

RESPONSIBLE SUPPLY CHAIN AND CIRCULAR ECONOMY

EUROCHAM POSITION PAPER 2022–2023



European Chamber of Commerce (Singapore)

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INTRODUCTION

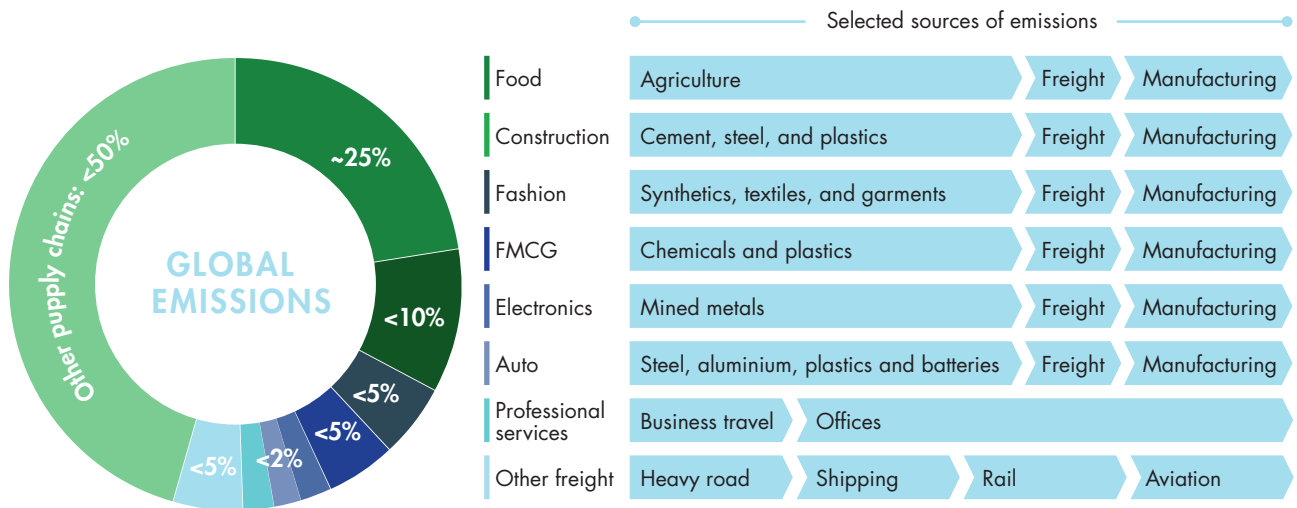
A global move towards building responsible supply chains

According to a 2021 Boston Consulting Group study, end-to-end supply chain carbon emissions are higher than the direct emissions from a company's operations.¹ Eight global supply chains in food, construction, fashion, fast-moving consumer goods, electronics, automotive, professional services, and freight activities, account for more than 50% of annual greenhouse gas emissions (fig. 1).² With these alarming numbers, organisations and governments worldwide have triggered a global move towards global sustainability through re-evaluating and generating new policies for sustainability. In Southeast Asia, governments have participated in pledges of carbon neutrality to push their country towards reducing overall carbon emissions whilst building green infrastructure such as sustainable air fuel to transition the country towards a more sustainable future. Singapore for example, has pushed out the Singapore Green Plan 2030 and in its latest Nationally Determined Contributions at COP 26, it has stated that Singapore aims to reach "net zero emissions as soon as viable in the second half of the century".³

¹ <https://www.bcg.com/publications/2021/fighting-climate-change-with-supply-chain-decarbonization>

² *Ibid.*

³ <https://www.channelnewsasia.com/singapore/cop26-singapore-climate-change-target-grace-fu-2312456>



Source: BCG analysis.

Note: Only selected value chain steps are shown in chevrons. The width of a chevron does not reflect the proportion of Co2 emissions. FMCG = Fast-moving consumer goods

Figure 1. Breakdown of 8 global supply chains, taken from BCG Publication: Supply Chains as a Game-Changer in the Fight Against Climate Change

Due to the pollutive nature of supply chains, coupled with the global rise of online business and consumer activity with COVID-19, collaborations across organisations and governments worldwide have also surfaced to ensure that end-to-end supply chains are as sustainable as possible. However, with the complexity of supply chains, the number of involved entities, and the multitude of means to manage and transport goods, the effort to make supply chains more responsible remains an ongoing feat for many.

SCOPE AND OBJECTIVES

Intended to target both European companies and the Singapore government, this position paper on Responsible Supply Chain will showcase the unique nature of Singapore and Europe in relation to building and maintaining sustainable supply chains. More importantly, this paper synthesises challenges, opportunities, and differences between these two entities, to ultimately draw future recommendations for building more responsible supply chains. It is crucial to understand that organisations, governments, and countries are developing sustainable supply chains at their own pace and at the availability and mastery of knowledge and resources. Hence, this position paper is imperative as a guide for Europe and Singapore to find a way forward together.

The position paper will centre around these three main questions.

1. What are the differences between Europe and Singapore in building and maintaining sustainable supply chains?
2. How aligned are Europe and Singapore and what are the specific priorities of Singapore in relation to European businesses?
3. In what areas and with what means can greater collaboration be fostered between the two parties?

METHODOLOGY

The methodology utilised for this paper consists of mainly secondary research, and written, qualitative interviews with selected European Companies.

To understand the local government’s (entity) perspective on responsible supply chain management, qualitative desk research was conducted to understand their attitudes, direction and most updated plans such as the Mandatory Reporting Scheme. On the side of Europe, EuroCham has also done research on European policies implemented by the European Commission to set guidelines on maintaining responsible supply chains.

Additionally, to obtain qualitative member data, and the perspective of businesses to the issue of responsible supply chain, EuroCham has approached Ipsen Pharma, Pernod Ricard, and CMA CGM for more information on how European Companies across different industries handle their supply chains. To do so, EuroCham has conducted written interviews coupled with follow-up in-depth questions on every aspect of the company’s supply chain management - procurement, transportation, logistics, use of technology, packaging, reporting, waste management and social responsibility. Following this, the data obtained would be used as case stud-

ies to illustrate supply chain management practices in European Companies, and to also highlight the differences between supply chain management in Europe versus Singapore.

