



# Sustainability Report 2023





Colby College, Maine  
Architect: Kaplan Thompson Architects.  
Photo: Christian Phillips.



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# Foreword by the CEO

In 2023, Lunawood continued to invest and develop in sustainability approach, despite challenging market conditions. We are ready to take our sustainability approach to the next level.

In many ways, the year 2023 was a challenging one. It was marked by geopolitical uncertainty and challenging market conditions. Increasing interest rates, inflation and product price pressure hampered demand and volumes, and therefore had a negative impact on revenue. We had to adjust production volumes downwards with temporary part-time layoffs.

However, there were also positive developments in 2023, and we took important steps in sustainability and further improving the customer experience. We introduced our new customer promise to highlight our ambition to put the customer at the centre of what we do. Our promise combines the key elements of the customer experience we aim to create: sustainability, reliability and experience. In 2023 customer survey, we received an impressive net promoter score (NPS) of 71. With over 20 years of experience, we are dedicated to serving our customers.

In the area of occupational safety, our efforts continued. Safety is a priority for us, and we are glad to see positive development in the results in terms of both lost time accidents (LTA) and preventive safety measures.

We updated our low carbon roadmap, which guides us towards our climate objectives and identifies the main actions required along the way. As Lunawood takes action to further improve energy efficiency and gradually transition to renewable energy sources, this will also result in an even lower carbon footprint of our products.

Looking forward, in addition to climate action we have made circularity a company level focus area. In the end, it comes down to truly understanding and appreciating the value of wood and taking action to use it carefully and efficiently in all stages. We look forward to the future with confidence. Lunawood's product range offer unrivalled means to achieve a more sustainable construction industry.

I would like to thank all our employees, customers, partners and suppliers for their fruitful collaboration with Lunawood in 2023. Sustainability calls for working together across the value chain. I look forward to our continued valuable collaboration in 2024 and further ahead.

**Arto Halonen**  
CEO  
Oy Lunawood Ltd



# Lunawood in brief

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## 2001

Founded

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## 136

Headcount

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## 49,8 M€

Revenue 2023

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## 92%

Share of export

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## 40

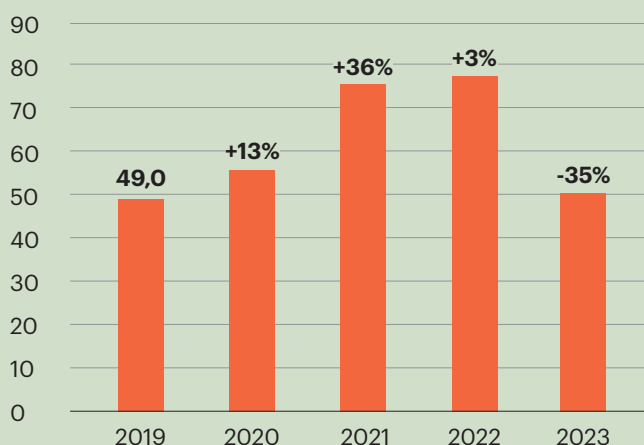
Exporting to over 40 countries

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## 160 000 m<sup>3</sup>

Production capacity

### Revenue development M€



### Our production sites and headquarters





# Highlights 2023

In 2023, we took several important steps in our sustainability work. Here are some of the highlights.



Hotel Umani, Bulgaria  
Architect: STARH. Photo: Dian Stanchev DSP Studio



## **Lost time accidents (LTA) -22%**

Lunawood has focused on safety measures for several years, with positive results. During 2023, we exceeded our preventive safety work targets. Focus on occupational safety resulted in a reduction of 22 per cent in the lost time accident rate (LTA).

## **A new low-carbon roadmap to accelerate climate action**

Lunawood's low-carbon roadmap defines our main actions for reducing our impact on the environment, and their estimated timeline. It guides our work towards our target of an emissions reduction of 42 per cent by 2030, and climate neutrality by 2035.

## **Honorable mention in the Sustainable Product category at Architecture MasterPrize**

Lunawood's Luna Panel System product family won an Honorable Mention at the Architecture Master-Prize 2023, in the Sustainable Product category. The Architecture MasterPrize represents one of the world's largest architecture and design award programmes.

## **A new whistleblowing channel**

Lunawood introduced a new whistleblowing channel in 2023. It is available to both employees and external parties. The whistleblowing channel provides a confidential means of reporting suspicions of possible misconduct or policy violations for internal investigation.

## **Over 99% of waste utilised**

In 2023, our process residuals utilisation rate was over 99%.

## **Lunawood's key customer partners and wood suppliers committed to the Third Party Code of Conduct**

Lunawood is dedicated to working with partners that share our principles of responsible business. All our key customer partners and wood suppliers are committed to the principles of the Lunawood Third Party Code of Conduct.



# Our mission and values

Lunawood's mission is to re-connect nature with urban people. We endorse sustainable architecture and construction.

We love the forest and want to bring the soothing effect of nature available for all. Every Lunawood product is an authentic piece of the Nordic forest, and the result of years of dedication to sustainability. We strive to be the most reliable business partner in sustainable wood solutions for decorative surfaces.

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## Our values

Lunawood's values are at the core of what we do. Our values guide our way of working with each other and with our stakeholders.



### Results together

We act together as a team and trust each other. We take care of good working spirit and safety at work.



### Brave innovator

We boldly develop our operations and dare to innovate. We encourage each other, our partners and stakeholders to succeed.



### Forerunner in sustainability

Sustainability and high-quality guide our work and decision-making. We require sustainability from all our stakeholders throughout the value chain.



# Creating shared value

## Our key resources



### People

- An experienced and engaged team of professionals



### Production

- Two production sites in Finland



### Natural resources

- High-quality wood
- Energy and water



### Partnerships

- Close relationships with a global network of partners
- Supplier collaboration



### Brand and innovation

- Lunawood brand and product development



### The financials

- Debt capacity and a good balance sheet
- A good track record in profitability
- Solid cash flow

## Our business

As a pioneer in chemical-free ThermoWood®, we offer sustainable and long-lasting wood products for architecture, building and design.

## Our mission

Lunawood's mission is to re-connect nature with urban people. We endorse sustainable architecture and construction.

