



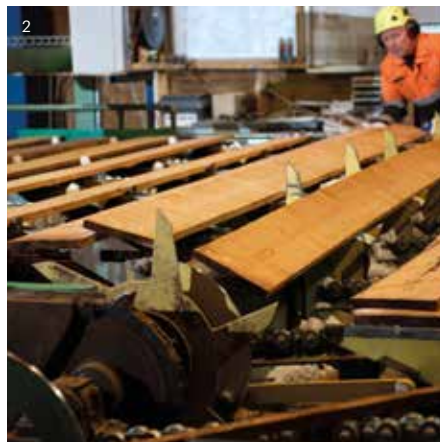
LUNAWOOD

SUSTAINABILITY REPORT

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## SUSTAINABILITY IS OUR CORE

Our mission is to reconnect nature with people in urban environments. We want to be the leader and pioneer in sustainable timber solutions. And this is a true story of our sustainability.



# FOREWORDS

Looking back at 2020, I can only ponder what an interesting year it has been. Due to the global covid-19 pandemic, everything we had planned was all but completely reconfigured. Contrary to what we had expected, the demand of construction materials in private building and renovation projects increased significantly and I am pleased to notice that people have been willing to make more and more sustainable choices. We're committed to doing our share to help to tackle the global challenges and accelerate change for the better by doing more with less.

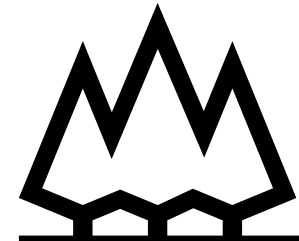
Lunawood Thermowood is a product with an exceptionally amazing sustainability story. And that story is true. Our product comes from the sources of the highest quality raw material and we do not use any chemicals in our production. We can honestly say that Lunawood is the cleanest wood product in the world that lasts in all kinds of climates and decorative end use areas.

We are proud of our values, which guide our business and leadership culture. Sustainability is at the heart of everything, from raw material sourcing to responsible production, and to our product, which has a long lifecycle. We believe in sustainable and responsible growth during which all Lunawood people get home safe and healthy from work and have equal working conditions. I am pleased that my Lunawood colleagues are satisfied with their work and passionate about the concrete results which they can see in the world's most beautiful architectural sites where Lunawood's products have been used.

For us, sustainability is a true story to which we are committed.

