

Sustainability for Business Forum 2024

Session: ESG and Green Supply Chains



Tuesday, 14 May 2024



Mövenpick BDMS Wellness Resort Bangkok

Special introduction to 'ESG for Private Entities'



Dr. Pipat Yodprudtikan **Thaipat Institute**



Anh-Hà de FOUCAULD **Schneider Electric Sustainability Business**



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Moderator



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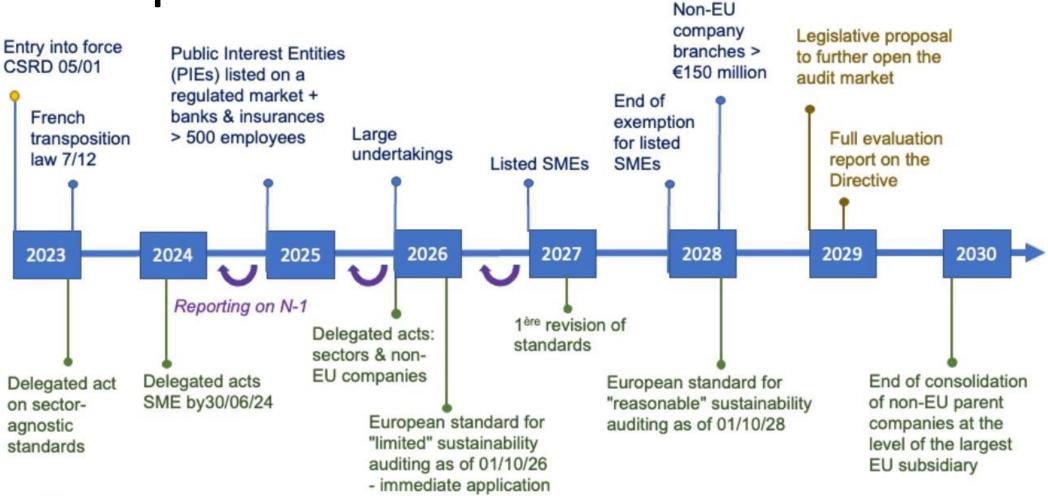


ESG for Private Entities

Thaipat Institute

Why NOW?

CSRD Imperative





Corporate Sustainability Reporting Directive (CSRD)

The rules will start applying between 2024 and 2028, as follows:

- ☐ from 1 January 2024 for large public-interest companies (with over 500 employees) already subject to the non-financial reporting directive, with reports due in 2025;
- □ from 1 January 2025 for large companies (with more than 250 employees and/or €40 million in turnover and/or €20 million in total assets) not presently subject to the non-financial reporting directive, with reports due in 2026;
- ☐ from 1 January 2026 for listed SMEs and other undertakings, with reports due in 2027. SMEs can opt-out until 2028.

Additional reporting for a non-EU headquartered company

Even if the ultimate parent does not have debt or equity securities listed on an EU-regulated market, global consolidated reporting will be required beginning in fiscal year 2028 (reporting in 2029) if:

At least one entity in the consolidated group is within the scope of the CSRD

OR

At least one EU branch generated net turnover (revenue) of more than €40 million in the preceding year



Consolidated net turnover (revenue) generated in the EU exceeds €150 million for each of the last two consecutive fiscal years

Voluntary European Sustainability Reporting Standard (ESRS) For Private Entities

The private entities fall outside the scope of the Corporate Social Reporting Directive (CSRD) are encouraged to use this Standard to prepare and share with whomever such sustainability information may concern.

Basic Module

- B 1. Basis for preparation
- B 2. Practices for transitioning towards a more sustainable economy
- B 3. Energy and greenhouse gas emissions
- B 4. Pollution of air, water and soil
- B 5. Biodiversity
- B6. Water
- B 7. Resource use, circular economy, and waste management
- B 8. Workforce General characteristics
- B 9. Workforce Health and safety
- B10. Workforce Remuneration, collective bargaining, and training
- B11. Workers in the value chain, affected communities, consumers and end-users
- B12. Convictions and fines for corruption and bribery

Narrative-PAT Module

- N 1. Strategy: business model and sustainability related initiatives
- N 2. Material sustainability matters N 3. Management of material

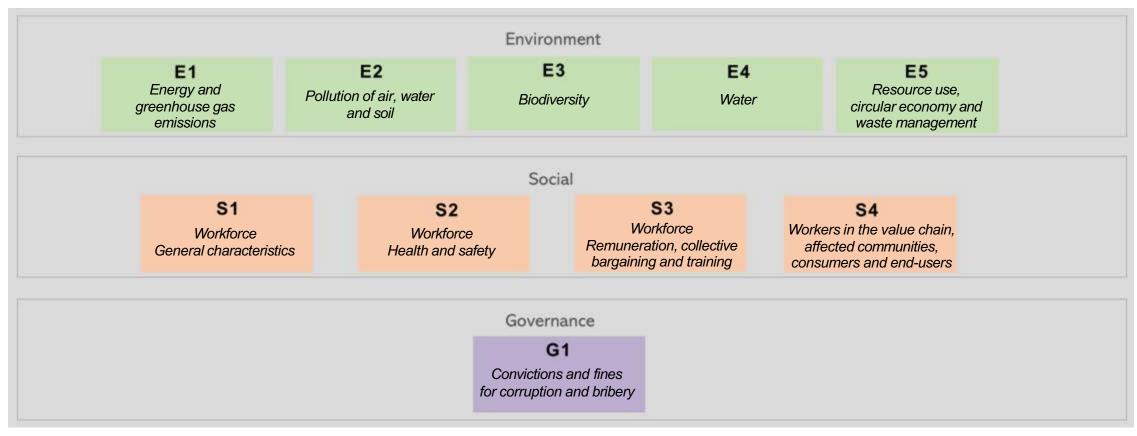
sustainability matters N 4. Key stakeholders

