Supporting the Sustainability goals of the Food & Beverage industry

Building a sustainable, resilient and credible Value Chain with EcoStruxure for Food & Beverage
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
Reduce your environmental footprint and meet your sustainability goals

End to End Decarbonization
Tackle your energy challenges by creating an optimized way to access reliable, green, and resilient energy. Reduce GHG emission, scope 1, 2, 3 to address climate change.

Efficient and sustainable operations
Meet your energy and sustainability goals and reduce costs with smart energy, water and waste management at your facilities.

Minimize footprint on environment
Reduce impact on the planet by helping farmers improving productivity and better managing the usage of resources. Protect agriculture and ecosystems.

Responsible Value Chain, end to end
Increase visibility across your entire Value Chain, from raw materials to finished goods to improve transparency and build a sustainable Value Chain.

Towards Net Zero emissions

Up to 30% energy cost reduction

For a better future from agriculture to packaging

Build a sustainable Value Chain
Energy & Sustainability
Reduce your environmental footprint and meet your sustainability goals

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Tackle your energy challenges and access reliable, green, and resilient energy. Reduce GHG emission, scope 1, 2, 3 to address climate change

Minimize footprint
From agriculture to packaging, we support in reducing impact on the planet and protect ecosystems

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

Make the most of your resources
Do more with less by reducing your energy consumption, saving money on energy, stewarding natural resources.

Responsible value chain
Increase visibility across your entire Value Chain, from raw materials to finished goods to improve transparency and build a sustainable Value Chain.
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Towards Net Zero emissions

Reduce GHG emissions

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CO₂ emission monitoring & management
• Climate Change Advisory Services ✓
• Supply Chain Decarbonization ✓

Microgrid & cleantech
• Microgrid & onsite renewables ✓
• New Energy Opportunities (NEO) Network ✓
Meeting Your Climate Goals
Reach ambitious climate goals backed by digital innovation

EcoStruxure Ecosystem

- Resource Advisor
- Microgrid Advisor
- Green Think Network

Baseline CO₂

- Manage your energy supply
- Avoid carbon-intensive activities

MANAGE

Resource Efficiency

- Reduce
Conduct operations more efficiently

REPLACE

- Replace
Switch from carbon-intensive energy to low-carbon sources

REPLACE

Renewable Energy

- Credits + Offsets
Balance emissions that cannot otherwise be reduced

BALANCE

Value and Supply Chain

- Engage
Engage supply chain to drive decarbonization

ENGAGE

Scope 1 & 2

Scope 3

Business As Usual

- Scope 3 Footprint Evaluation
- Supply Chain Engagement Workshops
- Supply Chain Scope 1 and 2 Reduction Initiatives
- Value Chain Initiatives (LCA, Circular Economy...)

Carbon Goals Achievement

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Internal
Climate Change Advisory Services
Tackle climate crisis, accelerate action toward your goals and build business resilience.

The solution

Business value

• Align on vision and strategy by leveraging market intel, engaging your stakeholders and building a strong business case for climate action.

• Set goals, assess & communicate strong targets, and prioritize actions to develop your carbon roadmap.

• Secure fast delivery on your goals with a practice-proven, programmatic approach across all decarbonization levers.

• Our industry leading enterprise-level sustainability platform will help to measure, iterate and innovate, and automate reporting to disclose your program's success.

Watch the video
## Purpose

- Reduce environmental footprint 50% by 2025
- Become carbon neutral
- Be the most sustainable protein company on earth

## Solution

- U.S. and Canadian renewable energy and emissions reductions projects that support wind energy, recovering methane gas from landfills, composting and biomass programs to reduce methane emissions, and forest protection and re-forestry to conserve species and biodiversity

## Path

- Developed process to measure GHG footprint
- Create sustainability strategy
- Develop REC and VER procurement criteria and protocol
- Engage project developers and owners to source RECs and VERs

## Results

- Addressed unavoidable emissions
- Became the first major protein company in the world to be carbon neutral
- One of the only protein companies worldwide to set Science Based Targets

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“We are staking our future on being carbon neutral today, and every day going forward.”

-Michael McCain, President & CEO
Global beverage group unlocks efficiency benefits with ISO 50001

**Purpose**

- Local regulatory obligations under Europe’s Energy Efficiency Directive (EED) to be full-filled
- Demonstrate continual energy performance improvements and achieve energy savings

**Path**

- Using global ISO 50001 standard to meet local energy efficiency mandates
- Belgian branch to pilot ISO 50001 certification at 2 sites

**Solution**

- Initial gap analysis at the sites
- Tailored supplements to the existing Energy Monitoring and Information System (EMIS)
- Further support in user motivation trainings, internal audits and assistance during management reviews

**Results**

- Creating multiple benefits beyond compliance, including substantial energy savings

“Using global ISO50001 standard to meet local energy efficiency mandates.”
Supply Chain Decarbonization
Realize significant environmental impact while improving the resilience of your business

The solution

**Assess**
Build strategy on prioritization and data

**Engage**
Take action within your supply chain

**Accelerate**
Monitor and innovate on your strategy

- Define Roadmap
- Supplier Survey
- Create Data Plan
- Activate Vision

- Supplier Engagement
- Supply Chain Initiatives
- Supplier Capacity Building
- Report Progress

- Performance Tracking
- Reporting
- Risk Management
- Adjust, innovate, expand

Business value

- A unique combination of supplier engagement, measurement, strategy setting, and implementation via efficiency, renewable energy procurement, and carbon offsetting.

