

# Sustainability Report 2022



# Letter from the CEO

We are excited to present our annual sustainability report, the second in a row, with the aim to provide customers, partners, and other readers with an overview of targets and achievements in 2022, as well as further plans.

In 2023 we celebrate our 85 anniversary as a provider of air power solutions. The legacy of our brand is strong, and we work relentlessly every day to maintain our commitment to applying 30 years of spare parts availability, and shipment of parts within 48 hours, to our global customer base. As an example of our commitment, we delivered spare parts to the vessel “M/S Skudenenes” on a compressor delivered by Sperre back in 1956. Our through-life pledge is our key contribution to a sustainable maritime business.

Dependable air power is our mission. We have created the Sperre value cycles to ensure that we as a collective team respond to our customers' ever-changing environment. At its core is a responsible culture, with enabled and empowered people with the right competence and governance structure. Our aim is to maintain a leading position in air power solutions in the transition to greener maritime shipping.

Digitalization is a core strategy for Sperre, as this is a prerequisite to obtaining our sustainability goals. Access to the right data is essential to make proper business decisions, but also needed to secure transparency in our business conduct, transactions, and relations to our supply chain and our customers. Enhanced digital focus helps us to automate our work processes. Data insight and new technology help us to reduce our environmental footprint.

We want to be recognized as a dedicated partner towards a sustainable future.



**Ole Nustad**  
CEO



# Your life cycle partner in Dependable air power

- › Sperre is a global maritime tech company based in Ålesund, Norway. The company develops, produces, delivers, and services compressed air systems.
- › We have been in operation since 1938, and today our company solutions are found on every 5th ship sailing the World's Oceans.
- › Our compressors are perfected for more than 80 years and designed to last. By offering preventive maintenance, spare part kits, and innovative digital solutions Sperre Air Power can deliver dependable air power for the lifetime of your vessel or plant.

85

Years experience

20

Locations globally

104

FTEs

## Locations

- Sperre Air Power (HQ - Norway)

## Sales & Services:

- Sperre Asia (Singapore)
- Sperre China (Shanghai)
- Sperre Rotterdam
- Sperre Korea (Busan)

476

MNOK Revenue

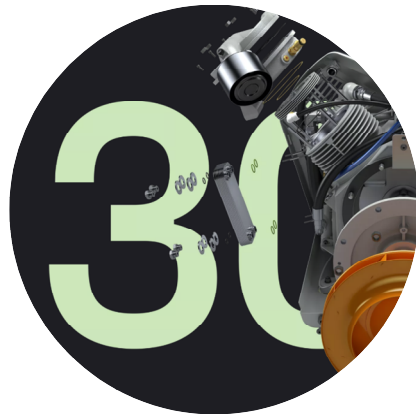
36k

Compressors in operation globally

10000+

Compressors delivered annually

## Our promise:



30 years spare part availability for piston compressors

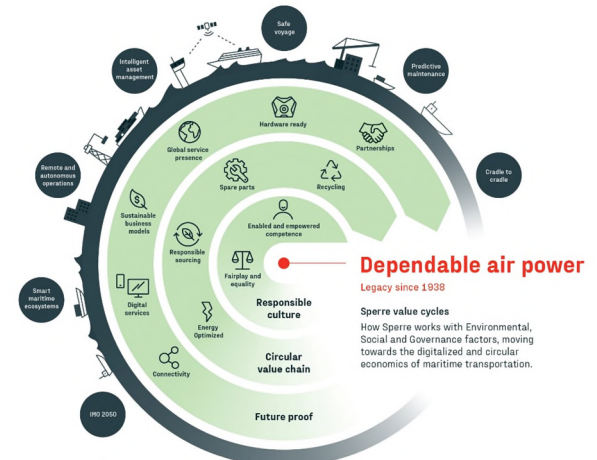


Any part to any place within 48 hours

## Our response:



Digital solutions



Sperre value cycles

# Here are our 2022 sustainability highlights

## 100%

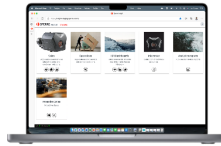
Electric at Sperre HQ

We replaced the oil heating of our paint cabinets with electric heating. In addition, our diesel forklift truck was replaced with an electric forklift truck.

## 2

Bonded zones

We introduced two new bonded warehouses\*, one in Rotterdam and one in Shanghai. This will help us to reduce CO<sub>2</sub> emissions from transport and reduce lead time to customers.

Development of Sperre Insight apps to enable customized preventive maintenance scheme for our customers.

## 12

Flagships

## 88%

Electric in company

## 92%

Recycled waste

## 23%

Females in company

## 0

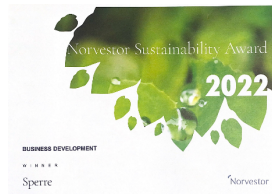
Accidents with leave

## 4,4%

Absenteeism rate

Since 2020, Sperre has been committed to the UN Global Compact corporate responsibility initiative and its principles in the areas of human rights, labor, environment, and anti-corruption

2022 Business development winner of Sustainability awards from our owners Norvestor



WE SUPPORT





Report content	Page
Letter from the CEO	2
Sperre at a glance	3
Sustainability highlights 2022	4
Our portfolio & lifecycle strategy	6
Our response: Sperre value cycles	9
Industry challenges	10
Our response: Future proof	12
Our response: Circular value chain	13
Our response: Responsible culture	16
Targeted UN SDGs for Sperre	21
Progress on 2022 projects	22
Focus areas 2023	24

