



Commerzbank CoBaCash – Logistics for cash

CoBaCash: an operating system to optimize the supply of cash to branches and cash machines – integrating forecasts and ordering systems

The Intranet-based server application CoBaCash ensures that both the branch tills and the cash machines at Commerzbank always have the right amount of cash available at the right time. The central SAS-based solution not only supports the logistics processes. An integrated forecasting tool helps to determine future cash requirements, and a linked optimization tool helps minimize the costs of supplying and keeping the cash in stock.

Since the beginning of 2001, a single securities transport company has been ensuring that the cash machines and cashiers in the branches of Commerzbank don't run out of cash. With around 840 branches and over a thousand cash machines in Germany, this is a major organizational and logistical challenge. An Intranet-based server application provides the securities transport company with the data required for the optimum supply of cash. "CoBaCash" is the name of Commerzbank's DP tool, which has been available throughout the country since the beginning of April 2001. The application was implemented largely with the support of IT service-provider and SAS Partner InfoWare GmbH.

How does the cash get into cash machines?

Every cash transaction at a cash machine is recorded in a log database, which is read into the CoBaCash system every day for the forecast and optimization calculations. For security reasons, the average daily consumption for the last 100 days is taken as the minimum stock level for the cash machines. If this is reached in the forecast period, CoBaCash sends the securities transport firm, at exactly the right time, the order to collect money from the Landeszentralbank and to fill up the cash drawers in the machines.

Technically speaking, the maximum amount that can be filled into the cash machines would be around 200,000 euro. However, it would not make economic sense to fill each cash machine to its maximum level just to be sure that bank customers could always take enough cash out. After all, the amount of money withdrawn from each cash machine daily varies, on average, between 2,500 and 35,000 euro. In addition, the money that is kept in cash machines or in the branches' tills is not earning any interest and is not part of the bank's business volume. Moreover, every single filling operation costs money: a standard lump sum figure was agreed for this with the securities transport company.

Customer	Commerzbank
Industry	Banking
Business Issue	ATM cash management
Partner	Infoware GmbH
Solution	SAS® forecasting solution
Benefits	Easy, accurate control of ATM cashflow



Arne Ruban,
CoBaCash project manager,

About Commerzbank AG

Facts and figures (Values from Group Balance Sheet, 31.12.2000)

- Total assets 460 billion euro
- Capital resources 12.5 billion euro
- Annual profit 1.34 billion euro
- Strategic business areas
- Private customers
- Asset management
- Business customers and institutions
- Securities
- Offices 1,080
- Workforce 39,044
- Customers 5,7 million, including 2,930.400 private customers

Commerzbank is one of the four largest banks in Germany, the 15 largest in Europe and the thirty largest in the world.

The centre piece of CoBaCash is a forecasting and optimization module. This is where the daily cash requirement of the branches and cash machines for a period of 2-3 weeks is determined. The system calculates the optimum amount that needs to be filled into each individual cash machine and the ideal cash level for each branch, weighing up the transport costs against the deposit interest and coordinating it with requirements.

The flow of cash is subject to trends and basically follows weekly, monthly and yearly cycles. For example, at the beginning of the month, relatively large amounts of money are taken out. Just before Christmas, when Christmas bonuses have been paid into people's bank accounts, cash machine usage increases. Much less money is taken out in the holiday month of August. A particularly large amount of cash is taken out of cash points in shopping centres on Fridays and Saturdays.

"The longer we work with CoBaCash, the more precisely we're able to predict requirements", explains Arne Ruban, CoBaCash project manager, Central Staff, Head Office and Branch Organization. Every day, 10 MB of data relating to the use of cash machines and the payment and collection of cash from the branches flows into the CoBaCash database. The plan is to collate and analyze the data from four years.

Small or large notes

The CoBaCash forecast tool provides counter staff in the branches with an order proposal which they can call up on their workplace PC. It tells them the next delivery date, the total amount of cash to be ordered and, in future, the breakdown into notes and coins. The employee can amend this order proposal as required. The complete order screen is saved in the CoBaCash system just by clicking with the mouse. The securities transport company can then access this order directly, confirm receipt of the order and the delivery date and provide further support as the money is delivered.

