

SUSTAINABLE SUPPLY CHAINS

White Paper on
Cross-Sector Partnerships
(CSPs) and other Strategies
for Improving Sustainability



SWEDCHAM.CHINA
中国瑞典商会



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Foreword by IVL

Dear Readers,

Embarking on the global journey towards sustainable development, it is more and more vital for different sectors and supply chain stakeholders to work together. Relevant policies, technologies, and management measures are emerging quickly, but it is never enough when coming to awareness boosting and knowledge sharing. Swedish Chamber of Commerce in China has organized and put forward this paper, among other exciting events and publications, as its dedication to providing inspiration for global sustainable development challenges.

This paper focuses on the strategies and practical actions of IKEA and SKF in sustainable development. IKEA, with its focus on "Healthy & sustainable living," "Circular & climate positive," and "Fair & equal," demonstrates its commitment to contributing to global environmental efforts. SKF, with goals like "Decarbonized own operations 2030" and "Net zero greenhouse gas emissions in supply chain 2050," collaborates with suppliers and partners to move towards a zero-emission future. The case studies in the paper showcase the innovative practices of IKEA and SKF in product design, material recycling, energy use, and supply chain management. We have been collaborating with IKEA and SKF on many interesting projects such as life cycle assessment, carbon footprint, EPD, circular economy, etc. and witnessing both companies have always been developing as top pioneers in sustainability. These also can serve as exemplary models for the sustainability goals of other companies and industries.

It can be observed that cross sector partnership is taken into consideration for different sustainable actions from a life cycle perspective. IVL Swedish Environmental Research Institute has launched a collaborative effort called the "International Action Initiative of Life Cycle Thinking." This initiative aims to align with global development initiatives and the United Nations' 2030 Sustainable Development Agenda, which engaged multiple sectors and players, including SwedCham and SKF etc.. Glad to see that the cases presented in the report has addressed this point carefully. In the close collaborative relationship, innovation can be triggered and remarkable improvements can be made through sustainable practices.

Foreword by IVL

Challenges, in many cases, are actually opportunities for cooperation. Business opportunities hide behind all the shared challenges and barriers, which creates more potential cooperation.

As the China Chief Representative of the IVL Swedish Environmental Research Institute, I am honored and happy to be invited to write this forward. We believe that through collective efforts, multinational corporations and their Chinese partners can find innovative solutions to address the challenges of global sustainable development.

Gao Si

China Chief Representative

IVL Swedish Environmental Research Institute



Introduction

In an era marked by rapid industrial growth and increasing environmental challenges, the pursuit of sustainability has become a core concern for businesses globally. One key area where the implementation of strategies and partnerships for improved sustainability is crucial is in the construction and management of supply chains, and cooperation with other companies across sectors can be an essential strategy for improving sustainability. This white paper has the purpose of contributing to the discussion and knowledge-sharing surrounding the common aims of improving sustainability in supply chains, as well as to present the potential effectiveness of Cross-Sector Partnerships (CSPs) as a method of enhancing sustainable practices. This will be done by presenting the successful cases of two large Swedish companies, IKEA and SKF, that are leading the way in improving the sustainability of their supply chains in China and globally.

In today's interconnected world, supply chains extend across continents, implicating a multitude of stakeholders in their operations. This global interdependence means that sustainability issues in one part of the chain can have far-reaching implications. As such, Swedish MNCs like IKEA and SKF are increasingly implementing sustainable practices into every facet of their supply chains, from sourcing raw materials to manufacturing processes and distribution.

The Swedish Chamber of Commerce in China asked IKEA and SKF a series of questions on how they work toward sustainability-related goals, how they utilize CSPs, how they improve the sustainability of their own supply chain, and what challenges they have encountered. This white paper will delve into the details of how they work with successfully integrating sustainability into their supply chains and the pivotal role of CSPs in this journey. It will highlight the strategies employed, the challenges encountered, and the lessons learned, offering valuable insights for other companies aiming to embark on a similar path.