CHAPTER 1: SINGAPORE'S MOVE TOWARDS A SUSTAINABLE SUPPLY CHAIN

SINGAPORE'S ATTITUDE AND MOTIVATIONS

Amidst a global shift towards sustainability backed by consumer-induced pressure on companies to become green, Singapore is also seeing a gradual shift towards solution-generation and regulation for sustainable supply chain management. Furthermore, as the city state expands into a regional hub, and as more multinational companies such as DHL establish their distribution hubs and Asia Headquarters in Singapore, there is mounting pressure for the country to develop sustainably and serve as the focal point of supply chain sustainability not just for Singapore but also for the larger ASEAN region.

In Singapore, the transport and logistics sector within the local supply chains play a sizable role in contributing to Singapore's carbon emissions and yet, SMEs in Singapore especially, remain unfamiliar with possible supply chain management solutions.⁴ Hence, as an import-oriented city state housing an array of MNCs and SMEs, Singapore's main areas of concern along the supply chain would be:

- Ensure sustainable and responsible procurement from suppliers locally and abroad
- Education and development of helpful solutions for companies that are new/looking to expand involvement in sustainability
- Sustainable transportation and last-mile delivery of products

With the development of COVID-19, Singapore, like the rest of the world, has sought digitalisation and sustainability as outlets for growth and development. The creation of Sustainable Aviation Hubs along with MNCs like Airbus is just an example of how the local government tries to incorporate digital solutions into ensuring that various nodes along the supply chain are optimised for sustainability.

Recognising that making supply chains sustainable and responsible occurs gradually and overtime, Singapore has been participating in global pledges to reduce carbon emissions and combat climate change. In 2021, Singapore enhanced its Nationally Determined Contributions (NDCs) under the United Nations Framework Convention on Climate Change (UNFCCC), aiming to halve peak emissions by 2050, and achieve net zero emissions 'as soon as viable' within the second half of the century. This is accompanied by additional pledges such as expanding the scope of its pledge to include a seventh greenhouse gas, Nitrogen Trifluoride.⁵

Building responsible supply chains goes beyond a physical shift with viable solutions, it also necessitates a drastic mindset shift where individuals see the pressing need to change existing practices beyond sustainability as a passing trend. With the leadership of the government, and greater consumer pressure, there is optimism for Singapore to create more responsible supply chains.

EXISTING COMMITMENTS AND INITIATIVES

Procurement

In speeches made by Minister for Environment and Sustainability, Ms Grace Fu, she has highlighted some front-runners of sustainable procurement. For instance, the Mandai Wildlife Group was emphasised for its Sustainable Procurement Roadmap where it identifies 21 product categories that are detrimental to the environment and would be hence prioritised for sustainable sourcing.⁶ In other cases, it has also managed to attain 100% sustainable sourcing for palm oil-based cooking oil.

Forming a responsible supply chain often begins with understanding the procurement practices of an entity. As Singapore moves towards its carbon commitments made during COP26, responsible and sustainable procurement has been of concern and focus in recent years. Spearheaded mainly by the government, initiatives such as the National Sustainable Procurement Roundtable (NSPR) has been implemented to assist companies in promoting sustainable procurement with the final goal of building more innovative and

⁴ <https://www.businesstimes.com.sg/hub/projects/switch-2021/green-tech-no-longer-a-good-to-have-but-a-must-in-supply-chains>

⁵ <https://www.channelnewsasia.com/singapore/singapore-targets-halve-peak-emissions-2050-achieve-net-zero-emissions-soon-viable-second-half-century-1338776>

⁶ <https://www.mse.gov.sg/resource-room/category/2021-12-06-keynote-address-at-sg-sustainable-procurement-forum-6dec/>

sustainable supply chains.⁷ With a membership base of local companies, government entities and international corporations, the NSPR focuses on using group meetings, panel discussions and member based projects to discuss best procurement practices on topics such as circular economy and cutting carbon emissions, and to connect companies to drive sustainable procurement solutions.

Looking also at SMEs that wish to engage in sustainable procurement, ESG Singapore has also launched the \$180m Enterprise Sustainability Programme to aim to support local enterprises to develop sustainable capabilities and to guide them in transitioning towards responsible procurement.⁸

Transportation and logistics

To accommodate a shift towards cleaner and renewable energy as part of sustainable procurement of resources along the supply chain, the Singapore government has also diversified to explore alternative energy to assist the country's shift to a low-carbon economy through energy vectors such as hydrogen, batteries, and solar panels. According to a Straits Times article, these new low-carbon technologies are also slated to be incorporated into various industries for powering vehicles and power generation.⁹ In fact, at the Singapore International Energy Week 2021, the government has pledged to create a roadmap charting out its plans to have 30% of its electricity supply be from low-carbon electricity imports by 2035 via imports from ASEAN countries such as Malaysia, Indonesian and Laos.¹⁰ Additionally, firms such as Sembcorp Industries have embarked on partnerships with Japan's Chiyoda Corporation and Mitsubishi Corporation to introduce a commercial-scale supply chain to deliver decarbonised hydrogen to Singapore via Liquid Organic Hydrogen Carriers (LOHC), organic compounds to chemically store hydrogen for transportation.¹¹ Pavilion Energy, a wholly-owned subsidiary of Temasek, has imported a carbon neutral LNG cargo in April of 2021 and has plans to build an emissions enterprise that is centred around carbon offsets for decarbonisation.¹²

Additionally, to maintain its reputation as a regional aviation and maritime hub, Singapore has also shown its commitments to green aviation and maritime fuels in transportations and logistical matters along global supply chains. Temasek is working with the Maritime and Port Authority of Singapore (MPA), as well as MNCs such as Neste to accelerate the adoption of green aviation fuel to cut carbon emissions.¹³ To express this commitment, the Civil Aviation Authority of Singapore (CAAS) has successfully embarked on the next phase of its pilot project to blend Neste-supplied Sustainable Aviation Fuel (SAF) to Changi Airport's existing fuel hydrant system in July 2022, aiming to cut carbon emissions by 2,500 tonnes.¹⁴ On the maritime aspect, Singapore has shown its commitment to decarbonising supply chains by presenting the Maritime Singapore Decarbonisation Blueprint 2050 that focuses on various aspects such as Marine Fuel, Research and Development, and International Maritime Organisation Standards to formulate a blueprint leading up to the eventual decarbonisation of the maritime industry in Singapore.¹⁵

