

Materials -Technology 3 – Full Track and Trace

A full track and trace system is a comprehensive method of monitoring and documenting the movement of products, goods, or items throughout the supply chain. This system is crucial for various industries, including manufacturing, logistics, pharmaceuticals, and food. In the DMC use case, The Track and Trace system is monitoring and documenting an order from inwards goods, ingredients, process, materials and packaging. When Customer A makes a complaint about an order, the Track and Trace system provides details on the production process and ingredients used. The Track and Trace system is also able to report on which other batches used the same tainted ingredient and the receiving customers.

Pros	Cons
<ul style="list-style-type: none"> Improved customer confidence and marketing opportunity. Less business disruption due to accurate product recalls. Respond faster to quality issues with less resources. 	<ul style="list-style-type: none"> Shop floor to ERP integration required. Ingredient movements through the process need to be tracked. Additional effort required when new equipment is added to the process. Plant cleaning needs to be recorded as part of track and trace.

Technology Cost range: \$50,000 - \$200,000, depending on how extensive and elaborate the business process and inputs are. Additional cost may be incurred for licences, hardware and networking.

DMC Technology Cost: \$80,000

DMC Cost Assumptions:

- Limited to single application.
- Existing network infrastructure.
- Existing ERP and MES systems.
- Internal costs for end user staff involvement have not been included.
- Single design and build iteration.

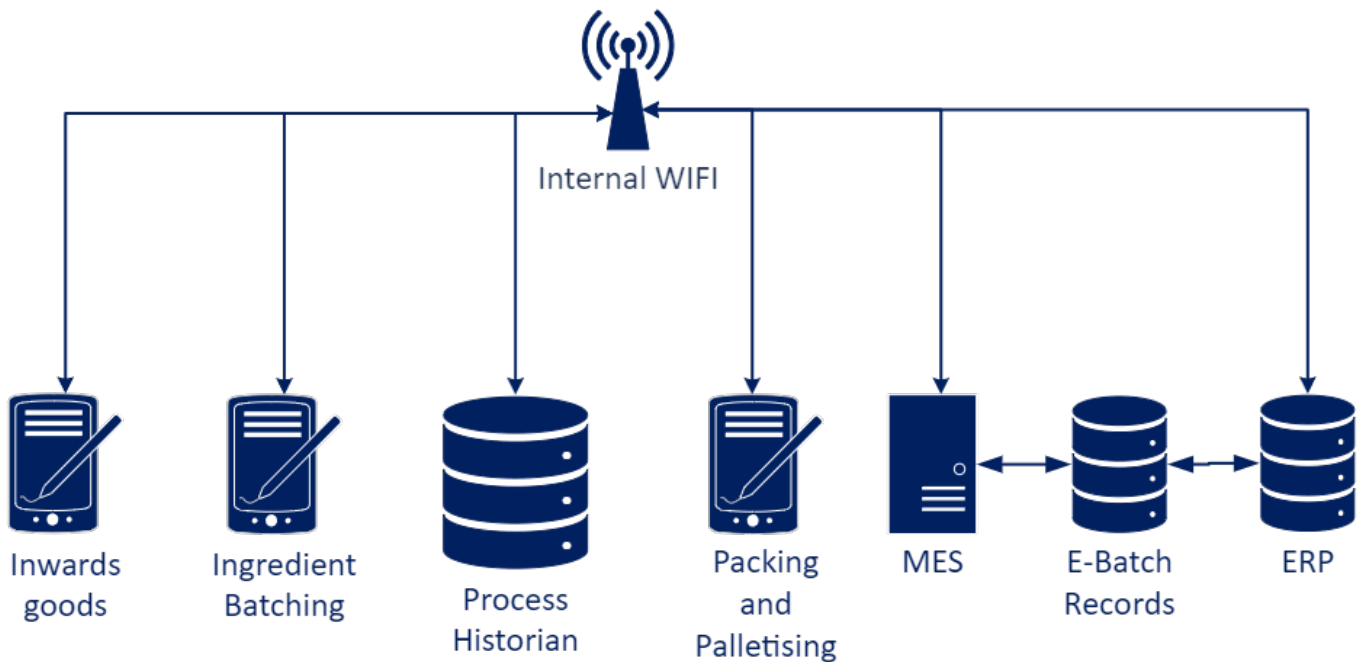
What situation would this technology usually be adopted in? A full track and traceability module enables end-to-end visibility and traceability of products throughout the supply chain. It records and tracks product movements, enabling quick identification of issues, effective recalls, and compliance with regulatory requirements. This technology enhances transparency, builds customer trust, and mitigates risks associated with product quality and safety.

ROI Considerations: Costs may include software licensing, implementation, and integration expenses. Benefits may include reduced recall costs, improved compliance, and enhanced brand reputation contribute to ROI. Full track and traceability modules provide transparency and visibility into product lifecycles, enabling quick issue identification and effective recall management.

What skills are required to implement & run this tech? Staff should be trained in track and trace system operation, data interpretation, and recall management procedures.

Pre-requisites for successful adoption: Preparation involves assessing traceability needs, identifying regulatory requirements, and selecting suitable software solutions.

Typical Tech Stack



Who can help with this technology? System Integrators.

What to google when researching this technology? Research topics include track and trace software platforms, integration options with ERP systems, and regulatory compliance standards. Existing ERP system or equivalents capabilities are being fully utilised before looking externally.