



Supporting the Sustainability goals of the Food & Beverage industry

Building a sustainable, resilient and credible Value Chain with EcoStruxure for Food & Beverage

Life Is On

Schneider
Electric



**Our mission is to be
your digital partner for Sustainability and Efficiency**

A man wearing a dark cap and a plaid shirt is standing in a field of green crops, holding a tablet. In the background, there are industrial structures, possibly a refinery or power plant, under a clear sky. The overall scene is lit with warm, golden light, suggesting late afternoon or early morning.

**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

Agile manufacturing

Boost manufacturing
flexibility & efficiency

Resilient supply chain

Manage complexity and
improve visibility

... 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

Towards **Net Zero emissions**



Efficient and sustainable operations

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

Up to **30%** energy cost reduction



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.

For a **better future** from agriculture to packaging



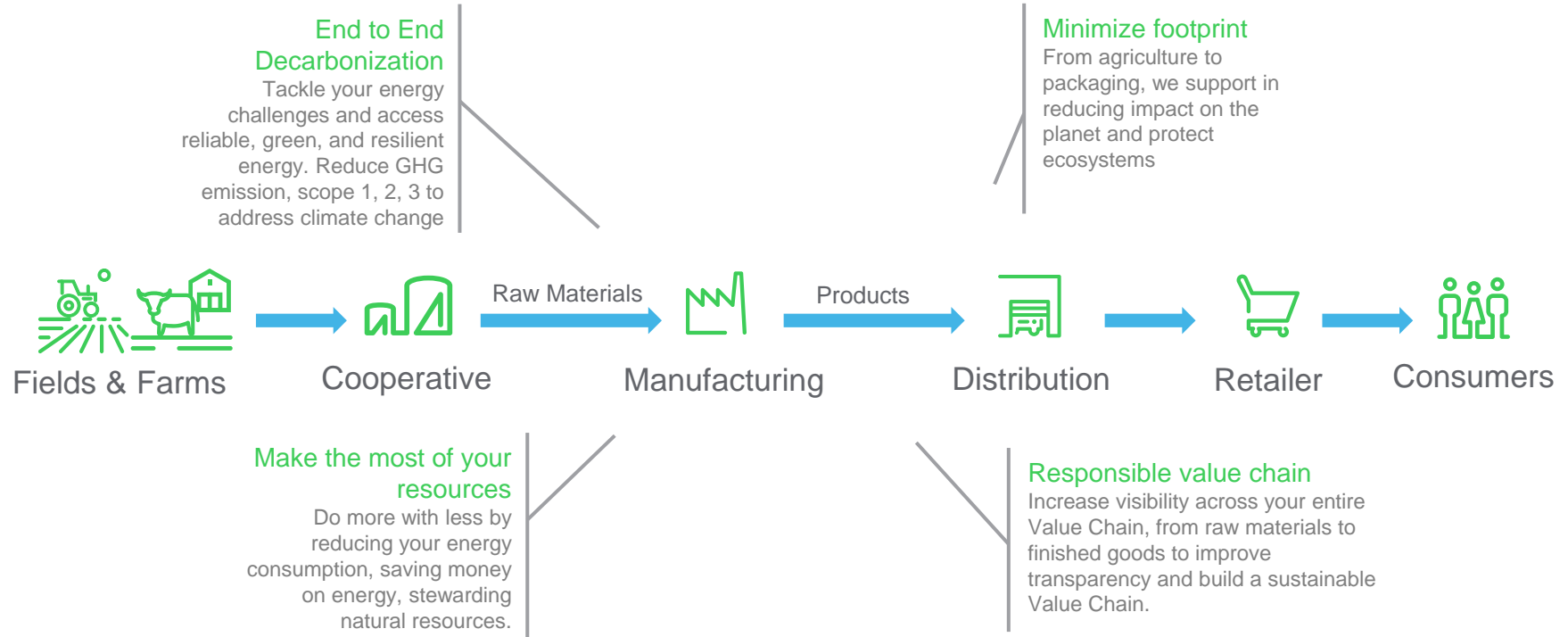
Responsible Value Chain, end to end

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

Build a **sustainable** Value Chain

Energy & Sustainability

Reduce your environmental footprint and meet your sustainability goals





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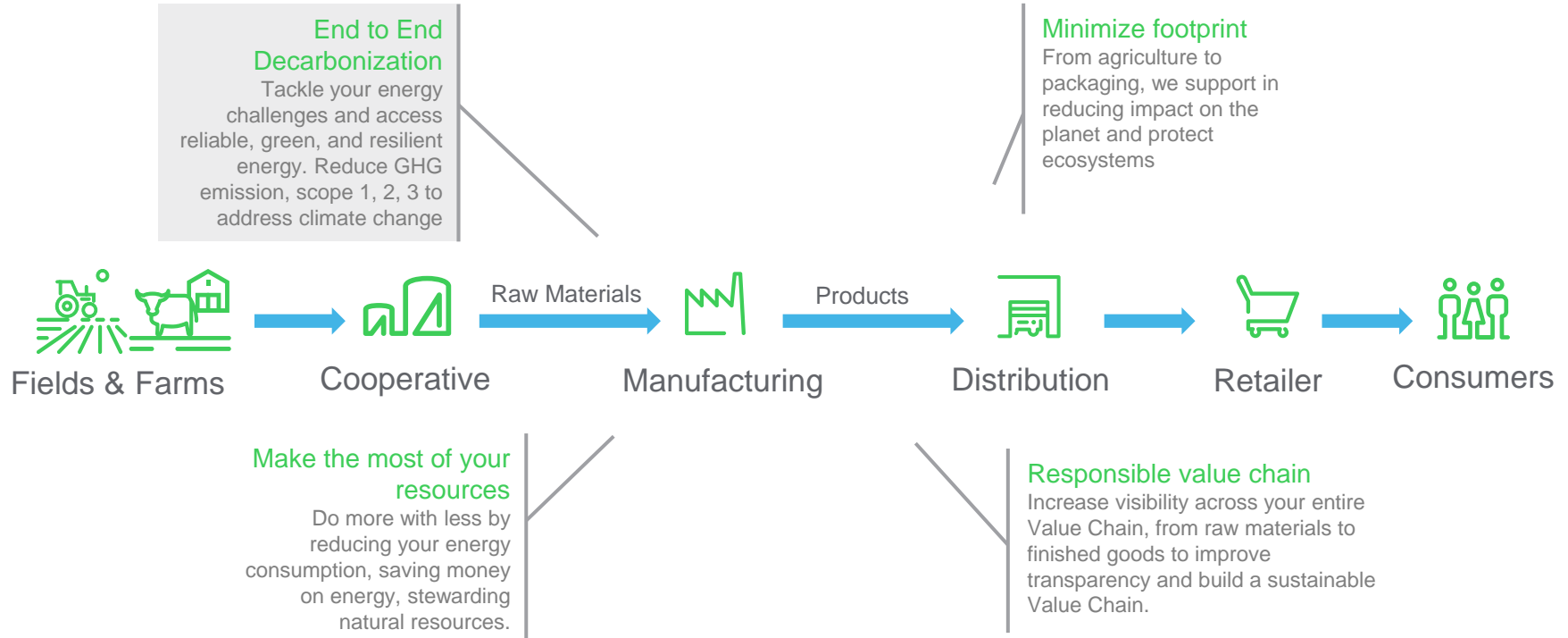
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Energy & Sustainability