Digitalisation for supply chain

Made more apparent by COVID-19, the Singapore government is of the stance that diversification of supply chains is insufficient. Rather, small states like Singapore must look to use technology to make supply chains more efficient. As such, the Supply Chain 4.0 Initiative was implemented in 2021 that brings together digital experts such as A*STAR, National University of Singapore (NUS), and National Technological University (NTU) to create digital and automation solutions to help SMEs especially become more sustainable and resilient to plausible future challenges.¹⁶

Emerging from COVID-19, Singapore's Emerging Stronger Taskforce (EST)¹⁷, convened the Alliances for Action in 2020 to develop a digital tool, Singapore Trade Data Exchange (SGTraDex) to assist global firms in digitalising supply chains. Of its many functions, the tool serves to enhance the visibility of supply chain processes across logistic partners such as shippers, to then allow them to better optimise the movement of cargo and containers.¹⁸ This allows companies to be more visionary as they are able to plan ahead with existing data, keeping their businesses more sustainable and cost-effective.¹⁹

⁷ <https://sustainableprocurement.sg/>

⁸ <https://www.mse.gov.sg/resource-room/category/2021-12-06-keynote-address-at-sg-sustainable-procurement-forum-6dec/>

⁹ Read more about Green Hydrogen in this same article. <https://www.straitstimes.com/singapore/low-carbon-hydrogen-fuel-tech-in-spore-could-be-fully-commercialised-in-2030>

¹⁰ <https://www.spglobal.com/commodityinsights/en/market-insights/blogs/energy-transition/111021-singapore-energy-transition-carbon-neutral-lng>

¹¹ <https://www.straitstimes.com/singapore/low-carbon-hydrogen-fuel-tech-in-spore-could-be-fully-commercialised-in-2030>

¹² <https://www.spglobal.com/commodityinsights/en/market-insights/blogs/energy-transition/111021-singapore-energy-transition-carbon-neutral-lng>

¹³ <https://www.straitstimes.com/singapore/greener-aviation-and-shipping-fuels-absolutely-critical-for-spore-sustainability>

¹⁴ <https://www.caas.gov.sg/who-we-are/newsroom/Detail/singapore-airlines-operates-its-first-flights-with-blended-sustainable-aviation-fuel-in-singapore>

¹⁵ <https://www.mpa.gov.sg/maritime-singapore/sustainability/maritime-singapore-decarbonisation-blueprint>

¹⁶ <https://www.straitstimes.com/business/18m-investment-in-tech-research-to-help-keep-supply-chains-agile-secure>

¹⁷ The Emerging Stronger Taskforce (EST) was formed under the Future Economy Council (FEC) to review how Singapore can stay economically resilient and build new sources of dynamism to emerge stronger from COVID-19. For more information on the EST, visit www.emergingstronger.sg

¹⁸ <https://sgtradex.com/images/pdf/Singapore%20Introduces%20SGTraDex.pdf>

¹⁹ *Ibid.*

Waste management methods

To outline its plans for future waste management, the National Environment Agency of Singapore (NEA) has implemented a complementary set of schemes to help the country's end-of-life product management. Under the Mandatory Packaging Reporting (MPR) scheme introduced in 2021, producers and suppliers of packaged products will have to submit packaging data and its 3R (reduce, reuse and recycle) plans to NEA.²⁰ 3R plans will include the company's initiatives, KPIs, and overall targets, plans for reducing, reusing, or recycling packaging, and development on making packaging life cycles more sustainable.²¹ To complement this scheme, NEA has also recently rolled out a regulated E-waste management system to ensure the proper collection and management of E-waste, and the extraction of valuable materials from unwanted electronics. This system is based on an Extended Producer Responsibility approach that expects producers to bear the responsibility for the collection and treatment of their products as they reach end-of-life.²² Producers can choose to do so either via 1-on-1 take back for regulated consumer products, in store collection of e-waste, or other NEA approved means of collection.²³



CHAPTER 2: THE EUROPEAN APPROACH TO SUSTAINABLE SUPPLY CHAINS

EUROPE'S CORE OF SUSTAINABILITY

In 2019, the European Commission launched the European Green Deal (EGD) aimed at reducing overall Greenhouse gas emissions by at least 55% by 2030, and climate neutrality by 2050, whilst still achieving substantial economic growth.²⁴ Covering all sectors of the economy, all products sold, imported and made in the EU have to, hence meet higher sustainability standards. This means that for European companies who are producing in Europe, supplies shipped into a country would have to be sustainably sourced, making procurement more responsible.²⁵ Additional information is also expected of the producers and sellers of European products to explain to consumers how and where their goods are sourced from, its manufacturing processes, and its end-of-life treatment.²⁶

In June and December of 2021, the European Commission continued to release more amendments and guidelines on sustainability under the "Fit for 55" Package to update and revise EU legislation to ensure that the EU is on track to reaching its climate goals under the EGD, and its policies are also aligned with the Council and the European Parliament.²⁷

Ensuring Circularity for Some Product Groups

For the EU to remain on track to achieve its goals laid out in the EGD, it believes that building a circular economy is indispensable. Not only will the circular economy create opportunities in various industries, it will strengthen the industrial base of the EU and foster businesses, entrepreneurship, and collaboration amongst governments, SMEs, and MNCs.²⁸ For consumers, the creation of the circular economy across industries will allow them to ensure that the products and services they receive and opt for are high

²⁰ <https://www.nea.gov.sg/our-services/waste-management/mandatory-packaging-reporting>

²¹ *Ibid.*

²² [https://www.nea.gov.sg/our-services/waste-management/3r-programmes-and-resources/e-waste-management/extended-producer-responsibility-\(ep\)-system-for-e-waste-management-system](https://www.nea.gov.sg/our-services/waste-management/3r-programmes-and-resources/e-waste-management/extended-producer-responsibility-(ep)-system-for-e-waste-management-system)

²³ *Ibid.*

²⁴ Refer to EuroCham's 2020 Sustainability Whitebook on a breakdown of the European Green Deal.