N 5. Governance: responsibilities in relation to sustainability matters

Business Partners Module

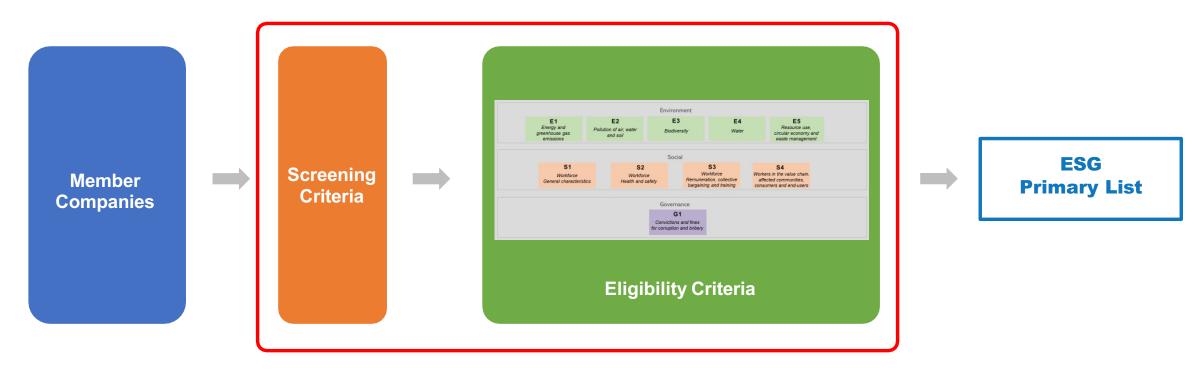
- BP1. Revenues from certain sectors
- BP 2. Gender diversity ratio in governance body BP 3. GHG emissions reduction target
- BP 4. Transition plan for climate change
- mitigation BP 5. Physical Risks from climate change
- BP 6. Hazardous waste and radioactive waste ratio BP 7. Alignment with internationally recognized
 - instruments
- BP 8. Processes to monitor compliance and mechanisms to address violations
- BP 9. Violations of OECD Guidelines for Multinational Enterprises or the UN Guiding Principles (including the principles and rights set out in the 8 fundamental conventions of the ILO Declaration and the International Bill of Human Rights)
- BP10. Work-life balance
- BP11. Number of apprentices

Thaipat ESG Primary Factors for Private Entities



Source: Voluntary European Sustainability Reporting Standards (ESRS) for Non-listed SMEs, 2024.

Establishing ESG Primary List



Thaipat ESG Primary Rating

What companies will get



Know Your ESG

Knowing your ESG score

Comparing your ESG score/Total ESG Score with previous periods (Updated)

Comparing your ESG — score with other entities



Enter an entity to compare

GO

Enter an entity to compare

Benchmarking your ESG score against the industry and overall

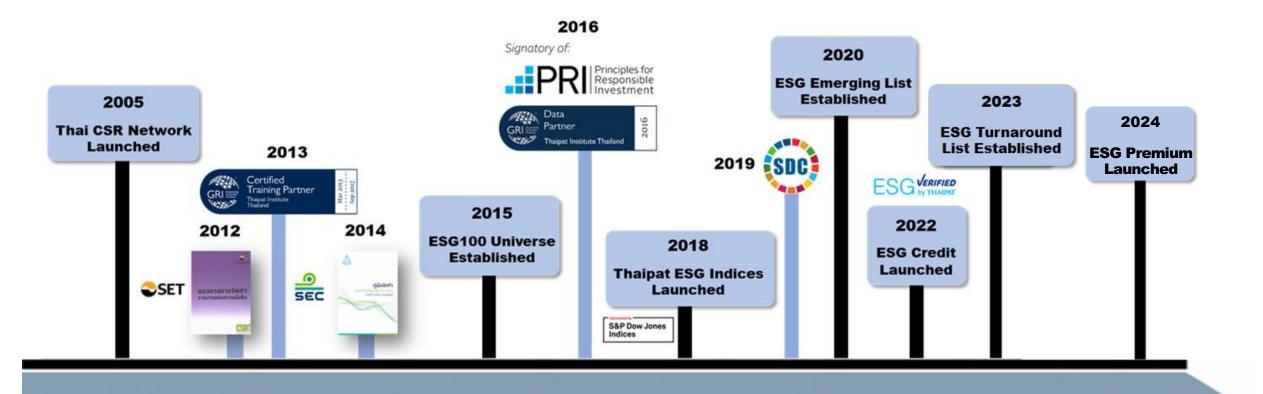
Ranking from all reporting entities in Thaipat Sustainability Disclosure Database

Ranking from industryspecific universe in Thaipat Sustainability Disclosure Database

Key Benefits of ESG for Private Entities

- #1 Staying ahead of regulatory obligations
- #2 Keeping up with industry trends
- #3 Understanding today's risks & opportunities
- #4 Creating sustainability to businesses
- #5 Making real-world impacts

Thaipat ESG-related Activities



About Thaipat

Thaipat is a public benefit organization in accordance with Section 34 of the Social Welfare Promotion Act, B.E. 2546 (2003) with its mission to work with organizations and companies – individually and collectively – to develop effective solutions and endure business growth with social progress by driving integration of environmental, social and governance (ESC) factors into core business practices. Since its inception in 1999, Thaipat has been recognized as a leading advocate in corporate responsibility and sustainability movement in Thailand.

