Food Safety & Traceability

EcoStruxure™ enables trust in the Food & Beverage, Household and Personal Care industries
Our mission is to be your digital partner for Sustainability and Efficiency
Rethinking next generation industries: business resilience and sustainability performance for lifecycle integrated management
We help on every step of the value chain

Efficient facilities
Safer, more available, and greener resources

Resilient supply chain
Manage complexity and improve visibility

Agile manufacturing
Boost manufacturing flexibility & efficiency
… enabled by transversal digital transformation capabilities

Food Safety & Traceability
Ensure compliance and increase trust across the whole value chain

Energy & Sustainability
Reduce environmental footprint and meet sustainability goals

Asset Performance
Maximize return on asset investment

Workforce Empowerment
Take teams efficiency to the next level

Digital Engineering
Cut time, cost and risks of capital project engineering
Ensure compliance and trust across the product life cycle

Manage your suppliers
Get visibility into your entire suppliers’s network, check their compliance and identify your risks

Digitize your compliance
Automatically document evidence of proper operation using digital tools and workflows

Reinforce your Food Defense
Protect your facilities from any unauthorized physical or cyber access

Monitor downstream logistics
Track and trace products and critical control points to guarantee product safety and protect your brand image.

Achieve End to End traceability
Increase visibility across your entire Value Chain, from raw materials to finished goods to improve transparency and trust for your end-consumers.

Build a credible Value Chain
Up to 75% time reduction in compliance

Achieve Best-in-class defence in depth

Up to 100% first time good quality

Ensure consumer trust

© 2020 Schneider Electric, All Rights Reserved | Page 6
Food Safety & Traceability

Ensure compliance and trust across the product life cycle

- **End to End Traceability**
  - Increase visibility across your entire supply chain to build a sustainable Value Chain

- **Digitize your compliance**
  - Automatically document evidence of proper operation using digital tools and workflows

- **Suppliers Information Management**
  - Get visibility into your entire suppliers' network, check their compliance and identify your risks

- **Food Defense & Cybersecurity**
  - Protect your facilities from any unauthorized access and ensure the right in-depth defense for your IT and OT systems

- **Monitor downstream logistics**
  - Manage efficiently your assets tracking, performance and maintenance to optimize your supply chain logistics
Digitize your compliance
Automatically document evidence of proper operation using digital tools and workflows

- Manage calibration requirements
  Plan, perform, approve and centrally manage instruments compliance tests performed by technicians. Be audit-ready with a robust scheduling and testing process.

- Securely collect and analyze operation data on process, product and people
  Visualize full production and process history, identify the equipment of production, recognize the workers and teams and track material usage and genealogy, record measurements, samples, and tests done on products.

- Digitize your Standard Operating Procedures
  Replace inefficient paperwork with a digital user experience and workflow automation and empower workers to execute work and data collection tasks in a more efficient, collaborative and secure way.
## Traceability - Regulation & Compliance

Specific solutions answering regulation and standards requirements

<table>
<thead>
<tr>
<th>HACCP/Standards Requirements</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Control Points</td>
<td>Process control</td>
</tr>
<tr>
<td>Equipment Design &amp; Maintenance</td>
<td>Digital Engineering</td>
</tr>
<tr>
<td>Devices calibration</td>
<td>Connected sensors</td>
</tr>
<tr>
<td>Documentation record</td>
<td>Digital Recorders for critical data</td>
</tr>
<tr>
<td>Traceability</td>
<td>EcoStruxure Clean-in-Place Advisor</td>
</tr>
<tr>
<td>Personnel Training</td>
<td>Operator Training Simulation</td>
</tr>
<tr>
<td>Food Defence</td>
<td>Cybersecurity</td>
</tr>
</tbody>
</table>
The Solution

- Integrated recording device and central process control system
- Monitor and record data for critical process parameters such as pasteurization
- Secure tamper-resistant data collection
- Ideal for regulated industries, quality performance, traceable and quality Audited

Business value

- Facilitate quality audits
- Paperless recording with data archiving
- Support PMO (Pasteurization Milk ordinance)
- Compliant with HACCP and standard requirements
Customer Challenge
• Supply of Data recording equipment to meet PMO (Pasteurized Milk Ordinance) regulations

The Solution
• Eurotherm 6180A fully loaded with batch, screen builder, EthernetIP and full auditor package supplied, installed by our solutions group into stainless steel enclosure, logging from the legal control and external sources

Customer Benefits
• Partner with regulatory knowledge in a validated environment, understanding of PMO

The Results:
Life is On with... Safe food production environment
EcoStruxure Manufacturing Compliance Advisor

Manage compliance & calibration requirements more efficiently

The solution

• A cloud hosted digital services platform, focusing on asset compliance, designed to **reduce testing costs**, increase productivity and be **audit-ready** with a robust scheduling and testing process.

