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Supplementary Material to

Connection between SSbD and ESPR with a focus on opportunities to integrate SSbD criteria into future Ecodesign requirements for textiles and furniture

IKEA Case study

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Case Study
How IKEA Addresses ESPR Parameters & SSBD principles in Furniture and Textile Products

Introduction

All IKEA customers have the right to safe, healthy, durable and functional products....

at a price that as many as possible can afford...

IKEA Facts: Requirements & Testing

IKEA uses sustainability as a business model. For example, its sustainable living shop is the company's fastest-growing business. There is evidence that IKEA often leads the market in its approaches to material safety, environmental performance and "affordable sustainability" as core value propositions for marketing to customers. IKEA also has a commitment to 'democratize green products'. This includes leveraging the rapidly developing field of AI to facilitate consumer use of its platforms.

- IKEA is recognized globally for its design methods that include quick assembly and disassembly, spare parts for repair, and take-back schemes for re-use.
- It is recognized for its multi-billion Euro investments into AI for sustainable supply chain management that is directly aiming to facilitate reuse, reduce food waste, and other aspects relating to ESPR and SSBD.
- Overall, IKEA strives for environmental performance and chemicals safety of its products through its IWAY code of conduct, which includes several aspects of SSbD and ESPR such as eliminating hazardous chemicals and waste**.** IKEA's code of conduct is designed to assure that these practices occur across the value chain**.**
- Here are examples of IKEA statements on sustainability as a core value proposition**:**

Evidence Area	**Statement / Source**	**Value Proposition Focus**
CEO/director quote	"Crucial for the future... of the IKEA business." [2]	Yes

Marketing strategy	"Affordable sustainability… democratizes green products." [3]	Yes
Circular shops	"Sustainable living sections and circular shops… 300 locations." [1]	Yes
Business strategy	"Sustainability at the core of IKEA's business model." [3][4]	Yes

Product categories

IKEA has such a broad range of products that it bears mentioning which product groups it is focusing on for sustainability1. This can provide context for the conclusions.

IKEA's sustainability work in furniture is organized around the main home-furnishing categories where it can reduce material use, increase recycled/renewable content, and enable circular use (repair, reuse, recycling). Within furniture, the key product group focuses are:

Wooden furniture and storage (e.g., beds, tables, wardrobes, cabinets, shelving), with a target for all wood to be from more sustainable sources (FSC-certified or recycled).

Seating and upholstered furniture (sofas, armchairs, mattresses) where covers, fillings, and textiles increasingly use recycled polyester and other recycled/renewable

[1] Sources for this section include:

1. https://www.ikea.com/ca/en/files/pdf/72/bb/72bbd2c5/peopleandplanetpositive_a.pdf
2. https://www.ikeasocialentrepreneurship.org/sitecore/content/nl/aboutikea/home/sustainability/a-world-without-waste/why-the-future-of-furniture-is-circular?sc_lang=en
3. https://www.ikea.com/ca/en/this-is-ikea/sustainable-everyday/sustainable-materials/
4. https://www.ikea.com/ch/en/product-guides/ikea-guide-sustainable-furnishings-and-living-pubb93444f0/
5. https://www.hagainitiativet.se/en/inlagg/41-millions-of-ikea-furniture-are-given-a-new-life-by-a-circular-business-model/
6. https://www.ikea.com/es/en/ideas/muebles-y-productos-sostenibles-de-ikea-pub239fdf60/
7. https://designwanted.com/ikea-furniture-sustainable/
8. https://www.forbes.com/sites/christophermarquis/2025/01/14/ikeas-circular-economy-redefining-sustainability-in-the-furniture-industry
9. https://www.ikea.com/au/en/cat/sustainable-materials-700199/
10. https://www.ikea.com/ca/en/this-is-ikea/sustainable-everyday/
11. https://www.ikea.com/ca/en/this-is-ikea/climate-environment/the-ikea-sustainability-strategy-pubfea4c210/
12. https://www.ikea.com/ca/en/campaigns/sustainable-living-shop-pubffaf7120/
13. https://www.designorate.com/ikea-sustainable-design-strategy-part2/
14. https://www.weavabel.com/blog/is-ikea-sustainable-exploring-the-homeware-giants-practices
15. https://www.ikea.com/us/en/files/pdf/6c/5b/6c5b7acd/people-and-planet-positive-ikea-sustainability-strategy.pdf

fibers, and where buy-back, resell, and mattress recycling programs extend product life.

Children's furniture (e.g., extendable kids' beds, storage and study furniture) designed for long life, adaptability, and use of renewable or recycled materials.

Textiles and soft furnishings linked to furniture (sofa covers, cushions, curtains, bed textiles) using organic or recycled fibers and designed to be removable, replaceable and recyclable, which supports circularity of seating and bedroom ranges.

Furniture made from fast-growing or renewable materials such as bamboo and rattan (tables, chairs, storage, lighting shades), prioritized because they regenerate quickly and can replace slower-growing wood species.

These product categories sit under IKEA's broader People & Planet Positive strategy, which commits that by 2030 all home-furnishing products (across every furniture category) will be designed for circular use and made only from renewable or recycled materials.

