



TIMBECO WOODHOUSE OÜ
ESG REPORT
2025

Timbeco is proudly releasing its ESG report for the fourth consecutive year on a voluntary basis. This initiative underscores the company's commitment to transparency, climate objectives, and the well-being of its partners, employees, and local community.

32 YEARS OF TIMBECO

sustainable wooden house manufacturer

Timbeco is a wooden house manufacturer with over 32 years of experience, combining several companies with strong competencies:

- Timbeco Woodhouse OÜ – production of element and modular buildings
- Timbeco Woodmill OÜ – processing of lumber and production of log houses
- Timbeco Ehitus OÜ – construction and real estate development in Estonia
- Timbeco Construction OÜ – erection of element and modular buildings in foreign markets

Timbeco's office and production unit are located in Tõdva, Saku rural municipality. The companies employ a total of approximately 80 people, who contribute to the creation of high-quality and environmentally conscious solutions on a daily basis.

timber + ecological = TIMBECO

32 YEARS OF TIMBECO

The company name Timbeco is derived from the English words "timber" and "ecological", which well reflect the company's core business and values. The name symbolizes the use of wood as a natural and renewable construction solution and Timbeco's commitment to environmentally friendly, innovative and energy-efficient construction methods.

In 2025, Timbeco will celebrate its 32nd year of operation – over three decades of experience in developing innovative and sustainable wooden buildings and energy-efficient solutions.

VISION

Leading manufacturer of wooden buildings in Europe

MISSION

We create a higher quality of life in an environmentally friendly way

COOPERATION

VALUES

SAFETY

CONFIDENCE

TRANSPARENCY

SUSTAINABILITY

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32 years of dedication to wooden buildings

We have grown and evolved as a unified team, becoming one of Estonia's leading prefabricated timber house manufacturers and a trusted partner across Europe. Our long-term experience and innovative mindset form the foundation for delivering high-quality and environmentally responsible building solutions.

In recent years, challenging market conditions have unfortunately forced us to part with some highly valued professionals. This experience has strengthened our determination to invest even more in team development, talent retention, and professional growth.

Our mission is to create better living environments in a sustainable way and to become Europe's leading producer of timber prefabricated buildings. To achieve this, we continuously develop new technologies, optimize material use, and enhance our team's skills to remain among the top performers in the industry.

In recent years, we have significantly upgraded our Tõdva production complex, making it more modern, safe, and environmentally efficient. We have placed strong emphasis on storage safety, fire protection, and improved waste-sorting capacity. A robust production base combined with a motivated team enables us to take on increasingly ambitious projects in both element and modular construction.

Amidst turbulent economic conditions, we prioritize employee development, health and well-being, and the maintenance of a high professional standard. We are introducing more flexible working arrangements to support work-life balance, recognizing long-term colleagues and nurturing an open, supportive company culture. Our goal is to ensure that top professionals can continue to grow and thrive at Timbeco, regardless of external market challenges.

Timbeco's strategy is built on the principles of sustainable development, with a clear goal to achieve carbon-neutral operations by 2028. We account for the carbon-sequestering potential of buildings, energy consumption, transport impacts, and waste recycling throughout our processes.

We aim to strengthen our capability to calculate and reduce the full life-cycle carbon footprint of buildings—starting already from the design phase. Close collaboration with our partners allows us to identify the most effective and practical solutions to achieve these goals.

By digitizing and optimizing our processes, reducing waste, and applying the principles of circular economy, we are already achieving measurable results with high added value.

We believe our expertise can make a significant contribution to the wave of apartment building renovations in Estonia and Central Europe, offering energy-efficient and low-carbon solutions. The growing market demand for sustainable and efficient buildings creates excellent opportunities for the wider implementation of Timbeco's technologies and services.

Collaboration with universities and research initiatives enables us to transform innovative knowledge into practical value, bringing the best practices of the sector directly into the construction process. Through these joint efforts, we can design, manufacture, and assemble buildings that enhance living environments, ensure energy efficiency and environmental responsibility, and create lasting sustainable value for our clients and communities.



Siim Leisalu
CEO



Last year in brief



Timbeco joins Renomize project

In January 2025, Timbeco Design Manager Aili Animägi participated in the opening event of the RENOMIZE project in Klagenfurt, Austria. This initiative aims to make prefabricated renovation solutions more efficient, economical and practical, helping to solve the biggest challenges in building renovation. The three-day meeting provided a comprehensive overview of the work packages, fostered collaboration and laid the foundation for the next steps.

First apartment building facade project completed in Germany

A landmark apartment building facade project combining innovation and sustainability was completed in Berlin in 2024. It is a hybrid building with load-bearing structures made of both concrete and cross-laminated timber (CLT), reducing the construction's carbon footprint and increasing the efficiency of material use.



Eero Nigumann to speak at Estonian Housing Association Innovation Conference

Great to see collaboration at EKYL's 5th Innovation Conference for Housing Associations! Eero's valuable presentation included the idea of how joint renovation of several apartment buildings can save costs through joint planning and procurement. He also introduced the EU-co-funded Drastic project, which offers new solutions for reducing carbon and promoting a circular economy in construction.

Value chain and stakeholders

Timbeco Woodhouse OÜ's value chain includes raw material miners, timber processors, construction material and packaging manufacturers, our own production facility and construction site logistics. Our impact on the previous stage of the value chain is minimal, as raw materials, packaging and other production requirements are ordered from various manufacturers and

Upstream stage of the value chain	Value creation	The next stage of the value chain
• Raw material procurement • Construction and packaging materials production • Materials transportation	• Design and project management • Transport of materials to the factory • CNC processing of wood • Manufacturing of building components • Transport to the destination and erection of buildings	• Use of buildings for their intended purpose • Recycling of waste



Value creation

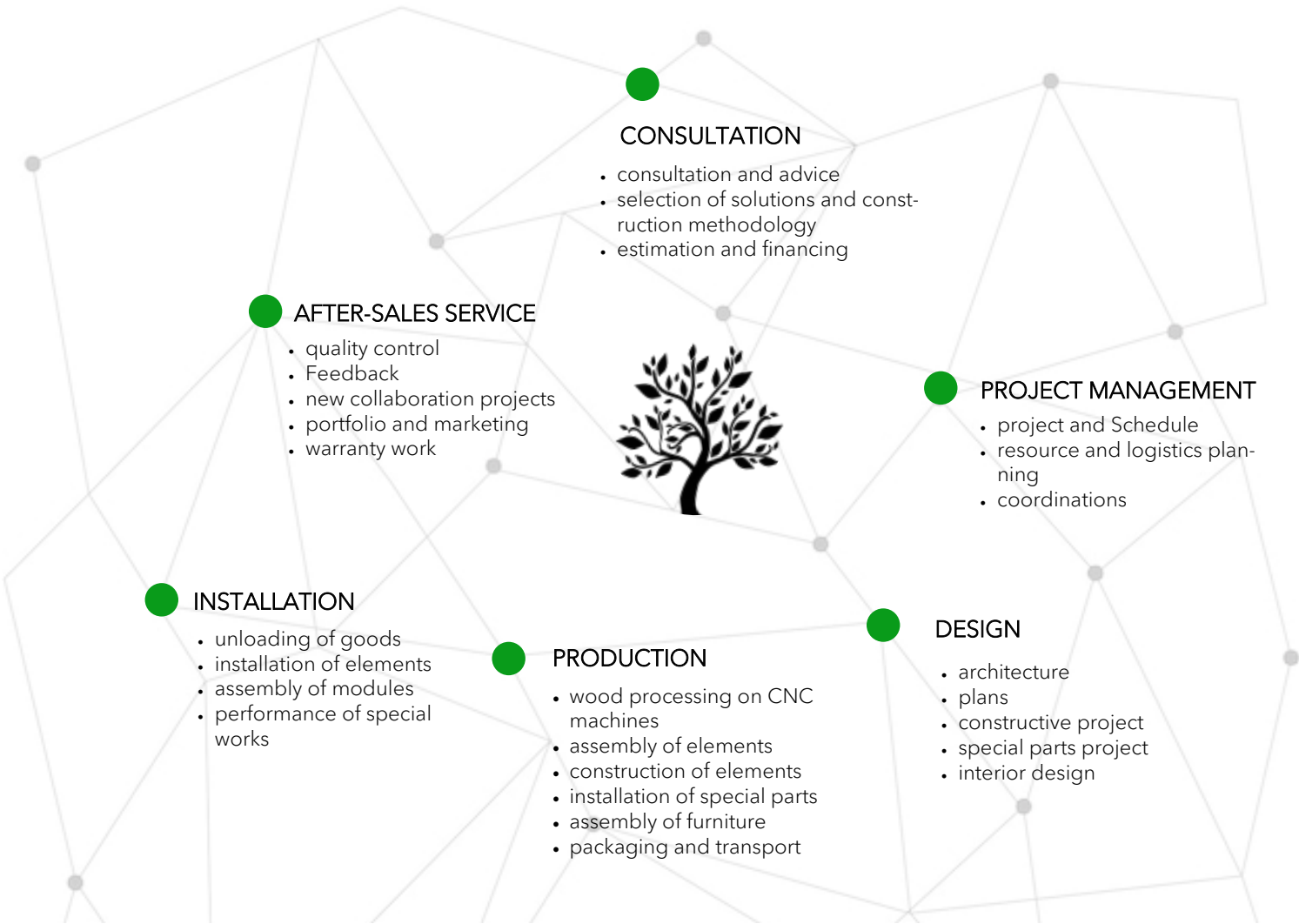
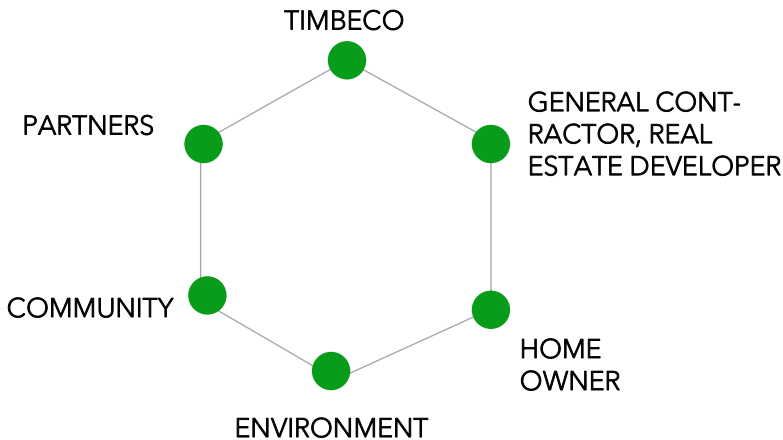
We believe that rapid urbanization and growing environmental challenges require smart and innovative solutions. Timbeco’s mission is to bring sustainability, technological development and a responsible mindset to the residential real estate sector.