²⁵ <https://www.cbi.eu/market-information/eu-green-deal/how-will-it-impact-my-business/what-extra-requirements-must-suppliers-to-the-eu-comply-with-at-what-time>

²⁶ *Ibid.*

²⁷ <https://www.consilium.europa.eu/en/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/>

To read more about the Fit for 55 package, refer to page XXX of this Whitebook

²⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN>

quality, durable, and are created with the intention to maximise its lifespan.²⁹ To sum up the EU's plans, it has published the Circular Economy Action Plan (CEAP) which provides a set of guidelines and regulations from product design, production processes, to empowering consumers across a plethora of supply chains.³⁰

Upon further analysis of the CEAP, the systematic construction of a region-wide plan aims to also be inclusive of some product groups. For starters, the plan ensures that there is a set of guidelines and regulations given to the businesses operating within the EU for aspects of manufacturing such as sustainable product design, where Ecolabels, the Ecodesign Directive, A Green Public Procurement Criteria (GPP) is introduced (albeit uptake by companies is on a voluntary basis).³¹ While not mandatory to follow, these guidelines serve as a gauge for all companies to be better informed of what are the moving sustainability requirements and expectations within the region.³² It also lends companies a platform to associate themselves to and showcase their commitment to sustainability. The CEAP also opens up gateways for future methods and aspects of the regulatory process under the purview of the EU Commission.³³

Identified as having greater circularity potential, the CEAP has identified product groups such as textiles, electronics, steel, cement, and chemicals. Each group identified will be allocated to a different circular economy framework that is specific for the group type, and takes into account its unique characteristics. The framework will then contain a specific set of guidelines typically covering from procurement to end-of-life treatment of the product to guide businesses in ensuring that every node of the supply chain is properly considered.³⁴ As the EU mainly exports its wastes, the plan explores waste management methods, plausible ways in which companies can communicate their supply chain circularity initiatives to its consumers to ensure traceability and transparency, and how circularity can support the mitigation of climate change or bring about climate neutrality.³⁵

Considering the environment and human rights

The EU has always considered the social aspect of supply chain management - broadly termed to be the consideration of the environment, social, and governance impacted as supply chains move globally. In 2022, the EU Commission has presented a proposal on the Directive on corporate sustainability due diligence to encourage sustainable and responsible corporate behaviour throughout global value chains.³⁶ Whenever possible, companies should ensure, prevent, and necessitate that their activities do not contribute to social problems such as child labour, worker exploitation, worker stagnation, exploitation of wildlife and nature spaces, etc.³⁷ These rules have been disseminated to different countries and are mainly targeting two types of EU companies - (a) EU limited liability companies of substantial size and economic power (500+ employees and EUR 150 mil in net turnover worldwide) and (b) other limited liability companies in high impact sectors (more than 250 employees, net turnover of EUR 40 Mil worldwide and more).³⁸ While SMEs are not directly targeted in this proposal due to their size and lack of financial ability, they are protected because they are eligible to receive financial support to guide and assist them in eventually being able to consider environmental and social factors in their operations.³⁹

Within a company's operations and the entire extent of subsidiaries they deal with, they have to integrate considerations for the environment and human rights into policies upon identification of the risks, impacts and problem points when engaging in their own activities.⁴⁰ The state would be in charge of ensuring that these companies properly adhere to these requirements and may impose a fine for non-compliance. Additionally, individuals have the right to take legal action if they feel that in any way, the company has not been attentive to these regulations. Upon approval by the European Council, EU member states will be given 2 years to transpose this directive into a law, and report back to the commission.⁴¹

To provide a concrete presentation of the best supply chain management practices implemented by European companies, the paper will showcase some case studies from our member companies. Mainly, Ipsen Pharmaceuticals, Novartis, CMA CGM, Danone, and Pernod Ricard.

29 <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN>

30 *Ibid.*

31 *Ibid.*

32 *Ibid.*

33 *Ibid.*

34 *Ibid.*

35 *Ibid.*

36 https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1145

37 *Ibid.*

38 *Ibid.*

39 *Ibid.*

40 *Ibid.*

41 *Ibid.*

INDUSTRY BASED CASE STUDIES

Pharmaceuticals: Ipsen Pharma

On digitalisation, Ipsen Pharmaceuticals has built comprehensive platforms to manage cloud and web services to deploy secure, robust and sustainable technical solutions, websites or applications to transform data into insights that support business decisions.

On packaging, Ipsen has set-up a rapid-packaging capability for the External Manufacturing Organisation (EMO) products to accelerate packaging and rework operations. This has enhanced Ipsen's reactivity to safety variations and secured the introduction of new products.

As a responsible member of the communities in which it lives and works in, Ipsen is committed to protecting the safety, health, and welfare of its people, the environment and the responsible use of natural resources.

It has recorded a 12% reduction of greenhouse gas emissions compared to 2019, 16% decrease in energy use since 2016, 8% reduction in carbon emissions in 2020 alone, 13 countries worldwide where Ipsen is recognized as an awarded employer, 97% of employees formalised a development plan with their manager in 2020. Furthermore, it has been implementing a global benefits standard that is applicable in every country where it has employees. This includes access to health insurance, maternity and paternity leave, life insurance and retirement.



Transportation and shipping: CMA CGM

As a global sea, land, air and logistics solutions provider, the CMA CGM Group provides agility that shippers need for end-to-end logistics solutions and a range of transportation modes to meet the varied requirements and speed to market. The group further enhances its capabilities and builds supply chain resilience through investments and assets.

Through CEVA Logistics, the Group's logistics subsidiary, together with the recent acquisitions of Ingram Micro, Colis Prive and GEFICO by the Group, its capabilities in end-to-end logistics solutions have been further strengthened. This includes e-commerce services like warehousing, fulfilment, reverse logistics, as well as last mile solutions. The Group has also invested in more than 50 port terminals in 33 countries. In 2021, CMA CGM expanded its investments in leading infrastructure to support the growth of its shipping lines and improve the quality of services offered to its customers.

Additionally, the importance of sustainability is growing among governments, businesses, and consumers in recent years. The CMA CGM Group is in the race to be a net zero carbon company by 2050 through energy transition. Today, it has 32 e-methane ready ships powered by LNG. By 2026, it will have 77 of them. By 2023, 10% of its fuel mix will be cleaner alternative fuels such as LNG, biofuel and biomethane, etc.

The CMA CGM Group enhanced its efforts to promote sustainable procurement by deploying a global evaluation system for its suppliers and intermediaries. CMA CGM has a group-wide sustainable procurement policy covering financing, corruption, sustainability, economic sanctions, competition laws, and personal data protection.