Mapping Ikea practices against ESPR requirements

IKEA produces and sells thousands of furniture and other products. This analysis does cite examples of individual products, but is more a high-level, systemic view than a deep dive into individual products. The following contains selected mapping of IKEA practices that overlap with general ESPR requirements defined in ESPR Art 5.

NOTES: Until Delegated Acts are enacted, uncertainties will remain in how ESPR parameters will be applied to product groups. As well, the regulation itself does not assign ANNEX 1 parameters to the 16 requirements outlined in Article 5. To compensate for those uncertainties, the parameters provided here are direct quotations from the ESPR product parameters. These are EPEA's estimation of how ANNEX 1 aligns with Article 5 of Regulation 2024/1781.

As well, many of the challenges identified in each ESPR category are addressed later in this study rather than for each category. This is because IKEA takes a systems approach to solving multiple challenges at once. Refer to pp. 17 – 23 for those systemic solutions.

1. Durability

Parameter: Durability and reliability of the product or its components as expressed through the product's guaranteed lifetime, technical lifetime, mean time between failures, indication of real use information on the product, resistance to stresses or ageing mechanisms.

Example of How IKEA Addresses It: Combining recycled content with materials efficiency and durability: "The LACK side table is one of the first IKEA products made from strong and rigid wood-based frames filled with recycled, honeycombed paper…lightweight and easier to handle." https://www.designlife-cycle.com/ikea-self-assembly-process

"IKEA…has embraced circular economy concepts to design and produce furniture that promotes durability, simplicity of disassembly, and recyclability." (Mahalakshmi et al., 2024, p. 261)

"Longevity is ensured by IKEA's emphasis on classic design, premium components, stringent testing, and creative building techniques." (Mahalakshmi et al., 2024, p. 268)

Challenges: "IKEA has difficulties implementing worldwide circular practices because of disparities between infrastructure, culture, law, and economy" (Mahalakshmi et al., 2024, Ch. 17 p. 272)

2. Reliability

Parameter: Durability and reliability of the product or its components as expressed through the product's guaranteed lifetime, technical lifetime, mean time between failures, indication of real use information on the product, resistance to stresses or ageing mechanisms.

Example of How IKEA Addresses It: "All our products are evaluated and tested throughout their lifetimes to ensure that they continue to live up to our demanding standards. And if needed, we make improvements." How IKEA develops safe products

Certifications/Standards: "IKEA Supplier Quality Standard" that is based on and further developed from ISO 9001. This standard is even more demanding than the ISO 9000 standard and ensures that IKEA suppliers meet internationally agreed quality". Internal testing standards.

Challenges: Same as for durability.

3. Reusability

Parameter: ease of upgrading, re-use, remanufacturing and refurbishment as expressed through: number of materials and components used, use of standard components, use of component and material coding standards for the identification of components and materials, number and complexity of processes and tools needed, ease of non-destructive disassembly and re-assembly, conditions for access to product data, conditions for access to or use of hardware and software needed, conditions of access to test protocols or not commonly available testing equipment, availability of guarantees specific to remanufactured or refurbished products, conditions for access to or use of technologies protected by intellectual property rights, modularity;.

Example of How IKEA Addresses It: Overall design approach. "*What distinguishes IKEA is the breadth of its circular design approach, which includes the full product lifespan from conception to end-of-life management*." (Mahalakshmi et al., 2024, p. 262)

Takeback and Reuse.. "*Through Buyback & Resell, customers in 28 markets can bring back IKEA furniture to one of our stores and receive a voucher to spend in-store or online. A majority of returned items are resold via our As-Is areas..*" (IKEA Sustainability Report FY23, p. 19)

Peer-to-peer recommerce: "IKEA customers often ask, "Can I recycle my furniture? Can I give my furniture a second life or take over furniture owned by someone else that's in good condition?" In response, IKEA created Preowned, a peer-to-peer platform that connects customers looking to sell with those who want to buy, allowing IKEA products to find second

homes. Pre-Owned has been launched in three European cities: Madrid, Oslo, and Lisbon. " (Interview with Parag Parekh, Chief Digital Officer, IKEA Retail (Ingka Group) Forbes.com July 26, 2025) .

The pre-owned platform marks a major new deployment of AI as part of IKEA's commitment to using responsible AI to accelerate all of it sustainability programs. IKEA has basically adapted the Ebay model for its own products and enhanced it with AI. It also solves a problem faced by many retailers – having to handle the reverse logistics associated with product re-use.

Supporting reuse through design for easy disassembly and reassembly. *"Another principle is focusing on making products easy to disassemble and reassemble…making it easy for people to acquire, care for and pass products on in circular ways." (IKEA Sustainability Report FY24, p. 22–27)*

Certifications/Standards: Some pilot programs, such as Cradle to Cradle Certified™; Internal reusability protocols.

Challenges: "Reverse logistics is the biggest challenge to overcome for takeback models, whether organised internally or with a partner."

https://www.wrap.ngo/resources/guide/textiles-resource-hierarchy-product-reuse.