We hope that the lessons and experiences presented by IKEA Supply Area East Asia and SKF, together with the foreword written by IVL, will be both helpful and inspiring for our member companies, as well any other company aiming to develop new strategies for improving the sustainability of their supply chains, and who is looking to work with CSPs to become more sustainable.

A large, leafy tree dominates the left side of the image. In the background, there's a garden with a watermelon, some outdoor furniture, and a fence. The title text is overlaid on a semi-transparent white box on the right side of the image.

Insight from IKEA Supply Area East Asia

What are IKEA's most important sustainability-related goals, and how does IKEA work with CSPs to achieve them?

At IKEA, our vision is to create a better everyday life for the many people. Sustainable development is essential for us. We always think long term – to be able to meet the needs of many people without compromising the needs of future generations. Our sustainability strategy has three focus areas to help us to fulfil the IKEA vision and ambition to become people and planet positive: Healthy & sustainable living, Circular & climate positive, Fair & equal.

Based on what we focus, our business gives us a unique opportunity to address these areas and we have very concrete goal on this - by FY30, reduce the absolute greenhouse gas emissions from the IKEA value chain by at least half, compared to the baseline year FY16.

In order to achieve the goal, we need the entire IKEA value chain to work together.

Design for circularity

One key piece of the puzzle for IKEA to transform into a circular business is to adopt circular thinking during the design phase of the product. This means developing it from the beginning so it can reach its full potential to be part of a circular society. Following the Democratic Design principles, we take sustainability aspects into account from the beginning of product development. Based on Democratic Design, we set higher for ourselves - Circular Design Principles. By following these principles, we are working intensively to make products more circular.

Work with secondary material

52.2% of our climate footprint in IKEA's total value chain comes from materials. To achieve our 2030 climate goal, it is important to focus on the material agenda. With this purpose, again we have the quantitative goal for material: by 2030, we aim to be able to define all products' life cycles and use 100% renewable or recycled materials. Therefore, we are constantly striving to explore how to use recycled materials, through cross-border and innovation. There are few examples about recycled materials:

Recycled Polypropylene Carpet

Today, IKEA's global carpet production consumes approximately 30,000 tons of virgin polypropylene per year, equivalent to 120,000 tons of crude oil. We have been actively striving to find alternatives to virgin polypropylene.

With the trend of food delivery, China consumes a massive amount of plastic takeaway containers every day. In just one city like Shanghai, approx. 300-500 tons of plastic takeaway containers waste are generated every week. These containers are recyclable, but they cannot be reused for food packaging. Typically, a portion of them undergoes downcycling through injection molding, while another portion ends up in landfills.

However, at IKEA, we identified the value of these discarded plastic takeaway containers, which, after a series of processes, can be transformed into carpets made from recycled polypropylene (scheduled for launch in 2024). This effort is expected to reduce carbon emissions by 36,000 tons annually. This crossover of the plastics and the textile industry promotes the advantages of recyclable raw materials in China to the world.



Energy use green use less

Almost 2/3 of the IKEA climate footprint is directly connected to the supply chain, including production at suppliers. We are striving towards 100% renewable energy (electricity, heating, cooling and fuels) and electrification across the IKEA value chain. Here, we would like to share some cases from production and logistics angles.



For Production

- We use multi solutions to reduce carbon emission. Energy saving projects and building energy system help us to improve energy efficiency, identify energy-saving opportunities and use less energy in everyday production.
- We increase renewable electricity share by on site generation and green electricity purchasing. At present, over 80% number of IKEA suppliers in China transited to renewable electricity (over 200 suppliers in China).
- We prioritize electrification solution, for example heat pumps, infrared heating and Li-battery-powered forklifts, to replace traditional fuel sources such as natural gas, steam, and oil.