In Lahti on the 12<sup>th</sup> of April 2021

Arto Halonen, CEO of Lunawood



**LUNAWOOD**


Revenue 2020: 56 M€

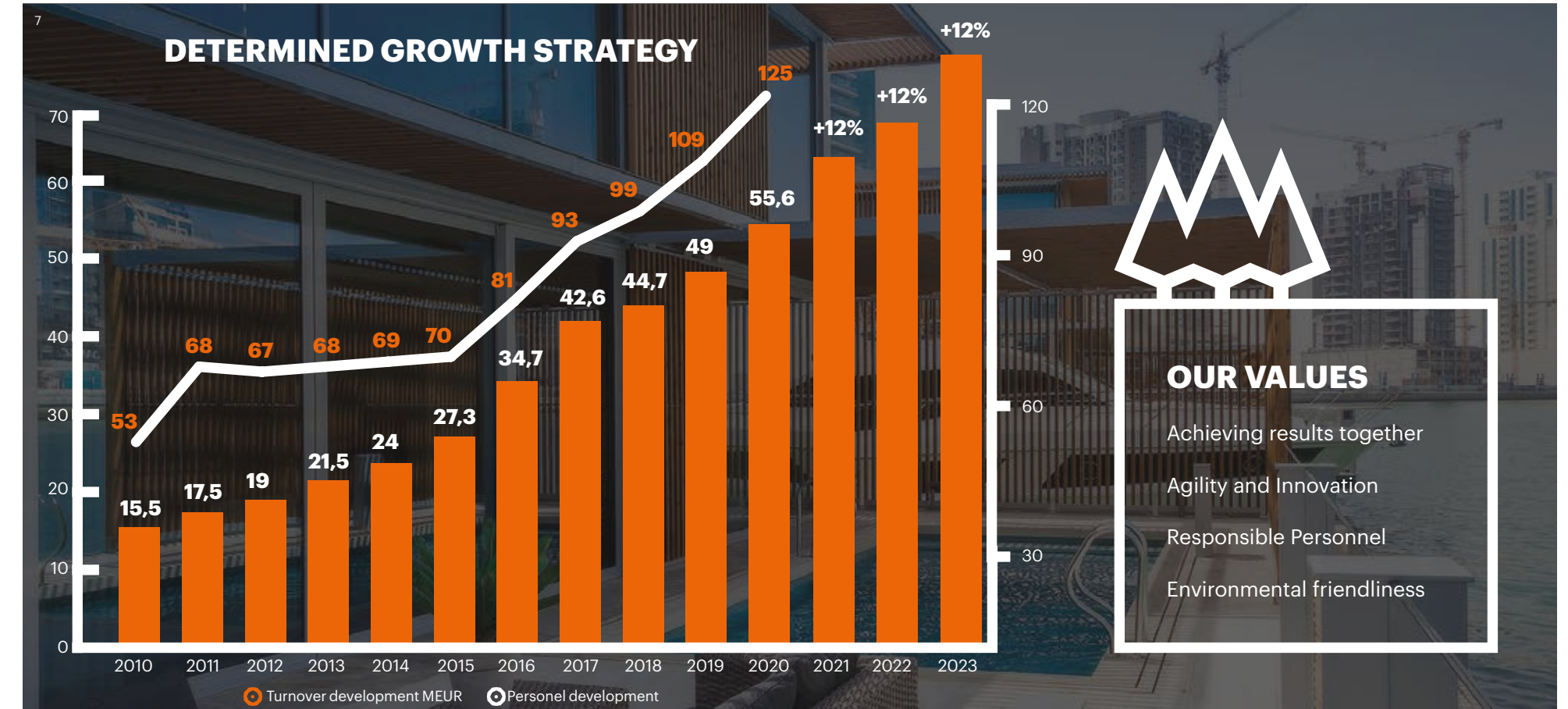
Personnel: 125

Production capacity: 155 000 m<sup>3</sup>

Share of export: 95%

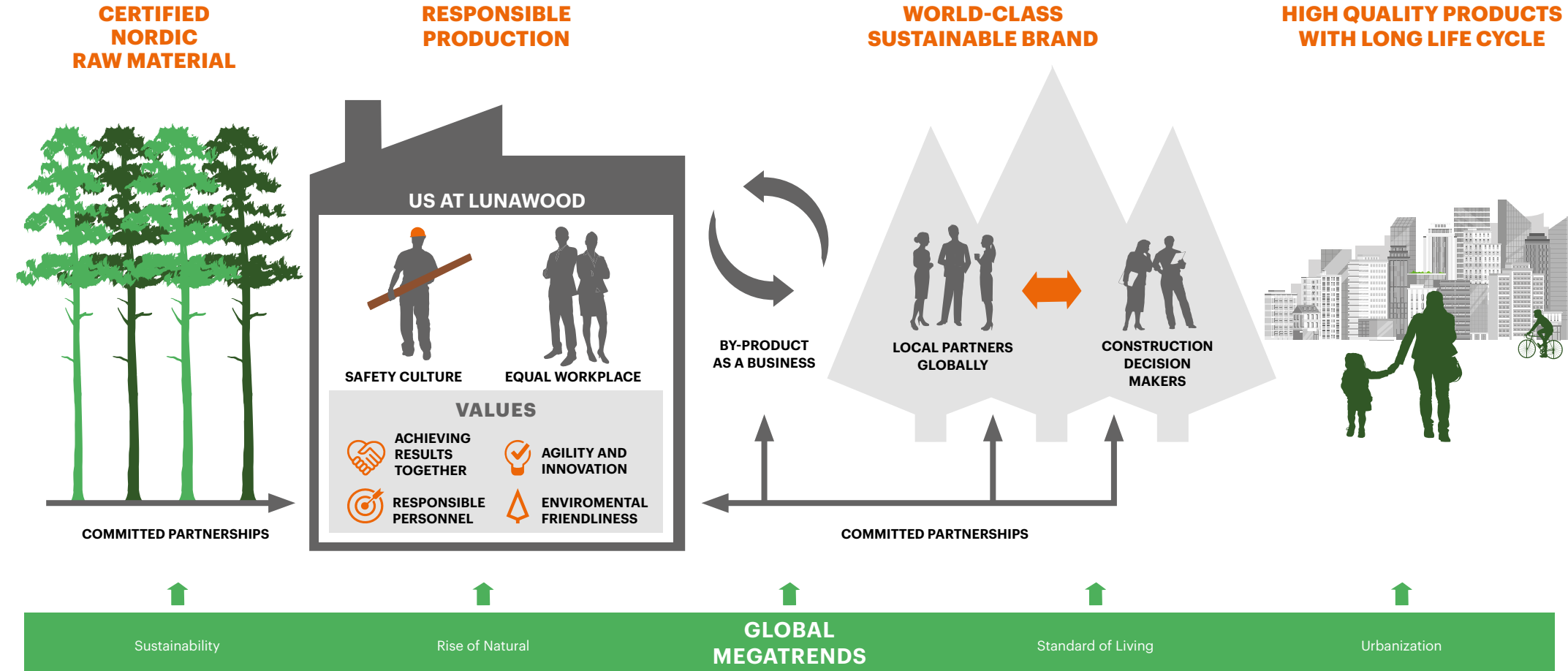
Deliveries to over 60 countries







# RECONNECTING NATURE WITH PEOPLE IN URBAN ENVIRONMENTS



## A TRUE STORY

We know what kind of a positive impact a close connection to nature can have on our lives. That is why sustainability is not just a chapter in our story, but the very core. We want to do our part in tackling the climate change by producing Lunawood Thermowood products, which create a connection between urban life and nature anywhere in the world.

Yes, we are a target-driven growth company. But we want to do it right, with respect. Our status is based on high-quality products, reliable customer service and professional employees. Everything we do, we strive to do as sustainably as possible. Sustainability runs through the whole supply chain and in our products for decades.

We see current megatrends as a positive tailwind that offers tremendous opportunities for Lunawood: we have Thermowood know-how, environment-friendly production processes and products and pay close attention to the entire value chain. Innovation and sustainability play an important role in our strategy. All of this is made possible by a socially responsible corporate culture with an emphasis on safety.

As a result, Lunawood can become a calming oasis in the midst of skyscrapers, a beautiful effect wall in a home or office space or individual battens with eye-catching aesthetic details. And we accomplish it sustainably. That is our story. And that story is true.

# A TRUE STORY

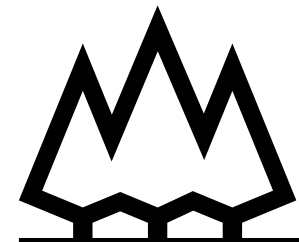
# CERTIFIED NORDIC RAW MATERIAL

Our heart is in the **Nordic forest**. We love the forest, its untamed freedom and its incomparable strength. We believe that sustainability stems from the forest and that wood is a versatile source of inspiration.

The **high quality** of Lunawood Thermowood® and Thermowood Composite TWPC starts from the raw material. Knowing the origin of our raw material is a basic requirement for us and that is why we only use wood that comes from certified suppliers of Nordic sawn timber.

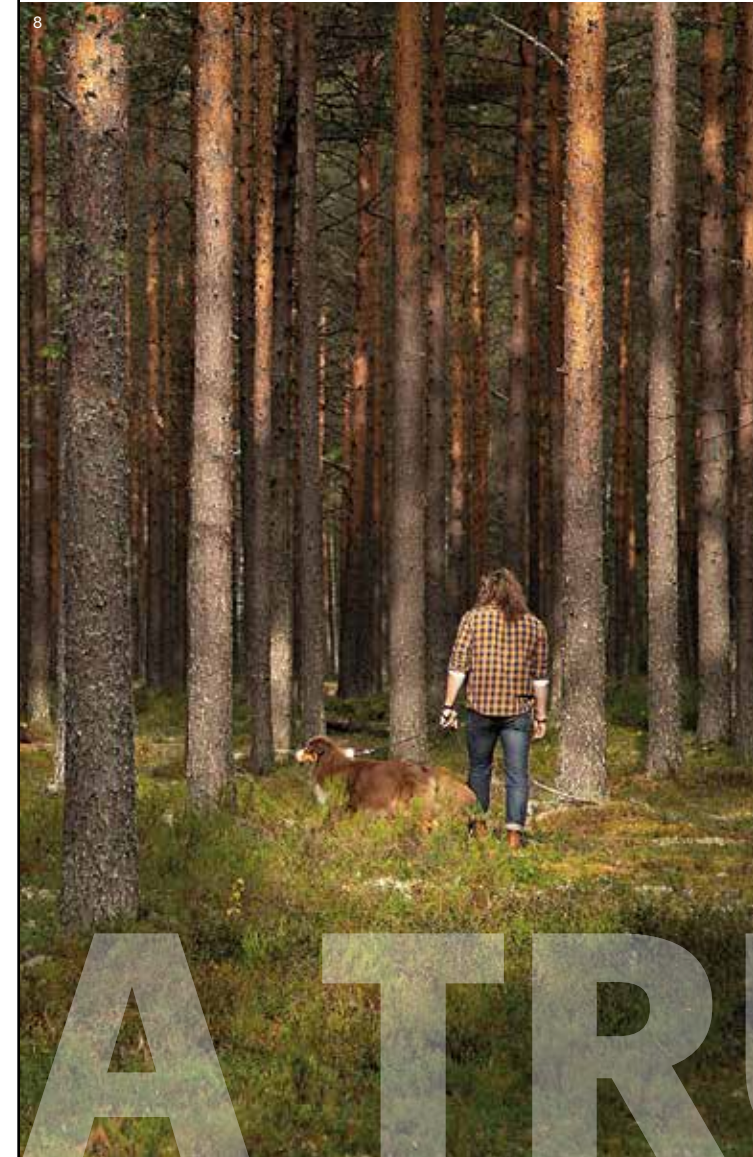
Lunawood's chain-of-custody certification provides independent verified assurance that our certified forest-based material originates from **sustainably managed forests**. It complements PEFC-sustainable forest management certification, which ensures that forests are managed in line with challenging environmental, social and economic requirements.

In order to make the most of our high-quality and sustainable Thermowood, we manufacture composite material which has the largest wood content on the market. **Lunawood Thermowood composite** has over 65% of its Thermowood fibre generated as a by-product on the Iisalmi planning line.



## OUR COMMITMENT

- High-quality raw material sourced from Nordic forests, purchased from certified suppliers
- Knowing our suppliers
- Carefully selected, live knotted sawn timber used to ensure the stability and high quality of our products



## RESPONSIBLE RAW MATERIAL PROCUREMENT

All of our raw material comes from Nordic forests and from certified suppliers. Responsible choices truly guide our raw material procurement.