Interestingly, IKEA solves this by having customers do the bring-back, then IKEA simply resells the product as-is. Mostly involves moving the product from one part of a store to the other after inspection on site. However, with large products, it is difficult for customers to bring the product back, and IKEA does not yet provide reverse logistics to the home. However, IKEA addressed this by launching a peer-to-peer reselling platform where customers can sell IKEA product to each other.

4. Upgradability

Parameter: See Reusability.

Example of How IKEA Addresses It: "Designing products in ways that parts can be added, removed or changed allows customers to change the style, form or function of a product rather than replacing the product when their lives or needs change. This could include altering products through modular design, customizing surfaces, changing fabrics, specifying function, and more (IKEA Circular Design Guide 2024, p. 14)

Certifications/Standards: Internal modularity audits. See the ten principles used to apply the audit. https://www.ikea.com/global/en/stories/sustainability/the-iway-auditing-process-ten-principles-for-building-a-responsible-supply-chain-230619/

5. Repairability

Parameter: as expressed through: characteristics, availability and delivery time of spare parts, modularity, compatibility with commonly available spare parts, availability of repair and maintenance instructions, number of materials and components used, use of standard components, use of component and material coding standards for the identification of components and materials, number and complexity of processes and tools needed, ease of non-destructive disassembly and re-assembly, conditions for access to product data, conditions for access to or use of hardware and software needed. NOTE: The legislation does not provide an actual definition of repairability but rather leaves it to the delegated acts to ointerpret the parameters shown here.

Example of How IKEA Addresses It: "IKEA's framework...prioritizes reparability and modularity, providing accessible spare parts and user-friendly designs to enable customers to maintain and repair items." (Mahalakshmi et al., 2024, p. 267)

FY24 Report: "One of the eight [circular design] principles focuses on making it possible and easier for customers to care for and repair their products. Another principle is focusing on

making products easy to disassemble and reassemble." (IKEA Sustainability Report FY24, p. 19)

Certifications/Standards: REACH compliance for replacement parts.

Challenges: Manuals not always easy for all users – IKEA has worked on upgrading those to make them easier to understand.

6. Possibility of Maintenance and Refurbishment

Parameter of Maintenance: See Repairability.

Example of How IKEA Addresses It: "removable and machine washable fabric covers, such as the KLEPPSTAD bed frame, PERSBOL armchair, SAGESUND upholstered bed and STRANDMON slipcover. By introducing more products with removable and washable fabric covers, we make it easier for customers to care for and maintain their products.." (IKEA Sustainability Report FY23, p. 18)

Certifications/Standards: Internal assessment (easy maintenance by design).

Challenges: Maintenance manuals are sometimes hard to understand. IKEA is upgrading those.

Parameter of Refurbishment: See Reusability.

Example of How IKEA Addresses It: "Refurbishment is the process by which used or damaged products are restored to 'like-new' condition with limited improvements by IKEA or a third party outside the customer's home. Through refurbishment products are evaluated, cleaned and/or repaired, can be upgraded, recertified, and eventually released back into the market." (Circular Product Design Guide 2024, p. 34)

Certifications/Standards: Quality control procedures; some alignment with ISO 9001.

Challenges: "High logistical effort and uncertain secondary market value can hamper refurbishment scale-up." (Sustainable Supply Chain Management, 2024)

7. Presence of Substances of Concern (see also Recycled Content vs. Recyclability/Safety Challenge)

Parameter: (Source: ESPR Article 2, point (27) of Regulation (EU) 2024/1781)

a) Substances of very high concern (SVHC) included in the REACH Candidate List.

(b) Substances with certain harmonised classifications in Part 3 of Annex VI to the CLP Regulation, including carcinogenic, mutagenic, toxic for reproduction, endocrine disruptors, persistent, mobile and toxic, very persistent and very bioaccumulative, respiratory or skin sensitisers, hazardous to the aquatic environment, hazardous to the ozone layer, specific target organ toxicity (repeated or single exposure).

(c) Substances regulated under the Regulation on Persistent Organic Pollutants (POPs).

(d) Any substance that "negatively affects the re-use and recycling of materials in the product in which it is present"; such additional substances will be determined by the Commission on a case-by-case basis for each product group through delegated acts."

The European Commission further clarified that "The fact that a substance is considered a "substance of concern" within the meaning of ESPR does not mean that there will be a ban on this substance (or that a product is dangerous). For the majority of substances, there will likely only be information requirements in product-specific delegated acts." (Ecodesign for Sustainable Products Regulation (ESPR): Frequently Asked Questions (FAQ) Sep. 2024 p. 59)

Example of How IKEA Addresses It: "We created the IKEA Chemical Strategy in 2016. The five key objectives of our Chemical Strategy that we abide by include: increasing information on product chemical content, assess all IKEA products for chemical safety, phase out substances/materials of concern, ensure our suppliers share our values on chemical safety and compliance, increase awareness among co-workers, consumers and stakeholders on

chemical safety and compliance." https://www.ikea.com/global/en/our-business/our-view-on/chemicals/

"For decades IKEA has banned and restricted the use of chemicals of concern throughout the IKEA value chain, always looking at research and innovations to help us take important steps. For example, IKEA banned and phased-out hexavalent chromium in chromating/anodizing in 2005 and in leather in 2015. We banned Bisphenol A (BPA)-containing plastics in children's products in 2006 and in food-contact products in 2012. We also phased out PVC (polyvinyl chloride) from most products – today, PVC remains only in some electrical products, and work continues to find replacements." https://www.ikea.com/global/en/our-business/our-view-on/chemicals/

"In 2024 we'll introduce non-stick coated cookware that does not use polytetrafluoroethylene (PTFE) material. From 2025, this will also apply to non-stick coated bakeware By 2026, PFAS will no longer be used in our cookware and bakeware range." (IKEA Sustainability Report FY24, p. 43)

Certifications/Standards: REACH compliance, IWAY supplier code.