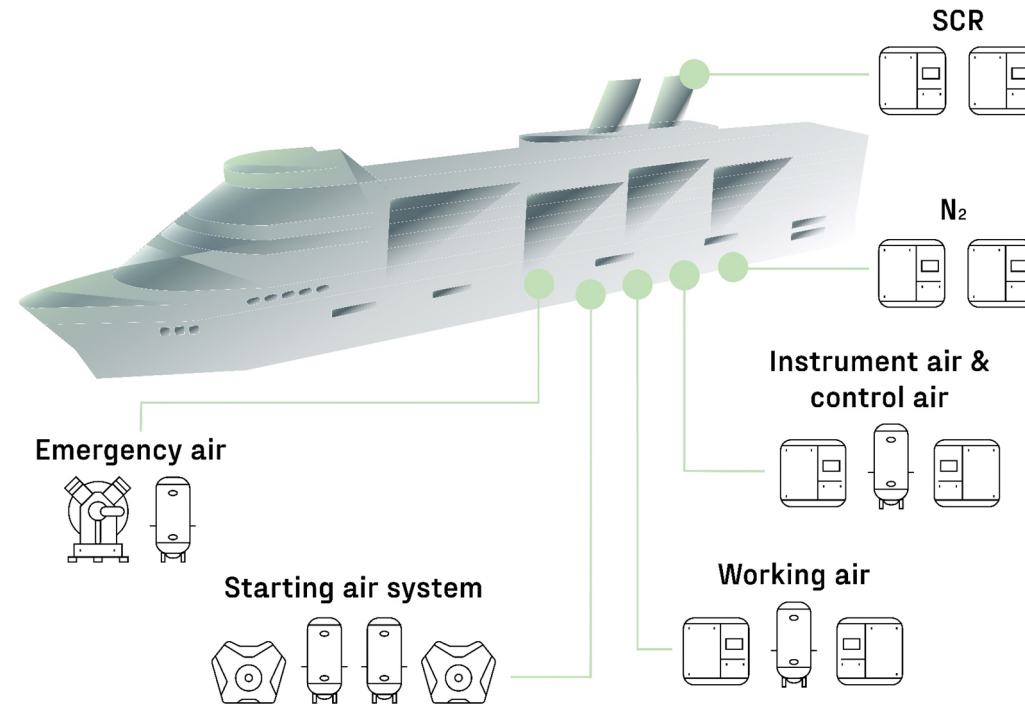


## Air Power Applications

Sperre Air Power provides air systems for a wide range of applications on modern vessels, and our product range continues to expand.

In the maritime industry, there is an increasing need for dry and clean nitrogen (N<sub>2</sub>). N<sub>2</sub> systems are used for padding or preventing vapor from cargo mixing with air – or for dual fuel vessels to flush the piping when changing fuel source. Both depend on our N<sub>2</sub> feed compressors to prevent undesirable reactions and ensure a safe operation.

Our compressors are run by electrical motors. Hence, the carbon footprint of the products in operation depends on the GHG emission level of the energy sources powering the vessels – most often the emissions of the auxiliary engine(s).



Every Sperre product is approved by all the major classification societies such as ABS, ClassNK, BV, DNV, KR, LR, RINA, CCS, RMRS among others.

## High Pressure Compressors



Our high-pressure piston compressors are used as starting air for the main engine on vessels and are critical equipment approved by class rules. We have two series of starting air, The Classic range covering the lower air capacity needed, while the X-range compressors are the latest and most modern member of the Sperre family and covering the higher range of capacity needed on vessels.

## Low Pressure Compressors



Our screw air compressors have few moving parts and are designed with everything in one complete cabinet. This ensures a safe work environment, reduces the risk of oil leakage, and makes maintenance easy. Sperre screw compressors are the natural choice for installations where a large volume of low-pressure compressed air is needed.



## Sperre Lifecycle Strategy

### Sperre's Product Lifecycle Strategy

- › Ensuring a long life span of our compressors is in the best interest of both Sperre, our customers, and the environment. Therefore we have developed service intervals and spare part kits with detailed instructions to ensure a long and economically sustainable product life for your compressors.
- › Sperre offers a 'life-cycle concept' featuring 24/7 service, 30 years of spare part availability, and additional value offerings for lifecycle support.
- › The average lifespan of Sperre's piston air compressors is 30 years. For screw compressors, we estimate a lifespan of at least 20 years. If our clients comply with the procedures set out in our service manual, an even longer life span can be expected.
- › Sperre is taking steps to add waste information and end-of-life procedures to the service manual provided to all clients.



30 years of spare parts at your hands. Our fully automated warehouse contains spare parts ready to be shipped anywhere within 48 hours.



# 96.6%

Delivery precision  
spares



At Sperre we process more than 10 000 spare part orders annually and most orders are received, processed and executed the same day.



## Customer Satisfaction



“

*In 2022 we won the Incentra Supplier of the Year for the third time in the last five years. In a difficult time when most suppliers faced a declining satisfaction score, Sperre increased the score to a record of 4,56 of 5,0!*

– Ole Kristian Aarsund, SVP Sales & Marketing

”

0

Recalls

+ 0

From 2021

1 %

Warranty cost of total  
revenue

+ 0

From 2021

4,56

Domestic survey  
(5-point scale)

+0,24

From 2021



*Incentra Supplier of the year 2022*

## Customer Satisfaction

We are dedicated to build strong personal relations to safeguard continuity in maritime operations. This is also visualized in our values. We perform frequent customer satisfaction surveys to ensure we still operate “world class” towards all of our customers:

- › Domestic surveys are conducted annually by Incentra, reviewing ca 40 shipowners and managers. Ten criteria are evaluated. In 2022, we were rewarded with an average score of 4,56/5,0 and won the “Supplier of the year”-award.
- › Global surveys are conducted biannually, where the questionnaire is based on the data from the domestic survey to facilitate comparison between the two surveys. Surveys are sent out to all customers of Sperre in the last 12 months, no matter the size of the order. The most recent global survey was conducted in 2021, with a score of 5.3/6.0.
- › Tracking the product quality helps us to ensure a more responsible production. At end-users, products are operated and maintained according to our high standards and procedures.
- › An important project in 2022 has been to introduce preservation when packing our compressors, electric cabinets and spare parts, to minimize the risk of corrosion.



