



BIRN GROUP

SUSTAINABILITY REPORT 2023

ABOUT THE REPORT

This is BIRN Group's Sustainability Report for 2023. The report covers the 1 January to 31 December 2023 financial year and all production units in the group. The report will also be included as part of the management report in the Group's annual report for 2023, to be published in May 2024.

The report brings us another step closer to meeting the 2024 directive, under which all large companies have to be able to report on the positive and negative impacts of their activities on society, the climate and the environment (CSRD). The report therefore follows the ESG structure, describing environmental, social and governance matters.

BIRN Group's work with sustainability is based on the principles of the UN global goals. The group has also partnered with the ReFlow eco-tech company, which helps create an overview of environmental data and calculate total carbon emissions.

This report was completed in April 2024. Errors and omissions excepted.

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DATA IS THE BEST FOUNDATION FOR SUSTAINABLE DECISIONS

2023 has been another eventful year for BIRN Group with lots of climate, environment, social and governance initiatives – all important steps on the path to becoming an even more sustainable group. The focal point has been data, which will help us target our efforts in the areas of Environment (E), Social (S) and Governance (G) even more precisely. This sustainability report is therefore also structured around these areas.

Our ability to use, understand and conduct business based on data is crucial to us being a highly professional and competitive manufacturing company. It is also the way to make good, sustainable decisions in relation to the climate and environment, employees and society around us, and in the management of our companies. Data collection has therefore been a major focus in 2023 throughout the BIRN Group, and as a result we now have a strong foundation to guide where we should target our efforts.

The circular mindset is firmly rooted in our group and is expressed, for example, in the high proportion of recycled material in our cast iron, while heat recovery from smelting processes is reducing our natural gas consumption. Even though we will not be covered by the EU sustainability reporting requirements until 2026, we have already come a long way with this work, and are constantly learning how we can optimise and achieve reductions in even more areas.

At BIRN Group, we hold our employees dear. Satisfied employees are crucial to running a sustainable business. We are therefore maintaining and developing our strong focus on well-being and job satisfaction. This is specifically reflected in our strategic decision to conduct employee satisfaction surveys in all our companies every year. We are also working actively and ambitiously to develop our leadership throughout the organisation, which also supports the operation of a responsible group.

We are seeing increased demands and expectations in relation to sustainability from our customers, and we are doing what we can to accommodate these. For example, by preparing EPDs for the cast iron components that form part of our customers' finished products. We also need to better communicate our efforts in relation to sustainability and the importance of these – to customers, suppliers and society around us. BIRN Group has made sustainability advances in 2023, with a wide range of investments and initiatives that you can read more about in this report. But our work with sustainability is a project that can be constantly developed and improved. We are already well underway.

Enjoy the read.

Claus Beier
Group CEO, BIRN Group



About BIRN Group

BIRN Group is one of Northern Europe's largest iron foundry groups. The group companies specialise in different types of casting, processing and distribution of cast iron solutions.

The group has 802 employees, and companies in Denmark, Germany, Sweden and Italy.



BIRN A/S
Holstebro, Denmark

BIRN was founded in 1896 in Holstebro, where its headquarters are still located. BIRN is the parent company of BIRN Group, and is a turn-key supplier of everything related to design, casting, precision machining and surface treatment.

BIRN Germany GmbH
Mülheim, Germany

BIRN Germany was founded in 1975, with the aim of getting closer to German users of transmission elements. This means that the company currently stocks almost all element groups for open transmission.

ULDALL A/S
Vejen, Denmark

ULDALL was founded in 1944 and has been expanded and modernised over the years, so that the company stands as a modern, flexible and quality-conscious foundry today.

VELAMP A/S
Vejen, Denmark

VELAMP is the only 100% Danish-owned supplier of classic lamps, benches and cast iron windows which still has production in Denmark. The foundry was started in Vejen in 1944, and the company's continued existence is proof that quality endures.

TASSO A/S
Odense, Denmark

TASSO was founded in 1856 and is today Denmark's oldest active iron foundry. Tasso specialises in the entire process of manufacturing continuous cast iron rods in various dimensions and grades, including casting, heat treatment and pre-processing.

TASSO BERNAREGGI S.r.l.
Castano Primo, Italy

TASSO BERNAREGGI was founded in 1976 and supplies cast iron bars to customers in Italy and Europe. Since this time, a steady increasing pool of qualified customers has led to stable, balanced growth and a constant expansion of warehouse space.

KOCKUMS MASKIN AB
Kallinge, Sweden

KOCKUMS MASKIN, with roots dating back to 1742, is one of Scandinavia's leading manufacturers of machined castings. Unique expertise, great flexibility and the company's combined resources are utilised to handle full responsibility for everything from the design phase to the finished item.

EUR 192 million

Revenue EUR 203 million (2022)

123.3 GWh

Electricity consumption 125,1 GWh (2022)

1,821,339 m³

Natural gas consumption 1.856.392 m³ (2022)

802

Employees 762 (2022)

676 / 126

Men / Women 654 / 108 (2022)

7

Companies

BIRN GROUP IN FIGURES



**BIRN GROUP
EXPORTS TO THE
MAJORITY OF
THE WORLD**

Data, data and more data

2023 has really been the year of data at the BIRN Group. We have spent almost the entire year collecting data from our companies and incorporating it into our new digital reporting system.

The reporting system has been developed by the ReFlow eco-tech company, which also assisted with the collection of data from all our companies. The system gives us a good overview of energy and resource consumption, carbon emissions and much more across all six companies.

The comprehensive data foundation will help us find the places in our production with the greatest potential for reducing our climate and environment impact. We have already identified two key areas across the entire BIRN Group that are central to our climate footprint – energy consumption and consumption of the alloy materials used when remelting scrap. We will soon conduct materiality analyses with a special focus on these two areas, so we can give priority to the places where we are best able to minimise our climate impact.

The new reporting system will also enable us to prepare life cycle analyses for our specific products, thereby helping our customers to comply with the future EU legislation in this area.

Focus on Social and Governance

There was a particular focus on the Environment area within ESG reporting in 2023. We will therefore look more closely at Social and Governance in the coming year, so we cover the entire ESG spectrum.

And this must also be done using a data-driven approach. We believe this is the best way to map the ESG areas in our group, and thereby qualify realistic objectives. We have also therefore divided this report into E, S and G sections, where we review BIRN Group's performance and initiatives in each area.



- Founded in 2018
- Helps companies map their carbon footprint
- Specialises in life cycle analysis
- 16 employees – primarily environmental and software engineers
- Award-winning climate technology engineering company (SDG Tech Awards)



Green investments that make sense

An active, green investment strategy based on a data-driven approach. This is essence of the work on BIRN Group's sustainability strategy. We have come a long way in recent years, having gained valuable knowledge about our opportunities to advance ESG. It also provides a good foundation for shrewd, green investments that will enable us to use green energy to replace fossil energy sources.

In 2023, BIRN in Holstebro installed an electric hardening furnace in the company's surface treatment plant and two large plants for heat recovery from extraction systems, and increased the use of AI-based regulation technology in the casting processes. Energy optimisation also remains a general focus throughout the BIRN Group.

Throughout 2023, we have collected data in all six companies of the BIRN Group. This data foundation has given us valuable renewed insight into our energy consumption, use of resources, value chains and much more based on 2022 data. The huge amount of data is structured in our new digital reporting system, and we will analyse it in the time ahead to identify the places in our production with the greatest potential for improvement. We can thereby ensure that we focus our resources where it is most beneficial. The data foundation is also an important starting point for our work of implementing a sustainability strategy towards 2030 for the entire BIRN Group.

Our continuous and automated data collection must also be brought into play commercially. A new EU directive sets stricter requirements for how companies work with sustainability data and reporting. The Corporate Sustainability Reporting Directive does not yet apply to all companies in the EU, but many of our customers are already

subject to the new requirements. Our data systems will enable us to help them meet the new EU requirements – for example by being able to offer product-specific life cycle analyses for all our cast iron solutions.

Our work with ESG must also be evident in our communication. We have started to share a lot more information about our group with the outside world. We have many good stories that we want to tell. These include our work with the circular economy, energy optimisation and sustainability, as well as exciting stories focusing on our many talented employees.

An ESG focus in our communication and brand will also help us commercially, by retaining existing customer relationships and building new ones. We are therefore very conscious of not overstating our achievements. Credibility is crucial for us to carry on the success of the BIRN Group – measured on both the financial and the green bottom line.



Our sustainability aims

At the BIRN Group, we are constantly working to become more sustainable in relation to the environment and climate, social responsibility and corporate governance. As we move towards implementing our sustainability strategy, we will continue to standardise and automate our data flows in 2024.

We will also perform a 'double materiality assessment' to identify which initiatives we should give

priority to. This will enable us to begin setting ambitious and realistic targets for our ESG work in 2024. Until then, we have defined a number of concrete aims and fleshed them out with the actions that are either already underway or will be initiated in order to meet these aims.

The BIRN Group bases its efforts on the following broad ESG aims:

E – Environment:

- Electricity consumption throughout BIRN Group to be reduced by 15 kWh per sold goods by 2024
- Natural gas consumption throughout BIRN Group to be reduced by 400,000 Nm³ in 2024
- Renewable energy to account for at least 50 per cent of BIRN Group's energy mix in 2024

Initiatives:

We have already launched several initiatives to reduce electricity consumption in our factories, such as replacing traditional lightning with newer generations of LED lighting and tuning electricity consumption in our smelting furnaces.

BIRN in Holstebro accounts for the vast majority of our natural gas consumption. The BIRN Group has the goal of becoming independent of fossil fuels by 2040. We have made investments in alternative forms of energy to this end, and we have a focus in all factories within the BIRN Group on increasing the share of renewable energy in our energy mix.

One way we work towards our aim that renewable energy makes up at least 50 per cent of our energy mix is by buying green electricity through certificates. In 2022, we renewed the solar cell system at TASSO Bernareggi in Italy that is installed on the roof of its 5,600 square metre warehouse. Expanding the solar cell system within the next few years is a key aim.

S

S – Social:

- Focus on maintaining the high employee satisfaction in BIRN Group in 2024
- Continued evolution from management to leadership in all BIRN Group companies
- Continued standardisation and digitalisation of organisational processes in BIRN Group

Initiatives:

Employee satisfaction surveys are sent out to all employees every year. Based on the survey responses, local action plans are initiated with the aim of increasing employee satisfaction throughout the organisation.

The evolution from management to leadership means that we train our leaders to take ownership and inspire, guide and coach their teams and employees towards success. All managers in the BIRN Group have the opportunity to do further leadership training.

Standardising and digitalising organisational processes will help streamline our HR processes, salary structure, recruitment, training and job descriptions. We want better access to data and analyses for strategic decisions and to improve the companies' competitiveness through innovation and technological development. We purchased a new HR system in 2023 which will be implemented during 2024. This system will help us achieve our aims in this area.

G

G – Governance:

- Increase the digital security level in BIRN Group
- No whistleblower incidents

Initiatives:

At BIRN Group, we want to raise our digital security level. We are therefore working to become ready for NIS2 and ISO 27001 certification.

We had no whistleblower incidents in 2023, and through good corporate governance we will do everything possible to ensure this continues to be the case.

The UN's Sustainable Development Goals serve as the foundation for our work with sustainability in BIRN Group

BIRN Group and the UN Global Goals

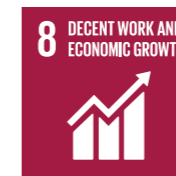
At the BIRN Group, the UN's Sustainable Development Goals serve as the basis for our work with sustainability. The Global Goals were adopted in 2015 and represent the most ambitious global development agenda ever seen. The goals set the course towards 2030 for more sustainable development – for both people and the planet.

The BIRN Group has chosen to focus on four of the 17 Global Goals – in relation to energy, jobs, consumption, production and climate – which our work either directly or indirectly supports.



Global Goal 7
– Affordable and clean energy

At the BIRN Group we aim to reduce our carbon emissions through energy optimisation of our internal processes. We also wish to contribute to the green transition by converting our natural gas consumption to electricity or other energy sources, thereby helping to phase out the last fossil fuel sources.



Global Goal 8
– Decent work and economic growth

A good, safe working environment is central at the BIRN Group, as our employees are our most important resource. We are therefore committed to developing even safer workplaces where machines perform the heavy and risky work, and where well-being, good training and safe workplaces are in focus.



Global Goal 12
– Responsible consumption and production

We intend to further strengthen our circular business model through a strong focus on responsible consumption and production. We are therefore continually investigating the possibilities for further reducing consumption, for example in relation to energy and surplus heat and increasing the waste fraction that is recycled.



Global Goal 13
– Climate action

The BIRN Group aims to minimise its negative impact on the environment. In collaboration with the ReFlow eco-tech company, we have established a complete overview of how we can reduce the CO₂ footprint of our products.

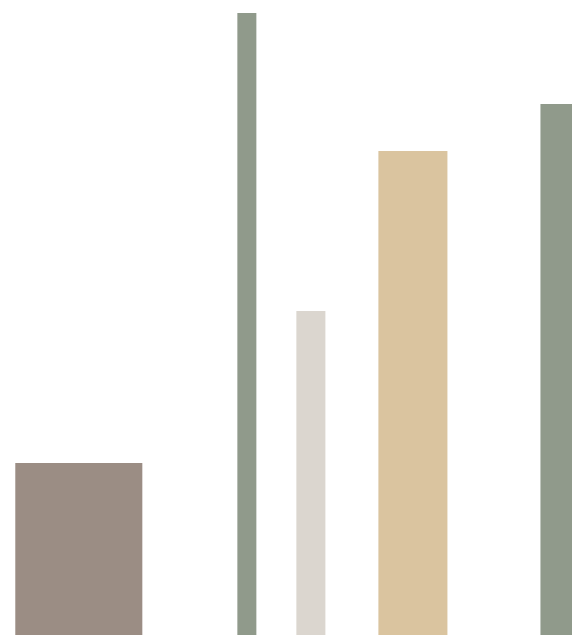
How will we work with Science Based Targets

Science Based Targets (SBT) sets concrete targets for companies' carbon footprint reduction in all three scopes. The targets are all in line with what is required to meet the Paris Agreement objective of limiting global warming to less than two degrees compared to pre-industrial levels. The objectives will thus be based on scientific data and models, which is why the BIRN Group wants to commit to SBT.

In 2023, the BIRN Group completed comprehensive data collection in all our companies in collaboration with the ReFlow eco-tech company. The data collection is structured and will be performed regularly going forward, so we can monitor our climate footprint over time. The data has been used in a comprehensive analysis of our current emissions and resource usage, to establish a baseline for our group.

By committing to SBT, we send a clear signal to customers, partners, employees, local communities and the world that the BIRN Group is ready to contribute to reducing climate change. We are aware that achieving our goal of creating a more sustainable future for both our group and the planet will require not only technological change, but also commitment from our management, employees and stakeholders.

Based on this analysis, we will work with SBT in 2024 to set concrete and realistic climate targets for our group. The analysis is also an important tool to help us identify the areas in our companies where there is the greatest potential to achieve significant reductions. These could be greater energy efficiency, optimisation of resource consumption, investment in green technology and much more.



Science Based Targets in brief

SBT (Science Based Targets) is a non-governmental organisation (NGO) that promotes corporate climate action in partnership with the Carbon Disclosure Project (CDP), the UN Global Compact, the World Resources Institute (WRI), the World Wildlife Fund (WWF) and the We Mean Business Coalition.

SBT mobilises the private sector to lead the way in climate action, where science-based targets show companies and financial institutions how much and how fast they can reduce their emissions. Over 4,000 companies across countries and sectors have already set targets for their climate reductions through SBT.

WE ALSO WORK WITH:

EcoVadis



EcoVadis is a widely used platform for assessing corporate sustainability and CSR (Corporate Social Responsibility). The platform assesses our performance in areas such as environmental impact, work practices, ethics and sustainable procurement policy.

Through EcoVadis, we give our customers further insight into our social and environmental impact, with the aim of promoting sustainability throughout their supply chain.

SAQ



The Self-Assessment Questionnaire – better known as SAQ – is an initiative of the Drive Sustainably sector association and aims to improve the sustainability of automotive supply chains.

SAQ contains questions on sustainability management, the environment, human rights and working conditions. All questions are based on the 'Automotive Industry Guiding Principles to Enhance Sustainability Performance in the Supply Chain', which is a common standard tool for measuring performance in the automotive sector.

E

Environmental and climate factors in a company, e.g. carbon emissions, energy consumption, recycling and waste sorting.

S

Social factors in a company, e.g. well-being, absence due to illness, accidents at work and diversity.

G

Governance factors in a company, e.g. management principles, data security, supplier selection and gender diversity in the board.

ESG - Environment, Social & Governance

The BIRN Group will be covered by the new EU Corporate Sustainability Reporting Directive from 2026. However, we are already documenting and mapping how we work with sustainability throughout the group, and last year we published our first sustainability report. This is not only driven by compliance with the law, it is increasingly becoming a competition parameter that customers and partners expect us as a supplier to adhere with.

We have particularly focused in 2023 on collecting additional data for the ESG areas, so we are even better equipped to meet the documentation requirements we will be subject to from 2026. We thus now have an even more structured and quantitative approach to our work with sustainability in relation to the environment and climate (E), social factors (S) and governance (G).