Challenges: Monitoring and adapting to global chemical regulations places ongoing demand on IKEA supply chain due to wide variations in national and local regulations. This is addressed as follows.

Supplier Auditing and Risk Management

"To ensure compliance, IKEA uses a risk matrix that assesses suppliers on multiple dimensions: Location Risks: Suppliers in regions with higher socio-political risks, such as weak labor laws or environmental regulations, undergo deeper scrutiny. Material Risks: Products with significant environmental footprints, such as textiles or wood, are closely monitored to ensure responsible sourcing. Supplier Performance: Historical compliance records, audit findings, and recurring issues are used to categorize suppliers into risk levels,

allowing IKEA to prioritize high-risk suppliers for intensive audits and corrective action." https://elm-ai.com/blog-ikea-sustainability-supply-chain-due-diligence

"The IWAY audit is a part of a robust system for evaluating suppliers' compliance. Its primary objective is identifying gaps or deviations from the IWAY requirements. During an IWAY audit, I review the supplier's policies and procedures, interview management and employees, and inspect facilities and documentation." https://www.ikea.com/global/en/stories/sustainability/how-ikea-uses-iway-audits-to-identify-gaps-and-improvements-in-the-global-supply-chain-230627/

8. Energy Use/Efficiency

Parameter: consumption of energy, water and other resources in one or more life cycle stages of the product, including the effect of physical factors or software and firmware updates on product efficiency and including the impact on deforestation.

Example of How IKEA Addresses It: "With investments in energy-efficient appliances and lighting, the corporation prioritizes energy efficiency with the goal of lowering overall energy usage and dependency on fossil fuels. Interestingly, IKEA is a big supporter of renewable energy and has made large investments in solar and wind power." Mahalakshmi et al., 2024, Ch. 17, p. 266

"BROGRUND tap…enables customers to consume less water as well as less energy. The integrated cold start function avoids the unnecessary use of hot water." (IKEA Sustainability Report FY23, p. 9)

Certifications/Standards: ISO 14001 Environmental Management.

9. Water Use/ Efficiency

Parameter: See Energy Use/Efficiency

Example of How IKEA Addresses It: "BROGRUND tap…enables customers to consume less water as well as less energy. The integrated cold start function avoids the unnecessary use of hot water." (IKEA Sustainability Report FY23, p. 9)

Certifications/Standards: FSC, ISO 14001

Challenges: Balancing cost competitiveness and resource efficiency can pose sourcing and validation issues. (Sustainable Supply Chain Management, 2024)

10. Resource use and resource efficiency

Parameter See Energy Use

Example of How IKEA Addresses It: "97.8% of our total wood used was FSC or recycled." (IKEA Sustainability Report FY23, p. 35)

"As materials stand for almost half of the IKEA climate footprint, efforts continue to increase the share of secondary raw materials, use materials more efficiently and develop products with a lower climate footprint. … This year, for example, we launched the foam-less sofa, DÅNHULT, that uses thermo-bonded felt made from fabric waste." (IKEA Sustainability Report FY24, p. 21)

11. Recycled Content

Parameter: See recycling. Also: use or content of recycled materials

Example of How IKEA Addresses It: "This year, we piloted a new initiative in Belgium, Germany and the Netherlands that encourages our customers to bring back products filled with down and feathers, that are no longer being used, for recycling into GULKAVLE pillows and FJÄLLBRÄCKA duvets. " (IKEA Sustainability Report FY23, p. 18)

"PAX wardrobe sliding doors…made with a minimum of 80% recycled aluminium." (IKEA Sustainability Report FY23, p. 42)

"By adjusting product design, production processes and supply chain set-ups, we have successfully tested new products made of 100% recycled glass. Products like MYRMOSAIK (vases and bottles) and KRONKLEMATIS (glasses and plates) are now on sale in limited markets to test the potential to scale these solutions and use waste that would otherwise have gone to landfill." (IKEA Sustainability Report FY23 p.25)

"In FY24, the climate footprint from materials decreased by 2% compared to FY23 and 9% compared to baseline FY16… our ambition is that at least one-third of the IKEA wood-based range will be made from recycled wood by 2030. During FY24, we maintained the level of recycled wood (16%) and increased the amount of recycled content in both particleboard (from 30% to 30.3%) and fibreboard (from 0.3% to 1%)." (IKEA Sustainability Report FY24, p. 23–26)

Certifications/Standards: FSC, internal content verification.

