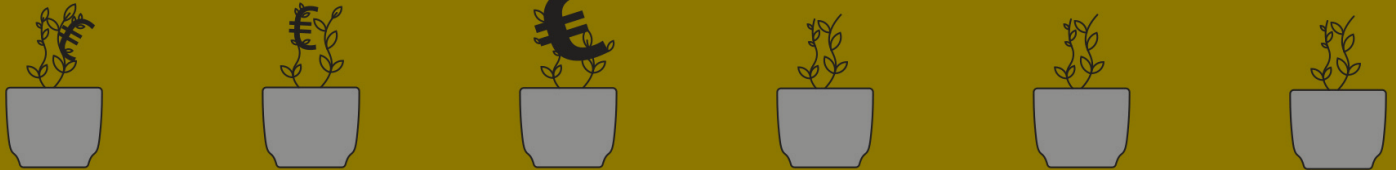Ś **Sparkasse**

# How Sparkasse Improved the Success of Product Campaigns up to 200% with KNIME

> *"KNIME showed everyone that it's not rocket science to build a model. A lot of the team had no profound ML or AI background – but learning how to build basic models took us just a couple of weeks, which made a big difference in how fast we moved."*
>
> *Christian Mueller-Hammerstein,*
> *Expert Advanced Analytics, Sparkasse KölnBonn*

Sparkasse KölnBonn is one of the largest municipal savings banks in Germany, handling roughly 28 billion euros in total assets. The bank employs 3500+ employees and is the market leader for banking services in the Cologne-Bonn area.

Like many financial institutions, the bulk of the bank's revenue doesn't come from new customers, but rather from returning customers, purchasing new financial products as their economic needs and interests change. Christian Mueller-Hammerstein, an expert in the Advanced Analytics team – a subset of the corporate development department – had a clear, but wide-reaching prerogative: "optimize everything customer-related." As part of this initiative, the team started investigating how to improve the success of their existing product campaigns.

## Company

### Sparkasse KölnBonn

Sparkasse KölnBonn is a full-range provider of financial services to both retail and corporate clients. It is the largest municipal savings bank in Germany, employing 3500+ employees and handling some 28 billion euros in total assets.

Marketing Analytics

Product Recommendation

**KNIME**
Open for Innovation

Anyone who had purchased any product with Sparkasse KölnBonn could expect to get recommendations for relevant offerings, like securities, savings plans or customer loans. This expert-based recommendation relied mainly on the experience of sales experts and some chosen customer characteristics.

Overall, however, the success rate of a product campaign wavered around 1% or less. Because of the sheer amount of customers (often about 50,000 per campaign) and products available, bumping up these low success rates by even 50% could have a 6-digit impact on the bottom line.

## An Intuitive Platform Provided a Lingua Franca Between Disciplines

Chris' team came from a variety of backgrounds – some from information science, but others came from market research and finance. Some had coding experience, while others specialized in Business Intelligence tools and Excel.

As a starting point, KNIME's low-code, no-code interface provided a common ground. The tool was sophisticated enough to allow for his data science experts to work with machine learning models, but intuitive enough for the rest of the team to use.

The team could now collaborate across disciplines. At the same time, more of his team could start working with advanced techniques. After a few weeks, anyone could use the same interface to build and train models with or without code. Those who were newer to data science were able to upskill from the pre-built workflows available on KNIME Hub and KNIME's data-scientist-led tutorials.

Once the whole team was working in the same environment, they were able to start collaborating more efficiently. Together, they started prototyping models for product-campaigns and comparing the results to those of their expert-based approach. The team was able to learn about and apply popular techniques like Random Forest and Gradient Boosted Trees for classification without writing a single line of Python. Once the models were built, they could automate their execution and compare results.

When the experiment proved successful, the previous, experience-based recommendation paradigm was then replaced by a modern, algorithm-based approach.

## End-to-End Coverage Meant Faster Experiments

The first product campaign experiment, including building the model, only took a few months. Because KNIME offered a complete, end-to-end data science platform, the entire process – from data understanding and modeling to deployment – could be done in one environment. After testing and validating the success of the first experiment they were able to quickly move on to new, more strategic projects.

"We put the model in a horse race with the past expert-based approach. In almost every experiment, the model outperformed the expert-based approach – and often gave us ideas for what else we could try," said Christian.

One such project was a sustainability campaign. In addition to global scoring models, provided by their parent organization – Savings Banks Financial Group – they could supplement with models that focused on their local, specific goals. As sustainability had been a major strategic initiative at Sparkasse KölnBonn, Chris' team decided to complement the standard scores and test their own, customized models on "sustainability" products.

Now the team can spin up models for many customized product campaigns relatively quickly, rather than relying on global scoring. According to Chris, "Each campaign performs from 50 to 200% better with the models we built, trained and deployed in KNIME."

## Self-Documenting Meant Easily Explaining Results to Stakeholders

The corporate development department strives for leadership buy-in from the start, so the team made sure to communicate its initiatives early and often.

The team now offers a digital platform – called "digital driving license" program – where anyone is invited to share knowledge on digital topics like e.g. crypto currencies throughout the organization. In this context, Chris' team uses KNIME's self-documenting interface to communicate and explain how these algorithm-based recommendations work and why they outperform the past, expert-based recommendation system.

## Why KNIME?

KNIME's no-code/low-code approach paired with the completeness of the platform resulted in fast iterations and easy communication both within, and outside the Advanced Analytics Department. However, it was KNIME's open-source approach that initially sparked the team's interest, since it removed any barrier to entry associated with cost.