This report is divided into E, S and G sections, to provide the best overview of how the BIRN Group works in a structured way with sustainability. It is an important guiding tool for the entire group in relation to how we ensure the best possible impact on our surroundings – environmentally, socially and through responsible business operations.



What is the aim of the new EU reporting requirements?

The Corporate Sustainability Reporting Directive (CSRD) is an EU directive that sets requirements for corporate sustainability reporting. From 2024 onwards, all listed companies must report on sustainability according to specific 'ESRS' standards. The rules will encompass more companies in the coming years.

The aim of the new rules is to ensure that companies in the EU report on sustainability in the same way. This will help increase transparency, making it easier for investors and other stakeholders to understand a company's sustainability initiatives when they want to invest or form new partnerships.

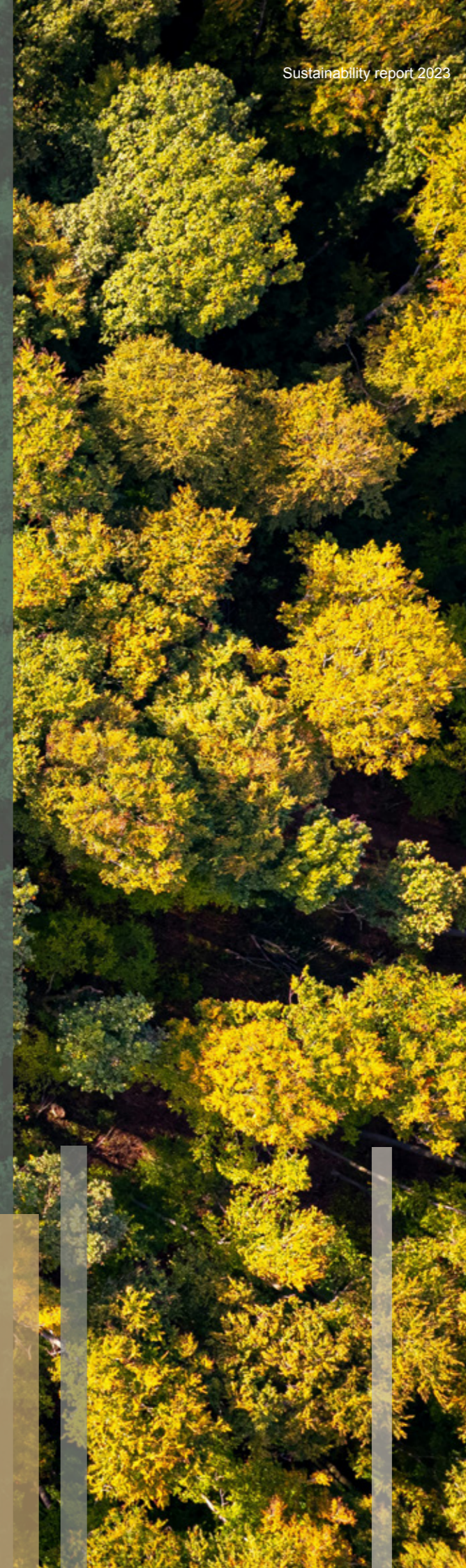
It will also help companies to document sustainability initiatives in connection with communication and marketing, to avoid greenwashing.

Source: Virksomhedsguiden.dk



ENVIRONMENT

At BIRN Group, we want to show responsibility by minimising our negative impact on the environment. We are therefore working proactively to reduce our energy consumption and increase our recycling of natural resources and surplus heat, and we are investigating how we can contribute positively to our surroundings. This is described in more detail in this section.



Data collection has been demanding, but is worth the effort

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“We want to be able to help our customers meet the EU’s sustainability reporting requirements, while also gaining insight into which areas in our own production have the greatest potential for reducing our environmental impact. Data collection supports both these goals.”

Claus Beier, Group CEO, BIRN Group

In 2023, we achieved our goal of establishing comparable and in many places automated data collection across the entire BIRN Group. While this has been a demanding process, it has been worth it.

Data-driven process optimisation is a central point in the BIRN Group’s sustainability strategy. A data-driven approach will make us better able to focus our resources where there is the greatest potential. With this goal in mind, we have spent much of 2023 setting up comprehensive data collection processes in all our companies.

Data collection is not an easy exercise – especially among such diverse companies as we have in the BIRN Group. All our companies are experts

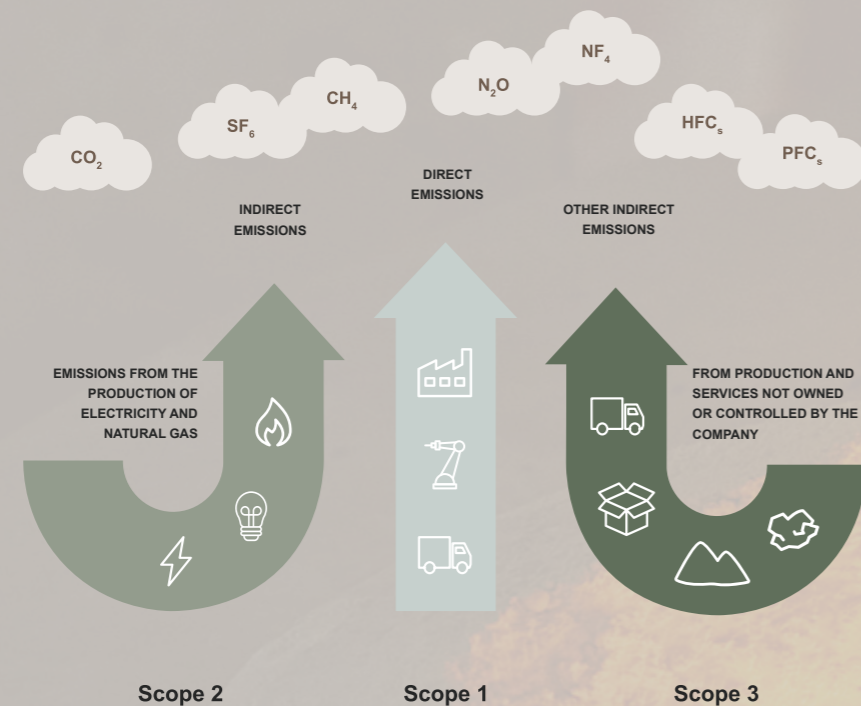
in their respective fields within the foundry sector, and have built up their own highly specialised processes over decades. This is positive in many ways, but also presents challenges when you seek to create a comparable data foundation across the entire group. The fact that the foundry sector is characterised by many processes based on traditions of craftsmanship adds to this challenge. This is also true in the BIRN Group. We have replaced manual registrations with automated and standardised data collection.

After many months of work, we have now reached our goal. With great assistance from the ReFlow eco-tech company, we have created comparable and in many places automated data collection across the entire BIRN Group.

This work has resulted in a comprehensive data foundation, which we are now in the process of analysing in order to map the CO₂ footprint of our products. This will allow us to calculate and document our products’ life cycle analyses (LCAs),

and thereby help our customers to meet the EU’s sustainability reporting requirements. It will also help us to identify the areas in our own production with the greatest potential for reducing our environmental impact – without compromising the high quality the BIRN Group is renowned for.

We have achieved our goal of establishing comparable and in many places automated data collection across the entire BIRN Group, so we have an overview of how our carbon emissions are distributed in the three different scopes.



Scope 1: Direct emissions

Scope 1 covers direct emissions of greenhouse gases from sources directly controlled by the company. For BIRN Group, direct emissions are primarily linked to our combustion of natural gas, emissions from smelting processes and direct emissions from our other production processes.

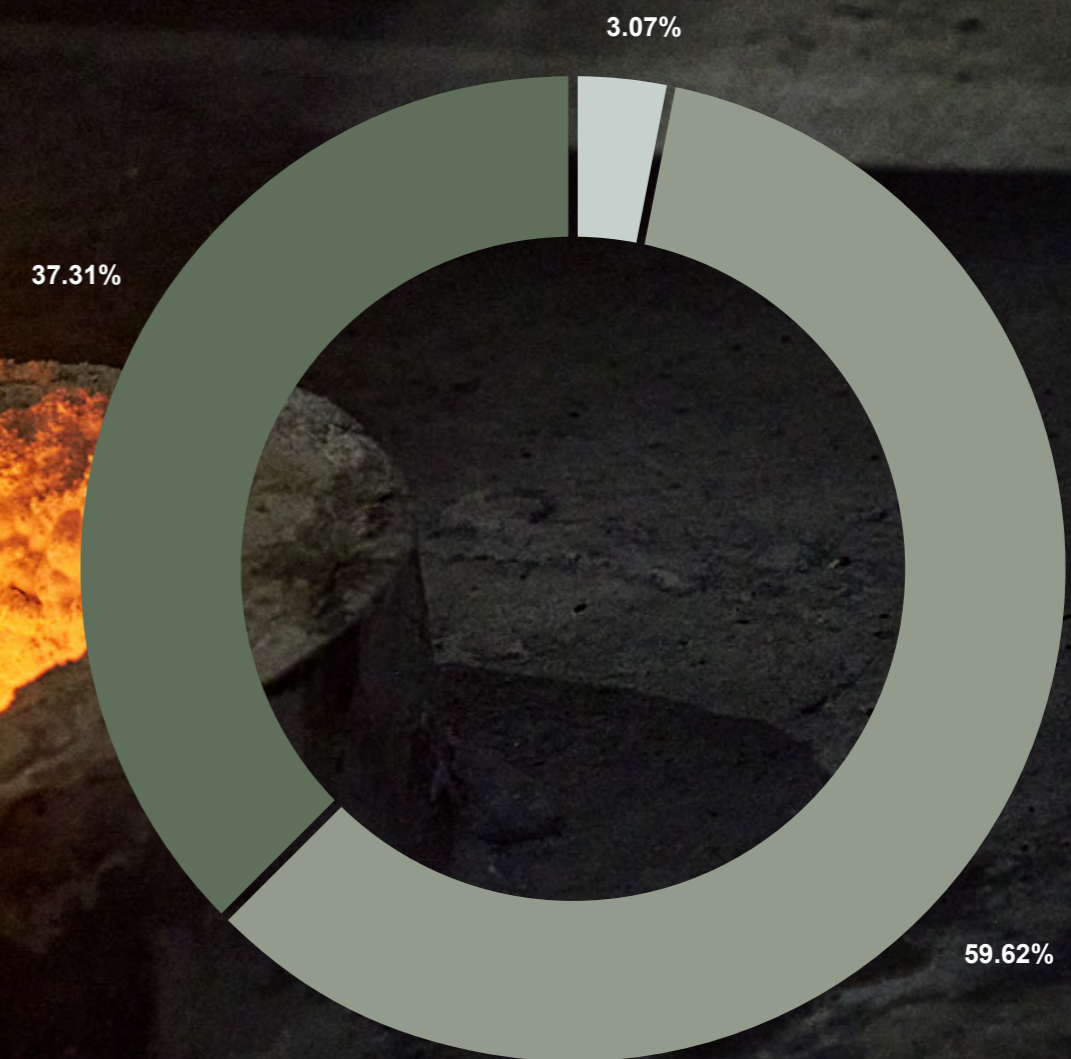
Scope 2: Indirect emissions from energy consumption

Scope 2 covers indirect emissions arising from the production of the electricity or heat the company buys or uses. At BIRN Group, this is primarily linked to the electricity and other forms of energy that we buy from outside sources and use, for example, in our casting processes.

Scope 3: Other indirect emissions

Scope 3 covers other indirect emissions arising from the company's activities, but beyond our direct control. The extraction of raw materials is a major contributor to BIRN Group's Scope 3 emissions, which also encompass transport, waste management and other activities in our supply chain.

BIRN Group's carbon emissions in 2022



Carbon emissions in BIRN Group in 2022*:

Scope 1	5,272 tCO ₂ e
Scope 2	102,291 tCO ₂ e
Scope 3	64,005 tCO ₂ e

*The carbon emission figures for BIRN Group and all its subsidiaries in this report pertain to emissions in 2022.

Calculations for carbon emissions in 2023 have not been finalized for this report.

REDUCING ENERGY CONSUMPTION OF MELTING FURNACES

BIRN in Holstebro conducts regular projects aimed at optimising the melting processes. Cast iron production involves heating scrap iron and other additives to over 1,400 degrees Celsius, and this process requires large amounts of energy. With annual energy consumption of over 100 GWh, about half of which is used for the melting processes, there is therefore great potential in improving melting efficiency.



**Approx.
500,000 kWh**

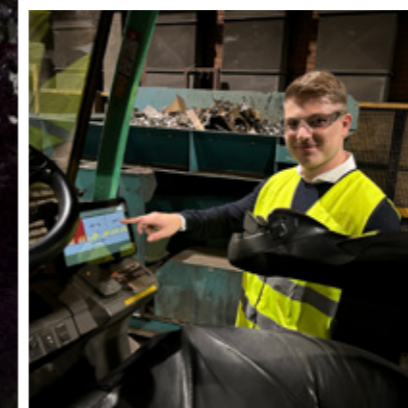
By the end of 2024, BIRN in Holstebro will use less than 640 kWh per tonne in the process of melting scrap into liquid iron (today the figure is 645 kWh per tonne).

About 90,000 tonnes are melted annually. This means that BIRN in Holstebro will save approx. 500,000 kWh in 2024.

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“We know from studies carried out by our furnace manufacturer that, under the best possible conditions, it takes approx. 560 kWh to melt scrap into one tonne of cast iron. This is the goal we’re working towards.”

**Emil Husted Brodersen,
Group Sustainability Manager,
BIRN Group**



In 2023, BIRN in Holstebro completed an innovation project in collaboration with the Energy Technology Development and Demonstration Programme (EUDP). Under the project, operators controlling the melters in the iron foundry were issued with tablets to serve as a digital operator tool. The tool uses data and advanced algorithms to calculate the current temperature in the furnaces, giving the melter operators precise and instant information about when new materials need to be added to maintain a stable furnace temperature.

According to Emil Husted Brodersen, Group Sustainability Manager at BIRN Group, the new tool in combination with the operators’ expertise in the melting processes has shown promising results:

“During the innovation project, it was possible to reduce energy consumption from 645 kWh per tonne of cast iron produced to 590 kWh, which is a considerable saving. We know from studies carried out by our furnace manufacturer that, under the best possible conditions, it takes approx. 560 kWh to melt scrap into one tonne of cast iron. This is the goal we’re working towards, and the new innovation project takes us one step closer,” says Emil Husted Brodersen.

The operator tool is undergoing further development, so that it can eventually be implemented throughout the iron foundry’s melting production. Regular projects are conducted with the aim of optimising the melting processes. Most of these projects have so far focused primarily on technology development, but with this innovation project, the iron foundry has also begun looking at employee behaviour and how work processes can be supported and optimised.

“It can be very difficult to change employee behaviour, as it has often been shaped by traditions and culture. Fortunately, the melter operators have been good at sharing their unique knowledge with us, so we’ve been able to develop a workable solution that makes a difference both for them and for the company,” says Emil Husted Brodersen.

AI TECHNOLOGY IS OPTIMISING BIRN'S ENERGY CONSUMPTION

In late 2023, BIRN in Holstebro completed an innovation project in collaboration with pour-tech AB, focused on the implementation of AI-based technology. The aim of the project was to reduce energy consumption by optimising the dosing of melting iron from casting machines into moulds. The project has been so successful that BIRN in Holstebro will now implement the technology on almost all of the foundry's casting units.

Two casting units at BIRN in Holstebro have been fitted with laser sensors that monitor and analyse, using AI technology, how the liquid iron is dosed into the moulds. The dosage has a major impact on the heating process and hence also the energy consumption, reports Lars Jørgensen, CTO at BIRN Group:

"The technology helps us achieve significant energy savings, as precise dosing into the moulds has a major impact on how much energy is needed for the moulds to be filled sufficiently and the melt iron to flow perfectly out into the moulds."

The project began back in 2020, when the system collected data from BIRN's casting production for about a year. The technology was later tested in operation, where it significantly reduced energy consumption. The company has therefore decided to implement the technology on almost all casting units in the foundry.

Time for specialised tasks

However, human casting operators are not at risk of being replaced by the AI-based technology, called EASYpour[®]™, which has been developed by pour-tech AB, the global market leader in automatic pouring solutions. Instead, the new technology gives them more time to perform other, more specialised, tasks:

"The technology is a great help to our operators, but it certainly cannot replace them across the entire process. It's basically just a skilled assistant that helps optimise the casting processes, freeing up the operators to take samples of the molten iron and perform other more specialised tasks," says Lars Jørgensen.



"Sustainability is one of the pillars of BIRN Group's overall corporate strategy, so we are constantly working strategically to reduce and optimise our energy consumption."

**Lars Jørgensen, CTO,
BIRN Group**



INVESTING IN OXYFUEL HEATING SYSTEMS REDUCES IRON FOUNDRY'S ENERGY CONSUMPTION

TASSO has invested in five new oxyfuel heating systems for the company's casting production lines and transport ladles. With the investment, TASSO expects to be able to reduce its energy consumption for preheating transport ladles and casting production lines by up to 75 per cent, while streamlining production time and improving the working environment in the foundry.

TASSO continuously seeks to reduce its energy consumption and is happy to invest in equipment and projects that can contribute to this. This has led the iron foundry to make a major investment in five new oxyfuel heating systems – also called burners – for its casting lines and transport ladles. It is expected that the burners will reduce energy consumption for heating by three-quarters:

“Our research and calculations show that the burners can reduce energy consumption for heating our casting lines and transport ladles by up to 75 per cent,” says Bjarne Faurbye, Technical Director at TASSO.