Challenges: Technical challenges with e.g. ceramics and fibreboard. See recycling.

12. Remanufacturing possibility

Parameter: See reusability.

Example of How IKEA Addresses It: Unclear, except that designs for rapid assembly and disassembly make it easier to remanufacture products.

13. Recyclability

Parameter: ease and quality of recycling as expressed through: use of easily recyclable materials, safe, easy and non-destructive access to recyclable components and materials or

components and materials containing hazardous substances, material composition and homogeneity, possibility for high-purity sorting, number of materials and components used, use of standard components, use of component and material coding standards for the identification of components and materials, number and complexity of processes and tools needed, ease of non-destructive disassembly and re-assembly, conditions for access to product data, conditions for access to or use of hardware and software needed;.

Example of How IKEA Addresses It: "Plastic products produced in Europe contain at least 70% recycled content, where more than half of it comes from post-consumer sources such as household plastic waste." (IKEA Sustainability Report FY23, p. 19)

FY24 Report: "In FY24, 16% (FY23: 17%) of the total IKEA wood-based range was made from recycled wood, and we increased the recycled content in both particleboard (from 30% to 30.3%) and fibreboard (from 0.3% to 1%).." (IKEA Sustainability Report FY24, p. 23)

Certifications/Standards: FSC (for wood products), internal audits.

Challenges: "Fibreboard is a key material for IKEA furniture, but its recyclability remains a challenge. While we saw a minor increase in recycled content in FY24, further innovation is needed to find solutions. To address this, we are working intensively to accelerate development through investments and pilots." (IKEA Sustainability Report FY24, p. 23)

14. Materials Recovery Possibility

Parameter: Ease of recycling, purity of sorting, accessibility to recoverable materials

Example of How IKEA Addresses It: "One breakthrough from FY23 was the SILVERSIDA product series. It represents our first successful attempt to use ceramic production waste to make new tableware. SILVERSIDA products are made from 65-70% factory waste materials." (IKEA Sustainability Report FY23, p. 3)

Certifications/Standards: internal audits.

Challenges: Producing ceramics and fibreboard from recycled materials. (FY23, Circularity summary, p. 23)

15. Environmental Impacts

Parameter: the environmental footprint of the product, expressed as a quantification, in accordance with the applicable delegated act, of a product's life cycle environmental impacts, whether in relation to one or more environmental impact categories or an aggregated set of impact categories.

Example of How IKEA Addresses It: "In FY24, the total IKEA climate footprint decreased by 1.1 million tonnes of CO2 eq in absolute terms compared to FY23 – a reduction of 5%.." (IKEA Sustainability Report FY24, p. 13)

Certifications/Standards: ISO 14001, "97.8% of our total wood used was either Forest Stewardship Council certified (FSC) or recycled." (IKEA Sustainability Report FY23, p. 35)

Challenges: "Carbon emissions from extraction, manufacturing, and transport remain significant." (IKEA Sustainability Report FY23, Climate summary, p. 14)

16. Expected Generation of Waste

Parameter: amounts of waste generated, including plastic waste and packaging waste and their ease of re-use, and amounts of hazardous waste generated.

Example of How IKEA Addresses It: "In our journey to phase out plastic packaging, the SMÅSPORRE range of quilts/duvets and pillows is just one example where we have implemented a paper-based solution. Traditionally packaged in plastic, it now comes in paper wrapping after extensive testing in FY24." (IKEA Sustainability Report FY24, p. 25)

"By adjusting product design, production processes and supply chain set-ups, we have successfully tested new products made of 100% recycled glass. Products like MYRMOSAIK (vases and bottles) and KRONKLEMATIS (glasses and plates) are now on sale in limited markets to test the potential to scale these solutions and use waste that would otherwise have gone to landfill. (IKEA Sustainability Report FY23 p.25)

"IKEA is making sure to use its resources to achieve these goals, including AI. One example of how IKEA is doing so is in its restaurants, where AI helps forecast demand and reduce food waste. 'We use AI to help us understand the waste being generated and to forecast and plan what we should prepare for the next days to avoid waste.' (Interview with Parag Parekh, Chief Digital Officer, IKEA Retail (Ingka Group) Forbes.com July 26, 2025)

Certifications/Standards: ISO 14001

Challenges: Composite and multi-material design remains hard to recycle at scale

Examples of how IKEA addresses SSBD Guiding Principles

IKEA does not refer to SSBD in its literature, so these examples have been cited from our own research into those, using IKEA sources.

