

## Large amounts of data in real time

Branch logistics and an optimised supply chain are essential in the retail trade. “Ergo”, our bespoke, portable, store-based solution, has been providing support for Coop staff’s goods orders and making sure stock information is always up to date since August 2013. “Ergo” was brought on stream in more than 1,000 branches in just six months. Real-time processing and big data are going to be important factors in the retail trade of the future.

### Ergo – a modern stock control system

Coop had a very clear checklist of requirements for its new stock control system: a fast, ergonomic solution for sales staff, state-of-the-art technology that combined scalability, robustness and flexibility, and near-real-time stock information for each outlet’s inventory.

Coop sought out a development partnership with Ergon to make this innovation a reality. “We think the development partnership model has several advantages over standard software for this application. It’s an ideal combination of Ergon’s technological know-how and Coop’s process expertise,” explains Alberto Kratter, Head of Processes, Stock Control and Sales at Coop Switzerland.

#### Portable data terminals

The new solution was implemented using Coop’s already rather outdated portable data terminals. To ensure that no delays occurred while capturing and sending data, a choice was made for high-performance software architecture based on parallelised transmission processes; Ergon IT engineers’ expertise with mobile devices came in very useful here.

A lot of emphasis has also been placed on user-friendliness. The user interface is reminiscent of the look and feel of smartphones and can be used intuitively, with the various processes clearly identified by distinct colour-coding. Data transfer occurs in near-real time. As the portable device constantly updates itself, the user has access to all important data, even when offline.

#### A flexible solution and a contented workforce

At the heart of the development process for “Ergo” was the need to maximise flexibility and ensure that the software is at once a custom solution and a standard product: it was engineered to suit Coop’s individual needs but can also be adapted for other companies; and, thanks to its modular development framework, new requirements can be addressed quickly and efficiently. New data capture terminals, portable tills or new applications can easily be integrated. Process-led applications make work easier and enable more intuitive and rapid workflows. The employees in Coop’s stores also seem very happy with the new solution: a post-rollout staff survey consistently rated Ergo’s speed, handling and user-friendliness as “very good”.



Using a portable terminal to log Coop's stock levels and order replacements.

## A step towards real time

### What are the core challenges currently being debated in the retail sector?

A company can reinforce its market position by using best-in-class technology; optimisation on this score can be an important factor, particularly in a mature market with thin margins. Customers are looking for new ideas and concepts. Online shops with home delivery or pick-up services are in demand, for instance, in addition to traditional store branches. In Switzerland, there is political pressure for longer opening times and this too would favour concepts such as in-store pickups. The use of portable devices in branches and links to customers' smartphones creates a need for real-time data.

### How can retail companies create competitive advantages for themselves?

HR planning and finely tuned store logistics are critical processes for every retailer. The multiplication effect means that even small optimisations in every branch have a significant

effect on the organisation's overall result. Perfecting the supply chain allows management to avoid excess stock levels, thereby increasing the availability of products and ensuring foodstuffs stay fresh for longer.

### What are the biggest challenges here?

The combination of data volume, quality and time presents major challenges for the architecture of the IT systems – stock levels of 50 million articles have to be available on 6,000 end-user devices in real time. Every second counts when you are making thousands of scans per day. And the system can never actually stand still, otherwise the shelves will be empty the following day. Here, if the software is to give staff optimal support, it's important that it is designed to incorporate people's experience, too. At the end of the day, though, the system can take over repetitive tasks but decisions ultimately have to be made by the relevant store manager.

### Is this big data?

It's an important step towards big data. At the moment we can still store

terabyte-level data in the traditional manner, in a database – you only start talking about big data when alternative storage methods are required to access the data efficiently. High-performance software architecture provides a solid basis for this next step towards big data. It's technically possible to capture and evaluate enormous amounts of customer data, purchasing patterns and mobility-related information; but with all these topics you soon find yourself treading a narrow path between use and trust – what is technically possible and people's private lives.



Dr. Christoph Schuler, Software architect