“We're still in the start-up phase, but we have seen what the burners can do at foundries in

Germany, and we've seen similar positive results in our initial tests in production. We certainly have great expectations that it will be a success.

Well on the way to biogas

With the investment, TASSO has replaced its previous oil-fired burners with burners that run on oxyfuel – a mixture of oxygen and natural gas. TASSO has had the burners made ready to also run on hydrogen. This means the iron foundry is not becoming dependent on natural gas.

“Most of the gas we use is natural gas. According to Biogas Denmark, 38 per cent of all gas in the Danish natural gas grid in 2023 was biogas, and this share will rise significantly in the coming years, leading to a further CO₂ reduction,” says Bjarne Faurbye.

In addition to optimising the foundry process, the burners also help reduce the noise level in the foundry. Unlike the former oil-fired burners – they do not need to draw in large amounts of air. According to Bjarne Faurbye, this significantly improves the working environment for employees in production.



MORE ENERGY-FRIENDLY LIGHTING AT BIRN GROUP

At BIRN Group, we continuously seek to reduce our carbon emissions on all parameters wherever possible. One of the key focus areas in 2023 was the replacement of fluorescent bulbs and older LED bulbs with the latest generation of LED lighting. This consumes a quarter or less of the power consumed by traditional incandescent bulbs. At BIRN in Holstebro this has led to savings of around 360 MWh.

LED lighting is being phased in as the old bulbs need to be replaced. We do not replace bulbs that are still working, as this would lead to unnecessary waste. BIRN in Holstebro has completed the transition in its administration area, where all lighting now uses LED bulbs. The process of replacing the light bulbs in the company's production areas is ongoing.

Our other subsidiaries in the BIRN Group are also in the process of switching to LED lighting. BIRN Germany uses motion sensors to ensure that no unnecessary power is used to light areas where there is no activity. At KOCKUMS in Sweden, the transition to LED lighting is particularly occurring in the production area, and we are also actively reducing the number of lights in operation. TASSO BERNAREGGI, in Italy, replaced all indoor and outdoor lights with LEDs during 2023, and has a continuous focus on turning off both lighting and heating when it is not needed.

The long-term intention is that lighting in all BIRN Group companies will use the latest generation of LEDs. It is therefore very positive that work is being carried out towards this on an ongoing basis. The combined effect of these many small initiatives will be a significant saving, in both costs and energy.



360,000 kWh savings

Switching to LED bulbs results in an average saving of 5 kW per bulb if the lighting is on for eight hours during a single working day.

If the lighting is switched on 20 hours a day over 365 days, the total savings will thus be 360,000 kWh.



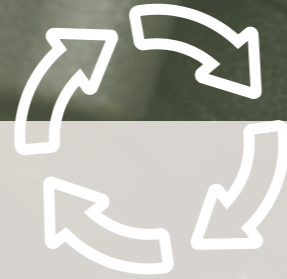
Product-specific LCAs

From 2024, the EU has started rolling out new sustainability reporting standards. With its 80 disclosure requirements and 800 data points, under the Corporate Sustainability Reporting Directive (CSRD), the EU will place more and much stricter demands on how companies work with ESG.

The EU's largest companies will be the first to be covered by the new requirements – including several of our customers in the European truck industry and iron and machinery industry. At BIRN Group, we see the new requirements as an opportunity to help our customers meet them. We do this, for example, by offering product-specific life cycle assessments (LCAs) on all our cast iron solutions.

These life cycle assessments are based on the data collection that we spent much of 2023 setting up in all BIRN Group production environments. In addition to providing LCAs, the BIRN Group is also working to reduce the climate footprint of our products, which will positively affect our product LCAs and thus benefit our customers.

“Sustainability has become a competition parameter through which we differentiate ourselves from the rest of the industry. We have done this, in part, by setting up data collection in our production environments. This enables us to prepare product-specific and thus very precise LCAs for our products,” says Lars Jørgensen, Group CTO at BIRN Group.



Why are product-specific LCAs important?

Product-specific life cycle assessments (LCAs) provide a precise picture of a product's climate footprint from cradle to grave. When customers of the BIRN Group prepare an LCA for a finished product that includes parts from a BIRN Group company, the product certificate from the BIRN company will almost certainly have a positive effect on the LCA calculation for the customer's finished product. This is because the BIRN Group strives to produce items that are greener than the industry in general. In the past, customers were not able to retrieve BIRN Group's own product data for the customer's product and instead had to use table values. These were typically far higher than the actual environmental impact of the given product – which could have a negative impact on the LCA.

LIGHTER CAST IRON COMPONENTS TO BE USED IN THE PRODUCTION OF ELECTRIC TRUCKS

The BIRN Group has been supplying cast iron solutions to the European truck industry for decades. According to the European Environment Agency, heavy-duty vehicles are responsible for a quarter of the carbon emissions of all road transport in the EU. European truck manufacturers are therefore working hard to reduce their climate footprint. That is why the BIRN Group has partnered with Scania to develop and manufacture over 50 custom-made cast iron components for the truck manufacturer's battery-powered vehicles.



“We are committed to reducing carbon emissions from our products during both use and production.”

Tom Kvarnström, Director Commodity Powertrain, Scania

At BIRN Group, we are seeing strong demand from several of our customers in the truck industry for documentation of the carbon footprint, life cycle assessments and durability of our cast iron components. CEO Claus Beier reports that this has driven the further development of products for electric trucks:

“With electrified vehicles, there is a strong focus on range and how far an electric truck can travel on one charge. Our components must therefore not be too heavy, as extra weight obviously requires more energy. This is why we have had to develop new cast iron components.”

Reducing carbon emissions is demanding Swedish truck manufacturer, Scania, decided in 2022 to reduce its carbon emissions by up to 90 per cent throughout its value chain: “Scania develops and manufactures all its solutions with a focus on reducing carbon emissions. This is a

top priority for us, and that is why we were one of the first manufacturers of heavy-duty transport solutions to commit to Science Based Targets. We have thereby committed to reducing carbon emissions from our products during both use and production,” says Tom Kvarnström, Director Commodity Powertrain at Scania.

This in turn places demands on BIRN Group as a supplier, as we are an integral part of Scania's journey to reduce their carbon emissions:

“In close cooperation with Scania, we are already well underway in developing several parts for its electric trucks. We currently have more than 50 new cast iron components for electric vehicles in our pipeline, and new ones are continually being developed so that we remain an interesting supplier for Scania and other customers,” says Claus Beier in conclusion.



BIRN in Holstebro tests regulatory power

In collaboration with IBM and Energi Danmark, BIRN in Holstebro is testing how the iron foundry's electricity consumption can be adjusted to relieve strain on the electricity grid and thus ensure better balance.

In the transition to renewable energy, balance in the electricity grid will be an important factor, and the most energy-intensive companies will play a significant role in this regard. This includes BIRN in Holstebro, which has therefore spent time in 2023 setting up a partnership with IBM and Energi Danmark that will result in the establishment of the Flex Platform.

Flex Platform will enable BIRN in Holstebro to reduce its energy consumption during periods when the electricity grid is under pressure. The iron foundry can thereby help increase the security of electricity supply for neighbours and other companies in and around Holstebro, by offsetting some of the renewable energy shortfall in the electricity grid that Denmark's focus on green power may lead to. Adjusting energy consumption will also be able to reduce the load on coal and gas-fired backup power plants that supply power in critical situations, and thus also reduce carbon emissions from these.

However, it is essential for BIRN in Holstebro that any electricity adjustment does not affect either production capacity or quality. A pilot project must therefore initially investigate whether it is possible to reduce the electricity consumption of the company's melting furnaces without compromising production. Three melting furnaces have been selected to participate in the project by testing whether artificial intelligence can accurately predict the furnaces' electricity consumption. Exact predictability is necessary to ensure balance in the electricity grid. But electricity consumption in BIRN's furnaces depends on whether it is scrap metal, cast iron shavings, or carbon or iron dust being melted.

The pilot project will be put into operation during 2024. A more technical test of the interplay between the hardware component that controls the temperature in the furnaces and the software in the Flex Platform is also to be conducted. This requires extensive data processing, to be carried out in collaboration with Init Group.

About Flex Platform

Flex Platform is a Danish technological solution that supports the green transition – created in a partnership between Andel Energi and IBM Danmark. The solution is based on artificial intelligence (AI) and Internet of Things (IoT). A number of both private and public sector participants are connected to the platform.

FLEX PLATFORM



100%
renewable energy

BIRN in Holstebro expects 100% of electricity consumption is covered by green certificates from renewable energy sources by the end of 2024 (the level was 66% in 2023).

HEAT RECOVERY WILL REDUCE NATURAL GAS CONSUMPTION BY 25 PER CENT

BIRN in Holstebro has invested in two new recovery plants that use the excess heat from the foundry's production to heat the rest of the company. The goal of the new plants is to reduce the company's natural gas consumption by about 25 per cent in 2024.

A significant reduction in natural gas consumption is one of the biggest advantages flowing from the purchase of two new heat recovery plants at BIRN in Holstebro. The plants recover the surplus heat from the company's cleaning chamber and send it back to the factory.

The two plants service 10,000 square metres of production space, and are expected to reduce

the iron foundry's natural gas consumption (the factory's previous source of heating), by up to 25 per cent in 2024:

"We are continually looking for ways to streamline our energy processes and optimise resource consumption, and heat recovery has proven to have enormous potential. The two plants at BIRN in Holstebro have been in operation since November 2023. During the first two months the plants saved around 55,000 cubic metres of natural gas, making it a very interesting case – both from a sustainable and an economic perspective," says Emil Brodersen, Group Sustainability Manager at BIRN Group.

BIRN in Holstebro expects to invest in two more heat recovery plants during the first half of 2024, to be connected to the foundry's furnace filter. Through ongoing investments in initiatives such as heat recovery plants, it is hoped that natural gas consumption can be phased out completely in the long term.

Chimney removal

The new heat recovery plants have not only significantly reduced natural gas consumption – they have also had a positive impact on the factory surroundings. The new plants and a general modernisation of the production facilities enabled the company to dismantle three chimneys in summer 2023.

"We are constantly working to improve the surroundings around our factories. Three obsolete chimneys from the old oil boiler, painting plant and ventilation system at the cleaning chamber were removed during autumn 2023," says Emil Brodersen.



400,000 Nm³
natural gas

The two new heat recovery plants service 10,000 square metres of production facilities and have saved BIRN in Holstebro 55,000 cubic metres of natural gas in just two months. The company expects to invest in two more heat recovery plants during 2024.

Eliminate fossil fuel consumption

By the end of 2024, BIRN in Holstebro will have reduced natural gas consumption by 400,000 Nm³ (the figure was 1.7 million Nm³ in 2023).



BIRN Group's circular business model

At the BIRN Group, a circular business model is embedded in our core values. We continuously work to integrate sustainability into our business practices by considering how waste materials can be recycled, how we can recycle our own materials in closed loops and how we can develop products with a long service life.

A concrete expression of this mindset can be seen in how we recycle our casting sand at the foundry in Holstebro. To ensure good sand quality, two per cent of the casting sand is replaced with new sand each day. The replaced sand is recycled in construction projects.

At the BIRN Group, we also focus on heat recovery. With annual production of around 45,000 tonnes of cast iron at the foundry in Holstebro, exploiting the energy generated during cast iron production is an obvious thing to do. This production involves energy-intensive processes at high temperatures that give off large amounts of heat from cooling. This heat recovery, whereby the surplus heat is used for efficient space heating in BIRN's buildings, has resulted in a significant reduction in the scope of cooling tower operation.

Another element of our circular practice is recycling wire from car tyres. Utilising the steel wire from car tyres together with cast iron shavings from our own production, we create briquettes that are used in smelting iron production and which reduce energy consumption by reducing smelting time.

On the following pages we will elaborate further on our initiatives based on our circular business model.

93%

93% of the materials in cast iron at BIRN in Holstebro come from recycled material.



Examples of recycling at BIRN Group:

- 98% of the sand from the casting process at BIRN in Holstebro is recycled
- 93% of the materials in BIRN's cast iron are recycled material such as scrap
- 50% reduced consumption of cutting oil at KOCKUMS MASKIN by filtering and recycling the oil in the machines
- 34% of the space heat at BIRN in Holstebro comes from recycled heat from production
- 25% of the smelting iron at BIRN in Holstebro comes from recycled shavings and wire from used car tyres

USED CASTING SAND BECOMES A VALUABLE RESOURCE

How can blackened and worn-out sand, which has been reused several times in foundry production, be transformed into a valuable resource? BIRN in Holstebro set out to find a solution to this – and there are already several potential partnerships in the pipeline.

According to UNEP, the UN Environment Programme, global consumption of sand has tripled in the past two decades, and sand is currently the second most widely used natural resource in the world, surpassed only by water. BIRN in Holstebro also uses large quantities of sand for moulds in cast iron production. Casting sand can withstand the enormous heat from molten iron, and an average of 2,500 tonnes of sand is therefore moved around the factory in Holstebro every day.



98%
recycled sand

BIRN in Holstebro recycles 98 per cent of the casting sand in production, but the company wants to find new recycling solutions for the two per cent of the sand that it cannot reuse.

Even though BIRN in Holstebro already recycles 98 per cent of the casting sand in production, the company is always looking for new recycling options for the two per cent of the sand that it cannot reuse. The company therefore presented a case at Sustain Week in Holstebro Municipality in autumn 2023. The aim of the case was to gather ideas for optimising the recycling and consumption of casting sand, so that it can continue to be a valuable resource after it reaches the end of its useful life at the company. Many different suggestions were made, by researchers, experts and some of the most ambitious companies in the world:

“Sustain Week was truly a week about sustainability. Together with companies, government organisations, specialists and researchers, an effort was made to find concrete solutions to how we can recycle our casting sand and find alternatives to fresh sand in production,” says Lars Christian Kongerslev, Environmental Manager at BIRN in Holstebro.

Great interest in used casting sand

Lars Christian Kongerslev reports that Sustain Week marked the beginning of several potential partnerships to recycle BIRN's used casting sand:

“We were totally overwhelmed by the many good ideas and the interest in our used casting sand. Sustain Week led to many interesting conversations and start-up meetings. We are currently working on getting concrete agreements in place with companies and partners who want to receive and recycle our used sand. An extended network and a potential group of partners have been established,” he says.

“The first potential partners have already visited the factory to collect samples of the used sand, so they can investigate whether it is something they can use in their production. It's important that we find partners who have the necessary technologies, so we can create good, lasting cooperation agreements. Taking part in Sustain Week has been a great success, and we will definitely attend again next year with a new sustainability case.”



SELECTED AS BØRSEN BÆREDYGTIG CASE:
**METAL WIRE FROM END-OF-LIFE CAR
 TYRES HAS HIGH VALUE TO FOUNDRY**



An advisory board consisting of sustainability professionals has selected 50 cases from Danish trade and industry, each of which way has contributed significantly to the green transition through an ambitious project. The 50 projects have been named Børsen Bæredygtig Cases 2023. One of them is from BIRN in Holstebro, where a quarter of the foundry's smelting material comes from metal wire from end-of-life car tyres.

Børsen is one of Denmark's most recognised business media publications. In collaboration with an experienced advisory board, it has selected this year's 50 Børsen Bæredygtig Cases – ambitious, innovative, green projects from Danish trade and industry. In 2023, BIRN in Holstebro could pride itself on being behind one of the 50 selected projects that have proven their worth and had a significant impact in relation to the circular economy.

BIRN in Holstebro has devised a method whereby the thin wire mesh left over when an end-of-life car tyre is disintegrated can be reused as part of the smelting process for the production of cast iron products. As a result of this in-house innovation, briquettes made from wire mesh now make up a quarter of the company's smelting material.

"The process of recycling the metal wire started when there was a shortage of materials, because

the scrap pits were empty. We therefore developed some cake-sized briquettes consisting of metal wire from discarded car tyres mixed with cast iron shavings, inoculant, and carbon and iron dust. These are smelted down together with the scrap to make engine mounts, wheel parts and other solid truck parts," explains Kurt Bjarne Larsen, Foundry Technical Manager, who is the man behind the innovation.