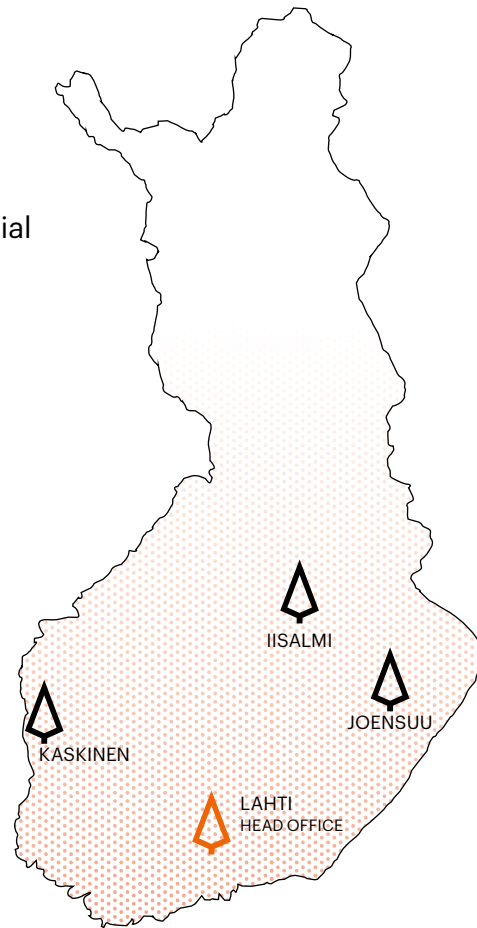


A TRUE STORY

**100%**  
NORDIC  
SAWN TIMBER

**235 km**  
THE AVERAGE  
TRANSPORT DISTANCE  
OF THE RAW MATERIAL

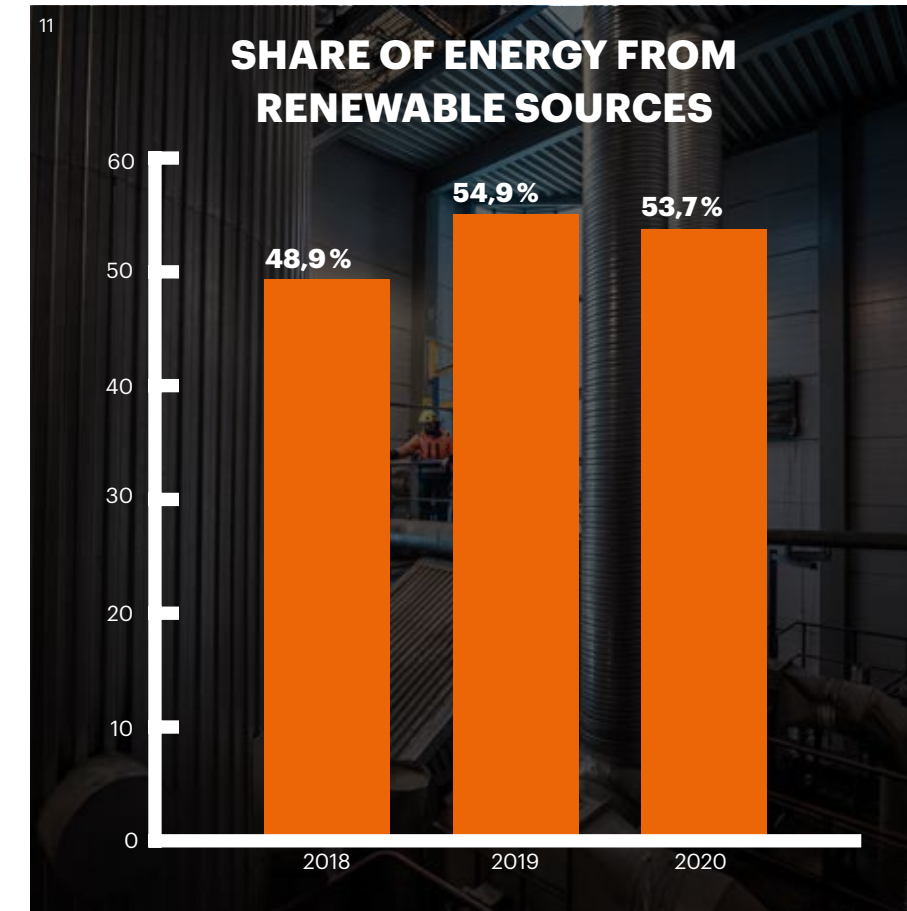
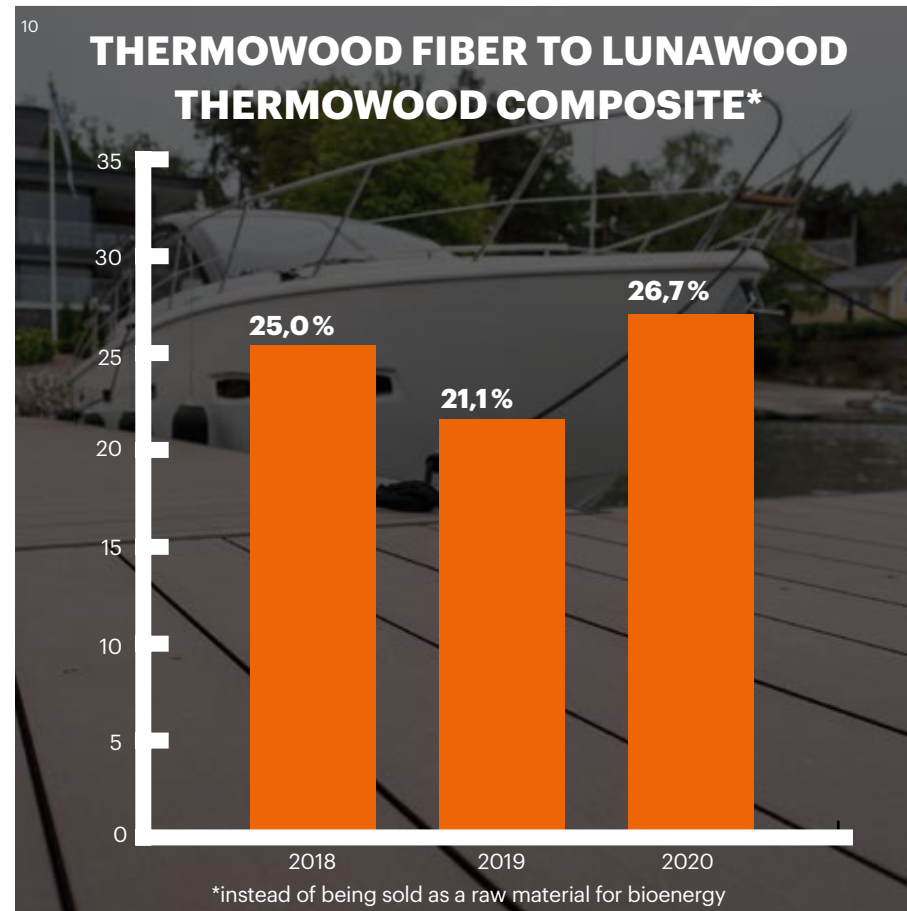
Carefully selected,  
live-knotted raw material  
from a specified wood  
procurement area  
and over 25 supplying  
sawmills from  
the Nordics.



**89%**  
OF WOOD USED  
IS CERTIFIED



SUSTAINABLE FOREST  
MANAGEMENT  
CERTIFICATION



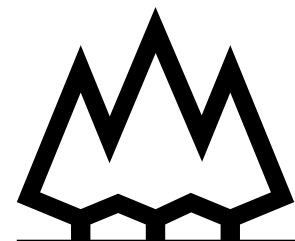
# RESPONSIBLE PRODUCTION

Lunawood is a pioneer and an expert in modern wood modification by enhancing the wood's natural properties, while respecting and preserving the environment in the thermo treatment process. Lunawood Thermowood® is a **natural material** produced with heat and steam only - and **without chemicals**. We produce trademarked products with a patented and annually audited process.

**The International Thermowood Association** supervises its member companies' production and quality control processes. This supervision is conducted by Finotrol Oy as an independent third party. Based on Finotrol audits, Lunawood has the right to use the Thermowood® trademark.

From a production standpoint, responsibility means reviewing our process from a life cycle perspective. By assessing the social and environmental impact of our production process, we can improve the resource efficiency and value chain in all parts of it. And most importantly, we can do our share to ensure that none of the various raw materials end up as waste but instead circulate in and between different supply chains - often through deformation.

**No organic waste** is generated at the Lunawood mills, as the planing dust is used in the production of Thermowood Composite TWPC or sold to a pellet manufacturer. Wood waste is turned into bioenergy.