• Agnostic Test Capabilities

• Cross Organization Collaboration

• Defined Workflows

• Actionable Compliance Status

Business value

Efficiently manage compliance requirements and enjoy online access to your data.

• Minimize Testing Costs

• Optimize Test Productivity

• Aid Regulatory Compliance Process

• Help Reduce Operational Costs

Learn more
Customer Challenge
• Grow the calibration business by enhancing the value provided to end customers with a more efficient digital solution that minimizes data input error.
• Neal Systems sought improvements to their outdated pen and paper calibration service that required lengthy certification turnaround times leaving their clients more vulnerable during an audit.

The Solution
• EcoStruxure™ Manufacturing Compliance Advisor enables users to efficiently manage compliance requirements and provides an affordable, more reliable and accessible service.

Customer Benefits
• Elimination of pre and post site work
• Reduced re-work
• Instant access to the documents, via QR code
• Peace of mind for technician as the test workflow guides them through the process
• Ability to scale and expand client base

The Results: Life is On with...
Process efficiency at NO cost for end-customers

“It only took seconds to realize that the cost per year was paid back multiple times over in goodwill with the customer and our own time savings in not having to be constantly chasing things.”

Stephen Arnold V.P. of Solutions Neal Systems

Neal Systems Incorporated (NSI) is a well-established technical supplier and solutions provider of plant/process automation services and equipment. Through each of their field based technicians more than 1,000 calibration tests are performed per year, plus additional test procedures.
System Platform

Responsive real-time Operations Control Platform for supervisory, HMI, SCADA and IIoT

The solution

• Collaborative, standards-based foundation that enables enterprise-wide standards compliance across processes, functional teams, and sites.
• Object-oriented implementations adding universal context to real-time processes, alarms, events, and archived historical data across disparate business systems
• Advanced graphics & visualization capabilities

Business value

Visualize Full Production History

• Provide process history incl. temperatures through product creation
• Identify the equipment the product was made on
• Recognize the workers and teams that worked on the product
• Record measurements, samples, and tests done on products
• Record the complete material and process history of a product
Customer Challenge
- Needed a powerful & flexible platform to create templates

The Solution
- AVEVA System Platform
- AVEVA Historian

Customer Benefits
- Flexibility to process data quickly & record them at any time
- Quickly identify the problems that occur during production and fix them within a short time by monitoring the deviations
- Monitoring of equipment and applications allowed an increase of the OEE by improving the machine coordination

The Results: Life is On with... Increased Product Quality & traceability to end-users.

Link to Web
Link to Video
Batch management

Effectively manages flexible batch operations for increased product quality

Key Capabilities

• Provides recipe execution management and automatic capture and storage of all batch execution data.
• Associates the batch execution and equipment history with full product genealogy and material traceability.
• Facilitates the design and implementation of Batch Management systems, applications and solutions that comply with regulations such as FDA 21 CFR Part 11
• Built-in security and material management capabilities (incl. material consumption, movements, and inventory levels) contributing to a detailed electronic batch record (EBR) that complies with regulatory requirements.

Business Value

• +30% Quality Improvement
• Consistent quality to recipe specifications, helping eliminate paper records and reduce batch release cycles
• Reduce risk associated with complex products and product variations
• Empower process engineers to create and modify recipes
• Faster time to market for new products introduction
• Reduce cost of regulatory compliance
• Multi-site recipe and batch management standardization
Customer Challenge
• Develop an evolutive and flexible solution to integrate future requirements of the plant
• Make data available in order to better monitor the equipment
• Improve the traceability and the repeatability of recipes

The Solution
• AVEVA System Platform
• AVEVA Manufacturing Execution System (MES)
• AVEVA InTouch HMI
• AVEVA Batch Management
• AVEVA Historian

Customer Benefits
• Improved Total Cost of Ownership
• Progressive implementation of the solutions with the plant evolution (from 2000 to 2016, production triple)
• Centralized solution
• Better maintenance and security of the solution

The Results: Life is On with... Increased traceability (from paper to automatic)
Manufacturing Execution System (MES)

Key Capabilities
- Paperless Work Order and Product Specification Mgmt.
- Real-Time Visibility to Production and Inventory activities
- Business Rules to secure Quality to Specification
- Comprehensive Electronic Manufacturing Genealogy and Material Traceability

Business Value
- 20 to 30% Quality Improvement
- Ability to capture full material history
- Record material details
- Understand materials or lots used in specific batches of products
- Empower Supply Chain Applications
- Enforce Compliance & Governance
- Foundation for Agile Production Processes: improved operational performance, optimal regulatory compliance, transparency across your supply chain, and increased plant-to-enterprise interoperability.