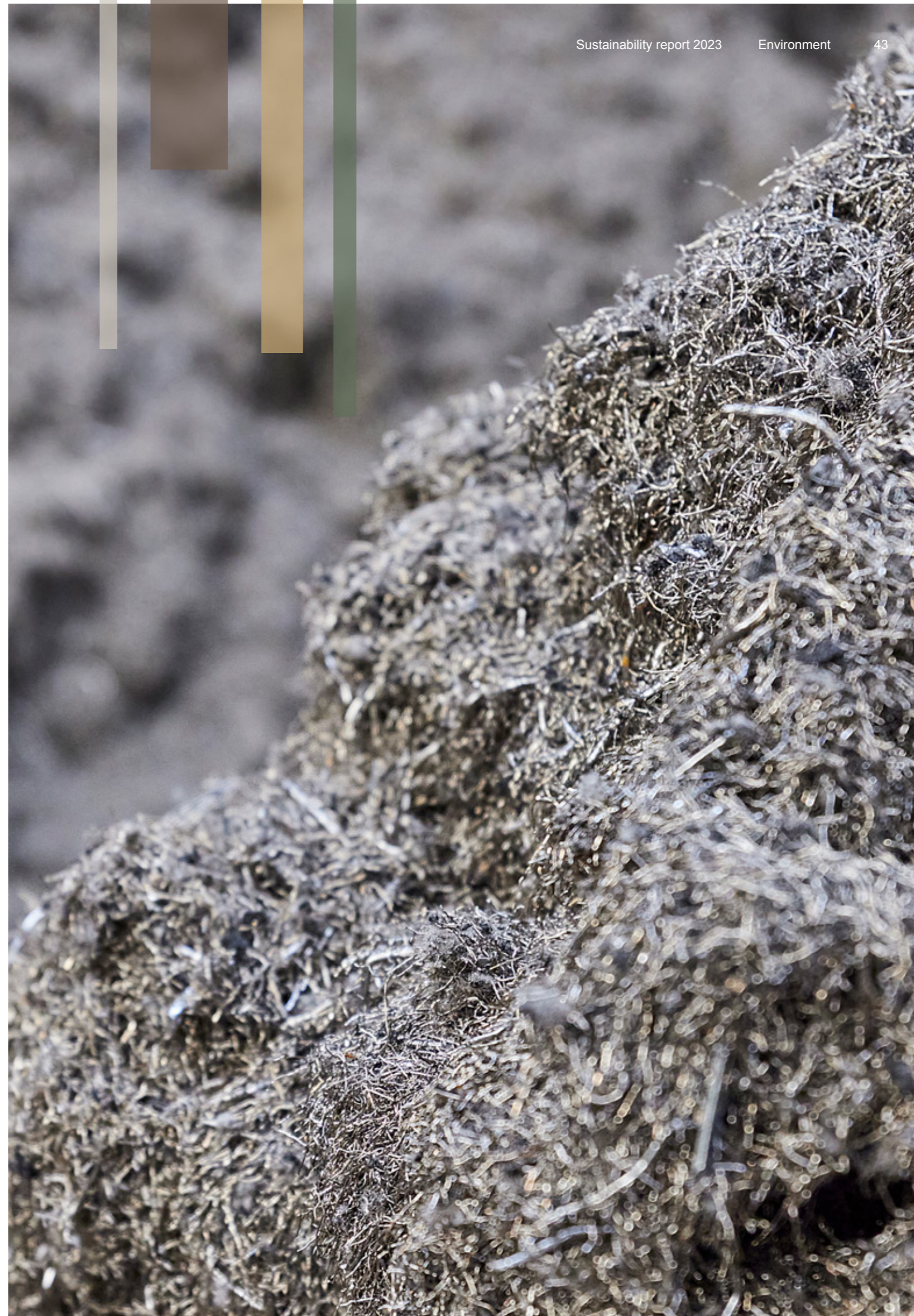
'Othello cakes' are good and green business

The metal wire briquettes, which are colloquially known as 'othello cakes', weigh around seven kilograms and are a very concrete example of the circular mindset that permeates BIRN Group.

"In addition to the briquettes contributing to the circular economy, we also discovered that we could turn it into good business. There is increasing demand for sustainable initiatives, so we are pleased to be able to offer our customers a product that utilises a waste material that no one else can use," says Kurt Bjarne Larsen.

"In addition to the benefits of being able to recycle the surplus material from old car tyres, having a regular year-round supply of these materials is also positive for our stability in production. This also helps to minimise scrap consumption."

A briquette – also called an 'othello cake' – consists of metal wire from end-of-life car tyres mixed with cast iron shavings, inoculant, and carbon and iron dust. This innovation was hailed as a Børsen Bæredygtig Case 2023.



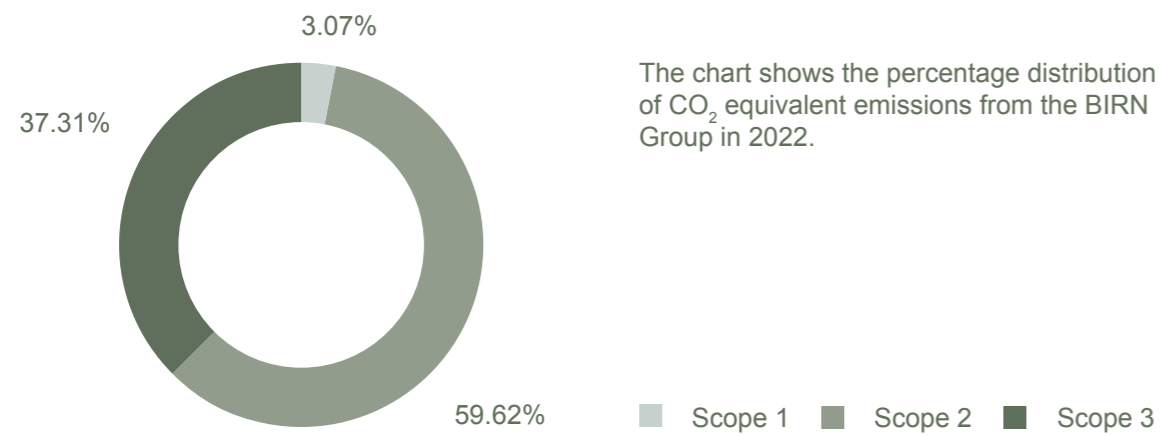
Risks and opportunities

RISKS AND OPPORTUNITIES	ACTIONS
<p>Recycling and waste</p> <p>The BIRN Group actively utilises residual materials from its own and other companies to increase recycling and promote responsible production. Residual materials from the BIRN Group's own processes are either recycled internally or passed on to other companies for recycling.</p>	<ul style="list-style-type: none"> • Actively investigate opportunities to test new types of residual materials in production. • Allocate skills and production equipment to testing and validation in the search for new opportunities. • Continue working to minimise waste and reduce surplus materials from production. • Strengthen strategic partnerships by selling surplus materials and residual waste in order to create new material streams.
<p>Energy supply</p> <p>2023 has been an extraordinary year in many ways, including volatile electricity prices and ongoing energy supply risks. All companies in the BIRN Group are dependent on energy in the form of both electricity and natural gas. The high energy prices during the energy supply crisis therefore impacted the group's companies. It was announced that there was a risk of periodic shutdowns to the electricity supply in certain areas of Denmark ('brownouts'), to maintain the general security of supply in the rest of society.</p>	<ul style="list-style-type: none"> • Establish internal contingency plans to ensure staff safety and minimise damage to equipment in the event of a blackout. • Participate proactively in the regulatory market to help balance the electricity grid. • Intensify efforts to save natural gas and eliminate the use of natural gas in the long term. This will eliminate the risk of a sudden shutdown of the gas supply. • Dialogue on making surplus heat available in the local district heating network.
<p>Carbon emissions</p> <p>The BIRN Group needs to be able to make well-informed decisions about the handling of carbon emissions in the value chain. There are also signs that market access will be dependent on products' sustainability performance. The group therefore has to be able to provide customers with factual information about the carbon footprint of its products.</p>	<ul style="list-style-type: none"> • The BIRN Group completed data collection for LCA reporting for each company during 2023, and can thus calculate emissions in Scope 1, 2 and 3, as well as its impact on the environment. This also means that figures for 2022 are the baseline for direct efforts towards CO₂ reduction.

RISKS AND OPPORTUNITIES	ACTIONS
<p>Waste heat and filtration</p> <p>A lot of air is currently used for cooling and extraction in our production processes. The filtered air therefore contains a lot of heat from the casting processes. We want to recycle this heat, while ensuring that the air is also filtered effectively.</p>	<ul style="list-style-type: none"> • During 2023, a number of the filtration systems at the subsidiaries of the BIRN Group were improved by installing heat recovery systems. This has improved filtering performance, while additional filtration filters were also installed that protect against emissions. • During 2023, the frequency of filter changes was also increased to protect against airborne rust and emissions. This has led to a higher maintenance cost, but also benefits the environment around our factories. • BIRN in Holstebro is in dialogue with the local utility company, Vestforsyning, regarding supplying surplus heat to local households. A partnership to supply surplus heat would involve conversion of the heating systems at BIRN in Holstebro, but this is deemed to be worth the investment from a sustainability perspective. BIRN in Holstebro has also completed a thorough mapping of the heating system to get an overview of the energy installations.
<p>Sand and dust</p> <p>BIRN in Holstebro has around 20,000 tonnes of surplus sand annually which the company would like to pass on for recycling in other sectors, as sand is a finite resource. It can be recycled for applications such as road beds and foundations for barns or the like.</p>	<ul style="list-style-type: none"> • In 2023, BIRN in Holstebro participated in Holstebro Municipality's Sustain Week, where it presented a case about surplus sand and alternative ways to utilise it. This has led to development projects involving utilisation of surplus sand, such as the possibility of cleaning the sand or using it in other products. This could pave the way for much of this waste fraction to be converted into new products, in line with BIRN Group's circular economy mindset. There has also been a strong focus on dust as a waste product, as this can be optimised and thereby create new circular economies.
<p>Natural gas</p> <p>The BIRN Group is working to become independent of fossil fuels, including natural gas. Investments are therefore continuously being made in alternative forms of energy.</p>	<ul style="list-style-type: none"> • BIRN in Holstebro has invested heavily in being able to use process energy for heating on site. It has therefore purchased two new heat recovery plants which were installed and commissioned in 2023. The expected potential shown in the calculations has been fully realised. The two new plants allow BIRN in Holstebro to recover up to 1.3 MW when it is -10 degrees outside. This potential is expected to increase further in 2024 as investment is made in even more plants.

Key figures for the BIRN Group

ENVIRONMENT		Tonnes of CO ₂ e in 2022	
Scope 1	Fuel Direct emissions from owned or controlled stationary sources that use fossil fuels and/or have volatile emissions	5,272	5,272
Scope 2	Electricity, heating and cooling Location-based emissions from the production of purchased electricity, heat, steam or cooling	102,291	102,291
Scope 3	Fuel and energy-related activities	-251	64,005
	Waste generated from operations	952	
	Purchased goods	53,527	
	Business travel	4,207	
	Upstream and downstream transport and distribution	4,829	
	Commuters	720	
	Home offices	21	
	Total		171,567



INPUTS AND OUTPUTS FROM PRODUCTION FOR THE BIRN GROUP

TOTAL INPUTS & OUTPUTS	2023	2022	2021
Total tonnes of production	75,553 tonnes	76,773 tonnes	79,224 tonnes
Energy consumption			
Total electricity consumption	123,286,457 kWh	125,108,314 kWh	126,844,344 kWh
Proportion of electricity purchased from renewable energy sources	38%	28%	23%
Natural gas	1,821,339 m ³	1,856,391 m ³	2,460,078 m ³
Heating oil	130,110 litres	176,150 litres	200,053 litres
Total district heating consumption	1,926,955 kWh	1,549,555 kWh	1,590,111 kWh
District heating sold	4,200,000 kWh	4,340,000 kWh	4,625,000 kWh
Transport			
Transport diesel	72,523 litres	70,995 litres	71,765 litres
LPG forklift gas	159,530 litres	218,620 litres	239,694 litres
Recycled raw materials			
In the product	12%	16%	16%
Material consumption (production)			
Raw materials	65,675 tonnes	66,275 tonnes	68,535 tonnes
Heating and lubricating oil	39,818 litres	37,323 litres	28,181 litres
Consumables	22,333 tonnes	23,248 tonnes	23,681 tonnes
Waste			
Recycling and reuse	14,964 tonnes	24,772 tonnes	25,145 tonnes
Incinerated	232 tonnes	219 tonnes	208 tonnes
Landfill	745 tonnes	824 tonnes	332 tonnes
Waste oil	23 tonnes	22 tonnes	13 tonnes
Chemical waste	83 tonnes	111 tonnes	92 tonnes
Discharge water			
Wastewater	28,203 m ³	26,180 m ³	14,133 m ³
Emissions to atmosphere			
Dust	7,559 kg	6,722 kg	7,888 kg
Water vapour	60,918,000 kg	63,363,000 kg	74,195,824 kg
Flue gases	6,217,739 kg	6,212,047 kg	4,890,233 kg
VOC (Volatile Organic Components)	2,058 kg	2,250 kg	2,258 kg

S

SOCIAL

The BIRN Group employs hundreds of employees, who constitute our most important resource. Safety, security, well-being, passion and decency are therefore keywords in our approach to work in all our companies. As an active part of the local communities in which each company is located, we also contribute positively to our near environments. Read more about our good initiatives on the following pages.



BIRN Group scores high on employee satisfaction

2023 was the year when the BIRN Group conducted its first employee satisfaction survey, covering all employees across our companies in Denmark and abroad. The participation rate among our approx. 800 employees was 94 per cent.

The results of the employee satisfaction survey show that the BIRN Group has achieved strong and anchored job satisfaction across the entire group. Results include a job satisfaction score of 75 points and a loyalty score of 80 points (out of 100). Claus Beier, Group CEO at BIRN Group, sees these results as having great significance:

“Our employees are our most important resource, so it means a lot to us that we can see they are happy to work here. The positive results underscore the effect of the initiatives we have implemented over the past year, including a greater focus on internal communication with the aim of involving and including employees in the group’s development,” says Claus Beier.

Passionate and core employees dominate the workplace

The survey results categorise employees on a scale from ‘switched off’ to ‘fiery advocates’, with the majority of employees lying at the positive end of the scale. One fifth of BIRN Group’s employees are deemed to be ‘fiery advocates’ – employees who care deeply about the workplace, while almost 60 per cent fall into the ‘solid citizens’ category – who thrive in the workplace and with their duties.

The positive results from the employee satisfaction survey have added to our determination in the BIRN Group to continue to improve job satisfaction and safety at all our workplaces.

“We have several initiatives in the pipeline, and have received good input from our employees via the survey which we are carefully evaluating. So even though there is clear progress, we have only taken the first tentative steps on the road to continuous improvement,” says Claus Beier.

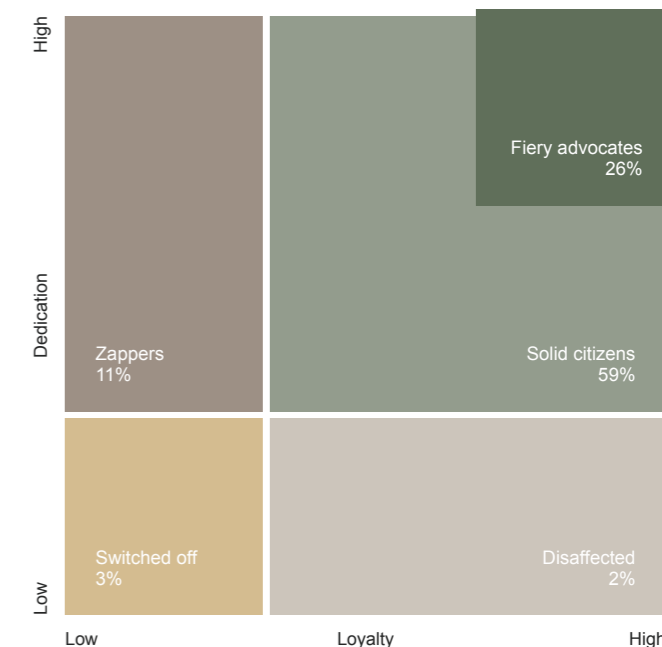


About the employee satisfaction survey

The employee satisfaction survey was conducted among all employees (approx. 800) in the BIRN Group’s six companies spread across Denmark, Sweden, Germany and Italy.

The survey is anonymous, and has questions on a number of physical and psychological conditions in the workplace (among other areas). The results of the study are measured on a scale from 0 to 100 points. Based on the responses, employees are placed in various categories on a scale from ‘switched off’ to ‘fiery advocates’.

The study was conducted by the Danish analysis agency, Ennova, which has offices throughout the Nordic region. Ennova specialises in IT and satisfaction surveys, and helps several companies conduct similar surveys.



The figure shows which categories BIRN Group’s employees belong to: 26% fiery advocates, 59% solid citizens, 11% zappers, 2% disaffected, 3% switched off.



Management in balance

'Management' in an organisational context means a focus on planning, organisation and administration, while the term 'leadership' is more about social relationships, motivation and inspiration. Both are important skills to have as a leader, which is why we work at the BIRN Group to advance our leaders' ability to balance the different aspects of management.

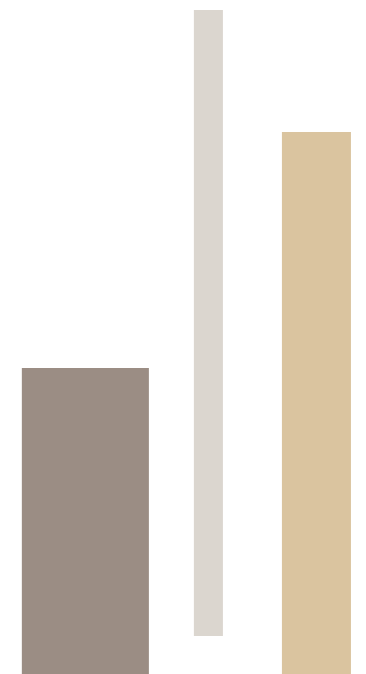
The well-being and health of our employees is an integral part of our strategy. We hold our employees dear at the BIRN Group, and this demands capable and dedicated leaders.

It is important for us to invest in our leaders and their skills. Managers at the BIRN Group therefore have the opportunity to do further training, for example through Basic Management Training (GLU) or a master's degree in management at university.

