



TIMBECO WOODHOUSE OÜ
SUSTAINABILITY REPORT
2024

31 YEARS OF TIMBECO

sustainable wooden house manufacturer

Timbeco is a wooden house manufacturer with a 31-year history, which gathers several successful companies around itself: Timbeco Woodhouse OÜ engaged in the production of prefabricated and modular buildings, Timbeco Woodmill OÜ focused on the processing of lumber and the production of log houses, Livful OÜ engaged in the production of CLT houses, Timbeco engaged in construction and real estate development in Estonia. Ehitus OÜ and Timbeco Construction OÜ engaged in erecting prefabricated and modular buildings in foreign markets. Timbeco's office and production unit are located in Tõdva, Saku municipality, and the companies employ a total of 120 people.

timber + ecological = **TIMBECO**

The name Timbeco is derived from the English words "timber" and "ecological", which characterize the company's field of activity and values.

31 YEARS OF TIMBECO

We celebrate the company's 31th birthday in 2024.

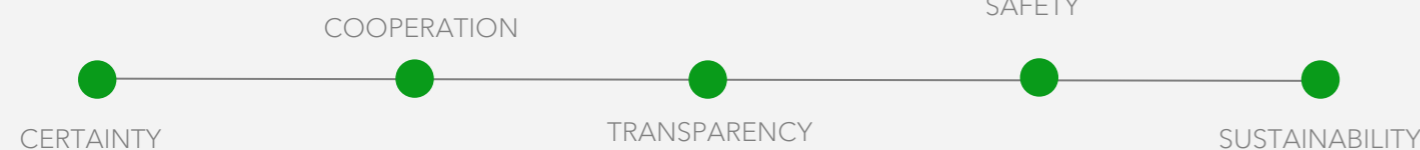
VISION

The leading manufacturer of wooden buildings in Europe

MISSION

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

VALUES



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31 YEARS OF INNOVATION, QUALITY, AND SUSTAINABILITY

Timbeco, with a proud 31-year history, stands at the forefront of sustainable modular construction. As a leader in the manufacturing of wooden factory buildings, we have built a reputation on providing high-quality, environmentally conscious solutions not only in Estonia but across Europe. Since our founding, we have grown together as one cohesive team, committed to delivering innovative, energy-efficient, and eco-friendly buildings that enhance quality of life.

At Timbeco, we strive to lead by example in the field of modular construction, continuously evolving to meet the growing demands of a greener, more sustainable future. Our overarching goal is to become Europe's top manufacturer of wooden factory houses, offering superior solutions that contribute to a cleaner environment. We are committed to achieving carbon-neutral operations by 2028, focusing on reducing emissions across the entire lifecycle of our buildings—from design and production to transportation and end-of-life recycling.

To meet these ambitious targets, we focus on acquiring the latest technologies, materials, and skills. By staying at the cutting edge of the industry, we ensure that our production processes remain efficient, cost-effective, and aligned with environmental goals. We also collaborate closely with research institutions to integrate the latest findings in sustainable building practices into our products and operations.

Our factory complex is continually evolving to be more modern, efficient, and safer. We have invested in state-of-the-art equipment and processes, enhancing our ability to produce high-quality modular buildings while minimizing environmental impact. Key developments include:

Enhanced fire safety protocols and secure storage facilities that ensure the safety of our products, materials, and employees.

A waste sorting and recycling system that ensures minimal waste generation during production, helping us maintain a circular economy within our operations.

The implementation of digital tools to optimize production processes, reduce energy consumption, and streamline supply chains.

These improvements are not only about increasing operational efficiency but also about minimizing the environmental footprint of our entire supply chain.

We believe that the foundation of our success lies in the well-being and development of our employees. The challenges posed by current economic conditions highlight the importance of fostering a resilient, motivated workforce. We provide continuous training in areas such as mental health, self-development, financial literacy, and physical well-being to ensure our employees can thrive both professionally and personally.

Timbeco recognizes the critical role our partners play in helping us achieve our sustainability goals. We work closely with our suppliers, clients, and other stakeholders to integrate feedback and continuously improve the environmental performance of our products. By engaging in life cycle assessments of our buildings, we ensure that we can accurately measure and reduce the carbon emissions of each project, starting from the initial design phase.

We are also focused on the sustainability of the buildings we produce. The wooden materials we use for our modular buildings are renewable, and our designs prioritize energy efficiency. Additionally, our buildings are designed with long-term sustainability in mind, ensuring that they can be easily adapted or repurposed in the future, further reducing their environmental impact.

Achieving carbon neutrality by 2028 is a cornerstone of Timbeco's strategy. We are taking a holistic approach to reduce our carbon footprint across every aspect of our operations, including:

Carbon sequestration: By using wood as a primary construction material, our buildings actively store carbon, contributing positively to the environment.

Energy-efficient design: We prioritize low-energy and energy-efficient buildings, ensuring that they have a minimal impact on the environment throughout their lifespan.


Transport and logistics: We optimize our transportation processes to minimize emissions related to the delivery and installation of our buildings.

Waste reduction: We actively reduce waste through recycling, repurposing materials, and employing circular economy principles in our manufacturing processes.

We are committed to ongoing efforts to reduce our environmental impact and to continuously enhance our sustainability practices across the value chain.

Looking Ahead: Building a Greener Future Together
Timbeco is determined to meet the challenges of the coming years with resilience, innovation, and a continued commitment to sustainability. By investing in the future of our people, operations, and the environment, we believe we can make a lasting impact on the construction industry and help build a sustainable future for generations to come.

We are grateful for the continued support of our partners and employees and are excited about the future as we work together to drive positive change in the built environment.

 Siim Leisalu
CEO



THE PAST YEAR IN SHORT



Timbeco joined the Drastic project

The Drastic project has been launched in order to use new construction technical solutions to reduce carbon emissions during the entire life of the building and to increase the adoption of circular economy principles throughout Europe, demonstrating this through 23 different projects. Timbeco joined the project to develop a more efficient factory reconstruction solution product.



International Drastic project workshop in Tallinn

The Drastic project has been launched in order to use new construction technical solutions to reduce carbon emissions during the entire life of the building and to increase the adoption of circular economy principles throughout Europe, demonstrating this through five different projects. The purpose of the workshop was to involve stakeholders based on the goals of the Drastic project.

Among the speakers of the workshop were:

- Michiel Ritzen, District Senior Expert / Sustainable Built Environment Project Manager, VITO
- Miles Rowland, Policy Coordinator, World Green Building Council
- Ivo Jaanisoo, Ministry of Climate / Ministry of Climate, Vice-Chancellor for Living Environment and Circulation

The test wall of the Drastic demo project is ready

In order to collect data and test Timbeco's apartment building reconstruction solution, we installed the first demo elements directly on the wall of the building to be reconstructed. In cooperation with Taltech, the elements were equipped with sensors to collect the necessary information over a longer period. Some elements are equipped with solar panels, which should ensure better energy supply and financial savings for the building. Phase II of the project is planned for 2025.



A Miljöbyggnad silver standard school building was completed in Järfälla, Sweden

In the construction of the Järfälla school building, Timbeco's role was the production and installation of glulam support structure, wall, ceiling and roof elements. The architect of the building is LLP Arkitektkontor, who considered it important that the new school building be built according to Miljöbyggnad silver standards and worthy of the NollCO2 certificate.



A development project in Switzerland using sustainable construction principles was completed

Vastu is an architectural theory that takes into account its position in relation to weather maps and specific building proportions that have a positive effect on people when planning and constructing a building. The most important factor is the entrance of the building, which must be either east or north. Vastu architecture emphasizes the use of natural and smart building materials. In terms of building materials, CLT (cross-laminated timber), wood fiber wool and Roofit Solar roof panels have been used as insulation material.