## Our values

Results together

Brave innovator

Forerunner in sustainability

## Creating value for our stakeholders

### Customers

- We put customer first and offer solutions for our customers success

### Society

- We design long-lasting carbon storing wood products for sustainable construction

### Employees

- We create a safe workplace and encouraging team spirit
- We offer opportunities for development

### Shareholders

- We build enterprise value and equity value

### Suppliers

- We emphasize close, long-term partnerships

# Sustainability at Lunawood

Sustainability is integrated in Lunawood's strategy.





Lunawood is a signatory to the UN Global Compact and has committed to complying with its ten principles for meeting fundamental responsibilities in the areas of human rights, labour, the environment and anti-corruption.

Lunawood’s sustainability program is guided by the UN’s Sustainable Development Goals (SDGs). We report on our progress in Lunawood’s annual sustainability report.



## Sustainability governance

In 2023, Lunawood updated its sustainability governance model to enable an ambitious and systematic approach to sustainability.

**Board of Directors:** Sustainability is included in the agenda of Lunawood’s Board of Directors. The Board is responsible for setting the overall strategic direction including the direction of the sustainability work. The board reviews and approves Lunawood’s ambition level regarding sustainability and the company’s Code of Conduct. The board follows up on progress towards meeting Lunawood’s sustainability goals and targets.

**Management team:** Responsibility for the company’s sustainability-related activities rests with the management team. The management team makes strategic decisions related to sustainability, reviews and approves sustainability policies, commitments, roadmaps and targets, as well as monitors progress regularly. Sustainability manager is part of the management team and is responsible for driving the sustainability agenda.

**The operations and mill directors** are in charge of the site-level or operations area-level actions and targets. They are also responsible for implementation of the sustainability approach as well as instructions, practices and operating models.

**The marketing and sales teams** have an essential role as Lunawood’s sustainability ambassadors globally. Through these teams, we also receive valuable input on customer expectations.

**Cross-functional project teams** are established as needed to advance specific projects on sustainability-related focus areas and to share knowledge and ensure effective use of resources. Lunawood currently has two sustainability-related cross-functional project teams, one focusing on side streams and the other on environment and energy.

**All employees:** Sustainability is part of the daily work of all Lunawood employees.



# Sustainability program

## Lunawood sustainability program consists of four pillars.

Lunawood’s sustainability program is based on the UN Sustainable Development Goals (SDGs), our values, and the materiality analysis summarising stakeholder expectations.

The five prioritised Sustainable Development Goals that we support through our sustainability program are:

- SDG 8 Decent work and economic growth
- SDG 11 Sustainable cities and communities
- SDG 12 Responsible consumption and production
- SDG 13 Climate action
- SDG 15 Life on land

In Lunawood’s sustainability program, each of the four pillars contain the key material topics for our sustainability work. Our company level cross-cutting sustainability goals are related to climate and circularity.

During 2023, we focused on revising and clarifying the material topics and documenting the governance model for sustainability at Lunawood. In 2024, we are focusing on further developing the sustainability program through action planning, target-setting, measurement and reporting. We continuously monitor the development of sustainability reporting related regulation (CSRD, EU taxonomy), in order to comply with regulatory requirements.

## Lunawood sustainability program

Climate			
Circularity			
 <b>Certified Nordic raw material</b>	 <b>Responsible production</b>	 <b>World class sustainable company</b>	 <b>High quality products with long life cycle</b>
<ul style="list-style-type: none"><li>• Sustainable sourcing and origin of wood</li><li>• Supplier cooperation</li><li>• Biodiversity</li></ul>	<ul style="list-style-type: none"><li>• Emissions and energy</li><li>• Sidestreams and waste</li><li>• Water use</li><li>• Quality</li></ul>	<ul style="list-style-type: none"><li>• Strong employee engagement</li><li>• Safety at work</li><li>• Business ethics and human rights</li></ul>	<ul style="list-style-type: none"><li>• Product sustainability</li><li>• Customer experience and services</li></ul>



# Materiality analysis

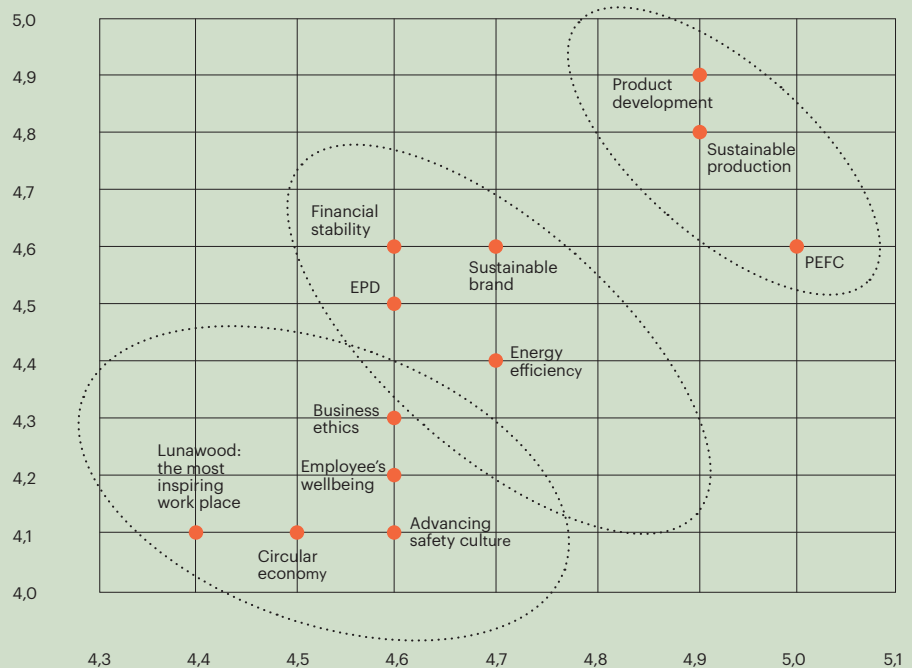
Involving stakeholders is an essential part of developing Lunawood's sustainability program. In 2022, Lunawood conducted a stakeholder survey and produced the company's first materiality analysis.

This analysis indicated that Lunawood's sustainability work has been considered very important by our stakeholders and has an impact on Lunawood's business. Our measures were evaluated on a scale of 1 to 5, and all actions and their impact on our business were rated above 4 on average.

In 2024, Lunawood will conduct a double materiality analysis in preparation for the Corporate Sustainability Reporting Directive (CSRD).