In 2014, Thaipat launched ESC Rating Unit to provide corporate sustainability data research and analysis to encourage the ESC disclosure of Thai companies to the investment community, both locally and globally.

Prior to setting up the rating unit, Thaipat developed ratings criteria and provided CSR and Anti-corruption progress indicator sets to the Securities and Exchange Commission (SEC), Thailand. The initiatives encourage the uptake of ESC disclosure



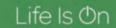
that places performance in the broader context of sustainability challenges, risks and opportunities. To date, more than 800 listed securities in the Thai stock market (both SET and mai) had been assessed by using <u>Thaipat rating methodology</u>.

Currently, Thaipat has several investment products; the <u>Thaipat ESG investment universe</u> consists of the ESG100 list (the 100 outstanding ESG performing listed securities in Thai stock market), the ESG Emerging List (the attractive listed securities with promising ESG progress), the ESG Turnaround List (the listed securities shown a turnaround signal and upside opportunity from market recovery backed by ESG factors), and the <u>Thaipat ESG Indices</u>, which constructed from the Thaipat ESG investment universe, consist of Price Return, Total Return, and New Total Return. The Indices are calculated by SSP Dow Jones and fed via Bloomberg and Reuters terminals to the investors worldwide.

Navigating the Path to Sustainability

Supply Chain Decarbonization: An essential step towards net-zero







About Schneider Electric Sustainability Business



Recognized **global leader** in energy and sustainability consulting and managed services.



More than **2,700** employees worldwide across over **100** countries.



Develop strategies for meeting energy management and sustainability objectives and help to **implement** those strategies.

Solutions Portfolio

Core services:

- Market and climate risk analysis
- · Energy efficiency
- Energy management
- Sustainability consulting
- Renewable energy and carbon advisory

Digital solutions:

- Resource Advisor
- Zeigo by Schneider Electric

Vital Statistics

2,700+

Global clients

3,000

Resource data streams tracked in Resource Advisor

125+

Million tons CO₂ in Resource Advisor

€40B+

In resource spend managed globally

2,700+

Professionals with specific market expertise

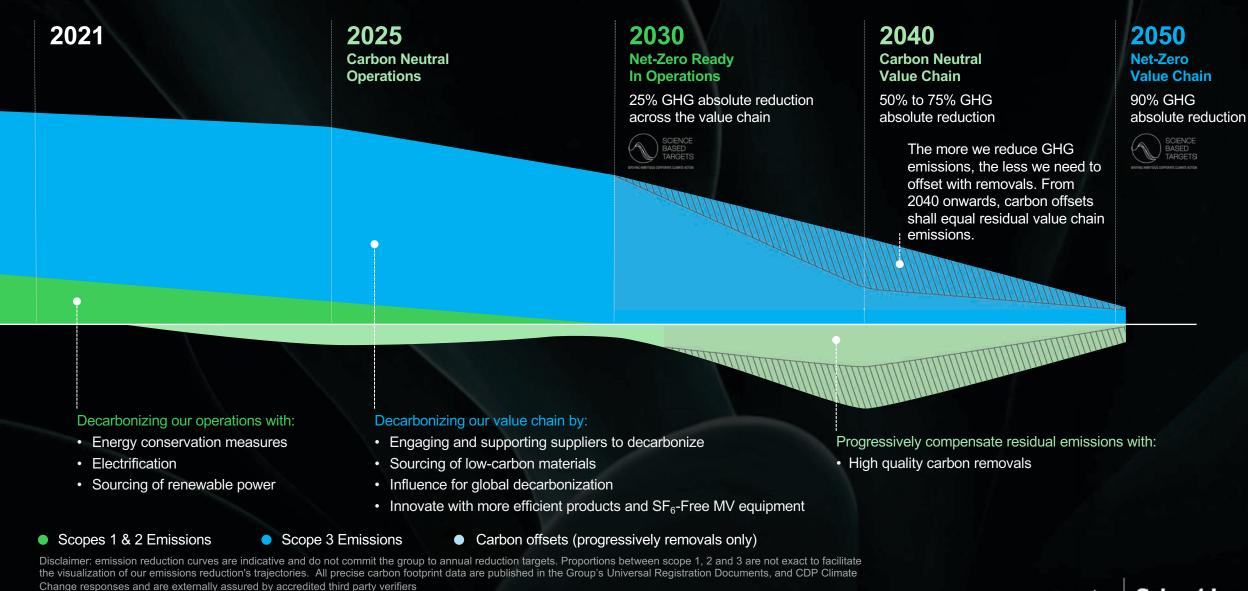
16+GW

Advised corporate PPA's since 2014

Leading ESG by example in our ecosystem



Our Commitment: Net-Zero on entire value chain by 2050



s On **Schneider**

Top 5 Takeaways Supply Chain Decarbonization: An Essential Step Towards Net-Zero Report





Regulatory compliance and stakeholder interest are driving adoption of practices

Navigating the evolving regulatory landscape, while also implementing unified processes and practices across the supply chain, requires partnerships, resources and technology.