## OUR COMMITMENT

- Sustaining our expertise as pioneers of Thermowood production
- A patented and audited process to guarantee the Thermowood trademark
- Exclusive use of a non-toxic and chemical-free manufacturing process
- Increasing the share of renewable energy
- Searching for circular economy solutions - considering new uses for by-products

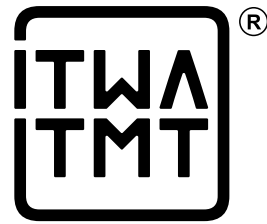


## CHEMICAL FREE PRODUCTION

Sustainability is at the heart of the Thermowood process. Modifying our raw materials of Nordic Pine and Nordic Spruce with only heat and steam makes Thermowood a truly sustainable, durable, stable and naturally beautiful alternative to tropical hardwood on decorative surfaces in all climates.



TRUE STORY

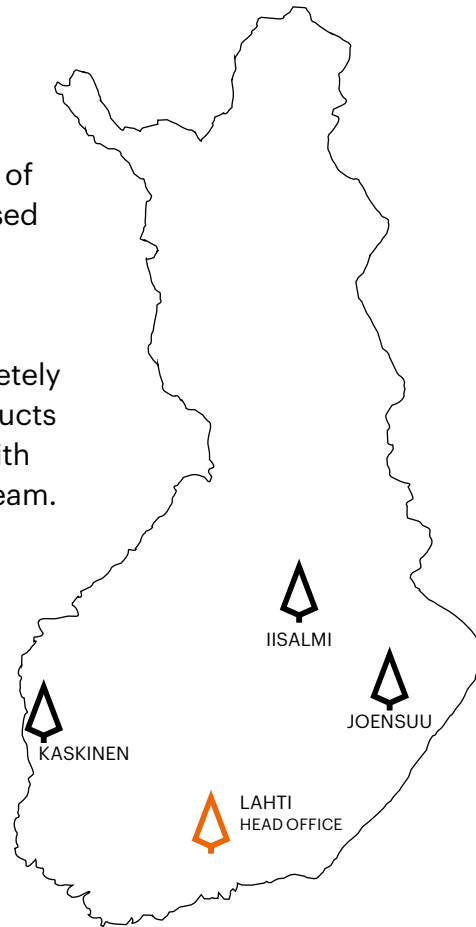


FOUNDING MEMBER  
IN THE INTERNATIONAL  
THERMOWOOD ASSOCIATION



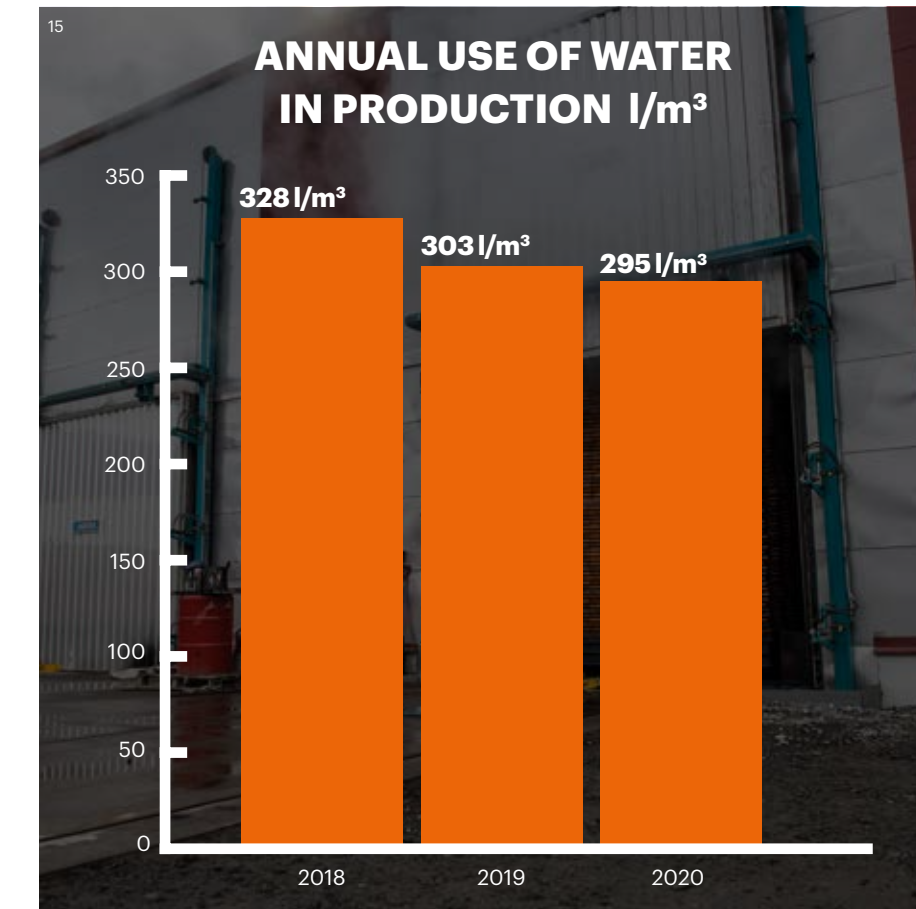
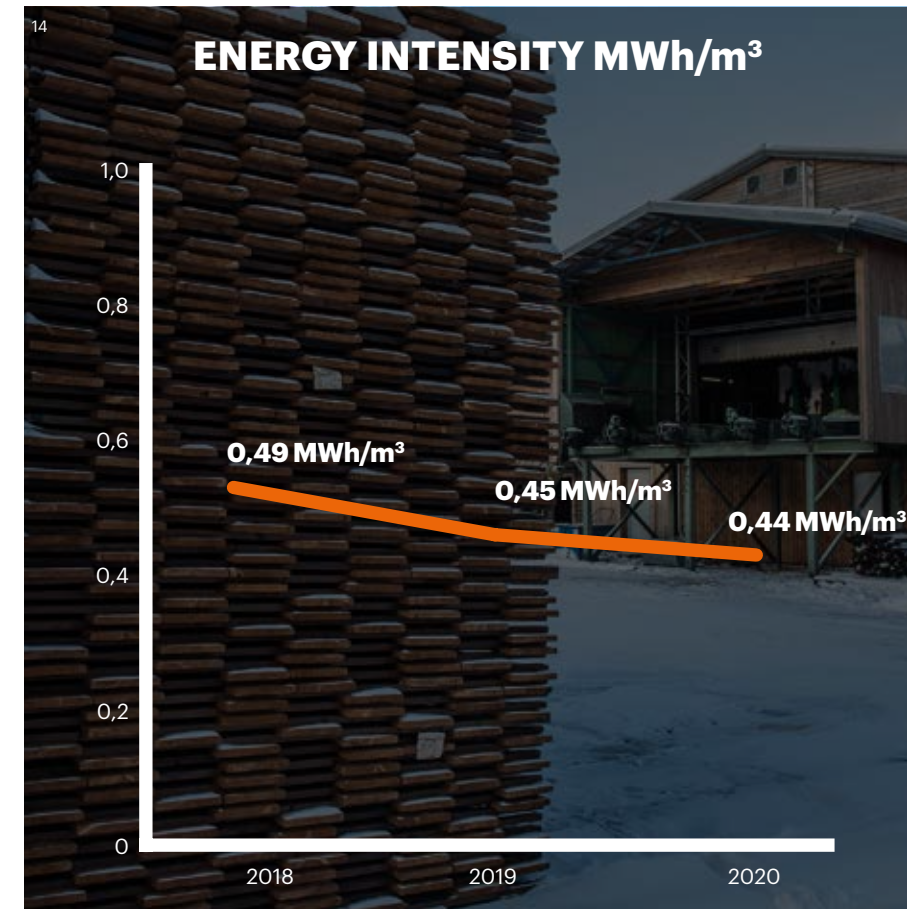
ALL PRODUCTION  
IN FINLAND

An annual capacity of  
155 000 m<sup>3</sup> is utilised  
at three production  
plants in Finland in  
the manufacture of  
sustainable, completely  
chemical-free products  
by treating them with  
strictly heat and steam.