SSbD Principle	IKEA Product Example / Practice	Direct Quote	Source Link
Material efficiency	MITTZON sit/stand desk	"Achieving the same function with less material using high-strength steel instead of regular steel in the MITTZON sit/stand desk."	Sustainability Report FY24
Minimize hazardous chemicals/materials	Bed linen	“Our bed linen, for example, doesn’t contain anything that isn’t safe to have close to your skin. We believe that’s how all bed linen should be.”	Product safety – IKEA Global
Design for energy efficiency	Fridges and freezers	"In FY24, we made important strides by improving the energy efficiency fridges and freezers in our range."	Sustainability Report FY24
Use renewable sources	BILLY bookcase	"Most materials used to produce the new BILLY bookcase come from renewable sources."	Designing for a circular future

Prevent/avoid hazardous emissions	Renewable energy in value chain	"The reduction in FY24 is attributed to continued increase in renewable energy, improved energy efficiency and movements towards electrification of transport."	Sustainability Report FY24
Reduce exposure to hazardous substances	Sustainable Living Shop	"We introduced QR codes to product displays in selected stores. These codes link customers directly to the online sustainability content... enabling customers to make more informed, sustainable choices."	Sustainability Report FY24
Design for end-of-life (circularity)	PAX wardrobe w/ foldable frame	"Improving PAX with foldable frame, designed for easy disassembly and reassembly."	Sustainability Report FY24
Consider the whole life cycle	Climate footprint reporting	"The IKEA value chain encompasses more than the IKEA business and includes sourcing and extracting raw materials, manufacturing, transporting of products, retail, customer travel, product use... and end-of-life."	Sustainability Report FY24

Recycled Content vs. Recyclability/Safety Challenge

Conflict Description: In IKEA's product ecosystem, there is a fundamental conflict between maximizing recycled content and maintaining optimal recyclability and product safety. High recycled content is essential for circularity and climate impact goals. However, recycled inputs often carry contamination risks, mixed material properties, or traceability challenges that can compromise either recyclability or consumer safety. This necessitates rigorous supplier auditing, documentation, and risk management, but also imposes limits on how much recycled content can safely or practically be used in specific product types or markets.

Key Issues:

- *Response to regulatory constraints*. "In FY23, for example, we have contributed to the discussions on the revision of the UK Furniture and Furnishing Fire Safety Regulations, advocating for a change to the existing rules so a balance can be found between securing fire safety, chemical safety and enabling a circular economy." IKEA Sustainability Report FY23, p. 45
- *Reponses to recycled materials vs. chemical safety*. "In the transition to a more circular business model, where IKEA is introducing more recycled materials, we pay high attention to chemical safety. We do our utmost to not contaminate post-consumer material flows with chemicals of concerns, which we believe is key to enabling a circular economy where IKEA products are designed and manufactured to be recycled." Chemicals in Recycled Materials
- *Example of responses to technology challenges – polyester*. "The fact is that recycled polyester isn't perfect from a sustainability point of view. For example, washing polyester releases microplastics (or microfibres) which harm the ocean and the environment. Moreover, PET bottles – the most common recycled polyester resin – aren't very traceable. The industry can't always ensure that the social and environmental conditions, when collecting feedstock, live up to the IKEA supply chain standard." ..."Another issue is down-cycling when producing recycled polyester from PET bottles. While a PET bottle can be

chemically recycled almost an infinite number of times, fibres and textiles are harder to recycle; we simply don't have the industrial capabilities in place to enable their reuse on a significant scale. (Recycled Polyester https://www.ikea.com/global/en/our-business/sustainability/recycled-polyester/)

"IKEA is a member of The Microfibre Consortium. We're active in different task forces with the long-term objective of reducing fibre shredding from polyester. Specifically, IKEA and other industry-leading companies are looking into a globally recognised technology that will help us track improvements to the fibre shredding problem. We're also considering more industry guidelines to enable conscious product development and best practice guidelines for manufacturing.

Moreover, all recycled polyester used in the IKEA range comes from recyclers who comply with the Global Recycling Standard. With that said, we still struggle to trace the first step in the process: the bottle collection itself. However, we're working hard on finding a solution for this. Specifically, we're looking into coming up with a method to secure decent working conditions for waste collectors.

As for the challenge with down-cycling plastic bottles, we want to make sure our materials can be recycled over and over again. That's why we're looking into alternative materials to start our recycling process, like textiles. We're also looking into using BioPET – a polyester resin that originates from sugar – as feedstock."

Source: Recycled polyester is a step forward, but it's not taking us all the way

IKEA Materials Pooling

IKEA bulk purchasing works in two directions:

- Purchasing for suppliers who then use those materials to make IKEA products,
- Requiring suppliers of bulk materials to meet specific standards.

This centralized approach is part of IKEA's vertical integration and global sourcing strategy, and it is supported by traceability protocols, long-term supplier partnerships, and guaranteed volumes for key materials. https://supplychainnuggets.com/why-ikeas-vertical-integration-strategy-works

Evidence

- **Centralized Supply Chain**: IKEA's procurement system is centrally managed to aggregate demand, plan material volumes, and guarantee supplier allocations for essential components, including fiberboard.
- **Vertical Integration**: IKEA owns forests and negotiates directly with primary producers to secure supply and manage costs, including board materials.
- **Bulk Purchasing Power**: The company invests in fiberboard sources, mostly from European producers, with direct logistics and traceability from raw material origin to supplier use. Up to 90% of IKEA's fiberboard comes from such centralized European sourcing operations.
- **Supplier Support and Oversight**: IKEA's board material and timber requirements are codified within its supplier contracts, IWAY standards, and Forest Tracing System, ensuring all suppliers adhere to IKEA's procurement volumes, quality standards, and traceability demands.