75%

of survey respondents said regulatory pressures and stakeholder requirements are prompting their organization to initiate decarbonization planning with supply chain partners Financial institutions are a catalyst for change

The financial sector provides access to the necessary investments and resources needed to adopt sustainable practices in businesses.

Of a financial institution's downstream emissions are attributed to clients' operations

Technology is pivotal to decarbonizing upstream and downstream emissions

Digital solutions help establish intelligent energy systems to monitor and measure energy consumption and carbon reduction efforts within a business and across the partner ecosystem.

Survey respondents who said digitalization is a key enabler for supply chain descarbonization.

Respondents who have a system in place to measure their suppliers' carbon footprint.

Currently use digital tools to measure impact and progress.

Research methodology

72%

4

4%

) (

research methodology

SME respondents who require

decarbonize their supply chain

financing to help them

3 70

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Partnerships

Public initiatives

- Race to-Zero: United Nations-led initiative promoting a coalition of leading net zero emissions initiatives, representing thousands of government actors, companies, and financial institutions.
- <u>Blackcycle</u>: European project to design new tires from end-of-life tires.

Private initiatives

- Energize: The world's leading pharmaceutical companies are helping hundreds of suppliers they collaborate with to gain access to renewable energy purchases.
- The Climate pledge 1.5: Co-founded by Global Optimism and Amazon, it is driven by 445 companies in 38 countries around the world to achieve net-zero carbon emissions by 2040. Among them are Iberdrola, Schneider Electric, Prologis, ARPA, P&G, Telefónica and Heineken.



Supplier engagement

Access to renewables

- L'Oréal: Through its <u>Spread the Green Vibes</u> program helps suppliers around the world by training programs and providing access to renewable energy for their entire supply chain
- PepsiCo: Launched its pep+ REnew program to help its suppliers access renewable energy procurement.
- Microplásticos: Gains access to renewable energy procurement through <u>Schneider Electric_commitment</u> to its supply chain.

Supplier training and capacity building

- BASF & Grupo Antolin: Together with other companies promote the United Nations Global Compact's Sustainable Supplier Training Program_aimed at SMEs to help them in their sustainability training.
- Beiersdorf: Collaborate with local suppliers through <u>Women in Circularity</u> program by training local women entrepreneurs on circularity and establishing local plastic recycling infrastructure.
- Almirall SA: Through their <u>Supplier Engagement Program</u> monitor their suppliers to support them in their sustainability commitments.
- Danone: Promotes <u>sustainability in its livestock farms</u> through regenerative agriculture actions and proximity to food to reduce its farmers' emissions by 25%.

Supplier incentives

- CEPSA: has a comprehensive supplier plan, including incentives such as WePioneer recognition program.
- Ferrovial: collaborates with its suppliers to contribute to improving processes and adding value.



Digitalization

Digital tools to help decarbonization

- Supplier Cascade
- SME Climate Hub
- Zeigo
- Dcycle
- Bayer: Creates the digital tool <u>ImpacTest</u> to help its suppliers to measure and monitor the footprint of their suppliers.
- Enagas: Relies on <u>digital technologies</u> to verify and track the sustainability compliance of its suppliers.
- Resource Advisor



Innovation & Technology

Hydrogen

- PepsiCo & Fertiberia: Launched a pioneering program to reduce emissions in potato cultivation through the use of Impact-Zero fertilizers from green hydrogen and precision agriculture.
- Arpa Equipos Móviles de Campaña: Bets on <u>hydrogen</u> by establishing the first hydrogen plant for public use in Aragón.
- Enagás: Launches <u>Call For Interest</u> process for the first axes of the Spanish Hydrogen Backbone.

Renewable raw materials

- BASF: Includes <u>renewable raw materials</u> through life cycle analysis in its production chain.
- Michelin: Introduces resin of circular origin in its production chain through Resicare.

Use of biofuels

• Freixenet: Collaborates in a <u>pilot test</u> with Repsol, Serveto, and Scania to contribute to the decarbonization of freight transport through the use of renewable biofuels.

Circularity

- ACCIONA and AENA: Collaborate through the use of low-emission <u>circular steel in the</u> remodeling and expansion of the Son Sant Joan airport.
- BRITA IBERIA: Uses bio-based plastic that comes only from the residues of other processes.
- Signus: Uses recycled materials from end-of-life tires
- Schneider Electric and Enagás: <u>District Cooling Project</u>, an innovative system that takes advantage of the residual cold produced in the regasification process of the Enagás plant in Barcelona for the air conditioning of facilities such as Mercabarna or the port of Barcelona

Innovation in materials and eco-design

- Roca Group: Collaborates with its suppliers in materials innovation and eco-design .
- Puig: Includes eco-design and innovation throughout its value chain through the <u>SPICE</u> tool.



Financing

Creation of sustainable investment products

- Banco Santander: Has created <u>Santander Green</u>
 Investment, a new platform for acquiring and investing in renewable energy projects in Spain. It has also <u>aligned its</u> portfolios to achieve net-zero by 2050.
- BBVA: Promotes <u>sustainable investment</u> through different products for individuals and companies, as well as wholesale financing, being the first Spanish bank to issue green bonds.

