

Line with Product traceability

Customer profile

Food manufacturer in Western Europe with several production lines.

Starting position

The existing production lines are controlled by many individual control systems that partially operate autonomously or are complexly linked with each other.

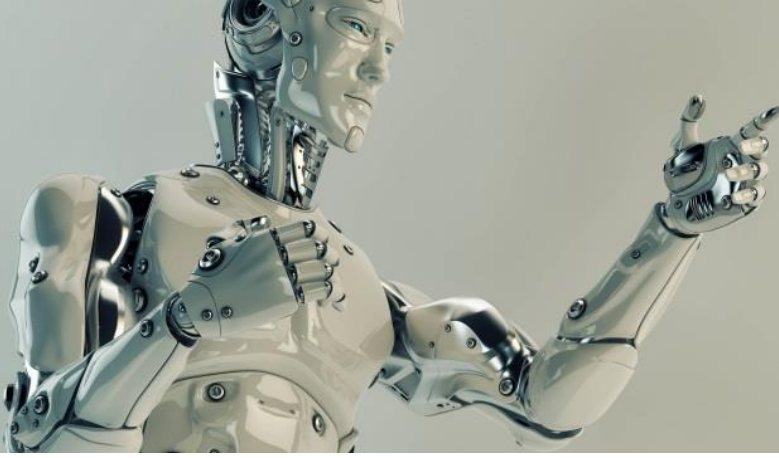
There is no product traceability available. A new production line with product traceability throughout the line shall be installed.

Additional requirements

- Conceptual approach for the control of the entire plant and the product traceability
- Other parts of the plant shall be seamlessly integrated later on
- Interfaces to existing control systems and later on to ERP
- Implement customer specific requirements

Our method

- Perform Pre-Engineering
 - Record the actual situation (Product flows, processes, existing control systems and their interfaces, etc.)
 - Define target situation, mainly for the product traceability (which data must be collected where, respectively displayed)
 - Project plan for a phased implementation
- Design basic concept for the control system of the entire plant
- Create basic concept for the product traceability throughout the entire plant (uniform definitions for tanks and lots, identification of products, use of barcode scanners and printers, operating stations, specific treatments of liquid and solid products, mechanical adjustments such as additional sensors and tandem tanks, adjustments to administrative processes, etc.)
- Work out the specification for the new control system
- Develop the software
- In-house test and pre acceptance test
- Commissioning including process optimization, customer training and acceptance test
- Gradual implementation of further phases



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Concept / solution

- Server/Client system for operating stations
- Standby server with data replication
- WinCC for the visualisation and operation
- 3 PLC S7-400, 6 PC operating stations
- Barcode scanners and local operating stations where necessary
- All operating stations networked via Ethernet
- Intelligent devices linked via Profibus
- On each operating station all parts of the plant can be viewed and operated via a password
- Managing job lists and plant parameters, silo management, recipe management, display of historical data, recording of all events and errors, statistical analysis, etc. are included by default
- Maintenance computer with the PLC programming environment and a visualisation independent from the server
- Remote support via VPN

Customer benefits

- Gradual integration of existing and new parts of the plant into a future oriented concept. Small initial investment and investment can be spread over several years
- Secure production
- Easy to use
- Production data available at any time and at any place
- Quick overview where which ingredients in which quantity were used
- In the final stage: product traceability throughout the plant, from the goods intake to the finished product
- Allows rapid and targeted product recall, if necessary
- Plant information available for optimal maintenance
- Project accompaniment by the same partner over several years