Awards from the "Factory House of the Year 2024" competition

The "Factory House of the Year 2024" competition was very successful for the company. The Vaela Kindergarten built by Timbeco won the overall victory and the best public building award at the competition. In addition, the building received a special award for the most energy-efficient building and a special award for Isover Estonia. In addition, the private development project in Northern Norway was recognized with the "Best Development" award

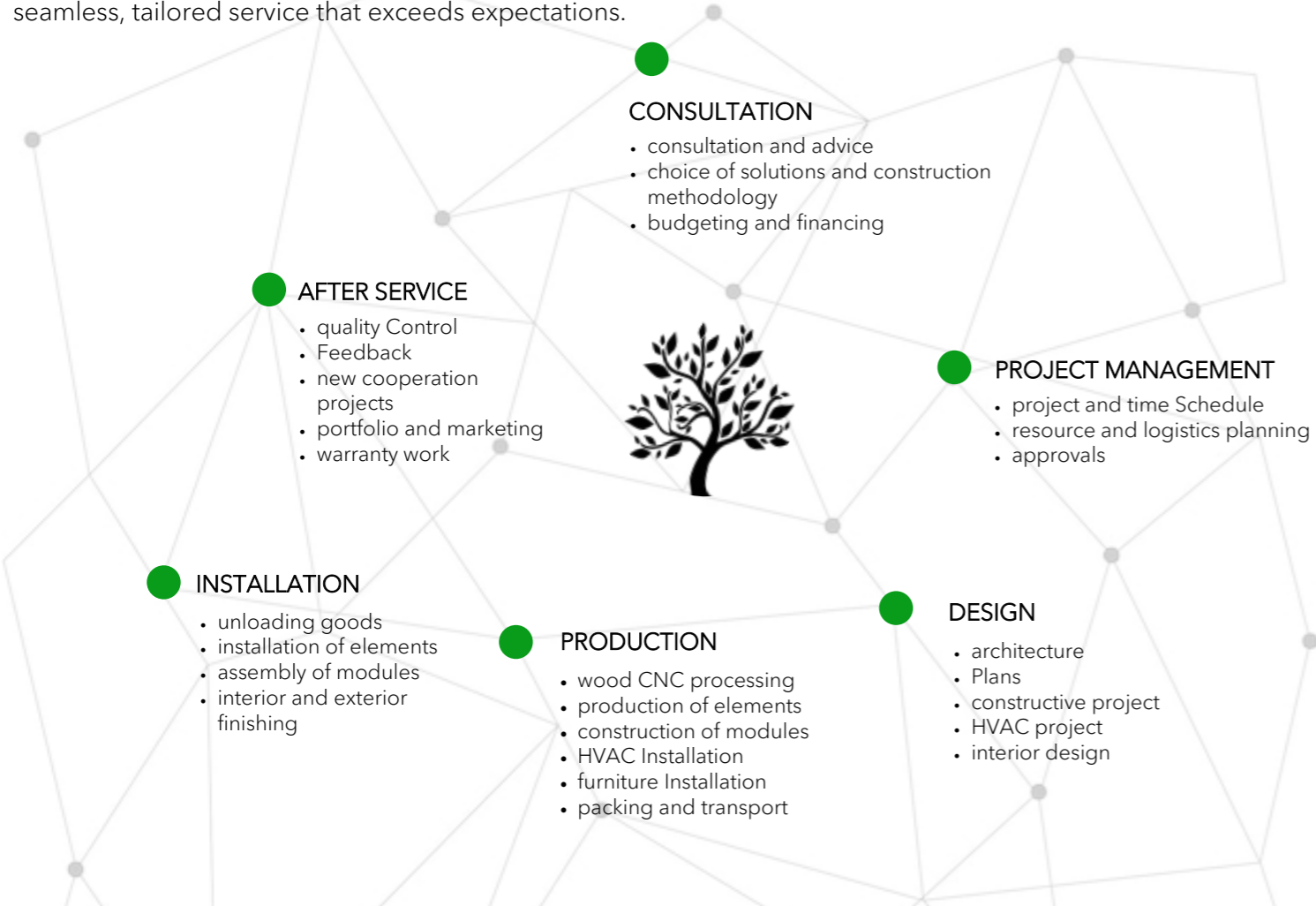
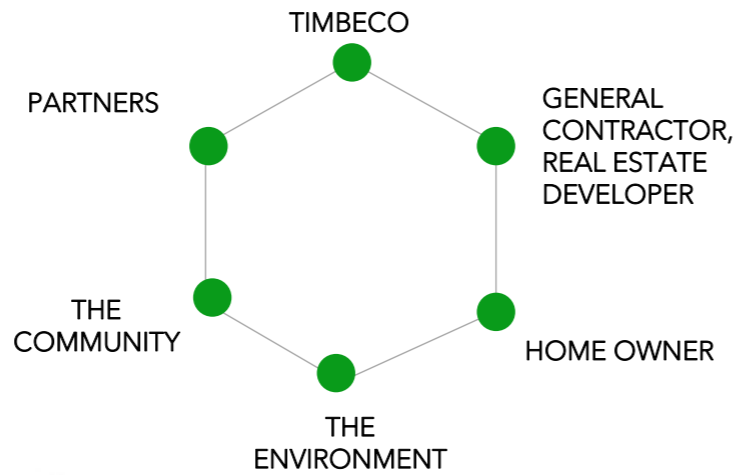
CREATING VALUE IN TIMBECO

We believe that addressing the challenges of rapid urbanization and growing environmental concerns requires a forward-thinking, sustainable approach. At Timbecco, we possess the expertise and capabilities to drive a new, environmentally responsible mindset in the residential real estate sector. Our vision is to demonstrate that housing development can be fast, cost-effective, and environmentally sustainable—manufactured efficiently in a factory setting and scaled to meet the needs of today’s dynamic urban landscapes.

In collaboration with our partners, we aim to create not just buildings, but vibrant, lasting communities. Our goal is to deliver beautifully crafted, durable homes that contribute to a modern, diverse, and harmonious living environment where people feel inspired to settle, thrive, and make their homes for years to come.

At Timbecco, we believe that our products are more than just buildings—they are services designed to deliver exceptional value. The way we work is just as important as what we deliver. Each project is treated as a unique business plan for our client, with Timbecco serving as a trusted partner in its successful execution.

Our value proposition is built around providing the best possible customer experience. We achieve this through a holistic approach that combines transparency, high-quality service, and a deep commitment to understanding and meeting our clients’ needs at every stage of the process. For us, every project is an opportunity to deliver not just a structure, but a seamless, tailored service that exceeds expectations.



Inspection of the Vaela construction site spring 2024

At Timbecco, we firmly believe that continuous development is the cornerstone of our success. This drives our ongoing investment in enhancing both our products and services. Our mission is to provide clients with an exceptional collaborative experience, from the first interaction through to the successful completion of each project.

We understand that true efficiency and flexibility come from working closely together as a team—an approach that traditional construction methods often struggle to achieve. Our goal is to streamline and demystify the construction process, ensuring transparency at every stage. This collaborative approach allows us to create buildings with our clients that meet the highest standards of quality and environmental sustainability.

By partnering closely with our clients, we can minimize the environmental impact of construction and deliver energy-efficient, healthy homes that enhance the quality of life for their residents. Together, we are shaping a more sustainable future for the built environment.

SUMMARY OF TARGET MARKETS

ESTONIA

The Estonian construction market has faced a prolonged downturn, driven by high interest rates, tax increases, and broader economic instability. As a result, many residential development projects remain stalled, with the market expected to stabilize only gradually. However, recent signs indicate that townhouse and apartment building developments are beginning to gain renewed momentum, offering a hopeful outlook for the near future.

Encouragingly, local governments have shown growing interest in modular and prefabricated buildings, which are known for their reduced environmental impact. A significant milestone has been the successful completion of the Vaela Kindergarten project, marking one of the first major initiatives in this sector. Additionally, new kindergarten projects are in the pipeline, both in Tallinn and its surrounding areas, reflecting a positive trend towards sustainable construction.

The government's decision to open a funding round for the renovation of apartment buildings has further bolstered confidence in the wooden house sector, presenting valuable opportunities for innovation and growth. Timbeco is actively positioning itself to participate in this emerging wave of reconstruction, aligning with the government's sustainability goals.