Supplier financing and education

 Cajamar: Collaborates with farmers through financing and education actions to promote sustainable and profitable agriculture <u>Agrosostenibilidad</u>.

Our Supply Chain Decarbonization Framework End-to-End approach

Program Management

End-to-end deployment and tracking of supplier decarbonization initiatives



an enterprise program

- Value Chain Assessment and Baselining
 - Collect, assess and validate enterprise Scope 3 emissions inventory.
- Target Setting Model and set enterprise decarbonization goals.
- Program Design Develop a strategic and comprehensive program and governance to achieve enterprise targets.



<u>Act</u>

for supplier impact

- Supplier Engagement & Training Onboard suppliers and spur action though education and collaboration.
- Supplier Target Setting Create supplier emissions baseline and set targets.
- Supplier Roadmap Development
 Customize solutions based on supplier scale
 and solution availability in the market.
- Supplier Progress Reporting Track headway leveraging a foundation of immutable data and targeted KPIs.

Accelerate end-to-end sustainability

- Renewable and Clean Initiatives
 Enable access to education and a like-minded
 community, plus access to renewable energy instruments
 and procurement.
- Circularity
 Shift the lifecycle of a product from design, creation, use
 and end-of-life treatment to resource-saving, circular
 practices.
- Efficiency & Electrification Work with supply base to achieve operational excellence and resilience through efficiency and electrification solutions.

Sustainability Communication Services

Monitor progress, demonstrate leadership, and influence through storytelling / communications throughout project lifecycle

Our Supply Chain Decarbonization Programs A collective effort



- Part of Schneider Electric's initiatives toward achieving net-zero by 2050
- Halve the operational emissions of Schneider Electric's top 1,000 suppliers, which account for 70% of all upstream emissions
- Support the implementation of all decarbonization levers
- As of July 2022, over 1,000 companies have joined and over 1,300 supplier participants joined technical trainings on decarbonization



- Collaborative funding from 10 global pharmaceutical companies
- Designed to help suppliers take action on climate change through accelerated renewable energy adoption, starting with education and functional support



- Part of Pepsico's initiatives to achieve netzero emissions by 2040
- Aim of increasing value chain partner access to renewable energy, through education and aggregate PPAs and other renewable energy procurement options
- First of its kind in food and beverage industry



- The Catalyze program enables the acceleration of renewable energy adoption in the semiconductor value chain through industry wide collaboration
- Catalyze is designed to address one of the most notoriously challenging aspects of decarbonization scope 3 upstream

Powered by:



Eco Ctruxure Resource Advisor

Speakers' contact

Feel free to reach out to the speaker by email should you have any questions



Anh-Hà de Foucauld

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LinkedIn Profile



Download the "Supply Chain Decarbonization: An Essential Step Towards Net-Zero" report



Access to Schneider Electric Supply Chain decarbonization Knowledge Hub



Thank You!





Consulting and engineering for sustainable buildings and industries





European Actor - Pioneer since 1993Leading specialist in building sustainability



Experts of international standing a multidisciplinary team of 90 people working on 5 continents



Worldwide implantation and + 2 000 references
Offices in Thailand, China, Vietnam, Malaysia,
Singapore, Europe, Africa and Americas
Projects in +30 different countries!



Whole life cycle of the building

with a strong involvement and a tailored approach throughout the projects



3 key Business units:

- Low-Carbon Building
- Energy Efficiency and Energy Management
- Certifications (green building, energy, carbon)



+ 10M of sqm committed across sectors: Industrial, Logistics, Hospitality, Commercial, Healthcare, Infrastructure



ESG Criteria at the building level

ESG CONSIDERATIONS IN INVESTMENT DECISIONS



Environmental

Renewable fuels

Climate risk

Greenhouse gas emissions

Energy efficiency

Water management

Recycling processes

Population growth

Emergency preparedness



Social

Health & safety

Human rights

Working conditions

Employee relations

Inclusion & diversity

Impact on local communities



Governance

Ethical standards & corporate behaviour

Board diversity & structure

Stakeholder engagement

Executive compensation

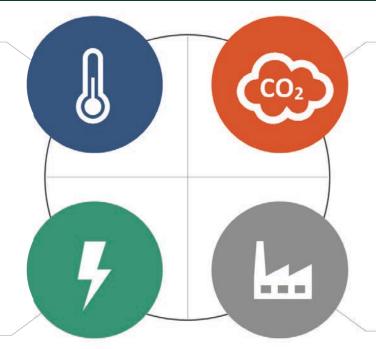
Shareholder rights

Source: World Economic Forum

Facilities Sustainability Indicators

Thermal comfort and well-being

Improve thermal comfort, natural daylighting, indoor air quality for the building users