Reduce your environmental footprint and meet your sustainability goals



Towards Net Zero emissions



Reduce GHG emissions

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

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

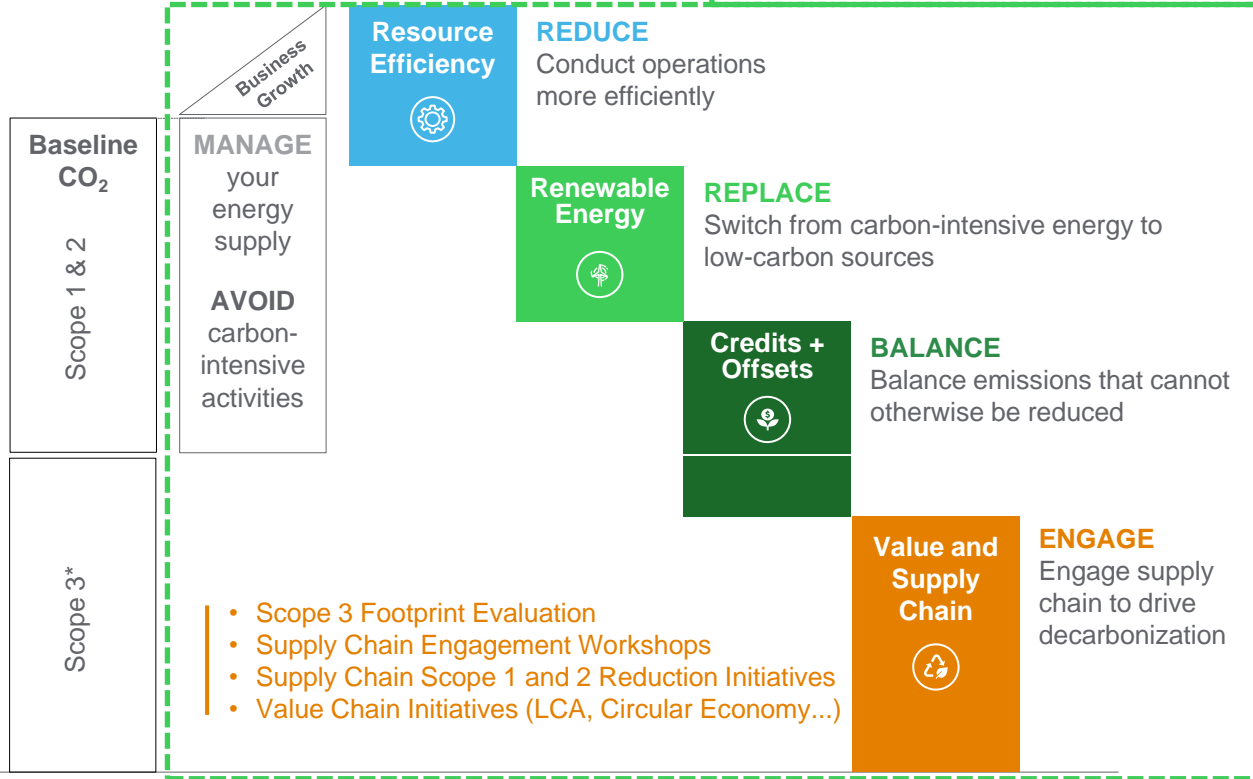
Reach ambitious climate goals backed by digital innovation

EcoStruxure Ecosystem

EcoStruxure
Resource Advisor

neo
network
enabling next-stage operations

EcoStruxure
Microgrid Advisor



Meeting Your Climate Goals

Reach ambitious climate goals backed by digital innovation

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

Maple Leaf Foods Goes Carbon Neutral

Purpose

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

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

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

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



**MAPLE
LEAF**

“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



- 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

Watch the video

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

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

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

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

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

Life Is On



Olam Cocoa

Strategic Energy Sourcing Program

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 ...

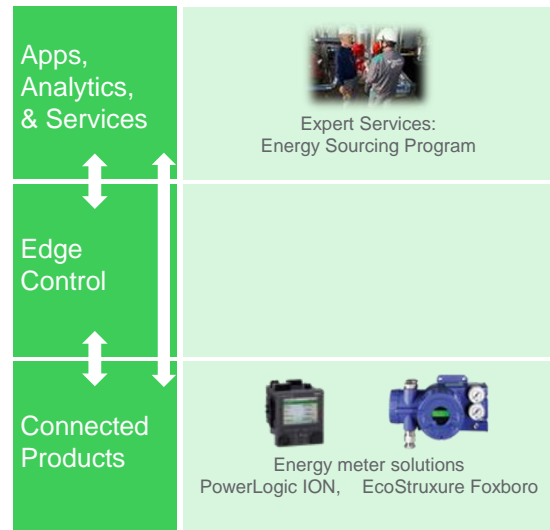
~ **30%** reduction in annual natural gas procurement spend compares to 2020 baseline

"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

Supplying 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.