We are convinced that the buildings of the future will largely be built in factories, where high quality, energy efficiency and adaptability to the needs of each customer are ensured. This approach allows us to create environmentally friendly, sustainable and affordable living solutions.

In collaboration with our partners, we design living environments that support healthy, happy and natural living – building a future where sustainability and comfort go hand in hand.

Timbeco's product is a service

At Timbeco, we understand that every project is a significant investment for our client. That's why we treat each project as a separate business plan, the success of which is as important to us as it is to our client. We see ourselves as a partner who helps the client realize their vision.



Services

Timbeco is constantly developing its services, analyzing daily changes in target markets and taking into account long-term green and digitalization trends in the construction sector. Our focus is on the construction of element buildings, facade solutions and modular buildings, which is why we have expanded our production capacity in recent years. We see that factory reconstruction solutions are a rapidly growing market segment, where the key factors for success are standardized solutions, well-thought-out material selection and efficient construction processes. This approach ensures reliability and quality.

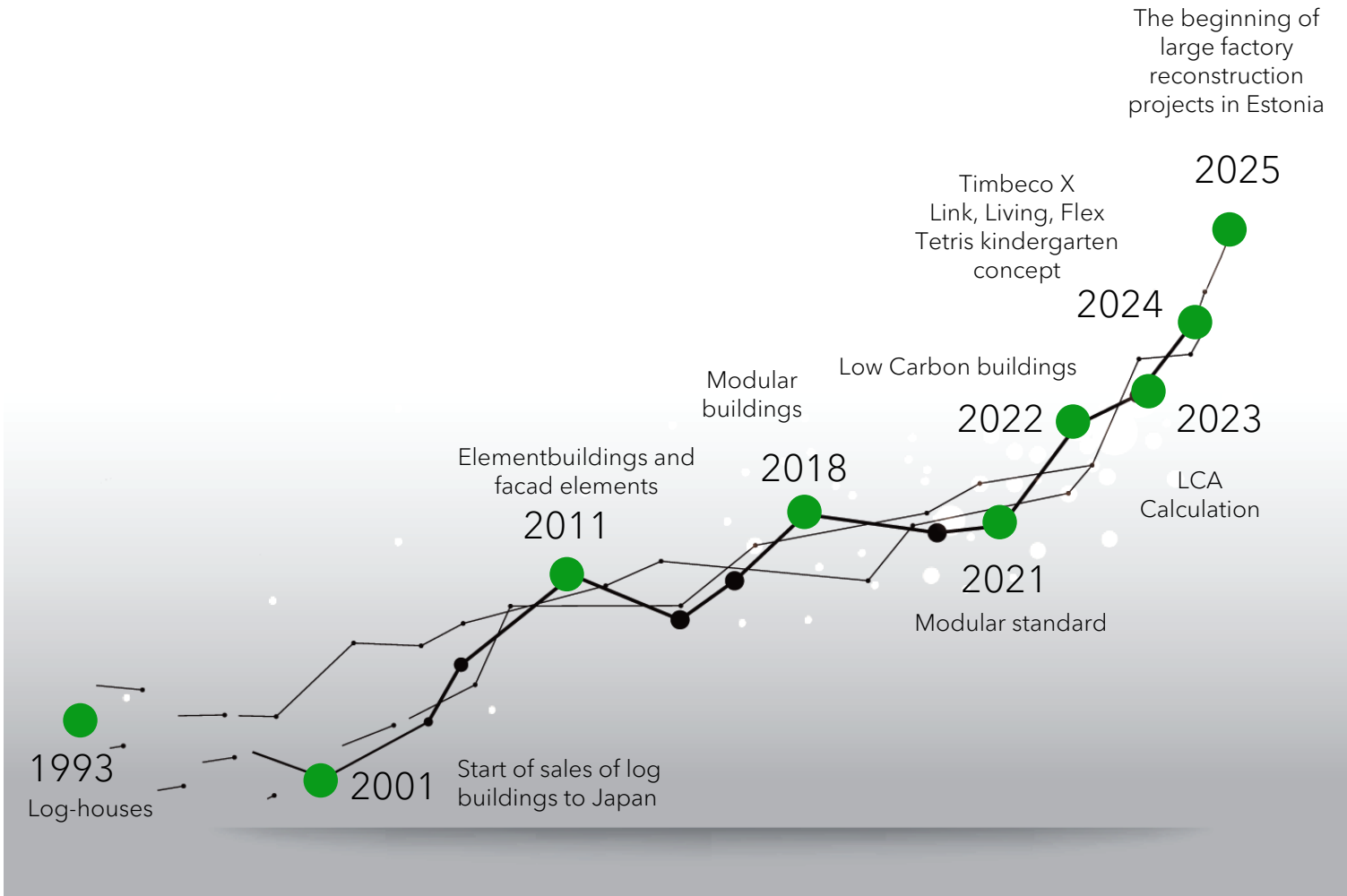
Timbeco's comprehensive product and project management solutions allow customers to grow their business significantly without increasing resources, as we have clear responsibility for the entire process - from design and production to installation and after-sales service.

We believe that factory production of building components is an innovative and future-proof construction method that combines the efficiency of standardization and the uniqueness of each project, providing a sustainable, high-quality and value-creating result.

Timbeco sees significant growth opportunities in the public buildings sector in the coming years, where increasingly stringent environmental requirements are being imposed on major procurements and customer interest in low-impact buildings is growing.

We are ready for the green wave of the construction sector, offering buildings that are manufactured from low-carbon materials and erected using efficient and innovative construction methods. Our in-house carbon footprint (LCA) calculation capabilities allow us to offer added value to our customers by assessing and optimizing the environmental impact of buildings at an early stage of the project.

The early involvement of Timbeco’s timber house factory team in the project allows us to maximize the carbon footprint reduction effect, as important decisions on materials and construction methods are made right from the start. This ensures environmental sustainability, quality and efficiency throughout the project.



Double Materiality Assessment

In the first half of 2025, Timbeco conducted a double materiality assessment to identify the most significant sustainability topics related to the company’s activities. The assessment covered both internal ESG impacts within the company and external impacts on the surrounding environment and stakeholders. The process was developed based on the guidelines of the European Financial Reporting Advisory Group (EFRAG).

