

Data Report

The Voluntary Sector Collaboration on Textiles



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Acknowledgments

At Lifestyle & Design Cluster, we extend our gratitude to all the signatories, who have devoted considerable time and effort to gathering and submitting their data. We sincerely appreciate the dedication and hard work of collecting the data. Without the signatories' contributions, this report would not have been possible.

We would also like to express our appreciation to Valcon, the consulting firm that was instrumental in developing the application used for data collection and providing ongoing support throughout the process. Additionally, we extend our gratitude to the consultancy Norion, which played a fundamental role in developing the reporting tool. A big thank you to them as well for their contributions

Executive Summary

This executive summary provides a focused review of the key findings and progress under the Voluntary Sector Collaboration on Textiles for the year 2023. As we aim towards the ambitious goals set for 2030, the data collected this year is instrumental in assessing the strides made by the signatories. The report encapsulates the concerted efforts of the signatories who have engaged deeply with the initiatives, demonstrating both challenges and significant advances across various aspects of circularity. Each goal—circular business models, circular design, and the use of recycled textile fibers—presents a distinct challenge, as evidenced by the results detailed in this report. While there is discernible progress, indicating that developments are indeed underway, the journey towards fully achieving the goals remains extensive. See a brief summary of the three goals below.

Circular Business Models

The goal regarding circular business models is as follows: A larger part of the turnover in clothes in Denmark comes from resale, and clothes are kept in use for as long as possible. In Denmark, the recycling/resale category, primarily driven by NGOs and Peer-To-Peer platforms, dominates the resale market. Although some signatories in the fashion & accessories and children's wear sectors claim adherence to circular business models, these claims do not translate into recorded resale revenue. Over half of the signatories actively pursue initiatives aimed at extending the lifespan of products.

Circular Design

The goal regarding circular design is as follows: Create common circular design requirements for clothes and textiles from Danish companies to be designed to have more lives and to be part of optimal circular loops. The questionnaire used to gather data for the goal regarding circular design reveals that 51% of the signatories engage with circular design principles, though only 11 signatories have formalized these practices in written documents. This highlights a disparity between informal practices and formalized policy implementation. Furthermore, 73% of the signatories have adopted material strategies that align with sustainability.

Recycled Textile Fibers

The goal regarding circular business models is as follows: By 2030, all clothing and textiles from Danish companies will consist of at least 40% recycled material, including at least 10 per cent recycled directly from textile fibres¹. The sector has seen a notable increase in the use of recycled fibers, with 8.34% of all fibers used in 2023 being recycled—a 68% rise from the previous year. The fiber-to-fiber accounts for 11,12% of the total recycled fibers and it has specifically surged by 92%. Polyester

¹ Measured in weight

remains the leader in recycled fiber usage at 18.79%, followed by wool and nylon, at 8.39% and 7% respectively. This trend is promising as the industry advances towards the ambitious 2030 targets, aiming to significantly boost the incorporation of recycled materials into textile production.

1.0 Introduction

Welcome to the 2023 Data Report for the Voluntary Sector Collaboration on Textiles (hereafter referred to as ‘the Sector Collaboration’). This report synthesizes the data submitted by the undersigning companies (hereafter referred to as ‘signatories’), all of which have committed to achieving ambitious circularity goals by 2030.

The Danish sector collaboration on textiles has three goals



Goal 1: Circular Business Models

Aim/Ambition/Outcome: A larger part of the turnover in clothes in Denmark comes from resale, and clothes are kept in use for as long as possible.

Why? Extending the life of textile products is the most effective intervention in terms of environmental impact savings, through displacing sales of new products and their associated primary production impacts. Extending the active life of 50% of UK clothing by nine months would reduce carbon and water footprints by 4-10 per cent each². On top of this, re-commerce is expected to grow five times over the next five years, whilst traditional retail is expected to decline. With surplus value sitting idle in Danish wardrobes every year, due to clothing under-utilization, there is a huge opportunity for brands, retailers and re-use organizations to profit from circular business models.

How? Signatories pilot re-use business models as appropriate to their product ranges, share learning, and develop large-scale implementation to extend the lifetime of clothing in Denmark – decoupling business growth from the use of virgin resources.

Sources:

- 1) Ellen McArthur Foundation
- 2) Murray, B., 2013, Embedding environmental sustainability in product design, Best Foot Forward
- 3) WRAP's 2017 report, Valuing our Clothes: the cost of UK Fashion



Goal 2: Circular Design

Aim/Ambition/Outcome: Create common circular design requirements for clothes and textiles from Danish companies to be designed to have more lives and to be part of optimal circular loops.

Why? 80 per cent of a product's environmental impact is determined at the design stage². Design will play a pivotal role in moving away from the traditional linear model to a circular one. We must use circular design principles to: • extend the usable life of textile products; • allow products to be recycled at end of life; • design out waste from the system; and • increase the demand for recycled materials. This will allow maximum value to be extracted from textile products, whilst cutting carbon emissions and relieving the pressure on natural resources associated with the primary production of virgin materials. It will also help to divert textile waste and increase resource efficiency.

How? Signatories commit to agree good practice design principles (including durability, recyclability, use of recycled content and minimizing waste) and implement them as appropriate to their business model and customer base, to lower the impacts of products placed on the market in Denmark.



Goal 3: Recycled Materials

Aim/Ambition/Outcome: By 2030, all clothing and textiles from Danish companies will consist of at least 40 per cent recycled material, including at least 10 per cent recycled directly from textile fibres*.

Why? Only 1 per cent of blend textiles are recycled into new textile fibres¹. The raw material phase of a product's lifecycle generates the biggest environmental impacts, and pre- and post-consumer textile waste deriving from Danish consumption accounts for massive annual volumes of textile waste sent to landfill and for incineration. There is therefore a necessity and an opportunity to increase the use of recycled fibres in new products. Using recycled fibres shifts the environmental impacts away from the production of virgin raw materials and also diverts textile waste from landfill. Increasing demand from retailers for recycled fibres will drive investment into the reuse and recycling sector to build and scale up the infrastructure and innovation needed to support fibre-to-fibre recycling, creating a new opportunity for the Danish economy.

How? Signatories will work together to set up partnerships to supply and use recycled fibres for new products, accelerating the commercialisation of fibre-to-fibre recycling.

* Measured in weight

You can read more about the goals in the action plan 2030 [here](#) and the appendices [here](#).

Initiated in partnership with the Danish Ministry of Environment in August 2022, this initiative represents a proactive effort to guide the Danish textile industry towards a circular economy, in anticipation of adapting to the evolving European Union regulations. The purpose of the Sector Collaboration is twofold. First and foremost, it revolves around collaboration — leveraging collective strength to enhance and elevate all participants, both large and small. The second key objective is to prepare the textile industry for upcoming EU legislation. Navigating the complexities of new regulatory requirements is a challenging task, and tackling it as a united front makes the process significantly more manageable.

The Sector Collaboration is open to all companies within the Danish textile industry, including textile producers, fashion companies, resale actors, as well as service companies that facilitate resale activities. To become a signatory, a company must be willing to align with our shared goals and be eager to engage in the collaborative efforts required to achieve these objectives. Today, the Sector

Collaboration includes around 50 signatories, representing a diverse and comprehensive partnership that spans the entire textile industry. This collaboration encompasses a wide range of sectors such as fashion, sport, interior, children's clothing, carpets, and workwear, among others. With these signatories, we cover a significant portion of the Danish textile industry. The collaboration is dynamic, continually welcoming new members while acknowledging that some may depart as circumstances change.

The Sector Collaboration is structured around three distinct working groups, each dedicated to one of the overarching goals. These groups provide a platform for signatories to engage deeply with specific areas of interest and relevance. Participation is flexible, allowing the signatories to join one or more groups depending on their needs and the insights they wish to gain or contribute. The purpose of these working groups extends beyond mere discussion; they are pivotal in facilitating knowledge sharing and collaboration. Members exchange best practices, learn from external experts, and collectively explore solutions to shared challenges.

1.1 Commitment to Collaborative Reporting

The Sector Collaboration is a voluntary yet binding collaboration where the textile industry collaborates across different facets. A key requirement for all signatories is to contribute to annual reporting against the three targets of the Sector Collaboration. Recognizing the challenges related to gathering the data for the annual reporting, signatories will not be excluded per se if they do not meet this requirement. However, it is imperative that they actively work on locating the necessary data so they can hopefully contribute to the next cycle.

As we embark on this critical decade of action, the data contained within this report serves as a crucial tool to ensure that we are aligning with our set goals and continuously tracking our progress.

1.2 First Annual Data Report Overview

This document marks the first annual data report, focusing on the 2023 data for textile products traded on the Danish market, supplemented by comparative baseline data from 2022. While we developed a baseline in 2022, we did not produce a report for that year. Data from 2022 will be included for comparison where relevant to enhance the context and depth of our analysis. We are diligently working to refine our data collection and analysis methodologies. While we acknowledge the complexities involved in data collection, which may impact the data quality of this report, we are aware that the results are not yet perfect. However, we are collectively committed to refining our methodologies and enhancing the quality of data in future reports as we continue to develop our approach and capabilities in this challenging area.

Further information about the Sector Collaboration can be found [here](#). Additionally, this link provides a list of the companies that have signed on to the collaboration, as well as details about the members of the steering committee.

2.0 Word and Concept Clarification

This section provides clarification of key terms and concepts used throughout this report. The definitions presented here are derived from both relevant external sources and directly formulated by the signatories, developed collaboratively within working groups. These terms are specifically relevant to the goals we are pursuing within the Sector Collaboration.

Fiber types

Defined by Textile Exchange (2022) and REGULATION (EU) No 1007/2011. This lists 48 fibers but reporting on the 48 fiber types on the regulation's list will be very resource intensive. Therefore, it has been decided that the list includes the nine fibers that make up 95,68% of the world's textiles:

- Polyester (54%) // Synthetic fiber
- Cotton (22%) // Natural fiber
- Jute/hemp/linen (6%) // Natural fiber
- Cellulose (5,11%) // Man-made fiber
- Nylon (polyamide) (5%) // Synthetic fiber
- Acrylic (1,5%) // Synthetic fiber
- Elastane (1%) // Synthetic fiber
- Wool (0,92%) // Natural fiber
- Silk (0,15%) // Natural fiber
- Other (4,32%)

Peer-To-Peer Marketplaces

A physical or online service for citizens/consumers to sell and buy items to/from other citizens/consumers. Peer-To-Peer marketplaces are also asked to report their total revenue. In this case, it means their GMV (Gross Merchandise Value) incl. fees and shipping. This is the amount that consumers pay among themselves, including fees and shipping.

Recycled Material

The definition of recycled material in the Sector Collaboration follows the ISO standard 14021:2017 for Environmental Labels and Declaration: "proportion, by mass, of recycled material in products. Only pre-consumer and post-consumer materials shall be considered as recycled content."² This definition includes pre- and post-consumer recycled materials, and both recycled materials from textiles and other waste sources.

