

Sustainability Report

2024 GUDBRANDSDALENS ULDVAREFABRIK





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At Gudbrandsdalens Uldvarefabrik, we stand on a solid foundation for the green transition. As one of few vertically integrated textile manufacturers, all our processes take place under one roof. This gives us unique control over the value chain and ensures that our focus on durability is embedded in every step. Our fabrics for Norwegian national costumes are a prime example—designed to last, and often passed down through generations.

Still, we recognize that the journey is ongoing. We have therefore started with the areas where we can make the biggest difference: reducing propane consumption and handling textile waste more responsibly. In 2023, we invested more than €1 million in two large water-to-water heat pumps. By reusing energy from our own wastewater to heat production water and facilities, we cut our propane use by half. From the beginning of 2024, all our textile waste has been sent to Norsk Tekstilgjenvinning in Sandefjord for recycling, instead of ending up as incinerated waste.

These steps are part of a larger effort to minimize our environmental footprint. We continuously invest in technology, development, and people, and we remain committed to creating high-quality, long-lasting textiles made from wool—a renewable resource. Our textiles come from nature, and we design them to return that respect by lasting for generations.

Sustainability is not just a project for us—it is at the core of who we are. Thank you for being part of this important journey toward a greener future.

A handwritten signature in black ink, reading "Bjørn Krekke". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Bjørn Krekke
CEO, Gudbrandsdalens Uldvarefabrik

Weaving for the future



Who we are
and what
we do



Our core values

VISION

Market-leading manufacturer in sustainable production of quality fabrics.

MISSION

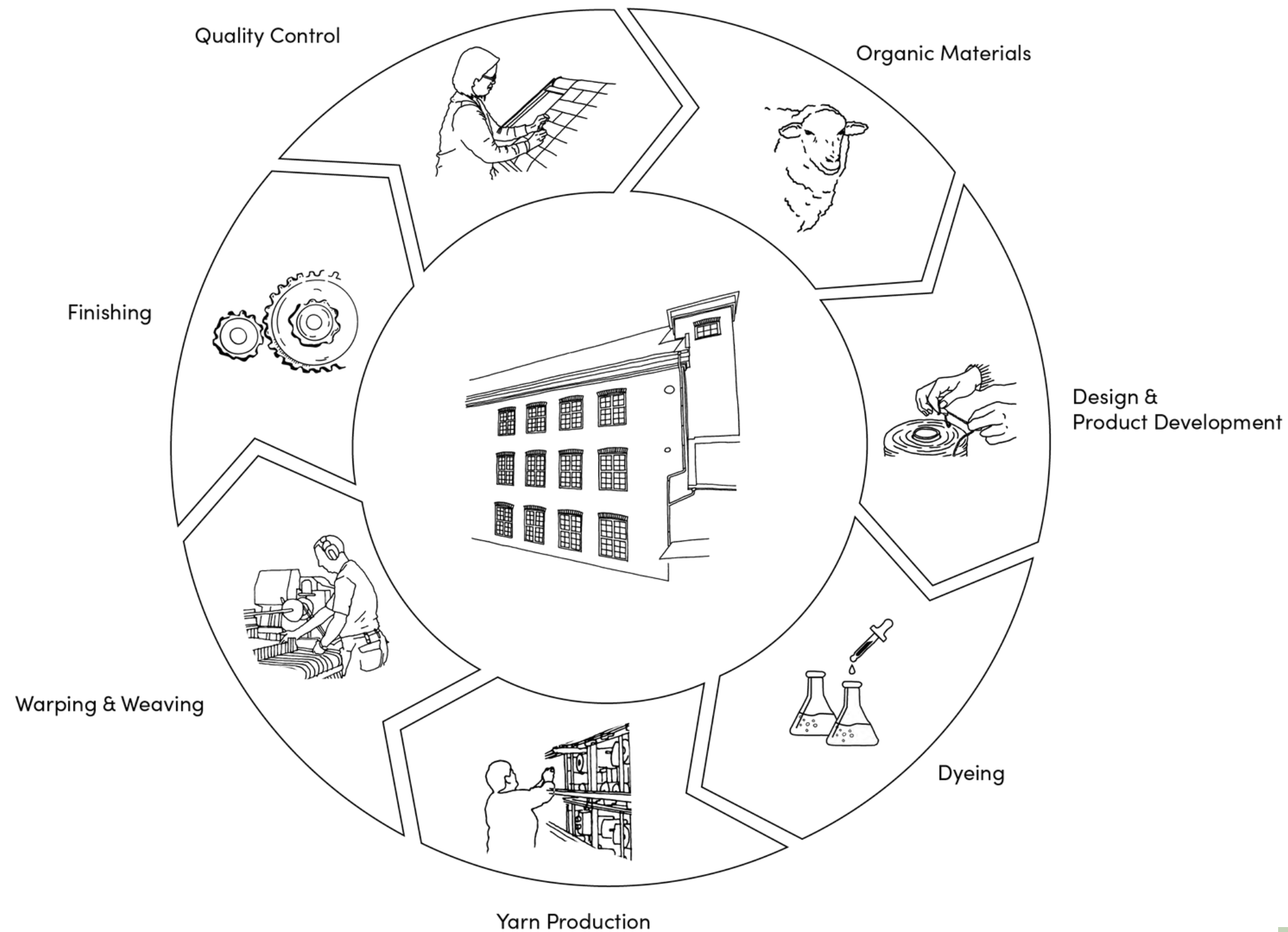
Wool for generations

CUSTOMER PROMISE

"Our weave is our word".

VALUES

- Quality
- Knowledge & Expertise
- Responsibility



Responsible Production since 1887

At Gudbrandsdalens Uldvarefabrik we have been practicing responsible production since 1887. We are a textile mill situated in Lillehammer that produces wool fabrics for upholstery and Norwegian national costumes.

In contrast to many other textile manufacturers, Gudbrandsdalens Uldvarefabrik has the entire production process, from freshly shorn and scoured wool to finished fabrics, gathered under one roof in Lillehammer. We know how the slightest of adjustments can improve quality throughout our production line.

For us, the future of wool-based textiles, inspired by our raw material's sustainable qualities, lies in our focus on research and development. The team consists of wool experts from all stages of the production. This gives us great control over the process, and opportunities for customer adaptations. We always design with sustainability, superior quality and longevity as main pillars; Wool for generations.