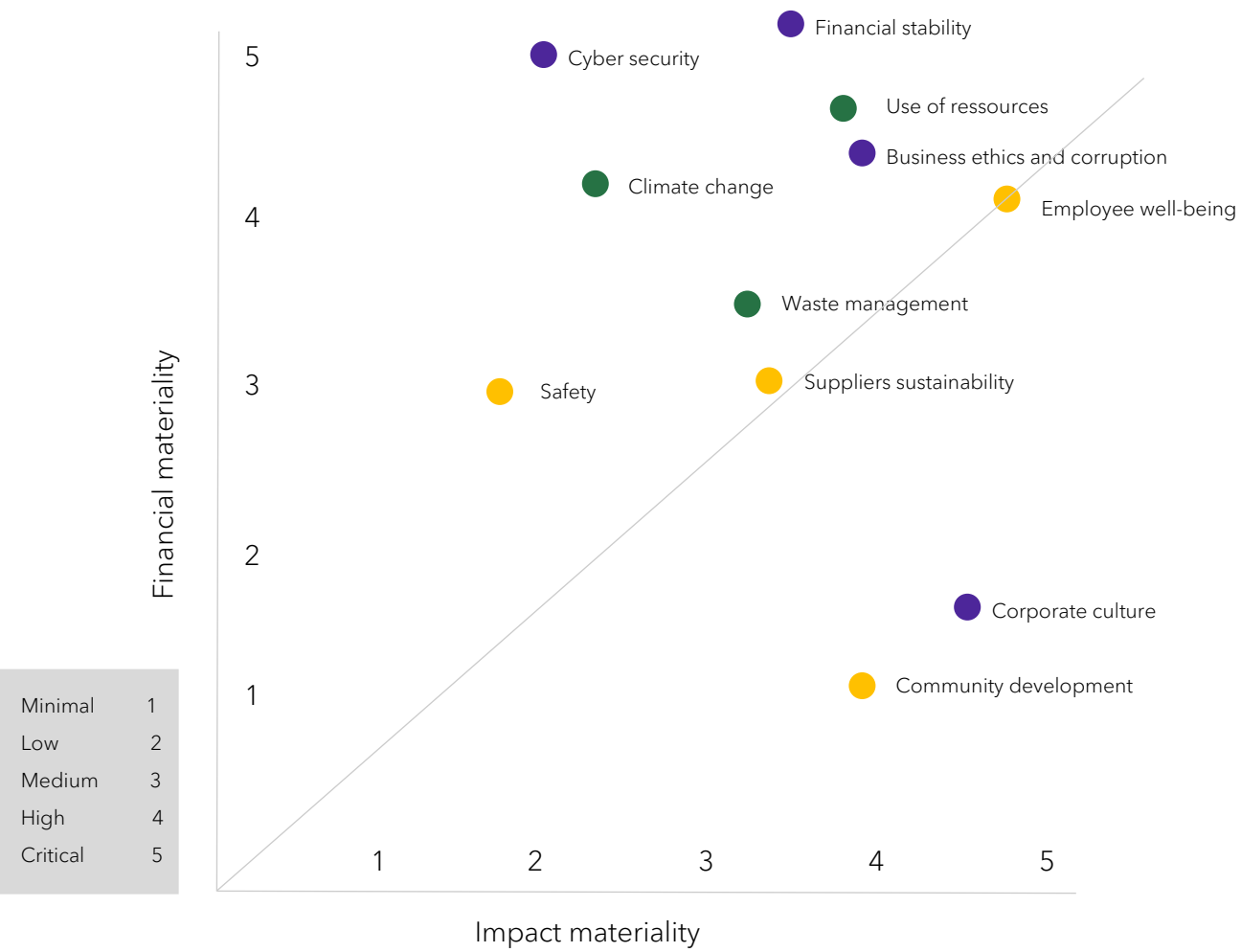
The assessment was carried out in three stages:

Understanding the company context - We analyzed existing ESG-related documents and conducted interviews and discussions with the management team to map the current situation and future directions.

Identification of impacts, risks, and opportunities (IROs) - We assessed the actual and potential impacts of the company’s operations.

Determination of materiality - We identified the most material IROs and related sustainability topics that require more detailed attention.

Key stakeholders were also involved in the process. They participated in interviews, the results of which provided valuable input for the materiality assessment and helped identify the topics with the greatest impact on both Timbeco and its areas of influence.



Field	Impact Significance (1-5)	Financial Importance (1-5)	Stakeholder comments
Climate change and CO ₂ emissions	5	5	Partners and customers expect CO ₂ reduction
Circular economy and waste management	4	3	Recycling is important because of our sustainability principles
Employee welfare and rights	4	4	Important for retaining employees and avoiding labor shortages
Supply chain sustainability	4	4	Supplier stability and financial security
Energy use and pollution	3	3	Energy saving and clean natural environment
Business ethics and corruption	2	3	Transparency in doing business and keeping promises

- E

Environmental Impact

Climate Change

Resource Use

Waste Management
- S

Social environment

Employee well-being

Occupational safety

Supplier sustainability

Community development
- G

Governance

Business Ethics and Corruption

Cybersecurity

Financial Stability

Corporate Culture



Impacts, risks and opportunities

Impacts – How the company’s activities affect people, the environment, and society – both positively and negatively, including actual and potential impacts.

Risks – How environmental or social issues (e.g. climate change, regulations, supply chain disruptions) may cause harm to the company or limit its business operations.

Opportunities – How addressing sustainability topics (e.g. energy efficiency, low-carbon products) can create added value or provide a competitive advantage.

In a double materiality assessment, each IRO is evaluated from two perspectives:

Impact materiality: The extent to which the company affects people and the environment.

Financial materiality: The extent to which the topic may affect the company’s financial performance.



Field	Category (I/R/O)	Importance (1-5)	Explanation
Carbon footprint of products (Scope 1, 2, 3)	Impacts	5	Direct and indirect impact on CO ₂ emissions across the entire value chain
Origin of wood material and sustainable forestry	Impacts	5	Sustainable certifications (FSC, PEFC) are of critical importance
Construction waste generation and recycling	Impacts	4	Reduction and recycling of waste generated in production and construction processes
Energy-efficient production	Impacts	3	Optimization of energy use in production and transition to renewable energy
Transport and logistics impact	Impacts	4	Optimization of logistics and reduction of transport-related emissions
Physical risks of climate change (storms, floods)	Risks	4	Extreme weather events may disrupt production and deliveries
Transition risks (EU regulations, carbon pricing)	Risks	5	Tightening regulations may increase costs
Supply chain risks (availability of raw materials)	Risks	5	Rising prices or decreased availability of timber raw materials
Reputational risks (certifications and market expectations)	Risks	3	Market demand for certified and transparent operations
Low carbon footprint products (CLT, natural building materials)	Opportunities	5	Sustainable timber elements offer a competitive advantage
Circular economy (reuse of materials in construction)	Opportunities	4	Material reuse reduces costs and environmental impact
New markets and green subsidies	Opportunities	4	Utilization of green investments and EU funding
Innovation in the design of energy-efficient houses	Opportunities	5	New technical solutions to improve energy efficiency



TIMBECO SUSTAINABLE DEVELOPMENT GOALS

Sustainable development goals (ESG Environmental, social and corporate governance) help Timbeco to put the company's activities in a larger context and to create connections with other organizations and fields. Among the goals of sustainable development, we have highlighted three areas where we see that we can create the greatest impact with our activities. We believe that these are goals where we can actively help create real change.

PRINCIPLES

- The success of the company depends on our people. We understand that success is directly related to the well-being of people who create value, who are offered a supportive work environment and who feel a personal and collective sense of mission and that they are valued;
- We have focused on the development of digital services, with which we reduce our ecological footprint. This allows to reduce paper and time consumption and create flexible forms of remote work;
- We build with wood because we value it as the most sustainable building material. We strive every day to find new innovative and environmentally friendly construction solutions;
- Timbeco wooden buildings are durable and visually dignified and meet the principles of a modern living environment. We start from circular economy guidelines and design buildings in such a way that they can be relocated, expanded, and construction materials can be used again;
- We want to build new buildings in cooperation with our customers in such a way that the best possible living conditions are guaranteed indoors (suitable humidity level, ventilation and soundproofing);
- We build in a controlled working environment because it ensures higher quality and better use of resources;
- We use the most environmentally friendly solutions in transport and choose our partners according to this principle.



8. Decent work and economic growth

Challenge: To achieve greater economic productivity; make the use of resources more efficient.



12. Responsible consumption and production

Challenge: To use natural resources more efficiently by reducing waste generation and raising people's awareness.



13. Climate action

Challenge: Improve awareness and corporate capacity in climate change mitigation.