With interest rates having recently decreased, there is renewed optimism that construction activity will ramp up in 2024. Some projects that had been suspended or delayed are now being revived, signaling the start of a recovery phase. While the market is expected to recover gradually, a full rebound may take several years.

SWEDEN

In 2023, Sweden's residential construction market experienced one of its most significant declines in the past decade. The number of new residential projects launched was nearly halved compared to the previous year, reflecting the severe impact of economic challenges on the sector.

High interest rates have had a profound effect on both construction companies' financing abilities and potential buyers' purchasing power. The sharp rise in material and labor costs further strained project profitability, while inflation and broader economic pressures diminished consumer confidence and willingness to invest in real estate.

As we move into the first half of 2024, the outlook for the construction market remains uncertain. While there are some early indications of a potential recovery, the market continues to face significant challenges. The path to stabilization and growth remains unclear, with uncertainty still a defining characteristic of the industry in the short term.

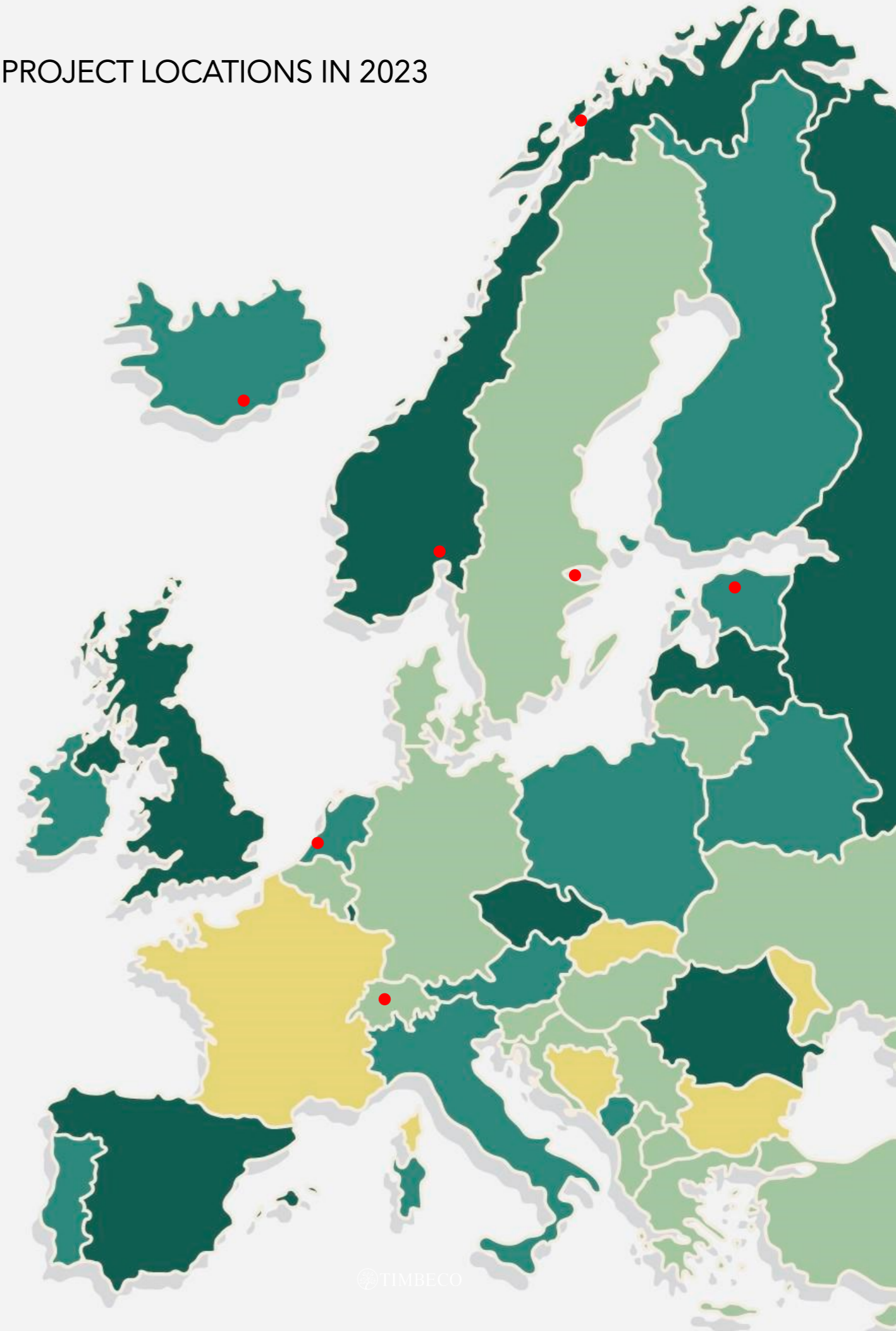
NORWAY

The Norwegian krone remains at a low level, which has made imports from the euro area more expensive, directly impacting sectors like the Estonian wooden house industry. Despite this, demand in Norway's housing market remains robust, driven by continued population growth. However, the pace of residential real estate development has not kept up with demand, as rising input costs and high interest rates have slowed activity.

Shortages of certain building materials have exacerbated the situation, leading to higher prices and longer delivery times. With overall market volume lower than at its peak, competition among bidders has intensified, resulting in tighter margins for awarded contracts.

While the overall construction market has cooled, there are signs of improvement in the private sector's willingness to invest. Orders for construction services have increased slightly, suggesting some optimism for the near future. However, companies offering on-site construction services are facing greater competition in this increasingly challenging market.