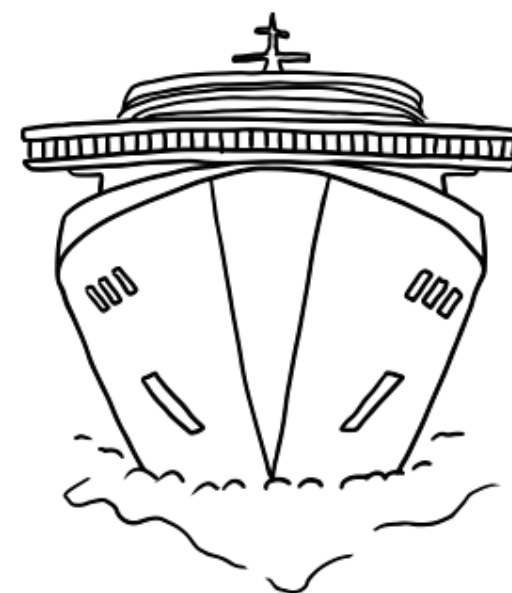
Our market segments



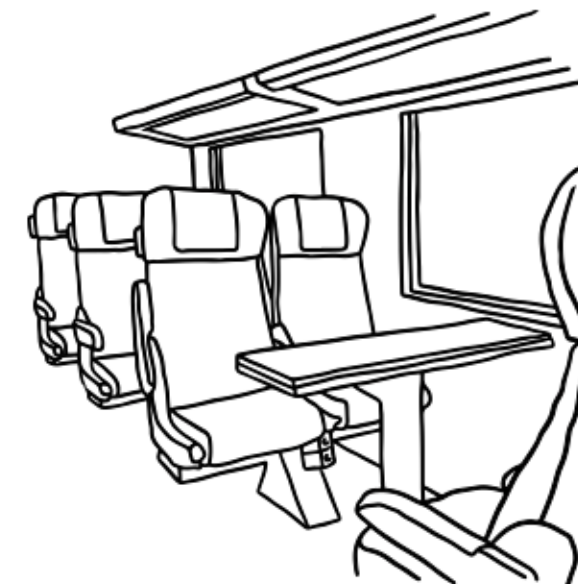
Bunad (National Costumes)



Home & Contract Furniture



Cruise Ships & Ferries



Trains & Busses

WE PRODUCE TEXTILE FOR:

Bunad (National Costumes)

Bunad, Norway's traditional folk costume, embodies centuries of cultural heritage. Often inherited from generation to generation, these garments carry stories of family and tradition, extending their lifespan and reducing the need for new resources. Made primarily from wool, a natural and renewable material, a bunad represents a deep connection to sustainability. The use of locally-sourced materials and traditional craftsmanship further minimizes environmental impact. By preserving age-old techniques and supporting local artisans, bunad not only honors Norway's rich past but also promotes sustainability, ensuring that cultural heritage and environmental responsibility go hand in hand.

Upholstery

Furniture, Cruise ships & Ferries, Trains & Busses

Our wool-based upholstery fabrics combine exceptional quality, durability, and sustainability. Wool is a naturally resilient material, making it ideal for furniture.

As a renewable and biodegradable fiber, wool breaks down naturally over time, leaving no harmful impact on the environment, making it a perfect fit for eco-conscious design. At Gudbrandsdalens Uldvarefabrik we are committed to sustainable production practices. The textiles not only reflect our commitment to sustainability but also stand out for their rich texture and natural aesthetic appeal, making them an attractive choice for interiors that prioritize both beauty and environmental responsibility.



How we operate



Key stakeholders



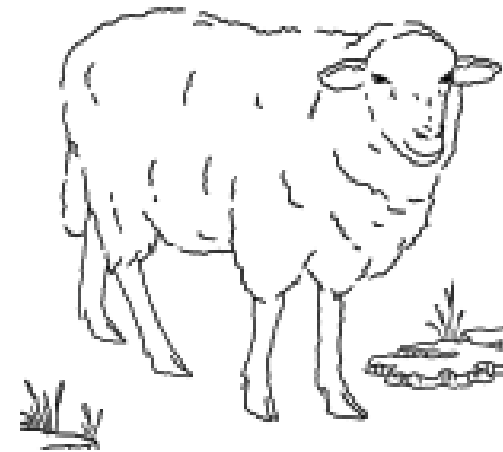
EXTERNAL

- Customers
- Suppliers
- Government
- Trade associations
(Industry associations)

INTERNAL

- Owners
- Board
- Managers
- Labour Union

Key suppliers



- Norilia (Wool NO)
- Bloch & Behrens (Wool NZ)
- Daiwabo (Viscose JP)
- Wagenfelder / Vlnap (Yarn)
- Filatura C4 (Yarn)
- Bodo Möller / (Archroma)
- Skandinavisk Textil Kemi Aps / (DyStar)
(Dye stuff & chemicals)



How we govern sustainability

At Gudbrandsdalens Uldvarefabrik, we are committed to integrating sustainability into every part of our operations. To support this, we have established a dedicated working group of key leaders who meet regularly to monitor progress and set new goals.

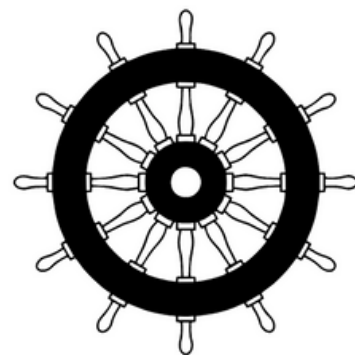
SUSTAINABILITY COMMITTEE

- CEO
- Quality Manager
- Senior Designer & Product Dev.
- Sales- and Marketing Manager

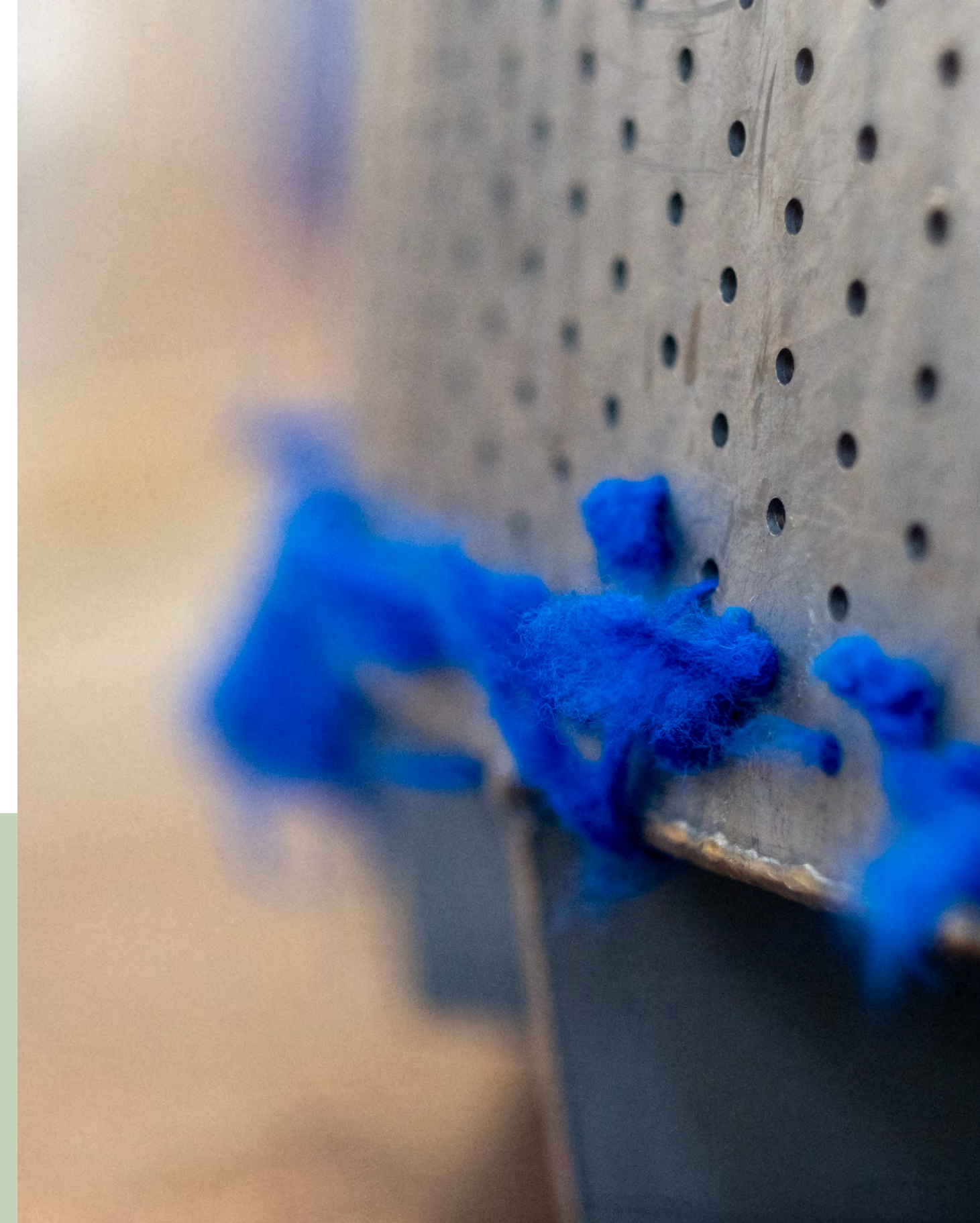
Together, we work to keep sustainability at the core of our strategy—from product development to marketing—fostering continuous improvement and ensuring every decision supports a more sustainable future.