"We create a better quality of life in an environmentally friendly way"



OBJECTIVES/ACTIVITIES	2021	2022	2023	2024	CHANGES
TURNOVER (mil.EUR)	12,5	16,2	10,1	7,8	
E-ENVIRONMENT					
ENERGY CONSUMPTION PRODUCTION Kwh 1m ² per year	2,76	2	2,3	1,58	■
ENERGY CONSUMPTION OFFICE Kwh 1m ² per year	4,96	3,44	4,94	3,45	■
WATER / SEWERAGE, OFFICE AND PRODUCTION m ³	3,92	6,1	3,65	3	■
MUNICIPAL WASTE OFFICE m ³	3,74	3	1,56	0,4	■
PAPER/CARDBOARD IN THE OFFICE m ³	0,89	1,02	1	0,39	■
OLMEJÄÄTMED TOOTMINE m ³	2,37	2,1	3	0,42	■
FILM WASTE RECOVERED IN PRODUCTION t	0,87	0,7	0,86	1,6	■
CARTONG RECYCLED IN PRODUCTION t	0,54	0,28	0,65	0,43	■
MIXED WASTE IN PRODUCTION t	7,38	3,72	3,62	3,2	■
GYPSUM RESIDUES RECYCLED t	8,4	6,4	1,52	3,43	■
WOOD RESIDUES RECYCLED t	1	7	9,2	6,9	■
SCRAP METAL t	0,1	0,26	0,08	0,048	■
HAZARDOUS CHEMICALS t	0,11	0,4	0,4	1,48	■
<i>*unit of reference data divided by annual turnover (e.g., water consumption in office 49(490 m³) divided by turnover 12,5 = 3,92</i>					
LCA CALCULATION CAPABILITY ON PRODUCTS	0	1	1	1	■
IT EQUIPMENT SENT FOR RECYCLING VIA GREENDICE	0	100%	100%	0	■
S -SOCIAL					
COMPREHENSIVE DEVELOPMENT PROGRAMS FOR EMPLOYEES	1	5	4	0	■
ACCIDENTS AT WORK AT WORK					
SERIOUS ACCIDENT AT WORK	1	1	0	0	■
G-GOVERNANCE					
THE EMPLOYEE HAS COME UNDER AN EXTERNAL IT ATTACK	0	0	0	0	■

■ Positive ■ Neutral ■ Negative

During 2024, the total amount of waste decreased significantly compared to the previous year – by 47.87 m³ and 134.76 tonnes. The largest reductions were achieved in the volumes of mixed waste, gypsum, and wood. This demonstrates progress toward waste reduction and improved material efficiency.

Timbeco sustainable development goals

Creation of a charging facility for electric cars

There is a plan to build charging facilities for electric cars next to the factory and office parking lots.

Solar park on the roofs of production buildings

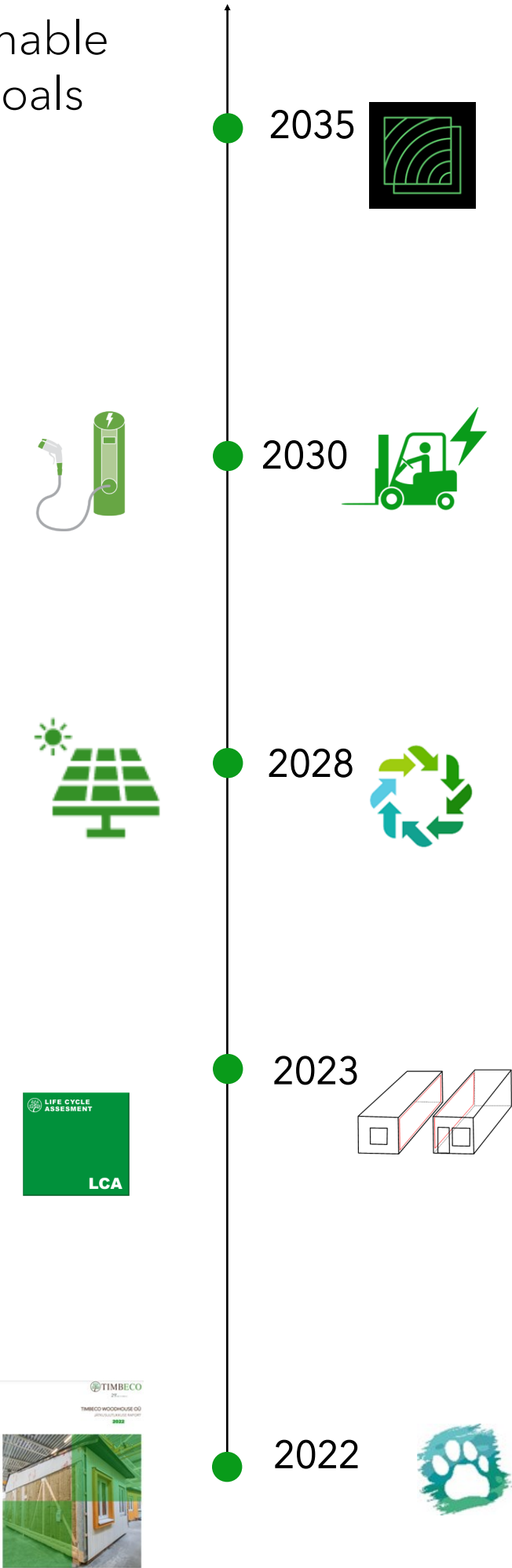
Electricity production for factory and office use.

Calculation of LCA

LCA calculation capability has been created and implemented for the first projects.

ESG reports

We started preparing ESG reports and publishing them



A zero-carbon company

Materials, production, transport and construction of buildings

Acquisition of electric lifts and creation of infrastructure

Replacement of the lift fleet with electric lifts

90% of production waste is recycled

We recycle at least 90% of production waste.

TMS standard modules

Complete solutions from standard modules for erecting different types of buildings.

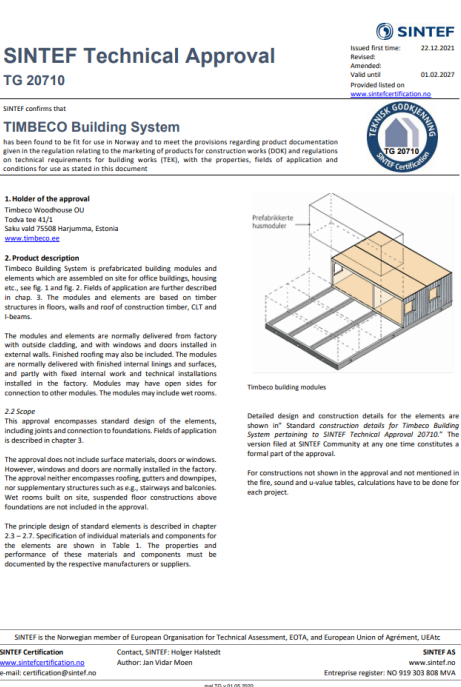
Green Tiger Program

We went through the Green Tiger program.

Certificates



SINTEF



ISO 9001 Quality Management System

The ISO 9001 standard requires continuous improvement of processes and provides customers with confidence that commitments will be met. It represents a fundamental principle of quality management and a competitive advantage in the marketplace.

ISO 14001 Environmental Management System

Environmental management helps companies reduce the impact of their operations on nature while enhancing competitiveness. It involves efficient use of raw materials and energy, the adoption of modern technologies, emission reduction, and optimized logistics.

ISO 45001 Occupational Health and Safety Management System

The occupational health and safety system helps reduce risks and injuries, preventing losses and reputational damage caused by workplace accidents. ISO 45001 provides a transparent and employee-inclusive framework for effective management of workplace safety.

ETA



Added value of factory-produced buildings



LCA

For Timbeco buildings, we perform an LCA calculation in the early stages of the project.



Produced in a controlled environment and from materials. Safety at work is a priority.



Thanks to the LCA calculation, it is possible to make choices in terms of materials and construction methods in the direction of a smaller environmental footprint.



For modular buildings up to 95% works carried out in the factory and therefore it is possible to quickly install the buildings on



Standardized modular solutions help reduce costs and increase construction capacity.



Buildings are designed with the principles of the circular economy in mind.



Increased Wood Processing Capacity

Woodmill by Timbeco offers a wide range of wood processing and building material solutions, focusing on quality, precision, and environmental sustainability. The company's production is based on the ISO 9001 quality management system, ensuring continuous process improvement and transparent operations.

The company's services include precise CNC machining and fully automated planing, enabling efficient use of materials and high dimensional accuracy of products. Woodmill manufactures certified glued laminated timber (GLULAM) structures, including beams and log products that meet the GL24h strength class and CE requirements. Durable PUR-type adhesives are used for wood bonding, ensuring long-lasting structural performance and moisture resistance.

In Woodmill's environmentally responsible production, certified timber is used, with an emphasis on optimizing raw material usage and applying modern manufacturing technologies. Operations are guided by quality and management systems that support a responsible business culture, transparent governance, and long-term customer relationships.