This can include but is not limited to:

- Recycled PET from plastic
- Recycled Nylon from fishing nets
- Recycled Cotton from industry off-cuts
- Recycled Wool from post-consumer goods

Pre-consumer materials include items returned tried on but unused by consumers to the retailer. It also includes all items (for example trims, yarn, belt, buttons, pieces of fabrics/off-cuts) used in

2 Visit the ISO website: Go to www.iso.org

the textile value chain. The Textile Exchange certifications, the Recycled Claim Standard (RCS) and the Global Recycled Standard (GRS), follow the above ISO definition. Since these certifications are specifically developed for the textile industry, the Sector Collaboration will primarily refer to the RCS and the GRS as third-party verification measures for recycled content.

Additional certifications may be included going forward if they are aligned with the ISO definition. Definitions and documentation requirements will follow EU requirements and standards and may be adjusted going forward.

Resale

Within the framework of the Sector Collaboration's efforts to promote circular business models, the working group has established a formal definition of resale. This term is defined as products that were previously possessed, either owned or leased/rented, by a consumer. These are categorized as post-consumer products. Importantly, this definition explicitly excludes new products, deadstock, returns, claims, 2nd sorting products, and re-designed products. This clarification ensures a precise understanding and implementation of resale practices, focusing solely on genuinely used items, thereby supporting our objectives of reducing resource consumption and extending product lifecycles.

Retail

Sale direct to consumers (B2C = Business to consumer). To sell goods to the public, usually in small amounts, for their own use. Retail price: The price that customers pay for goods in stores.

Revenue

Defined as: "money generated from normal business operations, calculated as the average sales price times the number of units sold. It is the top line (or gross income) figure from which costs are subtracted to determine net income³"

SKU number

Stock Keeping Unit.

Textile product

A product with more than 80% of textile content. See REGULATION (EU) No 1007/2011.

Wholesale

Sale to retailers (B2B = Business to business). The activity of selling goods, usually in large amounts, to businesses which then sell them to the public. Wholes price: The price at which goods are sold to shops by the people who produce them, rather than the price that the customer usually pays in the shop.

3.0 Data Collection

The data collected is national for textile products gathered and entered by the signatories. The Sector Collaboration is an initiative initiated by the Danish Ministry of the Environment, and as such, data collection is currently confined to the Danish market. The signatories report data for a calendar year, as companies have different financial years. The ambition is to have a yearly report showing the progress for the total Sector Collaboration. By 2024 and the years forward the plan is to report data in Q1 from the previous calendar year.

3 Investopedia

3.1 How Is the Data Collected?

In our efforts to streamline data collection for the Sector Collaboration, we have partnered with Valcon, a consulting firm, working with IT solutions for collecting and analyzing data. The developed app for collecting the data has been instrumental in facilitating an efficient and secure method for our signatories to submit their data. By using this app, signatories can easily input their information, which is crucial for our ongoing analysis and reporting.

The signatories enter their data into a Power Pages application to which they have individual access via unique passwords. The data is collected in the app and stored in Dataverse. You can read more about the security of the app [here](#). Access to the aggregated data for reporting purposes is restricted to key personnel at Lifestyle & Design Cluster.

It has been clarified that textile companies typically store data in one of the following five IT systems (however, data storage also takes place in Excel, in internal documents or order confirmations): TRIM-IT, SPY System, Aspect 4 Textile, Delogue or Pebblestone. The systems are used to process data about the companies' products and typically not for data about sales.

The Power Pages app is structured as signatories can download templates to help prepare the data. For example, the fiber categories to extract data from their own systems and then copy this into the respective columns. Therefore, the signatories cannot extract data directly from their IT systems. The level of existing data varies from signatories. Some, including smaller, signatories that already work with sustainability have collected/aggregated data, which they have used for climate calculations or had to provide data for the French or Dutch extended user responsible systems. Some signatories have data at the product level (SKU) but other signatories primarily operating on the Danish market must gather, clean and report data for the first time.

In the app we are asking for both qualitative and quantitative data related to the three goals within the Sector Collaboration. In the qualitative reporting (Questionnaire), signatories must select "Yes" or "No" and write the answer directly into the app. In the quantitative reporting, signatories have been asked to enter data manually.

3.2 Who Are the Signatories That Reported Data

The data are collected from signatories who have completed the necessary and relevant questionnaires and inputs into the app. The report shows the summary for each of the goals in an anonymized setup. The data for calendar year 2022 was obtained from 36 signatories out of a total of 50 signatories. For calendar year 2023, we obtained data from 39 signatories out of a total of 47 signatories. There are more reasons the difference between number of reporting signatories and the total number of signatories in the Sector Collaboration. For 2023, the difference of eight signatories can be explained with one signatory being a service company who does not have to report, one signatory has signed on to the agreement after the data collection was initiated, and finally six signatories were not able to gather, clean and report their data. We are in dialogue with them on how and when they will report in the next period. Between the two reporting periods, one signatory who reported for 2022 has resigned and four signatories reported data for the first time for 2023.

The 39 signatories can be divided into five categories related to their product profile and into three different company sizes. The company size is related to the number of employees as registered in the CVR register:

	Small: < 50 employees	Medium: 50 - 250 employees	Large: > 250 employees	Total	+/- 2023 vs 2022
Carpets / Furniture / Home Interior	0	2	1	3	+ / - 0
Children's Wear	6	1	0	7	+ 2
Fashion & Accessories	11	3	4	18	+ / - 0 Three new signatories for 2023. Three signatories have not reported for 2023
Recycling / Resale	2	2	1	5	+ 1 Two new for 2023, one NGO and one resale platform. One Peer-To-Peer with big volume has not reported for 2023. Three signatories are NGO's and two are Peer-To-Peer marketplaces.
Work - & Active Wear	3	2	1	6	+ / - 0
Total	22	10	7	39	

Some signatories cover several categories, but since their data is aggregated for the whole company rather than for each of their brands, we have chosen the category based on their main business. Throughout this report, we compare data from 2022 to 2023. However, it is crucial to keep in mind that the composition of signatories may differ year over year, as not exactly the same signatories are involved in both years. This variability can significantly impact the results and trends observed.

The 39 signatories have not all entered data for all three goals as it may not be relevant to their type of business or because they were not able to collect the data for this report. For example, Peer-To-Peer marketplaces who do not produce textile products have not reported data for recycled textile fibers.

4.0 Goal: Circular Business Models

The goal regarding circular business models is as follows: *A larger part of the turnover in clothes in Denmark comes from resale, and clothes are kept in use for as long as possible.*

The primary aim of this goal is to ensure that a substantial portion of the turnover in Denmark's textile industry derives from resale activities, with garments being utilized for as long as feasibly possible. Signatories pilot re-use business models as appropriate to their product ranges, share learning, and develop large-scale implementation to extend the lifetime of clothing in Denmark – decoupling business growth from the use of virgin resources. In pursuit of this goal, we have sought both qualitative and quantitative data from the signatories. We have specifically requested quantitative data regarding their resale activities as well as revenue figures within the Danish market. Additionally, the signatories have responded to a questionnaire focused on their business models.

4.1 Data Reported on Resale

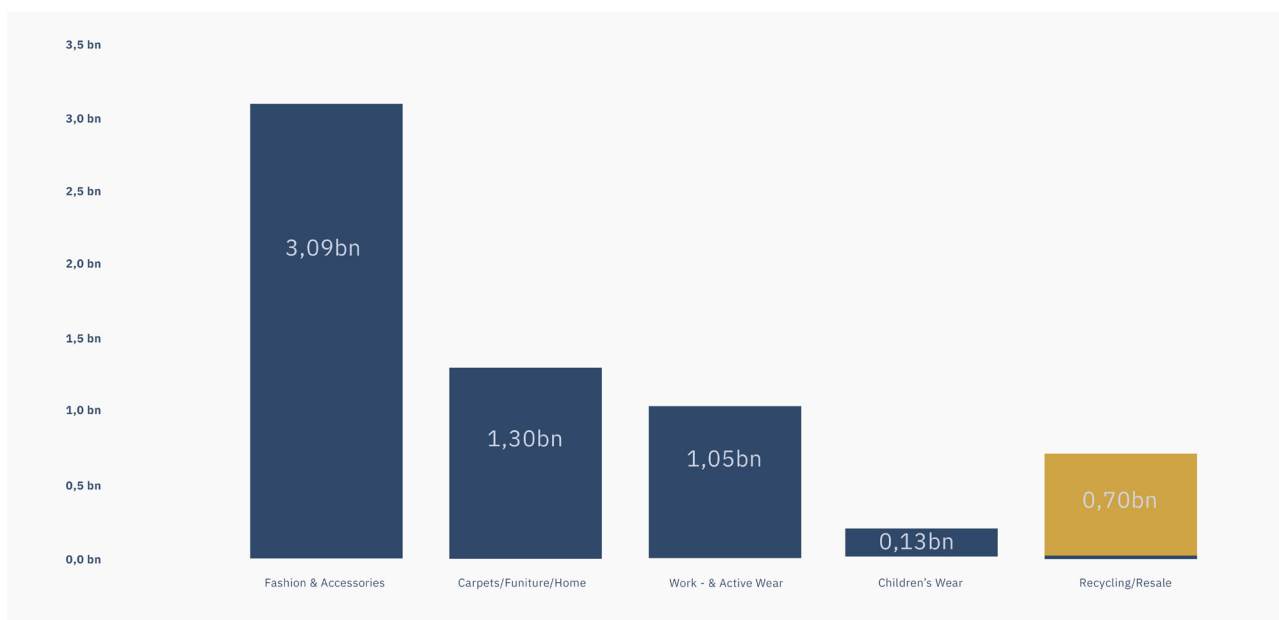
The signatories were asked to report two sets of data: a) Total revenue for the Danish market in DKK b) total revenue of resale on the Danish market in DKK. Even though the signatory does not have any resale they still had to report on their total revenue in order for us to calculate the share of resale for the category they belong to.

To avoid double registration, it is possible to register at either wholesale or retail, just as it is possible to add wholesale sales to foreign e-platforms that resell the products to Danish consumers. This data must be obtained from the platforms, which can provide information on how many products are resold to Danish consumers.

A survey made by Norion Consult shows that companies can often extract data on revenue and number of products sold, while data on weight will only be available in the future. We have in this report chosen to show data on revenue, not on pieces nor on weight. The reason is that only some signatories managed to extract data on pieces and weight. We focused on making it mandatory for all signatories to report data on their revenue on the Danish market, even though it is sensitive for many companies to inform about this.

4.2 Data on Revenue and Resale Per Category

For this goal, we have gathered data from 37 signatories. Below, you will find a graph displaying data on the signatories' total revenue as well as their resale revenue displayed per category. We will thoroughly review and analyze this data in the following section.