To identify and manage procurement risks, the Group implemented a five-step assessment tool.

1. Preliminary definition of the risk level
2. Risk assessment through an internal questionnaire by EcoVadis
3. Analysis
4. Supplier qualification
5. Monitoring over time

To further strengthen the monitoring of supplier risks and share best practices, CMA CGM published its responsible purchasing policy 'THE WAY TO BUY', applicable to all employees involved in any part of the procurement and supplier engagement process.

The CMA CGM Third Party Code of Conduct sets forth non-negotiable minimum standards that it expects from its partners, especially from suppliers, their employees and subcontractors. The principles in the document apply to all contractual relationships between CMA CGM and its business partners.

The Group implements a Responsible Procurement Strategy based on:

- **The Third-Party Code of Conduct:** all suppliers have to agree and to sign this Code of Conduct, which presents the involvement of CMA CGM regarding business ethics, social, societal and environmental axes. With this signature, suppliers and subcontractors agreed to respect CMA CGM's involvement.
- CMA CGM has done a suppliers/ subcontractors risk map that includes environmental and social criteria, per domain, geographical localisation.
- CMA CGM has developed a CSR assessment for a set of suppliers and has developed a Group Prequalification and qualification questionnaire for reinforcing the suppliers' screening before contracting and on a regular basis.

The Group accelerates shipping and logistics digitalisation by investing in IoT, artificial intelligence and blockchain solutions, to develop smarter and more secure service offerings.

To capitalise fully on the potential of digital technologies, the Group has developed a dedicated innovation ecosystem that focuses on three priority areas:

- **Customer:** updating customer relationships by creating new business models and developing new products and services.
- **Operational excellence:** simplifying processes to step up rate of development and improve decision-making in all areas.
- **Digital culture:** encourage innovation as a collaborative process between staff members, using agile working methods and a proactive approach.

Recently, the Group and the Maritime and Port Authority of Singapore (MPA) inked a Memorandum of Understanding (MOU) to initiate a collaboration on the development of capabilities and solutions across maritime decarbonisation, digitalisation and innovation. Some collaboration opportunities explored include maritime cybersecurity, just-in-time shipping, shipboard automation for more safety, efficiency and smarter solutions onboard vessels.

Since 2008, the Group has been committed to a green and exemplary approach to exceed the requirements of the MARPOL maritime regulations: the "Green Ship" programme. All vessels owned by the Group participated in this programme. For example, the quantities of waste produced are monitored, updated and reported, specific training sessions are conducted onboard and ashore, and sorting and recycling solutions are proposed whenever possible. The Group uses dismantling shipyards that meet and exceed the health, safety and environmental standards of the Hong Kong Convention. CMA CGM audits these sites directly and uses third-party organisations to monitor procedures on a daily basis during the dismantling process. In 2021, no vessels were sent for dismantling.

Many containers have been reused and converted into emergency shelters to support local communities following natural disasters, but also into cultural projects among others.

The Group actively drives stakeholder collaborations with partners across the ecosystem to build connected, resilient and sustainable supply chains. Here are some examples:

- To improve end-to-end visibility of supply chains, CMA CGM has integrated into Tradelens, an open and neutral industry platform underpinned by blockchain technology, supported by major stakeholders in the maritime ecosystem to promote the efficient, transparent and secure exchange of information to foster greater collaboration and trust across the global supply chain.
- As a founding member of Digital Container Shipping Association (DCSA), CMA CGM paves the way for digitalization, standardisation, and interoperability in container shipping. DCSA establishes standards for a common technology foundation that enables global collaboration such as for smart containers, cybersecurity, eDocumentation, monitoring of on-board Reefers and just-in-time arrangements for port calls. This helps to ensure shipping services are flexible, reliable and environmentally friendly.
- Committed to accelerating maritime decarbonisation, the group is collaborating with MPA to explore the use of zero and low-carbon marine fuels such as e-methanol, e-methane and biofuels for commercial shipping while researching on technologies such as carbon capture solutions.
- CMA CGM will strengthen existing collaborations with MPA in attracting talent through maritime scholarships such as the Tripartite Maritime Scholarship. The Group and MPA will cooperate on new industry-wide initiatives to attract and empower the Singapore-based maritime workforce, tapping on the MPA Maritime Cluster Fund.

Wine and Spirits: Pernod Ricard

In 2019, Pernod Ricard launched its 2030 Sustainability and Responsibility (S&R) roadmap titled, “Good Times from a Good Place” outlining four (4) pillars covering all aspects of key material issues for the company. With its core business linked to nature and well-functioning ecosystems and within its Nurturing Terroir pillar, Pernod Ricard developed its Sustainable Agriculture Key Principles that is being implemented across the business to ensure that 100% of its key raw materials are eventually certified as sustainable. Pernod Ricard also works directly with farmers to champion and implement sustainable and regenerative agriculture practices within its own vineyards and beyond to increase carbon sequestration, protect and restore local biodiversity and empower local communities.

These include commitments by Pernod Ricard:

1. 100% of all raw materials mapped out and risk-assessed for sustainability by 2022;
2. Regenerative agriculture pilot schemes in 8 wine regions by 2025;
3. 100% of direct affiliates with a strategic biodiversity programme in place, linked to priority terroirs and supporting key brands;
4. Partner with 5,000 farmers on regenerative agriculture by 2030;
5. 50% reduction by intensity of Scope 3 carbon emissions by 2030;
6. 100% of key agricultural raw materials sourced according to selected sustainability standards by 2030.

Due to the wide range of its procurement and supplies, Pernod Ricard relies on many suppliers across its supply chain. From farming and manufacturing through distribution and merchandising, some of the Group’s impact on society and the environment is managed by its suppliers. Pernod Ricard believes in building strong business relationships. Under its Valuing People pillar and commitment towards responsible procurement, Pernod Ricard requires all suppliers (including raw material suppliers) and agencies to comply with the Responsible Procurement strategy by acknowledging and signing-on to Supplier Standards via an internal online platform, PartnerUp. This allows the group to have precise knowledge of the sustainability impacts and risks of supply chains and engage key suppliers through collaboration to reduce impacts and accelerate improvement towards ensuring no lack of mitigation plans for high or medium risks direct suppliers by 2025.