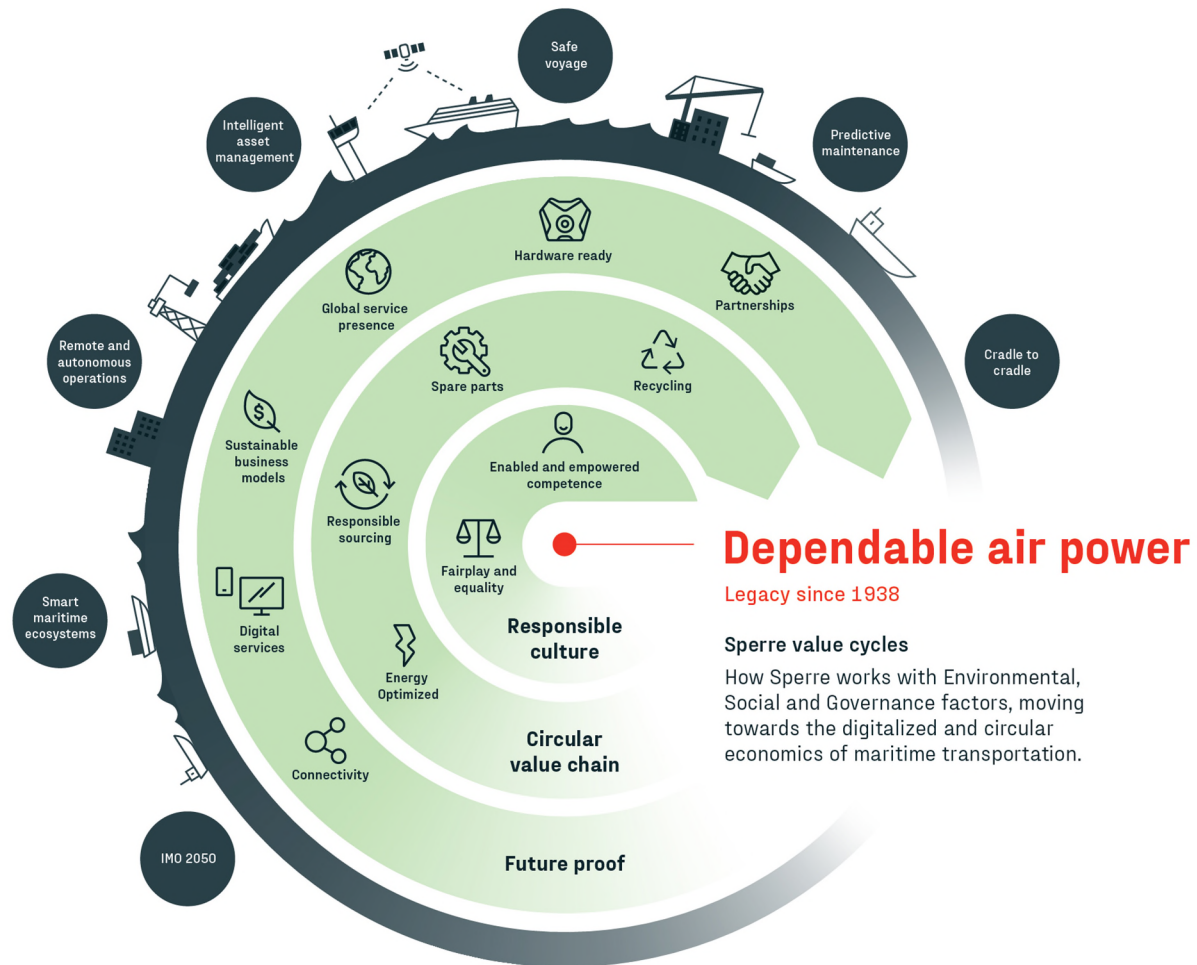
Hardware ready



Partnerships

Global service  
presence

## Our response: Sperre Value Cycles



### Sperre Value Cycles

At Sperre, we aim to have sustainability at the core of our strategy, risk assessment and reporting structure. The Sperre sustainability strategy is captured in one figure with key topics, our value cycles, and the external industry factors surrounding it. As 90% of our business today is within the maritime segment, this market is naturally our primary focus when it comes to sustainability. Each of our value cycles will be covered in the following pages.

#### Future-proof

Key activities identified to maintain and strengthen our lead position as the customer's first choice.

#### Circular value chain

We support the transition to a low-carbon economy and take action throughout the complete value chain to reduce the carbon footprint

#### Responsible culture

The people working at Sperre are the most important asset and make up the core in our business model.

### Key Battles

We run several internal and external development and improvement projects yearly, and make sure to link them to our ESG strategy. We have identified three key ESG topics, or key battles, that are labelled to our projects when relevant:

- › CO2: Reduce the carbon footprint of our total operation (scope 1, 2, 3)
- › Competence: Enable employees to further develop their competence using individual development plans, ensuring certificates are in place and increasing the product portfolio competence – all realized through "Sperre Academy".
- › Trust: Ensure we are working in compliance with all laws and regulations. Ensure we are transparent in reporting and keeping risks low.



## Industry Challenges

### IMO 2050 emission targets

Looking at the big picture, transportation stands for 22% of the world CO<sub>2</sub> emissions, of which maritime transportation constitute 11% of the transport sector. Maritime transportation is also by far the most GHG-efficient transport method – as an example, a large vessel emits 1% CO<sub>2</sub> per ton-km compared to an airplane, and 14% compared to a cargo train. (Ref. [Marine Digital](#))

The International Maritime Organization (IMO) has defined a roadmap for decarbonization of shipping, see next page.

### Enhanced ESG focus

Investors, owners and global finance players are connecting the valuation of a company directly to its ESG performance and strategies. The EU Taxonomy is an example of this put into a formal framework. This initiates companies to systematically collect data related to the operations and its business transactions, both to secure transparency, and mainly to measure progress against ESG performance indicators. Manufacturers will increasingly report details of their environmental footprint and compliance with new indicators and regulations.

The upcoming EU Social taxonomy will support economic activities that respect human rights and at the same time promote investments that improve living conditions, especially for disadvantaged people. In Norway, the Transparency Act was introduced in 2022, and is adding pressure on companies to promote fundamental human rights and decent working conditions in their value chain.

### Digitalization and cyber security

With the digitalization of the maritime industry comes with exposure to a wide variety of cyber security treats. Working continuously with information security is business critical to all players in the industry.

### Increased level of autonomy

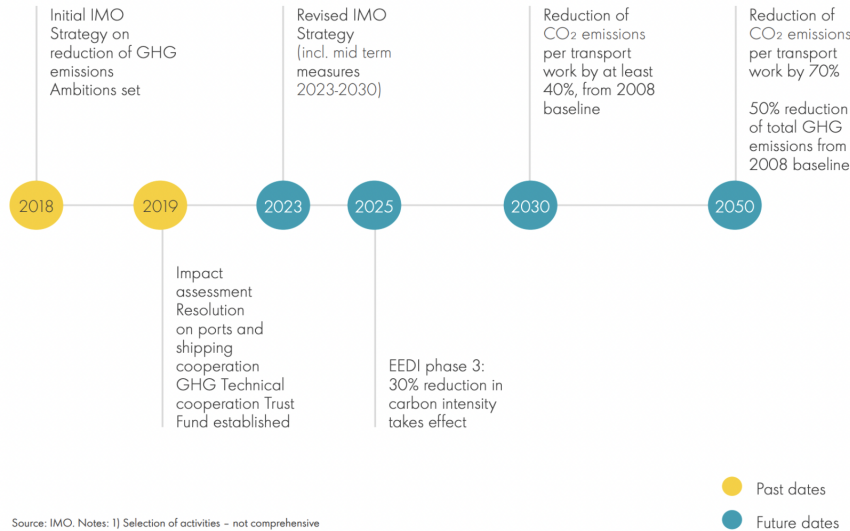
There is a trend towards a higher level of autonomy and use of remote operations in the maritime industry. Often, this may also have a positive effect on the emissions. However, autonomy drives the need for improved safety measures and insight of the condition and life-cycles status of mission critical equipment. Maintenance schedules and business models for aftermarket services may also change accordingly.

### Circular economy and life-cycle focus

The industry will need to shift towards circular business models, thereby minimizing material waste. The integration of sustainability principles into product design will become mainstream to align with shifting demand (e.g., spare parts/design for disassembly).



