

Sustainability Report 2025



MÄKELÄ ALU



Contents

3 General

- 4 Opening words: Petri Mäkelä
- 5 Key achievements 2025
- 6 Responsibility at Mäkelä Alu
- 8 History of Mäkelä Alu
- 9 Our business today
- 10 Vision and mission
- 11 Strategy
- 12 Key figures 2025
- 13 Our guiding principles and standards
- 17 UN Sustainable Development Goals



22 People

- 23 From the CEO
- 24 Key figures of our personnel
- 25 HR Manager: Wellbeing personnel
- 26 Employee satisfaction
- 30 Competence development
- 32 Occupational safety and wellbeing
- 34 Extensive occupational healthcare services
- 35 Insurance and prevention
- 36 Local agreements
- 37 Employee benefits and reward fund
- 39 Our people: Soile and Juhani
- 41 Local presence

42 Planet

- 43 From the Sustainability Director
- 44 Achieving net-zero emissions
- 45 Case: Our solar power plant
- 46 Case: Our afforestation project
- 47 Case: Energy storage
- 48 Towards lower-emission aluminium profile production
- 49 Recycled profile AluPlanet®
- 50 Origin of recycled aluminium
- 51 EPD declarations
- 52 Energy consumption
- 53 Waste management and emissions to soil
- 55 Water bodies and water consumption

56 Management

- 57 Ilkka Halava: We continue as pioneers
- 58 Management system
- 59 The Mäkelä Alu way of operating
- 60 Whistleblowing channel & Code of Conduct
- 61 Supplier requirements
- 62 Risk management
- 64 Auditing

Planet. People. Profile.

General

- 4 Opening words: Petri Mäkelä
- 5 Key achievements 2025
- 6 Responsibility at Mäkelä Alu
- 8 History of Mäkelä Alu
- 9 Our business today
- 10 Vision and mission
- 11 Strategy
- 12 Key figures 2025
- 13 Our guiding principles and standards
- 17 UN Sustainable Development Goals





Sustainability is not for heroes

Sustainability is not about heroic acts.

It is, at the scale of both individuals and organisations, an anthill built from small pieces, forming a much larger whole than what is visible on the surface. Just like an anthill, sustainability is not built alone but is always a shared effort.

Sustainability is a cumulative process.

Already on the way to one goal, new opportunities for sustainability work emerge. That is why sustainability unfolds like the shell of a mollusc, as a spiral that expands to cover new functions and forms.

Sustainability is perseverance.

It is not about quick victories, but a series of strategic and everyday decisions that consistently lead towards more sustainable operations. What matters is movement and direction, not always speed.

Welcome to explore our anthill of sustainability through this report.

Petri Mäkelä

Chairman of the Board

Key achievements 2025

- We achieved net-zero emissions in our own production and internal logistics.
- We increased the use of renewable energy and improved energy self-sufficiency by investing in our own solar power plant and energy storage.
- We supported a Finnish afforestation project that strengthens domestic carbon sinks and promotes biodiversity.
- We further developed occupational safety systematically through safety observations, safety briefings and risk assessments.
- We improved employee experience and engagement, as reflected in the 2025 job satisfaction survey.



Building a sustainable future

At Mäkelä Alu, responsibility is deeply rooted in everything we do. It covers actions on environmental, economic and social issues. These principles have guided us from the very beginning.

For us, responsibility is not just a word, it's the daily, concrete actions we take to make it a reality – every day.

Our corporate strategy, values, management system principles and ethical guidelines guide our day-to-day responsibility work.



Key objectives of our sustainability work



Safety: We protect people, property and the environment.



Staff wellbeing and skills: We develop management skills and promote local prosperity.



Environmental friendliness: We reduce the environmental impact of our production and internal transport and fight climate change.



Honest and reliable business: We also maintain high standards with our partners.

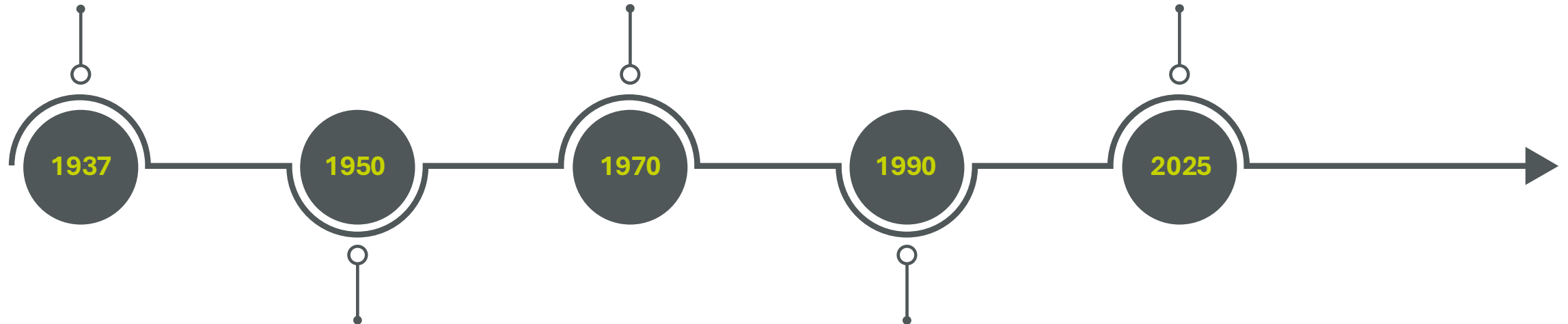


A family business with almost 90 years of experience

At the age of 20, **Fredrik “Reeti” Mäkelä** made his dream come true and founded a sheet metal shop in Luoma-aho, Alajärvi in 1937. In the early years of the company, the business focused on the manufacture of stove coverings and various types of tinfoil dishes.

The world changed, and by the time the company was taken over by Reeti’s first-born **Esko** in the 1970s, the company had already started manufacturing tin roof profiles. But the biggest change was yet to come.

The company has evolved and grown over the decades. We have always invested in the skills of our staff, and their wellbeing is well looked after. The Board is currently chaired by Esko’s son **Petri Mäkelä**.



During the war, shortages of materials and labour forced innovation and production was often reoriented. Already in the 1950s, Reeti foresaw that tinfoil would be replaced by a higher quality material. A material that would come to define the future of the company.

During a company visit in Norway in the early 1980s, Esko visited an aluminium extruding facility. Slowly, his interest towards extruding aluminium grew, and Mäkelä Alu started manufacturing aluminium profiles at the beginning of the 1990s.

Modern 2020s extrusion plant

Our aluminium profile production has the lowest emissions in Europe. We are constantly renewing and improving our production to become more environmentally friendly, without compromising quality, efficiency, or safety.

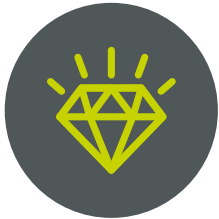
In addition to profile production, we offer our customers a comprehensive service. Our services include surface treatment, design, storage, and transport solutions for aluminium profiles. The goal is always to find a solution that will meet the customer's needs and achieve the best and most cost-effective result.

Our factory and offices are located in Luoma-aho, Alajärvi. We also have a branch in Voikkaa, Kuusankoski in Kouvola, and a subsidiary in Sweden.



Our vision and mission

Mäkelä Alu Oy is a pioneer in the aluminum industry, where the past is respected but the future is boldly envisioned.



Our mission

Planet.
People.
Profile.

Together for the
Planet's Best.



Our vision

Curious and responsible
trailblazer
– life must have a profile.



Our values

Let's do as agreed.
We challenge tomorrow.
We succeed together.
Responsibility is action.

Our strategic cornerstones



Kuvateksti

Customer value



Pioneer



Responsibility and sustainability



Quality and efficiency



People, skill, and will



Family Business: stability, harmony, curiosity, trust



Key figures 2025



Ownership:

100 %

family business



Equity ratio:

69 %



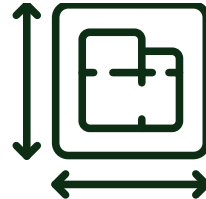
Turnover:

77.8 M€



Personnel:

210



Factory area:

35,000 m²



Aluminium produced:

14,900 tonnes



Share of surface-treated aluminium:

55 %



Export production:

38 %



Salaries paid:

10.0 M€



Tax footprint:

14.2 M€



Customer satisfaction (eNPS):

63

(Average 2025)



The principles that guide our work

Our work is guided by key international frameworks, which include:

- UN Sustainable Development Goals
- UN Guiding Principles on Business and Human Rights
- ILO Declaration on Fundamental Principles and Rights at Work
- Energy Efficiency Agreements implementing the EU Energy Efficiency Directive
- EU chemicals regulation (REACH) and CLP Regulation



Our work is also guided by our own internal guidelines and objectives

- Our strategy
- Our company values
- Code of Conduct
- Responsibility requirements for suppliers
- Our CO2 emission reduction targets related to our operations
- Our energy efficiency and development projects
- Quality and production process standards
- Our occupational health and safety practices
- Guidelines and commonly agreed practices