On sustainable packaging, the group’s dedicated Sustainable Packaging Tool: “EcoPack Tool” and the creation of a multi expertise Sustainable Packaging Panel (marketing, sustainable performance, commercial, procurement and S&R) helps Pernod Ricard ensure compliance to their Sustainable Packaging Guidelines launched in 2019. These mandatory guidelines set out a list of eco-design principles to follow to achieve its Sustainable Packaging targets as part of the Circular Making pillar.

Pernod Ricard briefs and shares its Sustainable Packaging Guidelines and requirements with all suppliers and agencies to ensure materials used and design meet:

- Eco-design principles to reduce impact according to all New Product Developments by 2022.
- 100% certified cardboard by 2025.
- 50% recycled content of glass by 2025.
- 100% reusable, recyclable or compostable VAP/POS materials by 2025



This is with an aim to have all packaging evolutions managed according to circular design principles, ensuring each change is an improvement in the product life cycle and end waste is minimised or eliminated and circular design principles and mindset is adopted internally. As its primary packaging is glass bottles, Pernod Ricard and its brand companies are redesigning its glass packaging to increase the percentage of recycled content and light weighting while not compromising the quality and standards of its products. On secondary packaging, Pernod Ricard aims to remove giftboxes where possible, to reduce packaging waste, use of natural resources and overall environmental impact.

On point-of-sale (POS) products, the group has met commitments to completely eliminate all single use plastics POS items and is in the process of ensuring all remaining POS and new developments are fully reusable, recyclable or compostable.

Committed to minimising waste at every step by imagining, producing and distributing products and experiences in ways that optimise and help preserve natural resources, its strategy includes commitments around:

- Circular Design:
 - Packaging evolutions projects are managed according to circular design principles, ensuring each change is an improvement in the product life cycle and end waste is minimised or eliminated
 - Circular design principles and mindset is adopted by all teams
- Circular Packaging:
 - Ensure all primary packaging is 100% recyclable, compostable, reusable
 - Introduce recycled content in our glass (50% recycled content on average across the group) and plastic (25% recycled content)
 - 100% of cardboard packaging certified from sustainably managed forests standards (FSC / PEFC SFI)
 - No PET minis by 2025
- The creation of targeted projects to improve recycling rates in 10 key markets.
- Innovative circular distribution models to distribute products
- Water use reduction across all manufacturing sites and water replenishment programmes for manufacturing sites located in high water risk watersheds.

CHAPTER 3: ENCOURAGING GREATER EUROPEAN-SINGAPORE COLLABORATION

Harkening back to the objectives of this position paper - to trigger dialogue and explore further paths for collaboration on supply chain sustainability and responsibility between Europe and Singapore, the paper will now explore successful initiatives and existing gaps identified. Then, this chapter will explore further recommendations that may be implemented.

To consolidate, below are the main recommendations this paper will present:

1. Clearer Guidelines and Infrastructure to Follow up on Commitments
2. Expansion into EU-ASEAN-SG Digital Collaboration for Supply Chains
3. Increase Focus on ESG
4. Include SMEs and the Community in making Supply Chains Responsible
5. An Incentive-based Approach

WHAT HAS BEEN WORKING?

EU-SG Free Trade Agreements

In 2019, Singapore and the EU entered into the EU-Singapore Free Trade Agreement (EUSFTA). This partnership has allowed increased market access for EU Businesses in Singapore and vice versa. It also optimises import and export processes because the agreement entirely removes duplicate testing for certain products.⁴² More importantly, this FTA opens up opportunities for new environmental services, green public tendering, and makes trading cheaper to allow more money to be invested into green technologies.⁴³

Under the multitude of measures undertaken by this FTA, the Sanitary and Phytosanitary part aims to protect humans, animals, and plant life and health. This means that a level of transparency in information exchange is expected from both parties to recognise and ensure the quality of their goods as they trade. The agreement also protects the health and safety standards of each country, ensuring that trade does not compromise the standards of any party.⁴⁴ This means that the EU, which possesses a strict set of food and health safety rules, will not have their standards lowered to accommodate Singapore exports. All Singapore exports to the EU

⁴² <https://trade.ec.europa.eu/access-to-markets/en/content/eu-singapore-free-trade-agreement>

⁴³ *Ibid.*

⁴⁴ *Ibid.*

must fulfil the same/equivalent rules and regulations on environment, animal health and hygiene, consumer safety, and food safety regulations.⁴⁵ For Singapore, it will also only accept products that are deemed to be of low enough risks for its consumers and environment.⁴⁶ Hence, this FTA is effective because it not only heightens EU-SG trade, it also ensures that supply chains are optimised and yet ensures that processes and imported goods do not impede upon the health, safety, and well-being of external stakeholders such as consumers, animals, plants, and the natural environment.

Country-based digital partnerships

Aside from partnerships within the ASEAN bloc, Singapore has recently in March 2022, engaged France in a bilateral Digital and Green Partnership intended to provide a platform for the two countries to work on digital and green projects such as smart transportation, smart cities, cyber and financial innovation, as well as agri food technologies.⁴⁷ With the prioritisation of technological innovation undertaken by both countries, this partnership intends to bring the public and private sector closer by sharing sector-led green technologies to enhance the competitiveness of the Singapore and French economy and create more opportunities sustainably.⁴⁸

GAPS ANALYSIS

Differences in the nature of supply chains between EU and SG

Since Singapore imports most of its goods, much of the supply chain procurement process at the manufacturing stage occurs outside of Singapore. In Singapore, the main focus is on transportation logistics, and end-of-life treatment. As Singapore is also land scarce, it does not possess sufficient space to ensure proper composting and decomposition of biodegradable matter. Instead, Singapore adopts the main method of incineration and dumping the incinerated ash into Semakau Landfill.