Carbon emissions

Calculate emissions, identify reduction strategies and set reduction roadmap,

Energy and water efficiency

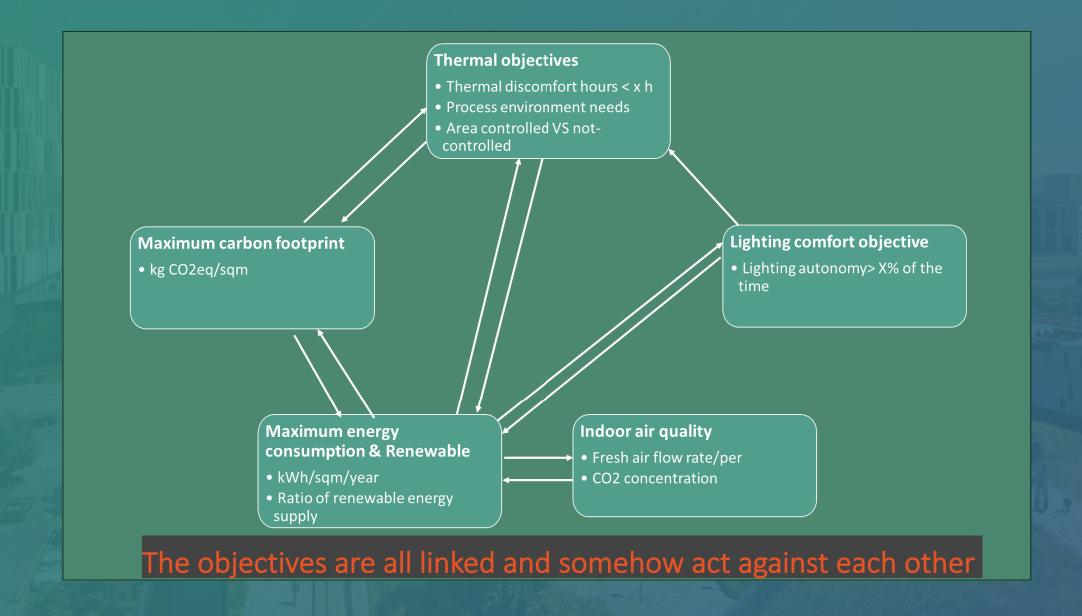
Improve energy and water efficiency

Renewable energy

Solar PV (PPA and EPC), cogeneration, biomass

TERAO focuses on analyzing from a technical and financial point of view

Indicators of Building ESG-Performance





Context of the Project





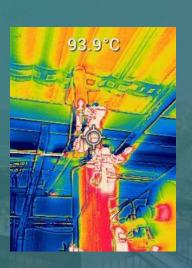
Onsite visit

The purpose of the site visit is for Terao to witness the operations, to assess the facility and its equipment contributing to the different energy-use identified in the energy analysis.

After the site visit, the energy auditor can understand the operations of the energy-intensive equipment, their **technology**, **conditions**, **regulations**, **principles**, **and setpoints**. It implies a lot of **communication** with the engineering team on-site.

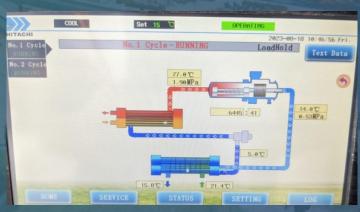
The energy auditor handles some **on-site measurements**:

- Thermal camera measurements,
- Air and surfaces temperature measurements,









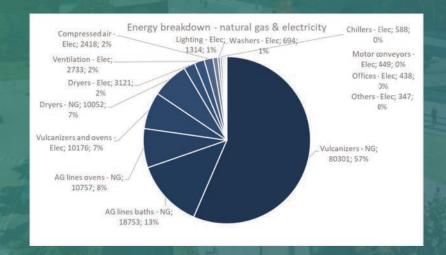


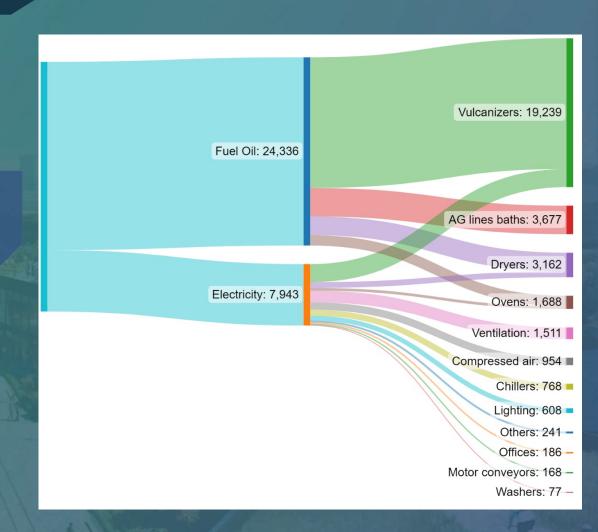
Energy Breakdown

Energy Breakdown done through:

- Through data monitoring (BMS, EMS, energy meter readings, IoT, ...);
- Calculations using technical specifications and assumptions; It is most of the time a mix of the 2 methodologies.

The Sankey diagram → overview of the main energy use
The rule is to focus on 80% of the energy use to lead to significant energy savings.