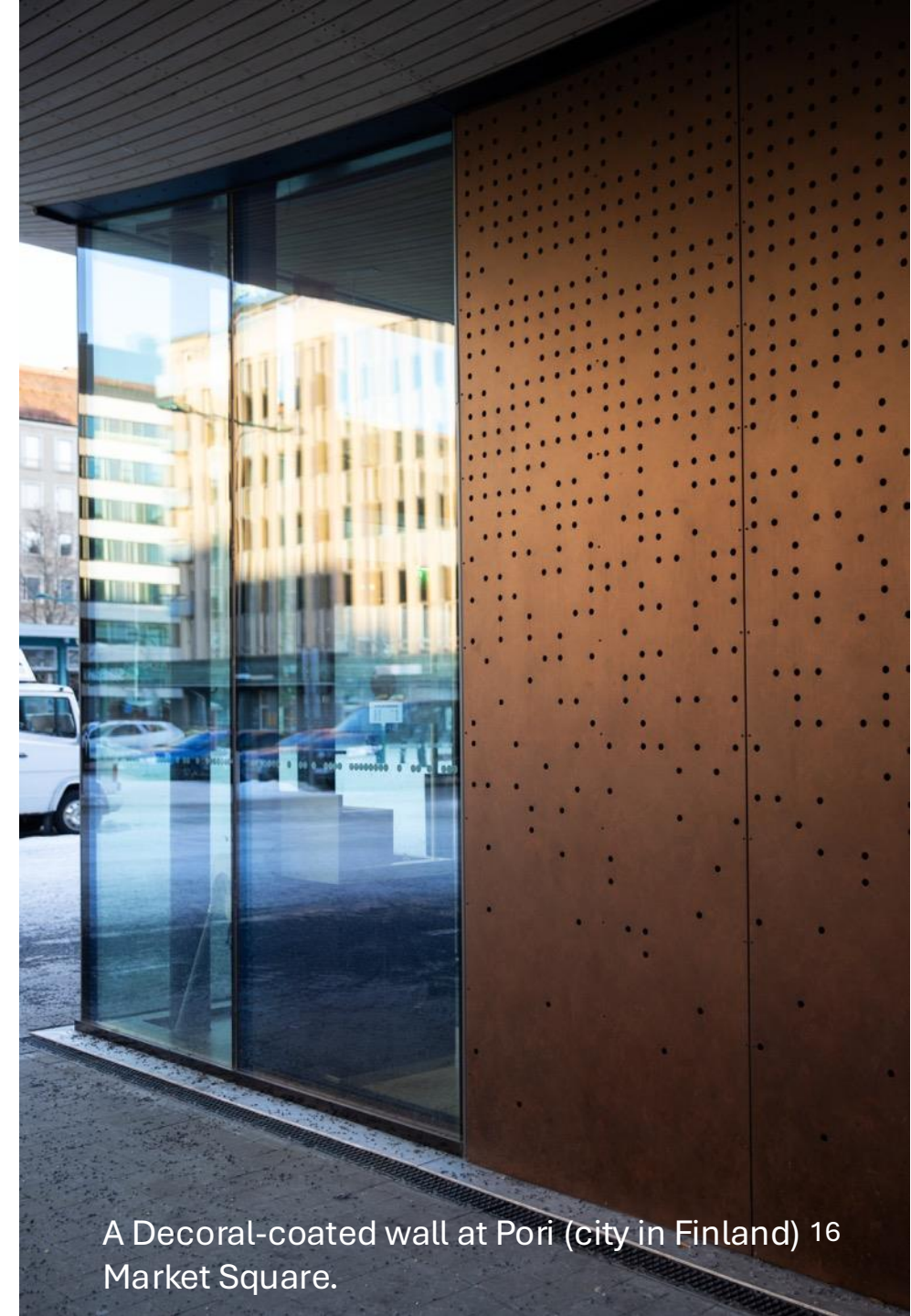
The standards that guide our work

- **ISO 14001:2015**
Standard for environmental management systems
- **ISO 9001:2015**
Standard for quality management systems
- **ISO 45001:2018**
Standard for occupational health and safety management
- **EN 15088:2006**
Standard for aluminium and aluminium alloys and technical conditions for the delivery of products used in construction works



- **GSB Standard and Master Certificates**
All our powder-coating paint shops are GSB-certified
- **MED D and MED B certificates**
Our operations are MED-certified. MED (Marine Equipment Directive) is a European Union directive that, among other things, promotes safety at sea and prevents marine pollution.

We also comply with a number of other standards, including those relating to aluminium testing methods and the various stages of production.



A Decoral-coated wall at Pori (city in Finland) 16 Market Square.

As a company, we are committed to the UN Sustainable Development Goals

The UN Sustainable Development Goals (SDGs) define policies for a better tomorrow.



Of these, we have identified the four most central goals for us.



Decent work and economic growth

A sub-target of the UN Sustainable Development Agenda: Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high value added and labor-intensive sectors.

Our objectives

Create profitable long-term business growth, enabling local and regional employment and an equal, balanced life.

Metrics

Number of employees, solvency.



Sustainable industry

A sub-target of the UN Sustainable Development Agenda for 2030: Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.

Our objectives

Lead the way in the areas of sustainability and planetary resilience. We deliver low-emission aluminium profiles, with or without surface treatment.

Metrics

Net-zero emissions in our own production and internal logistics. EPD emission value.



Local prosperity

A sub-target of the UN Sustainable Development Agenda: Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.

Our objectives

Act as a creator and contributor to local prosperity. Promote employment and cooperation not only in our own region but also on a wider regional, national and European scale.

Metrics

Tax footprint, effectiveness in selected networks.



Upper secondary school students from Alajärvi visiting the factory.

Climate action

A sub-target of the UN Sustainable Development Agenda: Integrate climate change measures into national policies, strategies and planning.

Our objectives

Lead by example in the fight against climate change through our own planetary resilience programme and influence the creation, design and implementation of climate-positive strategies at local, national and European level.

Metrics

Net-zero emissions in our own production and internal logistics. EPD emission value.
Effectiveness in selected networks.



People

- 23 From the CEO
- 24 Key figures of our personnel
- 25 HR Manager: Wellbeing
personnel
- 26 Employee satisfaction
- 30 Competence development
- 32 Occupational safety and wellbeing
- 34 Extensive occupational
healthcare services
- 35 Insurance and prevention
- 36 Local agreements
- 37 Employee benefits and reward fund
- 39 Our people: Soile and Juhani
- 41 Local presence

**YHDESSÄ
PLANEETAN
PARHAAKSI.**



Responsibility is a way of working

In 2025, we continued our determined efforts to reduce emissions, improve energy efficiency and promote the circular economy.

For us, responsibility is much more than environmental actions. It means a safe and well-managed working environment where people can develop, succeed and feel well. It means honest and transparent business, where we keep our promises and expect the same from our partners throughout the value chain. It also means responsible governance and risk management, which create the foundation for long-term success.

In terms of reporting, we have aimed to do more than is required of us. We believe that transparency, comparability and continuous development serve not only our stakeholders, but also ourselves. For us, reporting is not an endpoint, but a tool that helps us identify areas for improvement and measure our progress.