ASSESSMENT OF  
ENVIRONMENTAL  
PERFORMANCE

**0%**  
WOOD WASTE  
TO THE LANDFILL





# HIGH AND STABLE QUALITY OF PRODUCTS

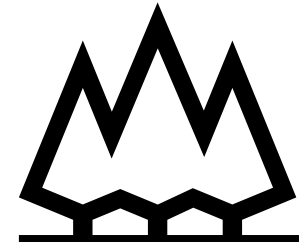
Thermowood is the ideal foundation and perfect material for **ecological and healthy living**. Every Lunawood product is an authentic piece of Nordic forest and the result of years of dedication to sustainability. Thermowood is suitable for all climates and types of weather.

The **Thermowood® trademark** is a guarantee of certified quality of products and operations. Durability is a part of product quality. The international KOMO certificate confirms that Lunawood Thermo D-class materials meet the quality requirements set for their biological durability and production. Lunawood exterior cladding products are also CE-marked, which guarantees their performance. BRE [Building Research Establishment Limited] is able to conclude that the expected service life of the LunaThermo-D used for exterior cladding and decking will be **30 years** when following the manufacturer's guidance and best practice principles of construction.

The long life cycle of Lunawood Thermowood enables our materials to act as a **carbon storage** from one generation to the next. At the same time, wood surfaces provide a healthy indoor and outdoor environment. Lunawood Thermowood is dimensionally stable and resin-free. These unique properties make Thermowood a source of endless inspiration with a long service life.

Lunawood Thermowood is a **truly sustainable product through its whole life cycle**. Our products do not necessarily need any coating or maintenance to withstand time and different weather conditions, which make them a responsible choice from a cost and sustainability point of view.

Close cooperation with clients and partners is an essential part of our quality chain. Based on their feedback, suggestions, and ideas, we are able to develop our operations to improve customer satisfaction and the quality of our products.



## OUR COMMITMENT

- The long life cycle enables carbon storage for decades
- Dimensional stability and durability
- Pure and hygienic product without resin
- No mandatory treatments or maintenance
- Bringing nature where it does not even exist naturally



## NATURAL LUXURY

We truly believe that people feel better and healthier when surrounded by natural, beautiful materials. That is what we call natural luxury.



# bre

EXPECTED SERVICE LIFE  
OF LUNAWOOD PRODUCTS  
IS 30 YEARS



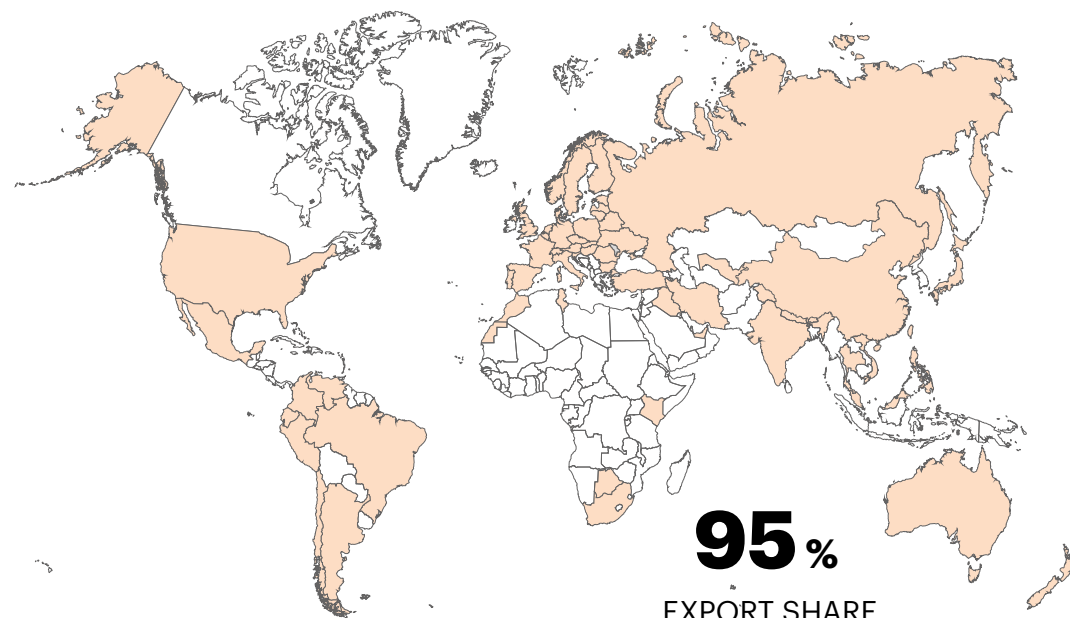
DESIGNED AND DEVELOPED  
IN FINLAND

## 48,9 M€

INCOME CASH FLOW IN  
FINNISH ECONOMY Y.2020

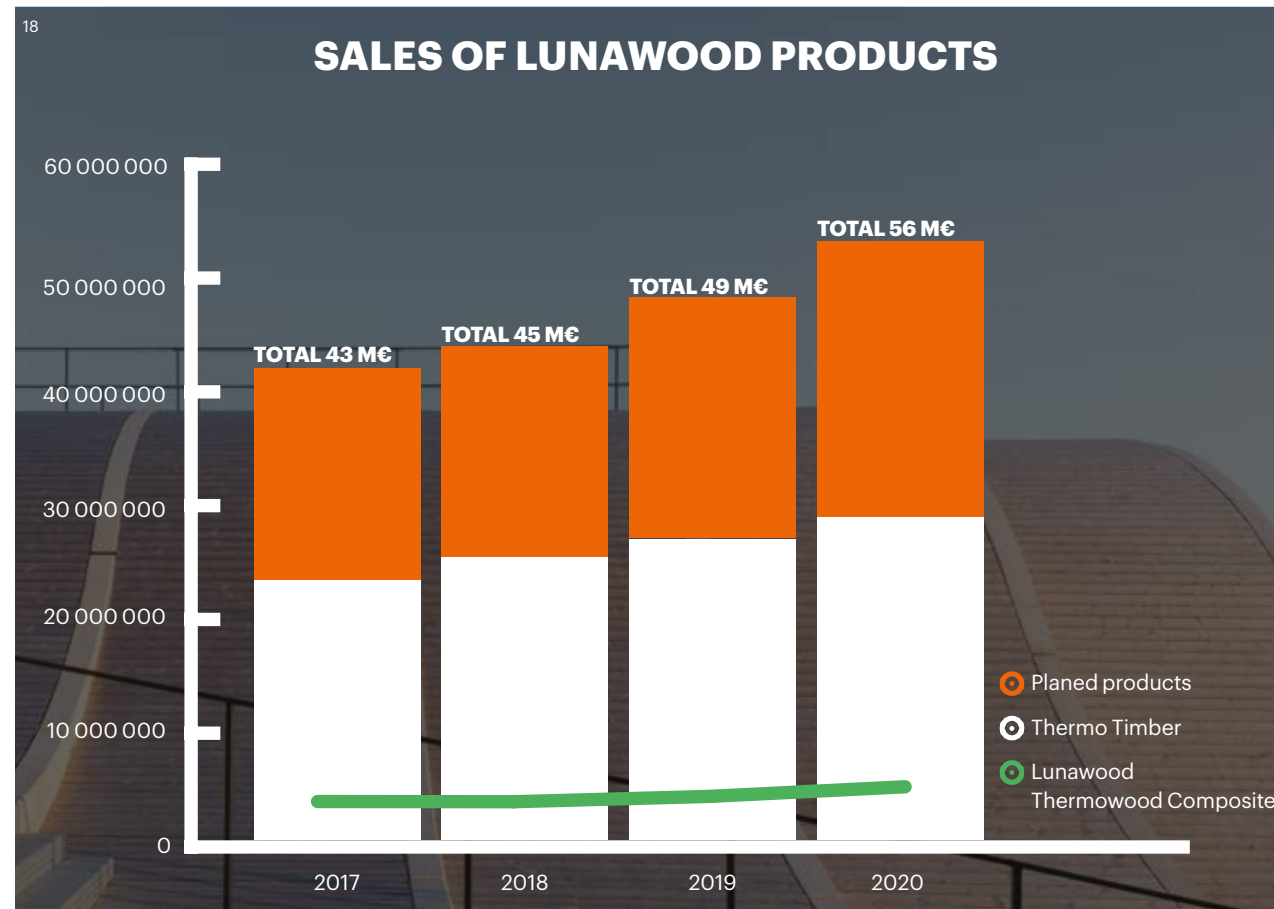


CUSTOMERS' WILLINGNESS TO  
RECOMMEND LUNAWOOD



There are no geographical restrictions on the sales of Lunawood's products, as our competitiveness is strong, especially in the areas where tropical hardwoods and illegally harvested timber are used.