As highlighted by many of our EuroCham members as well, apparent differences in the way supply chains in Singapore and Europe can be further analysed. For instance, for pharmaceutical companies like Ipsen Pharma, that do not possess production facilities in Singapore or ASEAN, they will require extensive engagement with local distributors to provide warehousing and logistics services to ensure that their goods reach their designated customers.⁴⁹ This is the same for wine and spirits companies such as Pernod Ricard, whose production and sourcing footprint is based mainly in Europe, Americas, Australia, and New Zealand. Hence, operations in Singapore do not involve procurement, harvesting of food ingredients to make wine and spirits, and the wine and spirits manufacturing process itself. In Singapore, main operations and opportunities for sustainability along supply chains mainly revolve around ensuring compliance to the group's responsible procurement strategy, transportation and transshipment of goods to Singapore and the wider ASEAN region.⁵⁰

Additionally, since it takes a significantly greater amount of time to transport goods from Europe to Singapore, it is expected that there will be a lot more packaging and technology to ship fragile items such as vaccines, medicines, and other perishable goods. Whereas in Europe, it is easier and takes less time to transport goods across various countries due to proximity and geographical similarities.

MNCs or SMEs?

More SME-oriented than many parts of Europe, Singapore has many programmes lined up in support of SMEs as they become more sustainable. As mentioned in the first chapter, Singapore has grants and programmes like the Energy Efficient Fund to encourage SME investment in low carbon technologies. Despite these efforts, there does not seem to be a concrete plan for SMEs of varying size, financial capacity, and scope to develop their sustainability agenda. More often than not, SMEs are local, meaning that they engage in procurement, sourcing, transport, and waste management themselves, either locally or abroad. Distinctively, they are not as established as MNCs to financially and physically ensure that their supply chain processes are sustainable. They may also not possess the technical expertise to create or engage digital tools to optimise supply chains, and track real time supply chain processes to ensure they remain sustainable. While cost is a pervasive problem for SMEs in comparison to MNCs, SMEs should still, in their own ways, ensure that their supply chains remain sustainable not at the expense of their own survival. This hence comes at the guidance and more detailed assistance of local governments.

45 <https://trade.ec.europa.eu/access-to-markets/en/content/eu-singapore-free-trade-agreement>

46 *Ibid.*

47 <https://www.mci.gov.sg/pressroom/news-and-stories/pressroom/2022/3/singapore-and-france-sign-partnership-on-digital-and-green-economy-cooperation>

48 *Ibid.*

49 *Written Interview with Ipsen Pharma*

50 *Written Interview with Pernod Ricard*



Over focus on optimisation

In order to ensure that supply chains become more optimal, efficient, and green, companies and the Singapore government have been focusing extensively on the topic of cutting carbon emissions. While cutting carbon emissions help correct global warming, certain carbon technologies and methods can be invasive to wildlife, nature, and even worker welfare. In order to build sustainable supply chains, it is also the responsibility of companies and governments to ensure the ethical aspect of its activities, and to always ensure that companies remain ethical and are aware of the ethical implications across the supply chain. To this aspect, Europe is significantly ahead of Singapore in terms of taking the ESG aspect into consideration when optimising and making responsible supply chain decisions.

Furthermore, this comes with understanding the industry-specific needs of stakeholders. For example, in a written interview, Ipsen Pharmaceuticals has noted a crucial point. Due to the nature of pharmaceutical products, it is difficult to reduce packaging (secondary and primary packaging are required for safety reasons). According to the current regulations for pharmaceutical products, the packaging is country-specific. If the electronic labelling system can be developed further, scanning the QR/bar code to download package inserts and instructions for use can save large amounts of paper and facilitate product flow tracking and anti-counterfeiting.

The need to expand partnerships

In recent years, Singapore has made significant progress in bilateral and regional FTAs or partnerships on trade and economic development. In the second phase of its efforts, it has also expanded to look at digital and sustainable Digital Economy Agreements (DEA) to expand and build more complex and efficient data systems.⁵¹ Currently, Singapore is working on its Green Economy Agreements (GEAs) to serve as a strategic pathfinder that contributes to global capacities to address climate change.⁵² Singapore has partnered with the EU to engage in free trade agreements, as well as country specific bilateral partnerships to expand upon green solutions. However, the existing partnerships can be expanded upon to look at every aspect of the supply chain to ensure that supply chains remain sustainable, because existing initiatives do not prioritise supply chain solutions in a bid to move supply chains from a linear to circular fashion.

RECOMMENDATIONS

Clearer guidelines and infrastructure follow-up on commitments

Currently, Singapore has many targets and plans to make supply chains more sustainable. However, what can be improved is the setting of clearer guidelines and specific checkpoints to keep organisations on track to reaching Singapore's sustainability goals. For instance, in an interview with Pernod Ricard, it was suggested that legislation or checkpoints could be implemented to track carbon emissions or the government could mandate ships to carry a minimum load to improve supply chain sustainability. Since factors may differ from industry to industry, these guidelines or requirements should be customised and clearly mandated and enforced to ensure that supply chains in different industries move to becoming more sustainable.

Furthermore, it is pertinent for the relevant infrastructure to accompany the government's policies. For example, if the government wishes to present a campaign for recycling of glass, but they do not possess adequate infrastructure such as glass recycling sites or a roadmap for the treatment of collected glass, then there is significant plausibility that individuals will ignore future government initiatives. Merely passing legislation to compel organisations to comply with waste management measures without getting the relevant understanding and buy-in of such organisations will mean that these strategies will inevitably fail. While the government is doing a good job with the implementation of logistical infrastructure like ports, airports, railways, roads, modernising border regulations,

⁵¹ <https://www.mti.gov.sg/Newsroom/Speeches/2022/03/Opening-Remarks-by-Minister-S-Iswaran-at-FTA-Day-2022>

⁵² *Ibid.*

sanitary inspections, the government can afford to take extra steps to develop infrastructure further by understanding industry-specific circumstances, its needs and how to best support those needs as they align with the government's own plans to make supply chains more responsible.

With clearer guidelines and infrastructure implemented to follow-up on its sustainable supply chain commitments, Singapore can, as a result, increase transparency and traceability of supply chain processes. This also allows companies to know what happens to the data they are reporting or collecting to deepen trust between the private and public sectors. Having relevant infrastructure also allows European companies to better adapt their sustainability initiatives to suit Singapore's environment.

Expansion into EU-ASEAN-SG digital collaboration for supply chains

While partnership with the EU is a good step to take, Singapore can also afford to look into expanding partnerships bilaterally or involving states in ASEAN as well. This is because Singapore functions as a port or hub for supply chain shipments from Europe to many other states in ASEAN. This expands the existing supply chain to many other stakeholders who will contribute to the output of supply chains. States involved in this extensive supply chain need to have more avenues to connect and develop strategies to make supply chains more sustainable. Through having multinational collaborations, a discussion platform can be created to assist Europe, Singapore, and other stakeholders to be better informed of the physical challenges experienced by different states when it comes to supply chain management.