● PROJECT LOCATIONS IN 2023



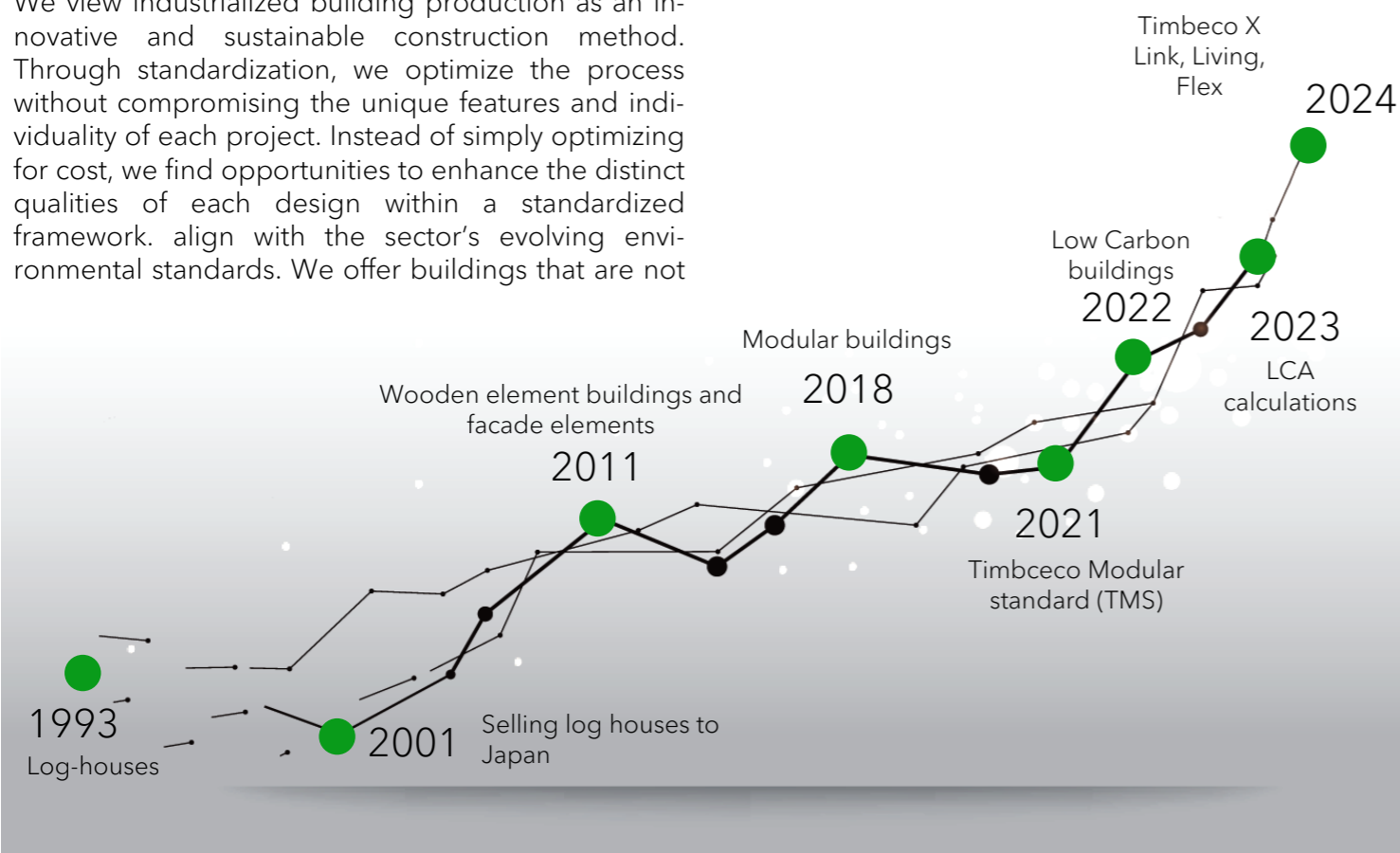
Timbeco services

As we continue to develop Timbeco's services, we closely monitor shifts in target markets and stay aligned with long-term green trends to ensure our approach remains future-focused and sustainable.

Timbeco is deeply committed to the growth of modular building construction, which is why we have expanded our production capacity to meet the increasing demand. We believe the modular building market is on a clear upward trajectory, with key drivers being the standardization of room layouts, material selections, and construction methods. This approach allows us to deliver high-quality, cost-effective solutions at scale.

The Timbeco Modular Standard (TMS) service integrates a comprehensive project management framework that enables our clients to scale their operations efficiently, without the need to significantly increase their workforce. By offering a detailed and transparent overview of how we manage all project roles, processes, and final implementation, we ensure that every project is executed with precision, consistency, and excellence.

We view industrialized building production as an innovative and sustainable construction method. Through standardization, we optimize the process without compromising the unique features and individuality of each project. Instead of simply optimizing for cost, we find opportunities to enhance the distinct qualities of each design within a standardized framework. align with the sector's evolving environmental standards. We offer buildings that are not



We see growth opportunities in the public buildings sector in the coming years. Increasingly higher environmental requirements are noticeable in larger procurements, and customers have a growing desire to build buildings with less environmental impact.

We are ready for the green wave of the construction sector and are able to offer buildings produced and erected from building materials with a low carbon footprint using effective construction methods.

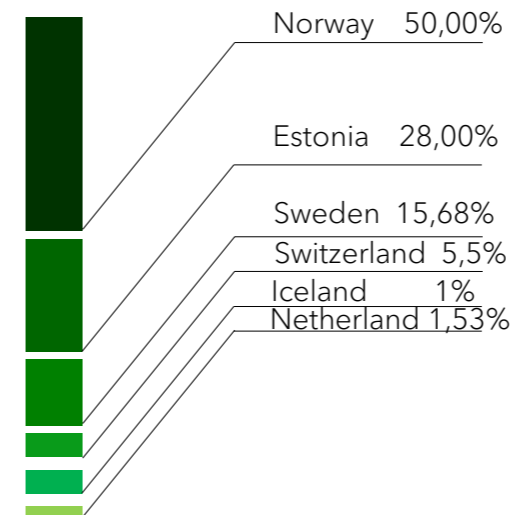
The ability to calculate the carbon footprint (LCA) allows us to offer our customers more and more added value. The greatest impact on reducing the carbon footprint can be achieved by choosing materials and construction methods immediately at the beginning of the project. The earlier the Timbeco wooden house factory is involved in the project with its team, the greater the effect can be achieved in reducing environmental impacts.

Timbeco clients

Our primary partners are small and medium-sized real estate developers and construction companies across Central and Northern Europe. The Timbeco brand stands as a symbol of reliability, professionalism, and excellence, offering top-tier solutions and superior quality to our customers.

Timbeco is highly regarded for the transparency of our services, the added value we bring to our products, and our commitment to energy efficiency. We are known for providing innovative, cost-effective solutions that meet the evolving needs of the market. Our reputation is built on delivering on our promises and consistently meeting deadlines—qualities that our customers deeply value and rely on. When clients work with Timbeco, they can trust in our ability to deliver on time, every time, ensuring their projects run smoothly and efficiently.

Sales by market 2023



In 2024 and 2025, we are strategically focusing our sales efforts on markets with lower currency risks and a growing demand for wooden buildings with a reduced environmental footprint. Estonia will remain one of our core markets, where we expect significant growth in both product sales and service offerings in the coming years.

By maintaining this targeted approach and driving continuous innovation, we are confident in our ability to deliver competitive solutions that not only meet the evolving needs of consumers but also support our long-term sustainability goals. This strategic focus positions us to stay ahead of market trends while contributing to a greener, more sustainable future.



CERTIFICATES

ISO 9001:2015 since 2012
 ISO 14001: 2015 since 2015
 ISO 45001:2018 since 2018

ISO 9001 quality management system

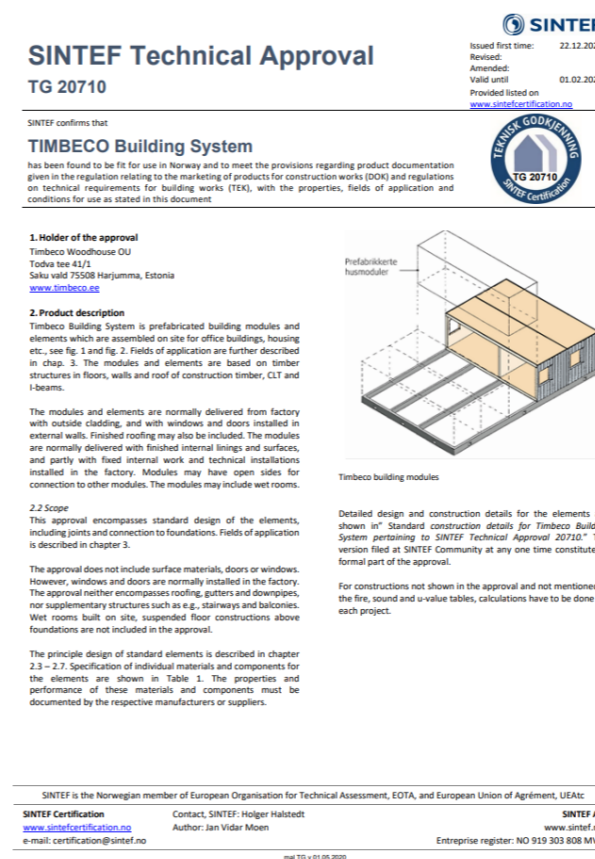
In order for organizations to compete successfully in the market with their products or services, their management must take care of continuous process improvement to ensure good quality. Continuous improvement and improvement is the basic principle of the quality management system. Adherence to the ISO 9001 standard requires the existence of a quality management system at an elementary level and is a guarantee for the customer that promises will be fulfilled.

ISO 14001 environmental management system

Given the ever-increasing awareness of climate change and environmental issues, organizations need an effective environmental management system that provides long-term competitiveness. Conscious environmental management is a company's opportunity to show that during the production and distribution of goods, they are aware of and control the impact of their activities on the environment. The company's desire to protect the environment is reflected in the sustainable consumption of raw materials, the selection and use of sustainable energy sources, the application of modern technologies, the efficient handling of emissions and industrial waste, as well as the logistical transportation of products.

ISO 45001 occupational health and safety control systems

Occupational safety problems may seem exaggerated until the first accident, which leads to physical injury and causes material and moral damage and negative publicity for the company. The occupational safety system is a very important part of the company's management, which creates the basis and framework for targeted, transparent, effective, fact-based and employee-inclusive occupational health and safety activities. Adopting an understandable and controllable occupational safety system also helps to manage and reduce potential risks and injuries.