Energy Efficiency Plan

- Quick-win actions
 No investment, immediate ROI
 - 2 Low investment ROI < 2 years
- 3 CAPEX ROI > 2 years
- Offset opportunities
 Switch to less carbonate energy sources

Energy Efficiency Strategies

1

Quick-wins

- 6 Energy Conservation Measures
- Energy savings = 8,8%
- Financial savings = 40 kUS\$/year
- Cost = 2 kUS\$
- Payback = Immediate

2

Quick wins + Equipment upgrade

- 12 ECMs
- Energy savings = 15,3%
- Financial savings = 70 kUS\$/year
- Cost = 37 kUS\$
- Payback = 0,5 year

Quick wins + Equipment upgrade + Ambitious improvement

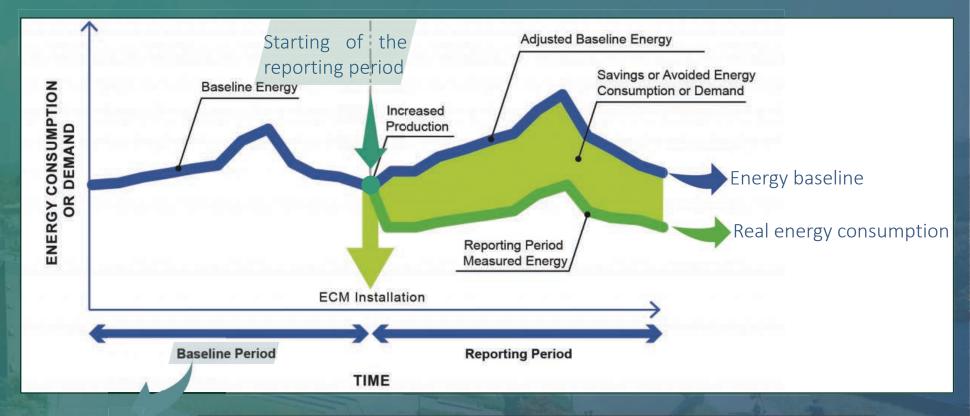
- 16 ECMs
- Energy savings = 17,3%
- Financial savings = 83 kUS\$/year
- Cost = 110 kUS\$
- Payback = 1,4 year



Reporting: How to Measure and Verify



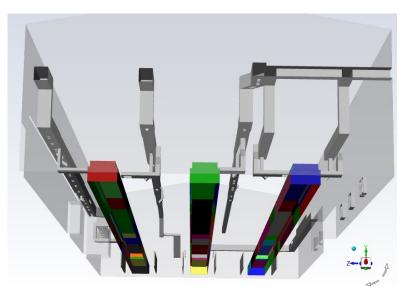
nternational
Performance
Measurement and
Verification
Protocol



Period of time used to model statistically (linear to trilinear regression) the energy consumption of the plant

Energy savings = Energy baseline(prod data) – real energy consumption

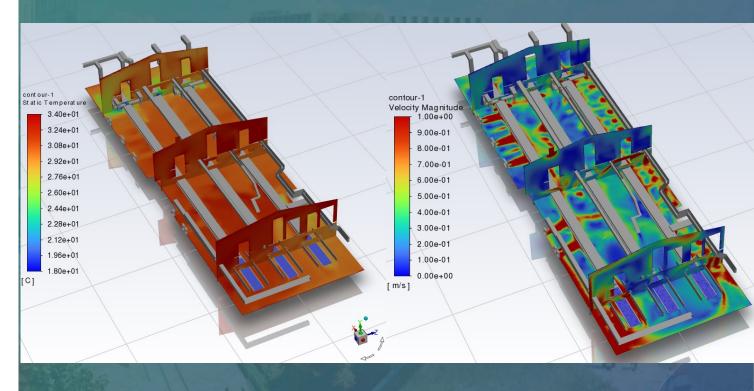




Comfort improvement - CFD modeling

- Thermal comfort Analysis and Improvement → temperature distribution, air speed distribution in space
- Olfactive comfort Analysis and Improvement → distribution of NH3 in the air was performed.

Example of Thermal comfort







SCGP Business model

Continuing to grow the core, expand to adjacencies and break out to new business

PURPOSE

To grow people and business for better planet

VISION

A leading multinational consumer packaging solution provider through innovative and sustainable offering







M&P and organic expansion



Innovation & packaging solutions



Sustainability

Operational excellence & people



GLASSINE PAPER
GRAPHIC PAPER

PLASTERBOARD LINER

DISSOLVING PULP



ESG 4 Plus

Net Zero by 2050



Go Green Circular Economy Roadmap 1. DESICH FOR RECYCLING 1. CHEMICAL RECYCLING 1. CHEM

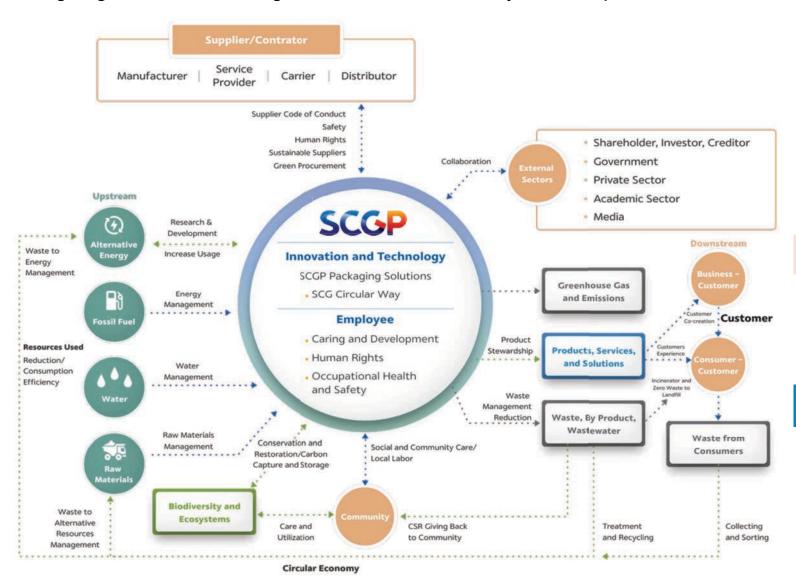




Plus Trust Through Transparency In All Operations

SCGP Sustainable Value Chain

Aligning with Net Zero target and Circular Economy Roadmap



Key Strategies

Supply commitment of Code of Conduct

Mitigate ESG risk

ESG Risk assessment including Anti-Corruption, Anti-trust

- **Human Rights Due Diligence**
- **Supplier & Contractor compliance**

Establish sustainable sourcing

- Personnel development on Procurement Framework
- **Supplier Development**

		Target	2023 Performance
•	Suppliers complied with	100%	100%
	SCGP Code of Conduct		
•	Supplier passed ESG		100%