Certifications

- ISO 9001 – Quality Management
- ISO 14001 – Environmental Management
- EU Ecolabel
- DNV MED certificates



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Our Sustainable Development Goals & Global Impact

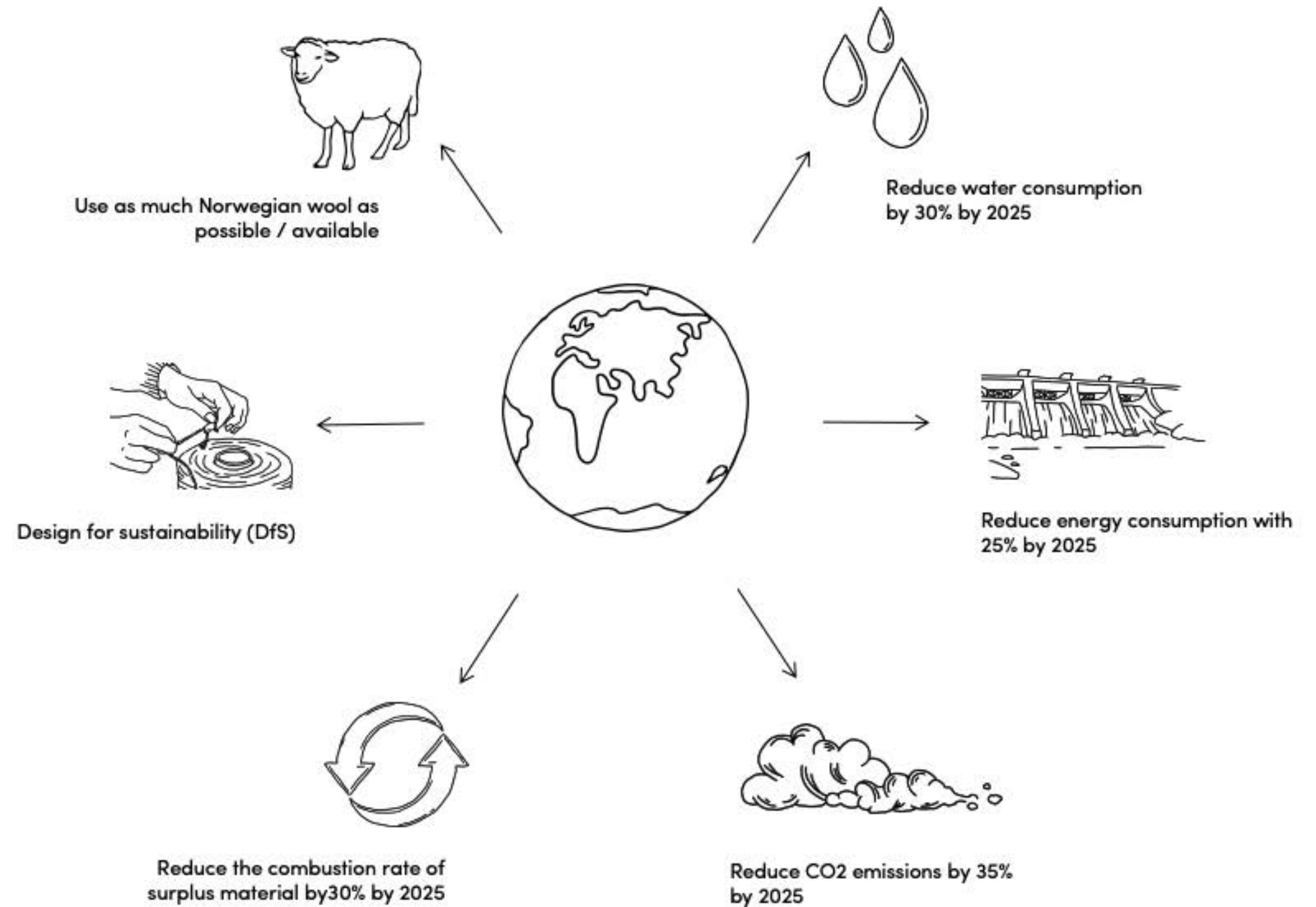


Sustainability Development Goals

We are dedicated to continuous improvement, guided by both the UN Sustainable Development Goals (SDGs) and our own roadmap.

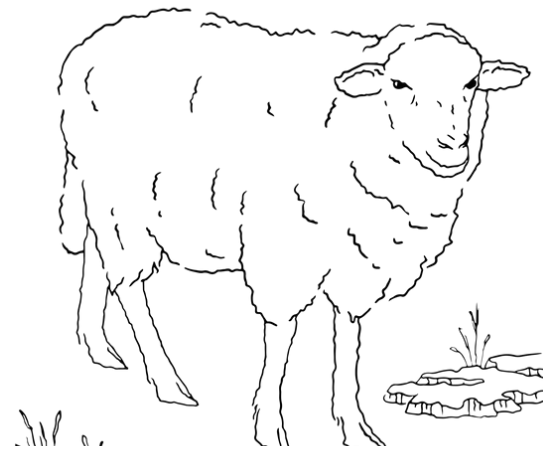
Wool's natural properties make it an inherently sustainable fiber. By maintaining full control of our value chain, we are able to minimize chemical use and promote responsible processes

We continuously invest in technology, innovation, and people to reduce our environmental footprint. Our mission is to create high-quality, long-lasting wool textiles—born from nature and designed to endure for generations.



