the overall recovery rate and the total recovery.

ABOUT PYTHON PREDICTIONS

Python Predictions is a Brussels-based service provider specialized in data science projects with impact.

The company has a strong legacy in predictive analytics projects in a business context, and success cases of applied data science in marketing, risk, operations and HR. Python Predictions enables clients to take their adoption of data science to the next level.

Founded in 2006, Python Predictions is active in b2b and b2c retail, financial services, utilities, postal services, telecommunications and fundraising.

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