■ Glued Laminated Timber

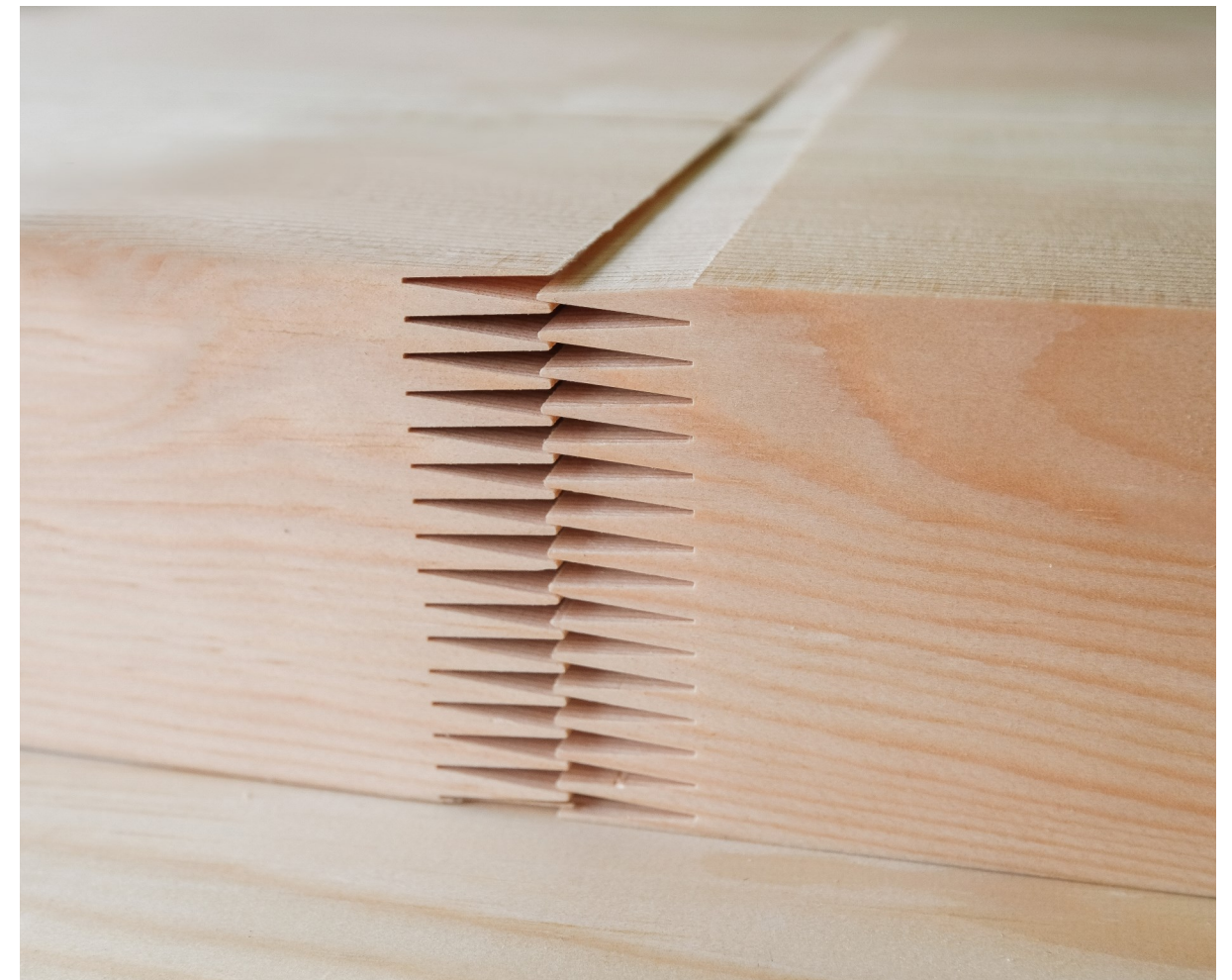
Glued laminated timber (GLULAM) is a high-quality and durable construction material that combines the natural beauty of wood with modern technology. A key advantage of GLULAM is its length of up to 24 meters, high load-bearing capacity, and versatile processing options.

■ Duo/trio/quattro beams

Duo/Trio/Quattro beams are engineered wood products designed to deliver excellent structural performance in modern construction. Beams of up to 24 meters in length are ideally suited for both roof and load-bearing structures.

■ Finger-Jointed Timber

Due to the limited length of sawn timber and the volume of wood residues generated in the timber industry, an efficient method has been developed for producing finger-jointed timber. In this process, smaller wood pieces are bonded together using moisture-resistant adhesive, creating a strong and sustainable material for further use.





Timbeco's contribution to the implementation of the Estonian reconstruction wave with factory-made facade elements

EU projects and cooperation in factory reconstruction



Timbeco collaborates with TalTech in European Union-funded projects with the aim of promoting innovative solutions in the reconstruction of apartment buildings.



The Drive0 project period was active in the period 2019-2024 and within its framework we reconstructed the apartment building at Saue, Kuuma 4.



The Drastic project period is 2024 - 2028, and within the framework of this project, we are developing sustainable reconstruction solutions for apartment buildings.



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In collaboration with TalTech and Soft-Academy, we will reconstruct the apartment buildings at Akadeemia tee 4, 6, 14 and 22, following the principles of the new European Bauhaus – inclusive, beautiful and sustainable urban space.

Reconstruction of an apartment building in Saue, Kuuma 4



Apartment building Kuuma 4, Saue

Apartments: 24
Facade elements: 1880 m²
Additions: new balconies, solar panels
Results:
Heating costs reduced: 65%
Electricity costs reduced: 42%
Energy label change: D -> A



The Estonian reconstruction wave and Timbeco's contribution

The goal of the Estonian renovation wave is to increase the energy efficiency of existing buildings and reduce their environmental footprint.

Timbeco has made thorough preparations to implement this direction by participating in several European Union projects that focus on innovative and factory-based renovation solutions. In cooperation with partners, several tenders have been won, which create a strong foundation for practical applications.

Starting in 2026, Timbeco will start real renovation projects, bringing modern and energy-efficient facade elements to the market that support Estonia's climate goals and a sustainable built environment.



Features and advantages of factory reconstruction

Unlike traditional reconstruction methods, factory reconstruction is based on thorough preliminary work and precise engineering planning. A large part of the work process takes place before construction begins - engineers carry out detailed measurements, analyses and tests to ensure the suitability of the solutions for a specific building. As a result, precise and high-quality facade elements can be manufactured in the factory, which allows for fast, energy-efficient reconstruction on site with a lower environmental impact.

The factory approach reduces construction time, improves occupational safety and ensures consistently high quality, while helping to achieve national energy efficiency and CO₂ reduction goals.



Raising awareness of factory reconstruction

Workshops on factory reconstruction are a regular part of EU-funded projects and play an important role in disseminating knowledge and promoting innovation. Timbeco actively participates in organizing such workshops in cooperation with TalTech, sharing its practical experience and technical knowledge with both construction sector specialists and students. Cooperation with educational institutions helps to increase awareness of the possibilities of factory reconstruction solutions, bring new skills to the field and shape future experts. Such knowledge exchange supports both the development of the sector and Estonia's transition towards more energy-efficient and sustainable construction practices.



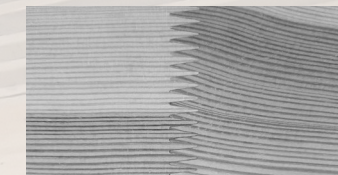
Wood processing efficiency

12% → 6%

During CNC processing, the amount of final wood material residues has decreased from 12% to 6%.



During CNC processing, the amount of final wood material residues has decreased from 12% to 6%.



We implemented a project-based material ordering system, where material lengths are selected as accurately as possible according to the project. This reduces scrap generation and keeps material costs under control.



Faster realization of project-based non-standard product stock balances has been put into focus. This helps reduce costs and increase useful storage space.

Economical use and recycling of construction materials

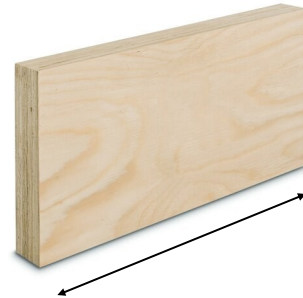


C24 wood

We use C24 strength-graded construction material with CE conformity mark.

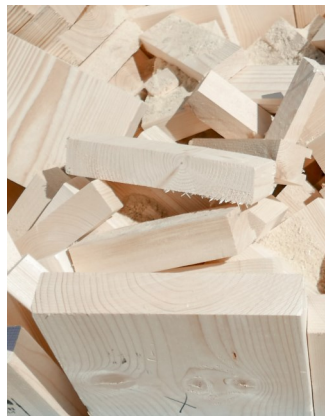
LVL frames and beams

We use LVL material more and more because it has good technical parameters, is easy to use and has a smaller environmental footprint.



Increased adoption of appropriately sized and pre-processed/finished materials

When sourcing wood and board material, we base it on the assumption that it would be as accurate as possible and would help reduce the generation of waste. Whenever possible, we use pre-processed and finished materials.

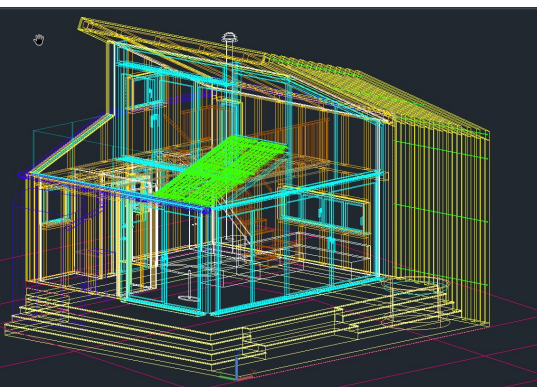


FSC® Timber Supply Chain Certification

The FSC certificate confirms that wood from responsibly managed forests is used in the production of wood material and that this material is traceable at all stages of production and marketing.