Marko Orpana

CEO



Staff structure

Average age of workers

42 years

Staff

238*

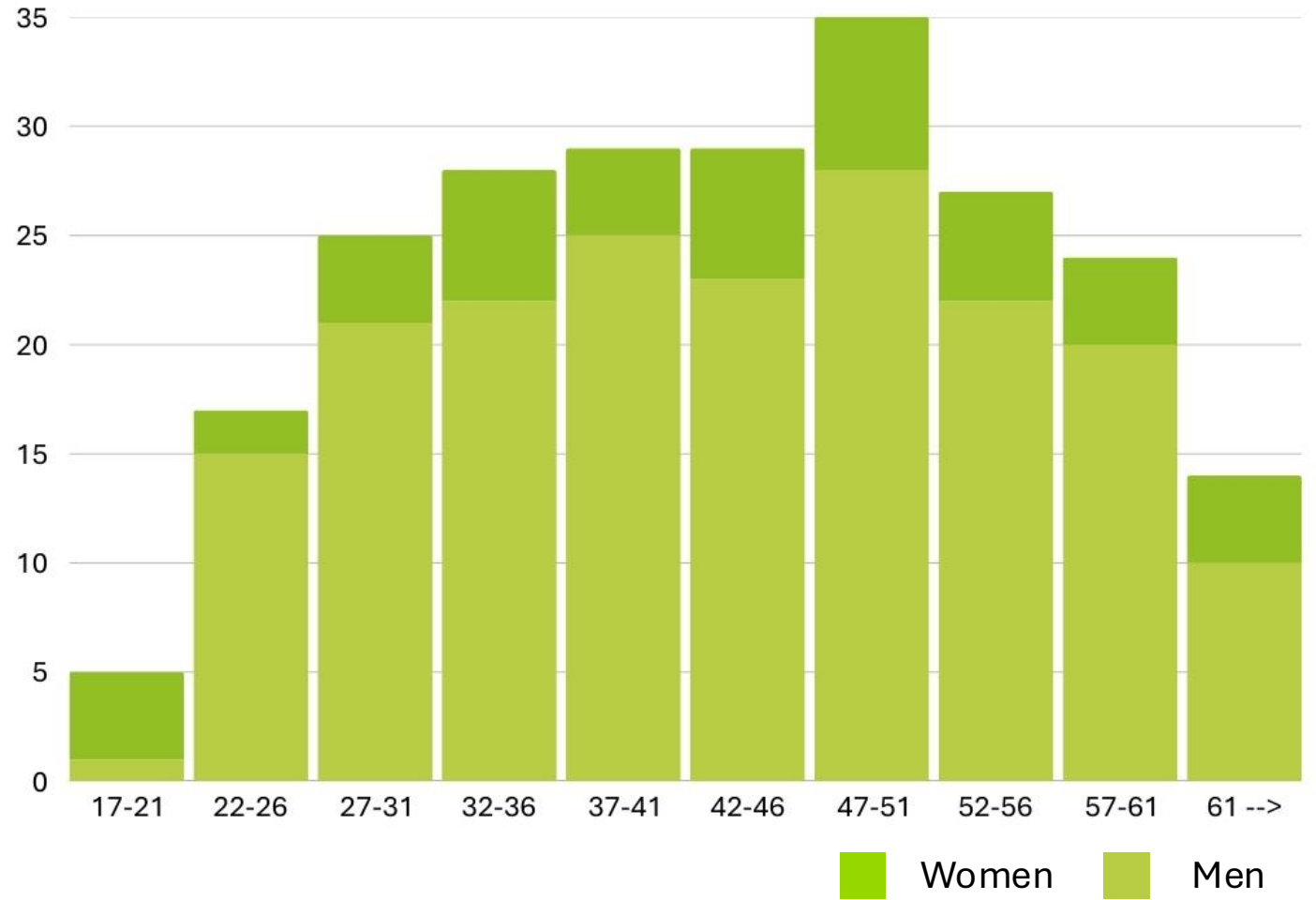
Officials

74

Employees

164

** Average number of employees over the full year, based on pension insurance company data.*





Wellbeing personnel are the foundation of success

At the core of our work are our people: skilled, committed and forward-looking Mäkelä Alu employees. We build a working environment where everyone can learn, develop and succeed in their own role. We have the courage to try new things, develop our ways of working and learn along the way, together.

Although 2025 was not an easy year and some difficult decisions had to be made, we look to the future with confidence. We continuously develop our processes and want to ensure that working life with us supports wellbeing, motivation and a sense of purpose in a constantly changing world.

We believe that the wellbeing of our personnel is the foundation of success, now and in the future.

Jenni Hautakangas,
Human Resources Manager

Employee satisfaction

We conduct a comprehensive annual employee satisfaction survey, the results of which are reported at the level of the whole organisation. The survey helps us understand the views of all our employees and identify areas where we can improve.

Our survey focuses on the following areas:

- Employee engagement (eNPS)
- Work capacity
- Stress level
- Response rate and number of respondents



The survey also explores the following areas and their development needs:

- Personal performance
- Functionality of the work community
- Management
- Knowledge and skills development
- Capacity and resources

We use these indicators to ensure that our staff are happy, motivated, and able to achieve their best.

We want to maintain a working community where our employees feel safe and enjoy their work.



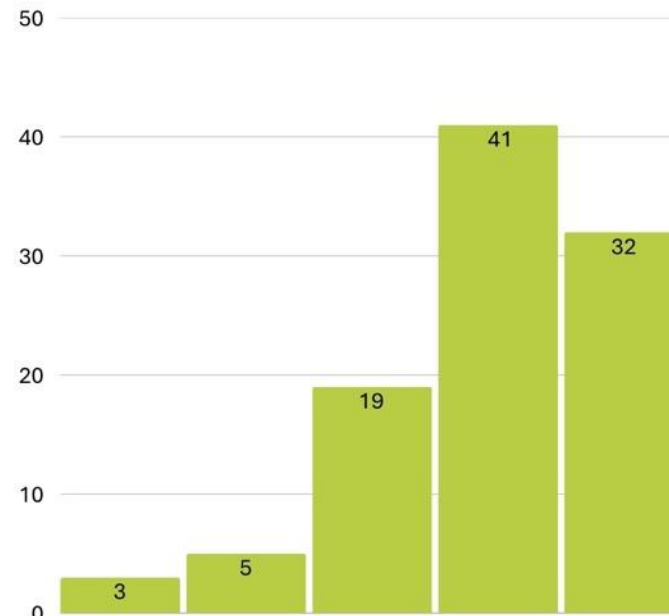
Employee satisfaction

The response rate was 66 % (149 respondents). The average score for all questions was 3.93 (scale 1–5).

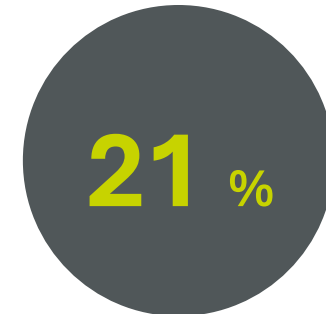


Average score

The average score of all likert responses was 3.93



Distribution of the average score



Need for development

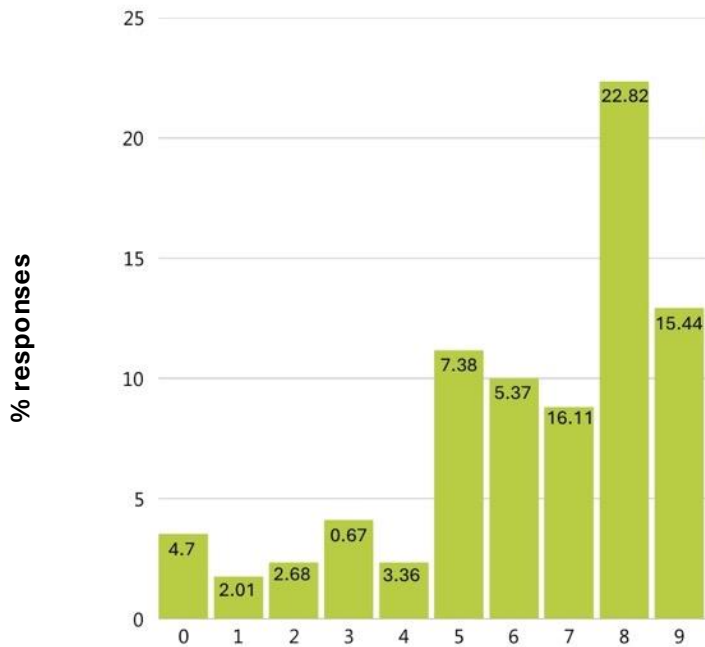
21 % of respondents indicated a need for development. 79 % of respondents stated that they are satisfied with the current situation.

Employee satisfaction visualised

eNPS



Promoters % - Detractors %

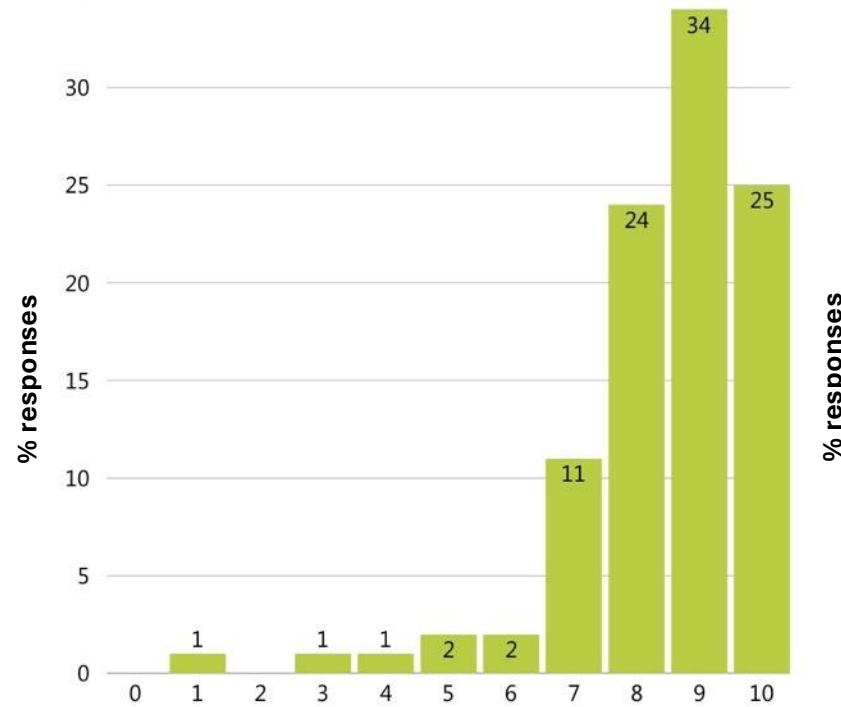


0-6 = Detractors, 7-8 = Passive, 9-10 = Promoters

Work capacity



The average work capacity score was 8.49 on a scale of 0-10.