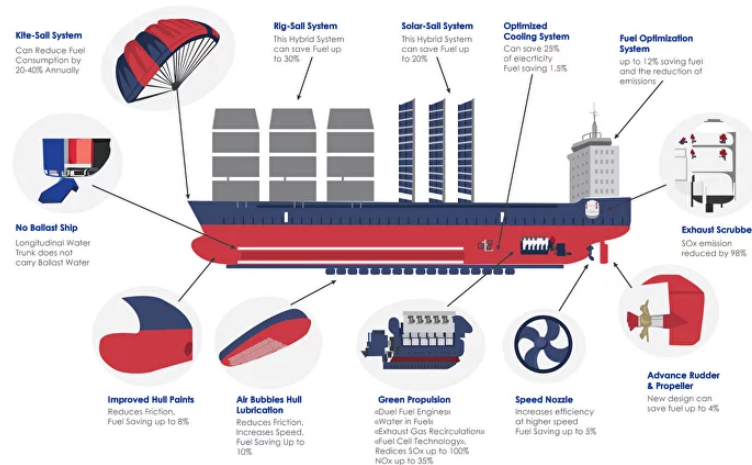
## Industry Challenges



Source: IMO. Notes: 1) Selection of activities – not comprehensive

## Marine Digital

## MODEL OF THE "GREEN" SHIP



Source: Green Ship: Green technologies in Shipping Industry (marine-digital.com)

## Decarbonization of Shipping

Regulatory frameworks and new standards will be absolute essential in the green transition of shipping. Through the International Maritime Organization (IMO) shipping nations have committed to reduce the GHG emissions by 50% within the year 2050 (baseline is 2008). A roadmap with different targets and policies is established and will be reviewed in July 2023. In addition, all larger sailing vessels will be characterized by different indicators (e.g. EEXI and CII) related to efficiency and carbon footprint. Also, The European Commission has launched its Fit for 55 package of proposals with a more ambitious plan of reducing GHG emissions by 2030 to at least 55% compared to 1990 levels.

In addition to regulatory frameworks, the customer demand for greener transport from big stakeholders in the shipping value chain (like IKEA, Amazon etc.) is a main driver for decarbonization of the transport industry.

Another main driver are the financing and bank institutions. By issuing favorable terms and conditions on loans, bonds etc. linked to building greener ships, they are incentivizing ship owners to building ships for the future.

## Future Fuels

The GHG emission targets can partially be met by operational efficiency measures (optimized routing, speed reduction etc.) and technological efficiency improvements (optimized hydrodynamics, exhaust cleaning, energy usage etc). However, the consensus is that the GHG emission goals can only be achieved by combining the above with a transition to alternative fuel types such as biofuels, methanol, ammonia and hydrogen.

Due to the uncertainty in which technology that will prevail, ship owners today place orders with the yards that are prepared for various future fuel types and green technologies.

## Sperre Air Power

Technology and applications onboard ships requiring dependable air power to support the green transition, means that future-oriented vessels have even more air power systems installed that yesterday's designs.

The Sperre compressors are driven by electric motors. Hence, the carbon footprint of our products in operation depends on the GHG emission level of the energy sources powering the vessels.

## Sperre Competence

As an organization we are working structured in gaining market intelligence and knowledge around the shipping decarbonization journey. This means having regular updates with major stakeholders like engine manufacturers, class societies, ship builders and ship owners. We are engaged and participate in engine makers testing of new fuel types to ensure our compressor technology is future proof.

We also continue to invest in our internal competence by sharing and building relevant knowledge of shipping decarbonization throughout the organization.

## Our response: Future-proof

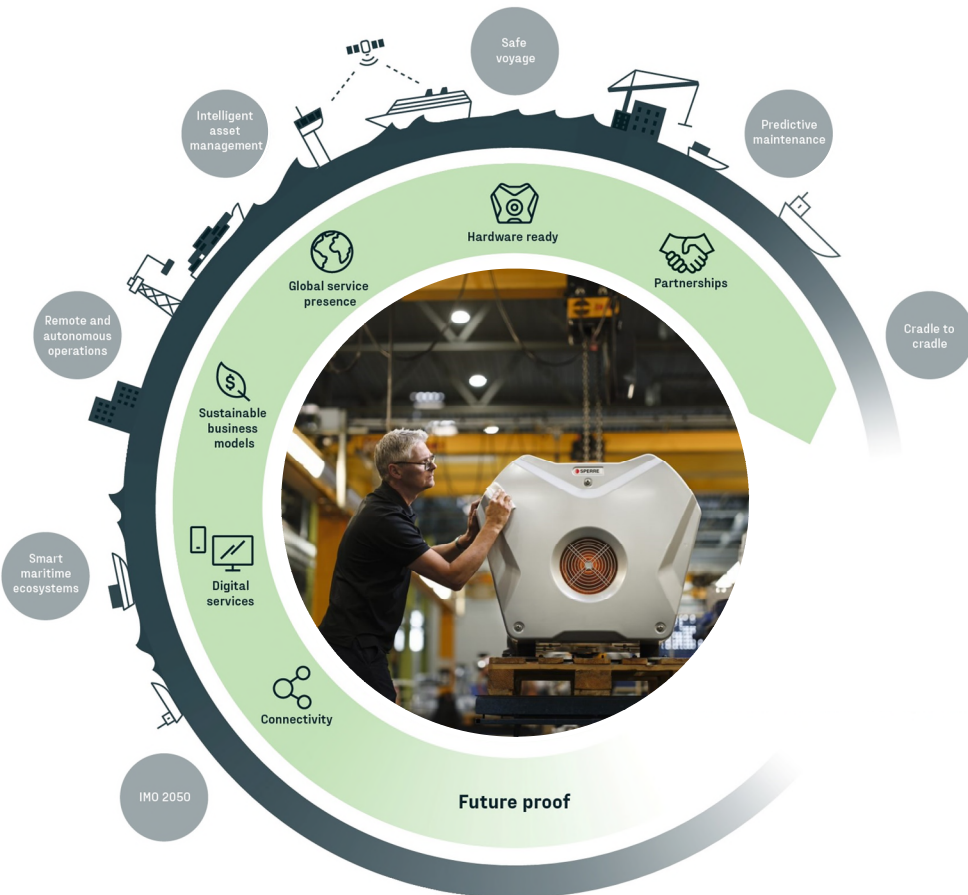
## Flagships

Winning air power system orders to vessels designed for the future, so-called *flagships*, is key for us. Our Flagships projects are focused on new energy solutions, such as ammonia, hydrogen, or zero carbon ready vessels.

- In 2022 we won 12 such orders, same as in 2021.

**12**  
Flagships

**+ 0**  
From 2021



Our air products are designed to support various maintenance services, business models and future digital solutions enabling us to deliver dependable air power for decades to come.

We have identified several key topics we need to focus on to stay in our lead market position:

› We have engaged in new partnerships and collaborations as an integral part of our strategy.



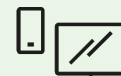
Partnerships

› In 2022 we joined the NCE Maritime CleanTech cluster where energy-efficient and sustainable technologies are being developed. One key project in the cluster is Wärtsilä's testing of ammonia as a fuel for the future, where we are engaged in supplying compressors for the test engine and for the test facilities at the Sustainable Energy catapult in Stord, Norway.