The Windows interfaces make CoBaCash a truly user-friendly application. "For us, this was an important reason for developing an Intranet-based server application", explains Ruban.

It has the advantage that the IT network is only used when a function is carried out: developing a server application that is permanently connected would have been much more complicated in terms of the network structure.

"One of the reasons why Commerzbank decided on SAS Tools was the SAS ETS forecasting component", Jost Doerken, Director of InfoWare recalls. "Statistics applications and procedures for data analysis are clearly amongst SAS' strong points", says Ruban. In addition, all the other components for CoBaCash were also possible in SAS: SAS IntraNet is used for the user front end and Intranet handling.

With the new version SAS OR 8.2, which was introduced in January 2001, the project team also had a powerful optimization tool at their disposal. Access to the CoBaCash where data is saved both in SAS and SQL format is provided by SAS Connect to ODBC. From the bank's central host computers, the posting data for customers' cash withdrawals, the cash machine balances and the bank's internal user and structure data are transferred to CoBaCash. Some of this host data is already kept in an SAS Data Warehouse, and so it can be transferred without further conversion straight from the central computer to the CoBaCash system.

Rapid prototyping: simple solutions, high development quality

Another reason for deciding to develop CoBaCash using SAS Software was the SAS know-how, which was already in use in the company. "It made customizing considerably easier", Ruban recalls. It probably also helped to ensure that development costs have so far stayed well within the budget and that CoBaCash was developed in an incredibly short time: the specification was approved at the beginning of September 2000. By October, the basic framework for the user front end had already been created, and a month later the project team was able to present the prototype to selected branch staff and decision-makers in the securities transport company. Commerzbank was pleasantly surprised by the positive reactions of the later users – not only as regards the way the prototype worked: "People were really pleased that we had included our staff before the completion of the tool and asked them for their opinions", reports Ruban.

"One of the reasons why Commerzbank decided on SAS Tools was the SAS ETS forecasting component."

Jost Doerken

Director of InfoWare

The rollout in the branches started at the end of February 2001, and this was finished by the beginning of April. In May 2001, the forecasting component was integrated into CoBaCash. The fact that, instead of end-user training courses, only a short handout was needed to tell people about the system, is further proof of the user-friendliness of the new solution. The rollout also went quickly and smoothly. Within the bank, five people, including a specialist in securities logistics, are needed to provide the branches step by step with access to CoBaCash and to give user support by telephone. The system immediately proved extremely popular with users and even just after its introduction, between 95 and 99 percent of orders were being sent to the securities transport company via CoBaCash. "This is clearly the most reliable ordering route in terms of quality, since it excludes the possibility of misunderstandings or mistakes in the manual entry of the orders", emphasizes Arne Ruban. In a survey, users gave CoBaCash top marks all round. And the staff at the securities transport company are also happy with the electronically transferred ordering data – before the introduction of CoBaCash, they sometimes had to enter orders into their system in night shifts.

At the moment, the team is already working on another project phase: firstly, CoBaCash has to be given comprehensive support during the changeover to the euro. Secondly, evaluation mechanisms are being installed that can be used to assess the quality of the forecasting and optimization. Now the decision-makers at Commerzbank want to know as precisely as possible how much money Commerzbank is saving through the learning online cash management system. After all, the fact that the operative solution is providing the best possible support for the logistics processes, is being proved in practice day after day.

Widespread use

Always having enough change in their cash tills and machines without hoarding cash or using too many money transports: it is not only banks and financial institutions that face this challenge, but also retail companies and transport operations.

For this reason, CoBaCash was designed to be client-adaptable. This means that other companies can also use the CoBaCash ordering system and forecasting component. If the cash delivery to the partner company is carried out by the same securities transport company, there would be even greater savings, since trips could be organized to be even more economically viable.



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