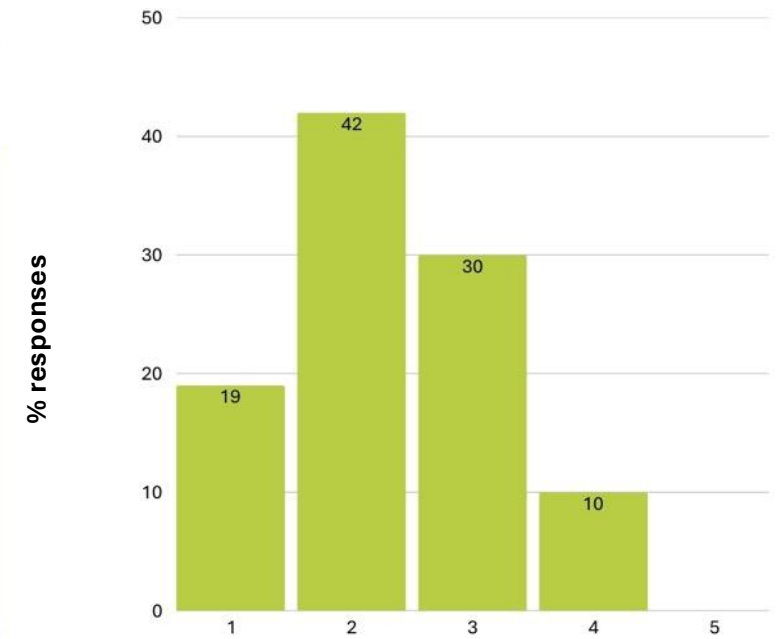


The higher the number the better the work capacity

Stress level



The average stress level was 2.31 on a scale of 1-5.



The lower the number the lower the stress level

Highly competent staff

Ensuring competence is important, because a smooth everyday life in the work community is a guarantee for high customer satisfaction, security of supply, and occupational safety.

The key to maintaining and developing competences is to identify the critical competence requirements for different tasks. For each of the competences identified, training material will be developed and used to deliver the training.

The development of competences is also verified, registered, and assessed for its effectiveness. The aforementioned components are used to draw up a training plan at individual, team, unit and, ultimately, company level.



Hours spent on training in 2025



Examples of statutory training include:



Hot work safety training



First aid courses



LPG Supervisor
Training



Hazardous chemical safety training
for managers and supervisors

We have also received training in the following areas

- Team leadership and management
- Responsibility
- Job-specific training
- New systems
- Safety & machine safety
- AI

Safety at work

We've made it as easy as possible to report safety observations, and everyone can follow the progress of corrective actions. Employees have the opportunity to contribute and share their improvement ideas.

Extensive machine risk assessments are underway, and production lines are being made safer. Our personnel are engaged and involved through continuous safety training focused on our own processes. Lasting change in safety culture comes from continuing and reinforcing good practices, training, and improving the work environment by staying committed to what has been agreed.

The idea of zero accidents may sound distant, but with commitment and continuous development of the work environment, it is entirely achievable. Our record for accident-free days is **479**. In the end, attitude makes the difference, and it takes the involvement of the whole community. We work toward this goal every single day.

Sanna Moilanen
EHS Coordinator

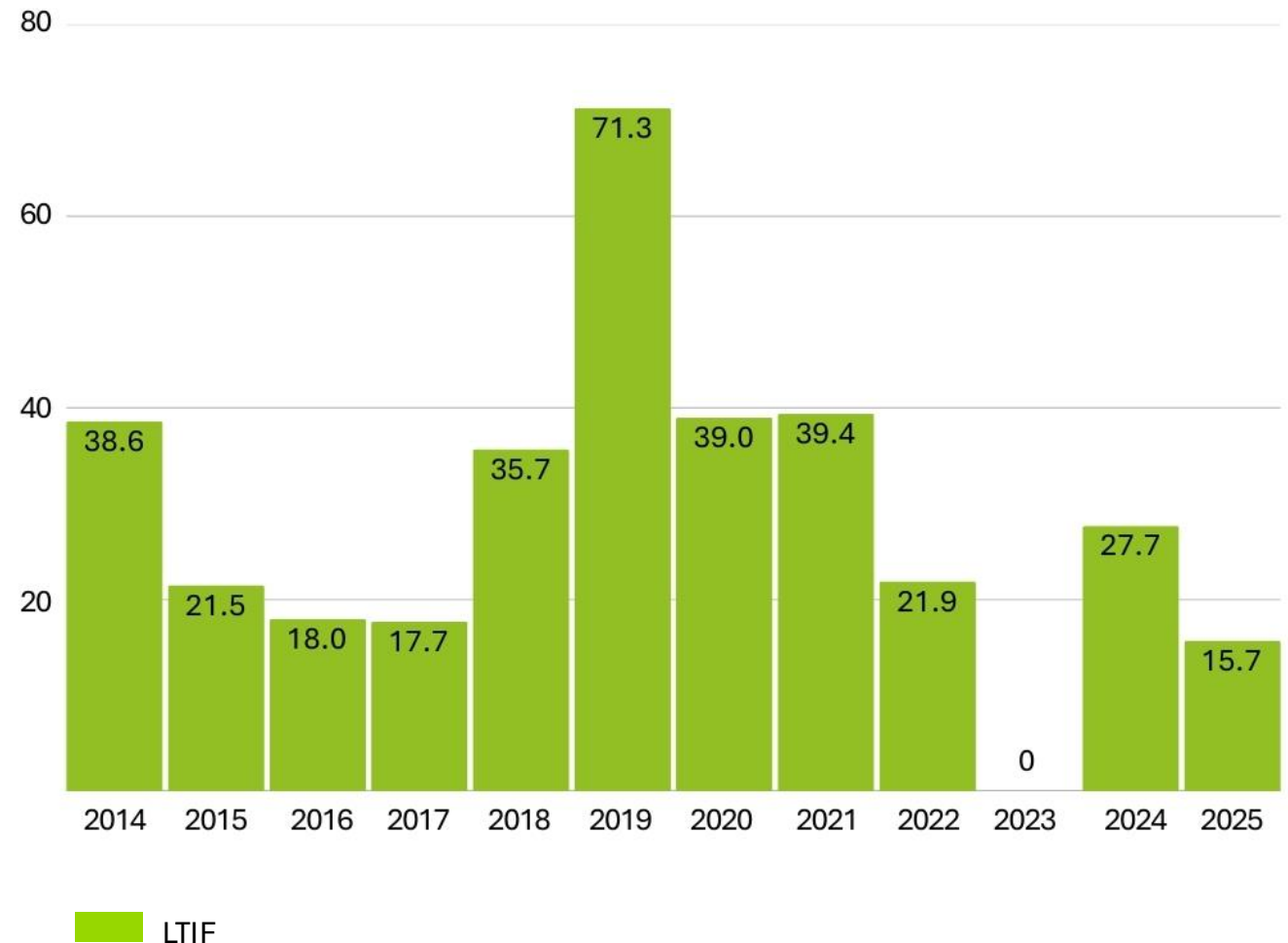


LTIF – Lost Time Injury Frequency

The LTIF rate in the graph is the so-called injury frequency rate. It indicates the ratio of accidents to hours worked. The ratio is calculated per million hours worked. Mäkelä Alu's injury frequency target is set to 0. The graph shows great progress from 2014 to today.

In 2024, the injury frequency rate was 27.7. There were six workplace accidents during the year.

The implementation of agreed safety practices is monitored on a weekly basis.



Comprehensive occupational health care services and early intervention

Staff have access to comprehensive occupational health care services, which include not only statutory preventive and capacity-building activities, but also extensive medical care. Cooperation with occupational health care services is active, and we aim to intervene early in cases that threaten the staff's ability to work.