For Transport and Logistics

- As a big transport buyer, IKEA has the responsibility to reduce its own emissions, and take the opportunity to influence the decarbonization of the transport industry. By 2030, we want to reduce the carbon footprint from every transport by an average of 70% compared to FY17.
- Key elements to achieve the set target will be fossil-free and zero-emission technologies integrated into the total IKEA transport system, where we see that hydrogen power can play an important role. In 2022, IKEA started the usage of hydrogen fuel cell technology in heavy-duty trucks for regular transport flows in China. This technology contributes to lowering our carbon emissions when transporting goods. It marks a new chapter on our way to green logistics.
- Besides, compared with conventional diesel trucks in the market, electrical trucks offer a greener solution. We have 7 electrical trucks with renewable electricity running in China and more to come.





Who should a large foreign company in China look to as potential partners when it comes to working toward sustainability goals?

The starting point is strategic fit. We need to have the common mindset and values, the sustainability agenda including the corporate social responsibility.

Then, we hope the potential supplier could grow with us, help each other, challenge each other, so that we can make positive impact together.

What are the main challenges IKEA has encountered in regard to their sustainability-related work in China?

We believe that China has very strong advantages in the recycled materials market, which can be observed in three aspects. First, it has a massive consumer market. Second, it possesses a complete industry chain setup. Third, it has developed material upgrading and application technologies.

Of course, we also face some positive challenges. Firstly, China is still in the process of developing its recycling material system and utilization. Material traceability within the system is under development. Secondly, it is about the establish of the laws and regulations related to recycled materials. But we believe that through dedicated efforts, these challenges can be overcome.

The image features the SKF logo in a large, bold, blue font, centered in the upper half of the frame. The background is a bright, sunny garden scene. In the foreground, a large terracotta planter is filled with a variety of flowers, including white and pink roses and purple lavender. To the right, a white metal folding table is partially visible, with a small white vase containing a succulent on top. In the background, a white-framed window is set into a red wooden wall. The overall atmosphere is bright and pleasant, suggesting a well-maintained outdoor space.

SKF®

**Insight from
SKF**

What are SKF's most important sustainability-related goals, and how does SKF work with CSPs to achieve them?

SKF committed Net-zero emission supply chain 2050 and decarbonized own operations 2030.

1. Decarbonized own operations 2030

- Improving energy and resource efficiency within our operations
- ISO 50001 currently in 45 factories – accounting for more than 90% of SKF's total energy use
- Energy performance monitoring
- Group energy target
- Investments in energy and resource efficiency

2. Switching to renewable energy sources

- 2022, over 50% of the electricity used by SKF was renewable
- SKF has joined RE100, a global initiative committed to using 100% renewable electricity
- Natural gas represents the second largest energy source in SKF operations, typically used for building and process heating – investigations ongoing to find renewable alternatives