## SALES OF LUNAWOOD PRODUCTS



One m<sup>3</sup> of Lunawood stores over two times the amount of CO<sub>2</sub> from air compared to the carbon emissions from the production.

## 315 kgCO<sub>2</sub>eq/m<sup>3</sup>

CARBON FOOTPRINT OF THE  
LUNAWOOD PRODUCTION\*

# 700 kgCO<sub>2</sub>eq/m<sup>3</sup>

CO<sub>2</sub> ABSORBED FROM AIR  
AND STORED IN LUNAWOOD

\*Source: Lunawood Environmental Product Declaration

# LUNAWOOD MISSIONARIES

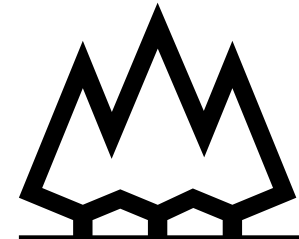
Lunawood's growth and success is founded on the **passion and commitment** of our people. Many of us have considerable experience with wood material and its industry.

Love for the forest makes us even better professionals in our field of expertise as it inspires us to work towards our mission to **reconnect people in urban environments to nature**. By contributing sustainable, high-quality Thermowood products and solutions to the world, we can do our part in tackling the global challenges at various levels of life and accelerate change for the better.

At Lunawood, we focus on building a **long-lasting relationship** with everyone we're involved with – employees, customers, partners and other stakeholders. That is why we have committed ourselves to our purpose-led mission. We see it as the main building block for our sustainable strategy and as a strong statement for anyone we meet along the way.

At Lunawood, the organisational hierarchy is low, and we work in close, well led teams. We have a good **team spirit**, which we cherish carefully. We appreciate versatile expertise and do not accept any discrimination or harassment. Lunawood people can influence their own work and we are extremely passionate and proud to see the result of our work come to life in astonishing architectural projects around the world.

In addition to the Lunawood staff, our important area of influence also includes our comprehensive subcontracting network. We work closely with our subcontractors and thus expand our employer influence, not only in our own factory locations, but also in smaller communities. We believe in long partnerships and trustworthy co-operation.



## OUR COMMITMENT

- Passion for high-quality products and service
- Work environment that supports participation and professional growth
- Equality in the workplace
- Zero tolerance for discrimination or harassment
- Sustainable and responsible growth



## LUNAWOOD MISSIONARIES

We state in our values that we achieve better results by working together. That is true as we work closely in co-creational teams and when developing new ideas, we do so together. We greatly appreciate the fact that there is versatile expertise throughout our organisation. Every single person is a unique entity and that is why we all think it is essential to have a holistic view of our staff.



# 125

LUNAWOOD  
PEOPLE  
IN TOTAL

# 22

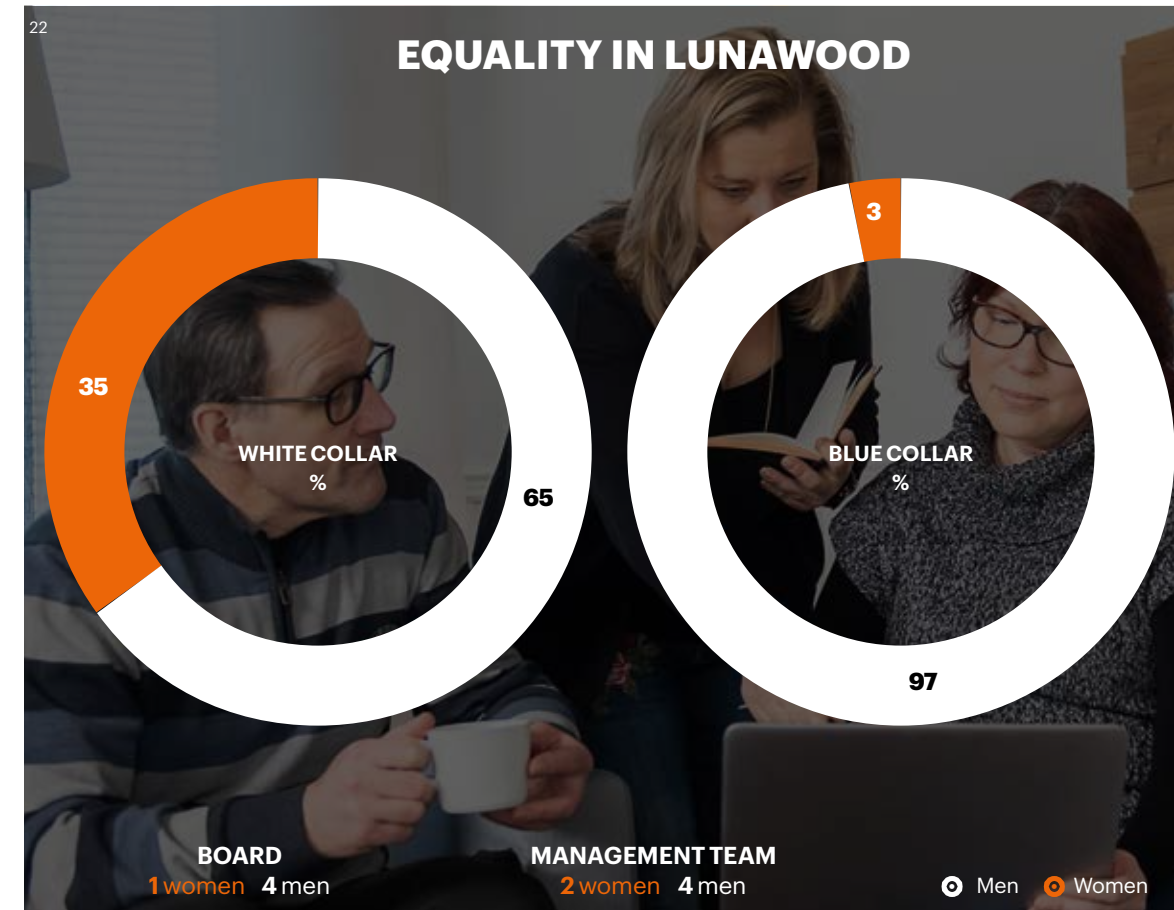
NET PROMOTER  
SCORE OF  
LUNAWOOD  
PERSONNEL SURVEY

# 0

DISCRIMINATION  
DURING 2020

# 8%

EMPLOYEE  
TURNOVER



### Competence develops in an equal work community

Lunawood's culture involves **making results together**, which is also one of our values. Despite our significant growth, our goal is to maintain a **low level of hierarchy** and **active co-operation** between teams so that our personnel's opportunities to influence are maintained and competence can be developed in various roles. The number of personnel grew by a total of 12 people in 2020 and six new appointments were made during the year without external recruitment.

We also offer **career development opportunities** and learning through our trainee program and have an active co-operation with the local universities. University students on the verge of their graduation gain experience to work assignments in their field and can also do an internship or thesis related to their studies. During the year, two of those who advanced in their careers through internal appointment took place through the trainee program.