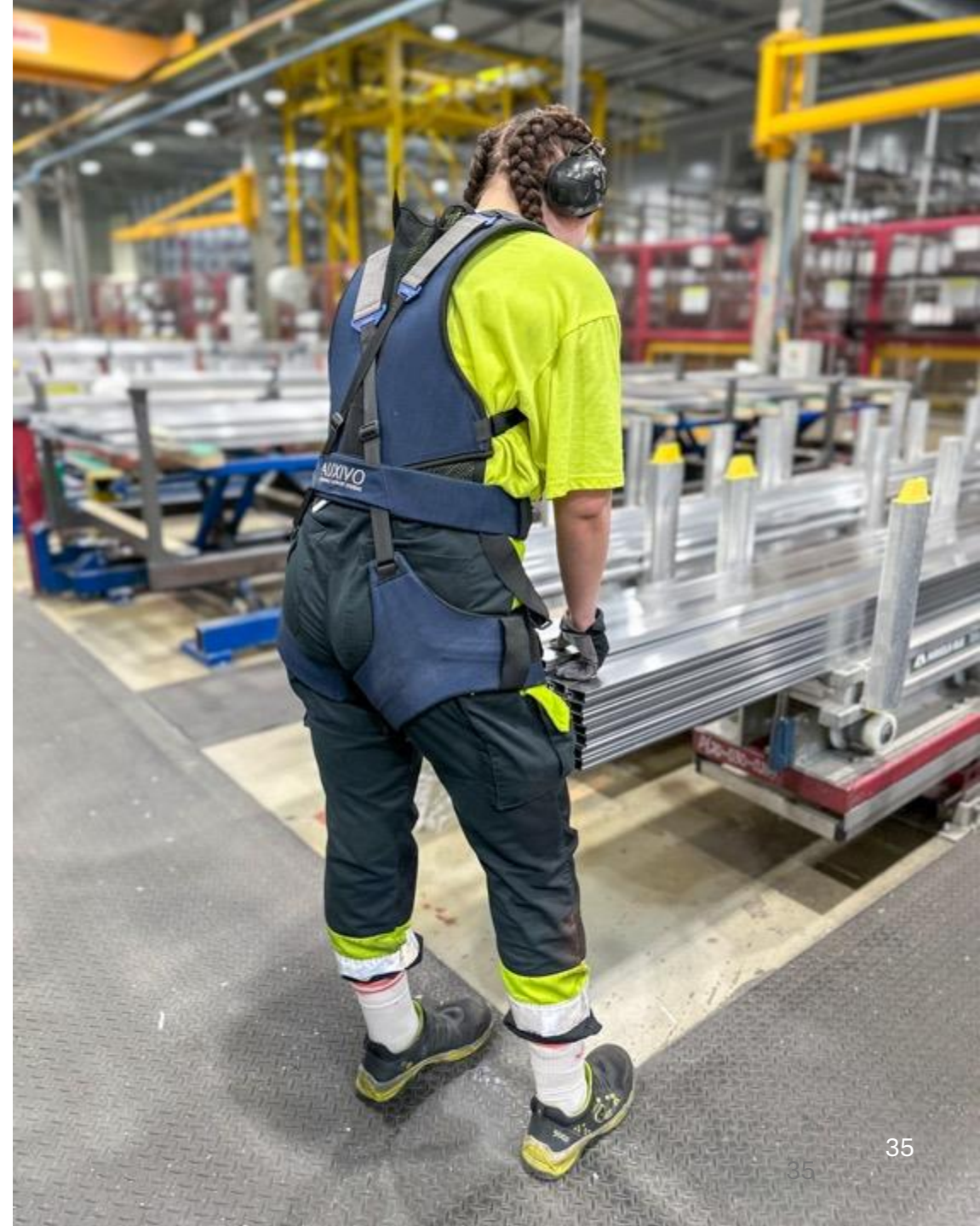
In cooperation with occupational health care services, we have developed an early support model, which ensures that any potential threats to work, safety or wellbeing at work are addressed at a sufficiently early stage.



Insurance and prevention

Occupational accident insurance provides workers with good social security cover in the event of an accident during working hours. In addition to the working time insurance, all our employees have a leisure time accident insurance taken out by Mäkelä Alu. Leisure time accident insurance is valid anytime, anywhere, and guarantees quick access to treatment in the event of an accident.

Work ergonomics is developed on the basis of needs from the units and ideas for improvement from follow-up visits by the occupational physiotherapist. We are also actively seeking other solutions and equipment to reduce workload, for example Exoskeletons have been purchased for all relevant units.



We use local agreements and take care of everyone's wellbeing

We believe in working together and try to agree on things locally. We actively cooperate with health and safety and trust organizations, which provide opportunities to influence and participate in the development of our shared workplace.

Reconciling everyday life and work can be challenging in shift work, and looking after one's own health and wellbeing is a big part of the job. That is something everyone can influence.



Benefits and support for wellbeing

We encourage our employees to take care of their wellbeing. We support them by offering the Smartum exercise benefit and access to various sports sessions. We also provide tickets to different events and organise shared wellbeing days with a sports theme. Recreational activities are coordinated by our wellbeing committee.

All staff have access to a flexible working hours agreement, which makes it easier to balance work and everyday life. The staff work in hybrid working models, defined by function, which allow for location-independent work according to job tasks.



In 2025, we won the “Most active company” challenge in Alajärvi in our category.

Reward fund

Our reward fund is based on the Finnish Personnel Funds Act and is used to manage and invest bonuses paid by Mäkelä Alu Oy. The fund offers employees a more tax-efficient way to receive rewards compared to bonuses paid directly as salary.

All employees are members of the fund, but actual investment in the fund is voluntary for each individual. Performance- and target-based bonuses as well as profit-sharing payments can be received either as salary or invested in the fund.



Case:
Employee story SOILE



From a high-visibility jacket to the office

When **Soile Peltola** started at Mäkelä Alu 27 years ago, she was the first woman to be hired as a production clerk. At that time, she worked in the horizontal coating line, in an era when production volumes were still recorded by hand in a notebook, dispatch notes were printed with a dot matrix printer and paints were ordered from Teknos by fax.

From production, Soile moved to the order-to-delivery department in the office. Although the company was familiar, the change was significant.

- I had spent 22 years working in a high-visibility jacket and safety shoes. I had to step out of my comfort zone. I had to learn an entirely new job, even though some things were familiar. For a long time, I wondered whether I would manage and ever adapt, she says.
- Looking back, the change was good for me. After such a long career, it has been great not having to do the same job all these years, but instead being given opportunities here. Mäkelä Alu is a caring and reliable employer. The feeling that my work is valued is also important to me. Otherwise, I would hardly have stayed this long, Soile says.

Case:
Employee story JUHANI



A tool professional facing something new

Juhani Siirilä has been part of Mäkelä Alu for over 20 years. Having worked as a tool fitter for most of his career, Juhani took on new kinds of tasks in 2025. He is covering for the extrusion development engineer during a family leave.

– I came to work in tool maintenance as a summer employee in May 2002. At the time, I was studying mechanical engineering at SeAMK. However, my studies remained unfinished as work took over. From 2004 to this day, I have worked in the tool shop, he says.

The work of a tool fitter mainly involves repairing and improving tools.

– After 20 years of working on tools, I thought it might be interesting to see things from a different perspective. My tasks now include various development activities related to the presses, he says.

Some time ago, Juhani took a year of study leave, as he had always dreamed of working as a massage therapist and personal trainer.

– I have to thank my employer for the opportunity to try something different. I trained as a massage therapist and now run my own part-time business, where I also work as a personal trainer. After my study leave, I worked slightly shorter days and focused partly on my own business, he says.

We support the local community

Throughout our history, we have always been committed to supporting the community around us.

We participate in community activities:

- By providing financial support to sports clubs and individual athletes in a wide range of sports. Our support focuses on recreational opportunities for children and young people in our areas of activity, but also for athletes who are progressing in their professional careers.
- By supporting families with children in need in our region through annual collections.

We also participate in the activities of our village community and joint projects in Alajärvi, Luomaaho.



- ▶ The year 2025 marked the 30th year of cooperation with the Alajärven Ankkurit, Finnish baseball, top league team. Next to the club's chairman, Tapio Kantokoski (right), is Eemil Peltomäki, head coach for the 2025 season.

- ▶ We signed a sponsorship agreement with Neea Hautakangas, who was selected for the U18 national volleyball team.



Planet

- 43 From the Sustainability Director
- 44 Achieving net-zero emissions
- 45 Case: Our solar power plant
- 46 Case: Our afforestation project
- 47 Case: Energy storage
- 48 Towards lower-emission aluminium profile production
- 49 Recycled profile AluPlanet®
- 50 Origin of recycled aluminium
- 51 EPD declarations
- 52 Energy consumption
- 53 Waste management and emissions to soil
- 55 Water bodies and water consumption



MÄKELÄ ALU

Responsibility is action

The year 2025 marked a significant milestone in our responsibility work. We achieved our target of net-zero emissions in our own production and internal logistics. This is the result of long-term development, investments in energy efficiency, and the replacement of fossil energy sources with electric solutions and the utilisation of waste heat.

However, our work does not end here. We continue our determined efforts to reduce emissions, improve resource efficiency and promote the circular economy in our production. At the same time, we develop our operations so that safety, employee wellbeing, competence and high quality support each other in everyday work.

From the perspective of governance and management, we have continued to develop risk management, supply chain responsibility and our ways of operating in a changing environment. The journey continues every day, sometimes in small steps and sometimes in larger ones.

Päivi Venesoja

Kestävyysjohtaja



Kuva: Tuukka Kiviranta

An important target was achieved

In 2025, we achieved our target of net-zero emissions in our own production and internal logistics.

We reached this target by improving energy efficiency, replacing fossil energy sources with renewable energy and optimising our production processes. A portion of our carbon dioxide emissions has been compensated through climate actions verified by a third party.

Achieving net-zero emissions has required several investments in the development of our own production. For this investment programme, exceeding EUR 10 million, we have received energy investment support (RRF) from the Ministry of Economic Affairs and Employment of Finland.



All employees received spruce saplings in the summer to celebrate the achievement of the target.

Case: Solar power plant made of aluminium

Our solar power plant project was completed on schedule during the autumn. The plant was commissioned at the beginning of November. The solar power plant also generates electricity in winter. The panels are bifacial, meaning they collect reflected light from the snow on their underside.

The solar power plant was purchased as a turnkey delivery from local electricity company, Pitkäsen Sähköasennus. Our customer Wisol Oy, specialising in the construction of solar parks, acted as a subcontractor in the project.

The support structures of the solar power plant are made entirely from aluminium profiles extruded in Luoma-aho.

The plant consists of 1,488 solar panels and has a maximum capacity of 952 kWp. The solar power plant is part of Mäkelä Alu's RRF development project.



Case: Our afforestation project stores carbon

We have compensated part of our carbon dioxide emissions for 2025 by purchasing carbon sequestration units.