Our Prioritized UN SDGs



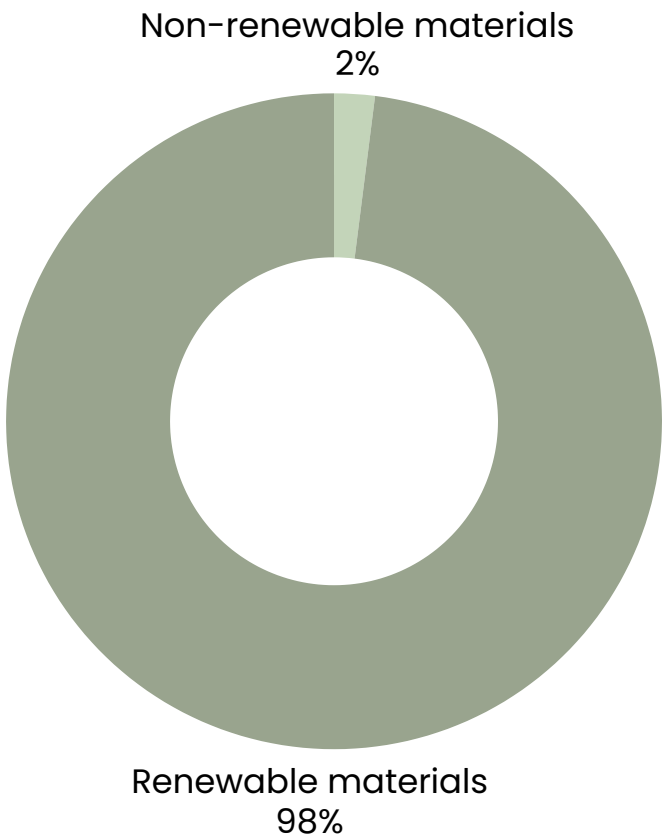


Improvement Target: Use as much Norwegian wool as possible/available

Non-renewable materials: 4,3 tons
Renewable materials: 253 tons
Total: 257,3 tons

Materials and Resources

Our fabrics are made from wool, viscose, linen, and a small amount of cotton, complemented by dyestuffs and chemicals for dyeing. All new upholstery fabrics are developed to meet the strict requirements of the EU Ecolabel. We use close to 100% organic raw materials, with high-quality wool from Norway and New Zealand. Wool is naturally biodegradable, free from microplastics, and grazing sheep contribute to CO₂ capture—making it a safer choice for the planet. Our ambition is to use as much Norwegian wool as possible, but limited supply makes us partly dependent on imports from New Zealand. This wool is always shipped by sea in full containers, ensuring a very low carbon footprint per kilogram CO₂ eq.



Steps to achieve the Improvement Target

Balanced sourcing with focus on Norwegian wool : We strive to maximize the use of Norwegian wool, depending on actual availability. To maintain the high quality required for our textiles, we combine carefully selected fibres from Norway and New Zealand. Limited access to Norwegian wool in the necessary qualities and volumes currently makes imports from New Zealand essential.

Testing recycled fibre integration: We are running a test program to integrate recycled fibres from our own production surplus materials into our yarn production, further reducing environmental impact.

Sustainable raw materials: With raw materials already close to 100% organic—mainly sheep’s wool and wood-based viscose—we ensure durable, high-quality textiles with a reduced environmental footprint.

Method used to retrieve data:
Data for material input is extracted from our ERP-system.

Data uncertainty:
Data for material input is converted from meters to kg based on average weight per meter.

Norwegian Wool – Locally Sourced (Nordic Swan Ecolabel)



In addition to imported wool, Gudbrandsdalens Uldvarefabrik also uses Norwegian wool supplied through Norilia and classified according to the Norwegian Wool Standard (NUS). This national system ensures consistent quality and full traceability throughout the value chain. Norwegian wool is sorted into 16 quality grades based on objective criteria such as fiber diameter, length, crimp, strength, color, and cleanliness. The classification ensures that each type of wool is used in the most suitable way, supporting efficient resource utilization and fair valuation of the raw material.

Norwegian wool is a valuable local resource, known for its strength, elasticity, and natural resilience, contributing to short-traveled and circular value chains. All Norwegian wool used in our production is washed in Bradford, England, at a facility owned by Nortura through its subsidiary Norilia Wool Ltd, and certified with the Nordic Swan Ecolabel. This guarantees that the scouring process meets strict environmental standards for chemical use, energy efficiency, and wastewater management.

The result is a responsible and transparent production process that combines traditional craftsmanship with modern, eco-certified technology. By combining Norwegian and New Zealand wool, we can select the fibers that best balance quality, durability, and environmental responsibility, while supporting both local raw material production and international standards for sustainable wool.



Wool Integrity – Trusted Wool from New Zealand



At Gudbrandsdalens Uldvarefabrik, we are committed to sourcing wool that meets the highest standards of quality, ethics, and environmental responsibility. All our New Zealand wool is certified through the Wool Integrity NZ™ program, an extensive assurance system that ensures full traceability from farm to finished yarn. The program is environmentally certified, setting strict requirements for sustainability throughout the entire value chain.

Wool Integrity NZ™ guarantees that the wool we use is:

- Ethically produced – New Zealand farmers follow rigorous animal welfare standards. Mulesing is prohibited, and sheep are treated with care and respect throughout their lives.
- Environmentally responsible – Farms are required to protect soil, waterways, and biodiversity, ensuring long-term ecological balance.
- Fully traceable – Each batch of wool can be traced back to its region of origin, ensuring transparency and accountability across the supply chain.
- Natural and high-performing – The result is a premium raw material known for its strength, softness, and resilience – ideal for durable and beautiful textiles.

Through our partnership with Wool Integrity NZ™, we support responsible farming communities and ensure that our products embody the values of sustainability, transparency, and quality.





Viscose – Softness with Responsibility



In some of our textile blends, we incorporate viscose, a renewable cellulose-based fiber that adds softness, drape, and sheen. Acknowledging that viscose production can be resource-intensive, we require our suppliers to document responsible sourcing and environmentally sound production practices, and we prioritize partners certified by FSC or the EU Ecolabel.

By combining natural fibers such as wool and viscose, Gudbrandsdalens Uldvarefabrik continuously strives to balance function, aesthetics, and sustainability, ensuring that all materials we use are traceable, high-quality, and produced with respect for people, animals, and the environment.



Improvement Target: Reduce water-consumption by 30% by 2025

Total water consumption: 18,342 m³

Method used to retrieve data:

Read from water meter

Data uncertainty:

Current data reflects reduced water consumption, but does not account for variations in production volumes.