Category	Total Revenue (DKK)	Non-Resale Revenue (DKK)	Resale Revenue (DKK)	% Resale Revenue
Fashion & Accessories	3.094.943.208	3.094.940.845	2.363	0,00%
Carpets/Furniture/Home	1.300.950.424	1.300.950.424	0	0,00%
Work - & Active Wear	1.045.010.592	1.046.010.592	0	0,00%
Children's Wear	126.850.619	126.826.372	24.247	0,02%
Recycling/Resale	718.035.489	22.901.767	695.133.722	96,81%

The models clearly show that the resale in Denmark is driven by the Recycling/Resale category. The five signatories within this category have a significant amount, 695 million DKK, of resale revenue. The difference between the total revenue and the resale revenue is called the non-resale revenue – the sales of products that are not according to the definition created by the Sector Collaboration. For the NGO's, this could be products donated by brands and for the Peer-To-Peer marketplaces it could be deadstock bought from brands (pre-consumer products).

Even though there are signatories within the Fashion & Accessories- and the Children's Wear category that offers resale on their homepage, this is not reflected in the reported data. It is either at an early stage, not sold on the Danish market, or not selling at all.

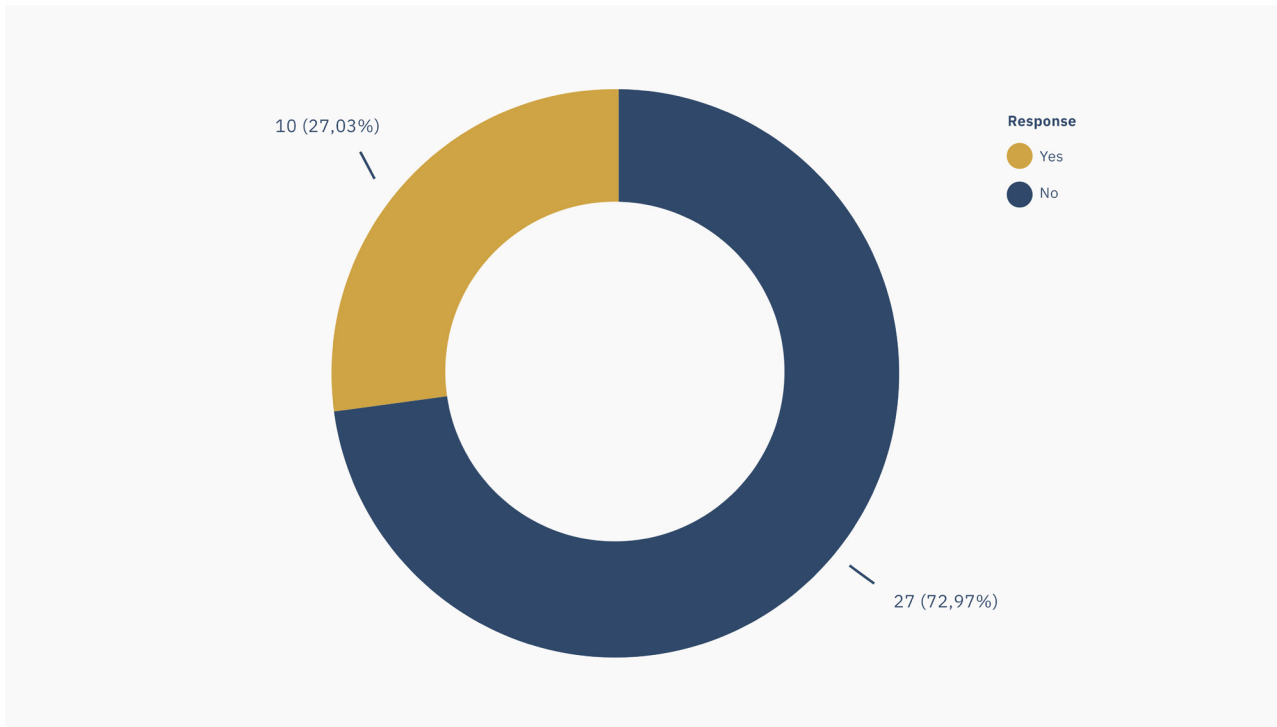
Compared to 2022 data, the resale revenue for the Recycling/Resale category has decreased by 357 million DKK. This decrease is attributed to the change of signatories within the category, i.e., one Peer-To-Peer marketplace with high revenue on resale reported data for 2022 and not for 2023, and the new signatories have not achieved as high revenues. For the other categories, the level of resale for 2022 and 2023 is too low to track any progress. Despite these fluctuations, the overarching goal is to significantly increase the proportion of resale moving towards 2030, underscoring our ambition to surpass current levels and drive substantial growth in circular business practices.

4.3 Questionnaire on Circular Business Models

Below, we will move to the qualitative part of the data related to the circular business models. We will delve into the survey responses from two “yes/no”- questions and provide a summary of the answers to two follow-up questions.

Question 1

Do you sell textile products through a circular business model? (yes/no).



10 signatories out of 37 answer yes to selling products through a circular business model; this equals 27%. Compared to 2022, 13 out of 33 signatories answered yes, which equaled 39%. This is an open question that does not only relate to resale but to all sorts of initiatives and services.

During the past working group meetings we have introduced a guide to Circular business models created by WRAP (see more [here](#)). It is therefore difficult to conclude if less signatories for 2023 compared to 2022 are selling through a circular business model or if the signatories have become more knowledgeable about what a circular business model requires.

Follow-Up Question

If yes, please describe the circular business model and on which development stage it is, e.g., pilot stage, planning, or operational.

Below, you can read a compiled analysis of the responses received for this follow-up question. This summary provides an overview of the key themes.

Takeback Systems and Recycling

Several signatories operate takeback systems where post-industrial or post-consumer textile waste is collected and recycled to create new products. This process is not just about waste reduction but also about reintegrating materials into the production cycle.

Some signatories are in pilot stages of implementing takeback schemes, suggesting this is a growing area of focus.

Resale

Resale operations are a significant aspect of circular business models, with the signatories facilitating the resale of used items through their platforms or physical stores. This includes selling pre-owned clothes and also upcycling non-reusable textiles into new products.

Notably, some signatories focus exclusively on the resale of donated clothing, maximizing the lifecycle of garments and contributing directly to reduced textile waste.

Operational Effectiveness

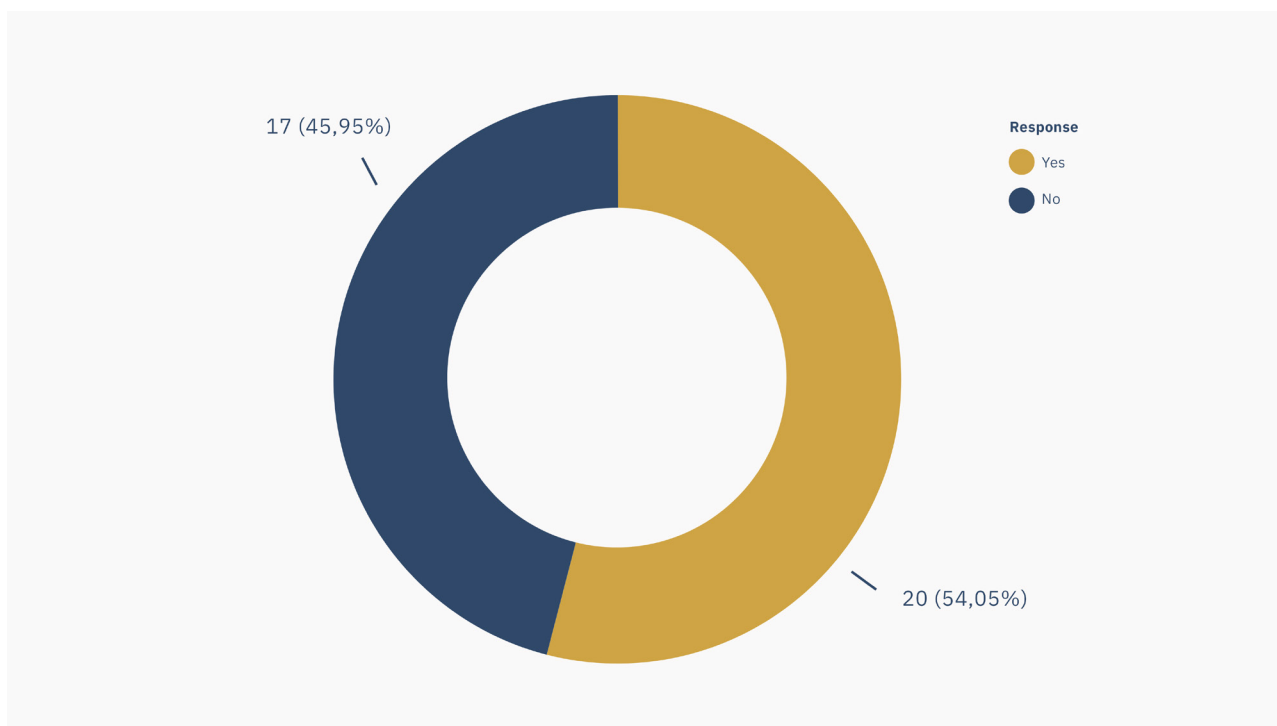
Many of the signatories mentioned that their circular business models are fully operational, with ongoing projects to enhance their effectiveness. This includes conducting sales of sample and deadstock items and planning service rentals to further reduce waste.

Sub-Conclusion Of the Questionnaire

The survey responses highlight a robust commitment across the signatories representing a large part of the textile industry to implement and refine circular business models. These models are characterized by a focus on repair, maintenance, resale, recycling, and consumer engagement, all aimed at minimizing waste and reducing environmental impact.

Question 2

Do you work with initiatives, which encourages or facilitates lifetime extension of the product? (yes/no).



When the signatories are asked about initiatives which extends the lifetime of products we see a high share of positive responses - 20 out 37, 54%. Compared to 2022 this is the same share.

Follow-Up Question

If yes, please describe the initiatives which can extend the lifetime of the products, e.g., repair, maintenance, modification etc.

Below is a synthesized overview of the feedback gathered from this question. This summary highlights the main themes and insights derived from the responses, showcasing the common views and approaches taken by the signatories.

Repair Services

Many signatories operate repair services, either in-house or through partnerships, to fix the products and extend their usability. This includes mending broken zippers, providing repair kits, and cooperating with tailors.

Retail shops are beginning to include repair stations, indicating a move towards making repair services more accessible to consumers.

Resale and Second-Hand Initiatives

A significant number of signatories have developed or are planning to develop platforms or partnerships to facilitate the resale of used garments. These “pre-loved” or second-hand initiatives aim to give clothes a second life and reduce waste.

Support for customers to resell or donate unwanted garments is also commonly offered, ensuring these items find new owners.

Durability and Lifetime Extension

The signatories focus on producing high-quality, durable workwear and outerwear, often offering long guarantees to back up these claims. Extensive durability testing on materials is also a key focus to ensure products last longer.

Advice and tools for maintenance are commonly provided, including maintenance guides and educational workshops on DIY repairs, which empower consumers to care for and mend their items effectively.