## Materiality matrix (prioritisation of sustainability aspects)

The Materiality Analysis indicated that Lunawood's sustainability work has been considered very important and it has an impact on Lunawood's business. Our measures were evaluated on a scale of 1–5, and all actions and their impact on our business were rated more than 4.



# Stakeholder engagement highlights 2023

Lunawood participates actively in several initiatives. The company is a member of the International ThermoWood® Association (ITWA) and a signatory of the UN Global Compact. In 2023, Lunawood participated in the SME sustainability group organised by the UN Global Compact Network in Finland. The group's aim was to share best practices and discuss shared sustainability challenges.

Sustainability issues were proactively included in customer discussions globally and in interaction with educational institutes. Lunawood is a climate partner of the city of Lahti in Finland, where Lunawood's headquarters is located. Partner organisations develop their own plans for carbon dioxide emission reduction and climate change mitigation.

Lunawood is a member of the U.S. Green Building Council (USGBC). The mission of the USGBC is to transform how buildings and communities are designed and built, and how they function to create thriving, healthy, equitable and resilient places that advance human and environmental wellbeing.

Lunawood is also a member of Finnish Business & Society (FIBS), the largest corporate responsibility network in the Nordic countries. The role of FIBS is to bring companies and business stakeholders together to share best sustainability practices and solutions.

Lunawood participates in a circularity initiative (KiertoKasvu Pohjois-Savo -hanke) organized by Savonia University of Applied Sciences, Navitas Kehitys Oy and Ylä-Savo Municipal Federation of Education. The objective of the initiative is to support SMEs in green transition.

# Climate action



Urgent action is needed in the building sector to combat climate change and its impacts. Lunawood offers long-lasting, carbon-storing products and has set ambitious climate goals.

Lunawood's climate goals in its own operations (scope 1 and 2 emissions):

- 42% less emissions by 2030 (Near-term target validated by the SBTi)
- Carbon neutrality by 2035





## Approach

The building and construction sector has a vital role to play in taking action for the good of the climate. Buildings are currently responsible for 39 per cent of energy-related carbon emissions globally, of which 11 per cent are caused by materials and construction.

Lunawood ThermoWood® products can store up to five times more carbon than is emitted in the production process. For us, however, this is not enough – our ambition goes even higher. Lunawood has set itself two climate-related goals: a reduction of greenhouse gas emissions by 42 per cent by 2030 from 2021 levels, and carbon neutrality in our own operations (scope 1 and 2) by 2035. Our major scope 1 and 2 emissions are related to heat production and the electricity we purchase.

In addition to reducing the emissions from our own activities, in the next phase our objective is to measure and reduce emissions in the value chain, also known as scope 3 emissions. Managing our scope 3 emissions requires collaboration with our suppliers and logistics partners.

## How we reduce our emissions

- We strive for continuous improvement in energy efficiency
- We transition to fossil-free energy sources

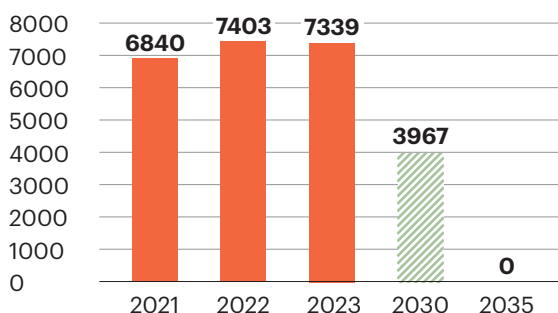
## How we performed in 2023

During 2023 we prepared to set a science-based climate target and updated Lunawood's low-carbon roadmap. It sets out our main climate actions and milestones for reaching our climate goals. One of the next steps in the roadmap is to gradually shift to renewable electricity from 2024. In 2023, Lunawood committed to set near-term science-based reduction target in line with the Science Based Target Initiative (SBTi). Our target to reduce absolute scope 1 and 2 emissions by 42% by 2030 from a 2021 base year was validated by the SBTi in March 2024.

In 2023, 53 per cent of the energy we used was derived from renewable sources. 2023 marked an important year in our energy efficiency work, as a large-scale modernisation of energy production was carried out at the Iisalmi mill.

We also started mapping our scope 3 emissions in 2023, and the scope 3 greenhouse gas emissions inventory will be finalised in 2024.

### Lunawood Greenhouse Gas Scope 1 and 2 emissions: development and target years



## Way forward ➡➡➡

- ➔ A shift to renewable electricity
- ➔ Energy efficiency improvements in production
- ➔ Evaluating fossil-free energy source alternatives for heat production
- ➔ Conducting a scope 3 greenhouse gas emissions inventory

Read more on our work related to energy and emissions on page 24.



# Circularity: valuing wood throughout the value chain

The role of building and the construction sector in the transition to the circular economy is widely recognised. Our ambition at Lunawood is to increase the amount of circularity in our processes and highlight the role of wood as a valuable material that should not be wasted at any stage of the value chain.



## Our circularity goals

- Continuous improvement in material efficiency
- Improving the utilisation of side streams
- Further integration of circular thinking into product development



## Approach

The world's population is growing, increasing the demand for products and raw materials. The role of building and the construction sector in the transition to the circular economy is widely recognised. Circularity can also unlock new opportunities. As a natural raw material, wood has several good qualities from the perspective of sustainability and the circular economy, as long as it is grown in sustainably managed forests and especially when used for durable, long-lasting products that require little maintenance. However, there is still more we can do. Our ambition at Lunawood is to increase circularity in our processes.

### How we will promote material efficiency and increase circularity

#### Renewable materials

We use certified renewable raw materials.

#### Resource-efficient production

We improve material efficiency and waste recycling.

#### Side stream utilisation and collaboration

We seek new solutions and partners to reuse or recycle our side streams.

#### Products and product development

Lunawood ThermoWood® products are durable, long-lasting and easy to maintain. Fixing systems that are used with our products enable repair and reuse. We offer training and guidance on correct installation, which supports the long lifespan of products.

## How we performed in 2023

In 2023, we recognised the need to increase the role of circularity in our agenda and to assess how such principles are currently included in our processes. Based on this assessment, we start integrating circularity into our processes.

To enforce this, we created an internal side stream working group to identify, analyse and test new ideas for using our side streams. These efforts may involve working with external stakeholders. At Lunawood, we have already achieved a high residuals utilisation rate (over 99 per cent). As we move forward, we seek to find ways to obtain more value from our side streams and explore ways to reuse or recycle materials.