ETA European Technical Assessment from 2021

The European Technical Assessment is an assessment document that confirms the performance of a construction product in relation to its main characteristics. Harmonized standards and European technical assessments create a common technical language used by all those involved in the construction industry and enable manufacturers to draw up a declaration of performance and affix the CE mark. The CE mark allows a construction product to be legally placed on the market in any EU country and then traded in the EU's single market.

SINTEF certificate from 2022

At the beginning of 2022, the technical approval TG 20710 of the Norwegian Building Research Institute (Sintef Buildings and Infrastructure) came into effect for the building system developed in Timbeco. Sintef confirms that the Timbeco element and modular building construction system consisting of design, manufacturing and construction solutions is suitable for use in the Kingdom of Norway and complies with the Norwegian Building Code. The approval covers buildings of up to 4 floors and covers areas such as load capacity, energy efficiency, sound insulation, fire resistance, wet rooms and the environment.

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"

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.



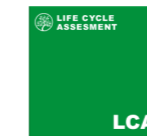
Competence center for wooden construction

We are creating a competence center for wooden construction.



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



TIMBECO2.0

2028

A zero-carbon company
Materials, production, transport and construction of buildings

2026

Acquisition of electric lifts and creation of infrastructure
Replacement of the lift fleet with electric lifts

2025

90% of production waste is recycled
We recycle at least 90% of production waste.

2023

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

2022

Green Tiger Program
We went through the Green Tiger program.



TIMBECO

SUSTAINABLE DEVELOPMENT GOALS

OBJECTIVES/ACTIVITIES	2021	2022	2023	CHANGES
TURNOVER (mil.EUR)	12,5	16,2	10,1	
E-ENVIRONMENT				
ENERGY CONSUMPTION PRODUCTION Kwh 1m ² per year	2,76	2	2,3	■
ENERGY CONSUMPTION OFFICE Kwh 1m ² per year	4,96	3,44	4,94	■
WATER / SEWERAGE, OFFICE AND PRODUCTION m ³	3,92	6,1	3,65	■
MUNICIPAL WASTE OFFICE m ³	3,74	3	1,56	■
PAPER/CARDBOARD IN THE OFFICE m ³	0,89	1,02	1	■
OLMEJÄÄTMED TOOTMINE m ³	2,37	2,1	3	■
FILM WASTE RECOVERED IN PRODUCTION t	0,87	0,7	0,86	■
CARTONG RECYCLED IN PRODUCTION t	0,54	0,28	0,65	■
MIXED WASTE IN PRODUCTION t	7,38	3,72	3,62	■
GYPSUM RESIDUES RECYCLED t	8,4	6,4	1,52	■
WOOD RESIDUES RECYCLED t	1	7	9,2	■
SCRAP METAL t	0,1	0,26	0,08	■
HAZARDOUS CHEMICALS t	0,11	0,4	0,4	■
<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	■
IT EQUIPMENT SENT FOR RECYCLING VIA GREENDICE	0	100%	100%	■
S -SOCIAL				
COMPREHENSIVE DEVELOPMENT PROGRAMS FOR EMPLOYEES	1	5	4	■
ACCIDENTS AT WORK AT WORK				
SERIOUS ACCIDENT AT WORK	1	1	0	■
G-GOVERNANCE				
THE COMPANY OR THE EMPLOYEE HAS COME UNDER AN EXTERNAL IT ATTACK	0	0	0	■

■ Positive

■ Neutral

■ Negative





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.



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.

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.

■ **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.

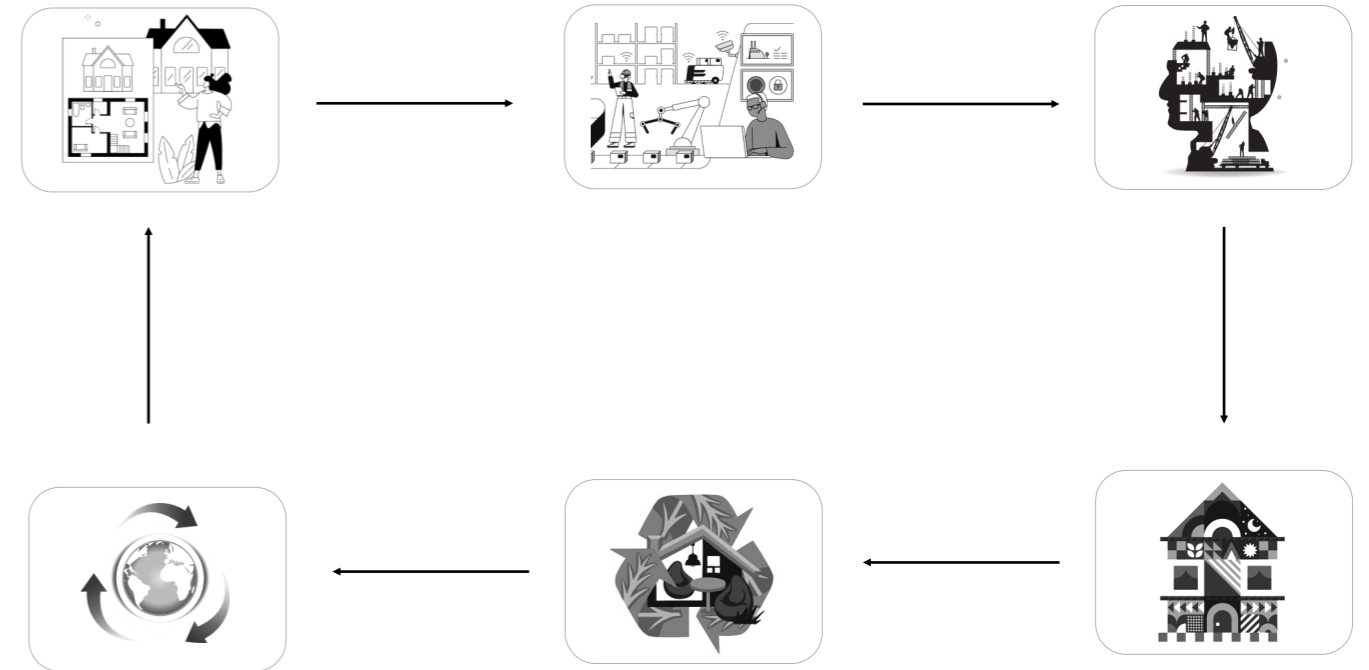
■ **Operational Carbon** - carbon emissions resulting from the use of the building: for example, the energy needed to heat, cool and maintain the building.

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/



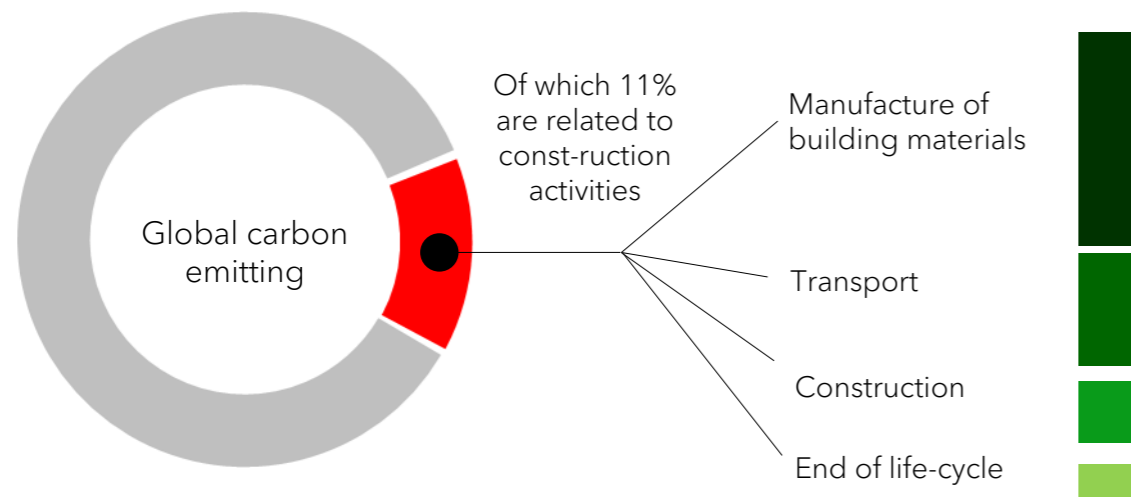
ADDITIONAL INFORMATION OUTSIDE LIFE CYCLE D
Benefits or burdens for the environment from recycling, reuse and energy recovery beyond the life cycle of a building. Takes into account the potential of exported renewable energy, reuse and recycling.