Water

In our production, we use clean freshwater from the Mesna river flowing directly alongside the mill. As this water ultimately ends up in Lake Mjøsa — Norway's largest lake and a vital source of drinking water — we follow strict regulations from the Norwegian Environmental Agency to ensure responsible use and treatment. All process water is carefully managed and treated before discharge to safeguard the local environment and protect water quality. We continuously work to improve water efficiency throughout the production line, including enhanced process control, optimized batch volumes, and more efficient operation in dyeing and finishing. These efforts are supported by ongoing assessments of new technologies and opportunities to reduce, reuse, and recycle water wherever feasible.

Steps to achieve the Improvement Target

Technological upgrades: In 2019, we invested in a new ultrasonic washing machine, reducing overall water consumption by 10%.

Efficiency improvements in production: In 2023, we introduced water-saving shower technology in the fiber-stuffing process, achieving a 33% reduction in water usage in this area.

Exploring water reuse solutions

We are currently evaluating additional ways to reuse and recycle water within the production line to secure long-term water savings.



Steps to achieve the Improvement Target

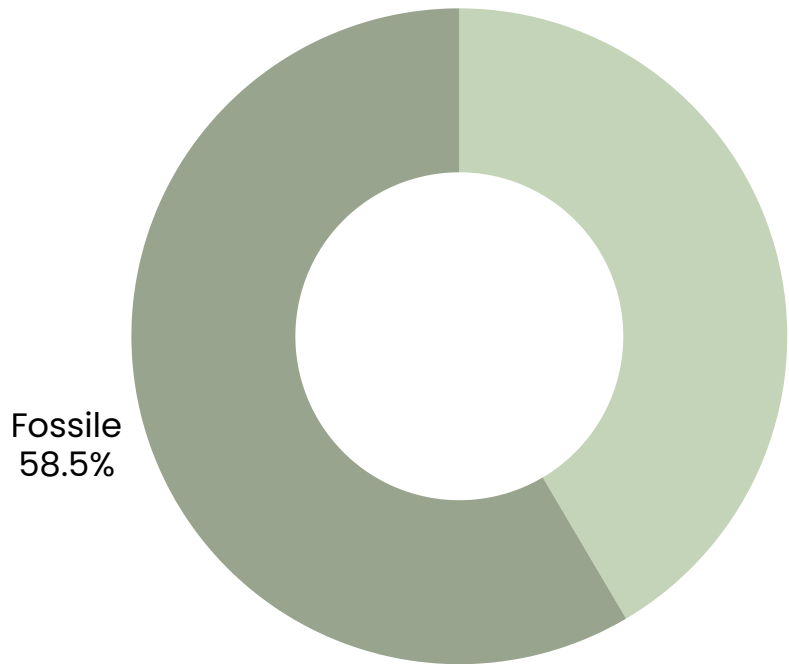
Implementation of key measures: The first phase of the improvement program was launched in early 2024, representing an investment of 1 million EUR in new water-to-water heat pumps.

Continuous operational focus: We maintain strict control over when energy-intensive systems such as ventilation and heating fans are active, ensuring efficient use of resources and minimizing waste.

Transition to renewable energy: We continue to increase the share of renewable energy in our total energy mix to ensure long-term, sustainable energy use.

Improvement Target: Reduce energy consumption by 25% by 2025.

Fossile free: 2,2 mill kWh
Fossile: 3,1 mill kWh
Total: 5,3 mill kWh



Fossile free
41.5%

Fossile
58.5%

Method used to retrieve data:
GU changed supplier of electrical energy in 2024. All electricity was fossil-free, but 62% was nuclear energy. Non-renewable energy is purchased LPG and nuclear electrical energy.

Data uncertainty:
Because we have used actual numbers in our calculation the data uncertainty should be minimal. We receive certificate of origin from our electrical energy supplier.



Energy

Energy is one of the largest contributors to our environmental footprint, and reducing consumption is a cornerstone of our sustainability strategy. In 2022, we conducted a comprehensive energy survey that identified several opportunities for improvement. By combining larger initiatives—such as installing new heat pumps—with smaller actions like optimizing ventilation, heating, and lighting, we aim to cut costs, lower emissions, and operate more sustainably. Our goal is to reduce total energy consumption by 25% by 2025, with the 2024 heat pump installation expected to deliver the full reduction potential.



CO₂ Emissions

At Gudbrandsdalens Uldvarefabrik, we are committed to reducing our greenhouse gas emissions and using energy more efficiently. When burning Liquified Petroleum Gas (LPG), carbon dioxide (CO₂) is released. Other CO₂ emissions mainly stem from the transportation of goods to and from our factory area. Our goal is to reduce total CO₂ emissions by 35% during 2025.



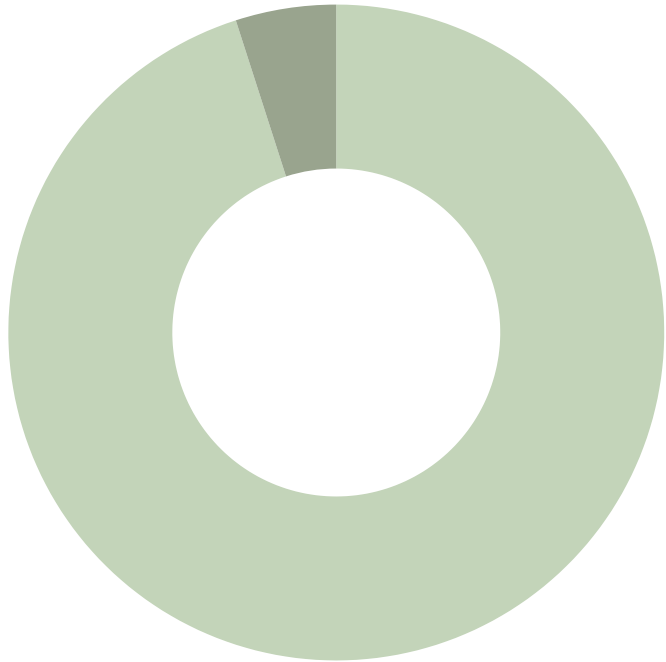
Improvement Target: Reduce total CO₂ emissions by 35% by 2025.

Direct GHG emission: 719.232 kg CO₂e
Indirect GHG emission: 37.500 kg CO₂e

Total: 756.732 kg CO₂e

Indirect GHG emissions (Scope 2)

5%



Direct GHG emissions (Scope 1)

95%

Steps to achieve the Improvement Target

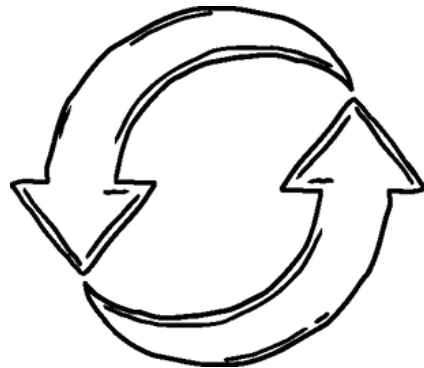
Investment in new energy solutions: Our steam production was previously based solely on LPG. After an energy survey in 2022, we initiated improvement measures in 2023 and invested 13 million NOK (2023–2024) in a state-of-the-art water-to-water heat pump system that will reduce our LPG consumption.

