

Consumer Goods

Supply Chain
Efficient Manufacturing
(MES)



an NTT DATA Company



Anticipating **customers needs**
in a **changing** environment

Consumer Goods

Supply Chain - Efficient Manufacturing (MES)

Objective/Challenge



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Manufacturers have been struggling for decades to improve the way they perform their production operations in the manufacturing area along with different approaches. Today's fast-moving marketplace requires an integrated and efficient production structure to facilitate the organization being able to meet the customers dynamic demand in the most efficient way.

An overwhelming share of top performers consider the production processes efficiency enhancement as one of the main drivers that brought them to reach their operational excellence and cost reduction objectives. However, efficiency improvements do not come alone without a solid and reliable data capture structure, appropriate production processes and high added-value IT solutions.

Production environments have to consider a series of aspects to get to the efficiency levels that will keep the organization competitive in the market by:

- Setting up a business process and system's framework based on MES that brings a swiftly flow of information among core business, production plants, warehouses, providers, partners and customers speeding up time-to-market and optimizing the efficiency.
- Gathering the necessary information from production shop floor (PLC signals, OPC tags,..) to escalate on real-time the main indicators that facilitate the identification of bottlenecks, inefficiencies, performance losses, availability problems and quality issues during the productive processes execution.
- Building change management plans to prepare and position the organization towards the new market challenges and the continuous adaptation.
- Establishing the needed conditions for Industry 4.0 initiatives providing the added value information from production.

everis provides an experienced approach that covers all previous aspects in an integrated model and allows the organization to run steady to the new market framework.

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Objective/Challenge

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Production Environment AS-IS Analysis

 - Productive processes detailed analysis among organization plants (materials consumptions, byproducts and goods receipts management, industrial printing and labeling, traceability among batches, orders and work centers, operator hours management, quality and checklist controls, lines maintenance, etc).
 - Production systems landscape assessment (information flow analysis among in-house and providers warehouses, production planners, ERP, MES, SCADA and involved third-parties systems, etc).
 - Shopfloor, backoffice and strategic level KPIs usage.

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TO-BE Production Model Definition & Directives

 - Standardization of plants operations and processes (BPR) under a lean manufacturing approach.
 - Target systems landscape definition (information flow optimization, data assurance to relevant systems, etc) establishing the MES system as the cornerstone that manages the shopfloor production operations.
 - Design automatic line data capture solution to facilitate information gathering (via PLC or OPC tags, automation providers, etc).
 - KPIs framework definition to bring the production operations picture to the business (production efficiency, real-time processes performance, etc).
 - Definition of change management policies.

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Organizational & Processes Adjustments

 - Change management implementation (general and ad-hoc trainings, measures to reduce resistance to change, etc).
 - Productive processes re-engineering through dedicated workshops to complete transition from AS-IS to TO-BE model (reduce steps and manual actions, optimize labor and machine hours, reduce waste and costs, etc).
 - KPIs final framework definition (Overall Equipment Effectiveness, materials and packaging waste, yield, MTBF, MTTR, etc).

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IT Adjustments & Deployment

 - MES system functional and technical design to enable the productive processes execution and interfaces with the other production-related systems (assuring functional coverage, simplifying workflows among systems, etc).
 - Detailed data capture definition to support reliable KPIs (relevant signals identification avoiding non-added value signals, etc).
 - IT system trainings staged in three levels: backoffice, key-users and operators. System's usage audits.
 - MES and IT adaptations deployment to initiate data capture and processing.

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Operation & Continuous Improvement

 - MES registering and providing the online/real-time relevant production information to support operations efficiency enhancements (times, production order and shift OEEs, operators productivity, yield, alerts, ...).
 - Operations stored information as a continuous input for Lean Manufacturing (quality improvement, reduction of delivery times and costs, etc) and key-stone for the new Industry 4.0 paradigm where the smart factory concept will be in the spotlight enabling aspects such as IoT or sensor data aggregation for higher value information. These aspects result in a better decision-taking for quality product improvement, higher machines availability or energy use optimization among others.

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Supply Chain - Agile Manufacturing (MES)

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**Benefits
(qualitative)**

 - Operations control improved by bringing a shopfloor bottom-up picture to the business.
 - Continuous improvement in operations (efficiency improvement, cost and waste reduction, bottlenecks identification,..).
 - Allows operations standardization and benchmarking between plants.
 - Enabler for the continuous improvement, reduces paper use in factories and key to Industry 4.0
 - Increase competitiveness in sector.

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Business Outcomes*

 - 10-20% Production Efficiency ↑
 - 80% Paper ↓

- 3

Why everis?

 - International experience in MES implementations across Europe.
 - Strong partnership with MAPEX (Spanish products MES software leader).
 - Strong FMCG sector knowledge.

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**Key assets & capabilities
(including sw solutions to use)**

 - MAPEX software (there is in place a partnership contract signed between everis and Mapex)

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Key success factors

 - Strong sponsorship by the customer's direction.
 - High involvement of the customers team (key-users).
 - Global project management of everis (managing Mapex resources).
 - Change management plan and execution as some production plants show resistance to changes.

* Based on FMCG Industry benchmarks

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