Supporting Quotes

- "Supplier partnerships: IKEA maintains long-term relationships with suppliers and often invests in them to ensure a steady supply of high-quality materials." https://www.dragonsourcing.com/ikea-global-furniture-sourcing-success/

- "The procurement routines detailed in the IKEA standard are intended to ensure that the supplier has responsible personnel who have been trained to implement a system for wood tracking and handling from procurement through production." https://forestpolicy.org/sites/default/files/2021-09/IKEA's response to the Lacey Act.pdf
- "Close to 90 percent of IKEA's fiberboard comes from European producers, with relatively uncomplicated supply chains that are traceable to the wood supply region." https://forestpolicy.org/sites/default/files/2021-09/IKEA's response to the Lacey Act.pdf

In summary, IKEA coordinates large-scale, centralized purchasing of fiberboard and other raw materials, leveraging its size and supply chain control to distribute these materials to suppliers and ensure quality, consistency, and cost efficiencies throughout its network.

IKEA deploying AI for Sustainability

In a development that affects IKEA's entire sustainability and circular economy approach, the company is investing billions of Euros into deploying AI for its recommerce, supply chain management, and food waste reduction. These uses of AI have the potential to be game-changers for the entire SSbD and ESPR universe, because they address the leading barrier facing implementation of SSbD and ESPR – complexity of regulations and supply chain management.

AI for Waste Reduction and Resource Efficiency

IKEA uses AI-driven analytics in its supply chain and manufacturing processes to decrease production waste and improve material efficiency. For example, in its restaurants, AI helps predict demand to minimize food waste, while also supporting pilot projects that convert

food scraps into renewable energy - aligning with IKEA's goal of zero organic food waste by 2030. AI is similarly utilized to track waste generated in stores, forecast food preparations, and reduce environmental footprint through logistics optimization (such as routing deliveries from the closest warehouse).

AI-Enabled Circularity Solutions

AI powers several circular economy initiatives, including IKEA's buy-back and resale platforms, which facilitate the resale of used furniture to prolong product life. Machine learning helps match sellers and buyers in select markets and predicts inventory needs for refurbishment or recycling. Additional applications include AI-guided sorting of returned or recycled items—such as transforming Christmas trees into furniture or recycling mattresses to recover materials.

Digital Tools to Support Sustainable Choices

IKEA has integrated AI into its digital platforms, providing features like real-time product visualization, inventory management, and wish lists that support data-driven product lifecycle management and circularity. These tools not only improve operational efficiency but also give customers information to make more sustainable choices, such as understanding recyclability options for specific furniture items.

AI in Supply Chain and Emissions Reduction

AI applications extend to logistics and supply chain planning, helping IKEA identify emissions hotspots and optimize shipping routes to reduce carbon impact. The company is using AI to advance its target of having 90% of home deliveries made by zero-emission vehicles by 2028, while also supporting broader emission reductions aligned with Science Based Targets.

Organizational and Sectoral Transformation

Beyond technology, IKEA is upskilling staff in AI literacy to embed digital and sustainability competencies throughout the organization, aiming for a system-wide transition toward circularity and resource decoupling by 2030. The company collaborates with suppliers and partners to scale up circular services - enabling reuse, repair, and recycling in more markets as part of its global sustainability agenda.

AI Tools

IKEA uses a mixture of proprietary AI solutions, commercial AI applications, and partner-developed software to support its operations, sustainability, logistics, and customer experience. Some of the key AI software and platforms IKEA employs include:

IKEA Kreativ

This proprietary AI-powered platform enables customers to upload photos of their rooms and generate interactive 3D models to visualize furniture placement. The software uses spatial computing, computer vision, and machine learning to create realistic design experiences and assist with room planning.

Demand Sensing Tool

IKEA's in-house "Demand Sensing" AI system uses up to 200 real-time data sources (such as weather, shopping history, and local trends) to provide highly granular demand forecasts for inventory management. This forecasting platform significantly improves supply chain efficiency and reduces waste by enabling local-level, day-to-day or monthly forecasting.

IKEA AI Assistant (GPT)

IKEA recently launched a generative AI-powered assistant on the OpenAI GPT Store. This tool provides personalized home design advice, inspiration, and product recommendations based on users' style, sustainability preferences, and unique functional needs. The AI Assistant integrates with IKEA's product catalog and can check availability and offer suggestions in natural language.

AI-Powered Logistics: Locus Platform

In 2025, IKEA (through Ingka Group) acquired Locus, an advanced AI logistics platform that enables route optimization, real-time delivery tracking, and dynamic fleet management for home delivery services. The software drives emissions reduction and improves delivery efficiency.

AI-driven Dynamic Pricing Engine

IKEA built a global, AI-powered pricing system that autonomously collects and analyzes competitor pricing and market trends to set optimal product prices. This solution ensures that prices remain competitive and adjusts dynamically to real-time market changes.

Customer Support Chatbots and Virtual Assistants

IKEA employs NLP-driven chatbots for customer support, helping users with product inquiries, troubleshooting, and product assembly guidance. These systems are continuously improving through machine learning from user interactions.