We also have courses internally in the group aimed at improving the skills of our managers. In 2023, we held three leadership days for all managers in the Danish companies in the BIRN Group, which focused on various disciplines and themes related to good personnel management. These were a great success, and we will be holding similar leadership days in 2024, where we bring together all our leaders and provide a forum to discuss what good leadership of the future involves.

We have also developed our 'Leader's Toolbox' model. This is a series of workshops where we focus on specific management tools in areas such as difficult conversations, evaluating job applicants, retaining employees and implementing employee policy. Four Leader's Toolbox workshops were held at BIRN in Holstebro in 2023, and another four workshops are planned for 2024.

Delegating responsibility is another focus area for BIRN Group leaders. This involves motivating employees and giving them the opportunity to take co-responsibility and make decisions. For example, at TASSO we have strengthened the organisation by adding three team leaders in the foundry, to ensure the necessary leadership resources are in place. While at KOCKUMS we promote a continuous learning culture, where both managers and employees are encouraged to continuously train and develop, through webinars, sector networking events etc. Leaders are also encouraged to work on cross-cutting projects, to exploit benefits in relation to efficiency, problem-solving and different perspectives on a problem.



One team with room for everyone

Just as a good piece of cast iron contains several alloy elements, a good business is also built on different kinds of people. This is also true in the BIRN Group.

BIRN in Holstebro has employees with 17 different nationalities, and 70 per cent of employees at ULDALL in Vejen are not native Danish speakers. The linguistic and cultural differences place demands on us as a workplace and on our managers. We are ready to meet this challenge, and our Danish companies – BIRN in Holstebro, ULDALL and TASSO – offer Danish lessons for employees for whom Danish is not their first language, and also courses for people with dyslexia. TASSO Bernareggi in Italy also offers courses in Italian to promote communication and integration within the company. TASSO Bernareggi also offers English courses for office staff.

At the BIRN Group, we see diversity as a strength, as it helps us to see challenges and solutions from various angles and to better understand the cultural differences among people. We see this at ULDALL in Vejen, for example, where Danish lessons are very well received by the

many international employees. ULDALL offers all employees with a foreign background a screening to determine their current level of Danish, and then Danish language training matched to their level. Both the screening and language training are voluntary, but virtually all foreign employees take up the offer.

“Depending on the employee’s language level, Danish lessons either take place here at ULDALL, or at a municipal language school. In both cases, the lessons takes place during working hours and employees receive full pay throughout. Both factors are central to the success of the courses. We generally see a stronger sense of belonging, team spirit and mutual understanding as Danish language skills are improved. We are also better able to retain stable and faithful employees,” explains Kurt Olsen, Production Director at ULDALL.

One of the employees who has completed the language course is Mehri Rosha, who has worked in production at ULDALL for the past three years. With an Afghan background, he interacted using English during his initial time at the company, but now uses Danish.

“It means a lot to be able to talk to my colleagues in Danish, because it helps us better understand each other. I have also been very keen to learn to speak Danish, and that has probably helped me learn a little faster. The fact that classes are held during working hours has also made it easier,” says Mehri Rosha.

So far, around 45 employees have attended a language course at ULDALL, and in 2024 it will be the third time that the course has been held. However, we have not yet achieved our goals in relation to strengthening diversity at the BIRN Group. In the coming years, we will give more focus to minimising the differential between sexes. We have a goal that 20 per cent of employees in top management positions should be women, and we are not there yet. There were 10 female

managers in the companies in BIRN Group in 2023, which corresponds to 1.2 per cent of our employees having a female manager.

Everyone is welcome at the BIRN Group, regardless of gender, ethnicity, age and more. Here we work as one team, where there is room for everyone.



70%

of employees have non-Danish ethnic origin

Given that 70 per cent of employees at ULDALL in Vejen have a non-Danish ethnic background, it is crucial that the workplace and managers find effective ways to handle the linguistic and cultural differences.

BEE SAFE campaigns lead to a change in culture and better safety

At the BIRN Group, we work continuously with safety at the various workplaces in our companies. For example, BIRN in Holstebro has run the BEE SAFE campaign during the past year. The campaign has raised awareness of for the use of protective equipment such as hearing protection, safety goggles and safety shoes, and is a good example of the group's continued focus on a safe and healthy working environment.

The work at a foundry takes place in a demanding physical working environment, where employees can be exposed to high heat and noise from the workstations. BIRN in Holstebro therefore works continuously to improve the working environment, with a focus on a high level of safety for both current and new employees.

The "BIRN Group has always had a strong focus on the working environment and the safety of our employees. For example, at BIRN in Holstebro we have attained ISO 45001 certification, which is an international standard for occupational health and safety management. The certification is not mandatory but sets a framework you can base your efforts against which exceed the legal requirements. We have to continuously assess the risks of current and new workflows, so that we can target safety efforts and prevent accidents," says Ronnie Rahbek, HS Manager at BIRN in Holstebro.

The occupational health and safety certification also requires BIRN in Holstebro to continuously measure OHS through data, have written safety instructions and make safety observations at the workstations. These initiatives are also supplemented with safety campaigns. In 2023, the BEE

SAFE campaign was run at BIRN in Holstebro to heighten employees' awareness of the need to always wear protective equipment such as hearing protection, safety goggles and safety shoes.

"We have many employees who started their careers at a time when the culture surrounding safety was totally different. It is therefore important to raise awareness of the safety requirements on each employee today, and to bring about a change in culture, for their own sake and the sake of their colleagues, because the majority of employees in Holstebro work in an environment with high heat, noise and heavy equipment. The employees have also given positive feedback on the BEE SAFE campaign, and are pleased that we give high priority to safety," notes Ronnie Rahbek.

"But, it's just as important that new employees imbibe safety from day one, so they remember to put on their safety shoes before entering the foundry, and we do employee onboarding and hold courses for everyone who works at BIRN in Holstebro."

The BEE SAFE campaign will continue at BIRN in Holstebro during 2024, where one focus will

be the approx. 150 forklifts and stackers driving around the site, and the pedestrian traffic in the foundry. The positive experiences from the campaign in Holstebro are also a good starting point for rolling out BEE SAFE to other companies in the group.



About BEE SAFE

BEE SAFE is a safety campaign that raises awareness about using protective equipment such as hearing protection, safety goggles and safety shoes among employees at BIRN in Holstebro, bearing in mind the demanding working environment at the foundry with high heat, noise and heavy equipment.



"The employees have also given positive feedback on the BEE SAFE campaign, and are pleased that we give high priority to safety."

Ronnie Rahbek, HS Manager, BIRN in Holstebro



FILTER SYSTEMS IMPROVE THE WORKING ENVIRONMENT AT ULDALL

We installed a new heat recovery system in the production at the ULDALL iron foundry in Vejen in 2023. The new system will benefit both the environment and employees. In addition to recovering heat from ULDALL's casting processes, it also has filters that significantly improve the air quality.

The heat is recovered from the mould boxes and from what the foundry industry calls a 'shake-out'. Shake-out is a mechanical process where the sand from the moulds is recycled by vigorously shaking the sand moulds, so that the sand becomes loose again. This allows ULDALL to recycle 95 per cent of the sand. The new system also ensures that the heat from the moulds is recovered, filtered and reused in ULDALL's production hall. The system, especially the new filters, were installed at the request of ULDALL's employees, who wanted better air quality in the area.

"We want to create the best conditions for our employees, and since the new recovery systems also allowed us to reduce energy consumption in the area, it was an easy decision to take. We can see from our employees' reactions and our district heating and electricity bills that it has been the right decision," says Dion Brun, CCO at ULDALL.

Lean philosophy eliminates waste and promotes employee involvement

At the BIRN Group, we continuously strive to optimise our work processes, to improve efficiency but also to further increase job satisfaction among our employees. One of the methods that both creates more overview and optimises the processes is Lean.

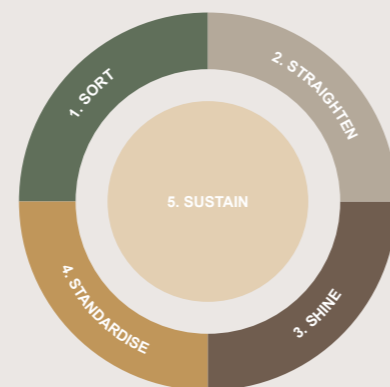
The purpose of Lean is to create maximum value with the fewest possible resources. That is why we focus at BIRN Group on eliminating waste, continuous improvement and involving employees in the entire process. BIRN in Holstebro has had a focus on this in recent years. Annette Marie Mikkelsen, Lean Manager at BIRN in Holstebro, explains:

“We work with Lean at BIRN in Holstebro, and have built a structure around regular direction setting meetings, job rotation and safety. Our focus in our daily work is on safety, quality and productivity, and involving employees in the process. In dialogue with the employees, the desired effect is achieved by reducing waste, for example by organising work areas optimally, thereby removing disruptions or annoyances, reducing handling, transport and ensuring better flow,” she says.

“We have been and continue to work with master data and standardisation of processes, so everything has a set place and structure. This has highlighted areas where there may be a need to put in extra support functions, or time-consuming processes that we need to pay special attention to. The employees have been very good at contributing from their experiences, and together we have been able to determine the right flow. This is of great importance to employees and their involvement.”

Benefits of a successful Lean 5S programme:

- Fewer workplace accidents
- Better quality
- Reduced space requirements
- Less time spent looking for tools and materials
- Employee involvement and ownership
- A workplace that signals order
- A workplace that impresses customers
- A workplace employees are proud of



The 5S model. The five S's stand for sort, straighten, shine, standardise and sustain.

TASSO reduces changeover times by a full two hours

We have also worked with Lean at the TASSO iron foundry in Odense. For TASSO, the idea is to establish new projects that aim to develop and optimise their production, rather than doing just things ‘as usual’. One consequence has been that the company has been able to reduce changeover times on the foundry’s process lines by a full two hours.

“We have experienced very good results with the Lean philosophy at TASSO. We have focused on the 5S system, which seeks to create a more efficient, organised and visual workplace. As a result, the right tools are now in all the right places. We have also worked with various

training tools and achieved stable start-up times, better handovers between the day and night shifts, and a more detailed understanding of the challenges of production and its potential – all of which have contributed to reducing changeover times,” explains Kristian B. Pedersen, Managing Director at TASSO.

One of the Lean frontrunners at TASSO is Stephan Kron, who is studying to become a production engineer and works in the iron foundry in parallel with his studies. Stephan Kron has implemented the 5S Lean system across departments and areas in the company. Each department has then operated and developed the system further.





BIRN Group invests in future talent



“At BIRN Group, we do not view apprentices, trainees and interns as cheap labour. They are the talents of the future and valuable colleagues, and we want to ensure they have a positive experience during their time with us.”

**Maria Mohr Holst,
HR Business
Partner, BIRN
Group**

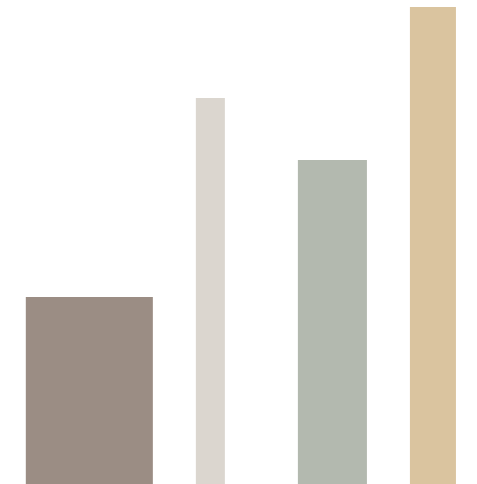
Apprentices, trainees and interns are a key part of the staff team at BIRN Group, and we are happy to take responsibility for training the future workforce.

We therefore strive to have apprentices, trainees and interns in all our companies across the group and in the various departments – from foundry and surface treatment to IT and purchasing.

Our aim at the BIRN Group is for our apprentices, trainees and interns to gain useful experience and acquire new knowledge during their time with us. We therefore regularly review their trainee plans to ensure they meet the requirements of their respective educational institutions. We give them responsibility, listen to their input and thus ensure they have influence. This promotes their growth and development, and BIRN Group also has good experience with learning from the good ideas and innovation of our apprentices, trainees and interns.

In autumn 2023, BIRN in Holstebro brought all apprentices, trainees and interns together for a theme day about their future, with input on employee profiles, careers and safety in the workplace. In 2024 we will bring together all those with responsibility for apprentices. This will provide a forum where they can share positive experiences with each other, and thereby give our apprentices, trainees and interns an even better experience during their time with us.








By giving them the opportunity to complete a constructive internship, we help ensure that the talents of the future get the best possible start to their working lives. And perhaps they will also be interested in returning to BIRN Group one day when they have finished their studies.



Risks and opportunities

RISKS AND OPPORTUNITIES	ACTIONS
<p>Labour force</p> <p>Competent employees are absolutely central to the viability of the companies in the BIRN Group. It is therefore crucial that we are able to recruit, retain and develop the right employees. It is also a focus area to reduce employee turnover, so that we retain valuable expertise and reduce the human and financial resources expended in connection with recruitment, onboarding/training and offboarding.</p> <p>Maintaining a workforce with the right mix of competencies and ages requires continuous focus, especially in the recruitment phase. High job satisfaction also helps us to retain both new and more experienced employees.</p> <p>At the BIRN Group, we have many employees who have given us many years of faithful service. We are proud of this, but it also means that we must take care to bring in younger employees who can learn from their older colleagues, thereby ensuring that important knowledge is retained.</p> <p>BIRN Group also employs people of many different nationalities. This leads to cultural and linguistic differences, which in turn place demands on our managers and colleagues in relation to inclusion.</p>	<ul style="list-style-type: none"> • Conduct employee satisfaction surveys in all companies within the BIRN Group. • Develop a strategy for employee development. • Cooperate with relevant educational institutions. • Increase structured efforts in relation to employee development. • Ensure sustained marketing efforts to raise awareness of the attractive workplaces the group companies offer. • Offer all employees language courses to build a culture characterised by a sense of equality and community spirit.
<p>Safety</p> <p>Despite long-term and sustained efforts to improve safety, we still have employees who are injured at work. The injuries suffered by our colleagues are not severe.</p> <p>However, it underlines the important fact that dangerous situations can arise if safety rules are not followed, and we therefore work proactively with behaviour and mindset.</p>	<ul style="list-style-type: none"> • Increase focus on promoting safe behaviour in the workplace. • Conduct micro-campaigns as a tool to continually maintain focus on safe behaviour in the workplace. • Uphold the ISO 45001 standard for improving safety and preventing accidents.

Key figures for the BIRN Group

Full-time workforce and gender diversity			Gender diversity for other levels of management	
				
	Men	Women	Men	Women
2023	676	126	68	10
2022	654	108	63	9
Type of position			Loyalty and job satisfaction	
				
	Salaried employees	Production	Loyalty	Job satisfaction
2023	201	601	79	74
2022	191	571	-	-
Employee turnover rate			Lost-time accidents at work	
				
2023	21%		57	
2022	23%		43	

G

GOVERNANCE

At the BIRN Group, good corporate governance provides the foundation for healthy businesses and workplaces. Despite the differences between our companies, we are one team. We therefore organise ourselves in a way that ensures synergies and common guidelines in areas such as leadership principles, IT and purchasing. You can read more about this in the following section.

Our work must be supported by data but people-driven

At the BIRN Group, we have put digitalisation on the agenda. This is because data management and collecting knowledge and information about our production and internal processes will allow us to optimise the work for our employees, so we get simple and standardised workflows and optimal production.

Digitalisation has become an important tool in the BIRN Group, where we want to make it easier for our employees to make the right decisions based on data about our work processes. We thereby ensure that the valuable knowledge our employees and machines possess is brought into play, so that we ultimately make the best decisions on an informed basis.

“A data-supported approach means that our employees must use data to make the best possible decisions. We will abolish the complex processes and work duplication that we were not aware existed, and standardise the workflows so that they are easier to teach others. We have been too dependent in the past on the experience and skills of individual employees, and while experience and knowledge are highly valuable, we

become vulnerable when work processes are too person-dependent and not integrated into our systems,” says David Stampe Grønborg, Group IT Manager at BIRN Group.

One way to work in a more data-supported manner is via BIRN Group’s data platform, where all essential data has to be gathered, so there are uniform numbers throughout the group. The companies in BIRN Group have complex operations and complex data that can be understood in different ways depending on how it is to be used.

“For example, if we want a precise overview of what it cost to create an item, we need to define exactly what is to be included in such a calculation. There are many elements and processes in our production. All these must be considered, and

be flexible to adjust if conditions change – such as when we had soaring energy prices. All this information is gathered in our data platform, so both our ERP system and production systems work based on the same data. It’s an extensive task, but it also provides a strong foundation for us to better adapt along the way, so that we always have the most solid data foundation to work from,” explains David Stampe Grønborg.

Digitalisation supports BIRN Group across borders

The companies in the BIRN Group are spread around Europe, and our increased focus on digitalisation creates better cohesion and standardisation across them. It has therefore also been important to create a data collection system that can embrace all companies in the group, so

all employees can benefit from easier processes now and in the future.

“The digital foundation aims to support the journey towards more standardisation and a better overview that we have embarked on. We do this by creating a digital hybrid infrastructure that leverages cloud solutions for data sharing and experience exchange. Through this, we can build a good structure between the various companies, so we can identify improvements and synergies, even though we are geographically dispersed in the group,” says David Stampe Grønborg in conclusion.