In packaging, we use renewable materials including wood and cardboard. We also use plastic hoods, 75 per cent of which are made from recycled plastics.

## Way forward ➡➡➡

- We aim to develop target-setting, measuring and reporting related to circularity
- Take production site-specific action to increase material efficiency and minimise waste
- We continue to explore new ways to explore new ways to reuse or recycle side streams through collaboration

Read more on resource efficiency and waste management on pages 25–26.



# Certified raw material

Lunawood products are made from certified pine and spruce from Nordic forests. Lunawood works with suppliers to develop sustainability in the value chain.



The wood we currently use is pine and spruce from Finland. Key building blocks in Lunawood raw material sourcing are to secure availability and ensure consistent quality and long-term collaboration with suppliers. We focus on quality steering and on improving the means of conducting it. Our products build on the strengths of the wood species naturally grown in Finland, while balancing with customer expectations and supplier capabilities.

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# 100%

Share of Finnish raw material in 2023

## Our objectives

- To maintain a high share of certified raw material
- All wood suppliers committing to the principles of the Lunawood Third Party Code of Conduct
- To increase collaboration with suppliers to safeguard biodiversity



Lunawood's Product Specialist, Antti Kahelin, planting spruce seedlings in the forest at Pielavesi.





# Sustainable sourcing and origin of wood

Lunawood’s approach to sustainability is founded on the use of renewable, high-quality raw materials sourced from trusted suppliers. In 2023, we updated our sustainable sourcing approach to guide our wood procurement process.

## Step 1

We follow closely the development of sustainability related regulation and develop our sourcing process accordingly (e.g. EUDR).

## Step 2

We are committed to sourcing wood raw material only from suppliers that comply with the Lunawood Third Party Code of Conduct.

## Step 3

We are committed to maintain the high level of certified raw material with availability consideration.

## Step 4

We want to cooperate closely with key suppliers and seeking ways to take action related to biodiversity that go beyond forest certification alone.

We have a chain of custody certificate (PEFC/02-31-114) issued by the Programme for the Endorsement of Forest Certification (PEFC), and by sourcing PEFC-certified wood we are supporting the sustainable management of forests. In 2023, all our wood was of Finnish origin, and all of it came from certified Finnish sawmills. All the wood Lunawood procured in 2023 came from certified forests or forests that meet the requirements of controlled origin. In 2023, the share of PEFC-certified raw material was 92 per cent of all our raw material purchases.

Lunawood is committed to following all the applicable laws and regulations, and has started to prepare for the implementation of European Union regulation 2023/1115 on deforestation-free products (EUDR). The EUDR entered into force in 2023 with the aim of reducing the EU’s part in global deforestation and forest degradation. Operators and traders will have 18 months to implement the new rules. The EUDR repeals the EU Timber Regulation.

100%

of our wood suppliers have PEFC certification

# Supplier cooperation and biodiversity

Lunawood wants to cooperate with trusted partners in the value chain. In addition to the PEFC certificate, all Lunawood’s raw material suppliers are committed to the principles of the Lunawood Third Party Code of Conduct. We engage in deeper dialogue related to sustainability with our key suppliers.

Biodiversity is an issue of growing concern globally, and the importance of biodiversity and ecosystem services is becoming increasingly recognised. Forest certification is one of the means of accommodating biodiversity in forestry, but various other means also exist to protect forest biodiversity. In 2023, Lunawood began discussions with some of the key raw material suppliers to seek ways to take joint action to safeguard biodiversity. This work will continue throughout 2024.

100%

of our wood suppliers comply with the principles of Lunawood Third Party Code of Conduct


## Way forward ➡➡➡

- ➔ Preparation for the Regulation (EU) 2023/1115 on deforestation-free products (EUDR)
- ➔ All new suppliers to comply with Lunawood Third Party Code of Conduct
- ➔ Active dialogue with suppliers to seek ways of promoting forest biodiversity

# Responsible production

The chemical-free thermal modification production process enhances the properties of wood. Lunawood's focus areas for responsible production include energy and emissions, side streams and waste, water use and quality.





The thermal modification process enhances the properties of wood. The wood is treated with steam and heat only. The main environmental impacts of our production sites are related to the use of energy, materials and water. In our production sites, we aim for resource-efficient production and high quality.

#### Our objectives

- To increase the share of renewable energy
- To improve energy efficiency
- To improve material efficiency and find new uses for our side streams
- To maintain the high and stable quality of our products





## Energy and emissions

Lunawood's goal is to achieve carbon neutrality in our operations (scope 1 and 2) by 2035. Lunawood updated its low-carbon roadmap in 2023. Key actions in the roadmap include continuous improvements in energy efficiency and a gradual shift to renewable energy sources. From 2024, Lunawood will start gradually transitioning to renewable electricity. We have also begun discussions with energy suppliers to find renewable alternatives to the liquid petroleum gas currently used for heat production.

Lunawood's key actions related to energy and emissions are to improve energy efficiency and increase the share of renewable energy we use. In 2023, Lunawood continued the energy production renewal project at the Iisalmi mill. This investment is the largest in Lunawood's history. Construction related to the energy production renewal was completed in 2023, and the project will be finalised in 2024. The investment will increase Lunawood's total energy production capacity and improve energy efficiency. In 2023, we also sought to improve energy efficiency by optimising our thermal modification processes. This work continues in 2024.

In 2023, Lunawood's direct fossil-based carbon dioxide emissions

(scope 1) amounted to 3,524 tonnes, a reduction of 10 per cent from the previous year. Fossil-based carbon dioxide emissions from purchased electricity and heat (scope 2) in 2023 amounted to 3,836 tonnes. The increase in scope 2 emissions was mainly due to the change in the Finnish electricity grid's greenhouse gas (GHG) emission factor. In 2023, 53 per cent of the energy Lunawood used was from renewable sources, and we are committed to further increasing this proportion.

In 2023, we started to map the emissions in our value chain, also known as scope 3 emissions. One of the main sources of scope 3 emissions is product transportation. Through a questionnaire, we asked our logistics partners to provide us with information on their current plans to reduce emissions. Based on the work initiated in 2023, in 2024 we are compiling a GHG inventory for our scope 3 emissions. With our logistics partners, we will investigate target-setting possibilities for product transport emissions.