Design for Longevity

Many of the signatories emphasize designing products with emotional longevity and technical durability in mind. This includes choosing well-known, durable fabrics and accessories and offering extended sizes to accommodate a wider range of body types.

Design initiatives often include creating products that are easier to repair and maintain, enhancing their functional lifespan.

Innovation and Education

Innovation in care and repair manuals is under development, aiming to engage consumers in taking better care of their garments.

Educational efforts to teach consumers about proper care and the importance of repairs are integral to these business models, helping to shift consumer behaviour.

Material and Resource Management

The signatories are actively seeking to use recycled materials where possible and develop recycling initiatives for end-of-use products.

The integration of maintenance and design considerations into product development helps reduce the need for new resources.

Sub-Conclusion of the Questionnaire

The responses from the signatories show a strong commitment to extending product lifetimes through repair services, resale initiatives, and consumer education. These practices promote durability, reduce waste, and support the circular economy.

5.0 Goal: Circular Design

The goal regarding circular design is as follows: *Create common circular design requirements for clothes and textiles from Danish companies to be designed to have more lives and to be part of optimal circular loops.*

5.1 Rationale Behind Circular Design Initiatives

It is documented that approximately 80% of a product's environmental impact is determined at the design stage⁴. Thus, design plays a critical role in transitioning from the traditional linear model to a circular one. By employing circular design principles, we aim to extend the usable life of textile products, enable their recycling at the end of life, eliminate waste from the production system, and enhance the demand for recycled materials. These measures are expected to maximize the value extracted from textile products, significantly reduce carbon emissions, and alleviate the pressure on natural resources incurred by the production of virgin materials.

5.2 Commitment and Implementation by Signatories

Signatories commit to adopting and implementing good practice design principles that include durability, reusability, recyclability, the use of recycled content, and minimizing waste. These principles are to be applied in a manner that is congruent with each company's business model and customer base, thereby minimizing their environmental impact.

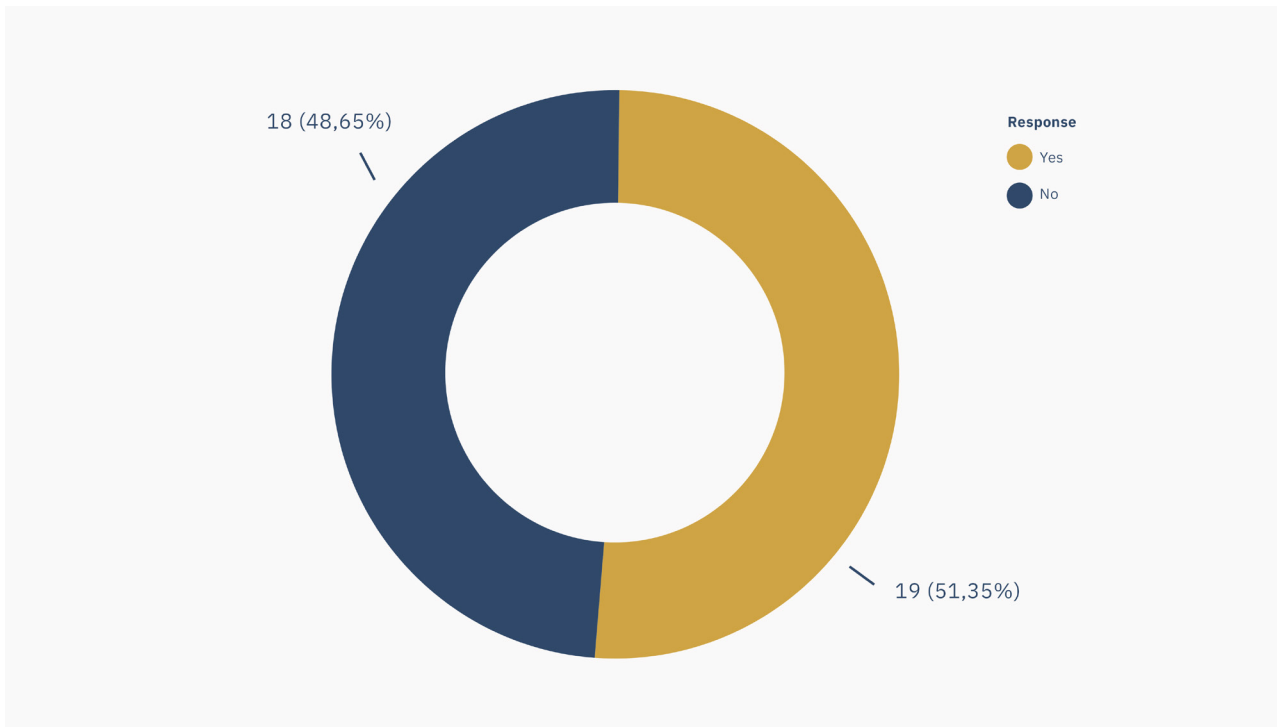
5.3 Questionnaire on Circular Design

For this goal the signatories were only asked to enter qualitative data by completing a questionnaire with three overall "yes/no"- questions, two of which had a follow-up question added. In the following section, we will delve into the survey responses and explore the responses to the follow-up questions for those who answered affirmatively.

Question 1

Do you work with circular design principles during your product design / product development? (yes/no)

4 Ellen MacArthur Foundation: An introduction to circular design



51% of the signatories (19 out of 37) answer yes to working with design principles. Compared to 2022, this is a lower share. In 2022, 20 signatories out of 36 answered yes (56%). In alignment with the goal to 'Create common circular design requirements for clothes and textiles from Danish companies to be designed to have more lives and to be part of optimal circular loops,' we are striving for all signatories to affirmatively respond to this question. We are actively developing a guide that companies can utilize and implement in their business practices to help achieve this aim.

Follow-Up Question

If yes, how do you work with circular design principles?

Below, you can read an overview of the key findings from a qualitative survey where signatories shared insights into this follow-up question.

Product Design

Many signatories are focusing on developing mono-composition products to facilitate easier recycling. The use of mono-materials is a recurring theme, with examples including 100% wool or 100% polyester designs.

Durability and Longevity

There is a strong emphasis on creating long-lasting products to prolong the product's life. This includes focusing on durability during the design phase and implementing minimal design changes across seasons to allow for easier take-back and resale without loss of value.

Circular Strategies and Resources

Several signatories are working towards or have already implemented a circular vision and strategy, which includes the creation of design guides tailored to promote recyclability and textile-to-textile recycling.

Extended Product Life and Reusability

There is a significant focus on designs that support the reuse of garments, including extended sizing and technical durability to fit a broader range of consumers for longer periods. Additionally, many signatories have structured take-back systems to ensure garments are designed for reuse.

Principles for Circularity

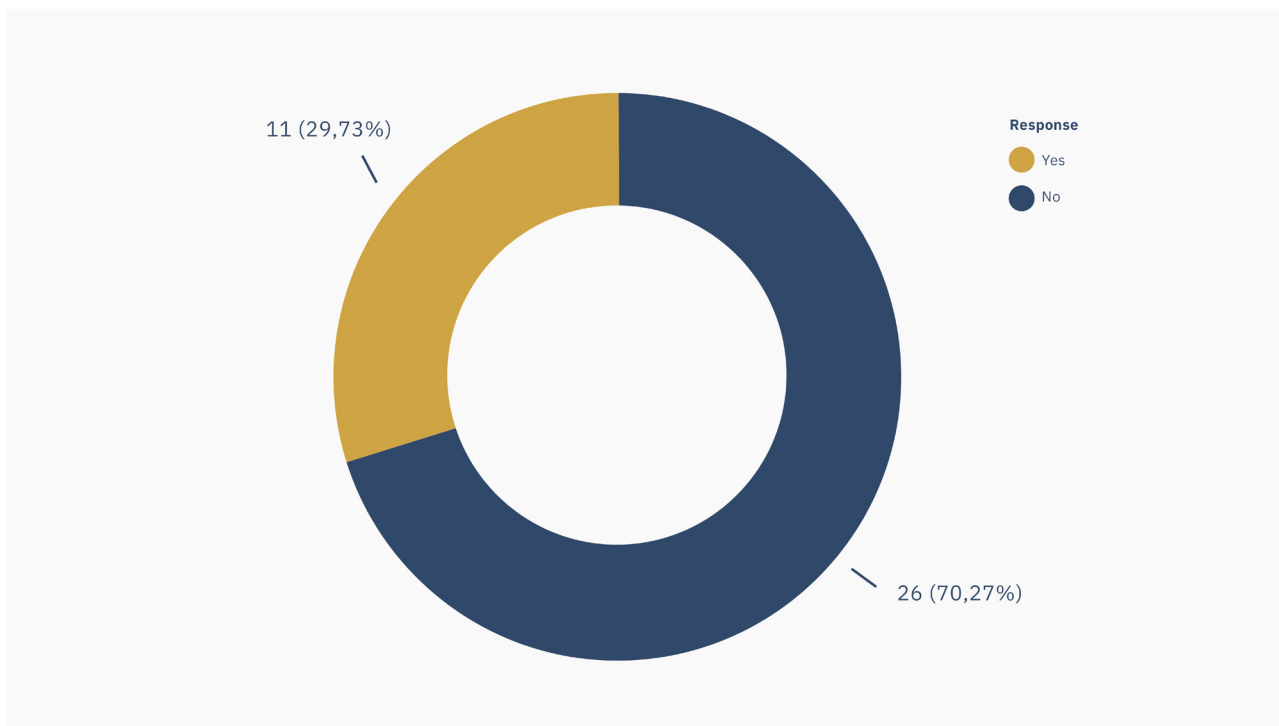
Some of the signatories highlighted specific principles guiding their designs, such as using natural fibers, mono-fibers, un-dyed materials, and maintaining a circularity mindset throughout the design process.

Sub-Conclusion of the Questionnaire

In conclusion, the survey responses highlight a robust commitment across the textile industry to work with circular design. However, it is important to note the varied nature of these responses, which indicates that the signatories interpret and apply circular design principles in many different ways. This diversity in approaches underscores the need for clearer definitions and standardized guidelines moving forward.