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“A data-supported approach means that our employees must use data to make the best possible decisions. We will abolish the complex processes and work duplication that we were not aware existed, and standardise the workflows so that they are easier to teach others.”

David Stampe Grønborg, Group IT Manager, BIRN Group

Supplier agreements place high demands on social responsibility

At the BIRN Group, we are very aware of our responsibility. We therefore only enter into new agreements with suppliers who observe our Code of Conduct – a set of rules that lays down guidelines for human rights, anti-corruption, child labour and environmental requirements.

To give us the best conditions for finding suppliers who observe our guidelines, we have gathered the purchasing functions in the various companies into a central purchasing department, which negotiates on behalf of the entire BIRN Group. In addition to improving our negotiating position, it also ensures uniformity in our purchasing agreements and greater security of supply for materials used for our production.

“By having a central purchasing department that can negotiate on behalf of all the companies in the BIRN Group, we achieve higher volumes than if each factory negotiated its own purchasing agreements. This puts us in a stronger position in relation to our suppliers and gives us greater security of supply for raw materials,” explains Jesper Astrup, Group Purchase Manager at BIRN Group.

“But most importantly, it has made it easier for us to place high demands on suppliers, who commit to observing BIRN Group’s Code of Conduct. Because we will not partner with companies that use child labour, violate human rights or otherwise fail to demonstrate the same social responsibility that our customers expect of us in the BIRN Group.”

Our Code of Conduct also requires our suppliers to allow their employees to join trade unions, to avoid discrimination based on gender, ethnicity, religion or other factors protected by law, and to ensure an inclusive and diverse workplace.

Purchasing agreements also set high environmental standards

Reducing BIRN Group’s carbon emissions has also become a factor for our purchasing department, where we systematically work to limit our environmental footprint by choosing suppliers that are close to our factories. Our Code of Conduct also sets requirements for how suppliers must consider the environment around them.


“At the BIRN Group, we want to have a close and trusting working relationship with our suppliers, but we also want to be close to them geographically. By choosing local suppliers where possible, we can limit carbon emissions by minimising the transport of materials to our factories. Our Code of Conduct also sets requirements for how suppliers treat the environment. For example, we require that energy, resources and raw materials be utilised as efficiently as possible,” notes Jesper Astrup in closing.

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“We want to work with companies that commit to comply with our Code of Conduct and demonstrate the same social responsibility that our customers expect of us in BIRN Group.”

Jesper Astrup, Group Purchase Manager, BIRN Group





Improving IT security through employee training

The cyber threat is increasing, and as more work processes transition to digital systems, we are putting greater focus at BIRN Group on employee training. Through training and exercises, employees are given the necessary knowledge and tools to minimise the risk of hacker attacks.

Employees of the BIRN Group are key stakeholders when it comes to preventing cyber attacks. So to secure the group's and employees' data against such attacks, we hold internal courses for our staff. This will ensure that employees of BIRN Group are up-to-date with the latest knowledge on how to avoid attacks on our IT infrastructure.

"Like many other companies, we are seeing an increase in attempts to infiltrate our servers and gain access to data, and we take the cyber threat very seriously within the group. All employees in the BIRN Group with a personal email account have attended a course in IT security each year,

and we are now stepping up the pace. This allows us to continuously share the latest knowledge and remind employees about the tools available to prevent hacker attacks," says David Stampe Grønberg, Group IT Manager in BIRN Group.

"Our IT security also entails identifying the cultural differences in the various companies that make up the BIRN Group. For example, some companies may use platforms for order processing and invoices, while other companies are more email-based. This results in different threat scenarios in relation to hacker attacks, and we must give all employees the tools that suit their specific work setting."

At the BIRN Group, we want to raise our general digital security level. We are therefore working to become ready for NIS2 and ISO 27001 certification.

Contingency plan to handle hacker attacks

BIRN in Holstebro held a crisis management exercise, which enacted a fictitious hacker attack and revealed any areas in the contingency plan that needed to be changed or improved.

"In the event of a hacker attack, which in the worst case ends in a power outage, where our IT systems are shut down, halting production – we have

a contingency plan for how this can be handled. We believe that regular emergency response exercises, IT security courses and a general focus on prevention and handling of a possible attack are the best way to be prepared," says David Stampe Grønberg.

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"We believe that the best way to be prepared for a possible hacker attack is to conduct regular emergency response exercises and IT security courses, and have a general focus on prevention and management."

David Stampe Grønberg, Group IT Manager, BIRN Group

EMERGENCY GENERATOR WILL HOPEFULLY NEVER BE USED

In the event of a brief or sustained power failure, it is crucial for an iron foundry that production can be shut down in a controlled manner, avoiding human injury or damage to production equipment or the environment. This is why TASSO has invested in an emergency generator that can start up if the power suddenly disappears for any reason.

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“The emergency generator is a kind of insurance that we hope we will never need. But we have re-evaluated our risk assessment in recent years, as there are many factors that can lead the electricity grid to collapse. If this happens, it is crucial that we can shut down our production in a controlled way, for example by cooling down our plants and by ensuring that the iron does not solidify in our melting furnaces. The new emergency generator will allow us to do this,” explains Bjarne Faurbye, Technical Director at TASSO.

The work of evaluating technical, safety and financial risks in the event of a power outage really accelerated at TASSO after the authorities announced the risk of ‘brownouts’ in 2022 (where power is cut in a controlled manner for a limited period to maintain the stability of the electricity system).

“We must avoid being left without power in our factory at all costs. The right thing to do is therefore to ensure we can maintain our own power supply, for our refrigeration systems, cranes, pumps and hydraulic systems. We have been used to a very high security of supply in Denmark, but general power consumption is rising rapidly. This leads to a higher risk of outages in the electricity grid, and a generally more uncertain world may also impact our critical infrastructure. In our view, it is therefore simply due diligence to do everything we can to prepare for how to handle these situations, so we can maintain the necessary safety around our production,” says Bjarne Faurbye.

“It is crucial that we can shut down our production in a controlled manner in the event of a power failure, by cooling down our plants and by ensuring that the iron does not solidify in our melting furnaces. The new emergency generator will allow us to do this.”

**Bjarne Faurbye,
Technical Director,
TASSO**



Certifications

BIRN Group companies hold a number of certifications, including ISO certifications, IATF, BV Mode and Marine Mode. These certifications help ensure that the companies in the BIRN Group are competent, responsible and focus on continuously improving their routines and work-flows. All certificates are continually updated in line with current requirements and regulations, so we constantly ensure we are up-to-date and meeting current standards.

ISO certifications

The BIRN Group holds ISO certifications under the 14001, 45001 and 50001 standards, awarded for our implementation of environmental management and energy policy, among other things. These certifications aim to ensure that we continuously improve our companies and maintain high climate standards, meeting environmental regulatory requirements and taking care of our employees. The table below contains an overview of the certifications held by the various BIRN Group companies.

ISO 14001

ISO 14001 certification means that we work systematically with continuous improvements aimed at minimising environmental impacts and ensure compliance with the applicable statutory environmental requirements through our environmental management system. This is done through risk management and environmental mapping. This includes understanding and taking action regarding the potential environmental impacts of our activities and services and the products we manufacture. ISO 14001 certification also requires the adoption of an environmental policy and environmental goals. We have to document how environmental conditions are managed and ensure the necessary control measures are implemented.

ISO 45001

ISO 45001 certification means through our occupational health and safety management system we ensure compliance with the applicable statutory occupational health and safety requirements and work systematically with continuous improvements to ensure we remain a healthy and safe

workplace. The certification also entails that we identify the company's significant OHS risks and take action to continuously improve safety and working conditions for our employees and other parties. We are also required to have a set OHS policy and objectives. We also have to document how OHS conditions are managed.

ISO 50001

ISO 50001 certification requires the adoption of an energy policy and objectives in this area. Using an energy management system we have to be able to map our energy-consuming units while continuously working to minimise energy consumption and thus environmental impacts. The certification requires us to achieve better energy results and thus greater profitability. ISO 50001 certification also aims to ensure that we continuously work with energy improvements, through measurement, documentation, reporting and benchmarking of energy consumption.

ISO 9001

ISO 9001 is a certification of our quality management system, demonstrating our commitment to consistency, continuous improvement and customer satisfaction. For many the certification is synonymous with quality and effective management, combined with structured customer dialogue. The standard is based on a number of quality management principles, with a continuous focus on customers, motivation and involvement of senior management, process approach and improvements. With the certification we have thus committed to increasing efficiency and reducing the number of product defects.

IATF 16949

The IATF 16949 standard is specific to the automotive industry and contains process requirements for quality management systems that continuously encourage improvements in relation to preventing errors and reducing variation and waste in the supply chain.

The standard is based on ISO 9001 and national quality standards for the automotive industry. IATF 16949 focuses on customer-specific requirements related to continuous improvements, error prevention and reductions in variation and waste in the supply chain. The standard facilitates an ongoing process that helps identify, report and improve areas of management systems and other relevant business processes.

BV Mode II

The marine and offshore sector imposes special requirements on the certification of ships and their components. During the certification Bureau Veritas has reviewed how BIRN in Holstebro conducts and analyses various tests on cast iron grades and how it subsequently issues material certificates if so requested by the customer.

With the BV Mode II certification the companies are approved by Bureau Veritas to provide material certificates for their cast products.

EcoVadis

EcoVadis is considered to be a world leader in its field and is recognised for its thorough and detailed analyses of corporate sustainability based on a range of criteria in relation to climate,

environment, labour and human rights, ethics and procurement. The entire BIRN Group renewed its EcoVadis certification in 2023.

The result of the certification has been assessed based on our efforts in the E, S and G areas, where we have succeeded in mapping our waste streams, training our employees in energy optimisation, and improving energy efficiency through technology and equipment upgrades. In the S area, we have reviewed safety equipment and introduced a health check option for employees. In the G area, we have established a whistleblower scheme and been recognised for high IT security.

SAQ

The Self-Assessment Questionnaire – better known as SAQ – is an initiative of the Drive Sustainably sector association and aims to improve the sustainability of automotive supply chains.

The SAQ has questions on sustainability management, the environment, human rights and working conditions, which help to measure performance in the automotive industry.

OVERVIEW OF CERTIFICATIONS	ISO 14001	ISO 45001	ISO 50001	ISO 9001	IATF 16949	BV MODE II	MARINE MODE 2	ECO-VADIS	SAQ
BIRN	X	X	X		X	X		X	X
BIRN Germany				X				X	
ULDALL				X		X	X	X	
TASSO	X		X	X				X	
TASSO BERNAREGGI				X				X	
KOCKUMS MASKIN	X			X	X	X		X	

Risks and opportunities

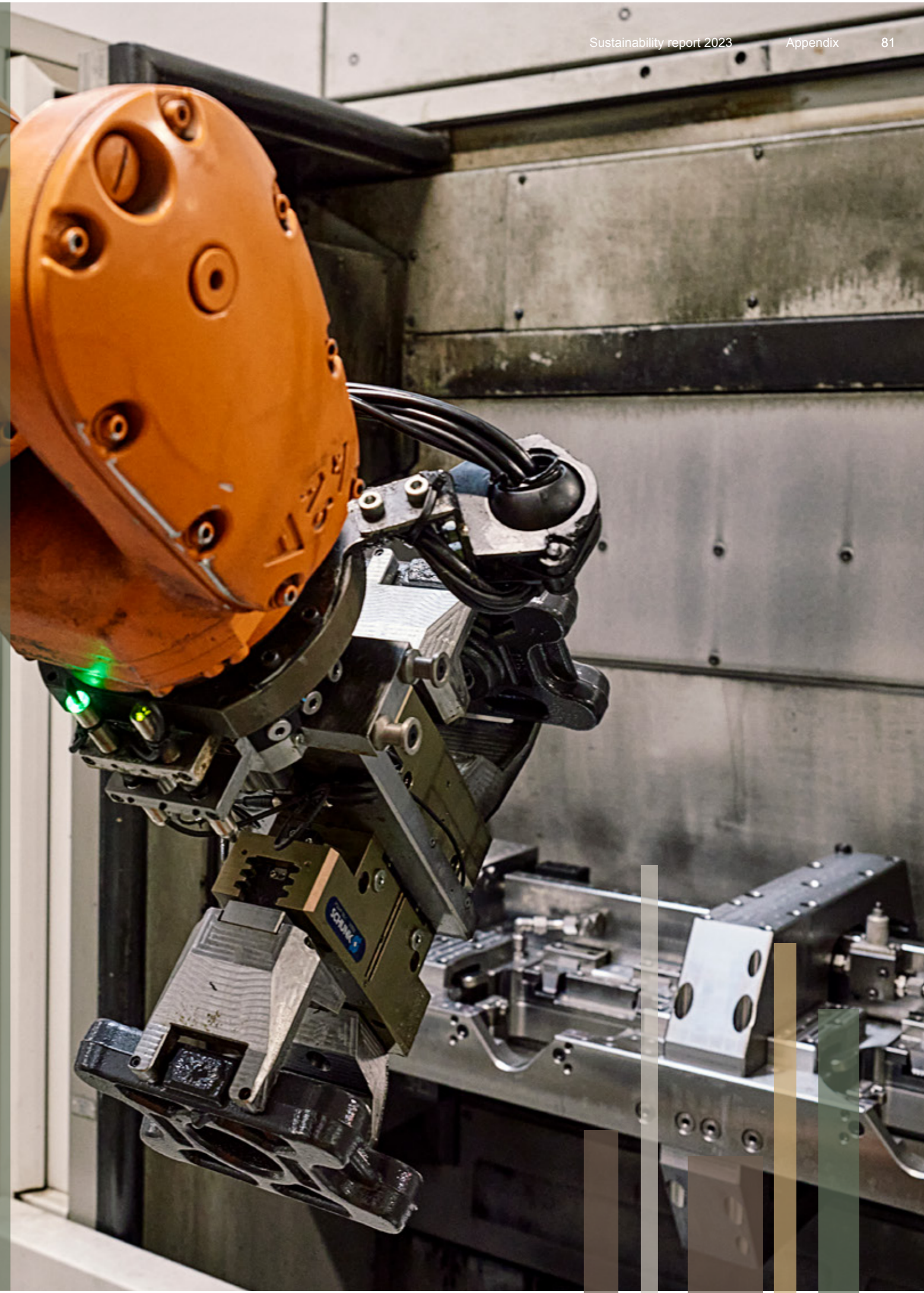
RISKS AND OPPORTUNITIES	ACTIONS
<p>Organisation</p> <p>The oversight of sustainability in the BIRN Group is managed by our CTO and approved by the board. We must ensure that our organisation can maintain and develop our competitiveness within the E, S and G areas.</p>	<ul style="list-style-type: none"> Sustainability is a key element of the BIRN Group's strategy. We will continue to allocate the competences and resources within the E, S and G areas that will ensure the progress of the entire BIRN Group. Group management meets occasionally to evaluate actions and results, in order to meet and exceed the requirements from both customers and legislation.
<p>Customer retention</p> <p>We are very focused on maintaining a good relationship with our customers at the BIRN Group, so we can retain our customer pool – irrespective of whether the goods and product services in question have a long or short buying cycle.</p> <p>BIRN in Holstebro has conducted customer satisfaction surveys since 2011 to obtain customers' direct feedback. The latest survey was conducted in 2023 and saw positive progress on all the average parameters – including satisfaction and loyalty (84.8 and 85.9 per cent, respectively, an increase of 4.2 and 4.6 percentage points, respectively, compared to 2021).</p>	<ul style="list-style-type: none"> Drawing on the customer satisfaction analysis at BIRN in Holstebro, Denmark, we work actively to maintain trust among customers and meet their requirements and wishes. Other subsidiaries also ask their customers about their collaboration and respond accordingly. In the coming years, both TASSO and KOCKUMS will also conduct proper customer analyses.
<p>Supply chain – a changing world</p> <p>The world is constantly changing, and particularly in recent years, political turmoil, wars, and climate impacts have affected our companies' ability to deliver.</p> <p>We have to recognise that the global supply chain has changed and is not about to normalise again. We should instead get used to a new normal. It is therefore important that we have a good foundation in corporate governance, where we constantly focus on our own producing value chains and our trading companies, in which we purchase goods from various parts of the world.</p>	<ul style="list-style-type: none"> In the BIRN Group, we have chosen to centralise our purchasing department, which carefully screens and selects suppliers and handles price negotiations and purchase conditions on behalf of all companies in the group. We also secure our own supply chains in this way, for example by having dual sourcing. All our suppliers are also required to follow our Code of Conduct.

Key figures for the BIRN Group

	Gender diversity of the board		Whistleblower cases
	Men	Women	
2023	18	1	2023 0
2022	19	2	2022 0

Appendix

The subsidiaries of the BIRN Group are each committed to becoming more sustainable companies within the ESG areas. In this section, we present the various companies and their current status based on key figures for production, carbon emissions, workforce, gender diversity on the boards, etc.





BIRN



“Sustainability has become a competitive parameter in the foundry sector, and we at BIRN, together with the rest of the BIRN Group, want to be a market leader.”

Claus Beier, Group CEO, BIRN Group

BIRN

Since its foundation in 1896 up until today, BIRN in Holstebro, Denmark, has grown into one of Northern Europe’s largest foundries, with around 550 employees. BIRN develops and supplies customer-specific cast iron solutions and complete servicing to the automotive, pump and hydraulic industries. A number of these customers are located in Denmark with many also abroad. Ninety per cent of the company’s production is exported.