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").



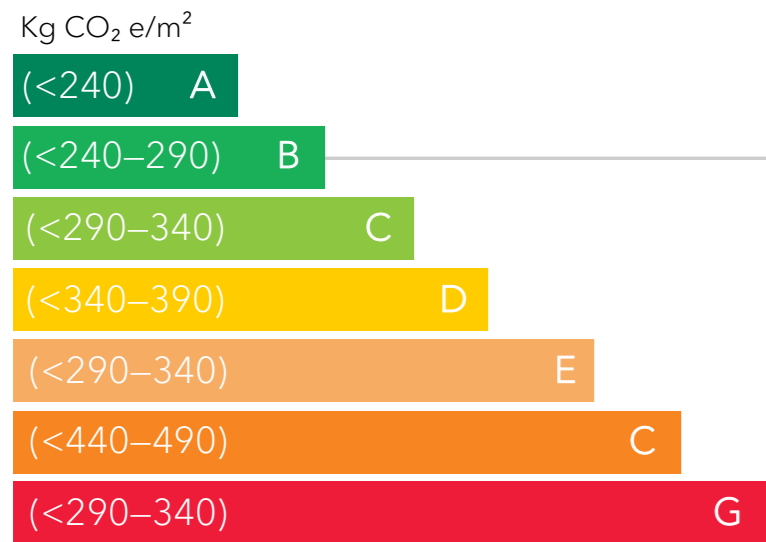
Information sharing and storage is anonymous



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

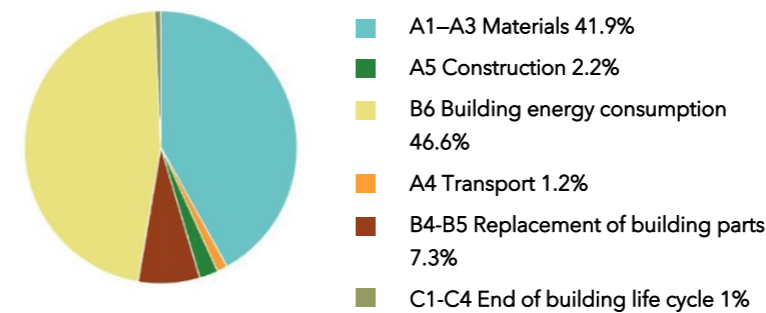
Example of CO₂ emitting by building elements

- 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.

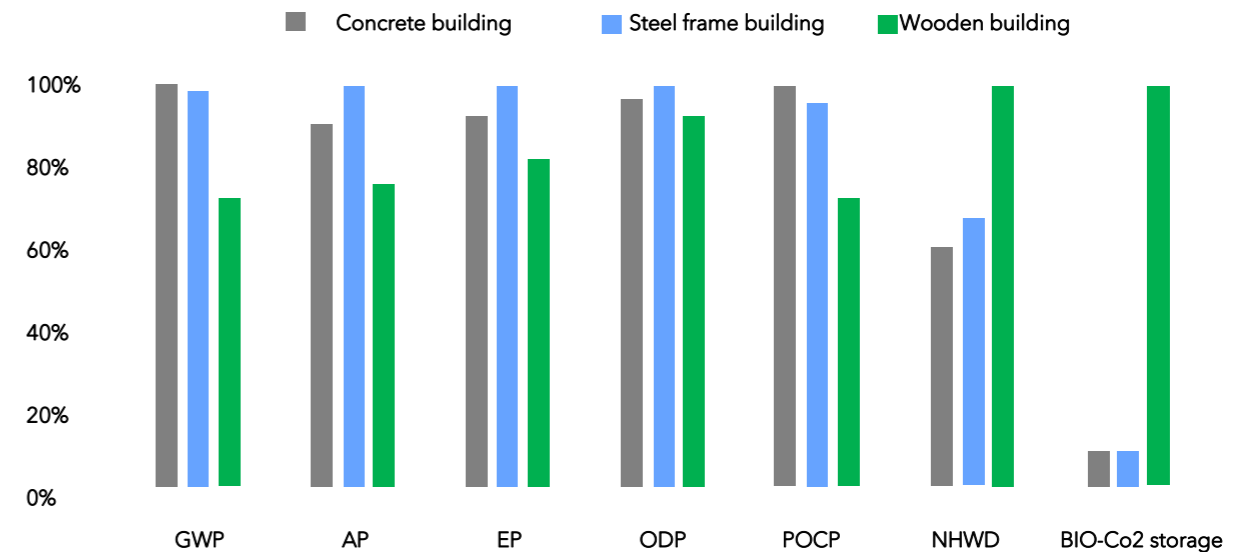
An example of a building's GWP calculation when emitting



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.



TIMBECO STANDARDIZED MODULAR CONSTRUCTION

■ Timbeco Modular Standard (TMS)

Timbeco Modular Standard represents a pioneering advancement in modular construction, offering an innovative solution that combines cutting-edge technology with sustainability principles. At the core of this approach is the use of prefabricated wooden frame modules, which are seamlessly integrated on-site using a versatile “plug & play” methodology. These modules are designed around the concept of multifunctional spaces, allowing for flexible and adaptive building configurations that cater to the evolving needs of modern living.

The result is not just a building, but a sustainable living environment that prioritizes both the well-being of its inhabitants and the health of the planet. TMS buildings are designed to optimize indoor air quality and ensure a healthy indoor climate, making them ideal for both residential and commercial use. The natural materials, including sustainably sourced timber, contribute to enhanced air quality while minimizing exposure to harmful chemicals often found in conventional construction materials.

In addition to their environmental and health benefits, the Timbeco Modular Standard brings significant advantages in terms of construction efficiency. The modular design allows for dramatically shortened construction timelines, reducing both labor and material waste. The off-site prefabrication process minimizes disruptions at the construction site, reducing noise, dust, and other emissions that are typically associated with traditional building methods. This results in a cleaner, more eco-friendly construction process with a lower carbon footprint.

Another key feature of the Timbeco Modular Standard is its emphasis on circularity and recyclability. The modular components are designed to be almost 100% recyclable at the end of their lifecycle, supporting a circular economy by reducing waste and promoting resource efficiency. This approach ensures that TMS buildings are not only sustainable during their construction and use but also contribute to long-term environmental benefits once they are decommissioned.

TMS offers a revolutionary approach to building design and construction, one that prioritizes sustainability, health, and efficiency. By embracing modularity, prefabrication, and recyclability, TMS provides a holistic solution that meets the demands of modern urban development while contributing positively to environmental and social sustainability goals.



■ LIVING holiday home

Building: 3 different models
Net area: 70.2 and 103 m²
Room plan: three different room plans

A house with high 2.7m ceilings and spacious window areas. In the 103 m² model, you can choose between a sauna or an extra bedroom.



■ LINK 2-floor terrace house

Building: standard terraced house
Net area: 95.6 m²
 Three different balcony-terrace solutions with a total of 3 bedrooms

A 2-storey terraced house with a minimalist style, where the space planning has been solved smartly. There are utility rooms on both floors



■ FLEX apartment building

Building: with 4 to 12 apartments
Apartments: 1, 2 and 3 rooms
Layout: 7 room plans

A flexible modular solution for building apartment buildings of different sizes. The building has an external staircase and spacious balconies.



■ X modular holiday home

Building size: 12900x3900
Net area: 44m²
 Mirrored windows

The building consists of a living room and an open kitchen, a home mini-spa with a sauna and a bedroom. The layout of the rooms has added emphasis to enjoying moments of rest.