Question 2

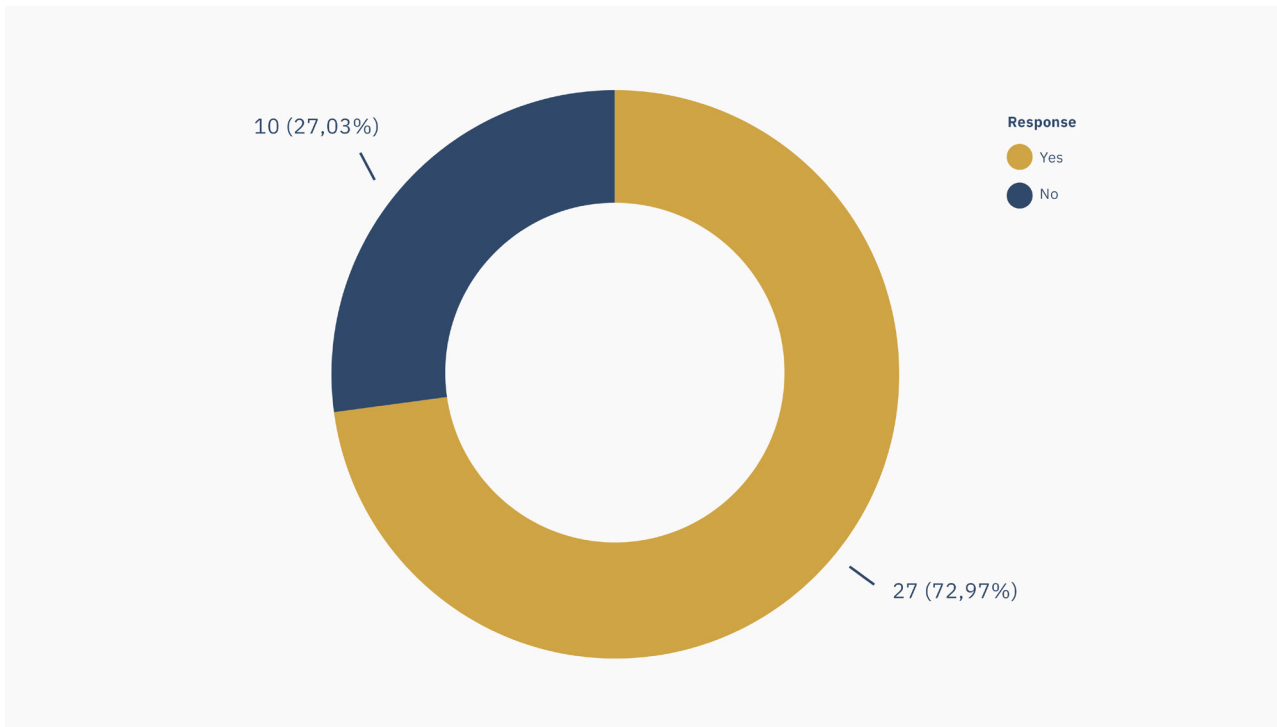
*Does your design department work based on written design requirements?
(yes/no)*



Only 11 signatories out of 37 work based on written design requirements. Compared to the above answers, it seems as if a lot of principles and requirements are in the brand DNA or within the designers knowledge and not written down in a guide. This picture is the same compared to 2022.

Question 3

Does your business have a strategy for your materials, such as an overview of preferred materials? (yes/no)



73% of the signatories answer yes to having a strategy for materials. This is same level as for 2022.

Follow-Up Question

If yes, which principles does this strategy build upon?

The summary below consolidates the responses from a qualitative survey focused on the principles signatories use.

Material Certification

Many signatories prioritize the use of certified materials, such as OEKOTEX and GRS. They also emphasize compliance with stringent environmental and quality standards beyond legal requirements, including certifications like ISO 9001 and 14001.

The signatories frequently mentioned using GOTS and GRS, focusing on a materials strategy that classifies compositions based on their fiber content or certification level.

Durability and Longevity Focus

Durability is a central theme, with many signatories designing products to last longer. This includes using durable materials for workwear and other products that must meet specific performance requirements.

Several signatories highlighted internal strategies that emphasize increased use of recycled fibers and reducing synthetic fibers when possible.

Design and Product Strategies

The signatories are implementing design principles aimed at longevity and functionality, such as using mono-materials for easier recycling and excluding unnecessary components at the design stage.

The development of preferred material guidelines aligned with Textile Exchange recommendations and the adoption of a preferred materials matrix indicate a strategic approach to material usage.

Circularity and Recycling Initiatives

A significant focus is placed on designing products for circularity, including mono-materials strategies and ensuring that products are made from materials that are either already recycled or are recyclable.

Many of the signatories have specific take-back programs or strategies for recycling fibers and materials to ensure products contribute to a circular economy.

Sub-Conclusion of the Questionnaire

The signatories clearly illustrate a robust commitment. By focusing on material certification, durability, strategic design, and circularity, the signatories are actively working with design principles.

6.0 Goal: Recycled Textile Fibers

The goal regarding circular business models is as follows: By 2030, all clothing and textiles from Danish companies will consist of at least 40% recycled material, including at least 10 per cent recycled directly from textile fibres⁵.

6.1 Rationale for Increased Use of Recycled Fibers

It is estimated that approximately 1% of blended textiles are recycled back into new textile fibers⁶. The phase in which raw materials are processed contributes the most significant environmental impact during the product lifecycle. This situation presents not only a pressing need but also an opportunity to enhance the utilization of recycled fibers in new products. By incorporating recycled fibers, we can shift the environmental burden away from the production of virgin raw materials and simultaneously divert textile waste from landfills. Furthermore, a rising demand for recycled fibers among retailers can stimulate investments into the reuse and recycling sectors, thereby enhancing the necessary infrastructure and innovation to support efficient fiber-to-fiber recycling. This shift is poised to create significant new opportunities within the Danish economy.

6.2 How To Report Data on Fibers?

The aim is to report on the total amount of recycled fibers compared to virgin fibers used to produce textile products. Signatories have reported data for products traded over a period of 12 months = a calendar year. The finished products must have been sold in Denmark. The amount per fiber is entered in kilograms per fiber type. Each signatory has been asked to report both the virgin fibers, the recycled fibers and the recycled F2F (fiber-to-fiber). For each amount of recycled fibers, they were asked to indicate which verification measure is used (A, B or C). Signatories are expected to have documentation validating that their products are made of recycled content. Signatories are, however, not required to submit this documentation as part of their reporting. Only third-party certified recycled material is accepted. It is the responsibility of the individual signatory to ensure that what is reported as recycled material is third-party certified. The Sector Collaboration allows for three types of verification measures that can document the recycled material. When conducting the reporting, signatories were asked to indicate which verification measure is used to ensure the authenticity of the recycled material.

5 Measured in weight

6 Ellen MacArthur Foundation: A New Textiles Economy: Redesigning fashion's future

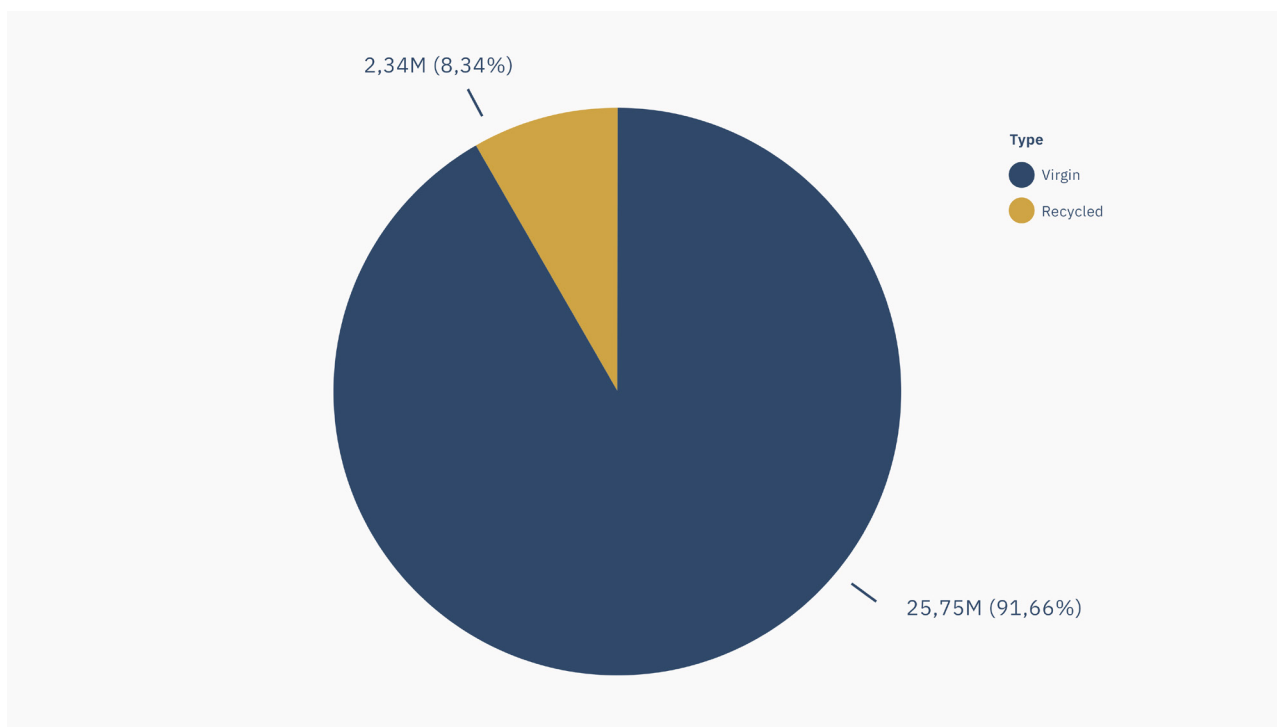
The app is developed for the signatories to either report data on fibers aggregated or on SKU level. When collecting data for 2023, we asked the signatories to enter data manually aggregated per fiber. This is to encourage that the signatories overlook their own data for possible errors such as double reported lines or reported on non-textile products. For example, we found a large amount of data under the fiber category “Others” - which surprised us, and it turned out that some signatories had reported shoes, bags, suitcases and other accessories that do not go under the textile category (product with a minimum of 80% textile).

6.3 Data on Textile Fibers

By the year 2030, a significant goal has been set for the signatories: all clothing and textiles from Danish companies will be made up of at least 40% recycled material. Importantly, of this 40%, at least 10% will be sourced directly from recycled textile fibers. This specification emphasizes a focused effort not just on general recycled materials but particularly on integrating recycled textile fibers into products, highlighting a deeper level of commitment to circularity in textile production.

33 signatories have reported data for 2023.