AI technology optimising energy consumption

In 2023, BIRN in Holstebro implemented AI-based technology on a number of casting production lines. The casting lines have been equipped with special laser sensors. These monitor and analyse (using AI technology) how the quantity of liquid iron added to the moulds is controlled. This makes it possible to optimise how the hot iron is measured out – and hence energy consumption. Read more on page 28.

New operator tool in casting production

Using data collection and advanced algorithms, a new operator tool can calculate the current temperature in the foundry’s smelting furnaces. This helps inform BIRN’s casting operators when new materials need to be added to maintain a stable furnace temperature. A constant, stable temperature can help optimise the energy consumption of the furnaces. Read more on page 26.

BIRN in figures

-  Location: Holstebro, Denmark
-  Employees: 544
-  Annual production volume: Approx. 50,000 tonnes of cast iron

Certifications

- IATF 16949**
Quality management in the automotive industry
- ISO 14001**
Environmental management
- ISO 45001**
Occupational health and safety management
- ISO 50001**
Energy management
- BV Mode II**
- SAQ**
- EcoVadis**

Focus on: Additives and energy processes

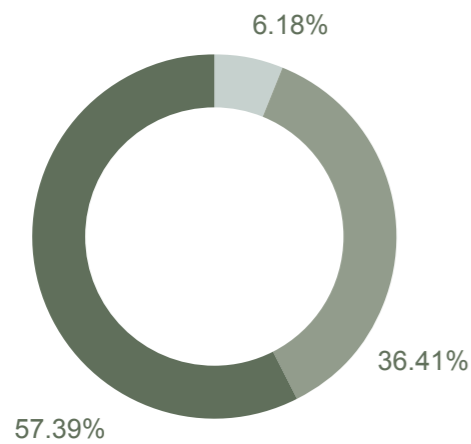
BIRN in Holstebro emitted 66,961 tonnes of CO₂ equivalents in 2022. Scope 3 accounts for more than half of these total emissions, including additives for cast iron production in particular. The next major item was electricity consumption under Scope 2, with a share of just over 36 per cent.

In 2024, BIRN will give special focus to optimising additives, where it sees the greatest potential for reducing the company’s emissions, while continuing efforts to optimise their energy processes.

Employees			Managers		Type of position		
Men	Women	Total	Men	Women	Salaried employees	Production	Apprentices
448	96	544	44	7	128	416	24



ENVIRONMENT		Tonnes CO ₂ e in 2022	
Scope 1	Fuel Direct emissions from owned or controlled stationary sources that use fossil fuels and/or have volatile emissions	4,144	4,144
Scope 2	Electricity, heating and cooling Location-based emissions from the production of purchased electricity, heat, steam or cooling	24,385	24,385
Scope 3	Fuel and energy-related activities	932	38,432
	Waste generated from operations	372	
	Purchased goods	33,274	
	Business travel	14	
	Upstream and downstream transport and distribution	3,347	
	Commuters	479	
	Home offices	14	
Total			66,961



The chart shows the percentage distribution of CO₂ equivalent emissions from BIRN in Holstebro in 2022

■ Scope 1 ■ Scope 2 ■ Scope 3

SOCIAL	2023	2022
Full-time workforce	544	500
Gender diversity (men / women)	448 / 96	421 / 79
Gender diversity for other levels of management (men / women)	44 / 7	40 / 6
Employee turnover rate	27%	31%
Lost-time accidents at work	37	30
Loyalty	81	73
Job satisfaction	77	66

GOVERNANCE	2023	2022
Gender diversity of the board (men / women)	6 / 1	6 / 1
Nationality of the board	DK	DK
Whistleblower cases	0	0

INPUTS AND OUTPUTS FROM PRODUCTION FOR BIRN

TOTAL INPUTS & OUTPUTS	2023	2022	2021
Total tonnes of production	47,959 tonnes	45,721 tonnes	46,526 tonnes
Energy consumption			
Total electricity consumption	103,020,020 kWh	103,710,010 kWh	104,762,030 kWh
Proportion of electricity purchased from renewable energy sources	66%	25%	0%
Natural gas	1,695,684 m ³	1,717,380 m ³	2,280,579 m ³
Heating oil	0	0	0
Total district heating consumption	0	0	0
District heating sold	0	0	0
Transport			
Transport diesel	10,832 litres	20,509 litres	14,327 litres
LPG forklift gas	142,994 litres	150,943 litres	170,151 litres
Recycled raw materials			
In the product	29%	50%	50%
Material consumption (production)			
Raw materials	47,770 tonnes	46,781 tonnes	46,693 tonnes
Heating and lubricating oil	30,860 litres	30,573 litres	21,735 litres
Consumables	22,333 tonnes	23,248 tonnes	23,681 tonnes
Waste			
Recycling and reuse	13,811 tonnes	24,443 tonnes	24,483 tonnes
Incinerated	144 tonnes	138 tonnes	124 tonnes
Landfill	742 tonnes	359 tonnes	325 tonnes
Waste oil	15 tonnes	17 tonnes	8 tonnes
Chemical waste	50 tonnes	74 tonnes	62 tonnes
Discharge water			
Wastewater	25,440 m ³	15,612 m ³	4,622 m ³
Emissions to atmosphere			
Dust	6,609 kg	5,772 kg	6,938 kg
Water vapour	60,918,000 kg	63,363,000 kg	74,195,824 kg
Flue gases	6,217,739 kg	6,212,047 kg	4,890,233 kg
VOC (Volatile Organic Components)	2,058 kg	2,250 kg	2,258 kg



BIRN
GERMANY



“Our business is circular to the bone, we strive to recycle everything within the process before we consider disposing.”

Dennis Klimanek, Managing Director, BIRN Germany


BIRN GERMANY

From its location in Mülheim an der Ruhr in Germany’s industrial heartland, the Ruhr district, BIRN Germany GmbH primarily services German industry with transmission elements and other machined cast iron components. With its specialised machining plant, BIRN Germany can also offer mechanical machining of custom solutions and continuous cast goods.

New premises for grinding department improve working environment

BIRN Germany’s grinding department has moved into its own on site premises. These have sound insulation and industrial vacuum systems, so that dust and noise levels in production will be reduced going forward.

BIRN Germany in figures

 Location: Mülheim an der Ruhr, Germany

 Employees: 34

Certifications

ISO 9001
Quality management (underway)

EcoVadis

New bonus system

Employees should also benefit when things go well. BIRN Germany has therefore introduced a new bonus system where employees receive both a monthly and annual bonus if the company reaches its short-term and long-term financial goals.

Focus on: Optimised energy consumption and greener transport solutions

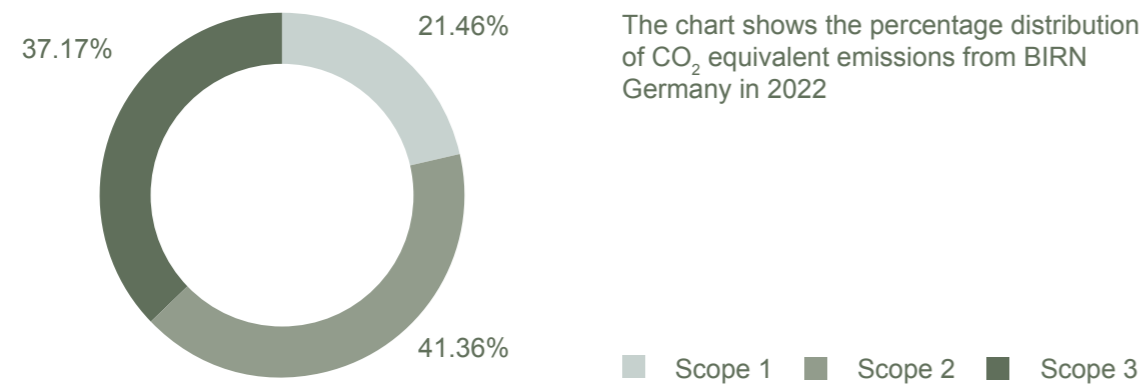
BIRN Germany’s carbon emissions are estimated to be 146 tonnes of CO₂ equivalents in 2022. Divided into the three scopes – Scope 2, with a share of 41 per cent, is the largest item in BIRN Germany’s CO₂ accounts. This is largely tied to the company’s energy consumption. This is followed by indirect emissions under Scope 3 at 37 per cent, and BIRN Germany’s direct emissions under Scope 1, which account for 22 per cent.

In the coming year, BIRN Germany will develop targeted strategies to optimise its energy consumption and explore options for switching to more sustainable energy sources. BIRN Germany will also try to find greener transport solutions that can potentially reduce the company’s emissions under Scope 3.

Employees			Managers		Type of position		
Men	Women	Total	Men	Women	Salaried employees	Production	Apprentices
30	4	34	3	2	14	20	4



ENVIRONMENT		Tonnes CO ₂ e in 2022	
Scope 1	Fuel Direct emissions from owned or controlled stationary sources that use fossil fuels and/or have volatile emissions	31	31
Scope 2	Electricity, heating and cooling Location-based emissions from the production of purchased electricity, heat, steam or cooling	61	61
Scope 3	Fuel and energy-related activities	1	54
	Waste generated from operations	0	
	Purchased goods	0	
	Business travel	0	
	Upstream and downstream transport and distribution	19	
	Commuters	34	
	Home offices	0	
Total			146



SOCIAL	2023	2022
Full-time workforce	34	34
Gender diversity (men / women)	30 / 4	30 / 4
Gender diversity for other levels of management (men / women)	3 / 2	3 / 2
Employee turnover rate	6%	38%
Lost-time accidents at work	3	1
Loyalty	80	-
Job satisfaction	76	-

GOVERNANCE	2023	2022
Gender diversity of the board (men / women)	2 / 0	2 / 0
Nationality of the board	DK	DK
Whistleblower cases	0	0

INPUTS AND OUTPUTS FROM PRODUCTION FOR BIRN GERMANY

TOTAL INPUTS & OUTPUTS	2023	2022	2021
Total tonnes of production	N/A	N/A	N/A
Energy consumption			
Total electricity consumption	155,232 kWh	162,444 kWh	177,430 kWh
Proportion of electricity purchased from renewable energy sources	17%	17%	17%
Natural gas	9,387 m ³	11,292 m ³	20,478 m ³
Heating oil	0	0	0
Total district heating consumption	0	0	0
District heating sold	0	0	0
Transport			
Transport diesel	308 litres	413 litres	560 litres
LPG forklift gas	0	0	0
Recycled raw materials			
In the product	0	0	0
Material consumption (production)			
Raw materials	0	0	0
Heating and lubricating oil	1,177 litres	1,456 litres	832 litres
Consumables	0	0	0
Waste			
Recycling and reuse	118 tonnes	26 tonnes	21 tonnes
Incinerated	0	0	0
Landfill	0	0	0
Waste oil	4 tonnes	2 tonnes	1 tonne
Chemical waste	0	0	0
Discharge water			
Wastewater	0	0	0
Emissions to atmosphere			
Dust	0	0	0
Water vapour	0	0	0
Flue gases	0	0	0
VOC (Volatile Organic Components)	0	0	0



ULDALL VELAMP

“Around 70 per cent of employees at ULDALL have a non-Danish ethnic background. We therefore offer language courses in Danish to all international employees. The courses are matched to each person’s language skill and are held both internally and externally.”

Kurt Olsen, Production Director, ULDALL

ULDALL AND VELAMP

ULDALL A/S was founded in 1944 in Vejen, Denmark. It is a modern and flexible foundry today, that develops customer-specific cast iron solutions for the food, manufacturing, agriculture and energy sectors.

ULDALL owns VELAMP A/S, which develops and produces specially designed cast iron products such as lamps, benches and a number of other customer-specific solutions.

New ventilation system

ULDALL has reduced its energy consumption by installing a new ventilation system at the ‘shake-out’ and an off-gassing area. The company also recycles heat from the system at the shake-out – a mechanical process that ensures sand from moulds can be recycled. The heat from this process is transferred to the ventilation system through off-gassing.

ULDALL and VELAMP in figures

-  Location: Vejen, Denmark
-  Employees: 60
-  Annual production volume: Approx. 1,425 tonnes of cast iron

Certifications

- ISO 9001**
Quality management
- BV Mode II**
- Marine Mode 2 DNV**
- Marine Mode 2 LR**
- Marine Mode 2 ABS**
- EcoVadis**

Well-being and optimisation

ULDALL has set up a well-being group that works across the entire company to improve job satisfaction and the working environment. The group meets regularly with management to share ideas and new initiatives, and to align expectations between management and employees.

Work has also been completed through an action plan following the employee satisfaction survey last year. One result of the action plan has been to invest in new hand and grinding tools that optimise the work processes and increase job satisfaction.

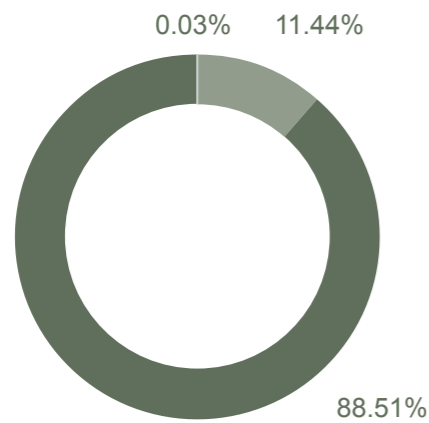
Focus on: Reduced energy consumption and greener electricity

In 2022, ULDALL emitted a total of 9,475 tonnes of CO₂ equivalents. The largest emissions occurred in Scope 3, which accounted for 8,387 tonnes or almost 89 per cent of the company’s total carbon emissions. Scope 2 emissions, which stem from electricity purchases, contributed 11 per cent of total carbon emissions. Scope 1 emissions, which stem from fossil fuel consumption in the company’s vehicles, are relatively minimal, contributing less than 0.5 per cent of total emissions.

Employees			Managers		Type of position		
Men	Women	Total	Men	Women	Salaried employees	Production	Apprentices
53	7	60	5	0	7	53	1



ENVIRONMENT		Tonnes CO ₂ e in 2022	
Scope 1	Fuel Direct emissions from owned or controlled stationary sources that use fossil fuels and/or have volatile emissions	3	3
Scope 2	Electricity, heating and cooling Location-based emissions from the production of purchased electricity, heat, steam or cooling	1,085	1,085
Scope 3	Fuel and energy-related activities	74	8,387
	Waste generated from operations	112	
	Purchased goods	3,978	
	Business travel	4,180	
	Upstream and downstream transport and distribution	0	
	Commuters	37	
	Home offices	6	
Total			9,475



The chart shows the percentage distribution of CO₂ equivalent emissions from ULDALL and VELAMP in 2022

■ Scope 1 ■ Scope 2 ■ Scope 3

SOCIAL	2023	2022
Full-time workforce	60	66
Gender diversity (men / women)	53 / 7	61 / 5
Gender diversity for other levels of management (men / women)	5 / 0	4 / 0
Employee turnover rate	35%	39%
Lost-time accidents at work	7	2
Loyalty	78	-
Job satisfaction	77	-

GOVERNANCE	2023	2022
Gender diversity of the board (men / women)	5 / 0	5 / 0
Nationality of the board	DK	DK
Whistleblower cases	0	0

INPUTS AND OUTPUTS FROM PRODUCTION FOR ULDALL AND VELAMP

TOTAL INPUTS & OUTPUTS	2023	2022	2021
Total tonnes of production	1,425 tonnes	1,684 tonnes	1,391 tonnes
Energy consumption			
Total electricity consumption	3,541,175 kWh	3,916,987 kWh	3,471,975 kWh
Proportion of electricity purchased from renewable energy sources	0%	0%	0%
Natural gas	0	0	0
Heating oil	1,600 litres	1,600 litres	1,600 litres
Total district heating consumption	694,288 kWh	955,555 kWh	1,131,111 kWh
District heating sold	0	0	0
Transport			
Transport diesel	0	0	0
LPG forklift gas	10,234 litres	8,677 litres	10,529 litres
Recycled raw materials			
In the product	45%	45%	45%
Material consumption (production)			
Raw materials	1,497 tonnes	1,840 tonnes	1,444 tonnes
Heating and lubricating oil	0	0	0
Consumables	0	0	0
Waste			
Recycling and reuse	0	0	0
Incinerated	27 tonnes	38 tonnes	38 tonnes
Landfill	0	0	0
Waste oil	1 tonne	0	0
Chemical waste	0	0	0
Discharge water			
Wastewater	1,002 m ³	4,000 m ³	5,100 m ³
Emissions to atmosphere			
Dust	0	0	0
Water vapour	0	0	0
Flue gases	0	0	0
VOC (Volatile Organic Components)	0	0	0

TASSO

“At TASSO, we give high priority to social responsibility, and are keen to help people with challenges to achieve a meaningful life. For example, we have four employees in flex jobs, and we have a partnership with Odense Værkstederne – a sheltered workshop for people with physical or mental difficulties.”

Kristian Pedersen, Managing Director, TASSO A/S

TASSO

TASSO A/S has more than 165 years of experience as a developer and manufacturer of cast iron bars in various dimensions. From the foundry, which has been located in the heart of Odense, Denmark since 1856, TASSO provides services related to casting, heat treatment and machining of cast iron bars. TASSO customers can be found all over the world operating in many fields, including Hydraulics. Parts of the old buildings in Odense have been declared a national industrial monument by the Danish Agency for Culture and Palaces.