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3,524 tCO<sub>2e</sub>

Scope 1 emissions 2023

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3,836 tCO<sub>2e</sub>

Scope 2 emissions 2023



## Side streams and waste

Lunawood aims for continuous improvement in resource efficiency in production. Our main side streams include planing dust and chips, wood waste, ash and tar. In addition to resource efficiency and waste reduction, we seek to find new ways to utilise our side streams.

In 2023, we took important steps related to our efforts to address side streams and waste as we renewed our waste management process at our Iisalmi mill. We also established an internal working group to evaluate and take action on new ideas related to side stream use.

In 2024, in collaboration with external partners we will also renew our waste management process in the Kaskinen mill, and search for and test new ways to utilise our side streams.

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# 99,98%

Process residuals  
utilisation rate 2023



## EcoCompass environmental management system

The EcoCompass environmental management system has been in use at Lunawood since 2016 and covers all sites. The EcoCompass certificate demonstrates commitment to continuously improving and complying with the 10 principles of EcoCompass, including areas such as waste management, use of chemicals and the environmental programme.

Lunawood's environmental management system was audited in 2023 and we passed the audit successfully. Our progress related to the environmental management system is reported annually, and an audit is conducted every three years.

## Water use

Water is needed in Lunawood's thermal modification process for two main reasons: steam prevents the wood from burning during the process, and water is also used to cool the wood after thermal modification. These measures ensure the high quality of the final product. At the end of the process, moisture is added to the heat chamber to prevent the wood cracking, which contributes to ensuring a long life for the final product. When the process is complete, the moisture percentage of the wood is between 4 and 7 per cent, which makes ThermoWood® products extremely stable and durable.

Water use is one of the indicators that is monitored at both Lunawood mills. Although the location of Lunawood's mills in Finland means that we do not withdraw water from areas with a high or extremely high overall water risk (according to the Aqueduct Water Risk Atlas of the World Resources Institute), our aim is nonetheless to use water efficiently and seek ways to optimise its use in our production process.

In 2023, our water use per cubic metre of product manufactured increased from the previous year. One of the reasons for this was lower production volumes, which affected the efficiency of water use. Our aim is to investigate the causes of monthly changes in water consumption and look for opportunities for optimisation.

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**Our aim is to use water efficiently and seek ways to optimize it's use in our production process.**



### Case

#### From wood ash to forest fertiliser

Around 300 tonnes of wood ash is generated annually through the combustion of wood for energy for heat production at Lunawood's Kaskinen mill. There we use wood-based side streams to produce energy for drying wood raw material and heating the kilns.

The use of ash as a fertiliser has several positive effects on the forest and the environment. Ash promotes tree growth and improves their ability to absorb carbon. Ash also helps to maintain the nutrient balance of the soil and improves soil condition overall.





## Quality

The Lunawood quality control process has three stages. The first, quality inspection, is performed on the incoming sawn timber. Lunawood maintains a quality document that defines the quality requirements for raw materials for sawmills.

The company produces trademarked Lunawood ThermoWood® products through a patented and annually inspected process. After the thermal modification, the second stage of the quality control process is to take samples from every thermally modified batch. We check in our own laboratories in our mills that after the thermal modification the product meets the quality requirements set by the International ThermoWood® Association. This ensures the technical quality of the products. Lunawood's production process is audited three times a year by an external auditor. The test results of our own quality control process are also audited twice a year by an external auditor.

The third and final stage of the quality control process is carried out on the planed products, which are subject to weekly checks to ensure uniformity of sorting.

In 2023, systematic quality development work has continued at Lunawood's mills in the areas of raw materials and product and process quality. Collaboration and sharing of best practices between the two mills have continued, with positive results.

## Way forward ➡➡➡

- A gradual shift to renewable electricity
- Energy efficiency improvements through production process optimisation
- Waste management renewal at the Kaskinen mill
- Continue to identify and test new ways to reuse sidestreams through collaboration
- Develop packaging and the packaging process to reduce the risk of damage during transportation
- Monitor development and sharing of best practices and challenges through the internal environment and energy group

