



DIGITALIZING DAIRY: HOW DAIRYGOLD TRANSFORMED WAREHOUSE OPERATIONS WITH ORACLE MSCA

Abstract

Efficient warehouse management is crucial for the dairy industry, where traceability, inventory accuracy, and compliance play a vital role. This case study explores how Infosys implemented Oracle Mobile Supply Chain Applications (MSCA) to modernize Dairygold's warehouse operations, addressing complex challenges in traceability, grading, shelf-life management, inventory tracking, and containerization. Dairygold, Ireland's second-largest dairy cooperative, relied on manual, paper-based processes that resulted in inefficiencies and errors. Infosys designed and deployed a customized Oracle MSCA solution that seamlessly integrated with Dairygold's operations, providing real-time inventory tracking, ensuring compliance with industry standards, and enhancing operational flexibility. The transformation enabled paperless workflows, improved accuracy, and boosted warehouse efficiency, positioning Dairygold for greater scalability and supply chain resilience.

Client Background

Founded in 1990 through the merger of two of Cork's largest dairy cooperatives, Dairygold is a leading supplier of premium cheeses and dairy nutritionals, including infant formulas and protein powders derived from milk whey and casein. Operating in over 50 countries, the company has manufacturing facilities in Ireland and the United Kingdom (UK), with several international sales offices. In 2023, Dairygold reported revenues of €1.4 billion, making it Ireland's largest farmer-owned cooperative.

Business Objectives

Dairygold aimed to transform its warehouse operations by addressing several key business objectives:

- **Improve inventory accuracy:** Receiving goods, inventory management, and shipping transactions were previously recorded on paper and entered into the Oracle system at the end of shifts (EOS) or the end of day (EOD), resulting in stale data and frequent errors. The goal was to transition to real-time, system-based transaction processing to enhance accuracy and reduce discrepancies.
- **Replace legacy systems:** Many components of the existing manufacturing execution system (MES) were custom-built and approaching end-of-life (EOL). Dairygold sought to replace these with a standardized solution based on Oracle E-Business Suite (EBS).
- **Comply with industry standards:** New solution components, such as barcode labels, were mandated to follow industry standards to ensure seamless data exchange across the supply chain. This included compliance with the Uniform Code Council/European Article Number 128 (UCC/EAN-128), now known as GS1 128, so that data captured by one entity in the supply chain could be universally recognized and processed by all others.
- **Support custom processes:** Dairygold operates with several industry-specific workflows critical to its daily operations. The Oracle MSCA solution needed to integrate seamlessly with these custom processes without disrupting business continuity.



Infosys as a Strategic Partner

Infosys worked closely with Dairygold business users to understand their unique needs. This partnership led to the design of a tailored solution based on Oracle MSCA modules. With extensive expertise in implementations, Infosys successfully delivered and deployed the solution across four manufacturing sites serving the cheese and powder businesses.

By leveraging its in-depth knowledge of the mobile supply chain technology stack, Infosys enabled key capabilities through personalization and development, eliminating the need for additional bolt-on tools. It also introduced an innovative label-creation approach that eliminated the dependence on intermediate label printing software.

Key Challenges

While implementing the solution, Infosys had to overcome several obstacles:

- **Aligning standard solutions with custom workflows:** Dairygold's operations required modifications to Oracle MSCA to fit its existing processes without disrupting operational efficiency.
- **Integrating with MES and label printing systems:** The solution required seamless integration with label printers and MES applications to support traceability and barcode generation.
- **Ensuring compliance while managing barcode data volume:** The labels and scanning processes had to comply with UCC/EAN-128 while efficiently and seamlessly managing large volumes of encoded data across the supply chain.
- **Minimizing additional licensing costs:** The project had to stay within budget by eliminating reliance on third-party barcode printing software, thereby also avoiding additional licensing expenses.
- **Enhancing system performance:** The new system needed to support high transaction volumes without affecting warehouse productivity.



Infosys Solution

To address Dairygold's unique operational challenges, Infosys implemented a tailored Oracle MSCA solution, focusing on the following key components:

- **Deploying Oracle MSCA on Android handheld devices and forklift-mounted tablets:** This implementation enabled real-time transaction processing for inventory, procurement, and order management. Most transactions could now be performed instantly, requiring only one-time data entry.
- **Customizing MSCA screens to streamline workflows:** The first Conference Room Pilot (CRP1) and fit-gap analysis identified opportunities to reduce keystrokes and simplify several standard Oracle screens based on Dairygold's specific operational requirements. Using a systematic design decision process, Infosys compared MSCA customizations against Intellinum bolt-on solutions. Opting for MSCA customizations, six screens were modified to seamlessly support Dairygold's processes and minimize manual data entry.
- **Implementing UCC/EAN-128 compliant 2D-barcode labels:** The solution introduced barcode labels that encapsulated essential data required by different MSCA screens. All barcodes and their application identifiers complied with UCC/EAN-128 standards, ensuring seamless integration across the supply chain.
- **Systematic Integrated User Training:** Infosys implemented a structured Train-the-Trainer approach, where Super Users were first trained and then empowered to deliver end-user training. A combination of classroom-based instruction and hands-on sessions using handheld devices ensured the team gained the necessary knowledge, skills, and confidence to effectively adopt the new tools and processes. Additional support sessions were provided as needed to reinforce learning and address specific challenges.

Results and Benefits

The implementation of Oracle MSCA delivered significant improvements across Dairygold's operations:

- **Enhanced inventory accuracy and real-time visibility:** Transactions were performed directly on handheld devices, ensuring up-to-date inventory data. Barcode scanning replaced manual data entry, reducing errors and improving accuracy.
- **Improved warehouse productivity:** Paper-based documents, such as pick lists and allocation data, were replaced with on-screen guidance, streamlining operations and improving efficiency.
- **Simplified system landscape:** Two legacy applications used for label printing and MES capabilities were retired. Their functionalities were seamlessly integrated into Oracle MSCA, eliminating the need for additional software.

Conclusion

By leveraging Oracle MSCA's capabilities and Infosys' expertise, Dairygold successfully transitioned from a manual, paper-based warehouse system to a fully digital, integrated supply chain operation. The new system delivered real-time inventory visibility, increased productivity, and ensured compliance with industry standards. It also eliminated reliance on legacy applications, reducing costs. Dairygold's transformation optimized warehouse efficiency and enhanced business agility, ensuring a robust, accurate, and future-ready supply chain.

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