Sustainable business models

› The Blue Maritime cluster, where we have been engaged for many years, have established a new strategy; New blue deal, where the goal is to be the world's first net zero maritime cluster within 2030. Our participation in these projects and plan to fulfill this strategy is well aligned with our own ambitions and future proofing.



Digital services

› We are developing new digital services to serve our customer's needs

› One of our focus areas is to enable proper and secure connectivity to products and services

› We are increasing our global service presence, and improving customer interaction

› Sperre keep delivering future oriented products with upgrade path for new functionality or customer services



Connectivity



Global service presence



Hardware ready

## Circular value chain



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*In 2022 we actively worked to reduce our global CO<sub>2</sub> footprint from transport by launching two new bonded warehouses, one in Rotterdam and one in Shanghai to enable direct deliveries of key equipment to our customers.*

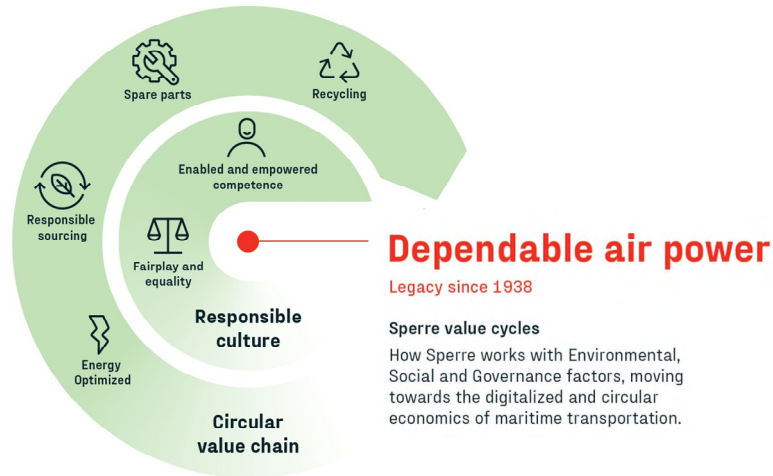
– Jann Peter Strand, COO

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2

Bonded zones

57%

suppliers audited  
on ESG criteriaEnergy  
Optimized

Spare parts



Recycling

Responsible  
sourcing

Hardware ready

› The production site in Norway went to 100% electric by replacing a diesel truck with an electric truck, as well as replacing oil heating system for paint cabinets to electric heating. More information related to the projects can be seen later in this report.

› Circularity is fundamental for us and is ensured through materials that can be either repaired, reused, refurbished or recycled. A lot of the packaging material we receive from our suppliers is reused when sending spare parts to our customers.

› We collaborate with our suppliers to ensure a responsible conduct. In 2022, in addition to regular business reviews, more than half of our key suppliers have been audited on ESG criteria. Conflicting minerals and materials included in IHM documentation is closely monitored.

› Due to delivery challenges, many of the suppliers are frequently followed up to ensure delivery on time. There is ongoing work with dual sourcing on key components - iron casting and aluminum. We have increased our inventory in 2022 to ensure components on stock.

› The main material used in our compressors is cast iron, which is recyclable. Some hazardous materials, including paint, cooling fluid and cleaning chemicals, are used in operations. 97% of input materials are recyclable.

› An ongoing project since 2022 has been to find substitution for some of our chemicals on site to reduce risk of health and environmental aspects, such as changing all glue to a less hazardous type.



## Circular value chain

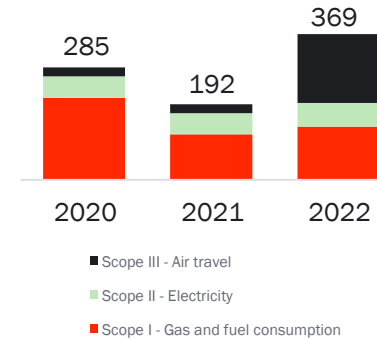


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September 2022 marks the completion of the project “100% Electric production Norway” where heating of the paint cabinets was upgraded from oil heating to electric heating at Sperre Headquarters. In addition, a diesel forklift truck was replaced with an electric forklift truck, ensuring that Sperre Air Power now is close to zero from Scope 1 emissions!

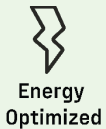
- Anna Söderlind, Sustainability & HSEQ Manager

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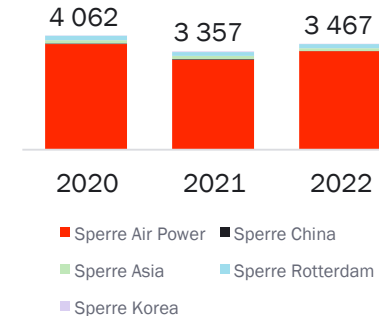
CARBON FOOTPRINT<sup>1,2</sup>  
tCO<sub>2</sub>e

0,8  
tCO<sub>2</sub>e / NOkm

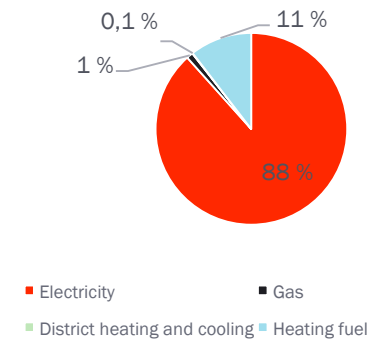
+ 60%  
From 2021



- › We are very focused on lowering our carbon footprint and has set initiatives to put this at the top of the agenda.
- › In addition to the project related to turning Sperre HQ's 100 % electric, we have continued the work to refine the energy monitoring system to reduce Scope 2 emissions. We aim to be compliant to ISO 50001 by 2023.
  - › More energy meters have been installed on key equipment at Sperre HQ, such as the main heating, CNC machine and working air compressor.
- › As society began to come back to normality after two years of travel restrictions due to Covid-19, travel activities have also picked up in 2022. This is visualised in the carbon footprint overview as increase in Scope 1 emissions (company cars) and Scope 3 (air travel).
  - › Our travel policy is updated to ensure travel bookings are considering the CO<sub>2</sub> footprint. Most memberships with air travel includes CO<sub>2</sub> offset of each distance travelled.
  - › 11 % of Scope 1 emissions in 2022 is due to company cars using petrol or diesel.
- › At the end of 2022, a project was initiated to gain a better understanding of our current Scope 3 CO<sub>2</sub>e emissions to enable more projects to lower our total CO<sub>2</sub> footprint.