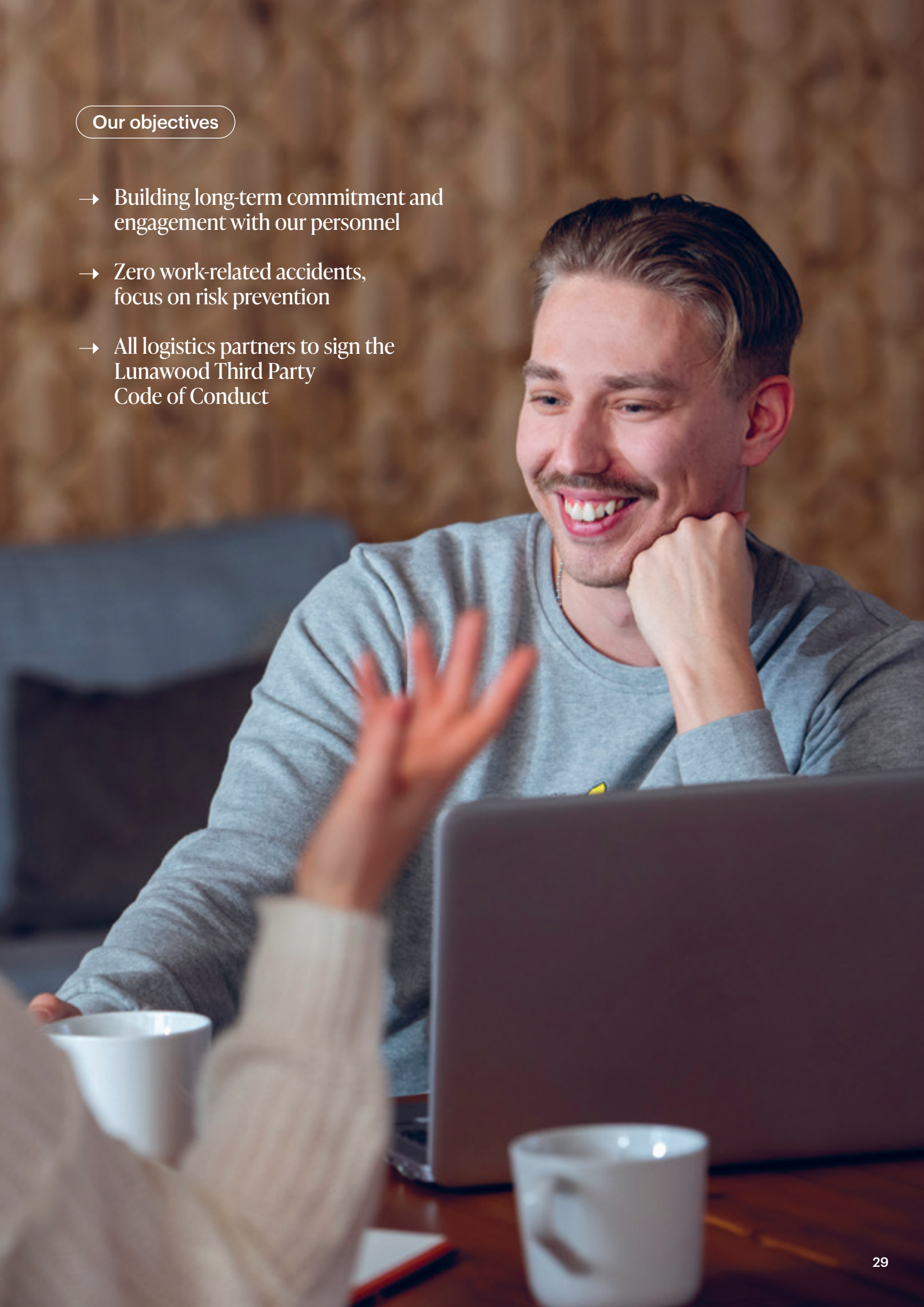
# World-class sustainable company

Lunawood is committed to operating responsibly. Lunawood has long and wide-ranging experience in ThermoWood®, and the skill and engagement of our personnel are the key factors in our success.



### Our objectives

- Building long-term commitment and engagement with our personnel
- Zero work-related accidents, focus on risk prevention
- All logistics partners to sign the Lunawood Third Party Code of Conduct





## Strong employee engagement

At Lunawood, we strive to create long-term commitment and engagement with our personnel. Our people strategy rests on one of our three values: Results together. We act as a team and trust each other. We want to foster a vibrant working spirit and safety at work. Our strategy has three focus areas: Learning and development, leadership development, and company growth with new people and new ways of working.

One of the ways to measure our efforts regarding personnel is the personnel survey, conducted annually. Our goals are a high Employee Net Promoter Score (eNPS) and good results in the overall work satisfaction and leadership index (an average of over 4 on the scale of 1 to 5). According to the personnel survey conducted in 2023, Lunawood's strengths include a strong team spirit and work autonomy. According to the survey, the Lunawood team culture is considered to be open and based on trust – people feel they can express their opinions openly. The results show that employees are aware of

what is expected from them, and that their immediate supervisor gives them the independence needed to make decisions. Areas for further development based on the personnel survey were related to change management and communication. These areas have been taken into careful consideration, and action has been taken to increase the frequency of team meetings and internal communication.

Due to the difficult market situation and declining demand in 2023, temporary part-time layoffs took place. These decisions were not easy to make. The change negotiations were carried out with the personnel representatives, and the layoffs were planned in teams. To keep everyone informed, active internal communication was organised, including a weekly info to personnel.

In 2023, we maintained the working group model and related activities at both Lunawood mills. The aim of the working groups is to bring employees from Iisalmi and Kaskinen together to develop processes and find new

solutions for shared challenges. We believe that people know their own work best, and know-how should be shared directly between the key persons, not only through team leaders. When people know each other, it is easier to call a colleague and make improvements together. Seven working groups were active during 2023.

The new customer experience organisation was structured during 2023 to emphasise the strategic goal of making the customer our key focus. Lunawood sales, marketing and promotion were combined into one unit, and ways of working were redesigned to ensure the best possible customer experience. The objective was to create strong working teams, with time for leadership for the supervisors.

As Lunawood goes forward and grows, we strive to maintain the essentials of the Nordic working culture and develop together as a diverse team. We want to put focus on learning and provide opportunities for personal development.



# Safety at work

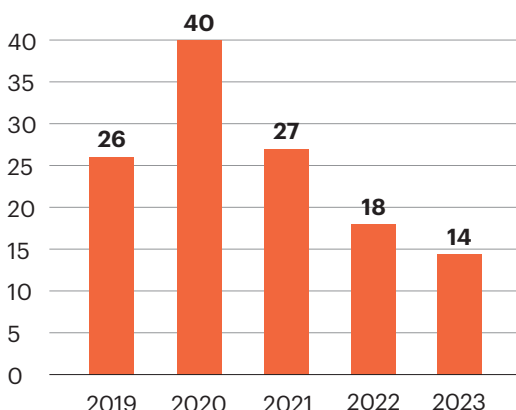
Safety at work is a top priority for Lunawood. Our goal is to be the safest company in our industry in Finland. Lunawood is committed to the goal of zero work-related accidents and to preventive safety.

Lunawood has focused on safety measures for several years, and this has yielded positive results. The emphasis in the safety work has been in improving fire safety, developing and implementing joint ways of working, employee engagement, and preventive action. Lunawood's safety management system was documented and implemented in 2022, and significant investments have been made in safety development. All employees are encouraged to report shortcomings and suspected shortcomings in safety.

During 2023, we exceeded our preventive safety work targets. The number of safety observations in 2023 developed positively, exceeding the set target of 500. In total, 613 safety observations were documented, and in 97 per cent of the cases corrective measures were taken. For 2023, we had an objective of above 365 assessments of work-related risks, and this target was exceeded with a total number of 412 assessments conducted.

There was a positive development in efforts to reduce the number of incidents leading to lost time at work, with a 22 per cent reduction from 2022. Three work-related accidents occurred in 2023. All near-misses and work-related accidents are investigated within seven days.

## LTA Development (Target 0)



## Safety goals 2024

We have yearly goals for improving safety at work. Zero accidents remains our goal and we measure preventive actions monthly.

- 1 Work-related accidents: 0
- 2 Fires: 0
- 3 Tidiness and order: above 90 %
- 4 Safety observations: above 500
- 5 Personal assessment of work hazards: above 500
- 6 Regular safety training for all personnel: 1 hour per quarter per person

## Business ethics and human rights

Lunawood's operations are guided by our Code of Conduct. The code is based on the ten principles of the UN Global Compact, the world's largest global corporate sustainability initiative. The ten principles include human rights, labour, the environment and anti-corruption. Lunawood is a signatory of the Global Compact.