Reusing energy from wastewater: The new system recovers energy from our wastewater to preheat process water, significantly reducing the need for LPG. This measure alone is expected to cut LPG consumption by 50%, resulting in an overall 35% reduction in CO₂ emissions by 2025.

Fossil-free electricity supply: In 2024, we entered a new purchasing agreement with ENEAS, ensuring that all our electricity is fossil-free, verified through guarantees of origin.

Method used to retrieve data:
Non-renewable energy is purchased LPG, calculated based on the purchased quantity. For electric power, the CO₂e figure is calculated on the basis of 17g CO₂e/kWh.

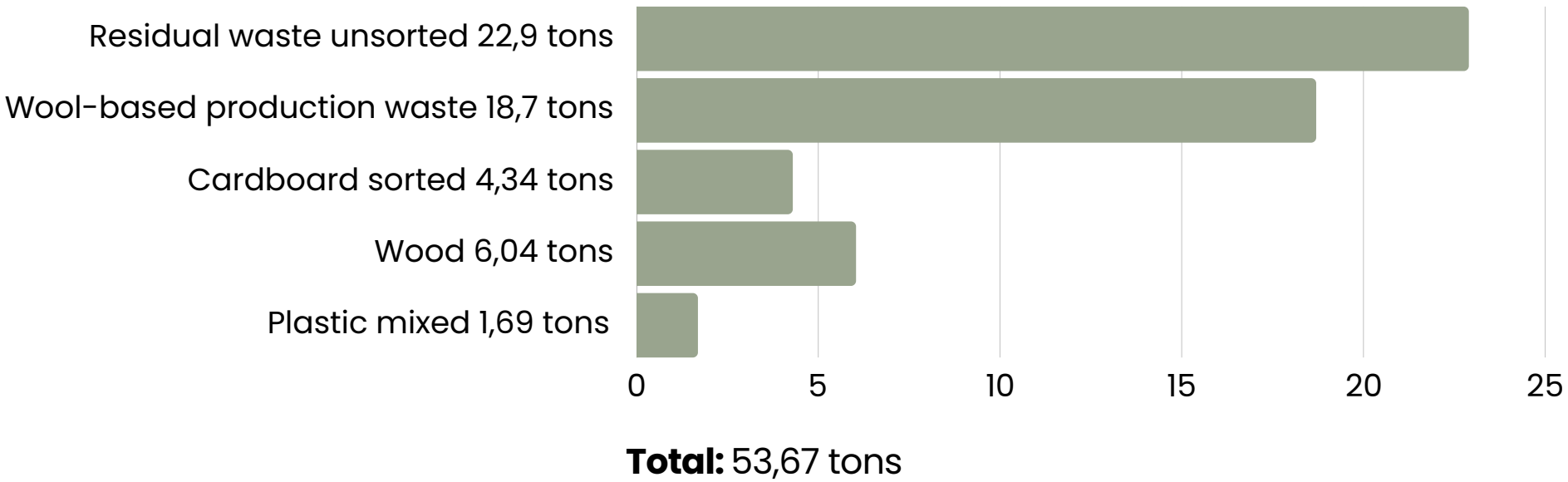
Data uncertainty:
Outlets are based on calculation from energy consumption.



Improvement Target: Reduce the combustion rate by 30% by 2025.

Method used to retrieve data:
We have analysed our waste generation by using waste-data provided by our waste-management company.
Categories are based on official waste codes.

Data uncertainty:
The data can be regarded as high quality and accurate data. Volumes are actual weights, reported by the waste collecting company



Steps to achieve the Improvement Target

Recycling production waste: Recycle wool-based production waste into new raw materials.

Product development with recycled content: Develop and launch new products that include fibres from recycled production waste.

Business development around surplus materials: Explore new business opportunities and collaborations based on surplus materials.



