

Linking a CAQ System to Existing Software Systems.

Modules in a Cutting-Edge Combination.



The path from handwritten recording of quality data to a fully integrated CAQ system needs to be well thought out. A manufacturer of high-quality knives and kitchen devices was looking for a long-term solution which would be harmonized with the specific requirements of the company. The happy ending to this tale? Zwilling has been trusting in modular CAQ software from Babtec since 2008.

The famous pair of twins from the town of Solingen is one of the oldest registered trademarks in the world and is regarded as a seal of quality for first-class kitchenware. Founded in 1731, Zwilling J.A. Henckels AG is one of the leading manufacturers of premium products in the area of kitchen, tableware, and beauty.

Over the centuries, the traditional company has supplied exclusive customers such as the Imperial Court in Vienna, Pope Benedict XVI, and Lufthansa's First Class. Their core competence, right up to the present day; lies in the production of high-quality knives. Worldwide, around 3,200 employees produce a turnover of 545 billion euros (2012). In order to meet the growing quality demands of the world market and to prepare for the future, Zwilling was looking for a replacement for its, up until then, handwritten documentation of quality data. Even before software support was implemented, the company's quality management was already geared toward the automotive industry, which has some of the highest and best established industrial standards worldwide for quality. With the new CAQ system, the company wanted to continue along this path and benefit from a modern solution in this area.

During the selection process for a suitable supplier, some demands were made on the future system: In addition to the general desire to enable the recording of quality key figures according to production stages, the focus was on detailed fault analysis to reduce the costs of defects and failures. Furthermore, the company wanted a flexible solution that could be tailored to the specific needs of the company, with the help of specific adaptations if necessary. In the search for a standardized procedure in the value-added process and a system with high process orientation, a solution from Babtec, Wuppertal, was finally chosen. Thanks to the intuitive and easy-to-learn operation of the software, CAQ users could be quickly trained: At its headquarters in Solingen, which has a long and rich history, Zwilling employs more than 160 employees. Today, 70 of these work intensively with the CAQ system BabtecQ every day.

CAQ Modules to Exchange Data with PDA and ERP systems

A particular challenge during system implementation was the internally used order system. This is a type of production control where the workers independently report via a production data

acquisition (PDA) system whenever they are converting a machine for a new work step or product. Only after they have completed this process can production be continued – until this cycle is repeated a few days later. While production planning is carried out using the Enterprise Resource Planning (ERP) system, the control system uses production data collection via the PDA system.

Thus the CAQ system's production module had to be connected to all relevant systems. Since the PDA data received contain only insufficient quality and master data (only the current workstation is known), the CAQ system supplements the logic with its own algorithm. The corresponding work step can be derived from the workstation at which the worker carries out his or her PDA posting and the necessary inspection plan can be called up. In this way, the CAQ system reacts to order creation, deactivation, reactivation, and completion. With the help of some adaptations by Babtec's project manager, a practical and functional solution could be found together with Zwilling, which works in harmony with the company-specific characteristics (Figure 1).

The system could also be customized for the company-specific processes in the incoming goods department. Incorrect orders in the incoming goods department, for example, are returned to suppliers either immediately or, on request, handled subsequently in the form of an error log. This does not create a report with static content, but a report individually compiled by the user. The user can select from an extensive list of text modules in order to identify specific priorities. The report uses the recipient's country code to decide on the language used for the text passages.

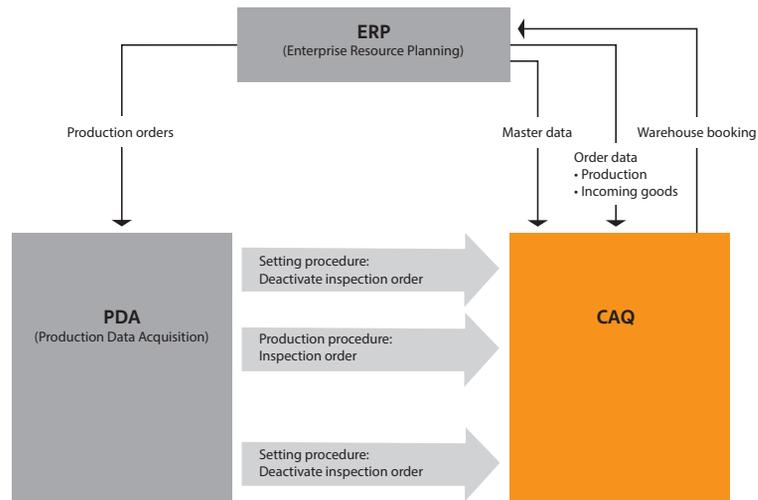


Figure 1: There are clear benefits in closely interlinking the new CAQ module with the PDS and ERP systems.

The electronic signature and contact data of the creator are automatically integrated. The system also enables in-production monitoring of failure frequency as well as a detailed analysis of failures: With the help of the software, it was thus possible to significantly reduce the number of errors and the associated costs.

Due to its modular structure, it was possible to individually adapt the CAQ system to the brand manufacturer's requirements. It is currently in use in incoming goods inspection, almost throughout all of production, and in outgoing goods inspection. In addition, the Gage Management and Complaints Management modules as well as APQP (Advanced Product Quality Planning) have been integrated for advance quality planning. Project planning in the development department is now also carried out using this system.

Quality Data Available Company-Wide

A particular advantage of the software is its ability to provide timely information on key areas of errors and failures and to monitor key figures independently of the product: Via an Internet browser, all relevant information is

available wherever and whenever it is needed. In this way, the software contributes to supporting quality management processes throughout the company. Management information can be easily generated from CAQ data and distributed throughout the entire company via the intranet. User-defined display formats, e.g., for extensive order lists, additionally relieve the inspectors and ensure more transparent information.

Babtec's CAQ solution has proven to be a flexible system: Just like the ERP system, various measuring equipment, for instance, could be connected to the system without any problems. Since the production processes at the various Zwilling plants differ only marginally, the long-term goal is to use the same CAQ system at all locations. Due to the positive experience at the Solingen headquarters, BabtecQ will therefore also be used at other locations in the future.

The Writer

Christian Abke
Director of Quality Management
at Zwilling J. A. Henckels AG
c.abke@zwilling.com