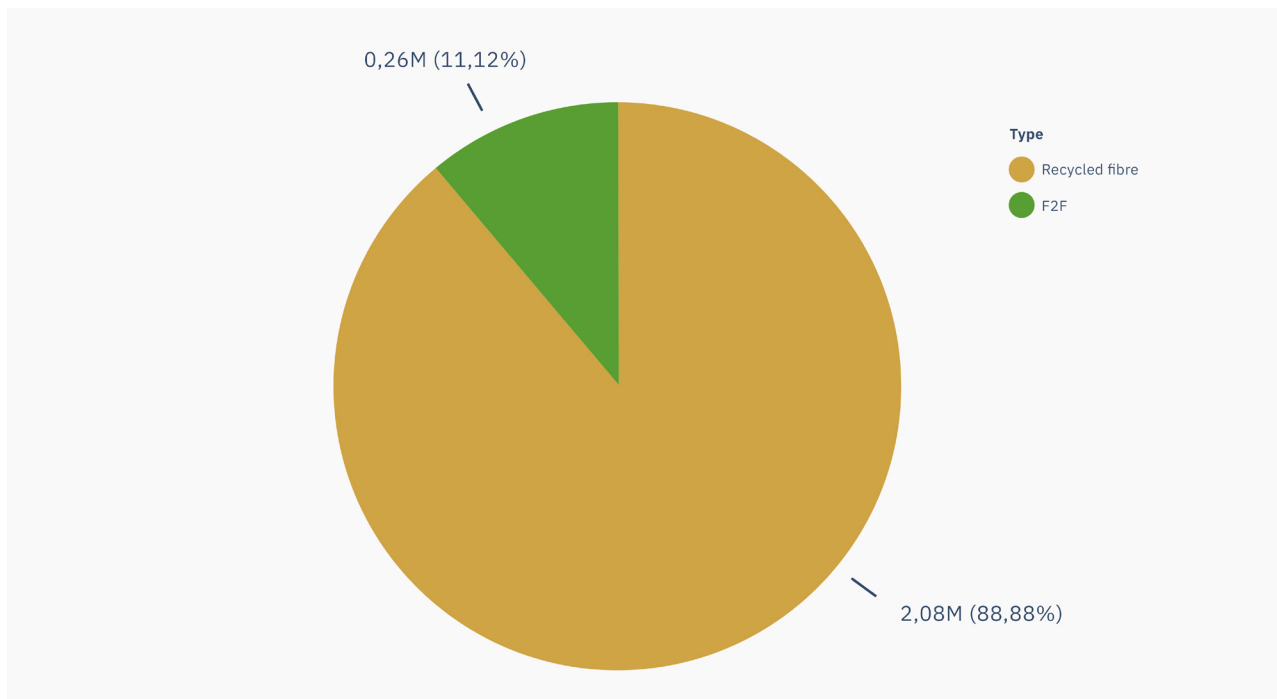
Total weight (kg) and split (%) of fibers



Fiber	Weight (kg)	Weight %
Virgin	25.753.619	91,66 %
Recycled	2.342.854	8,34 %
Total	28.096.473	100,00 %

The model analysis reveals that of the total 28.096.473 kg of fibers reported in 2023, 8,34% were recycled, amounting to 2.342.854 kg. Although this is still below the target of 40%, it marks a significant improvement from the previous year. In 2022, a total of 29.048.196 kg of fibers were reported, with only 4,81% (1.398.026 kg) being recycled. This year’s data not only shows a decrease in total fiber usage but also a substantial increase in the proportion of recycled fibers by 68%. Given this positive trend and assuming the total amount of fibers remains stable, the goal of 40% recycled content, which would equate to 11.238.589 kg of recycled fibers, could potentially be achieved within the next 3-4 years.

Weight (kg) and split (%) of Recycled fibers and F2F

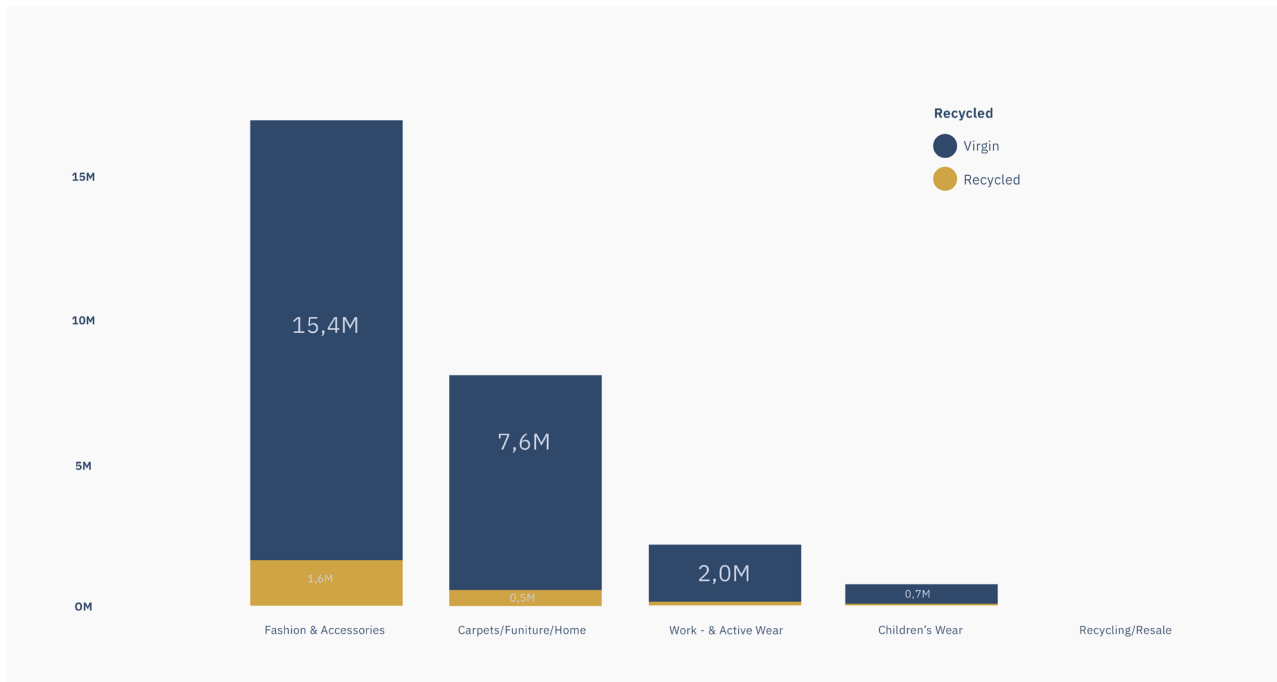


Type	Weight (kg)	Weight %
Recycled fibre	2.082.379	88,88 %
F2F	260.475	11,12 %
Total	2.342.854	100,00 %

The fiber-to-fiber recycling target is set at 10%, and the current data indicates that this specific type of recycling accounts for 11,12% of the total recycled fibers in 2023, surpassing the set target. This represents an improvement from 2022, where fiber-to-fiber recycling constituted 9,7% of recycled fibers, with a total volume of 135.569 kg. In 2023, this volume increased significantly to 260.475 kg, marking a 92% rise in the amount of fiber-to-fiber recycling.

Given the substantial growth in the total volume of recycled fibers, the fiber-to-fiber segment demonstrates a strong upward trajectory. If this trend continues in tandem with the overall increase in recycled fiber usage, it is likely that the specific goal for fiber-to-fiber recycling will not only be sustained but also potentially exceed expectations in the coming years. Having reviewed the overarching goal regarding the use of recycled fibers, we now turn our focus to the signatories.

Weight (kg) of virgin and recycled fibers by category

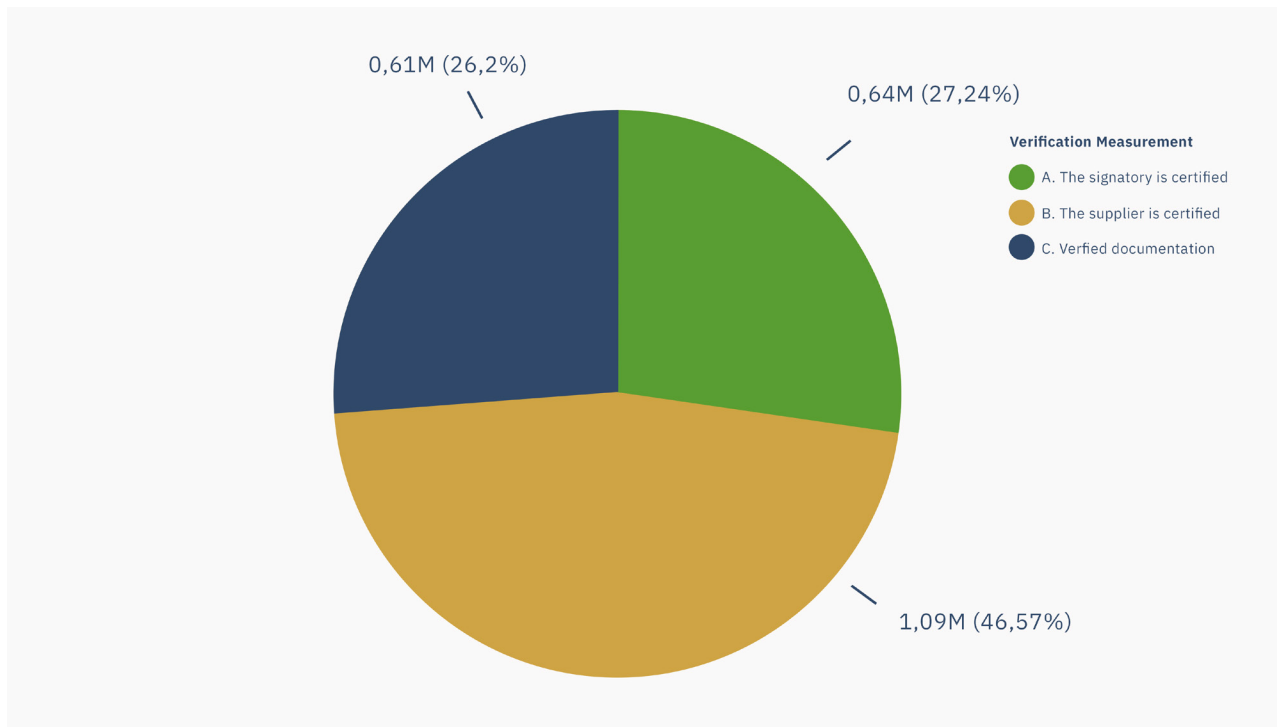


Type Category	Recycled		Virgin		Total	
	Weight (kg)	Weight %	Weight (kg)	Weight %	Weight (kg)	Weight %
Fashion & Accessories	1.610.047	9,46%	15.413.917	90,54%	17.023.963	100,00%
Carpets/Furniture/Home	532.947	6,59%	7.551.650	93,41%	8.084.596	100,00%
Work - & Active Wear	123.924	5,70%	2.049.966	94,30%	2.173.890	100,00%
Children's Wear	75.937	9,33%	738.086	90,67%	814.023	100,00%
Total	2.342.854	8,34%	25.753.619	91,66%	28.096.473	100,00%

The analysis of the model above reveals that all categories within the textile industry are engaging with recycled fibers to some extent. According to the data, the category exhibiting the highest usage rates are Fashion- & Accessories at 9,46% and Children's wear 9,33%. Work- & Active wear shows the lowest rate at 5,7%. This variation can be attributed to the ongoing discussions regarding the quality of recycled fibers. Workwear, demands high-quality materials to meet durability and safety standards, which may explain the lower incorporation of recycled fibers in this category. Compared to 2022 all categories have increased their use of recycled fibers. But it is in particular the Fashion & Accessories category - that has lifted the total weight by 96%, it goes from 820.670 kg in 2022 to 1.610.047 kg in 2023.