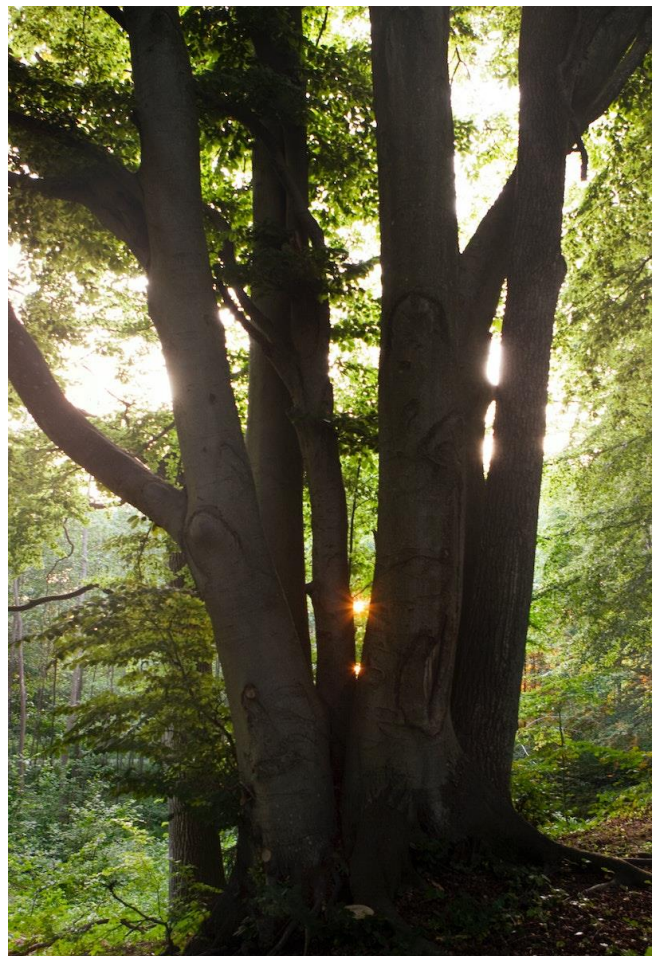
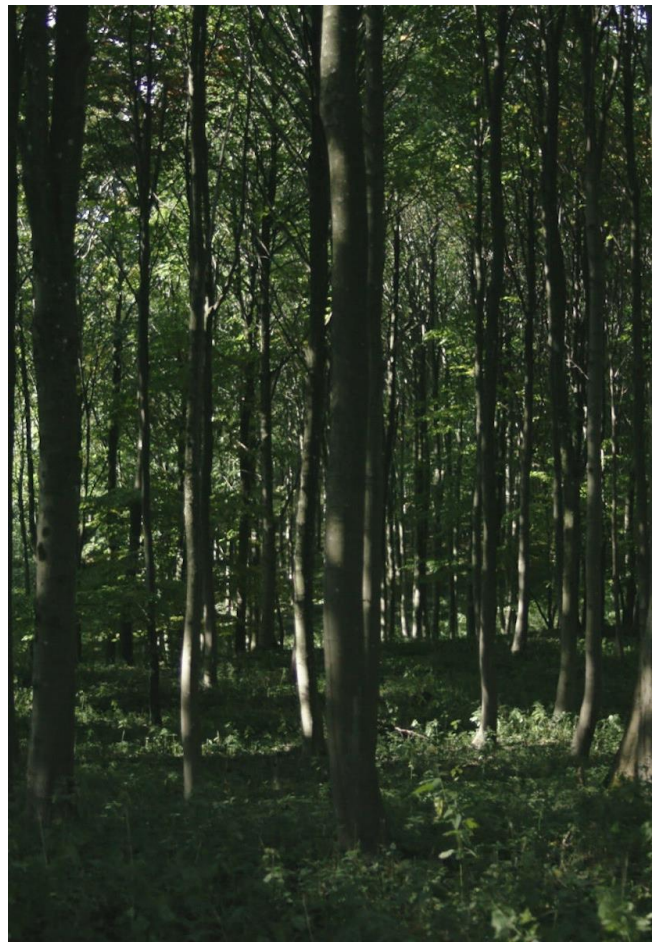
Net zero greenhouse gas emissions in supply chain 2050

1. Direct material suppliers

- Adoption of ISO 50001 energy management standard for energy intensive suppliers
- Reporting of upstream scope 3 emissions from direct materials
- Emissions reduction plans from key suppliers
- Joined SteelZero and ResponsibleSteel initiatives
- SKF to participate in and fund research related to fossil-free bearing steel

2. Goods transportation

- Production and sourcing on a regional basis
- Optimizing modes of transportation
- Optimizing logistics efficiency



How has SKF worked with improving sustainability in its own supply-chain?