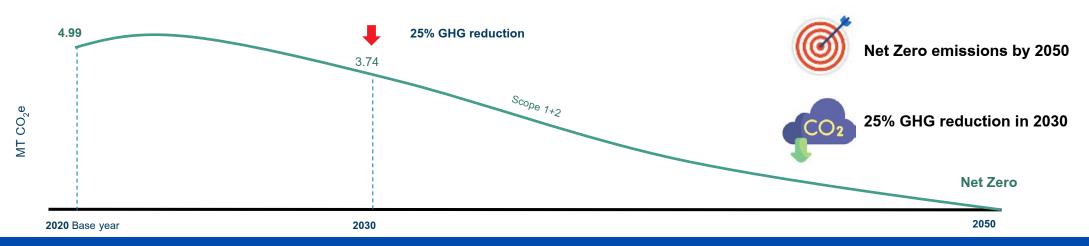
Contractors received Safety Certification (SCS)

risk assessment

99%

SCGP Decarbonization

Aligning with Net Zero target and Circular Economy Roadmap



Climate change Strategy

Energy Transition

Energy Efficiency

Corporate value chain (Scope 3)

Green

Natural Climate Solution

Carbon Capture Utilization and Storage



Biomass Utilization



Process optimization



Low carbon raw material

Transportation



Forest Restoration



Economic tree plantation







Refurbishment GT

Best available

technology



Innovative
Sustainable
Packaging Solution
(CE principle)

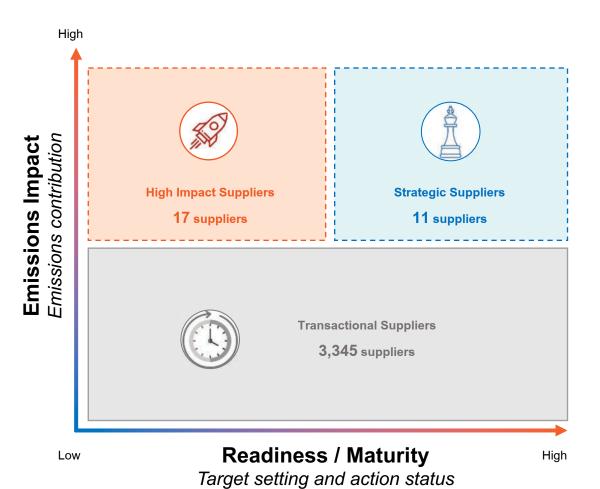


Carbon capture technologies

SCGP Supply Chain Decarbonization (GHG Scope 3)

Prioritizing Suppliers

 Selected suppliers are prioritized to help achieve GHG reduction of the whole supply chain



Our actions towards decarbonization

Support/Educate personnel and suppliers regarding to GHG reduction plan and activities



Training & workshop for GHG reduction development plan



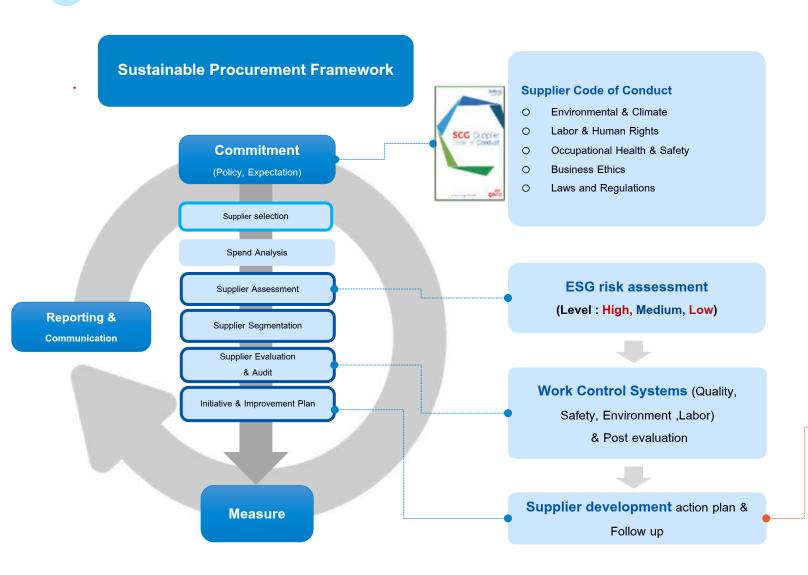
Collecting and Report



Implement of GHG reduction projects

Establish sustainable sourcing

1 Personnel Development on Procurement Framework



2 Supplier Engagement



- ESG Supplier development
- Empowering diversity

"Small businesses owned by women, people with disabilities, veterans, minorities, and LGBTQ+"





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