Based on our Code of Conduct, we have also drawn up a third-party Code of Conduct. This is motivated by our intent to work with partners that adhere to the same principles. All the sawmills we source materials from have agreed to the principles of our third-party Code of Conduct, and in 2023, all our key

customer partners globally committed to the same principles.

Our work in this area continues, as our target for 2024 is to have all our logistics partners sign the Lunawood Third Party Code of Conduct.

The responsibility to respect human rights is a global standard for all companies. According to the UN's Guiding Principles on Business and Human Rights, the responsibility to respect human rights requires that companies avoid causing or contributing to adverse human rights impacts through their own activities, and that they tackle such impacts if they occur. Companies must also seek to prevent or mitigate adverse human rights impacts. In 2024, Lunawood is starting to develop a human rights due diligence process to identify, prevent, mitigate and account for how we deal with our impacts on human rights.

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**Our work continues as our target for 2024 is to have all our logistics partners to sign the Third-Party Code of Conduct.**







## A new whistleblowing channel to report misconduct

To promote an open, transparent and safe culture, Lunawood introduced a new whistleblowing channel in 2023. It is available to both employees and external parties. The whistleblowing channel provides a confidential means of reporting suspicions of possible misconduct or policy violation. Whistleblowing can be done anonymously.

As part of the process of introducing the channel, Lunawood's whistleblowing policy and instructions for the whistleblowing committee were created. Lunawood encourages its employees to first raise their concerns or suspicions with their supervisor or management. If this does not seem a good option or does not work, it is always possible to use the whistleblowing channel to report the matter. The channel is provided by Juuriharja Consulting Group Oy.

No whistleblowing cases were reported during 2023.

### Case

#### Joining Sedex

Towards the end of the year, Lunawood joined Sedex, a global organisation and platform that promotes sustainability and transparency in the value chains. More than 75,000 businesses from across the world are members. By joining Sedex as a supplier, we can promote the transparency of our operations through sharing data with our customers on our efforts to continuously improve sustainability. Membership of Sedex also enables us to help our customers meet their supply chain goals.

#### International sales meeting in Lahti

In 2023, we held a one-week team event in Lahti. Colleagues from Finland and abroad gathered to learn, work and get to know each other face to face. The valuable shared time was used for brainstorming various topics together and engaging in team-building activities. Sustainability was one topic of the event, and there was also the enjoyable activity of spruce planting in a forest nearby.

## Way forward ➡➡➡

- Continuous efforts in work safety, with a focus on risk management, active employee participation and systematic development of the safety management system
- A focus on learning and offering opportunities for personal development
- Equality and a work-life balance: support from external experts
- Training of employees on business ethics
- Development of the human rights due diligence process
- Lunawood's logistics partners to sign the Lunawood Third Party Code of Conduct

# High-quality products with long life cycle

Lunawood manufactures easy-to-maintain and long-lasting wood products for all climates. With well over 20 years of experience, we are dedicated to providing unmatched customer service.



At Lunawood, it is in our core to offer products that are long-lasting, durable and enhanced with heat and steam only. Lunawood's offering includes Thermowood cladding, battens, decking and interior products. Our products can be used for facades, interiors, landscaping, mobile homes, bathrooms, saunas and furniture. All our products are designed and manufactured in Finland.

### Our objectives

- High customer satisfaction
- Continuous improvement in product sustainability

# Product sustainability

We believe that renewable, recyclable, carbon-storing wood products have a great deal to offer when it comes to advancing sustainable development goals in the built environment. Of course, this is only the case if the wood is sourced from sustainably managed forests. From reducing our carbon footprint to improving circularity, our aim is to further increase the sustainability of our products.

The sustainability, quality and safety of Lunawood products is a result of careful consideration at every step of the process, from raw material sourcing to production and all the way to the customer. Lunawood

ThermoWood® products provide long-lasting carbon storage.

One of the advantages of Lunawood ThermoWood® products is that they are low-maintenance. To be able to also serve customers who look for surface treatments, in 2023 we tested and analysed potential new surface treatment options for different markets. This work continues as we enter new markets and new surface treatment products are developed. The aim of this work is to provide our customers with up-to-date information on suitable surface treatment options for Lunawood ThermoWood® products. We are currently evaluating the technical characteristics and safety of surface treatments. Going forward, we aim to bring more sustainability aspects into consideration.

In early 2023, we launched a new fire retardant solution for Lunawood

products. To expand the fire-protected product range, we have now also launched new surface treatment options (three colours) to be combined with the fire retardant.

In 2023, we also began preparations for the amendments to the EU regulation on fire safety for wood products. This will change the conditions needed to classify wood panelling and cladding without further testing, and the conditions for wood ribbon elements in terms of their reaction to fire.

In the area of product quality, in 2023 we initiated a packaging development project for reducing and preventing damage to packaging and products. Based on a root cause analysis, the required improvements are being investigated and implemented in 2024.

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One of the advantages of Lunawood ThermoWood® products is that they are low-maintenance.

## Case

### A new fire-retardant solution

Lunawood introduced a fire-retardant solution to Lunawood Collection products to meet the fire class B-s1/s2,d0 (EN-15301). The selected BurnBlock® impregnation method is a toxin-free solution for fire protection. It is a water-based solution, and the fire retardant itself is made only from natural substances. It is fully biodegradable, pH-neutral, non-corrosive, and does not produce volatile organic gas (VOC) emissions. The fire protection method is part of our chosen product strategy of sustainable and non-toxic solutions.



Hotel Popal, Netherlands MONK architecten





## Record-high results in customer survey

In 2023 customer survey, we received an impressive net promoter score (NPS) of 71. The NPS metric is used internationally to measure customer loyalty. This high score is achieved by only a small proportion of highly customer-oriented companies, and it confirms that the positive changes Lunawood has made in its business approach and the dedication of our highly professional team are serving our customers well.

One of the key next steps in our customer experience development is to adopt a customer relationship management (CRM) system. The CRM system will help in managing customer-related information.

## Customer experience and services

For Lunawood, commitment to the customer is number one. We want to build long-term partnerships and provide support to our customers through different levels of our organisation.

In 2023, several steps took place to take our customer service to even higher level. This work included the creation of a customer experience team. This was structured to emphasise the strategic goal of keeping customers in the centre. Lunawood sales, marketing, product management and promotion were combined into one unit, and practices were reorganised to highlight customer orientation and ensure the best possible customer experience.