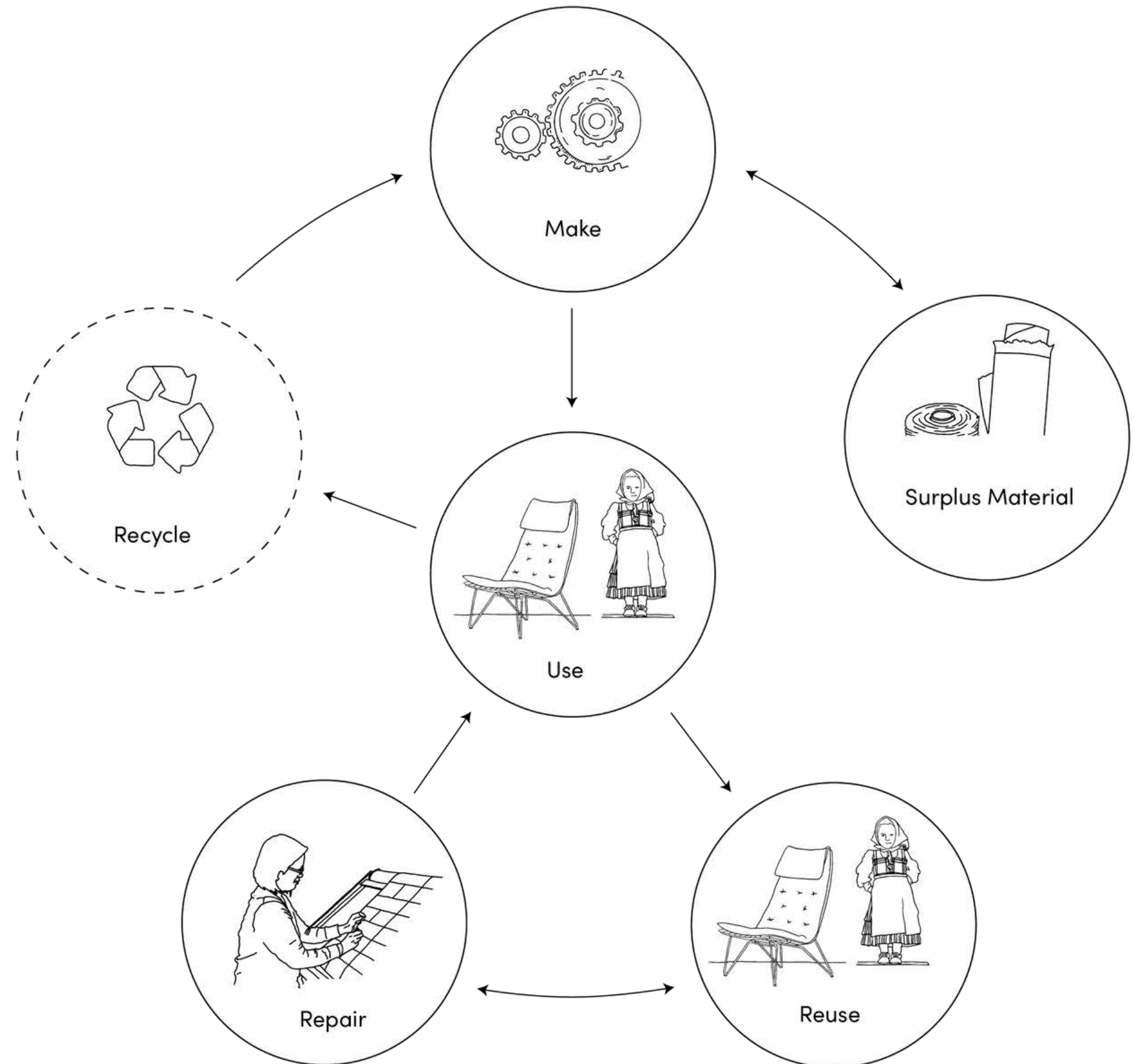
Waste

Our waste consists of materials for recycling, incineration, and special industrial disposal. From our wool-based production, we generate textile residues, cardboard, wood, plastic, and mixed waste. Our goal is to reduce the incineration rate by 30% by 2025. Most surplus materials come from production leftovers such as selvages, yarn scraps, and loose fibres. In 2024, we partnered with Norsk Tekstilgjenvinning to recycle textile waste into new raw materials, with 18.7 tonnes recycled that year. We aim to develop new products with recycled content from our own production surplus, combining waste-to-resource recycling, product innovation, and circular business development.

Our Circular Business Model

At GU we are continuously working towards reshaping our future through circular economy. A circular economy reduces material use, redesigns materials and products to be less resource intensive, and recaptures “waste” as a resource.

We already use natural fibers – wool – that are bio-degradable and renewable. Our products are of the highest quality in the industry, and are known to have a long life, often lasting through generations. Therefore, we are currently working to find the optimal balance between recycled and new wool fibers. Our goal is to maintain the high quality and durability of our products without compromise.

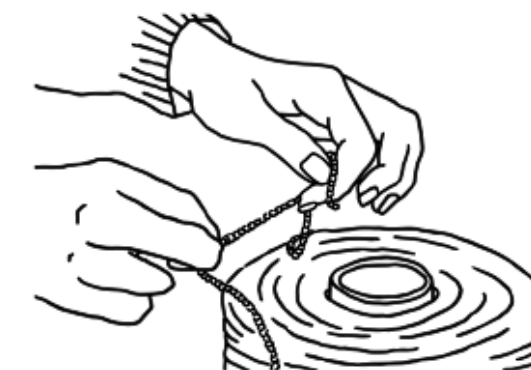




Design & Product Development

Improvement Target: Sustainable design & product development

At Gudbrandsdalens Uldvarefabrik, sustainability begins with design. We know that a product's environmental impact is largely determined during the design phase, and we take this responsibility seriously. Our goal is to create long-lasting, high-quality textiles with a low environmental footprint. All our products are designed to serve for generations — from national costumes to upholstery fabrics — by focusing on lasting design and durability rather than short-term trends. Each fabric is carefully developed in colour and structure to add long-term value for our clients. All new fabrics are EU Ecolabel certified, and our management systems are certified to ISO 9001 and ISO 14001. Through continuous research and innovation, we aim to design responsibly—simplifying processes and integrating recycled fibres where possible without compromising quality or lifespan.



Steps to Achieve the Improvement Target

Design for sustainability: Incorporate sustainability principles from the earliest design stage, ensuring that products have a long lifespan, are easy to maintain, and can be recycled at end of life.

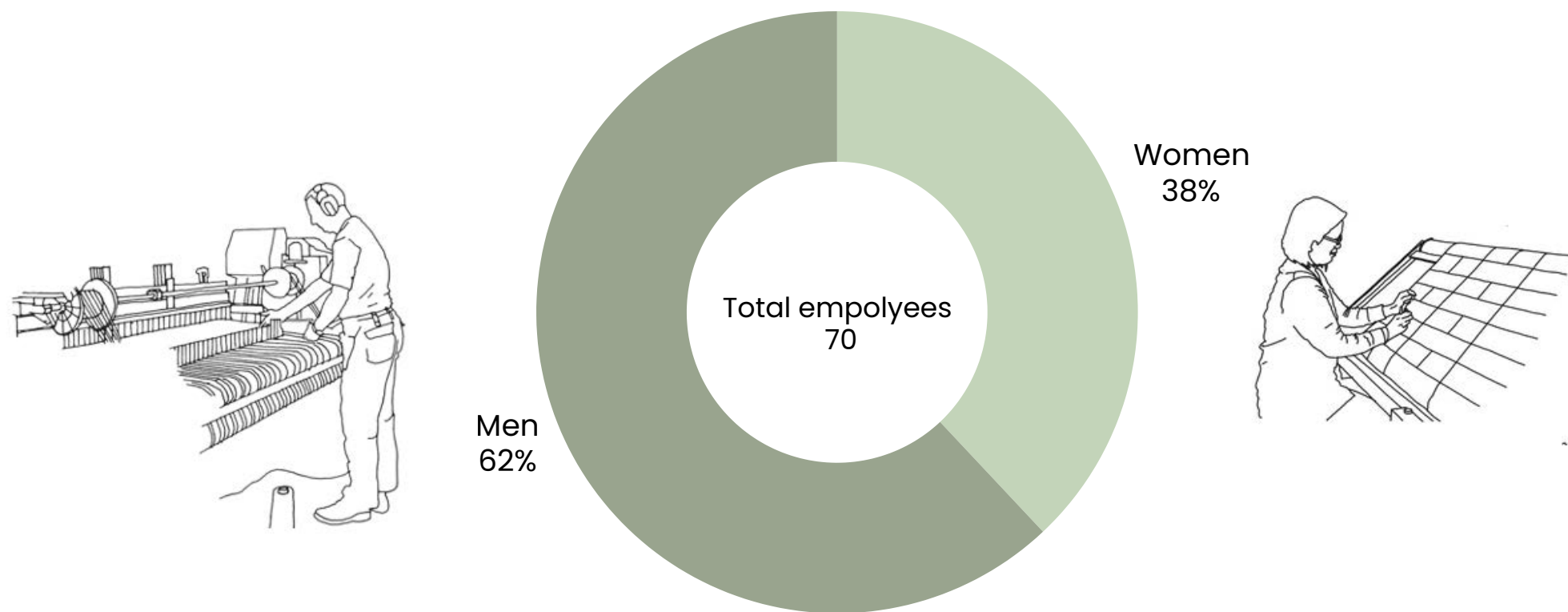
Process efficiency: Continuously work to reduce the number of processes in production to lower energy use and resource consumption for each new product.

Recycled and circular design: Test and integrate recycled fibres where they do not shorten product lifetime, maintaining GU's high durability standards.

Certified and research-driven approach
Ensure all new fabrics meet EU Ecolabel criteria and continue LCA research to strengthen our scientific understanding of product impact.

Social Responsibility





Equality & Diversity

At Gudbrandsdalens Uldvarefabrik, diversity and equality are central to our culture and strength. We are proud recipients of the Diversity Award in 2023, recognizing our efforts to create a workplace built on inclusion, equal opportunity, and respect.

