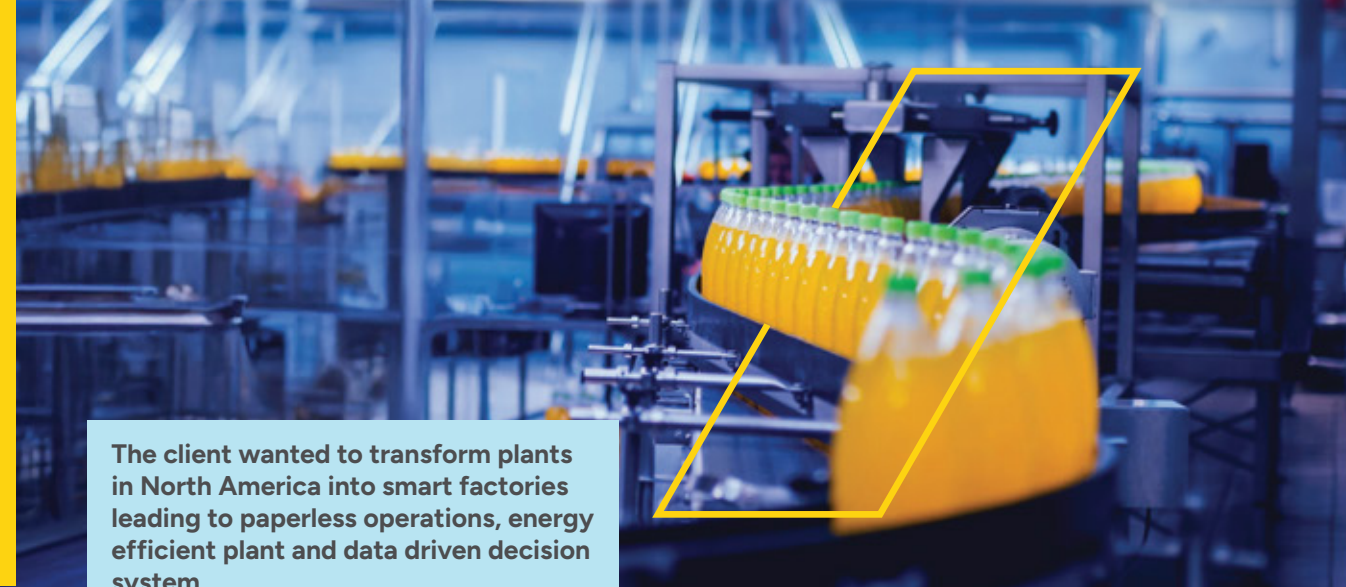


Towards a Smart Factory - Accelerated Operations

Enabled Paperless Factory for a Global CPG Major in US

CASE STUDY



The client wanted to transform plants in North America into smart factories leading to paperless operations, energy efficient plant and data driven decision system.

**Purposeful.
Agile.
Innovation.**

BUSINESS NEED

A CPG major (LTTS customer), with a global presence, wanted to adopt paperless operations for all plant and factory processes including

- Health, Safety and Environment
- Quality
- Production
- Maintenance
- Energy Management
- Condition Based Monitoring
- Audit

The project was a significant step towards enabling digital transformation of factory floors for client's business in North America.

OPERATIONAL CHALLENGES

Owing to the diverse set of operational procedures, statutory requirements and manual review processes, arriving at a baseline solution was challenging.

- High amount of user time to create and capture plant information, compliance data and operation KPIs
- Lack of visibility to energy consumption and sustainability initiatives
- Lack of data driven decision system and analysis
- Delay in actions derived from audits and facility walks

SOLUTION HIGHLIGHTS

Paperless Factory helps the customer to achieve – digitized plant information, process compliance every time, reduced effort of operators for process completion, reduced opportunity cost of downtime and reduced cost of energy.

LTTs leveraged its expertise and relationship with PTC and Rockwell to conceptualize a scalable architecture-based business solution, delivered in pilot plant and is currently proliferating to multiple sites in USA.

Paperless Factory enables users to complete tasks as per compliance norms and track non-compliances in activities real-time. It also provides visualization of schedule, production, downtime, OEE (and efficiency KPIs), utilizing system data and integrating with other plant systems.

Importantly, Paperless Factory creates a single source of truth for all plant information, such as quality parameters, check sheet, machine specification, and makes it accessible in minutes for future reference and audits.

SOLUTION HIGHLIGHTS

- **Data Integration and Historization** – From control systems, other databases
- **Paperless Process** – Forms, checklists, workflows, follow ups, reports, dashboards for Production, Quality, Maintenance, TPM
- **Analysis and Trending** – Completion, Compliance, Analog/ Numeric parameter, RCA
- **Prediction** – Deviations, machine breakdowns
- **Notification** – Contextual, email/ SMS, escalation mechanism



Value driven and a secure OT architecture



End-to-end responsibility - deployment at a 'model plant' and rapid roll-out to



Operational alignment to streamline the needs



Optimized functional design and the number of User Interfaces (UI)

BUSINESS VALUE DELIVERED

- **Complete paperless operations** for all factory processes
- Organization culture shift from **Information creation** to **Information analysis**
- Savings in **energy consumption**
- **Predictive maintenance** with **reduced cost** of ownership of critical assets
- **Time saving for operators** – 2 hours for quality technician/ day, 1 hour for production operator/ day, 30 mins – 1 hour for Production/ Quality supervisors
- **Improvement of runtime compliance** – 80 - 90%



Completely paperless operations



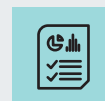
GLOCAL solution covering Global standards at NA



Iterative approach with end users



Remote assessment as part of FRS



90% Remote