TOTAL ENERGY CONSUMPTION  
MWh

## ENERGY DISTRIBUTION



<sup>1</sup> As defined by The Greenhouse Gas Protocol; The carbon footprint is an estimate expressed in equivalent tonnes of carbon dioxide (tCO<sub>2</sub>e); <sup>2</sup> Following Sperre internal carbon footprint calculations, the Norwegian electricity has been calculated with the emission factor 11 gram CO<sub>2</sub>e/kWh, as defined by the NVE. For the remaining offices, same emission factor for all years has been used (ref. 2022). Source: NVE, Greenhouse Gas Protocol, Company data

0,5

Tonnes / NOKm revenue  
waste intensity

-17%

From 2020

92%

Recycled waste



+ 2%

From 2021

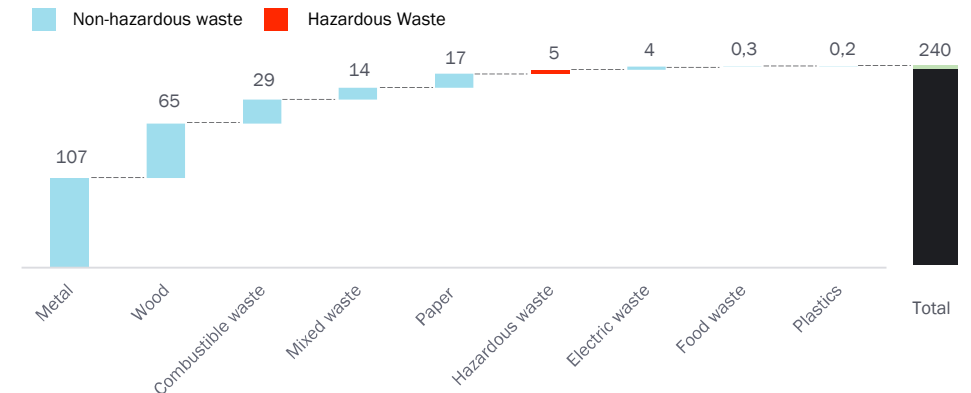


## Recycling

- › We have a structured waste management system which enable us to keep track on the separate streams to allow monitoring and performance assessments (e.g., paper, plastic, metal, food, wood, batteries, and electrical waste).
  - › Waste is one of the internal KPIs that is reviewed on a monthly basis.
- › An important project in 2022 was to increase awareness related to waste sorting in our OEM site. A separate section will explain results from project.
- › By working with our suppliers, wood waste is expected to reduce in 2023: Suppliers are asked to supply goods on standard euro pallets and not special dimension pallets as those pallets cannot be reused and goes to waste.
- › Other types of packaging material received from our suppliers (mainly carton boxes, paper cushions & bubble wrapping) are reused when shipping spare parts to our customers to keep the virgin packaging material as low as possible.
- › During 2022, we have optimized the dimensions of our packaging crates to the current product portfolio to reduce amount of air being shipped.
- › In 2023, the plan is to gain more understanding of internal water consumption and how we can improve water recycling.

## TOTAL WASTE 2022 (ELLINGSØY)

Tonnes



## Responsible culture



“

*“To succeed with the initiatives and projects relevant to the value cycles, we need an organization that has the right skills, takes responsibility and works according to the criteria that have been established. We must ensure a "world class" mindset in everything we do. This is why in 2022 additional effort was made to understand the importance of, and take ownership of the company values, and act accordingly. To achieve this, workshops was completed in all offices globally.”*

- Eva Brox, SVP HR

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## Our values

**Agile**

Our team and customers rely on our ability to respond.

**Observant**

We observe and foresee team and customer need.

**Approachable**

We are down to earth and always available.

**Responsible**

We all have a key role to ensure the highest customer satisfaction.

**Dependable air power**

Legacy since 1938

**Sperre value cycles**

How Sperre works with Environmental, Social and Governance factors, moving towards the digitalized and circular economics of maritime transportation.



Enabled and empowered competence



Fairplay and equality

- › An employee satisfaction survey was conducted in 2022 with good results and an impressive response rate - 95% of the employees replied to our survey. The report presented a high level of commitment among the employees. An ongoing process is in action to ensure necessary improvements and the continued innovation of the organization.
- › We are currently working on implementing an HRM system as a part of the digital transformation in HR. This will improve both the quality and how we handle the data. The project also includes a new digital onboarding process and an updated handbook for employees and managers. In 2023, competency mapping and development plans will be established as part of our 2023 sustainability projects.
- › Sperre Academy is a platform where new internal training courses are offered to increase product- and organizational understanding and competence.
- › New employees in relevant departments commit to reading and understanding the importance of the Sperre Air Power code of conduct, and other policies and procedures. Annual reviews with all sales offices and agents are in place.
- › In 2023 we will focus even more on awareness and training related to compliance within the organization.



## Responsible culture – enabled and empowered competence



# 104

FTEs



+12

From 2021

# 23%

Female FTEs



- 3%

From 2021

We are dedicated to building strong personal relations to safeguard continuity in maritime operations. By developing a high-performance culture within the organization, we achieve a highly skilled workforce providing high-quality products and world class support.



Fairplay and  
equality

- › Supported through the Sperre Academy, the employees gain both product- and organizational knowledge in the company.
- › In addition, individual competence mapping and development plans are managed to ensure development in the company
- › We are a part of a typically man-dominated type of industry. However, there is awareness and focus related to increase women in new-hiring processes in all functions as well as in management positions.
  - › The number of female employees increased in 2022 (+2). Although the number of female employees increased, we also hired more people in the same period, resulting in the share of women employees decreasing in total.
- › We have over the years developed a good collaboration with the Norwegian education system, from secondary school to university, where students are completing apprenticeships and bachelor/master thesis in our company, as well as our employees work part time as lecturers at the university and attend courses for further development.
- › We believe in building a more dynamic and trainable workforce. Some employees over 50 years old have been recruited since they master specific competencies.
- › In 2022, there has been additional focus on cyber security, hence frequent nano-learning courses to all employees to reduce risk of incidents. In addition, there is an ongoing project to become certified in ISO27001 in 2023.
- › We work actively to ensure a flexible workforce. Cooperation between departments in various projects provides great “on the job training” for all employees.



Enabled and empowered  
competence

# “It’s personal”

Dependable air power is our personal mission

## Responsible culture - the wellbeing of our employees



17

H&amp;S NC's

 - 4  
From 2021

0

Accidents with leave

 - 2  
From 2021

4,4%

Sickleave

 +2,7%  
From 2021

The safety and well-being of our employees, hired personnel, customers, and business partners are crucial to us. We have a dedicated team working with HSE activities to minimize the risks related to accidents and sick leave.

