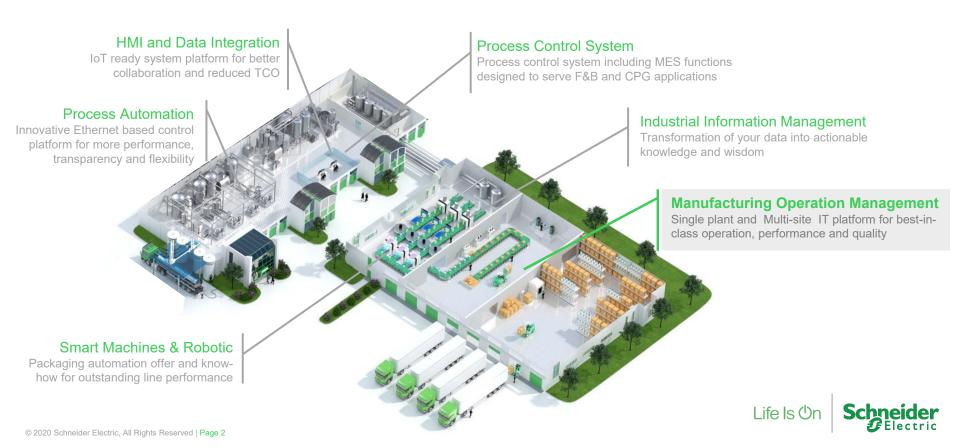


Agile Manufacturing

Transforming operations to improve flexibility and profitability



The different steps of Operation Management benefits

(1) SEE:
Reveals the
"hidden factory"



(2) ACT: Automates work orchestration

- / Right Order
- √ Right Recipe
- ✓ Right Equipment
- ✓ Right Quality
- ✓ Right Quantity
- ✓ Right Time
- ✓ Right Cost

(3) **OPTIMIZE:**Brings strategy to real-time execution

Performance

Production

Quality

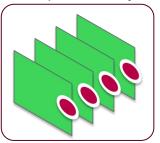
Inventory

Maintenance

Utilities

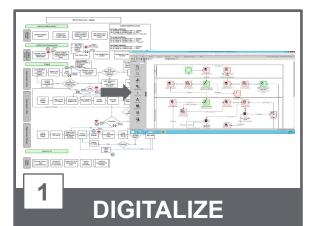
(4) SCALE: Speed & ease of standardization

Standard Solution Template Library





The model driven approach

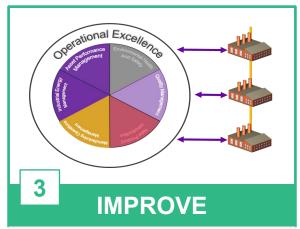


Capture manufacturing processes and collaborations and digitalize them using low code technology

Transform how work is done in the plant



Manage best practices, KPI's, product specifications and compliance and safety data between sites



Continuous improvement of processes based on rich data collection with governed change management



The model driven approach

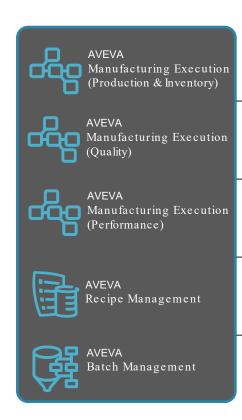
The solution

Includes market leading Manufacturing execution, recipe management and batch offerings

- Provides a process-based approach, where work practices, business rules and associated UIs are defined graphically into application models
- Able to be easily modified to meet operational requirements without re-programming
- · Reliable integration with other IT systems, using the Enterprise Integrator framework and plug-ins



Operational activities description



- Paperless Work Order and Product Specification Management.
- Real-Time Visibility to Production and Inventory activities
- Comprehensive Electronic Manufacturing Genealogy and Material Traceability
- Dynamic Quality Sample Plan generation and enforcement based on Work Order Specification (Product and Process)
- SPC Alerting and Charts to Identify and Correct Quality Deviations in Real-Time
- Detect, Capture & View Utilization Events
- Real-Time Visibility to Line and Equipment Production Performance
- Enables Root-Cause Analysis of Capacity losses
- Recipe Management Standardization across multiple Automation Systems
- Equipment Formula Management and Recipe Procedure Management
- Role based Security, Recipe Versioning and Approval
- Flexible Recipe Management and Batch Scheduling
- Material Management and Traceability
- Electronic Batch Records and Reports with Support for FDA 21 CFR Part 11



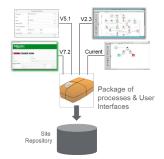
The model driven approach

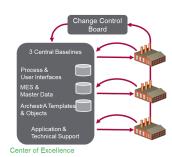
Business Value

- 30% Quality Improvement
- 30% More Equipment Uptime
- 20% Reduction in Manufacturing costs
- 10% Increased Productivity
- 20% OEE Improvement

Learn more









Advanced Planning & Scheduling

A digital nervous system to quickly adapt value chains to dynamic market conditions

 Whether you have plants and warehouses around the world or in a single location with PlanetTogether production planning and scheduling, you'll have demand, capacity and inventory visibility to help you get ahead of whatever changes are coming your way.