On former agricultural land that is no longer in cultivation, approximately 1,000 pine and 1,000 spruce saplings have been planted per hectare. The field is not included in the state's carbon accounting.

The solution has a real impact on the environment and is located in our local area, as the site is in Levijoki, Alajärvi.

Afforestation enables long-term carbon storage in the soil while also improving ecosystem health. The calculation of carbon sequestration is based on extensive Finnish scientific data, which has been verified by an independent third party.



Case: Energy storage

We introduced an energy storage system that allows us to participate in the reserve markets of Fingrid Oyj, Finland's state-owned transmission system operator.

The energy storage system acts as a flexible element that supports the electricity grid when weather-dependent energy production fluctuates. In this way, we take concrete societal responsibility as part of the broader energy transition.

We monitor the performance of the energy storage system as a whole, including both market returns and the future outlook of the reserve markets.





Towards lower-emission aluminium profile production

Carbon footprint management and related emission reduction measures have long been a central part of our operations. We have carried out systematic work to reduce carbon dioxide emissions for more than two decades.

We have been calculating our own emissions since 2005. These calculations have guided our actions, including our supplier selection.

Since 2005, we have reduced our carbon dioxide emissions (from gate to customer's gate) **by 51%** per tonne of aluminium produced.



AluPlanet®: Alumiiniprofiilit kierrätysalumiinista

AluPlanet® is a low-carbon aluminium profile product family with emissions of 2.04–2.59 t CO₂e/t. The profiles are made from recycled aluminium, and their emissions have been calculated in accordance with standards.

AluPlanet® Basic, emissions 2.04 t CO₂e/t

Uncoated aluminium profile

AluPlanet® Paint, emissions 2.59 t CO₂e/t

Powder-coated aluminium profile

AluPlanet® Anod, emissions 2.24 t CO₂e/t

Anodised aluminium profile

For comparison, the average emissions of primary aluminium produced in Europe (raw material, not a finished profile) are 6.6 t CO₂e/t (European Aluminium Environmental Profile Report 2024, reference year 2023).

The emission calculation is based on the standards ISO 14025 and EN 15804:2012 + A2:2019.



Origin of recycled aluminium

We source recycled aluminium from process scrap generated in our own production as well as from aluminium scrap returned by further processing companies and customers. This scrap is remelted into new billets in our own foundry.

We believe that reusing the waste generated in our own processes as raw material is a sustainable way to manufacture recycled aluminium profiles. Minimising production waste and making full use of all possible scrap in line with the principles of the circular economy is important to us.

Sourcing recycled aluminium generates very few transport emissions, as the material is either handled within our own production site, collected from nearby further processing companies, or transported alongside existing deliveries.

We are continuously developing and seeking new solutions for utilising recycled aluminium.

Environmental Product Declarations (EPD) and eco-label

EPDs are available for both recycled billets and primary aluminium profiles with different surface treatments.

Profiles made from recycled billets are accepted for Nordic Swan Ecolabel products and applications.

The declarations can be found on our website at makelaalu.fi/en/company/materialbank/

RAMBOLL

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN 15804:2012 + A2:2019 for:

SECONDARY ALUMINIUM PROFILES

MÄKELÄ ALU OY

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-06271
Publication date:	2022-06-13
Valid until:	2027-06-13

ECO PLATFORM EPD VERIFIED **EPD®**

MÄKELÄ ALU

Energy use

The electricity we use at our Luoma-aho and Voikkaa sites is sourced as renewable energy. It is verified with guarantees of origin and is market-based emission-free.

We are part of an energy efficiency agreement, through which we are committed to continuously improving energy efficiency in all our operations and investments.



We use Väre's
Green electricity



Mäkelä Alu Oy

100 % renewable wind power certified with a guarantee of origin. We support sustainable energy production and climate prosperity. The certificate is valid from 2025 to 2027.

V Ä R E



Waste management and circular economy

Our environmental work also covers emissions to water and soil.

- In 2025, only 1.13 % of our total waste and by-product volume was sent to landfill. All other waste and by-products were utilised either in further processing or as energy waste.
- We are constantly developing circular economy opportunities and making the most of related business models.
- With our own coating removal line, we can remove coating from aluminium profiles. This enables us to recoat the profiles if necessary or to supply them to our own foundry as raw material.



ISO 14001 guides our activities

The operations of our Luoma-aho and Voikkaa factories are guided by the certified ISO 14001 environmental management system.

All our products also comply with the requirements of the European REACH and RoHS regulations, as well as requirements related to conflict minerals.

Handling of chemicals

The chemicals we use are procured according to an agreed process. The procurement criteria are primarily based on less hazardous and more environmentally friendly chemicals.



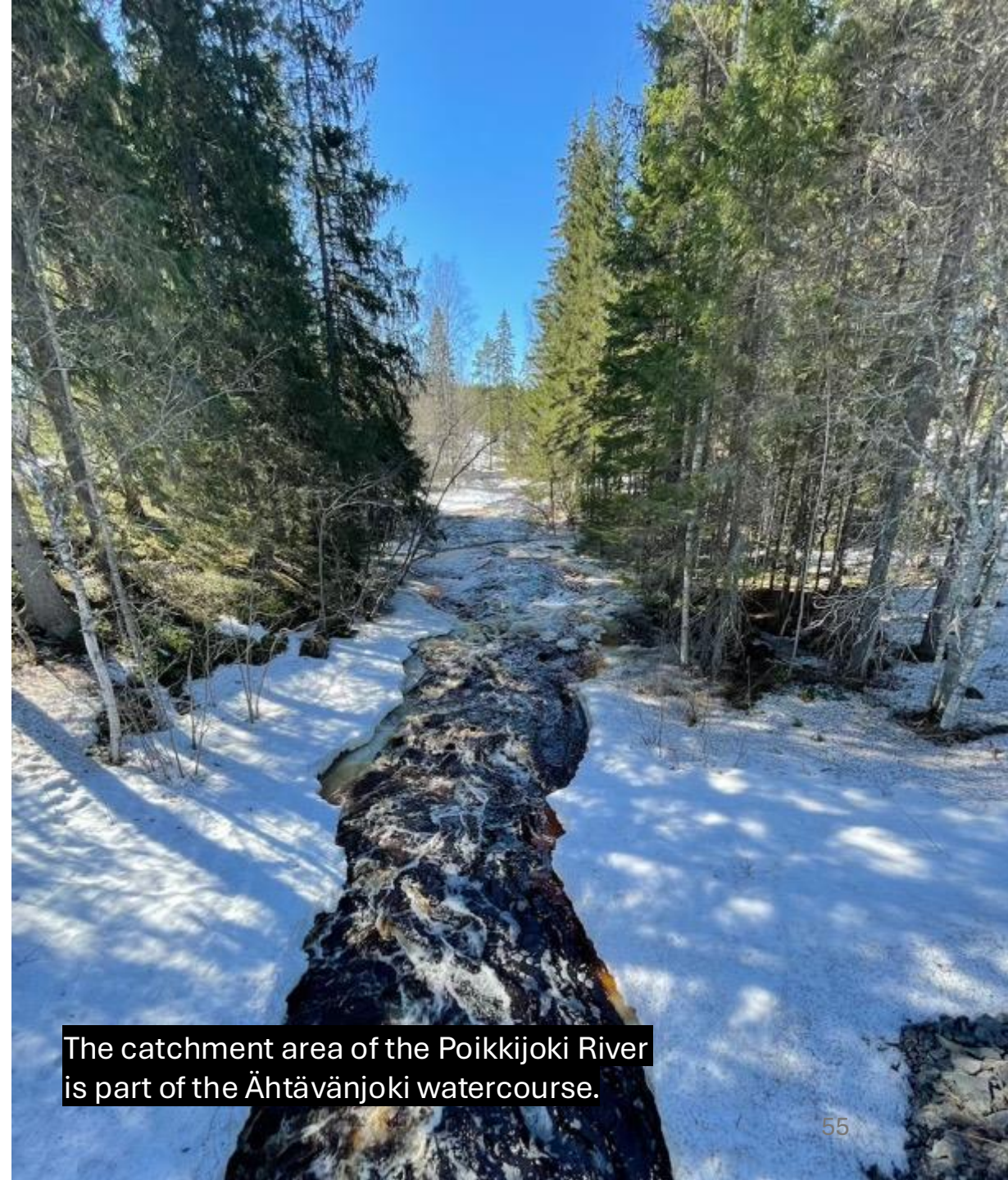
Water bodies and water consumption

In addition to overall water consumption, we continuously monitor water consumption at different stages of our processes. We are able to carry out monitoring and general surveillance in real time through remote and camera monitoring.

An alarm is automatically triggered in the event of a potential waste water treatment incident.

Wastewater concentrations must remain within the limits of our environmental permit.

For water body monitoring, we participate in the joint monitoring of the Ähtävänjoki, Kruunupyynjoki and Purmonjoki rivers at our own sampling sites.



The catchment area of the Poikkijoki River is part of the Ähtävänjoki watercourse.