■ SHOP gas station shop

Building: Variable size
Net area: 100m²

A building produced as one complete module, which has everything necessary to serve the gas station.

Wood processing efficiency

12% → 6%

Hundegger Speed-Cut SC3

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





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.

ECONOMICAL USE AND RECYCLING OF CONSTRUCTION MATERIALS

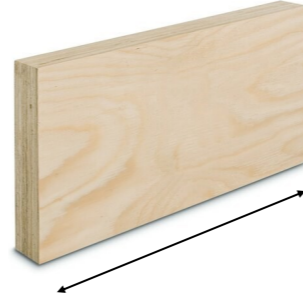


C24 wood

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.

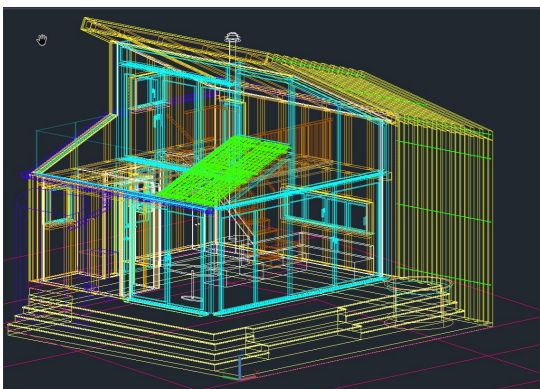


FSC® Timber Supply Chain Certification

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.



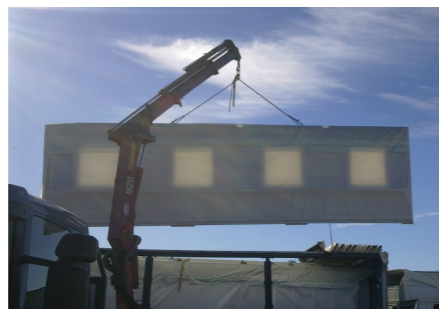
Heating blocks from production waste

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.

SAFETY

Occupational safety objectives

Timbeco's main occupational safety goal is 0 serious occupational accidents in the factory and on construction sites. To achieve this, the company has put together an action plan that will help achieve this goal.

Training of new employees

When a new employee is added, comprehensive safety training is carried out. Training materials are shared, safety videos are reviewed together, and rules and requirements are explained.

Trainings

The company ensures the organization of the necessary trainings for forklift drivers, medical aid providers and the entire team to ensure fire safety.



Work clothes

Timbeco employees operating in the factory and on construction sites are equipped with work clothes, helmets, headphones, harnesses and safety shoes provided by the company.

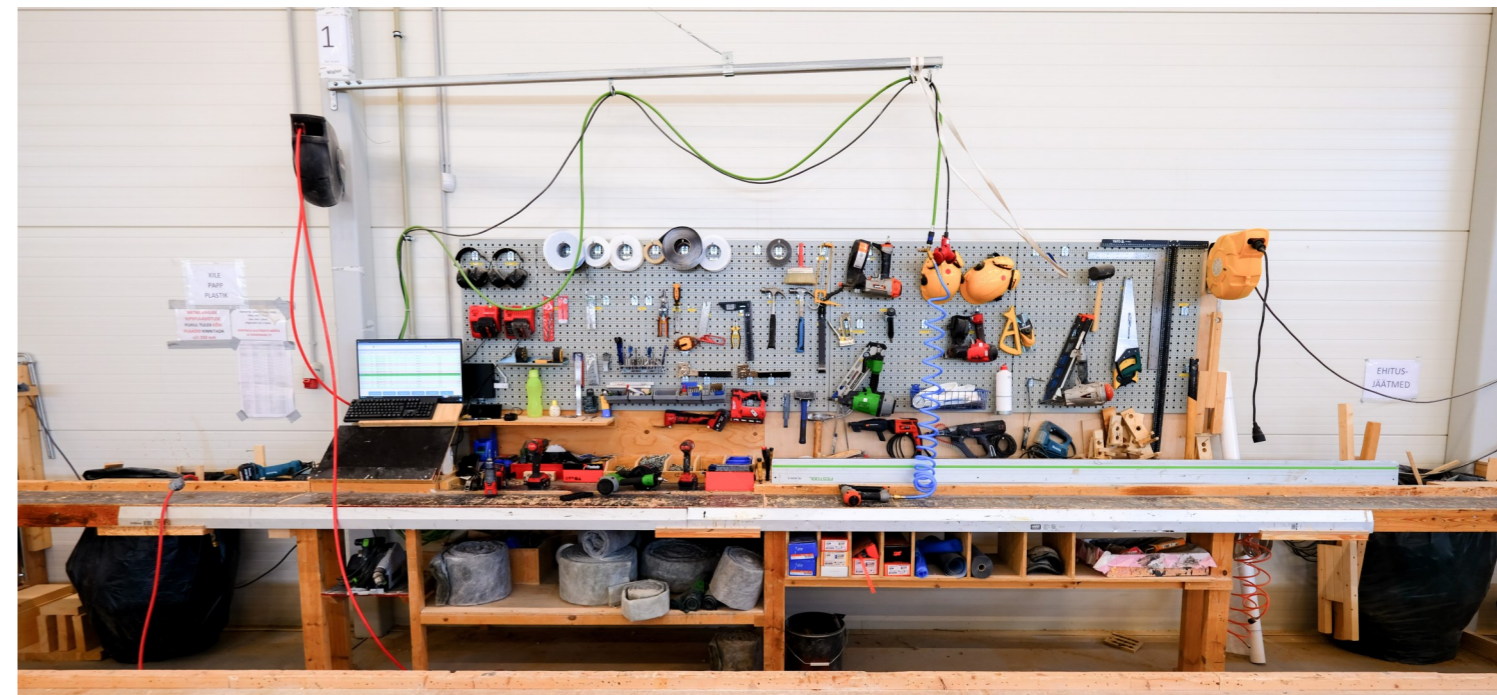


Educational videos on work and fire safety

We have produced training videos on work and fire safety that explain the rules applicable in the factory to employees and subcontractors. It gives a better visual overview of the main topics and points that we think are the most important.

Working environment meetings

The company has functioning working environment meetings, where an equal number of employees and employer representatives participate. The purpose of this meeting is to ensure a good working environment, to resolve issues of occupational health and occupational and environmental safety.



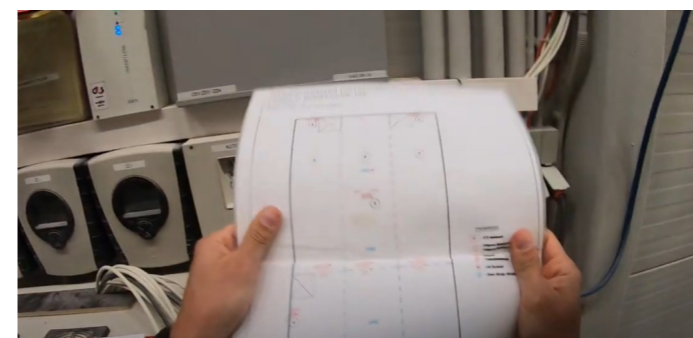
Occupational and environmental safety tours

Regular tours to ensure occupational and environmental safety in production, where compliance with requirements is checked. The minimum allowed level is 85%.

Fire safety training

We have invested significantly in fire safety activities in recent years.

We regularly organize fire drills to achieve readiness for real events. What is experienced in the exercises helps to highlight bottlenecks and improve general awareness of actions in the event of a fire.



Timbeco Woodhouse OÜ

TUNNISTUS
TI-1188 05.09.2024

Käesolev tunnistus on välja antud ettevõttele **Timbeco Woodhouse OÜ** (Saku-Tõdva 41, Tõdva, 75508 Harju maakond), mis tõendab, et Lisades nimetatud töötajad läbisid 05.09.2024.a töötajate evakuaatsiooni- ja tuleohutusosalase (teoreetilise ning praktilise) koolituse, kestvusega 2 akadeemilist õppetundi tuleohutuseksperdi (tase 6, nr. 200307) Aivar Põlda läbiviimisel.