Towards the end of 2023, we also introduced our brand-new customer promise, summarising our core strengths towards our customers: sustainability, reliability and experience.

### **Our Commitment to Earth and You:**

*We promise to provide sustainable branded and well commercialized Lunawood solutions for your success, delivering reliability and transparency every step of the way.*

We are committed to taking action to improve sustainability in the built environment. We ensure accurate deliveries, availability, consistent quality and business stability for our customers' success. With over 20 years of experience, we are dedicated to serving our customers.

# 71

Net Promoter Score (NPS) in 2023

## Way forward ➡➡➡

- ➔ **Customer Relationship Management (CRM) implementation**
- ➔ **Packaging development actions based on a root cause analysis**
- ➔ **Preparation for the amendments of the EU regulation on fire safety for wood products**

# Table of figures

ESG initiative	Target	Key metrics	Unit	2019	2020	2021	2022	2023
Environment and climate	1. Increasing the share of renewable energy	Production carbon intensity	kg CO <sub>2</sub> / m <sup>3</sup>	49,77 *	49,65 *	51,91	52,73	86,69
		Scope 1: Direct emissions from operations				4837	3935	3524
		Scope 2: Emissions from purchased energy consumed in operations				2003	3468	3836**
	2. Committing to source certified raw material from the Nordics	Total emissions scope 1+2				6605	7191	7234
		Energy intensity (heat & electricity)	MWh/m <sup>3</sup>	0,45	0,44	0,41	0,47	0,55
		Waste and residuals generated	ton	4334	4865	5609	4057	4296
	3. Searching for circular economy solutions: considering new uses for by-products	Of which utilised	%	93,3	91,5	99,9	99,9	99,98
		Of which landfilled	%	6,7	8,5	0,12	0,06	0,02
		Hazardous waste	ton	103	77	62	94	6,5
		Water usage	l/m <sup>3</sup>	303 *	295 *	256	263	311
		Share of certified raw material	%	90,1	88,7	89,8	91,04	91,7
		Energy from renewable sources	%	54,9	53,7	48,2	54,9	52,5

\* Low precision data    \*\* Electricity emission factor 2022



ESG initiative	Target	Key metrics	Unit	Measuring frequency	2019	2020	2021	2022	2023
Non-discrimination and Equality	1. Equality in the workplace 2. Create an including work environment 3. Zero discrimination or harassment	1. Split of gender in the management team	absolute	annual	men 4 women 1	men 4 women 2	men 4 women 2	men 4 women 2	men 3 women 3
		2. Split of gender on the board	absolute	annual	men 4 women 1	men 4 women 1	men 4 women 1	men 3 women 2	men 3 women 2
		3. Split of gender in Lunaholder group, white collars	%	annual	men 60 women 40	men 65 women 35	men 67 women 33	men 67 women 33	men 67 women 33
		4. Split of gender in Lunaholder group, blue collars	%	annual	men 97 women 3	men 97 women 3	men 96 women 4	men 97 women 3	men 93 women 7
		5. Incidents of discrimination and corrective actions taken	absolute	annual	0	0	0	0	0
		6. Use of family leave *	persons / year	annual	–	men 1 women 2	men 4 women 1	men 10 women 0	men 11 women 1
		7. Salary development, blue collars **	%	annual	3.6	2.3	3.1	2.2	2.0
		8. Salary development, men, white collars	%	annual	4.4	4.3	3.2	4.0	2.4
		9. Salary development, women, white collars	%	annual	8.7	6.4	2.8	4.1	2.5

Salary development: employees at the end of the year, incl .position changes, excl . seasonal workers.

\* During the year. No earlier data available. \*\* Women less than 3 pers.

ESG initiative	Target	Key metrics	Unit	Measuring frequency	2019	2020	2021	2022	2023
Safe and sustainable work place	1. No accidents: monitoring the safety of working areas	1. LTA	accidents/ million working hours	monthly	26.0	40.0	27.0	18.0	14.0
	2. Needed actions done without delay								
	3. Improved fire safety	2. Number of workplace accidents with at least one day of absence	%	monthly	4	7	6	4	3
	4. Good working ability in the long run, from work to home healthy and safe	3. Safety hazard reports	psc	monthly	4	57	238	469	613
		4. Near-miss reports	psc	monthly	48	5	33	38	18
		5. Absence rate	%	monthly	4.0	3.7	3.7	4.1	3.3
		6. Sick leaves of over 30 days	No. of people	annual	3	6	6	6	9
		7. Employee satisfaction	NPS	annual	-	22	32	34	34
		8. Employee turnover ****	%	annual	4	8	7	5	9
		9. Change in the number of personnel ***	absolute	annual	+10	+12	+16	+4	-5

\* No information available    \*\* Employee satisfaction 2018 , scale 1-5    \*\*\* Year average    \*\*\*\* Net turnover (excl. short-term employees)



ESG initiative	Target	Key metrics	Unit	Measuring frequency	2019	2020	2021	2022	2023
Anti-corruption & conflicts of interest	1. Code of Conduct in use (internal & 3rd party)  2. External audits successfully passed and corrective actions done on time	1. Policies in place	whistle-blowing in use	annual	not yet	yes	yes	yes	yes
		2. Confirmed incidents of corruption	yes/no	annual	no	no	no	no	no
		3. Occupational health and safety audits have been conducted	done in time	annual	done	done	done	done	done
		4. Environmental audits have been conducted	done in time	annual	yes	yes	yes	yes	yes

ESG initiative	Target	Key metrics	Unit	Measuring frequency	2019	2020	2021	2022	2023
Sustainable and responsible growth	1. Committing to sustainable and responsible growth  2. Committing to the promises to our customers	1. Profit development, EBITDA €M	M€	monthly	5.6	7.2	16.8	12.8	4.3
		2. Successful financial audit	clean audit report	annual	yes	yes	yes	yes	yes
		3. Governance policies in place	yes/no	annual	yes	yes	yes	yes	yes
		4. Client satisfaction	NPS	annual	–	58	22	48	71



■ Housing in Garralda, Spain Architect: Nazareth Gutierrez Franco, Rodrigo Nuñez Arquitectos. Photo: Alberto Amores





Cabin Havsstrand, Finland  
Architect: PlusArkitehdit.  
Photo: Hans Koistinen.