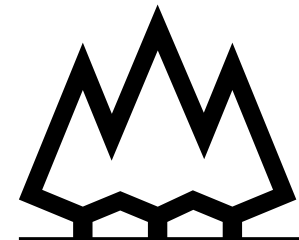
Less than 10% of Lunawood's personnel part-time employees, who mostly work in temporary tasks in production at some time of the week. Lunawood employs subcontractors and temporary staff in production in average 10 people per month, with the exception of production downtime and investment projects. We work with local agencies who are familiar with Lunawood's business and have the opportunity to offer long-term temporary employment relationships to the staff.

# SAFETY

Safety at work and good working conditions are our top priority. We believe that safety is built on the right attitude and it must strongly be in our mindset in every task of our daily work. We develop safety together, report all safety hazards and work without delay to minimise all work-related risks. We invest in improving safety.

We train our personnel in safety matters regularly and monitor the safety development. During the year, fire safety has strongly been on our training agenda and safety was followed up in regular safety walks in all teams. Our management and supervisors know their responsibility in ensuring the functioning of safety practices and setting an example of how to work safely.

It is the responsibility of every Lunawood employee to follow safety instructions, use the necessary protective equipment and report any deficiencies they find. Before starting to work, the hazards associated with the task will be assessed, considered and mitigated, and the common operating instructions will be followed.



## OUR COMMITMENT

- Constant improvement of safety at work
- Zero accidents
- Needed action taken without delay to ensure safety
- Improved fire safety
- Good working ability in the long run – healthy and safe from work all the way home



## SAFETY IS OUR COMMON PRIORITY

Safety is our most important priority. We want to get our people back home safe and sound. We are truly committed to managing our processes in the safest way to ensure zero accidents in the workplace.

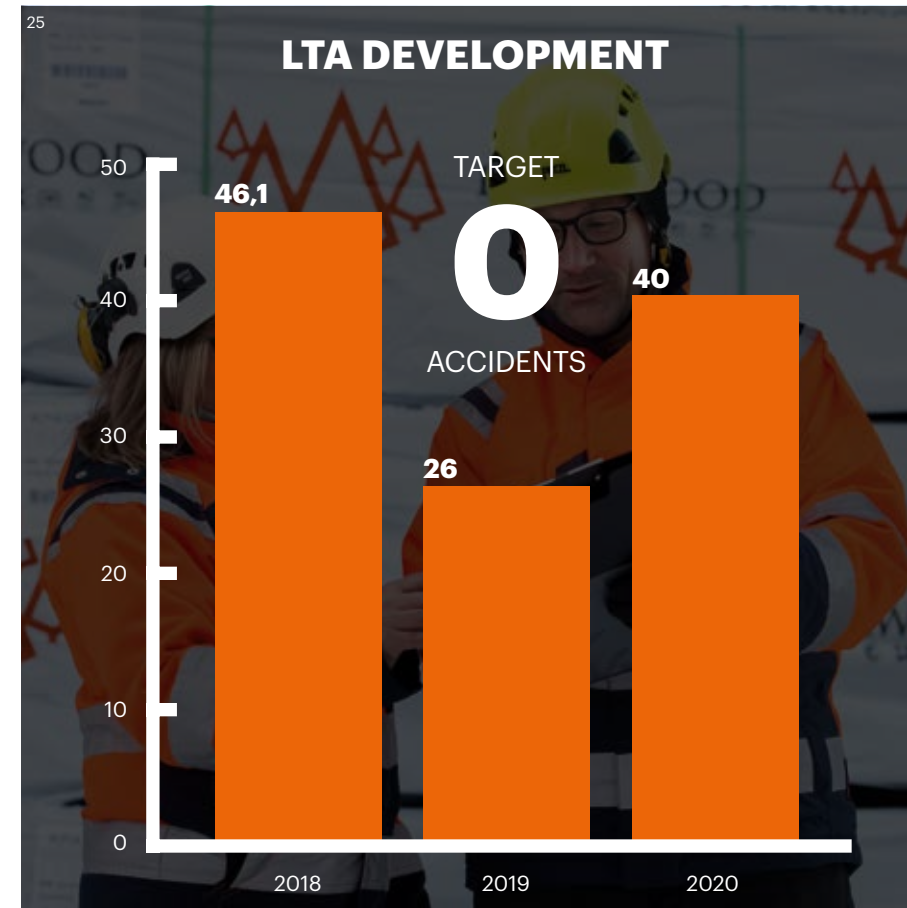


TARGET  
**200**  
HAZARD REPORTS

TARGET  
**40**  
SAFETY WALKS

**96,3%**  
HEALTHY  
ATTENDANCE

**6**  
PEOPLE HAVING  
SICK LEAVES OF  
OVER 30 DAYS



#### Fire safety trainings for everyone

In 2020 large-scale fire safety trainings were held at both factories. **Fire prevention** and **high fire safety standards** are part of thermowood manufacturing and refining processes and personnel's competence to effectively in a fire hazard situation is essential for safety. The use of fire extinguishers and fire truck were part of the trainings as well as identification of potential fire hazards. Lunawood's fire safety trainer, experienced fire fighter, coached the personnel for several weeks with **hands-on training sessions** including recap of first-aid.

Analyses of all fire hazards together with the personnel was part of the learning process.

ESG initiative	Target	Key metrics	Unit	Measuring frequency	2018	2019	2020
<b>Environment and climate</b>	<b>1. Increasing the share of renewable energy</b>	1. Production carbon intensity	kg CO <sub>2</sub> / m <sup>3</sup>	annual	62,47 **	49,77 **	49,65 **
		2. Footprint	ton CO <sub>2</sub>	annual	6771 **	5648	5850 **
		3. Energy intensity (heat & electricity)	MWh/m <sup>3</sup>	monthly	0,49	0,45	0,44
	<b>2. Committing to source certified raw material from the Nordics</b>	4. Ash from Kaskinen	kg/renewable MWh heat	annual	10,0 **	10,3 **	14,2 **
		5. Amount of hazardous waste *	Ton	annual	70	103	77
	<b>3. Searching for circular economy solutions - considering new uses for by-products</b>	6. Normal waste	Ton	annual	81 **	80 **	71 **
		7. Water usage	l/m <sup>3</sup>	annual	328 **	303 **	295 **
		8. Share of TW fibre to TWPC instead of energy use	%	annual	25,0	21,1	26,7
		9. Share of certified raw material	%	continuous	93	90,1	88,7
		10. Percentage of the energy that is from renewable sources	%	annual	48,9 **	54,9	53,7 **

\* Share of hazardous waste that is reused, recycled or composed under investigation

\*\* Low precision data

ESG initiative	Target	Key metrics	Unit	Measuring frequency	2018	2019	2020
<b>Non-discrimination and Equality</b>	<b>1. Equality in the workplace</b> <b>2. Create an including work-environment</b> <b>3. Zero discrimination or harassment</b>	1. Split of gender in the management team	absol.	annual	Men 4 Women 1	Men 4 Women 1	Men 4 Women 2
		2. Split of gender on the board	absol.	annual	Men 4 Women 1	Men 4 Women 1	Men 4 Women 1
		3. Split of gender in Lunaholder group, white collars	%	annual	Men 66 Women 34	Men 60 Women 40	Men 65 Women 35
		4. Split of gender in Lunaholder group, blue collars	%	annual	Men 97 Women 3	Men 97 Women 3	Men 97 Women 3
		5. Incidents of discrimination and corrective actions taken	absol.	annual	0	0	0
		6. Use of family leave *	Persons / year	annual	-	uw	Women 2 Men 1
		7. Salary Development Blue collar **	%	annual		3,6	2,3
		8. Salary Development Men white collar	%	annual	6,6	4,4	4,3
		9. Salary Development Women white collar	%	annual	2,6	8,7	6,4