AR and Visualization Tools

Beyond IKEA Kreativ, IKEA uses augmented reality platforms like the "IKEA Place" app, which leverages computer vision and AI for at-home product placement and visualization.

These AI solutions are integrated into IKEA's broader digital ecosystem, supporting operations, sustainability objectives, circularity, and enhanced consumer engagement

Conclusions

IKEA is doing much to meet SSBD principles and ESPR parameters without explicitly mentioning them. It's more than what IKEA is doing, but also how it's doing it; in the company DNA and using AI as a tool to accelerate progress. As well, IKEA transparently identifies problems and room for improvement.

ESPR requirements/ SSdB principles as a business case. IKEA has proven that commercial success is compatible with ESPR requirements and SSbD principles. **The overall approach is part of the company's core offering to consumers** to improve value.

Modularity is a universal enabler. A success of the IKEA approach has been designing for modularity. While modularity on its own is difficult to quantify across or within sectors, it is clearly facilitating measurable parameters such as durability, reliability, maintenance, assembly, disassembly, reusability, and recyclability. The policy perspective on this is clear: modularity is a core driver for enabling ESPR and SSbD in furniture and textiles. Modularity can be made measurable by the different parameters that it affects. Many SMEs who supply IKEA also design for modularity to fit their components into flat-pack systems, standardized component groups, and products engineered for self-assembly and scalability. Any policies should wherever possible reward designs for modularity as a key enabling point for meeting SSbD principles and ESPR requirements and parameters.

SSbD & ESPR status. IKEA has not yet published information explicitly on how it addresses SSbD or ESPR. This suggests that even large global companies with headquarters in Europe are not yet in a public dialogue or making claims. This is consistent with our findings from

other cases and investigations, that **the level of public-facing position on these is still lacking.** In turn this points to a need for an EC program to inform companies.

> **Coincidental coverage**. Despite this, IKEA is coincidentally addressing SSbD and ESPR through its established initiatives, and is vigorously communicating those publicly. Independent evaluations seem to corroborate IKEA claims. However, **the level at which IKEA is explicitly addressing SSbD & ESPR (i.e. quantifiably) would require a far more detailed examination** due to the thousands of products that it sells.

Data harmonization. Because IKEA is vertically integrated in many aspects, it has the advantage of being able to specify and verify its supply chain, from materials sourcing onwards. However, independent analysis and its own reports suggests that **IKEA faces challenges with standardizing and harmonizing the mass of data that it receives**, when it comes to aligning that data with e.g. Digital Product Passport requirements. IKEA has communicated on the data issue since its 2022 sustainability report and is taking steps to address it, suggesting a sustained effort. The data alignment issue in EPEA's own experience over the years cuts across many companies and sectors, so we flag it here for special policy attention.

AI as a main driver to simplify complexity. IKEA has responded to those challenges by investing heavily in AI to manage many core aspects relating to SSbD and ESPR. This is a highly significant development that warrants major attention for policies to facilitate the use of SSbD in meeting ESPR parameters. It is especially relevant for SMEs in the IKEA value chain, with the potential to address the leading issue of complexity in regulation and supply chain management.

Chemicals of concern. It is no surprise that a global company such as IKEA faces challenges adapting to regional, national and local regulations that might impact how it meets SSbD principles and ESPR requirements relating to chemicals. This especially applies to chemicals of concern. The evidence shows that IKEA has a consistent well-defined approach to chemicals and chemical of concern, and this could serve as a policy model.

Recycled content vs. recyclability. Technical challenges remain with common materials such as fiberboard used in many IKEA products. Recycled content does present a significant challenge by IKEA's own admission. However, it is also improving the amount of recycled content by improving the technology and participating in the Microfibre consortium. This points to the need for more R&D on recyclability in narrowly defined product categories.

> IKEA is reconciling this conflict through a rigorous chemicals content program, where it has embraced the concept of safe materials for facilitate recyclability. **Materials pooling as an enabler**. IKEA also addresses the conflict with vertical control over its supply chain, which facilitates deep knowledge of materials content, and enforceability of standards. This allows IKEA to serve as a "materials pool" for its suppliers by bulk purchasing component materials such as fibre for fibreboard. This suggests that **SME suppliers collaborating with vertically integrated companies will find it easier to improve recycled content if they can access bulk purchasing.** This points to a policy need to facilitate materials pooling among SMEs by leveraging the purchasing power of the large companies that they sell to.

Reverse logistics for reuse. IKEA has led the way in its customer take-back and product "Second-Chance Market" resale program. Barriers:

Customers having to bring back fully assembled products that they originally brought home in a box and assembled. While the disassembly process is facilitated by IKEA designs, it is still time-consuming.

Many products are excluded from the program due to sanitary and other concerns. However, a new part of IKEA's recommerce strategy is using AI to create a peer-to-peer platform that allows IKEA customers to resell IKEA products to each other. This helps to overcome the problem of reselling products that might be excluded from IKEA's resale programme.

Assembly and disassembly. IKEA has been working to improve its instructions for assembling products. This points to **the priority for all companies of assuring that assembly instructions are easy and clear**, using symbols wherever possible to facilitate multiple languages.

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