Business values:

- Grow sales with quicker production lead-times
- Cut inventory by aligning manufacturing with demand
- Reduce unit costs with more efficient production runs
- Improve decisions with capacity visibility and scenarios and Analytics









- Cans with missing labels: mislabeling instances and product recalls
- Finished product losses due to manufacturing issues
- Difficulty in process optimization and continuous improvement projects due to minimal plant data collection
- Existing SPC software was out-of-date and not integrated with the ERP system
- Significant inaccuracy in using master data across multiple systems and heterogenous plant environments

The Solution

- System Platform
- InTouch HMI
- · MES Quality / Operations
- Workflow Management

Customer Benefits

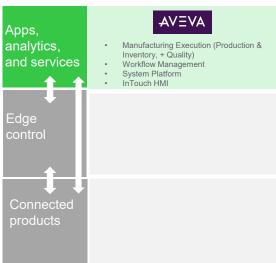
- 3% Reduction in material costs
- **75** additional CI projects a year (accelerate continuous improvement efforts)
- Quality solution with mislabeling module: verifies and validates unit and case level labeling
- Achieves manual, semi-automatic and automatic inat-line sampling with validation against specifications

The Results: Life is On with... 25% Decrease in product give-away

Link to Video

Global food company making a range of high-quality soups and simple meals, beverages, snacks and packaged fresh foods.









- Achieve high level of product quality consistency: difficult tracking & tracing issues related to quality due to paper-based reporting
- Complete its fully-automated smart factory

The Solution

- System Platform
- InTouch HMI
- MES Performance & Operations

Customer Benefits

- Empowered workers with enhanced visibility on the production lines.
- InTouch ensures that a 3,000 quintal batch looks, smells, and tastes identical to a 1 liter sample.

The Results: Life is On with... increased yield, with 32 million bottles of olive oil produced each year

"Food safety also means avoiding cross-contamination within the lines. So, knowing the pipeline is a process that works exactly like it's supposed to, it's an important safety guarantee". Andrea Violetti

Andrea Violetti Director General Farchioni Olii Italy's leading producer of olive oil.









- Enable quality tracking
- Facilitate connectivity of plant operations to industrial automation devices, computers and laboratory
- Reduce the total cost of ownership

The Solution

- MES Quality
- System Platform
- Historian

Customer Benefits

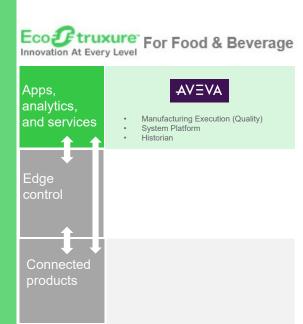
- Reduced quality traceability time from 4 hours to 1 minute
- Achieved production goal of 2,500 cans a minute (3 million cans a day)
- Attained "100% First-Time Quality"

The Results: Life is On with... ROI attained within 1 year

"We have comprehensive control of our manufacturing operations to ensure product quality and control"

Somchai Khwahar Production Manage F&N Dairie

<u>Link to Web</u> <u>Link to Video</u> Producing 24 million cases of food and beverage a year







- Improve plant technology while maintaining the product quality
- Upgrade path of automation as plant needs evolve

The Solution

- System Platform
- InTouch HMI
- Historian
- InBatch

Customer Benefits

- Ease of use allowing increased efficiency in operation
- Consistent control of the processes across all plants
- Reliable product quality due to automation
- Real-time information allowing preventive actions
- Rapid trouble-shooting of plant inefficiencies

The Results: Life is On with...Controlled recipe procedures & execution allowing more production batches

"With regards to metrics, what we're seeing is consistency in throughput. We are able to tell when problematic areas arise and by having it automated, we are able to take preventive action in order to maintain consistent operation."

Harry Crigler

Distillery Operations Manager

Largest spirit company in the USA, founded in 1775



Connected





Maple Leaf Foods, Canada

Improving Food quality and safety through automation





Customer Challenge

- Implement a standardized automation solution in all the production sites through a scale-up approach.
- Provide an efficient solution that needs limited energy and primary resources to produce a high quality product

The Solution

Line Performance

Customer Benefits

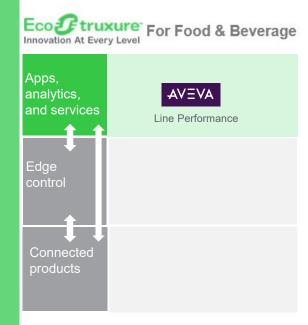
- Standardized solution on each production site
- Real-time and instant data available for better maintenance reactivity, waste management and production
- Solution easy to understand by the business group
- Easy implementation and use of the solution
- Easy integration of MES with the current ERP (SAP)

The Results: Life is On with... An automated performance management solution

"Our approach is to design an automation system that is flexible enough to deal with day to day variance."