EcoStruxure™ for Food & Beverage

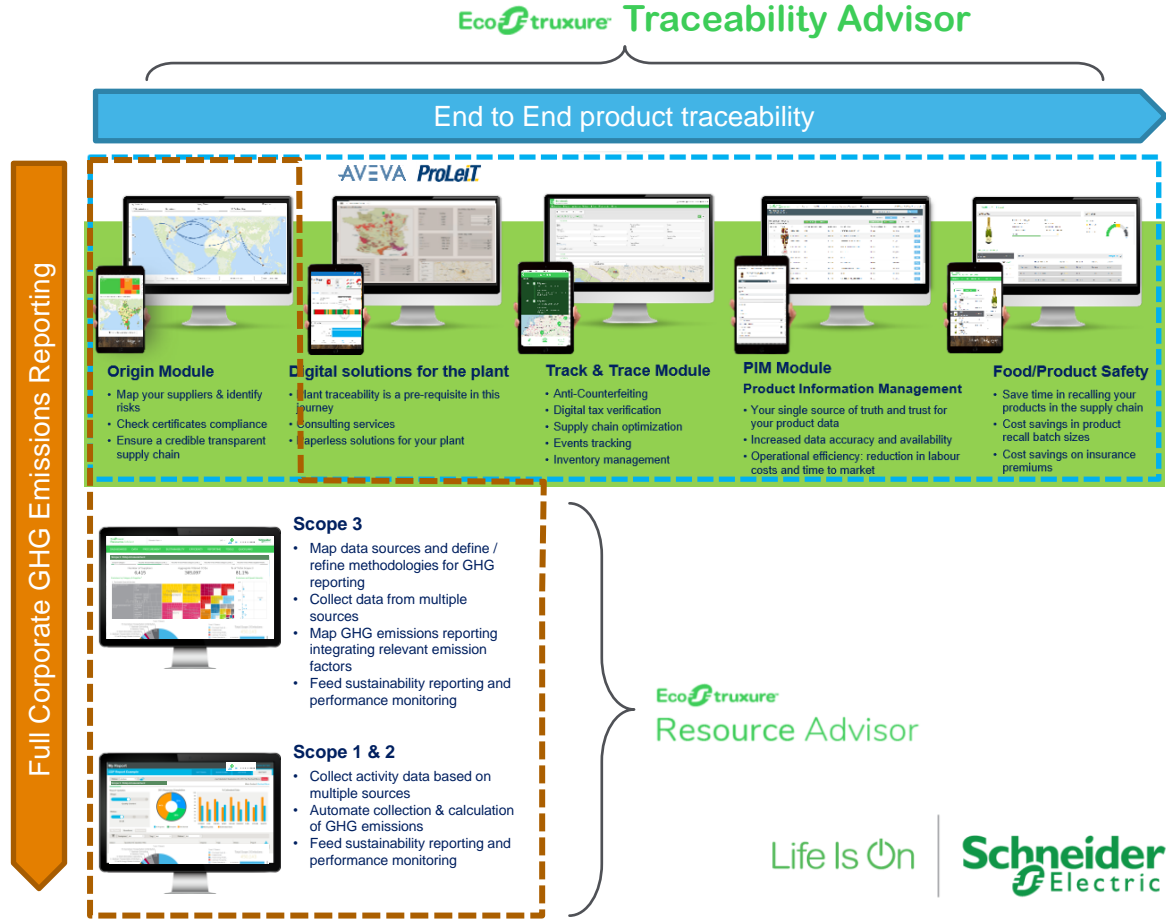


Origin module and Resource Advisor: A combined value proposition

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



Eco-design cuts CO₂ emissions for Leading Household and Personal Care Products Manufacturer

Belgium

Customer Challenge

- Create a responsible business which aims to achieve a sustainable economy.
- Strong commitment to reduce CO₂ 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 CO₂-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

European manufacturer, Private label experts in household and personal care goods with the scale to offer their development and manufacturing capabilities to customers in continental Europe and Asia-Pacific.

EcoStruxure™
Innovation At Every Level for CPG

Apps,
analytics,
and services

Energy & Sustainability
consulting & Services

Edge
control

Connected
products

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](#)

Microgrid & onsite renewables

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](#)

Microgrid Powers Indoor Farm to Deliver Reliable and Sustainable Food

USA



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

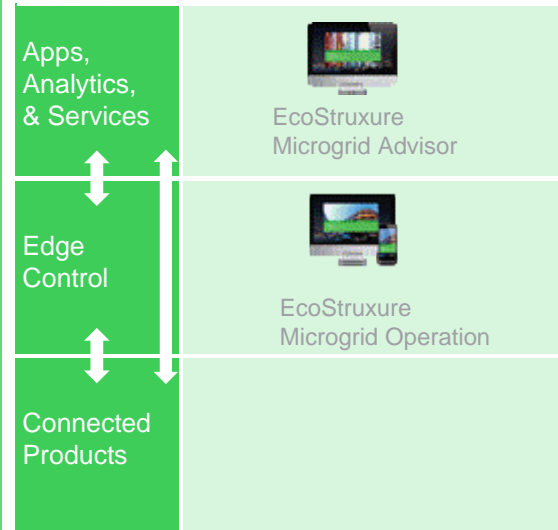
- Microgrid-as-a-service business model helps save capital that can be used toward additional operational investments, while also immediately benefiting from more efficient, sustainable and economic energy consumption.