SKF Care – Our sustainability decision-making process

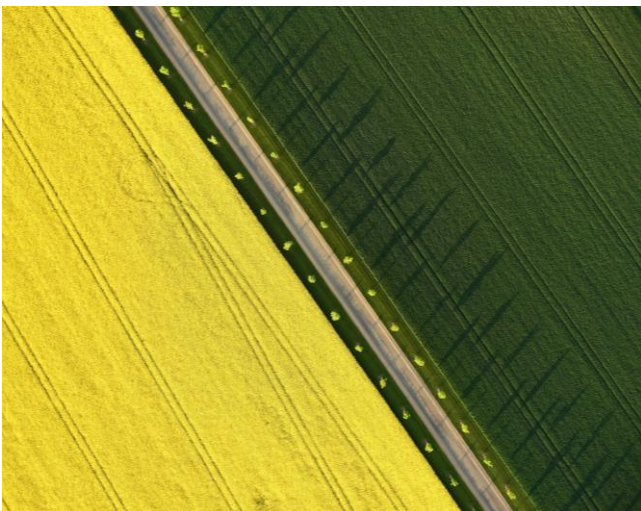
SKF Care is the framework guiding our:

- Code of Conduct for suppliers & sub-contractors
- Supplier Quality Standard
- Supplier Sustainability Standard
- Conflict Mineral Policy

SKF has received high sustainability ratings from CDP (A-) and EcoVadis (Platinum), and has committed to the Science Based Targets initiative, the UN Sustainable Development Goals, TCFD, ResponsibleSteel, SteelZero, and RE100. The SBTi has verified SKF's net-zero target by 2050, validating both SKF's near and long-term science-based emissions reduction targets.

Who should a large foreign company in China look to as potential partners when it comes to working toward sustainability goals?

Local energy companies should be potential partners, because renewable energy is very important part to achieve Net Zero and sustainability goals. However, currently there are different energy policy and resource in different provinces/cities in China. An energy partner is crucial.



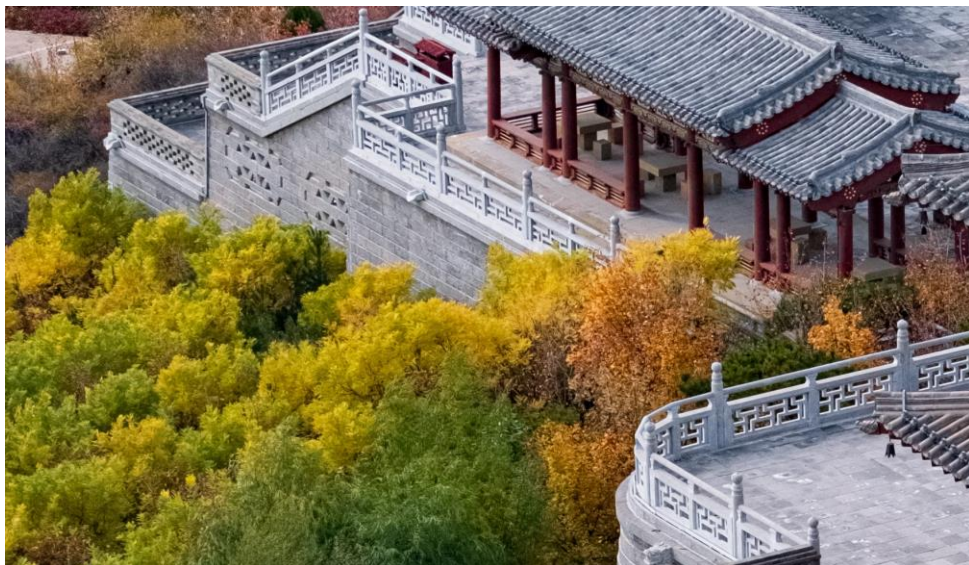
Case Sharing: SKF & Goldwind End to End Collaboration

As part of a wide-ranging sustainability focused collaboration, SKF and Chinese wind turbine manufacturer Goldwind have collaborated to build the first smart energy and carbon management system in SKF's Dalian factory in China in 2022, the system have rolled out in other 6 sites of SKF China in 2023.

This smart energy and carbon management system in SKF's is based on energy consumption analysis, carbon emission analysis and equipment operation. It adopts advanced cloud platform technology, aiming to achieve transparency of energy consumption and carbon emissions, as well as timely alarm of equipment operation, energy consumption and identifying energy saving opportunities.