With greater knowledge sharing, more insight can be gained and solutions may be better optimised for more sustainable solutions.

Increase focus on the ESG

Hyper focused on optimisation of supply chains and reducing carbon emissions as its main objective, it is observable that Singapore lacks sufficient emphasis on the ESG aspect of supply chain management. Oftentimes, the ESG impacts of supply chain management is overlooked as countries or stakeholders find the most cost-effective and efficient solutions. Unlike in Europe where there are slightly more concrete laws to protect the environment, the social, and the governance aspect of supply chains, Singapore can do more on the ESG side to ensure that supply chain processes remain ethical. For example, local governments need to not only put in place roadmaps for MNCs, but also SMEs to ensure worker safety and well-being. Additionally, when using digital solutions to optimise supply chains, it is also important to ensure that companies maintain and protect the data they put online, as a way of maintaining data governance and security.

To assist SMEs and other stakeholders who may not be accustomed to engaging with ESG, the government should set clear, customised targets and timelines to keep companies on track. Moreover, the government may also choose to tap on existing knowledge stakeholders, NGOs, and even student groups, to understand how to best implement ESG within companies that will actually be of substantial benefit to the relevant stakeholders. Most importantly, as different companies experience different supply chains and are hence faced with a different set of supply chain problems, it is important that the government does not assist these companies into using boilerplate solutions that might cause more harm than good in the long run. In fact, education on supply chain sustainability should begin at a young age or at the tertiary level, and the government should try to tap into student groups to listen to them and understand how they envision supply chains to shift in the future.

As focus on ESG increases, the direct outcome is that as the physical and online environments are well safe-guarded, the immediate welfare of the individuals, wildlife, and communities would experience a greater boost. In the long run, increased focus on ESG will result in the normalisation of regard for more abstract concepts like individual rights, global governance, and protection of wildlife and our natural environment.

Include SMEs and the Community in making supply chains responsible

SMEs are a key player in the sustainability scene as well. The Singapore government has engaged many MNCs like Airbus and Nestle in making more responsible supply chains. Another area that could be tapped on is the SMEs. Small and specialised to conduct only specific processes, SMEs also possess many innovative solutions that can optimise processes for supply chain. The government can serve as a link and bridge between SMEs who have good solutions for supply chain optimisation to EU companies, and the government's own projects on sustainable supply chain management. Including SMEs also gives the work they do more visibility, and allows them to explore additional pathways to ensure that their own business prospers and remains competitive. With more pathways for growth comes greater financial capacity for SMEs to be a part of the sustainability scene and contribute more extensively to Singapore's supply chains and economy.

It is important for the government to extend their support to promote relevant workshops and courses in the community, work with stakeholders from various sectors to explore sustainable technologies, develop new policies, invest in research and development, amongst others.

An incentive-based approach

To incentivise companies to abide by the government's plans and move towards greening their own supply chains, it is perhaps important to consider providing some incentives or benefits to support companies who are already actively playing a part in making their supply chains more responsible. For instance, with regard to the EPRS, the government can incentivise companies to promptly report and design their products sustainably whilst also sourcing ethically and responsibly by awarding them some certification as recognition for their efforts. Alternatively, the government can implement a benefits/ rewards scheme to encourage a more receptive approach from companies and also a more willing attitude to make small tweaks in their own supply chains for sustainability.

This approach can easily be extended to SMEs, to encourage them that they will be supported if they choose to move towards making their own supply chains more sustainable.

CONCLUSION

The collaboration between the EU and Singapore will need to contend with the new norm as there is a permanent shift in how companies conduct their supply chain operations with the onset of a green movement. The EU and Singapore have been doing extensively well in their own ways to make supply chains more responsible. However, there is still a long way to go to ensure that supply chains actually become sustainable in the long run.

To move forth from here, it is pertinent that the EU and Singapore continue to collaborate with relevant stakeholders to provide a secure and reliable environment where businesses can anchor themselves, amidst the shifts in supply chain. To facilitate this support, there could also be considerations to implement financial incentives and include smaller stakeholders such as SMEs and the communities that have a voice on supply chain sustainability. Additionally, it is also crucial to ensure that supply chain processes take good care of the ESG aspects.

Creating responsible supply chains is not an easy feat, it requires continuous collaboration, open discussion, solution trial and error, amongst many other plausible factors. Most importantly, it requires a collaborative and constructive effort for companies and governments to take the leap forward together, support each other, and push for the survival and health of our planet.



ACKNOWLEDGEMENTS

Thank you to the following people and entities who have contributed to this report:

Lead Authors

See Ee Teng, Advocacy & Research Intern, EuroCham Singapore
 Persa L Chowdhury, Advocacy & Special Programmes Executive, EuroCham Singapore
 Nele Cornelis, Executive Director, EuroCham Singapore

Content Support

Fiona Lim, CMA CGM
 Matthew Tan, Pernod Ricard
 Feng Yun, Ipsen Pharma
 Prateek Jain, Unilever
 David Ringrose, DHL Supply Chain
 Liu Haiyan, Novartis
 EuroCham Supply Chain Committee

Case Studies Support

CMA CGM Asia Pacific
 Pernod Ricard Pte Ltd
 Ipsen Pharma

LIST OF ACRONYMS

CAAS	Civil Aviation Authority of Singapore
CEAP	Circular Economy Action Plan
DCSA	Digital Container Shipping Association
DEA	Digital Economy Agreements
EGD	European Green Deal
EMO	External Manufacturing Organisation
EUSFTA	EU-Singapore Free Trade Agreement
GEAs	Green Economy Agreements
LNG	Liquefied Natural Gas
LOHC	Liquid Organic Hydrogen Carriers
MARPOL	International Convention for the Prevention of Pollution from Ships
MOU	Memorandum of Understanding
MPA	Maritime and Port Authority of Singapore
NEA	National Environment Agency
NDCs	Nationally Determined Contributions
NSPR	National Sustainable Procurement Roundtable
UNFCCC	United Nations Framework Convention on Climate Change