"The most important impact of MES was traceability, visibility, compliance, and data exchange between SAP.”
Source: Engineer, Fortune 500 Food and Beverage Company – Tech Validate, AVEVA

Learn more
Customer Challenge
• Implement a standard tool to follow the performance and traceability of the “disgorgement” step in champagne production
• Interface solution with ERP and production tools

The Solution
• AVEVA System Platform
• AVEVA Manufacturing Execution System (MES)
• AVEVA Historian

Customer Benefits
• High level of integration into current information system
• Traceability report in place at batch level
• Performance report allowing follow up of end of production and machine defaults

The Results: Life is On with... Increased Batch traceability
Customer Challenge
- Produce better quality products
- Brand protection
- Focus on quality tools to help make better business decision

The Solution
- AVEVA Manufacturing Execution System
- AVEVA Work Tasks

Customer Benefits
- Food Safety Modernization Act (FSMA) support
- Increased reporting and inventory management accuracy
- Increased workforce efficiency through mobile solutions for material receiving, labeling and material consumption
- Efficient withdrawals of items in minutes thanks to lot number traceability and genealogy for ingredients.
- Improved quality and inventory management

Life is On with... Genealogy tracking/material traceability down from 2.5 hours to 10 minutes
Customer Challenge
• Accelerate Operations strategy
• Improve efficiency and flexibility of operations globally leveraging digital technologies and solutions
• Build strong foundations: Cybersecurity, MES, Data Architecture & Models, to avoid silos and customization per site
• Drive People Transformation: Operation Excellence maturity level is key

The Solution
• AVEVA* Manufacturing Execution System (MES)
• Schneider Electric Digital Transformation Consulting Services

Customer Benefits
• Build a Core model MES system
• Definition of one standard interface with ERP modules
• Covering 20 Standard functionalities, serving Quality (preserving traceability), Finance (reporting accurate factory usage), Production (measuring true performance), Digital (providing a foundation)
• Roll out planned within next 5 years to the entire operations
• Model-driven template
• Compliance to FDA and Chinese regulation

The Results: Life is On with... Supporting the Digital Transformation Journey of global operations

Link to Video

One of the Global Leading Dairy company.

* The Schneider Electric industrial software business and AVEVA have merged to trade as AVEVA Group plc, a UK listed company. The Schneider Electric and Life is On trademarks are owned by Schneider Electric and are being licensed to AVEVA by Schneider Electric.
EcoStruxure™ Clean-in-Place Advisor
Complete solution to track and tune your CIP operations

The solution
• CIP assessment - Optimization tool
• Product loss monitoring tool
• Energy monitoring and reports services
• Typical payback from 6 – 8 months

Business value
• Reduced environmental footprint: up to 30% energy, water & chemical savings
• Higher productivity: up to 15%
• Document evidence of proper cleaning

Learn more
Customer Challenges

• Empower workforce with convenient diagnostic tool that’s easy to configure & install
• Improve traceability by making it fast & simple to retrieve data on each production batch or cleaning process
• Improve quality by tracking deviations & highlighting abnormal production and Clean-In-Place (CIP) behavior

The Solution

Nestlé selected Schneider Electric’s innovative EcoStruxure Clean-In-Place Advisor solution, including OptiCIP software and services, to optimize their CIP operations, because of its:
• Flexibility to adapt the architecture to their IT and automation constraints
• Efficiency to better track and diagnose the process
• Differentiation from the competition who lack the features for this dedicated activity

Customer Benefits

• Improved tracking & diagnosis of processes
• Significant reduction in traceability time and savings per CIP line
• 340t CO₂ used in sparkling water process saved in the first year (50% less for specific lines)
• Increased productivity, with 20% CIP reduction for some lines
• Facilitated commissioning of new production line
• Improved maintenance with dedicated custom features related to usage of the valves (like flip counters)

Life Is On with... 20% less CIP time

"Thanks to Schneider Electric’s EcoStruxure solution we are now able to reduce our production line downtime for CIP by 20%.”