Goldwind invested solar PV project in SKF Changshan and Jinan sites in 2023. totally installed capacity 10.7 MW, renewable electricity generation >10 GWh/year. SKF and Goldwind have also collaborated to pilot green electricity procurement, and under the RE100 framework, increased the proportion of renewable energy use across SKF's sites in China, with 68.65 GWh renewable energy purchased to date in 2023.

At the same time, SKF's high-performance products and solutions support Goldwind to continuously improve wind power generation efficiency. Using their respective expertise in R&D, technology and successful application experience in many industries, SKF and Goldwind continue to work together to carry out in-depth research and development of new wind turbine products. Areas of focus include design of the main shaft system, providing new bearing materials, exploring new processes and new structural design for the development of units and new products. SKF and Goldwind also promote the application of intelligent rollers in test development, cooperate on bearing operation and maintenance diagnosis models and methods and work to strengthen digital collaboration to jointly promote green smart wind power to continuously optimize sustainability.



What are the main challenges SKF has encountered in regard to their sustainability-related work in China?



1. The opening-up of local energy markets and the continuity of policies. In 2020, as the Chinese government announced its 2030 Peak Carbon Emission and 2060 Carbon Neutrality goals, the electricity market began to transform rapidly. All provinces began to tentatively open the electricity market, with some piloting provinces beginning to establish platforms for direct trading between end users and generators, allow the trading of green power, and provide internationally recognized green certificates. However, these attempts have only been carried out in a few provinces, where the supporting policies are renewed on a yearly basis, and thus the confirmation of a long-term power purchase agreement was not ensured, creating challenges for the fulfillment of our RE100 and Net Zero commitment.

2. Our customers are showing much greater interest in net zero. More and more customers (especially those of wind power and EV) are coming to us with all sorts of requirements – they inquire about our carbon emission targets and implementation plan as well as the products’ carbon data, and they require that our factories use 100% renewable energy by a certain year or demand on-site audit. As a matter of fact, we’ve done a lot of work in this area which can perfectly showcase our advantages. But how to transform this green advantage into differentiated commercial value and gain business benefits? It is only by customers recognizing and paying for the value created through the achievement of net zero goals, that there will be an opportunity to its fullest extent of the measures addressing climate changes. We have piloted some initiatives together with our sales team, but significant challenges also come with the opportunity, so we need to work even harder to realize our goal.



3. From the perspective of the carbon footprint of bearing products from cradle to gate, the emission from steel production accounts for 40%-50% (sometimes more) of the total emission. More than one third of SKF's steel demand is sourced from Chinese steel suppliers who now and for the foreseeable future will mainly rely on the traditional long process (blast furnace-converter). China Iron & Steel Association is driving the industry's evolution towards a future dominated by short process flow based mainly on the electric furnace, with some pilot programs also adopting hydrogen steel production technology. But overall, there is still a long way to go with enormous challenges. The ultimate solution lies in the innovation, breakthrough, and promotion of low-carbon technologies.

4. The other challenge is the collection of climate information and data. We have established relatively mature systems and processes to collect our own Scope 1 and 2 emission data to meet the requirements of external disclosure and local governments. But the collection of data from related parties (Scope 3), for instance, raw material suppliers and logistics providers, faces a range of challenges, including data confidentiality and quality guarantee, etc. This may affect our capability to meet the requirements of customers or governments, as well as our own decision-making process.

About Swedcham

The Swedish Chamber of Commerce in China (SwedCham China) is a non-profit, non-governmental organization with 240 Swedish and Sweden-related member companies, officially recognized as foreign chamber by the PRC. Our mission is to advance our members' business interests through in the role as Facilitator for Networking and Information flow.

We strive to always be relevant to our member companies. If you want to collaborate with us in any way or have any questions, we welcome you to contact us for further discussions!

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