- › Safety representatives are key resources to ensure the health and safety of our employees. During working environment committee reviews (4 times per year), concerns are discussed, and solutions are found. Together with the occupational health service, we are supporting the employees with risk assessments and health checks when feasible.
- › In 2022 we completed two safety inspections with different focus areas; Ergonomics (awareness of working position in front of screen, heavy lifts in production, and so on) and Cleanliness (service of ventilation filters, frequent cleaning in production, and so on)
- › We have an ongoing project to find alternatives and replace some of the chemicals we use in our operations, to reduce health and environmental risks. All our chemicals (including hazardous materials) are listed in our chemicals management portal (EcoOnline)
- › Health and safety conditions are well monitored; long-term/short-term sick leave, 'unwanted situations', and 'incidents' are reported and evaluated, and necessary actions are taken to prevent this in the future.
- › In the second half of 2022, we operated without covid-19 restrictions. As society has opened up, the sick-leave numbers for our staff have increased (both directly related to covid-19 and for other reasons). The levels during the covid lockdown were unprecedentedly low.
- › We arrange activities to motivate employees to a healthy, active, and well-balanced lifestyle. See pictures displaying some of the activities we facilitated over the last few years.



Enabled and empowered  
competence



### Sustainability policies, certificates and targets

- › Sperre has ESG KPIs and targets in place related to carbon emissions, competence development, flagship initiatives, etc.
- › Key ESG-related policies and procedures have been established and are embedded into its operations.
- › Sperre is ISO 14001 and ISO 45001 certified.
- › Annual compliance review according to laws and regulations, including specific focus areas.
- › Sperre is following OECD guidelines.
- › The company is compliant with all relevant local, environmental and social laws and regulations.

### Compliance management system

- › A robust compliance management system is in place to ensure that responsibilities are carried out and requirements / regulations are met.
- › Annual agent compliance assessments. In addition, annual risk assessments in sales and supply chain department.
- › Sanctions and/or export control is continuous monitored and assessed by compliance function.
- › Compliance function has had an additional focus in 2022 on Russian sanctions and Ukraine war.
- › There is awareness and understanding of following the policies, and good cooperation with the compliance function in the organization globally.
- › In 2022, a compliance audit of Sperre was completed by third party advisors where there were no findings, only opportunities for improvement.

### Risk management

- › Based on stakeholder analysis and internal and external factors, an overall risk assessment manages potential risks and opportunities in the company.
- › In addition, risk assessments are carried out periodically in all departments; follow-up action is taken when required. Sperre is continuously working to reduce hazard exposure on-site.
- › All major HSE risks are defined and available in the health & safety handbook (part of the ISO 45001 certified management system).

### Quality of monitoring systems

- › The production facility in Norway is ISO 9001 certified. Sperre has a quality assurance department and procedures in place for quality assurance and testing.
- › Sperre's products are strictly approved by a third party and CE marked accordingly. No serious claims related to safety occurred in the last years.
- › Quality assurance checks are performed, including measurement controls, testing and performance documentation.

### Ensuring supplier compliance


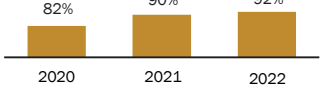

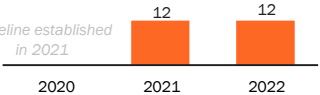

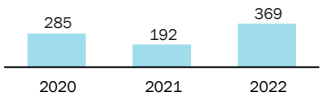

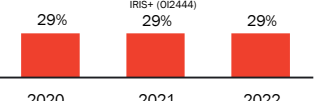

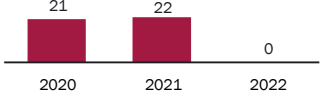
- › The Sperre Code of Conduct is provided to all suppliers and must be signed.
- › A separate Purchasing policy is available and communicated to suppliers.
- › Supplier business reviews are conducted on an annual basis.
- › Where required, additional supplier audits are performed.
- › Initial risk assessments of all suppliers with respect to human rights and corruption in progress. Part of Due diligence for Transparency Act.
- › Outcome of the annual compliance risk assessments has resulted in different risk mitigating projects, such as alternative or dual sourcing.

### Transparency and reporting

- › The sustainability report outlines Sperre's main initiatives concerning ESG and is issued on an annual basis. The report is available on the website.
- › Sperre is committed to supporting the Ten Principles of the United Nations Global Compact on human rights, labour, environment and anti-corruption. Communication of Progress is reported annually.
  - › In addition, Sperre is a signatory to the UN Global Compact Sustainable Ocean Principles.
- › Sperre website has an extensive ESG statement and discloses the company's life cycle concept and sustainability ambitions.



# Targeted UN SDGs\* for Sperre



Company activity	SDG	SDG target	SDG indicator	Company KPIs
<b>Potentially impactful activities</b>				
Promote sustainable consumption and production patterns	<b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION 	<b>12.4:</b> By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle.  <b>12.5:</b> By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.	<b>12.5.1:</b> Recycling rate.	<b>Recycled waste, %</b> <small>IRIS+ (012535)</small> 
Partnerships with customers and peers to develop more sustainable applications	<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE 	<b>9.4:</b> By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes.	<b>9.4.1:</b> CO <sub>2</sub> emission per unit of value added. <sup>1</sup>	<b>Flagship initiative projects<sup>2</sup>, #</b> <small>Baseline established in 2021</small> 
<b>Sustainable activities</b>				
Minimise carbon emissions of operations	<b>13</b> CLIMATE ACTION 	<b>13.2:</b> Integrate climate change measures into (national) policies, strategies and planning.	<b>13.2.1:</b> Number of countries that have communicated an integrated plan for adaptability and resilience to climate change;  - For companies: GHG contribution to national emissions.	<b>Carbon footprint, tCO<sub>2</sub>e<sup>3</sup></b> <small>IRIS+ (011479)</small> 
Empower women throughout all levels in the organisation	<b>5</b> GENDER EQUALITY 	<b>5.5:</b> Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.	<b>5.5.2:</b> Proportion of women in managerial positions.	<b>Women on the board, %</b> <small>IRIS+ (012444)</small> 
Create safe working environment	<b>8</b> DECENT WORK AND ECONOMIC GROWTH 	<b>8.8:</b> Protect labour rights and promote safe and secure working environments for all workers.	<b>8.8.1:</b> frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status.	<b>Accident rate, #/1,000 FTE</b> <small>IRIS+ (013757)</small> 

\*United Nations Sustainable Development Goals

<sup>1</sup>Goal is to establish baseline with life cycle assessment of (key) products and monitor progress accordingly; <sup>2</sup> Include flagships in the category "Flagship promotion" which is projects with new green technology, such as full electric, etc. In addition, but not reported, there is a separate category called "Flagship value", which is vessels with dual fuel, biofuel, LNG, etc. In this category, Sperre has delivered a significant higher number of compressors. <sup>3</sup> Following Sperre internal carbon footprint calculations.