Management

- 57 Ilkka Halava: We continue as pioneers
- 58 Management system
- 59 The Mäkelä Alu way of operating
- 60 Whistleblowing channel & Code of Conduct
- 61 Supplier requirements
- 62 Risk management
- 64 Auditing

Das Aluminiumprofil von Mäkelä Alu ist eine umweltfreundliche Wahl

Der CO₂-Fußabdruck wird in den kommenden Jahren zu einem wichtigen Kriterium bei Kaufentscheidungen werden. Der Vergleich der Emissionen zeigt, dass Sie mit der Wahl von Mäkelä Alu einen wesentlichen Beitrag zur Umweltfreundlichkeit Ihres Unternehmens leisten können.

Mäkelä Alu hat festgestellt, dass die Interessen der Kunden sich verändert haben. Sie möchten nicht mehr nur, was das Produkt kostet, sondern auch die Emissionen bei seiner Herstellung. Der Wandel ist ein langfristiger Prozess, der sich über viele Jahre erstreckt. Mäkelä Alu hat festgestellt, dass die Interessen der Kunden sich verändert haben. Sie möchten nicht mehr nur, was das Produkt kostet, sondern auch die Emissionen bei seiner Herstellung. Der Wandel ist ein langfristiger Prozess, der sich über viele Jahre erstreckt.

Der CO₂-Fußabdruck zeigt Umweltauswirkungen von Kaufentscheidungen. Es gibt jedoch ein neues Konzept, mit dem die Unternehmen noch vertraut werden müssen. Das ist der CO₂-Handabdruck. Der CO₂-Handabdruck ist eine neue Methode, um die Emission eines Produkts oder eines Prozesses, sowie die Umweltauswirkungen von Entscheidungen zu erfassen.

SONDERVERÖFFENTLICHUNG

- Mäkelä Alus eigenes recyceltes Aluminium 1,01 / Gesamtmenge des in Europa verwendeten Aluminiums 8,7 > CO₂-Handabdruck 7,69
- Von Mäkelä Alu eingekauftes Primäraluminium 6,36 / Weltweiter Durchschnitt 15,6 > CO₂-Handabdruck 9,24
- Mäkelä Alus Primäraluminium 6,36 / Gesamtmenge des in Europa verwendete Aluminiums 8,7 > CO₂-Handabdruck 2,34

Der CO₂-Fußabdruck kann nicht nur für das Rohmaterial, sondern auch für den Transport und die Profilherstellung berechnet werden. Mäkelä Alu hat seinerseits berechnet. Ein Vergleich mit dem europäischen Durchschnitt der Emissionen aus der Herstellung von Aluminiumprofilen zeigt beispielsweise, dass Emissionen in Europa (0,68) mehr als siebenmal höher als bei der Herstellung von Mäkelä-Aluminiumprofilen (0,094) sind. Der CO₂-Handabdruck unseres Strangpressverfahrens beträgt daher 0,586 t CO₂e pro Tonne Aluminium.

Wenn Sie sich für einen Partner entscheiden, können Sie einen großen Beitrag zum Klimawandel leisten

Die Zahlen zeigen, wie viel Sie mit der Wahl des Herstellers Ihrer Aluminiumprofile für das Klima und die Umwelt bewirken können. Wenn Sie sich also für Aluminiumprofile von Mäkelä entscheiden, treffen Sie eine echte Entscheidung für die Umwelt und das Klima.

Es ist gut, sich dessen bewusst zu sein und überlegen, ob ein Unternehmen, das beispielsweise Aluminium aus Asien verwendet, behaupten kann, umweltfreundlich zu sein.

Die Unterschiede sind so überwältigend, dass man sie selbst kaum begreifen kann. Auch wenn sie zu unseren Gunsten ausfallen, fühlt es sich nicht gut an, es fühlt sich schrecklich an, sagt Petri Venesja.

Das Kohlendioxid-Äquivalent (CO₂e) beschreibt die Klimawirkung der vom Menschen verursachten Treibhausgase. Die in der Analyse verwendete Einheit (in CO₂e/t) ist die Anzahl der Tonnen CO₂-Äquivalent, die bei der Herstellung von 1.000 kg des betreffenden Produkts entstehen.

Der CO₂-Fußabdruck wird nicht für Sie, sondern für den Kunden berechnet.*

Sie können damit beginnen, die Umweltauswirkungen Ihres eigenen Betriebs zu untersuchen, indem Sie Ihre Rohstofflieferanten um verifizierte Daten dieser Emissionen bitten und diese mit denen anderer Lieferanten vergleichen. Auf diese Weise können Sie direkt berechnen, inwieweit die Wahl Ihres Rohstofflieferanten zu den Umweltauswirkungen und dem CO₂-Fußabdruck Ihrer eigenen Tätigkeit beiträgt.

Emissionen aus der Produktion von Mäkelä-Alu-Rohstoffen / Durchschnittswerte (alle Angaben in tn CO₂e/t)

- Mäkelä Alus eigenes recyceltes Aluminium 1,01 / Gesamtmenge des in der Welt verwendeten Aluminiums 8,7 > CO₂-Handabdruck 7,69
- Von Mäkelä Alu eingekauftes Primäraluminium 6,36 / Weltweiter Durchschnitt 15,6 > CO₂-Handabdruck 9,24
- Mäkelä Alus Primäraluminium 6,36 / Gesamtmenge des in Europa verwendete Aluminiums 8,7 > CO₂-Handabdruck 2,34

Weltweit ist es immer noch üblich, die Primäraluminiumproduktion direkt auf der Erzeugung aus einer Kohle- oder Erdgasanlage zu errichten. Die Produktion dieser Anlagen ist sehr energieintensiv. So entsteht die Energie, die für die Aluminiumproduktion und die Weiterverarbeitung benötigt wird, erklärt er.

Was hat also in den letzten Jahren zum Umdenken bewegt? – Das sind natürlich Tatsachen, vor denen man wegschauen noch muss. Die Unterschiede sind so überwältigend, dass man sie selbst kaum begreifen kann. Auch wenn sie zu unseren Gunsten ausfallen, fühlt es sich nicht gut an, es fühlt sich schrecklich an, sagt Petri Venesja.

Unsere Produktionsstätte liegt inmitten der Natur. Wir arbeiten seit langem daran, die Umweltauswirkungen unserer Produktion so gering wie möglich zu halten. Wir sind für ein verantwortungsvolles Handeln und eine verantwortungsvolle Entscheidung zum Wohl unserer Kunden verpflichtet.

MÄKELÄ ALU

Mehr als Aluminiumprofile

Unsere Aluminiumprofile auf die Bedürfnisse

Wir arbeiten als „One Team“ zusammen. Ihre Hilfe haben wir sehr zu schätzen.

From optimism to purposeful action

The downturn in construction is still often discussed as if it were only a temporary pause in a linear development path. In the coming years, however, all industries will change, some significantly. Planetary sustainability and better matching are key themes as we move into the eye of this period of transformation. As our net-zero target has already been achieved, it is time to turn towards new markets, concepts and solutions.

On a global scale, 36 companies are responsible for around half of the world's CO₂ emissions. The majority of these major emitters are state-owned enterprises. Similarly, at the level of states, there is much hopeful rhetoric and fewer concrete actions. Companies have already moved to the forefront of ecological sustainability efforts and are setting ambitious targets for themselves. We want to continue as pioneers among these frontrunner companies. Perhaps in the near future, the corporate sector will begin to set responsibility targets for public actors as well.

Ilkka Halava

Futurist

Member of the Board of Directors



Management and control systems

(Corporate Governance)

General Meeting

The Board of Directors convenes the General Meeting of Shareholders in accordance with the Companies Act. The meeting deals with matters in accordance with the Articles of Association, the Limited Liability Companies Act, and the proposal of the Board of Directors.

Board of Directors

The Board of Directors is responsible for the company's activities. The duties and responsibilities of the Board of Directors are determined by the Companies Act. The Board meets 11 times a year and holds additional meetings as needed.

Chairman of the Board

The general role of the Chairman of the Board of Directors is to lead the work of the Board of Directors and to carry out separately agreed tasks.

Managing Director

The duties and responsibilities of the Managing Director are laid down in the Companies Act. The Managing Director manages the day-to-day administration of the company in accordance with the instructions and orders issued by the Board of Directors.

Steering Group

For planning, managing and supervising operational matters, the Managing Director is assisted by a Steering Group. The Steering Group meets for a brief situation review every week, and longer meetings are held 11 times a year.

In accordance with the Co-operation Act, a cooperation meeting is organized four times a year to review the situation of the company with staff representatives.

In addition, twice a month we hold a meetings between the employee representatives in the company's administration, the Managing Director, the Human Resources Manager, and the Production Director.

