

Integrated PDA system

Optimal transparency - integrated PDA system at Danone puts an end to „management by little notes“.

Those who are completely in the picture regarding the efficiency and cost effectiveness of manufacturing can exploit resources specifically and in this way use their chances on the market in an optimal way. The new production data acquisition system (PDA) at Danone proves this.

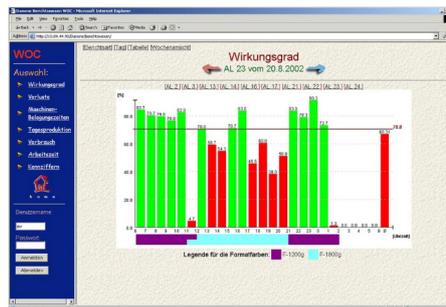
The market for milk products today is fiercely fought over. On one hand the profit margins are on average calculated very tightly. At the same time however, it counts to strengthen consumer confidence in one's own brand. For recent years have made one thing clear: those in the food industry who do not sufficiently provide for risk are often directly affected by a crisis in agriculture.

Danone GmbH has recognized the sign of the times. A broad range of products is manufactured at the Rosenheim, Hagenow and Ochsenfurt sites in Germany.

Whether „Fruchtzwerge“ or „Obstgarten“, whether „Dany & Sahne“ or „Actimel“ - Danone has a leading position in the German market. In order to defend these positions, the management board already formulated at an early stage clear objectives demanding more efficiency in manufacturing with optimal transparency and quality control - generally in every plant.

PDA System Key Technology

The starting shot went in this way at Danone for a successive changeover to new technology. From experience, only one key technology could really bring things forward: an integrated production data acquisition system (PDA) which in connection with high-performance company software automatically supplies all relevant information. It was similarly clear that in this way the packaging section was the focal point. Finally it is a matter of tight control of those subtleties of packaging which confer on the brand its special touch. At the same time, during packaging, the product is manufactured, which is to be listed in the finished products list and planned as a finished product in the company software. During this same time, the raw material which is critical for traceability, namely fruit preparation, is being used up there.



Always know what's running: the efficiency factor of a filling line is accessible at any time - at every PC terminal on the Intranet

As the implementation of corporate requirements was being done in Franconian Ochsenfurt, there was the advantage from the beginning of not having to spend a long time searching for a reliable partner. Since the end of 1997 namely, the Rosenheim plant has already cooperated closely with ProLeiT, the system specialist from Herzogenaurach. As system vendor for automation software and engineering, this company has undertaken there the implementation of an electronic production data acquisition system and thereby satisfied clients all around. And something else spoke for the IT specialists, as Werner Dettelbacher, Project Manager at the Ochsenfurt Danone site, emphasized: The extensive competence in ERP interfaces and system integration. After all, ProLeiT has been developing customized automation solutions for many years, whereby integrated data exchange has increased in significance across all company divisions since the mid-1990s.

In addition, the company has at its command many years of experience directly in the food industry.

At the Ochsenfurt plant, known for manufacture of „Dany & Sahne“ or „Danone und Frucht“, the initial situation was characterized by isolated solutions.

At the packing machines, isolated PLCs were used. In practice, this means an amount of paper warfare for order planning as well as compilation of the efficiency factor and the defective goods, and in addition frequent need for telephonic coordination.

INFO



Company:	Danone GmbH
Sector:	Dairy
Location:	Rosenheim
Country:	Germany

On the part of Danone, three improvements were in principle stipulated:

- A PDA system with full access and evaluation conveniences for the packaging section
- Link between materials management and SAP R /3®
- Acknowledgement of production tasks generated by APO (Advanced Planning & Optimizing System) - the innovative SAP tool for business planning

In order that operations continue to run largely without failure in view of all that, a graduated and consequent implementation was sought. Therefore, the following procedure was conceptualized in agreement with Werner Dettelbacher and the Danone SAP team:

Phase 1:

Implementation of a high-capacity PDA system with order management together with integrated networking.

Phase 2:

Specification of the interfaces for coupling with SAP R/3® and APO.

application profile

Phase 3:

Amalgamation of all components into a fully integrated system.

- manager (Plant Acquis iT)
- SAP systems R/3® as well as „Advanced Planning & Optimizing System“ APO (integrated with ProLeiT Connect for SAP and IBM MQ Series)

Innovative Production Management

A foundation for the entire system architecture (Phase 1) could be laid in just 4 months. The core is the Plant Acquis iT production data management system.

It compiles and seamlessly archives all important operating data for packaging and evaluates them wholly as and when required. This system runs without failure via a Microsoft SQL Server with Windows 2000.

An Industrial Ethernet provides for stable connections to the machine controls; separately linked via TCP/IP are PC clients in the offices, as well as the machines directly. From there the collected production data are accessible at any time via a browser user interface. In this way the data are available throughout the whole company, everywhere and at any time.

The value of well-founded know-how in data integration has been demonstrated in the follow-up: SAP/R3 and APO could start immediately with all their features operating (big bang implementation). The implementation of all system interfaces was undertaken in the weeks beforehand. Since then the Ochsenfurt plant has been connected via dedicated line to the Danone data processing center in France.

With this integrated automation solution many things have become simpler at the Ochsenfurt plant: production processes can be coordinated, orders exactly scheduled, individual batches traced more accurately. And for Werner Dettelbacher another aspect is: „Individual efficiency factors and weak points are now measurable. In this way losses can be minimized in a very precise manner, for example, when starting up, shutting down or rinsing.“

Therefore, it is desired that the possibilities of Plant Acquis iT will also continue to be consequently used in Ochsenfurt. The next phase of the set-up is the compilation of every single batch of raw material by scanner - for seamless documentation and tracking.

PDA at Danone - the components of the solution
Full integration of data exchange between the main levels:

- Packing machine control (PLC)
- Central server with production data

Management of production data with the newest system software Plant Acquis iT:

- For all process, machine and operating data
- Flexible compilation (online, offline)
- Seamless archiving
- Simple, multifunctional analysis
- Special modules for intuitive handling and optional archive selection

Local visualization / operator control at PC clients - everywhere, in the office and directly at the machines (WinCC)

High performance networking

- Via Industrial Ethernet for PLC to server connection
- Via TCP/IP for server - PC - client connection
- Via dedicated line connection for server - data processing center connection