The forthcoming section will show how companies document their use of recycled fibers. This examination will specifically address the various certifications that validate the presence and quality of recycled materials within the industry's products. To provide a structured approach to this analysis, certifications have been classified into three distinct categories: A, B, and C. For clarity on these categories, readers are referred to Section 2.0 of the report, which provides definitions and criteria for each category.

Weight (kg) and split (%) of Recycled fibers by verification measurement



Verification Measurement	Weight (kg)	Weight %
B. The supplier is certified	1.090.957	46,57 %
A. The signatory is certified	638.132	27,24 %
C. Verified dokumentation	613.766	26,20 %
Total	2.342.854	100,00%

Nearly half of the signatories, precisely 46,57%, rely on their suppliers being certified, indicating a substantial reliance on external certification standards within the supply chain. Additionally, 27,24% of the signatories hold certifications themselves.

We will now delve deeper into these findings, exploring the specifics of the certification processes as highlighted in the survey responses. This discussion aims to provide a clearer understanding of the certification landscape among the signatories and their suppliers.

6.4 Questionnaire on Recycled Textile Fibers

In addition to the overall quantitative data on recycled fibers and how these are documented, the signatories were asked to complete a questionnaire with three questions. In the following section, we will delve into the responses.

Question 1

How do you generally document your recycled materials?

Here is a synthesized overview of the key methods used by signatories to document the use of recycled materials:

Certifications and Standards

A significant number of the signatories use Global Recycled Standard (GRS) certifications to document their recycled materials. This includes obtaining transaction certificates (TCs) which verify the chain of custody from suppliers. Other certifications mentioned include OEKO-TEX and the EU Ecolabel, which requires third-party verification.

Supplier Documentation

The signatories commonly rely on documentation provided by their suppliers, such as declarations, transaction certificates, or scope certificates, to track the use of recycled materials. This documentation is often linked directly to purchase orders to ensure traceability.

In instances where direct certifications from suppliers are unavailable, some of the signatories seek letters of declaration or add transaction certificates that note the final product producer and buyer.

Internal Tracking and Reporting Systems

Several of the signatories highlighted the use of internal systems such as ERP (Enterprise Resource Planning), PLM (Product Lifecycle Management), and PowerBI dashboards to monitor and report the amounts and sources of recycled content. These systems help in managing and verifying the recycled content used per product, season, or year.

Third-Party Certification and Chain of Custody

Many of the signatories emphasize the importance of third-party certification to ensure compliance with recycling standards. They ensure that their supply chain partners, particularly those at Tier 1, hold appropriate GRS (Global Recycled Standard) or RCS (Recycled Claim Standard) certificates.

Documentation practices include using scope certificates and specific certifications from spinners used for all recycled yarn, which are crucial for maintaining transparency and integrity in product claims.

Challenges and Limitations

Some of the signatories noted challenges such as not receiving adequate documentation, which prevents them from labelling products as containing recycled materials. Others mentioned that they do not use recycled materials or are only engaged in resale, thus not requiring documentation for new materials.

Sub-Conclusion of the Questionnaire

This summary indicates a high level of engagement with standardized certification and robust documentation practices among the signatories, underscoring their commitment to transparency.

Question 2

If you work with certifications, which ones do you use?

To provide a clear overview of the most frequently used certifications based on the survey responses regarding recycled materials documentation, we have compiled a summary. This categorization helps visualize which certifications are most common among the signatories:

Global Recycled Standard (GRS): 20 mentions

Recycled Claim Standard (RCS): 9 mentions

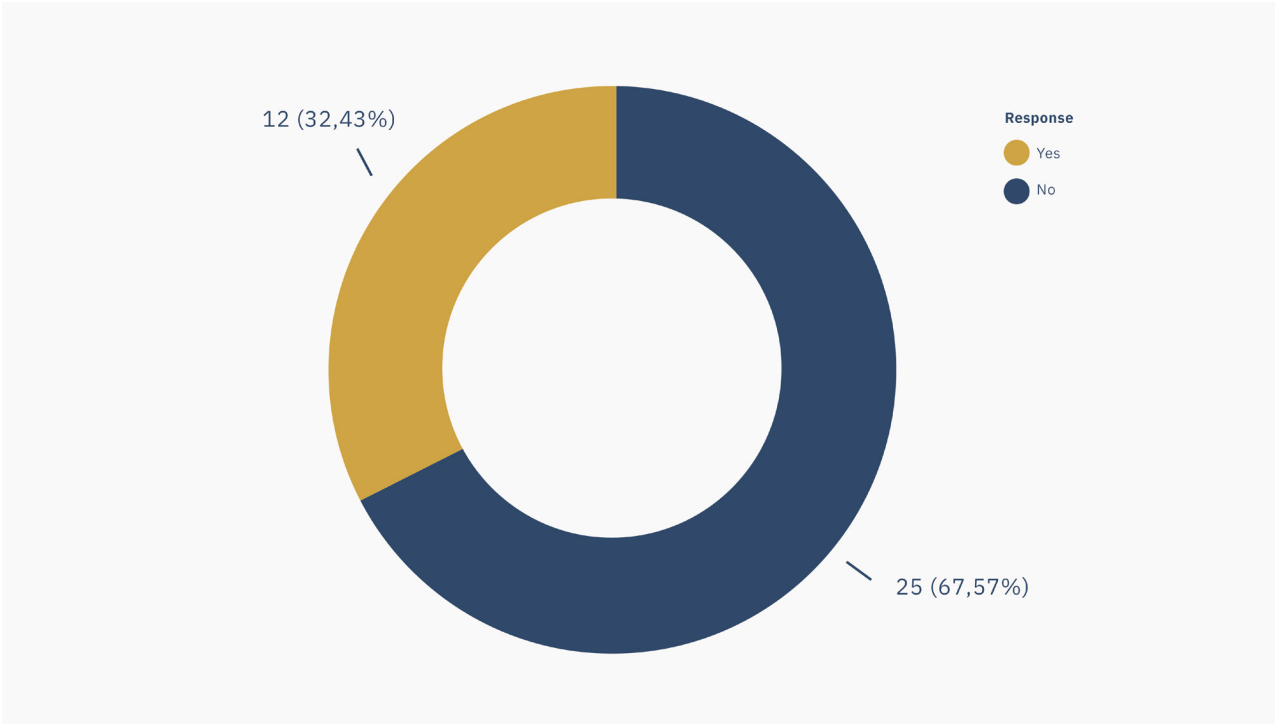
- Global Organic Textile Standard (GOTS): 9 mentions
- OEKO-TEX (including Oeko-Tex Standard 100 and Oeko - Tex Made in Green): 8 mentions
- EU Ecolabel: 3 mentions
- European Flax, RAF: 1 mention
- Organic Content Standard (OCS): 4 mentions
- Responsible Wool Standard (RWS): 2 mention
- Cradle to Cradle: 1 mention
- ISO 9001/14001: 1 mention

Sub-Conclusion of the Questionnaire

The Global Recycled Standard (GRS) is clearly the most prevalent certification, indicating its importance and recognition in the industry for verifying recycled content.

Question 3

Are you engaged with any innovation / development projects about recycled materials, which you are not yet able to report on? (yes/no)



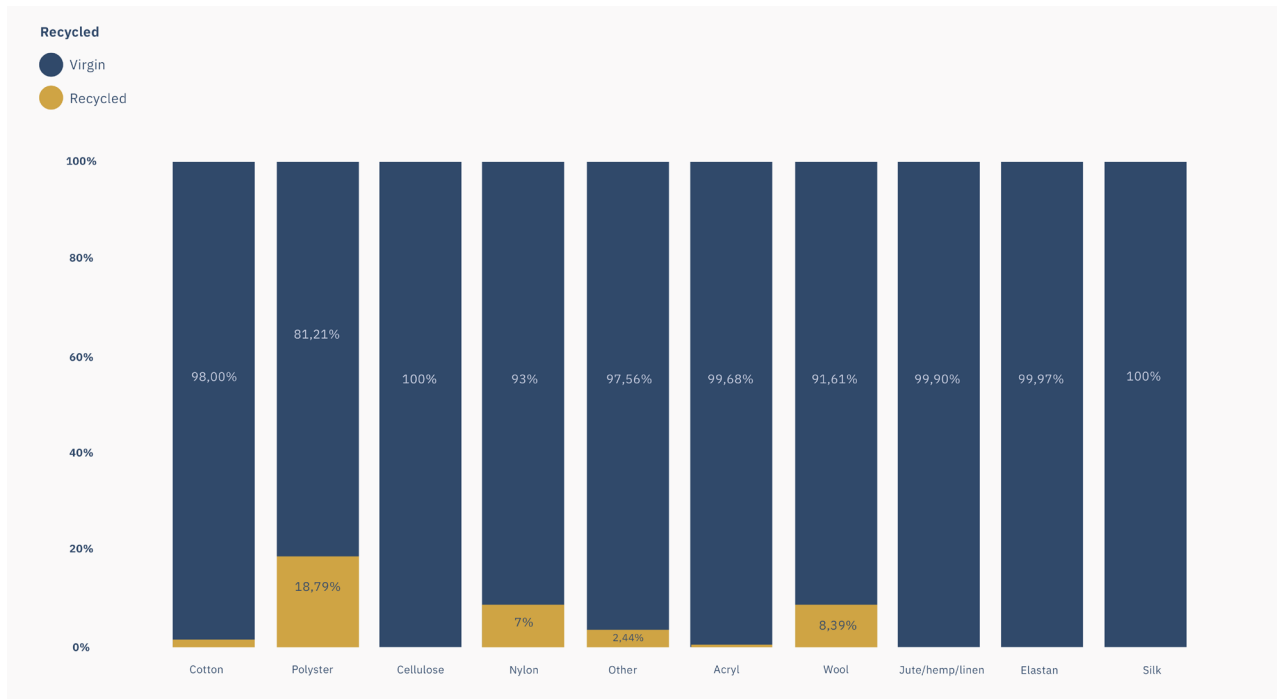
12 signatories (32,43%) out of 37 are somehow engaged in recycled materials which they are not yet able to report on. This could promise a higher level of recycled fibers in the future data reporting. Compared to 2022, there are already more signatories: 12 vs. 9.

Out of the total responses, only three signatories reported an inability to provide data on certain projects, whereas the remaining 33 signatories were able to do so. This discrepancy may stem from the fact that four signatories were unable to meet the criteria defined in categories A, B, or C, thus preventing them from reporting on these specific projects.