Our shareholder values

- Persistence
- Harmony
- Curiosity
- Trust

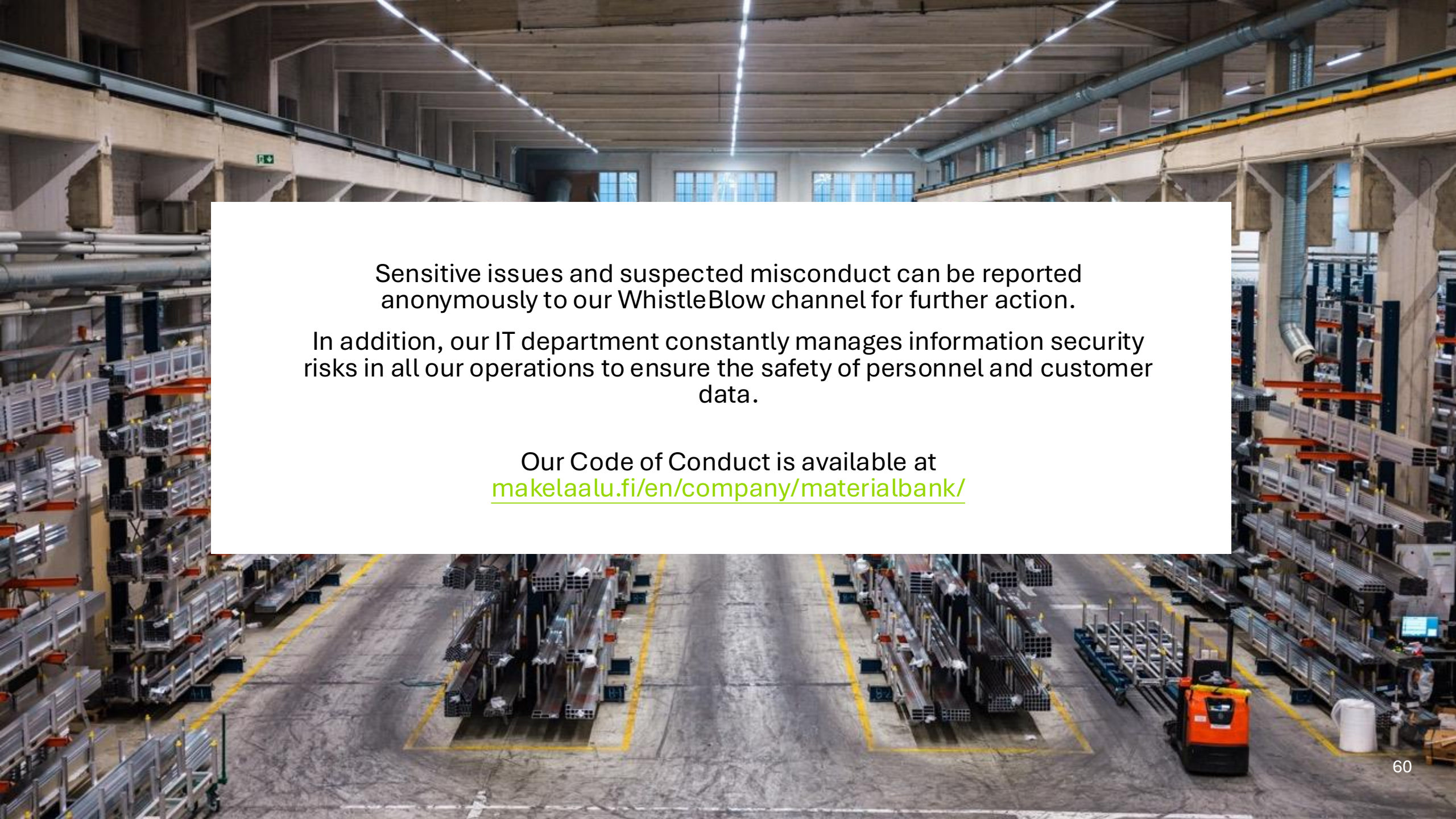
Mäkelä Alu's operating model

In addition to our strategy, values and planetary sustainability objectives, we are guided by a set of agreed guidelines and practices and the ethical principles of our Code of Conduct.

These principles help everyone understand how to act responsibly in their own job, in accordance with good workplace culture.

Our ethical principles also help guide our cooperation with suppliers, as we insist on the same principles throughout the supply chain.





Sensitive issues and suspected misconduct can be reported anonymously to our WhistleBlow channel for further action.

In addition, our IT department constantly manages information security risks in all our operations to ensure the safety of personnel and customer data.

Our Code of Conduct is available at makelaalu.fi/en/company/materialbank/

Principles for the selection of suppliers

An essential part of our **sourcing strategy** is to know our supply chains and choose greener options for raw materials, transport, and packaging.

We want to know where our raw materials come from, what kind of labour is used to produce them, and what impact they have on the environment. We want our suppliers to recognise our environmental goals and be willing to develop their own operations and technology in a more environmentally sustainable way.

The core value of partnership is trust, or “doing things as agreed”.

All our suppliers comply with our Code of Conduct.

Our own sustainability profile [in IntegrityNext](#)



Risk management

Risk management is based on a comprehensive risk assessment. The assessment prepared by management weighs up the strategic risks, financial risks, operational risks, and potential risks of damage.

A comprehensive risk assessment includes:

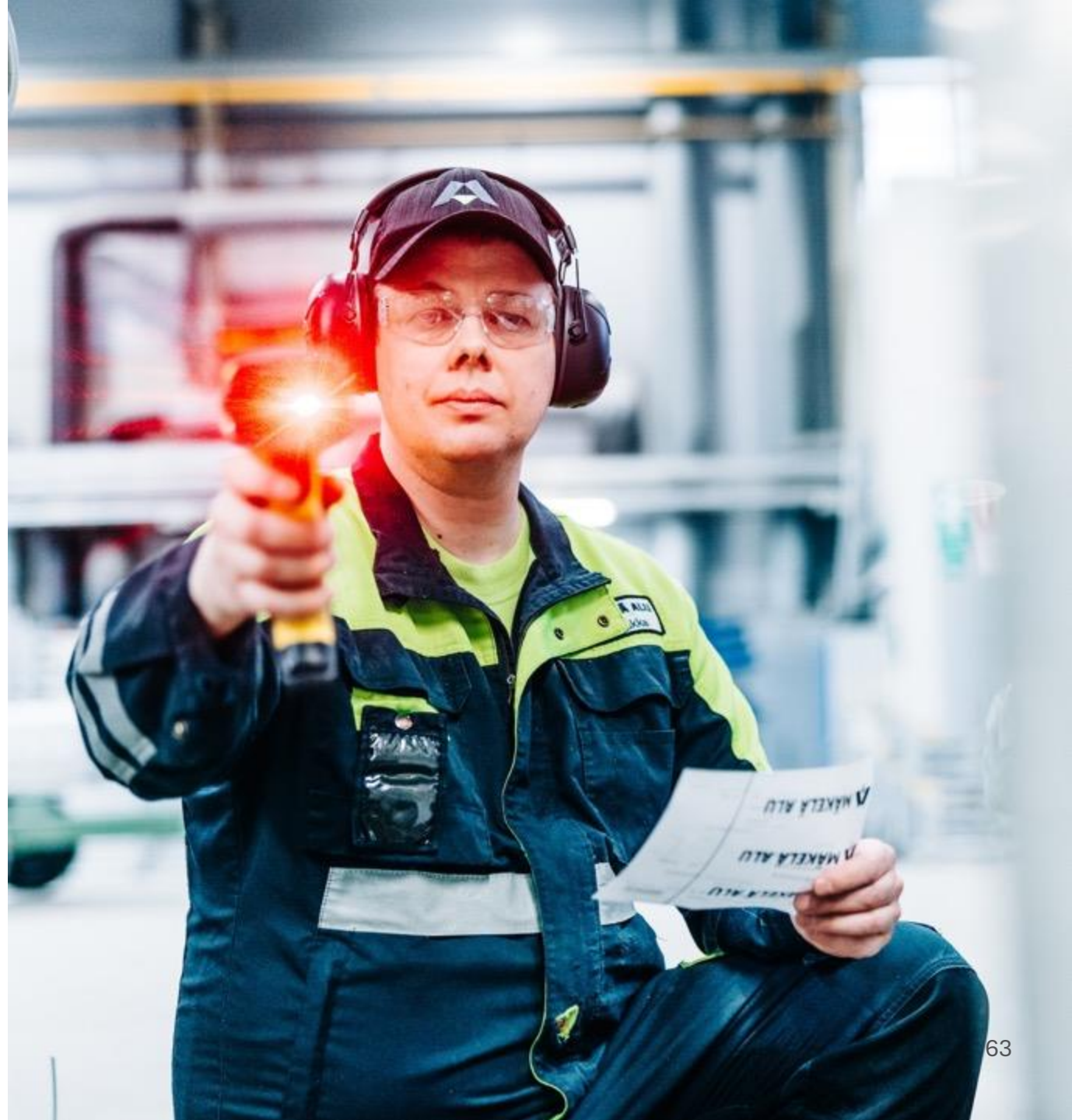
- Systematically identifying the risks to the company and identifying opportunities to improve risk and safety awareness
- Providing management with an overview of the threats to operations
- Supporting strategy and risk management, leadership, and sound decision-making.

Risk management is continuous work

The Board of Directors discusses the assessment of the company's risks made by the management and takes all possible measures to ensure that the company's risks remain within its carrying capacity. The Board also monitors changes in risks.

The comprehensive risk assessment is regularly updated.

All insurable risks are adequately covered.





Auditing

The company's accounts and administration are audited by independent auditors elected by the General Meeting, whose opinion is discussed by the Board of Directors.



MÄKELÄ ALU

Mäkelä Alu Oy, Mäkeläntie 2, 62830 Luoma-aho, www.makelaalu.fi