Salary Development: people employed 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	2018	2019	2020
<b>Safe and sustainable work place</b>	<b>1. No accidents – monitoring the safety of working areas.</b>	1. LTA	accidents/million working hours	monthly	46,1	26	40
		2. Number of workplace accidents with at least one day of absence	%	monthly	8	4	7
		3. Safety hazard reports	psc	monthly	0	4	57
	<b>2. Needed actions done without delay.</b>	4. Near miss reports	psc	monthly	8	48	5
		5. Absence rate	%	monthly	3,6	4	3,7
	<b>3. Improved fire safety.</b>	6. Sick leaves of over 30 days	No. of people	annual	-*	3	6
		7. Employee satisfaction	NPS	annual	3,8/5**	-	22
		8. Employee turnover ****	%	annual	21	4	8
		9. Change in the number of personnel ***	absol.	annual	+6	+10	+12
<b>4. Good working ability in the long run, from work to home healthy and safe.</b>							

\* no information available    \*\* employee satisfaction 2018 , scale 1-5    \*\*\* year average    \*\*\*\* Net turnover (excl.short term employees)

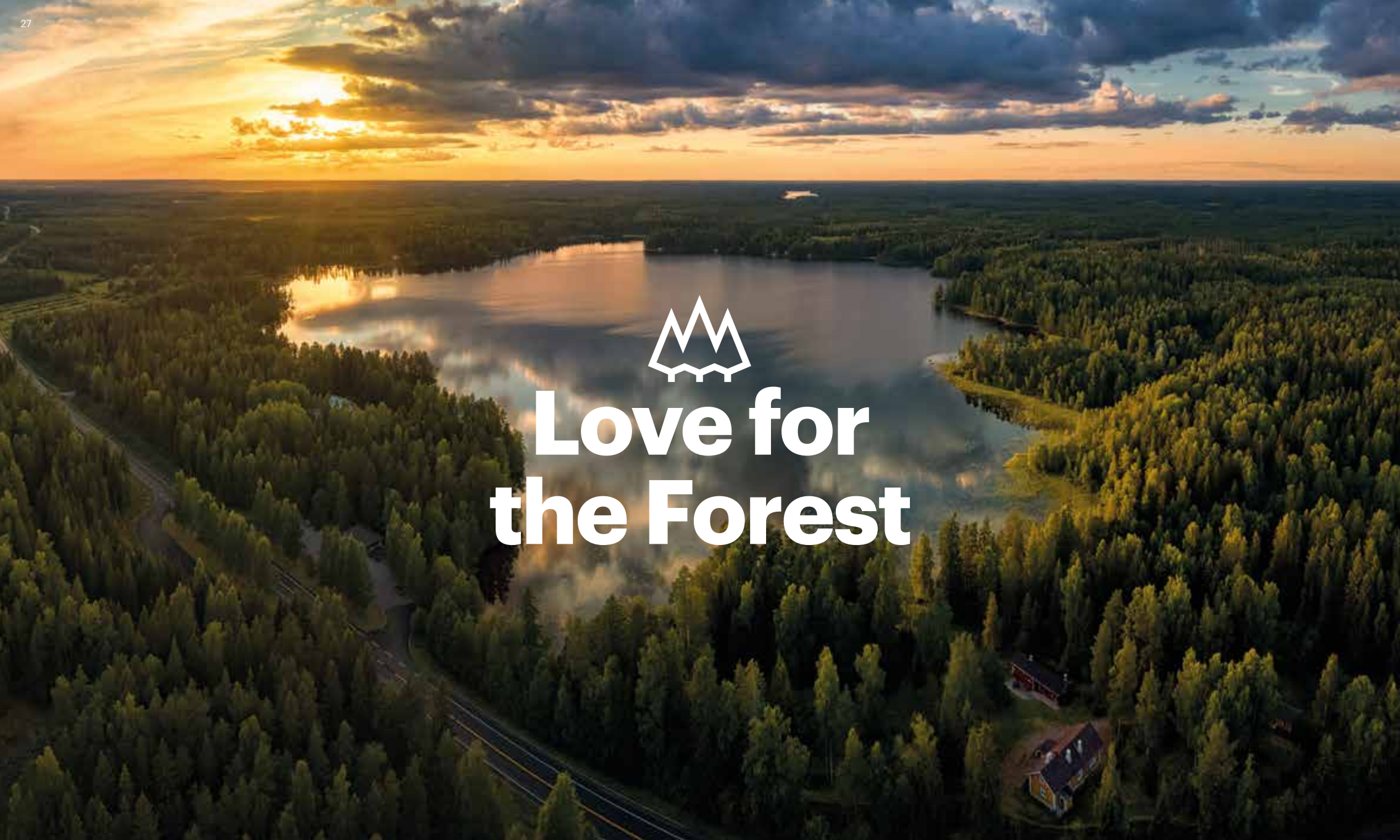
ESG initiative	Target	Key metrics	Unit	Measuring frequency	2018	2019	2020
<b>Anti-corruption &amp; Conflicts of interest</b>	<b>1. Code of Conduct in use (internal &amp; 3<sup>rd</sup> party)</b> <b>2. External audits successfully passed and corrective actions done in time</b>	1. Percentage of total sales attributable to risk countries	%	Annual	8,5	7,3	6,8
		2. Policies in place	Whistleblowing in use	Annual	Not yet	Not yet	Yes
		3. Basic training and commitment to Code of Conduct (%)	%	Per quarter	-	-	-
		4. Confirmed incidents of corruption	YES/NO	Annual	No	No	No
		5. Occupational health and safety audits have been conducted	Done in time	Annual	done	done	done
		6. Environmental audits have been conducted	Done in time	Annual	yes	yes	yes



ESG initiative	Target	Key metrics	Unit	Measuring frequency	2018	2019	2020
<b>Sustainable and responsible growth</b>	<b>1. Committing to sustainable and responsible growth</b>	1. Profit development, EBITDA M€	Meets expectations	monthly	5,6	5,6	7,2
		2. Successful financial audit	Clean audit report	Annual	YES	YES	YES
	<b>2. Committing to the promises to our customers</b>	3. Governance policies in place	Yes/no	annual	YES	YES	YES
		4. Customer Satisfaction	NPS	annual	43	-	58

## Photocredits

- Cover: Lunawood
- Picture 1: Sami Tirkkonen, Lunawood
- Picture 2: Sami Tirkkonen, Lunawood
- Picture 3: Private project, Architect: DO ARCHITECTS, Lithuania, 2016, Photo: Norbert Tukaj
- Picture 4: Sami Tirkkonen, Lunawood
- Picture 5: Jesse Kallio, Lunawood
- Picture 6: Casa A / Architect: REMA arquitectos, Portugal, 2016, Photo: Ivo Tavares Studio
- Picture 7: Marasi Floating Homes By Admares, Architect: U+A and Sigge Architects, United Arab Emirates, 2017, Photo: Joni Rantasalo
- Picture 8: Lunawood
- Picture 9: Sami Tirkkonen, Lunawood
- Picture 10: Luxusvilla, Architect: Sigge Architects, Finland, 2017, Photo: Lunawood
- Picture 11: Sami Tirkkonen, Lunawood
- Picture 12: Sami Tirkkonen, Lunawood
- Picture 13: Sami Tirkkonen, Lunawood
- Picture 14: Sami Tirkkonen, Lunawood
- Picture 15: Sami Tirkkonen, Lunawood
- Picture 16: Private project, Architect: DO ARCHITECTS, Lithuania, 2016, Photo: Norbert Tukaj
- Picture 17: B Home, Architect: Baragaño Architects, Spain, 2015, Photo: Mariela Apollonio
- Picture 18: Lahofer Winery, Architect: Chybik + Kristof Architects & Urban Designers, Czech, 2020, Photo: Alexandra Timpau, Alex Shoots Buildings
- Picture 19: Sami Tirkkonen, Lunawood
- Picture 20: Sami Tirkkonen, Lunawood
- Picture 21: Sami Tirkkonen, Lunawood
- Picture 22: Sami Tirkkonen, Lunawood
- Picture 23: Sami Tirkkonen, Lunawood
- Picture 24: Sami Tirkkonen, Lunawood
- Picture 25: Sami Tirkkonen, Lunawood
- Picture 26: Sami Tirkkonen, Lunawood
- Picture 27: Arsi Koivula, Lunawood



# Love for the Forest