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- The offer builds on successful supply chain solutions already developed for clients
CASE STUDY | SUPPLY CHAIN ENGAGEMENT

Gigaton PPA (GPPA)

Purpose

- Walmart’s Project Gigaton aims to avoid one gigaton (one billion metric tons) of carbon from its global value chain by 2030
- Opportunity to provide increased access to Walmart’s US-based suppliers to renewable energy purchasing information and the chance to participate in the U.S. renewable market via aggregated PPA

Solution

- Schneider Electric launched a signature program and educational curriculum to enable Walmart suppliers to join a first-of-its kind, aggregated approach to collective contracting for renewable energy via a buyer’s cohort
- GPPA Program gives suppliers who do not participate in the market access to utility-scale PPAs

Path

- Collaborated on a custom program to engage U.S. Walmart suppliers
- Developed robust educational curriculum within NEO Network™
- Facilitated with Walmart marketing and engagement activities: press release, media relations, FAQs, supplier invitation campaigns, social media, webinars, and additional assets

Results

- Program launched on September 10, 2020
- 500+ press articles within days of launch
- 170+ suppliers registered for overview webinar during first week of program
- Currently onboarding first supplier cohort

“The Gigaton PPA Program is the kind of innovation-in-action needed to help our suppliers take the next step towards low-carbon emissions, helping to build a more sustainable future for our communities. Through Schneider Electric’s work with our suppliers, the program aims to democratize access to renewable energy and accelerate its use with our supplier base.”

– Zach Freeze, Senior Sustainability Director, Walmart

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Customer Challenges

• Decentralized energy program at facility level
• Reduce their natural capital costs and embrace greener, more efficient energy sources as part of customer’s sustainability ambition for the future of cocoa, “Cocoa Compass”

Solution

• Centralized energy bill payment platform services managed by Schneider Electric
• Unified energy sourcing strategy

Customer Benefits

• Consolidated energy procurement solution
• Optimization Risk Management strategy, leveraging gas price plunges in the market
• Significant energy costs savings

The Results: Life Is On with ... 

~ 30% reduction in annual natural gas procurement spend compares to 2020 baseline

“Last year Olam Cocoa partnered with Schneider Electric to manage our energy spend. The decision was not an easy one, but I couldn’t be more pleased with the savings & return on investment the team has achieved on our behalf.”

Ajay Nair
Global Projects Head for Olam Cocoa

Suppling over 2,000 customers globally, Olam Cocoa is a leading supplier of cocoa beans and cocoa ingredients. The company ranks amongst the top three processors worldwide.
Origin module and Resource Advisor: A combined value proposition

Making the most of supply chain data:

✓ Enable End to End Traceability
✓ Enable Full GHG emissions reporting
  • Leveraging actual supplier data to calculate scope 3 emissions
  • Combining Suppliers data with other sources to provide full, optimized GHG emissions visibility
  • Enabling reporting and performance follow up on all scopes 1, 2 & 3

Learn from SE
Customer Challenge
• Create a responsible business which aims to achieve a sustainable economy.
• Strong commitment to reduce CO\textsubscript{2} emissions.

The Solution
• Energy & Sustainability Services & Consulting on scope 1, 2 and scope 3
• Calculation of Carbon Mapping
• Implementation of a sustainable roadmap
• List of actions to implement
• Evaluation of reduction and action plans

Customer Benefits
• Biggest CO\textsubscript{2}-savings are achieved by scope 3 reduced inputs, e.g. the purchase of chemicals, reduced packaging and use of recycled materials.
• The group is using dematerialization and eco-design to reduce doses of household cleaning products and therefore reduce chemicals, packaging materials, inbound and outbound freight and end of life treatment of wastes.

The Results: : Life is On with...Reduction of its GHG emissions in the value-chain by 45% within 4 years at one of its Belgian sites
Microgrid & onsite renewables
Connect, monitor and control your facilities Distributed Energy Resources (DERs) to optimize economic performance, sustainability and resilience.

The solution

Architectures and systems that ease integration of new resources – downstream & upstream

Edge automation that makes microgrids more reliable and resilient than the grid

Best-in-class algorithms that make the best of local energy resources

Watch the video  Learn More  See demo
Tackle your energy challenges by creating an optimized way to access reliable, green, and resilient energy

Business value

Integration
Reduce CAPEX for installation of Microgrid, and OPEX for evolution. Energy Control Center: all your microgrid in one box – minimizing the impact on the rest of the installation.