The Results: Life is On with... Reach full production potential with a smart, reliable and green energy system.

"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.

Fifth Season's precision agriculture platform to help the company reach its goal of efficiently producing 500,000 lbs. of local produce during the new facility's first year of full operation.



[Link to Web](#)



South Australian Produce Market

Australia



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 Mologic 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,"

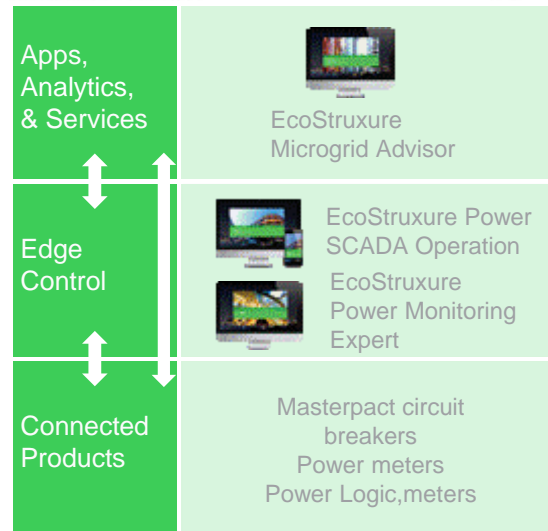
— Angelo Demasi,
Chief Executive Officer
SAPML

[Link to Video 1](#)

[Link to Video 2](#)

The largest private solar PV system for Adelaide's biggest fruit and vegetable market in Pooraka, South Australia

EcoStruxure for Food & Beverage
Innovation At Every Level



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

Solutions

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

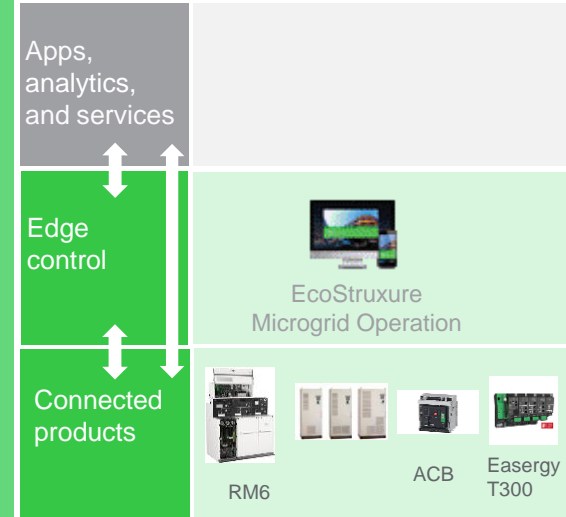
Customer Benefits

- 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

EcoStruxure for Food & Beverage
Innovation At Every Level



Life Is On

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Lidl Finland Enables Carbon-Neutral Distribution with Migrogrid Installation

Purpose

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

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

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

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



“Our goal is to build the Nordic countries’ most environmentally-friendly grocery distribution center.”

- Simo Siitonen, Energy Management Manager, Lidl Finland

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



accelerating New Energy Opportunities



Summary

- Australia has experienced a major power capacity crunch during the winter of the past year.
- Financial conditions for the sector have improved significantly, leading to a more active market for renewable energy.
- The government has announced a new energy strategy, which includes a target of 33% renewable energy by 2030.
- The market is expected to remain strong in the coming years.

Market Fundamentals

Australia's electricity market is dominated by the National Electricity Market (NEM), which is a wholesale market for electricity. The market is characterized by a high degree of competition and a strong focus on renewable energy.



Summary

- Ireland has become a fully integrated power market, which has led to a significant increase in the country's renewable energy capacity.
- The government has announced a new energy strategy, which includes a target of 70% renewable energy by 2030.
- The market is expected to remain strong in the coming years.

Market Fundamentals

Ireland's electricity market is dominated by the Electricity Regulation Board (ERB), which is a regulatory body for the market. The market is characterized by a high degree of competition and a strong focus on renewable energy.

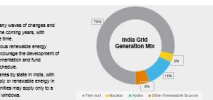


Summary

- The Indian electricity market is seeing very high levels of demand and is expected to continue to grow in the coming years.
- The government has announced a new energy strategy, which includes a target of 175 GW of renewable energy capacity by 2022.
- The market is expected to remain strong in the coming years.

Market Fundamentals

India's electricity market is dominated by the Central Electricity Regulatory Commission (CERC), which is a regulatory body for the market. The market is characterized by a high degree of competition and a strong focus on renewable energy.



