



NAME OF THE PROJECT

Manufacturing Execution System (MES)

FIELD

Food

LOCATIONS

United States and Canada

YEAR OF ACHIEVEMENT

Ongoing since 2013

Context

As part of a project to install a new ERP software, the customer saw the advantage of also deploying a Manufacturing Execution System (MES). Since it was programmed prior to the deployment of the new SAP ERP, the MES system was first deployed with the existing ERP system (PeopleSoft) and was later adapted to correspond to the needs of the SAP system. The MES solution is identical in all the customer's plants (US and Canada), which simplifies the operations management and the understanding of the system by all involved with it.

Mandate

One of the goals of the MES project was that no ERP screens would be installed in the production area. As such, the communication between the MES and ERP needed to be automatic and transparent for the operators. The same guiding principles were used when setting up the communication between the MES, SCADA and PLCs, so that new production orders would be automatically launched with the information received from SAP. The project was managed using the Agile method, with a deployment of new functionalities every three weeks. Finally, in support of the project deployment, PCI also set up a dedicated support hot line with a team providing 24/7 support to the operators, answering any questions and helping solve any problems they might have. Along with the help provided to the operators, the support team can provide the development team with useful information about the problems encountered by the operators. Corrections or improvements can then be deployed in the next cycle.

Solutions provided by PCI

- Production orders for intermediate Work-in-Progress materials sequenced according to the scheduling requirements of the finished goods
- Planning of the production orders based on available raw materials
- Quality management
- Maintenance management
- Inventory control and traceability
- Implementation of a portal for production reports, accessible both to operators and management
- Automated communication between the various software layers in the production environment:
 - SAP-MES
 - MES-SCADA
 - SCADA-PLC

Tools and methods used

- GE Proficy MES suite (Workflow, Plant Applications)
- SQL database, SSRS
- Allen-Bradley PLCs
- GE Proficy iFix SCADA
- Control panel design using ePlan software