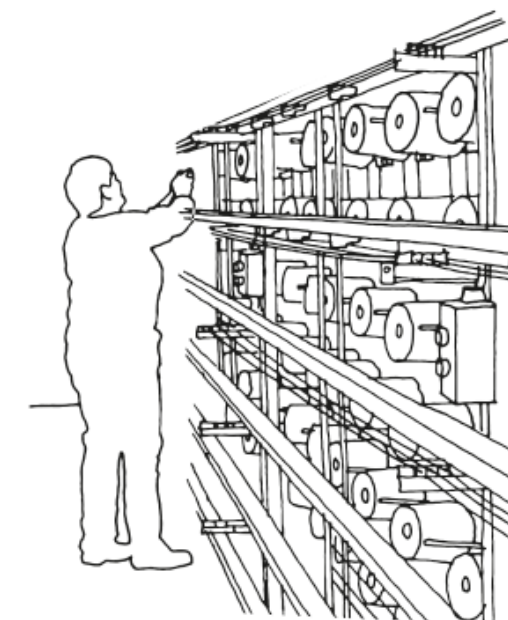
With a balanced workforce of 25 women and 43 men, and equal pay across all job categories, equality is an integral part of how we operate – not a separate initiative. In 2024, 22 employees from 15 national backgrounds contributed to our inclusive environment. We comply with Norwegian labour laws, maintain a senior policy, and actively invest in training – including eight employees currently pursuing trade certificates. We strive to foster an environment where everyone, regardless of background, age, or life situation, feels a sense of belonging and opportunity for growth. Diversity and equality give us new perspectives, strengthen innovation, and make us better equipped to meet the challenges of the future.





Photo: Karin Doseth / GD

Competence and training



At Gudbrandsdalens Uldvarefabrik, competence development is an investment in the future. After 25 years, we have reintroduced vocational training in the industrial textile trade, ensuring that valuable craftsmanship is passed on to the next generation.

In 2024, 20 of 67 employees applied, and eight were selected for a three-year training programme as apprentices and practice candidates in yarn production, dyeing and finishing, and weaving. The programme is led by senior textile advisor Frode Svarstad and quality manager Vidar Lilleespe, combining theory with practical, hands-on learning.

We collaborate with Karriere Innlandet and the county apprenticeship office, receiving partial funding for apprentices while investing internally in training and materials. We have eight employees currently pursuing trade certificates, strengthening internal expertise and ensuring long-term knowledge transfer as experienced workers retire. By building competence, we secure the future of Norwegian textile expertise — preserving craftsmanship, improving quality, and ensuring sustainable production for generations to come.

Working Environment and Health

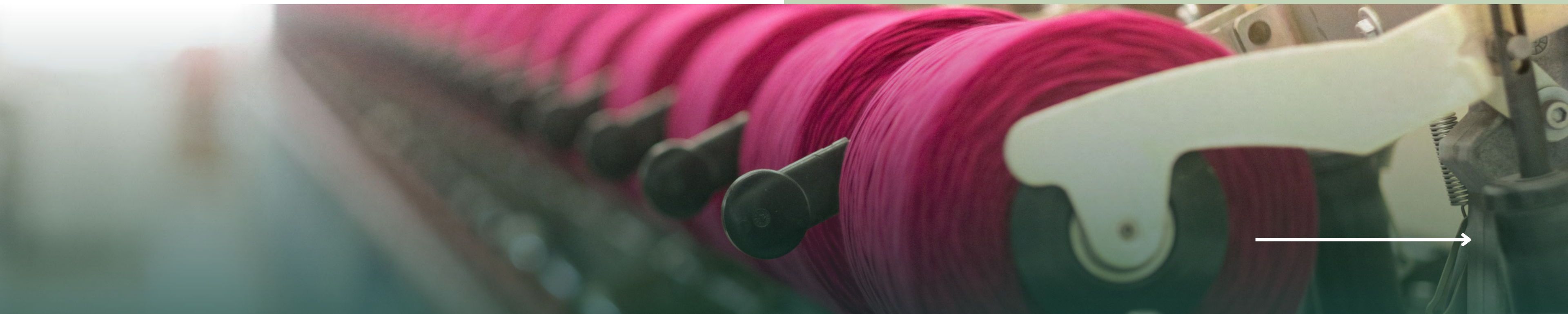
GU maintains a safe and healthy working environment in accordance with Norwegian regulations. Sickness absence in 2024 was 8.5%, above the target of 5%. While no distinction has been made between work-related and non-work-related absence, preventive measures and follow-up routines are in place to support employee well-being.

All employees are covered by a comprehensive health insurance plan, providing access to medical consultations, specialist treatment, and preventive health services. This benefit supports early intervention, reduces absence, and contributes to a stronger sense of security and well-being among employees. The company follows national guidelines for welfare and parental leave, ensuring equal conditions for all staff. GU continues to promote a positive working environment that prioritizes safety, inclusion, and work-life balance.

Human Rights and Supply Chain

GU complies with the Norwegian Transparency Act, which requires due diligence assessments of suppliers and partners. Most suppliers have signed our Code of Conduct (CoC), committing to ethical business practices and respect for human and labour rights.

As our supply chain is primarily based in the EU/EEA region, the overall social risk is considered low. Continuous dialogue and supplier evaluations help ensure that our partners uphold the same ethical standards as we do.





Preparing for
tomorrow:
What's next?



Environmental Product Declarations (EPDs)

In 2025, Gudbrandsdalens Uldvarefabrik joined a development project with LCA.no to create an EPD generator for textiles. This innovative tool will enable us, starting in 2026, to generate Environmental Product Declarations (EPDs) for our upholstery fabrics.

By quantifying the environmental impact of our products throughout their entire life cycle, we gain valuable insights into how our wool-based textiles perform compared to other materials used in furniture. These data-driven insights strengthen transparency and help our customers make informed, sustainable choices.

Equally important, the EPD tool allows us to identify opportunities to further reduce our environmental footprint — whether through design and material choices in R&D, improvements in production processes, or optimizations in logistics and supply chains. Our goal is to ensure that the timeless quality of our wool textiles is matched by measurable, documented sustainability.

Natural vs. Synthetic – The LCA Dilemma

Life Cycle Assessments (LCAs) and Environmental Product Declarations (EPDs) are essential tools for evaluating environmental performance. Yet, they also highlight a persistent dilemma: synthetic fibers such as polyester often achieve better scores than wool – primarily because LCAs measure emissions solely per kilogram of material. Wool is penalized for methane emissions from sheep, while many of the benefits unique to natural fibers remain undervalued.

Current LCA models rarely account for wool's renewable origin, biodegradability, or durability, nor do they reflect the absence of microplastic pollution. In contrast, polyester's fossil-based origin and contribution to microplastic emissions are often overlooked.

However, this is beginning to change. International initiatives are now improving the way biogenic carbon, land use, and natural material cycles are assessed. Over time, these developments are expected to provide a more balanced and holistic picture – one that recognizes both the challenges and the regenerative qualities of wool.



Thank You For Listening



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