Grid Prices

The price of electricity in India is expected to remain high in the coming years due to a combination of factors, including a high degree of demand and a limited supply of renewable energy capacity.

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



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

Towards **Net Zero emissions**



Efficient and sustainable operations

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

Up to **30%** energy cost reduction



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For a **better future** from agriculture to packaging



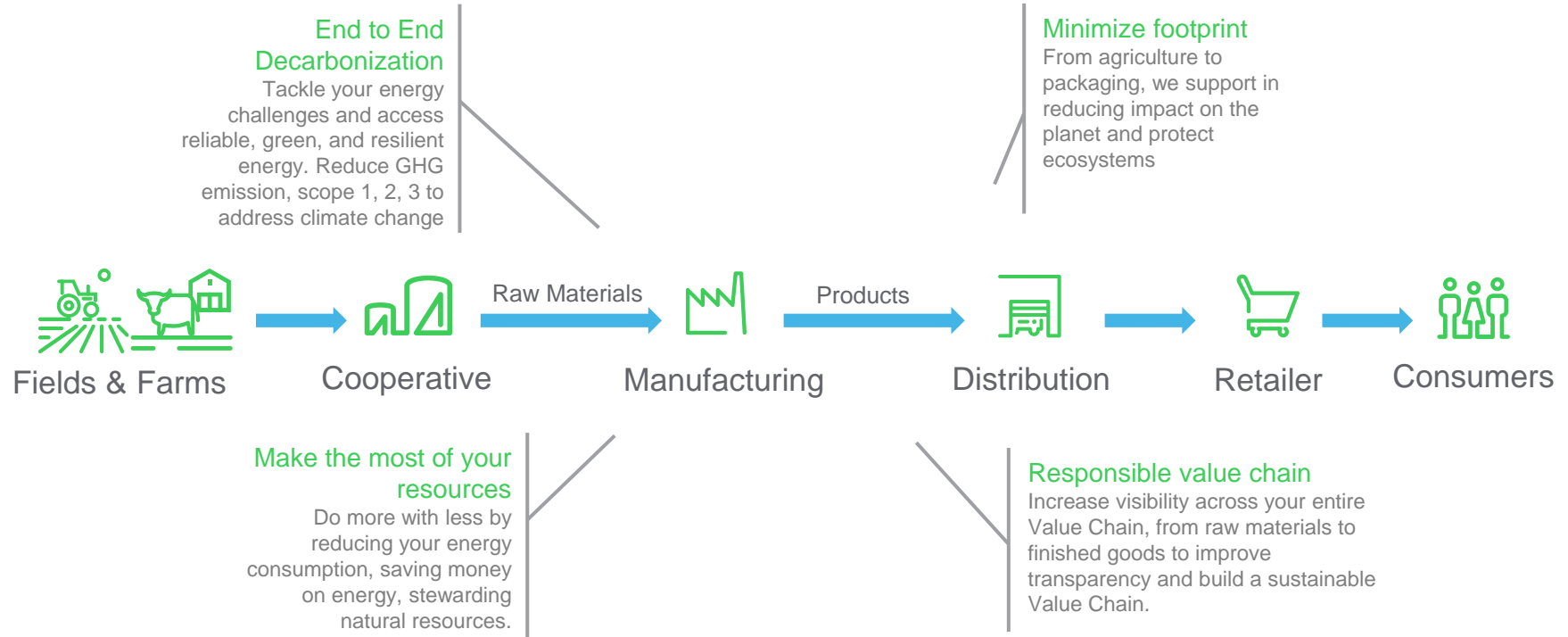
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Increase visibility across your entire Value Chain, from raw materials to finished goods to improve transparency and build a sustainable Value Chain.

Build a **sustainable** Value Chain

Energy & Sustainability

Reduce your environmental footprint and meet your sustainability goals



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	Electrical CAD
Cybersecurity Services	Energy Demand Services	Enterprise Asset Management	Augmented & Virtual Reality	Building Information Modelling
Digital Calibration	Strategic Energy Sourcing	Condition Monitoring	Workflow Management	Integrated Engineering-Design
Raw material traceability	Enterprise data management	Predictive Analytics	Staff Schedule Management	Digital Asset Visualization
Production traceability	Energy as a Service	Line & Process Optimization	Operator Knowledge Sharing	
Product Identification & Tracking		Modernization services		

Let's talk about

EcoEtruxure™

Innovation At Every Level

for Food & Beverage

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