Bernard Flores
Spring industrial process department manager
Nestlé Waters, Vergèze

© 2020 Schneider Electric. All Rights Reserved. | Page 28

The world’s largest bottled water company has 11% of the market share. The Vergèze plant already has 13 equipped production lines, and is a “laboratory” for innovative solutions

EcoStruxure Clean-In-Place Advisor

Edge control
Connected products
System Platform

Life Is On for Food & Beverage

* The Schneider Electric industrial software business and AVEVA have merged to trade as AVEVA Group plc, a UK listed company. The Schneider Electric and Life is On trademarks are owned by Schneider Electric and are being licensed to AVEVA by Schneider Electric.
Label Assurance
Ensure the right product is in the right packaging with the right label

Regulations evolving:
- Evolving Packaging Labelling Directive in some countries: France, Netherlands
- Coming soon - New labeling requirements: Nutriscore, Climate-Score, CO$_2$ footprint, Country-score, Animal welfare, ……
- Allergens list from EU changing in 2020: 140 new allergens banned!

Product recalls linked to mislabeling issues 40 - 60%
Label Assurance solution

Increased protection from product recalls due to label errors

The Solution

- Ensure the right product is in the right packaging with the right label
- Vision systems (OCR = Optical Character Recognition) and software for tracking and documenting labels
- Non destructive solution, 100% online scanning, automated label check
- Solution easy to integrate into the packaging line
- Flexible deployment as a standalone quality system or integrated with AVEVA System Platform

Business values

- Cost reduction from product waste and rework
- Reduced product recalls and improved consumer confidence
- Increased brand protection
Customer Challenge
• Cans with missing labels: mislabeling instances and product recalls
• Finished product losses due to manufacturing issues
• Significant inaccuracy in using master data across multiple systems and heterogeneous plant environments

The Solution
• AVEVA System Platform
• AVEVA InTouch HMI
• AVEVA Manufacturing Execution System (MES)
• AVEVA Workflow Management
• Label Assurance module

Customer Benefits
• 3% Reduction in material costs
• Quality solution with mislabeling module: verifies and validates unit and case level labeling
• Achieves manual, semi-automatic and automatic in- / at-line sampling with validation against specifications

The Results: Life is On with... 25% Decrease in product give-away
Manage Food Safety & Traceability

Ensure compliance and increase trust across the whole value chain

• Manage your calibration process digitally to streamline operations and ease audits.

• Manage your manufacturing process in a paperless way and document automatically evidences of good manufacturing practices.

• Implement Food Defense with proper access control & cybersecurity protection.

• Track and trace raw materials and products across the whole supply chain to increase transparency and protect your brands.

• Monitor cold chain to guarantee product safety.

Let’s engage in this journey!
Discover our customer’s journey to End-to-End Traceability

Cracking digital for An End-to-End Traceability Journey with Danone

Watch the video

Read the blog
Food Safety & Traceability

End to End Traceability
Increase visibility across your entire supply chain to build a sustainable Value Chain

Digitize your compliance
Automatically document evidence of proper operation using digital tools and workflows

Ends & Farms → Cooperative → Manufacturing → Distribution → Retailer → Consumers

Suppliers Information Management
Get visibility into your entire suppliers' network, check their compliance and identify your risks

Food Defense & Cybersecurity
Protect your facilities from any unauthorized access and ensure the right in-depth defense for your IT and OT systems

Monitor downstream logistics
Manage efficiently your assets tracking, performance and maintenance to optimize your supply chain logistics

Ensure compliance and trust across the product life cycle
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

- Food Defense
- Cybersecurity Services
- Digital Calibration
- Raw material traceability
- Production traceability
- Product Identification & Tracking

**Energy & Sustainability**
Reduce footprint and meet sustainability goals

- Sustainability Consulting
- Energy Demand Services
- Strategic Energy Sourcing
- Enterprise data management
- Energy as a Service

**Asset Performance**
Maximize return on capital expenditure

- Assessment and Consulting
- Enterprise Asset Management
- Condition Monitoring
- Predictive Analytics
- Line & Process Optimization
- Modernization services

**Workforce Empowerment**
Improve staff knowledge, productivity and collaboration

- Operator Training Simulator
- Augmented & Virtual Reality
- Workflow Management
- Staff Schedule Management
- Operator Knowledge Sharing

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

- Electrical CAD
- Building Information Modelling
- Integrated Engineering-Design
- Digital Asset Visualization
Let’s talk about EcoStruxure™ for Food & Beverage