The choice of materials in the design of buildings

When designing buildings, Timbeco engineers take into account the standard dimensions of materials, so that cutting to size is as efficient as possible and with as little waste as possible. In addition, it is also taken into account that building components should be as easy as possible to install and dismantle. This is necessary so that, if desired, elements and modules can be dismantled and new buildings can be built from them.



Goals

- Reduce waste generation by 15% by 2028
- Reduce the amount of mixed construction waste by 80% by 2028
- In 2023, the goal is to direct 60% of waste to recycling. By 2028, 100% of generated waste should be sent for recycling

Collection of wood scraps by type

Wood scraps are collected in production halls in a container marked accordingly. Wood material with a maximum length of up to 600mm is considered production waste. In total, wood waste is collected in five different categories.

Finger jointed frame material

We send wood waste longer than 600mm to finger joint gluing to produce frame material from it.



Heating blocks from production waste

Sawdust is pressed into heating briquettes and is used for heating production buildings and is also sold to private customers.



Packaging film produced from recycled plastic waste

We use film produced from plastic waste for weatherproof packaging of wooden elements. We collect film waste generated in production and construction sites and send it for recycling.



Bulk wool is produced from insulation wool residues

We collect the wool waste generated in production and send it to our partner, who produces bulk wool from it.

Waste collection by type



Reducing Waste at Timbeco

Timbeco has implemented a comprehensive waste reduction strategy that spans both operational practices and building design. We prioritize obtaining materials in precise dimensions to minimize cutting and processing waste. Additionally, we strive to standardize materials across projects, reducing the risk of excess stock and improving efficiency. Our waste management efforts have been further enhanced by expanding the categories of waste we collect, allowing for more effective recycling and disposal.

- **Sawdust**
It is collected and made into wood briquettes.
- **Wood waste**
Wood blocks longer than 600mm are collected separately and sent to finger jointing.
- **Gypsum scraps**
Gypsum scraps are collected and sent to the handler.
- **Wool scraps**
It is collected and a specialized company produces bulk wool from it.
- **Biodegradable residues**
It is collected separately and directed to the waste handler.
- **Paper-cardboard**
Collected in separate containers and sent to the waste station.
- **Packaging film**
Collected separately and sent to reprocessing to produce new packaging film.
- **Hazardous waste and contaminated packaging**
Collected in separate containers and sent to the waste station.
- **Glue-containing and chemically treated wood waste**
Collected separately and sent to the handler
- **Metal**
Collected and sent to the metal recycling.
- **Plastic packing tapes**
Collected separately and directed to plastic recycling.
- **Accumulators and batteries**
Collected in separate containers and sent to the hazardous waste handler.

Timbeco Building Life Cycle Assessment (LCA)

Life Cycle Assessment (LCA) is a systematic analysis of the environmental impact of products or services throughout their life cycle, from resource extraction to waste management. This includes suppliers and processes in the production chain (e.g. production of raw materials, consumer goods), the use phase and waste management (e.g. recycling or disposal of waste).

The calculation results in 60 years of total life-cycle GHG emissions, including emissions from building materials and products, construction, use and final handling.

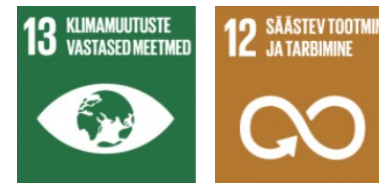
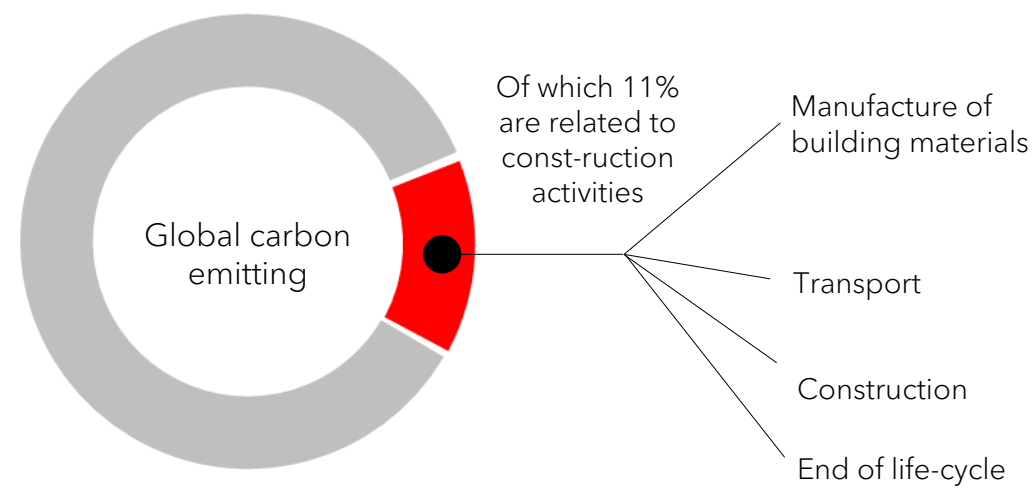
Through life-cycle assessment, the producer has the opportunity to better analyse and optimise the production technology and raw materials used in order to reduce the environmental impact of the product by improving sustainability and competitiveness.

■ **Embodied Carbon** – carbon emissions from the extraction, manufacture, transport, installation, maintenance and end-of-life of building materials. It accounts for about 11% of global CO₂.

In the long term, the methodology will be used throughout the European Union, as the draft of the redesign of the Energy Performance of Buildings Directive published on 15.12.2021 will require the life-cycle carbon footprint of a building to be reported in the energy performance certificate from 2027 onwards.

The methodology is based on environmental declaration standard EN 15804+A2:2019 (EPD), life cycle standard EN 15978 (LCA) and European Level(s) framework. In order to calculate the life cycle of buildings according to these standards, it is necessary to establish an accurate calculation scope and procedures for using source data and default values, which makes the methodology of each country slightly different.

■ **Operational Carbon** – carbon emissions resulting from the use of the building: for example, the energy needed to heat, cool and maintain the building.



Components of building lifecycle assessment

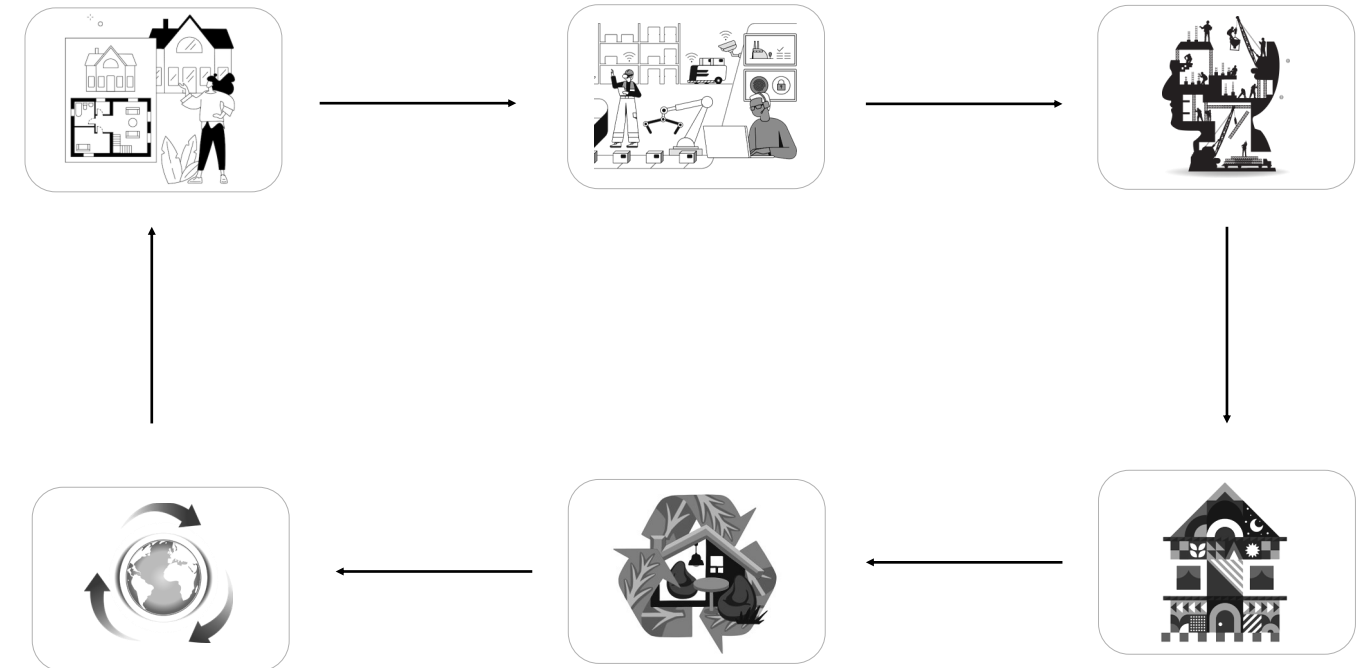
PLANNING OF SUSTAINABLE REAL ESTATE PROJECTS/ BUILDINGS. SELECTION OF CONSTRUCTION METHOD AND MATERIALS

PRODUCTION PHASE OF BUILDINGS

A1 – raw materials and production of building materials
A2 – transport
A3 – production

CONSTRUCTION OF BUILDINGS

A4 – A5 Construction
A4 – transport to the construction site
A5 – construction/



ADDITIONAL INFORMATION OUTSIDE LIFE CYCLE D
Benefits or burdens for the environment from recycling, reuse and energy recovery beyond the life cycle of a building. Takes into account the potential of exported renewable energy, reuse and recycling.