Reliability
Increase reliability of energy: business continuity, energy independence, crisis management

Orchestration / Analytics
Maximize value from energy resources in implicit (optimize supply) and explicit use cases (monetize flexibility)

Learn more | Watch the video
Customer Challenge
- Design, build and finance a microgrid for robotic indoor farming pioneer Fifth Season.
- Scale Microgrid Solutions, own, and operate the system with SE solutions to deliver sustainable and dynamic energy management for Fifth Season's newest, highly autonomous vertical farm in Pittsburgh, PA (60,000-square-foot facility)

The Solution
- Scale Microgrid Solutions including rooftop solar array, natural gas generator and a lithium-ion battery energy storage system leveraging EcoStruxure Microgrid Advisor software platform to collect, forecast and optimize operations

Customer Benefits
- Microgrid-as-a-service business model helps save capital that can be used toward additional operational investments, while also immediately benefiting from more efficient, sustainable and economic energy consumption.

The Results: Life is On with...
"Our vertical farm in Pittsburgh is reconnecting consumers to locally grown fresh food. This is a first step in solving some of the largest problems facing society caused by the broken food system, however, this industry must achieve long term economic and environmental sustainability. This microgrid enables our journey to create a sustainable system that delivers healthier, fresher greens to local communities through both economic and environmental efficiencies."

- Grant Vandenbussche, Chief Category Officer at Fifth Season.
Customer Challenge
- Reduce energy costs and pressure on the grid and increase reliability in case of a power outage

Solutions
- EcoStruxure Microgrid Advisor
- EcoStruxure Power SCADA Operation edge control software
- EcoStruxure Power Monitoring Expert
- Masterpact circuit breakers
- Power meters, Power Mogic meters
- Modicon M580 PLCs

Customer Benefits
- Installation of 1,6000 solar panels and a large lithium-ion battery
- System supplies all of the wholesale market’s energy needs and feed surplus power into the grid
- The solution will:
  - Lower energy costs by $4.3M over 10 years
  - Improve energy reliability and security
  - Reduce annual greenhouse gas emissions by 32%

The Results: Life is On with... Power bills cut by $500k a year

“We want to ensure we can continue to provide affordable fresh produce on a local and global platform and this initiative means we can do it with an environmentally friendly and cost-effective manner using an innovative solution,”

— Angelo Demasi, Chief Executive Officer SAPML

Link to Video 1
Link to Video 2
Future ready solution for integration of renewable energy

Processed Foods manufacturer, South Africa

Customer Challenge
- Expansion of existing electrical network
- Optimization of energy consumption
- Future ready network for integration of renewable energy

Solutions
- EcoStruxure Microgrid Operation
- EcoStruxure™ Smart RMU
- Smart Self-Healing
- Automation connected products

Customer Benefits
- Ease of use, integrated system for monitoring of MV and LV
- Expansion of existing network
- Energy management and efficiency

The Results: Life is On with... Future ready solution for integration of renewable energy and advisory “Microgrid Advisor”

Leading agri company in Asia and Africa. Processed Foods manufacturer in South Africa
Our goal is to build the Nordic countries’ most environmentally-friendly grocery distribution center. - Simo Siitonen, Energy Management Manager, Lidl Finland

**Purpose**
- Energy cost savings of over 50%
- Achieve a carbon-neutral building
- Continue operating according to the BREEAM environmental certification Excellent rating level

**Solution**
- Track progress toward energy saving goal
- Utilize Ecostruxure™ Building Operation software and Microgrid Advisor to monitor and manage the stores’ energy
- Install 1600-panel solar grid

**Path**
- Provided an energy-efficient, integrated, comprehensive solution combining several different building and energy management systems for the duration of the building’s entire lifecycle

**Results**
- Reach a high level of energy efficiency based on 100% renewable energy
- Earned International ISO 27001-2013 information security certification
- Achieved carbon-neutral building

CASE STUDY | MICROGRID
Lidl Finland Enables Carbon-Neutral Distribution with Migrogrid Installation
New Energy Opportunities (NEO) Network

Since 2016

Timely & Concise
Global Market Intel

• 40 multinational energy buying organizations
• 8 renewable project developers
• Deals developing and executing between NEO members – T-Mobile & Tradewinds

Learn more  Watch the video  See demo
Reduce your environmental footprint and meet your sustainability goals

Let’s engage in this journey!

- Towards Net Zero
- Doing more with less
- Minimizing impact on environment from agriculture to packaging
- Building a responsible and sustainable Value Chain, end to end
- Communicating sustainability goals, projects and achievements with all company stakeholders.

Up to 50% energy cost savings
Up to -5% of OpEx savings
Up to 40% CO₂ footprint reduction.
Reduce your environmental footprint and meet your sustainability goals

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## 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