Good management and optimal organisation

TASSO strives for good management and exercises management in accordance with the BIRN Group’s management principles and values. One of the biggest developments in 2023 has been changes in the direct management in the foundry. Team leaders have been appointed on all three shifts, which has contributed to greater efficiency, well-being and safety.

Greater focus on safety in production

TASSO has improved safety in production with the help of an external consultant, and the iron foundry is working actively to review near-miss incidents and internal observations from employees. The company has also added an extra OHS group to the OHS organisation, and the OHS representatives have been given specific job descriptions that set weekly requirements, so that safety is always at the top of the agenda.

TASSO in figures

-  Location: Odense, Denmark
-  Employees: 61
-  Annual production volume: Approx. 13,400 tonnes of cast iron

Certifications

- ISO 9001**
Quality management
- ISO 14001**
Environmental management
- ISO 50001**
Energy management
- EcoVadis**

Focus on: Fewer flights and more employee commuting

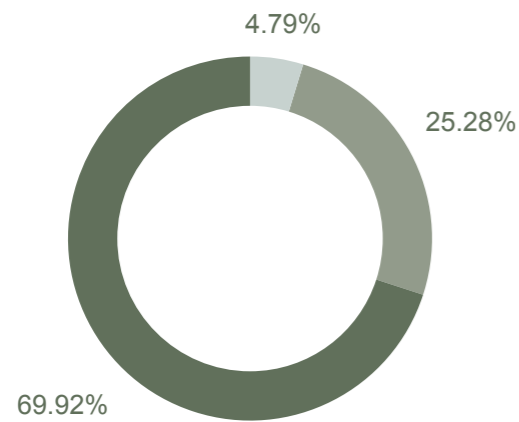
In 2022, TASSO emitted a total of 14,392 tonnes of CO₂ equivalents. The majority of these stem from material consumption in the melting process, which accounts for 70 per cent of the company’s total carbon emissions. This is followed by electricity and heat consumption in Scope 2 at 25 per cent.

TASSO has also identified areas such as business travel by air, employee commuting and freight transport as potential focus areas for reducing the overall CO₂ accounts.

Employees			Managers		Type of position		
Men	Women	Total	Men	Women	Salaried employees	Production	Apprentices
57	4	61	6	0	15	46	4



ENVIRONMENT		Tonnes CO ₂ e in 2022	
Scope 1	Fuel Direct emissions from owned or controlled stationary sources that use fossil fuels and/or have volatile emissions	690	690
Scope 2	Electricity, heating and cooling Location-based emissions from the production of purchased electricity, heat, steam or cooling	3,639	3,639
Scope 3	Fuel and energy-related activities	-1,261	10,063
	Waste generated from operations	459	
	Purchased goods	9,521	
	Business travel	9	
	Upstream and downstream transport and distribution	1,247	
	Commuters	88	
	Home offices	0	
Total			14,392



The chart shows the percentage distribution of CO₂ equivalent emissions from TASSO in 2022

■ Scope 1 ■ Scope 2 ■ Scope 3

SOCIAL	2023	2022
Full-time workforce	61	63
Gender diversity (men / women)	57 / 4	56 / 7
Gender diversity for other levels of management (men / women)	6 / 0	6 / 0
Employee turnover rate	24%	19%
Lost-time accidents at work	6	5
Loyalty	78	-
Job satisfaction	73	-

GOVERNANCE	2023	2022
Gender diversity of the board (men / women)	5 / 0	5 / 0
Nationality of the board	DK	DK
Whistleblower cases	0	0

INPUTS AND OUTPUTS FROM PRODUCTION FOR TASSO

TOTAL INPUTS & OUTPUTS	2023	2022	2021
Total tonnes of production	13,373 tonnes	14,214 tonnes	15,743 tonnes
Energy consumption			
Total electricity consumption	14,463,094 kWh	15,042,980 kWh	16,017,208 kWh
Proportion of electricity purchased from renewable energy sources	0%	0%	0%
Natural gas	96,859 m ³	104,000 m ³	120,851 m ³
Heating oil	128,510 litres	120,013 litres	115,996 litres
Total district heating consumption	511,667 kWh	594,000 kWh	459,000 kWh
District heating sold	4,200,000 kWh	4,340,000 kWh	4,625,000 kWh
Transport			
Transport diesel	1,565 litres	1,312 litres	1,182 litres
LPG forklift gas	6,302 litres	6,719 litres	5,620 litres
Recycled raw materials			
In the product	0	0	0
Material consumption (production)			
Raw materials	13,681 tonnes	14,500 tonnes	15,905 tonnes
Heating and lubricating oil	1,476 litres	0	0
Consumables	0	0	0
Waste			
Recycling and reuse	496 tonnes	469 tonnes	507 tonnes
Incinerated	38 tonnes	33 tonnes	34 tonnes
Landfill	0	465 tonnes	7 tonnes
Waste oil	2 tonnes	1 tonne	1 tonne
Chemical waste	0	0	0
Discharge water			
Wastewater	4,362 m ³	4,756 m ³	2,522 m ³
Emissions to atmosphere			
Dust	0	0	0
Water vapour	0	0	0
Flue gases	0	0	0
VOC (Volatile Organic Components)	0	0	0



**TASSO
BERNAREGGI**




“Safety is always at the forefront in everything we do at TASSO BERNAREGGI. In 2023, we dedicated time and space to general and specific training targeting the renewal of our employees’ professional qualifications, including forklift certificates, gantry crane certificates and jib crane certificates.”

Luca Scotto, Managing Director, TASSO BERNAREGGI

TASSO BERNAREGGI

TASSO BERNAREGGI S.r.l. is based in Castano Primo near Milan, Italy, and is owned by the Danish subsidiary of BIRN Group, TASSO A/S. As a wholesaler and machining company, TASSO BERNAREGGI has more than 40 years of experience supplying and machining cast iron and bronze bars of the highest quality. They service customers in Italy along with international customers.

TASSO BERNAREGGI in figures

 Location:
Castano Primo,
Milan, Italy

 Employees:
35

Certifications

ISO 9001
Quality management

EcoVadis

Less consumption and more recycling

TASSO BERNAREGGI has had the goal of minimising the use of plastic in the company in 2023. Drinking water columns have therefore been installed in the common areas, which employees and visitors are encouraged to use. There is also a strong focus on raising awareness among all employees about reducing plastic and paper consumption. All cutting fluid from the company’s CNC machines and dust from aspiration filters are collected after use and treated/recycled. All cast iron waste has been recycled as much as possible for many years.

Introducing the 5S model

One of the key initiatives for TASSO BERNAREGGI in 2023 has been the introduction of the 5S model. This is a systematic Lean method that aims to create a well-organised workplace and minimise all forms of waste. The five S’s stand for sort, straighten, shine, standardise and sustain. The goal of 5S for TASSO BERNAREGGI is – in addition to maintaining order and cleanliness – to reuse equipment and recycle as much as possible, and to minimise unnecessary purchases of new equipment and tools.

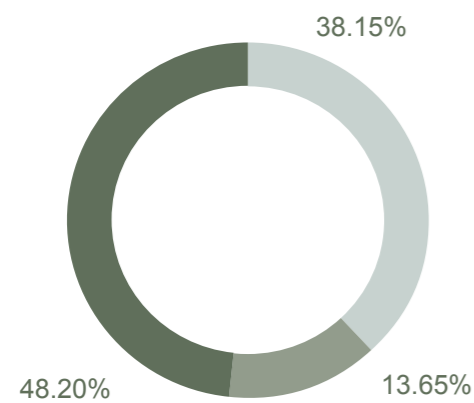
Focus on: More virtual meetings and more environmentally friendly transport

TASSO BERNAREGGI emitted a total of 533 tonnes of CO₂ equivalents in 2022. There is particular potential for reducing carbon emissions by reducing business travel by air and instead promoting the use of videoconferencing and virtual meetings. Using environmentally certified hotels and more eco-friendly transport options for travel can also contribute to a CO₂ reduction.

Employees			Managers		Type of position		
Men	Women	Total	Men	Women	Salaried employees	Production	Apprentices
27	8	35	2	0	16	19	0



ENVIRONMENT		Tonnes CO ₂ e in 2022	
Scope 1	Fuel Direct emissions from owned or controlled stationary sources that use fossil fuels and/or have volatile emissions	204	204
Scope 2	Electricity, heating and cooling Location-based emissions from the production of purchased electricity, heat, steam or cooling	73	73
Scope 3	Fuel and energy-related activities	-16	256
	Waste generated from operations	8	
	Purchased goods	34	
	Business travel	0	
	Upstream and downstream transport and distribution	211	
	Commuters	19	
	Home offices	0	
Total			533



The chart shows the percentage distribution of CO₂ equivalent emissions from TASSO BERNAREGGI in 2022

■ Scope 1 ■ Scope 2 ■ Scope 3

SOCIAL	2023	2022
Full-time workforce	35	28
Gender diversity (men / women)	27 / 8	22 / 6
Gender diversity for other levels of management (men / women)	2 / 0	2 / 0
Employee turnover rate	20%	29%
Lost-time accidents at work	1	0
Loyalty	84	-
Job satisfaction	80	-

GOVERNANCE	2023	2022
Gender diversity of the board (men / women)	5 / 1	5 / 1
Nationality of the board	DK, IT	DK, IT
Whistleblower cases	0	0

INPUTS AND OUTPUTS FROM PRODUCTION FOR TASSO BERNAREGGI

TOTAL INPUTS & OUTPUTS	2023	2022	2021
Total tonnes of production	10,069 tonnes	12,000 tonnes	11,071 tonnes
Energy consumption			
Total electricity consumption	263,796 kWh	290,131 kWh	333,701 kWh
Proportion of electricity purchased from renewable energy sources	46%	25%	20%
Natural gas	19,409 m ³	23,720 m ³	38,170 m ³
Heating oil	0	0	0
Total district heating consumption	0	0	0
District heating sold	0	0	0
Transport			
Transport diesel	55,753 litres	45,932 litres	54,196 litres
LPG forklift gas	0	0	0
Recycled raw materials			
In the product	0	0	0
Material consumption (production)			
Raw materials	0	0	0
Heating and lubricating oil	2,314 litres	2,223 litres	2,508 litres
Consumables	0	0	0
Waste			
Recycling and reuse	564 tonnes	547 tonnes	505 tonnes
Incinerated	0	0	0
Landfill	0	0	0
Waste oil	0	0	0
Chemical waste	0	0	0
Discharge water			
Wastewater	224 m ³	567 m ³	644 m ³
Emissions to atmosphere			
Dust	950 kg	950 kg	950 kg
Water vapour	0	0	0
Flue gases	0	0	0
VOC (Volatile Organic Components)	0	0	0



KOCKUMS MASKIN

“We strive to be a sought-after workplace and have close ties to the local community, schools and relevant networks. In relation to our working environment, we see continuous improvement as a natural way to develop our processes, for the benefit of employees, the company and the environment.”

Johan Brengesjö, Managing Director, KOCKUMS MASKIN

KOCKUMS MASKIN

From its factory in the Swedish town of Kallinge, KOCKUMS MASKIN, with roots dating back to 1742, has been supplying machined cast iron items to customers in and outside Sweden. KOCKUMS MASKIN is now a leading manufacturer of machined castings in Scandinavia, primarily servicing customers in the automotive sector, as well as a dedicated development partner that can handle the entire production process – from design to delivery.

New key performance indicator to measure energy consumption

In 2023, KOCKUMS MASKIN introduced a new key performance indicator to measure the company's energy consumption. The goal is to reduce consumption by 7.2 per cent compared to the previous year. To achieve this, KOCKUMS MASKIN has switched to LED lighting and has implemented a number of initiatives in production to optimise energy consumption. These include greater focus on employees' routines in order to avoid energy waste, and improved detection of air leaks to ensure optimal energy efficiency in the compressed air system.

KOCKUMS MASKIN in figures

- Location: Kallinge, Sweden
- Employees: 68

Certifications

- ISO 14001 Environmental management
- ISO 9001 Quality management
- IATF 16949 Quality management in the automotive sector
- EcoVadis

Internal system halves cutting oil consumption

To optimise the recycling of raw materials while increasing production efficiency, KOCKUMS MASKIN established a new system in 2023 to reduce faults and improve processes. The system has made it possible for KOCKUMS MASKIN to recycle all iron shavings from their machining processes and recycle cutting oil from machines, thereby halving the company's consumption of oil.

Focus on: Optimising material consumption and new strategy

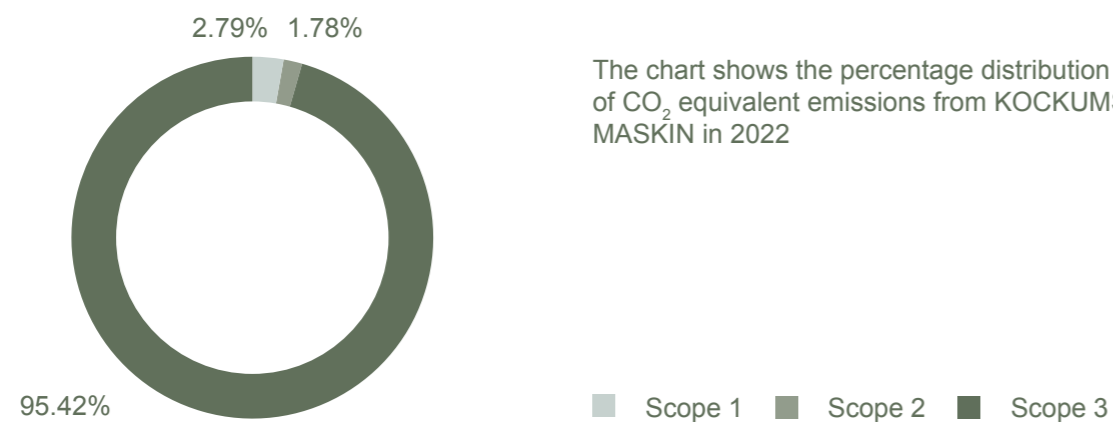
KOCKUMS MASKIN emitted a total of just over 7,137 tonnes of CO₂ equivalents in 2022. The vast majority of the company's emissions are in Scope 3. This includes material consumption, which alone accounted for over 95 per cent of KOCKUMS MASKIN's total emissions.

In addition to the initiatives already underway, the company will formulate a strategy to reduce its emissions in 2024, including a special focus on material optimisation.

Employees			Managers		Type of position		
Men	Women	Total	Men	Women	Salaried employees	Production	Apprentices
61	7	68	8	1	20	48	2



ENVIRONMENT		Tonnes CO ₂ e in 2022	
Scope 1	Fuel Direct emissions from owned or controlled stationary sources that use fossil fuels and/or have volatile emissions	199	199
Scope 2	Electricity, heating and cooling Location-based emissions from the production of purchased electricity, heat, steam or cooling	127	127
Scope 3	Fuel and energy-related activities	18	6,811
	Waste generated from operations	2	
	Purchased goods	6,719	
	Business travel	3	
	Upstream and downstream transport and distribution	5	
	Commuters	63	
	Home offices	1	
Total			7,137



The chart shows the percentage distribution of CO₂ equivalent emissions from KOCKUMS MASKIN in 2022

SOCIAL	2023	2022
Full-time workforce	68	71
Gender diversity (men / women)	61 / 7	64 / 7
Gender diversity for other levels of management (men / women)	8 / 1	8 / 1
Employee turnover rate	15%	7%
Lost-time accidents at work	3	5
Loyalty	72	-
Job satisfaction	60	-

GOVERNANCE	2023	2022
Gender diversity of the board (men / women)	6 / 1	6 / 1
Nationality of the board	DK, SE	DK, SE
Whistleblower cases	0	0

INPUTS AND OUTPUTS FROM PRODUCTION FOR KOCKUMS MASKIN

TOTAL INPUTS & OUTPUTS	2023	2022	2021
Total tonnes of production	2,727 tonnes	3,154 tonnes	4,493 tonnes
Energy consumption			
Total electricity consumption	1,843,140 kWh	1,985,762 kWh	2,082,000 kWh
Proportion of electricity purchased from renewable energy sources	100%	100%	100%
Natural gas	0	0	0
Heating oil	0	0	0
Total district heating consumption	721,000 kWh	643,000 kWh	973,000 kWh
District heating sold	0	0	0
Transport			
Transport diesel	1,500 litres	1,500 litres	1,500 litres
LPG forklift gas	0	0	0
Recycled raw materials			
In the product	0	0	0
Material consumption (production)			
Raw materials	2,727 tonnes	3,154 tonnes	4,493 tonnes
Heating and lubricating oil	3,991 litres	3,071 litres	3,106 litres
Consumables	0	0	0
Waste			
Recycling and reuse	539 tonnes	567 tonnes	614 tonnes
Incinerated	23 tonnes	11 tonnes	12 tonnes
Landfill	3 tonnes	0	0
Waste oil	2 tonnes	2 tonnes	2 tonnes
Chemical waste	33 tonnes	37 tonnes	30 tonnes
Discharge water			
Wastewater	1,537 m ³	1,245 m ³	1,245 m ³
Emissions to atmosphere			
Dust	0	0	0
Water vapour	0	0	0
Flue gases	0	0	0
VOC (Volatile Organic Components)	0	0	0





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