END OF LIFE OF BUILDINGS
C1 – dismantling and demolition
C2 – transport to a waste treatment plant
C3 – Demolition waste management
C4 – Final withdrawal from circulation

USE OF BUILDINGS
B1 – everyday use
B2 – maintenance
B3 – repair work
B4 – replacement of parts of the building
B5 – Renovation
B6 – energy consumption
B7 – water use

■ The LCA calculation can be carried out in different stages of the project:

1. In the conceptual design phase of the building, where the building materials and construction method are determined;
2. In the design phase, it is possible to perform a comparative LCA calculation;
3. In the construction and procurement phase;
4. When the building is commissioned. The level of detail of the LCA depends on the data available at each stage. One Click LCA offers tools suitable for different phases.

Timbeco LCA calculation methodology



Carbon heroes Benchmarking

Comparative data are based on region and destination countries. For example, for some projects in Sweden or Norway, there are more than 200 similar objects in the sample from different Scandinavian countries (sample "Northern Europe").



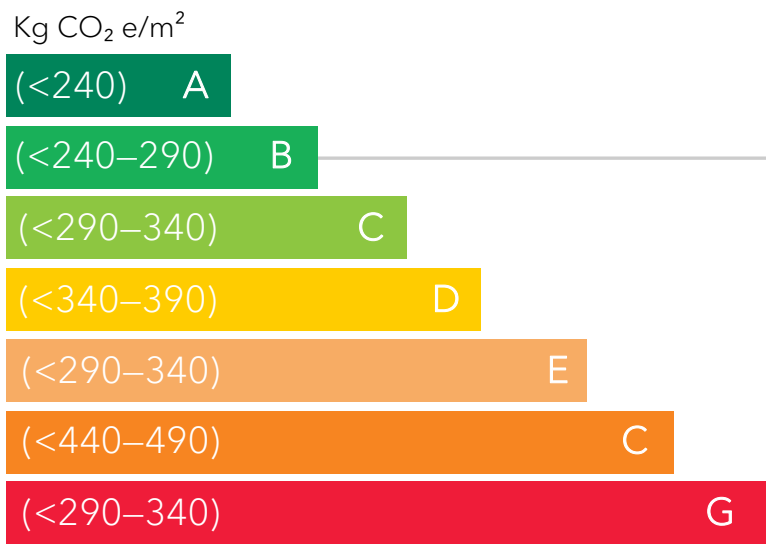
Information sharing and storage is anonymous



Verified by experts



Additional control by algorithms



Most of the buildings manufactured and erected by Timbeco correspond to class **B** according to LCA calculations.

Performance metrics (A-G)

- The range is divided into 7 levels
- The average of the results falls in the "D" range.
- A, B and C are better than average results
- E, F and G are worse than average results

Target country solutions for carbon footprint calculations

BREEAM is an internationally adaptable sustainability standard recognized and implemented in 89 countries. In Norway, carbon footprint calculations are made according to NS 3720 standard and TEK17 environmental declaration, and in Sweden BREEAM SE NC 2017.

Examples of visualization

Issuance of CO2 in different building elements and stages of the life cycle

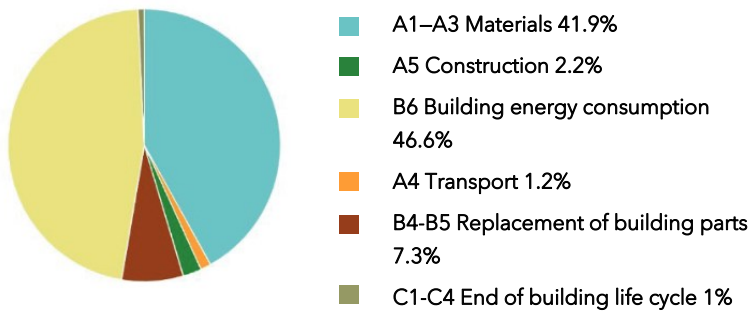
Example of CO2 emitting by building elements

- Foundation construction - 15%
- Building walls and facade - 15%
- Suspended ceilings, floors and roof - 30%
- Other structures and materials - 18%
- Construction technology - 22%

The adjacent table and diagram is one example of how GWP is distributed between different building elements and life cycle stages. The results suggest that efforts should be made during the building design phase to reduce GWP.

GWP - Global Warming Potential For visualization and comparison of different materials, OneClick LCA offers a very large number of different tools.

An example of a building's GWP calculation when emitting



Comparison of the use of different materials in the execution of the same project

In the future, buildings with a lower carbon footprint will clearly have a greater competitive advantage. If this were to become a reality, construction from different materials would begin to be compared and an increasingly weighted choice would be made to erect buildings with a smaller footprint. The same building, constructed of concrete, steel or wood, differs greatly in terms of environmental impact.

GWP - Globaalse soojenemise potentsiaal)

AP - Acidification potential

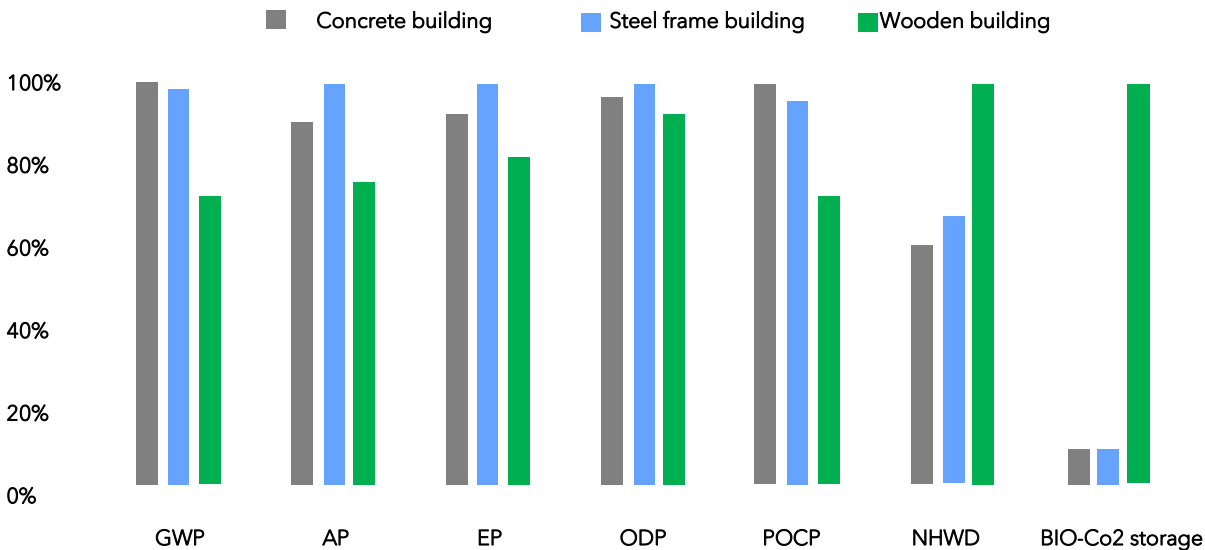
EP - Eutrophication potential

POCP - Photochemical ozone creation potential

ODP - Ozone depletion potential

NWHD - Non hazardous waste disposed

BIO-CO2 STORAGE Biological carbon sequestration is the natural ability of life and ecosystems to store carbon.



Occupational safety in the factory and on the construction site

■ Occupational Safety Objectives

Timbeco's main occupational safety objective is to achieve zero serious workplace accidents in both the factory and on construction sites. To reach this goal, the company has developed a comprehensive action plan that supports continuous improvement in safety performance.

■ Training of New Employees

When a new employee joins the company, they receive comprehensive safety training. Training materials are provided, safety videos are reviewed together, and all relevant rules and requirements are thoroughly explained.

■ Ongoing Training

The company ensures the organization of mandatory and specialized training for forklift operators, first aid providers, and fire safety awareness for all employees.

