

PMS Application Case Study: Glanbia

Background

Glanbia is a major international Dairy, Consumer Foods and Nutritional Products company. The Ballyragget site in Ireland is the flagship within the group and is a multi-plant production facility employing 330 people in the manufacture of cheese, butter, whey and casein. The site processes up to 1 million gallons of milk per day during peak production.

Problem

Glanbia undertook a strategic review of site operations in 2008. This review identified the need for an MES/EMI system to provide a “single version of the truth” and underpin operational excellence activities on the site.

Constraints

The problem was that Glanbia had invested in SAP at the enterprise level while at the PCS level a Sattline system operated. In between there was a multiplicity of spreadsheets, operator logs and manual recording which made the management of production and performance difficult due to inaccuracy and latency in the data. There was a lack of analytic tools to identify and exploit opportunities for improvement. In addition the plants were run on a semi continuous basis so that it was difficult to break production up into batches for the purpose of traceability and performance management.

Key Requirements

Glanbia wanted to:

- improve operations visibility
- improve performance visibility
- improve efficiency and performance of manufacturing assets
- improve quality right first time and regulatory compliance
- improve stock recording and reduce waste and losses through mass balance of milk constituents.
- reduce energy and utilities' costs and comply with environmental regulations
- drive continuous improvement
- reduce labour costs
- create a step change in the business from average to predictable excellence
- streamline production workflow.

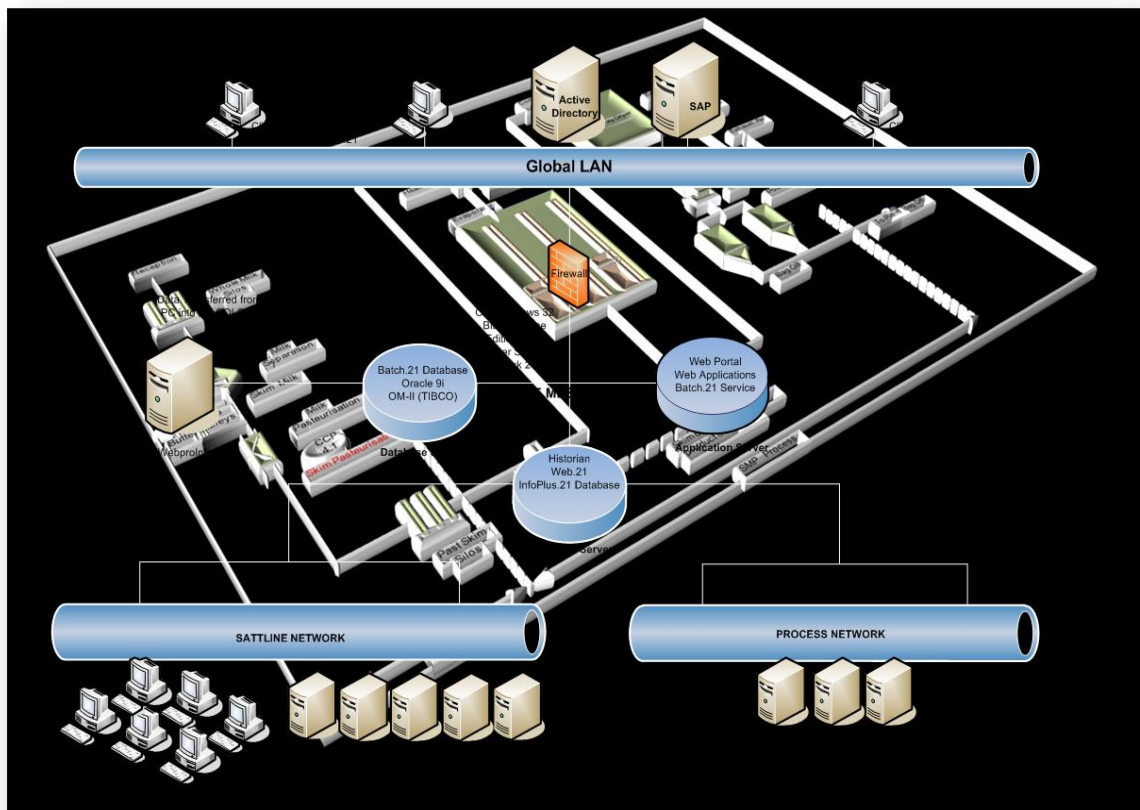
Solution

Orbis worked with Glanbia to define a PMS solution for the site and select an appropriate foundation technology. After an extensive market search the Aspentech AMS Suite was selected. The main reasons were that the Aspentech foundation layer incorporated a Production Record Manager which allowed Glanbia to use batch production.

Orbis configured the multi-plant processes as objects in the Production Record Manager and integrated these production events with the Infoplus21 Process Historian. This constituted the foundation layer for the overall solution.

Above the foundation layer Orbis developed a PMS template comprising a data warehouse and a suite of analytic modules based on Microsoft Analytic Services. The modules included Track & Trace, Performance Scorecard (KPI Viewer), Performance Monitor (Checker Boards) and OEE Monitor. Additional monitoring such as Utilities, Quality and Mass Balance are delivered via the Reporting Services functionality. The user interface is a Site Portal based on Microsoft Sharepoint with role based visualisation.

Layout



Benefits

The mind-set of the users changed. Interest in improving the process has increased and users are using intelligence to improve the way they move the product through the process, providing better throughput and more effective process control.

- It is anticipated that OEE will help to identify bottlenecks in the processes and improve the utilisation of these bottlenecks.
- Mass Balance has helped identify and eliminate waste and losses
- The PMS solution has helped to identify and enable corrective actions be taken to resolve some long standing historical quality issues.
- Site investigations have greatly improved with significantly better and more timely information. This was the case when a Site C.O.D review was undertaken.
- The system has greatly advanced Glanbia's capability for problem investigation and resolution.

About Orbis

Orbis MES is a systems integrator specialising in the design, build and delivery of advanced PMS solution for the Food & Beverage industry. Orbis works closely with a number of major players including:

- Diageo
- SAB-Miller
- Carlsberg
- Kerry Foods

The Orbis MES team of consultants, process engineers, information technologists and industry experts has over 100 years of combined experience working with this sector.

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