Dave Eckart

<u>Link to Video 1</u> <u>Link to Video 2</u> Leading consumer protein company making high quality, innovative products. The company also operates in the refrigerated plant protein category. The company operates 25 sites in Canada and one in USA.





Graphic Packaging International

Improving supply chain visibility and efficiency



Customer Challenge

- · Lack of changeover visibility
- Scheduling Errors
- Reliance on tribal knowledge
- Lack of forward-looking capacity utilization to be able to commit capacity to customers

The Solution

 Planet Together Advanced Planning and Scheduling (APS)

Customer Benefits

- 6% reduction on unit costs due to increased OEE
- \$16M in annual saving
- Scheduling decisions are based on automation and company KPIs rather than intuition

The Results: Life is On with... More efficient supply chain

"Scheduling and Planning is one of the most overlooked opportunities in the manufacturing industry today. The impact goes well beyond the ability to drive results you can see in your P&L, but into your culture and how work gets

Dean Dietrich
VP Operations
Graphics Packaging International

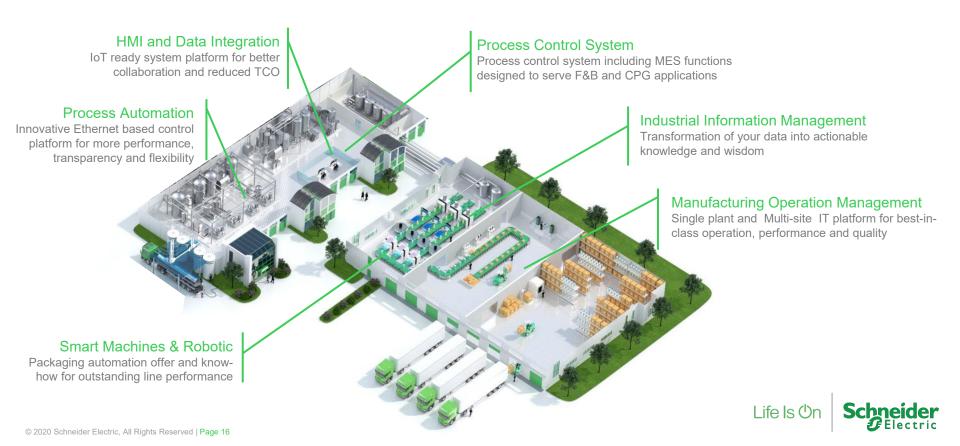
One of the world's largest packaging manufacturers operating 30 plants in USA, Canada and Mexico





Agile Manufacturing

Transforming operations to improve flexibility and profitability



EcoStruxure for Food & Beverage / CPG

Agile manufacturing Boost manufacturing flexibility and efficiency

Manufacturing Operation Management

Industrial Information Management

Process Control System

HMI and data Integration

Process Automation

Packaging Automation

Efficient facilities Safer, more available, and greener resources

Smart Building Management

Power Safety & Availability

Power Quality & efficiency

Renewable Energy & Microgrids

IT Infrastructure Management

Resilient supply chain Manage complexity and reduce logistics costs

Agriculture Efficiency & Sustainability

Suppliers Management

Supply Chain Optimization

Cold Chain Monitoring

Product Information Management

Food Safety & Traceability Ensure compliance and trust across the product life cycle

Energy & Sustainability Reduce footprint and meet sustainability goals

Asset Performance Maximize return on capital expenditure

Workforce Empowerment Improve staff knowledge, productivity and collaboration

Digital Engineering Cut time, cost and risks of capital project engineering

Food Defense

Sustainability Consulting

Assessment and Consulting

Operator Training Simulator

Flectrical CAD

Energy Demand Services

Enterprise Asset Management

Augmented & Virtual Reality

Building Information Modelling

Digital Calibration

Strategic Energy Sourcing

Condition Monitoring

Workflow Management Staff Schedule Management

Integrated Engineering-Design

Raw material traceability

Cybersecurity Services

Enterprise data management

Predictive Analytics

Modernization services

Digital Asset Visualization

Production traceability

Energy as a Service

Line & Process Optimization

Operator Knowledge Sharing

Life Is On



Product Identification & Tracking



Life Is On Schneider