■ Workwear

Timbeco employees working in the factory and on construction sites are equipped with company-provided protective clothing, including helmets, ear protection, harnesses, and safety footwear.

■ Workplace and Environmental Safety Inspections

Regular inspections are carried out to ensure compliance with workplace and environmental safety requirements in production areas. The minimum acceptable compliance level is set at 85%.

■ Occupational and Fire Safety Training Videos

Timbeco has produced occupational and fire safety training videos to explain the factory's safety rules to both employees and subcontractor personnel. These videos provide a visual and practical overview of the key topics and safety points considered most important by the company.

Contributing to the development of ESG, reconstruction with prefab elements and the wooden house sector

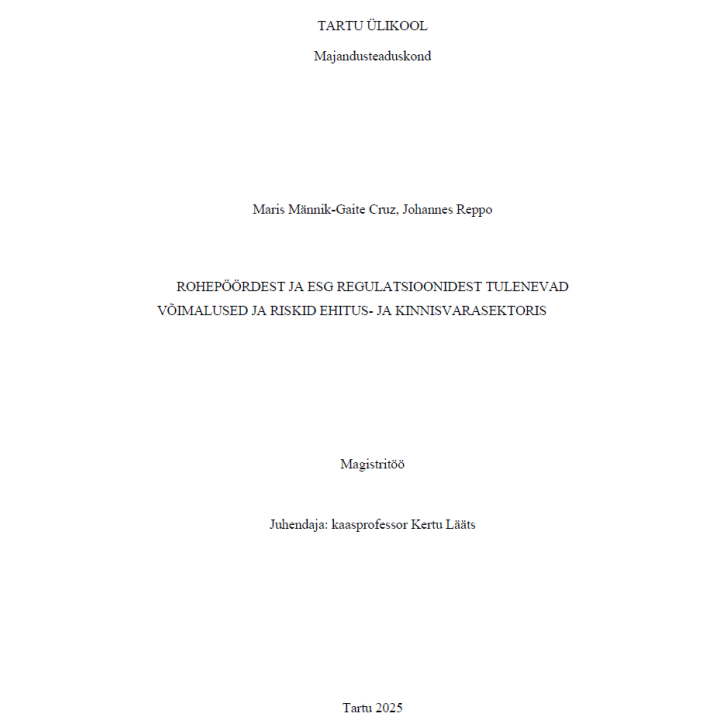
■ Sharing ESG reporting and sustainability experiences with master's students at the University of Tartu

We shared Timbeco's experience with students at the Faculty of Economics at the University of Tartu, who defended their master's thesis with an A, or excellent, grade.



■ Eero Nigumann shared his experience at the EHITUS 2025+ conference and was awarded the title of “Young Civil Engineer of the Year”

Eero Nigumann was awarded the title of “Young Civil Engineer of the Year” for his broad-based contribution to the construction sector - he has published scientific articles on circular renovation and energy efficiency, participated in international projects and shared knowledge at conferences and trainings.



In addition, he contributes to the education of young engineers as a guest lecturer and job shadowing instructor at Tallinn University of Applied Sciences and helped prepare educational materials for the Wood Construction Academy, promoting the field of wood construction and the principles of the circular economy.

■ Participation in the Green Tiger Industry Roadmap Project

Timbeco is contributing to the development of the Green Tiger Industry Roadmap to help guide Estonian industry towards a more sustainable future.

Objectives:

To map obstacles and opportunities in implementing sustainable solutions.

To understand regulatory changes and contribute to adapting to a framework that meets ESG and CSRD requirements.

To share practical experiences from the company's steps and challenges so far.

To create a future-oriented framework that supports a competitive and sustainable industry.

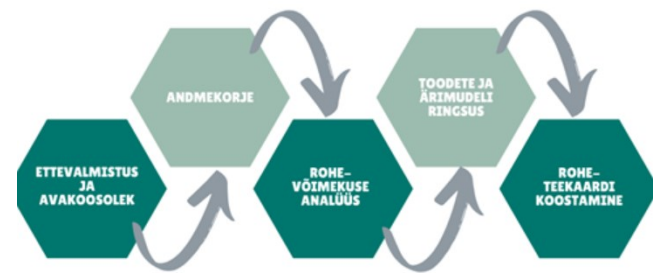
Timbeco sees the project as an opportunity to influence policymaking, prepare for future reporting requirements, and promote cooperation between companies and the state.

■ Appearing on TV and radio programs covering the activities of the wooden house sector

We have participated in public TV and radio programs to introduce the views of the wooden house sector and contribute to the growth of export capacity.

■ Promoting energy efficiency and energy saving in public media

Timbeco has shared knowledge and practical advice on increasing energy efficiency in public media. We have published articles that explain the meaning of the energy label, the factors affecting energy consumption and highlight effective energy saving techniques in both construction and use of buildings.



WOOD FOR YOUTH

CONTRIBUTION TO EDUCATION AND YOUTH INCLUSION: WOOD FOR YOUTH PILOT PROGRAM

2024 In 2024, Timbeco participated in the international Wood for Youth pilot programme, which brought together 148 young learners from Estonia, Latvia, and Finland to raise awareness of opportunities in the wood sector and sustainable construction. The programme, initiated by the Estonian Woodhouse Association, aimed to introduce young people to modern practices in the wood industry and inspire them to pursue careers in the green economy and wood-based technologies.

- Timbeco's contribution to the programme was both diverse and substantial. The company supported the project with extensive photo and video materials, providing a visual overview of its production processes and the practical application of wood-based construction solutions. In addition, Timbeco's specialists took part in shaping the programme's content, contributing their expertise in procurement and sales management processes within wooden house manufacturing. The information shared by Timbeco during the training programme helped participants gain a better understanding of how modern manufacturing companies manage supply chains, procurement, and customer relations. This knowledge plays an important role in preparing the next generation of specialists in the wood sector, supporting both workforce development and the sustainable growth of the industry. Through such initiatives, Timbeco actively contributes to education and skills development in the wood sector, strengthening young people's engagement with the values of the green transition and sustainable construction. This forms part of the company's broader commitment to community development and the promotion of a knowledge-based and responsible economy.



1. Why Wood?
Module 1 Why wood? The introductory part of the training discusses career paths in wood construction and explains why you should choose wood. We will examine the special properties of wood as a building material and the effects of industrial construction, e.g. process efficiency.

Module 1



2. Production of wooden elements
Module 2 focuses on different industrial construction methods and the special features of 2D and spatial element manufacturing. The module deals with the operation of the factory and its key processes, starting with the principles of line production and automation. It covers the manufacture of elements and spatial elements, including weather protection and storage. Finally, lifting and transportation are discussed, which are essential to ensure safe and efficient production.

Module 2



3. Erection and finishing of prefabricated buildings
In module 3, the use of elements in different building types (elemental, modular, hybrid construction, renovation) is examined, and the special features of construction site operations are described in more detail. The process of erecting and finishing prefabricated buildings consists of several key steps, where occupational safety and quality control are emphasized. These steps include a preliminary inspection at the construction site as well as the transport, storage and lifting of the elements. In addition, roof work, installation of facade elements and fire safety are discussed.

Module 3



4. Design of prefabricated buildings
Module 4 focuses on the special features of the design of industrially manufactured wooden buildings. In the planning phase of wooden construction, it is important to pay attention to the details as accurately as possible. The design emphasizes, for example, the acoustics of wooden buildings, energy efficiency and the versatile design possibilities of wood. By making the design as precisely as possible, operations on the construction site can be speeded up considerably. These topics provide a detailed overview of the requirements and possibilities that must be considered when designing prefabricated wooden buildings. Topics covered include fire safety, acoustics, technical systems, energy efficiency and low-carbon construction.

Module 4



5. Project management
Module 5 covers project management and leadership from a variety of perspectives, including production management, project management processes and managing the transition to digital construction. In addition, attention is paid to the practical implementation of personnel management.

Module 5



Learning on the job
After successfully completing all theory parts of modules 1-3, the student can complete an internship. The internship is organized in cooperation with the Työtehoseura. During the internship, the student gets to delve deeper into the principles of industrial construction, e.g. material choices, moisture management, fire protection with the teacher's help, first in theory and then in practice, building elements of a rigid wooden apartment building during the course.

On the job learning



The project "Wood for Youth" is co-funded by the European Union under the Interreg Central Baltic programme. It is led by the Estonian Timber House Association and implemented in cooperation with Tallinn University of Applied Sciences (Estonia), Satakunta University of Applied Sciences (Finland), the Finnish Wood Industry Federation and Vidzeme University of Applied Sciences (Latvia).

For more information about the program in each country:

Estonia: academy.woodhouse.ee

Finland: puuinfo.fi/wood-for-youth

Latvia: <https://jaunabuvnieciba.va.lv/wood-for-youth>

Interreg Co-funded by the European Union
Central Baltic Programme

Wood for Youth

Woodhouse Estonia