Evakuatsiooni ja tulekahju korral tegutsemise koolitus sisaldas teemasid:

Teema 1. Tuleohutusosalane teadlikkus

1. tulekahju olemus ja selle areng;
2. tulekahjuga kaasnevad ohud ning võimalikud tagajärjed inimesele, varale ja keskkonnale;
3. tulekahju tekkimise võimalikud põhjused;
4. tulekahju kustutamise põhi- ja ohutusreeglid.

Teema 2. Evakuatsioon

1. ohutu evakuatsiooni põhimõtted;
2. evakuatsioonitee läbimine ja selle märgistuse jälgimine;
3. inimeste evakueerimine.

Teema 3. Tulekahju korral käitumine ja tegutsemine

1. inimeste päästmine ohustatud alast;
2. inimeste teavitamine tulekahjust;
3. tulekahjusignalsüsteemi kasutamise põhimõtted;
4. tulekahju teate edastamine Häirekeskusesse ja selle sisu;
5. esmaste tulekustutusvahendite ja tuleohutuspaigaldiste kasutamise põhimõtted.

Aivar Põlda
Kahjuennetus OÜ

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Tallinn 13517 Ehitajate tee 110
E-mail: aivar@kahjuennetus.ee

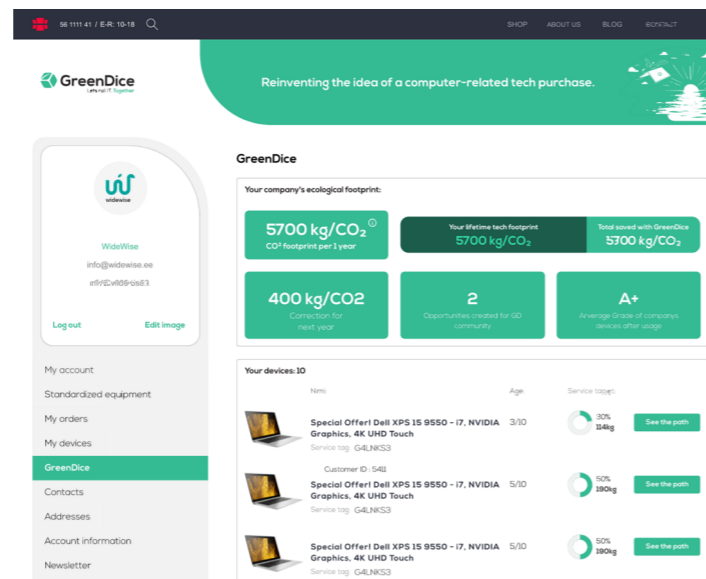
KAHJUENNETUS OÜ

THE GREENDICE TMEASURES THE CO2 FOOTPRINT OF TIMBECO TECHNICAL EQUIPMENT AND HELPS TO REDUCE IT



■ New IT equipment

With GreenDice, we can guide and monitor the life cycle of IT equipment from production to end of life. Timbeco's goal is to extract the maximum resource from one ready-made IT device. At Timbeco, we use only high-quality equipment, and as a rule, they are in active use for 4-5 years. Since the expected life of one computer is 8-10 years, we send them to GreenDice for inspection after the end of their useful life, and these devices are used again in schools, libraries and other social institutions both in Estonia and in other parts of the world. GreenDice very precisely monitors the movement of each device in a complete technical circle. Any device that has reached the end of its life cycle is directed to material recycling.



■ Used IT equipment

At Timbeco, we have partially put used tablets and screens on sale. In this way, we give them a longer life and reduce the environmental footprint. At Timbeco, such devices are used for 5 years or until the end of the device's life.

■ Calculating the lifetime carbon footprint of IT technology software

Greendice has developed a system based on which the environmental footprint of each purchased device can be calculated, and on the basis of which it is possible to prepare accurate reports on the effects of all IT equipment.

■ The formula for calculating the carbon footprint of IT technology

- A - Co2 generated during production
- B - Total life of the product in years
- C - Primary user consumption in years
- D - Not purchased by members of the Greendice community

$$\frac{A}{B} + D \leq O$$



Working at Timbeco

■ Trainings

Training is becoming an increasingly important topic in the company's work. We have prepared a comprehensive training calendar where you can find trainings for the entire company, teams as well as personal development programs.

- 1x per month professional internal training In-house group trainings, e.g. English and financial training.
- 1x per quarter internal training on health. Development programs where the company contributes to ensuring that our employees get very thorough and modern knowledge in their field.
- Six times a year, the focus is on different topics, and the trainers are our own employees or external consultants. The training topics are mental health, how to consciously do health sports, financial wisdom, etc.

■ Remote work at Timbeco

We promote remote work opportunities. It certainly does not replace contacts between people and teamwork, but it is a good alternative in terms of flexible work arrangements.

■ Discounts and Allowances

We are committed to supporting the personal and professional well-being of our employees through a range of benefits and allowances:

Educational Support: We recognize the value of continuous learning and professional growth by offering a graduation bonus for employees who complete their bachelor's or master's degrees.

Back-to-School Support: To support our employees with young children, we provide a paid day off on September 1st, enabling parents to accompany their children as they begin the school year.

Work-Life Balance: We offer flexible working hours and various work arrangements to help employees effectively balance their professional and personal responsibilities.

Bereavement Leave: In times of personal loss, we provide 5 paid days off to allow employees to take the necessary time to grieve and care for their family.

Financial Support for Life Events: We offer financial assistance for both sad and joyful life events, such as funeral expenses and the birth of a child, to support our employees during significant moments.



Activities in Timbeco

■ Team building through sports

We believe in the power of shared experiences to strengthen team bonds. Regular sports activities, outings, and team events play a key role in fostering collaboration and building a strong sense of community among our employees.



■ Nature-Based Team Activities

Our team values the opportunity to connect with nature and recharge in the great outdoors. We regularly organize activities, such as bog trips, that allow us to enjoy the natural environment together and strengthen our bond as a team.



Contributing to community development



■ We support Tõdva Volunteers Rescue commando

We maintain and protect the community by supporting local rescue efforts. It is an assurance to our small local community as well as to the Tim-beco factory that rescuers will be there when they are needed.



■ Cooperation with Kajamaa school

We have hosted Kajamaa school groups in Timbeco to introduce the buildings produced in the factory, working in the construction sector and provided inspiration for future construction.



■ The Ministry of Defense gave Timbeco "Supporter of the National Defenders" award

We value national defense and the contribution and participation of employees in national defense.



Contributing to the development of the wooden house sector

■ Sharing ESG experiences

We have always tried to share our experience and present our activities regarding the implementation of ESG activities in Timbeco. We actively participate in seminars and trainings.



■ Introducing prefab reconstruction of apartment buildings

We help introduce the specifics of prefab reconstruction and share information with apartment associations and consultants.



■ Contribution to the creation of the "Woodhouse Academy".

Eesti Puitmajaliit together with the partners of the "Wood for Youth" project - Tallinn University of Technology, Satakunta University of Applied Sciences, Finnish Federation of Woodworking Industry and Vidzeme University of Applied Sciences - created an interactive e-learning program to provide professional training in a convenient and attractive way. Knowledge is acquired both through theoretical e-learning (learning modules online) and practice in wooden house factories. Timbeco has contributed its materials and knowledge to make the program more meaningful and relevant to the needs of the sector.



Central Baltic Programme

Wood for Youth

■ Welcoming visitors to our factory and completed construction sites.

Our heart is to take care of vocational and higher education in the field of construction. We help young people find their way into the wood sector by holding lectures in (university) schools and by offering the opportunity to do an internship and write theses in the field of Timbeco and/or the wood industry.

■ Appearing in 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.

■ Contributing to the creation of a video for the EIS wooden house sector

we filmed and photographed the working processes of the Timbeco factory to contribute to the promotional material introducing the wood sector in Estonia created by the joint agency of EIS and KredEx.



■ Participation in the DRASTIC project

Drastic is a pioneering form of cooperation that aims to bring circular economy-based, low-carbon, affordable and innovative construction and reconstruction solutions to the European construction sector.