6.5 Data by Fiber Type

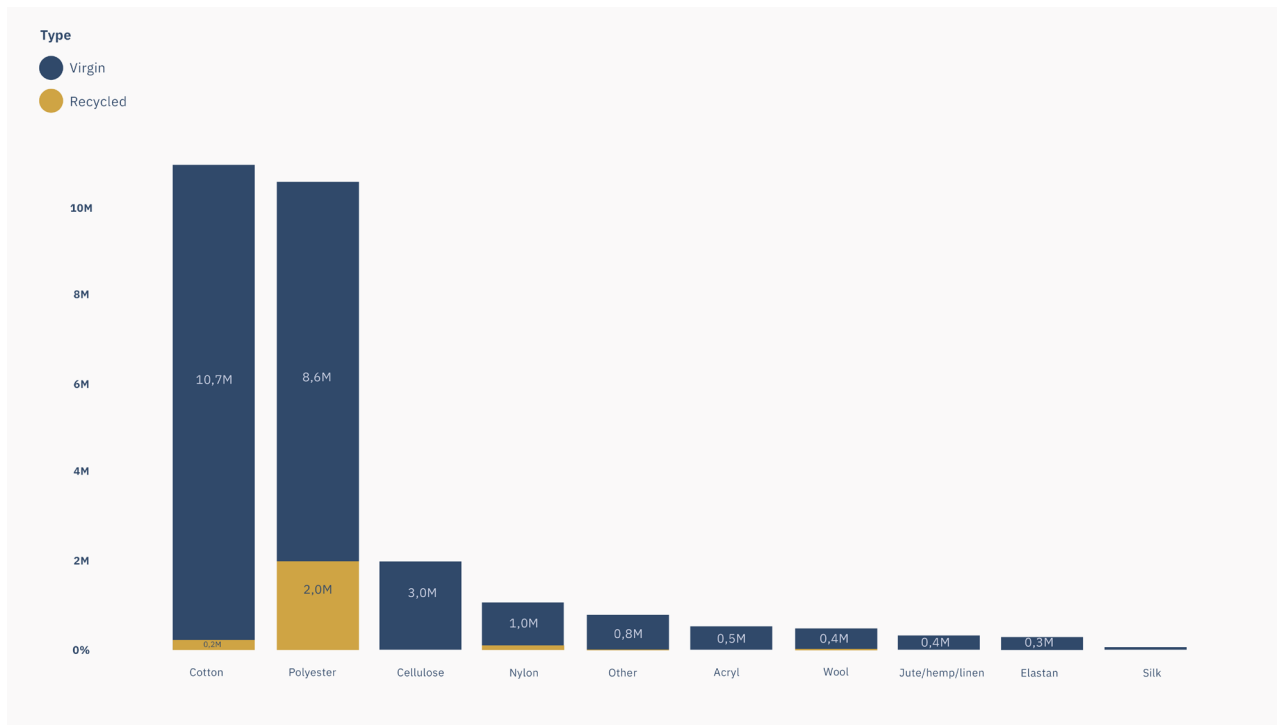
In the following sections, we will delve deeper into the distribution of different fiber types used by the signatories and explore how various recycled methods are employed across these categories. This detailed examination aims to provide a clearer understanding of the material composition and recycling practices within the industry.

Split (%) of Virgin and Recycled fibers by fiber type



Polyester is the fiber type with the highest proportion of recycled material at 18,79%. It is followed by wool, which has 8,39%, and nylon, which ranks third at 7%. In 2022, the percentage for recycled polyester was 11,47%, rising to 18,79% in 2023. This represents an increase of 7,32 percentage points. For wool, the amount of recycled fibers increased from 4,67% to 8,39%, marking an increase of 3,7 percentage points. Nylon saw an increase from 4,32% in 2022 to 7% in 2023, an increase of 2,68 percentage points. These three fiber types remain the most commonly used materials within recycled content. However, the question remains: what are the actual volumes of these mentioned fiber types? Read more below.

Weight (kg) of virgin and recycled fibers by fiber type



Type	Recycled		Virgin		Total	
	Weight (kg)	Weight %	Weight (kg)	Weight %	Weight (kg)	Weight %
Cotton	219.264	0,78%	10.724.759	38,17%	10.944.023	38,95%
Polyester	1.987.242	7,07%	8.589.585	30,57%	10.576.827	37,64%
Cellulose	98	0,00%	3.046.152	10,84%	3.046.250	10,84%
Nylon	74.487	0,27%	988.906	3,52%	1.063.393	3,78%
Other	19.129	0,07%	763.257	2,72%	782.385	2,78%
Acryl	1.666	0,01%	522.666	1,86%	524.332	1,87%
Wool	40.523	0,14%	442.681	1,58%	483.205	1,72%
Jute/hemp/linen	370	0,00%	377.793	1,34%	378.163	1,35%
Elastan	76	0,00%	286.748	1,02%	286.824	1,02%
Silk	0	0,00%	11.071	0,04%	11.071	0,04%
Total	2.342.854	8,34%	25.753.619	91,66%	28.096.473	100,00%

The above two models show fiber types ranked by total amount used by the signatories. It is very similar to the ranking in 2022, where it was also cotton and polyester that made up almost equal amounts and ranked as one and two followed by cellulose fibers. Compared to the Textile Exchange (2022) and REGULATION (EU) No 1007/2011 (see below), our list shows much higher use of cotton (38,95% vs 22%) and cellulose (10,84% vs 5,11%), and less use of polyester (37,64% vs 54%).

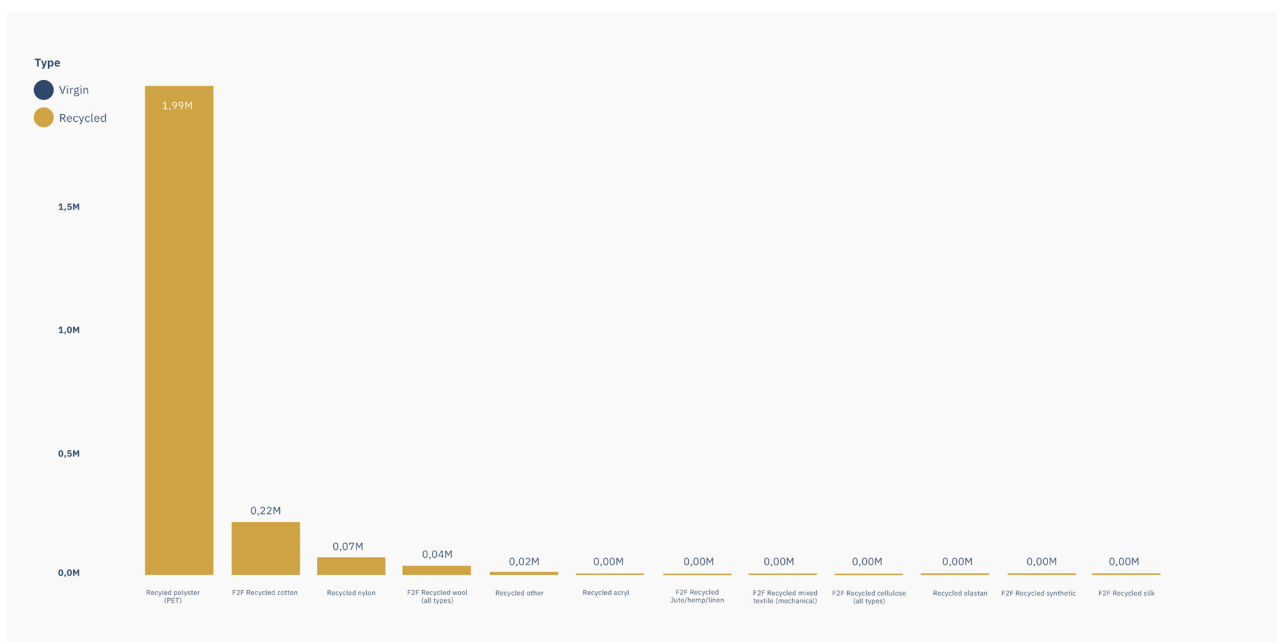
The picture reflects very well the categories the 33 signatories represent, i.e. Fashion & Accessories (18) and Children's wear (7), where these fibers are normally used the most. If the proportion of signatories from the Work- & Active wear category had been higher, we could expect a higher proportion of polyester and nylon.

Polyester: The total weight is 10.576.827 kg in 2023 and as comparison to 2022, the total amount of polyester was 10.496.132 kg. We are looking at almost the same amount of polyester and within that amount, recycled polyester has gone up by 7,32 percentage points, which must be said to be a big increase.

Wool: The total weight is 483.205 kg in 2023 and as a comparison to 2022 it was 430.053 kg. We are therefore looking at a slightly larger total amount of wool, where the recycled fibers have increased by 3,72 percentage points. Again, a positive tendency.

Nylon: The total weight is 1.063.393 kg, and as a comparison with 2022 it was 1.263.172 kg. Here we are looking at a smaller amount. Within this quantity, recycled nylon has increased by 2,68 percentage points.

Weight (kg) of recycled fibers by fiber type



Fabric Name	Weight (kg)	Weight %
Recycled polyester (PET)	1.987.242	84,82%
F2F Recycled cotton	219.264	9,36%
Recycled nylon	74.487	3,18 %
F2F Recycled wool (all types)	40.523	1,73 %
Recycled other	18.908	0,81 %
Recycled acryl	1.666	0,07 %
F2F Recycled jute/hemp/linen	370	0,02 %
F2F Recycled mixed textile (mechanical)	205	0,01 %
F2F Recycled cellulose (all types)	98	0,00 %
Recycled elasthan	76	0,00 %
F2F Recycled synthetic	16	0,00 %
F2F Recycled silk	0	0,00 %
Total	2.342.854	100,00%

The above three tables exclusively show the volume of recycled fiber ranked after volume and broken down by method of recycling.

This ranking follows the figures from 2022. This means that polyester makes up by far the largest part of the recycled fibers - in 2023 it is 84.82% and in 2022 it was 86.15%. Although the amount of recycled cotton is small, it is worth mentioning that the increase from last year is very high, namely 92%. From 114,196 kg in 2022 to 219,264 kg in 2023.

7.0 Summary

The task of data collection for the Sector Collaboration has proven challenging for all signatories involved, both in terms of the reporting process itself and the extensive collaboration required among various team members. To establish a starting point, we created a baseline for 2022, and the subsequent data collection for 2023 has shown noticeable improvements. It has become evident that signatories found it easier to report their data in 2023, likely due to the experience gained and refinements made to the reporting processes over the past year. This progress underscores the benefits of continuous engagement and iterative improvements in our data collection methods, aiding all parties in adjusting to the requirements and enhancing the overall efficiency of the process. Despite these complexities, it is commendable that the signatories have successfully submitted their data, demonstrating a high level of commitment and efficiency in their delivery.

The data collected is invaluable for the ongoing work within the Sector Collaboration, including setting and achieving specific goals and sub-goals. This important insight keeps us informed and ensures that we are on the right path with our action plan. Although we are making progress, there is still a considerable journey ahead before we fully achieve our objectives. Nevertheless, it is evident that the signatories are actively engaging with the goals within their business operations.

All of the signatories are actively working on these initiatives, but the impact of these efforts will likely become more apparent over time. The qualitative responses across different goals, whether related to recycled fibers, design guidelines, or other initiatives, indicate a flurry of activity. However, these may not yet be fully reflected in the quantitative data. This discrepancy can often be attributed to a time lag in implementation, as the process from designing to selling garments can take three to four years depending on market and category.