# Potentially impactful SDG activities

Company activity	SDG	What	How much	Who	Contribution	Risk
<b>Promote sustainable consumption and production patterns</b> <i>Providing compressor spare parts</i>		Sperre has developed service intervals and spare part kits with instructions to ensure a long and economically sustainable product life for compressors.	Sperre promotes sustainable consumption and production by preventing waste generation and recycling the materials within the value chain. The baseline for how much to be established, potentially with LCA data.	Customers benefit from the extended durability of their compressors. In turn, reducing waste downstream.  Simultaneously, the environment benefits from Sperre as the focus on circularity avoids further extraction of raw materials to create compressors.	Sperre's compressors are designed to last. Follow the preventative maintenance routines and its client receives dependable air power for the lifetime of their vessel or plant in return. As part of their life cycle support, 30 years of spare parts availability is guaranteed.	Use of energy-intensive transport solutions to ship spare parts to customers globally.
<b>Partnerships with customers and peers to develop more sustainable applications</b>		Engaging in Flagship projects help promote a sustainable blue economy through maritime cooperation.	Sperre currently has 12 Flagship promotion projects, focused on green technology (ammonia, hydrogen etc.) and is looking to expand the number of Flagship projects.	Positive impacts are experienced by the global community through the reduction of carbon emissions in the maritime sector.	Sperre are a preferred partner which provide future-proof applications to support the decarbonisation of the maritime industry.	Uncertainty in the industry about if future fuels is the long term solution, to meet IMO2050, This is pushing asset life of vessels.

The SDG assessment highlighted impactful activities. Using the Impact Frontier's five dimensions of impact framework, the scope and potential of impact of Sperre's company activities is assessed.

*A selection of projects has been defined that contribute to fulfilling our sustainability ambition(s).*



# Status sustainability projects 2022



Energy  
Optimized

## 100% electric production Norway

- 2 paint cabinets replaced with electric heating in September.
- Diesel forklift truck replaced with electric forklift truck.
- Expect zero emissions from Scope 1 in 2023.

Completed



Responsible  
sourcing

## Sustainable packaging

- Preservation of compressors, electric cabinets, spares implemented (VCI technology).
- Standardization and optimization of packaging of spares implemented.
- Increased use of recyclable packaging, some also with FSC labeling.

Completed



Recycling

## Waste Management

- Waste sorting implemented Sperre HQ (office), including labeling.
- Awareness training (Sorting guide) shared with employees.
- Standardization in use of euro pallets by supplier -> less wood waste.

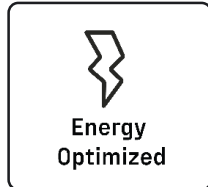
Completed



*A selection of projects has been defined that contribute to fulfilling our sustainability ambition(s).*

# Status sustainability projects 2022

key battles

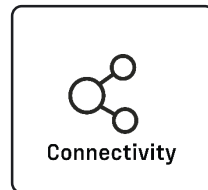


CO<sub>2</sub>

## ISO50001 – Energy Management

- Energy meters installed on key equipment.
- Data available in portal.
- Project ongoing according to plan, compliance in end of 2023.

Ongoing



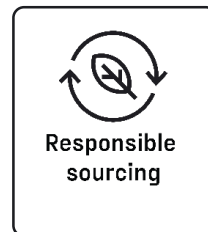
Competence

## ISO27001 – Information security

- Phase 1 completed. Assessment of highest risks in company.
- Phase 2 started – implementation. Expected certification in end of 2023.

Ongoing

Additional impactful activity on CO<sub>2</sub> footprint reduction in 2022

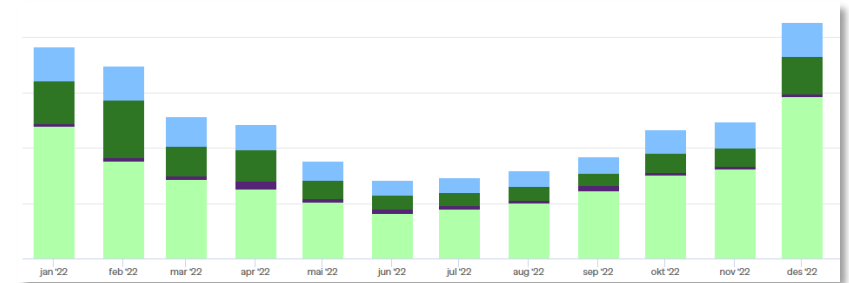


CO<sub>2</sub>

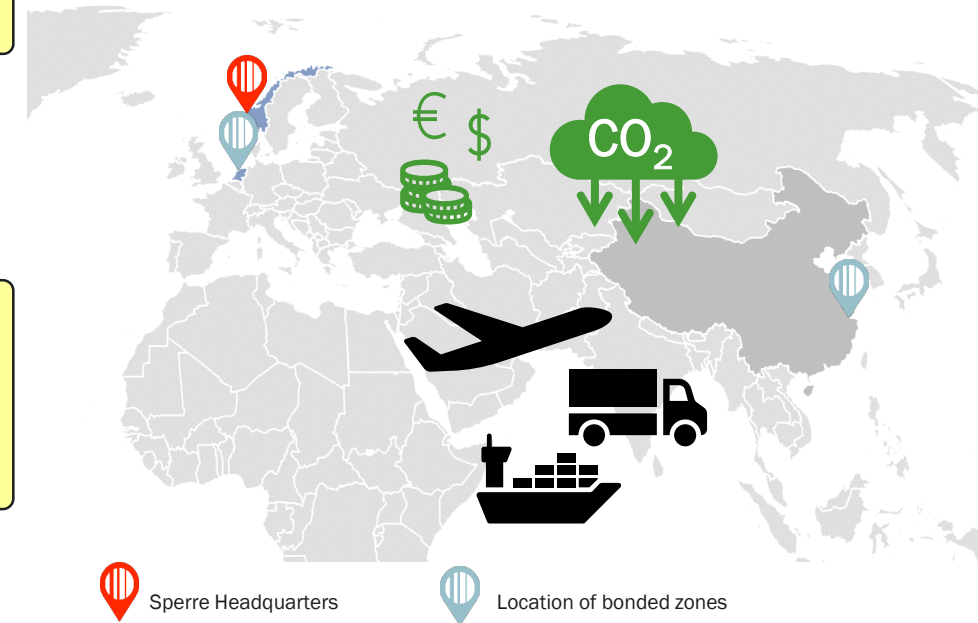
## Simplified logistics by using bonded zones

- Introduction of 2 new bonded warehouses, one in Shanghai & one in Rotterdam to simplify direct deliveries of equipment to customers.
- Major reduction of CO<sub>2</sub> emissions achieved, ca 50 tCO<sub>2</sub> per year in reduced CO<sub>2</sub> emissions (based on 2021 transport).
- Project to be finalized in 2023.

Ongoing








Electricity data from energy meters available in portal



*A selection of projects has been defined that contribute to fulfilling our sustainability ambition(s).*

# Sustainability focus areas 2023

Key battles				
	Energy Optimized	CO <sub>2</sub>	<b>ISO50001 – Energy Management Sperre Air Power</b> <ul style="list-style-type: none"> <li>Implementing more energy meters.</li> <li>Become compliant to ISO50001 in 2023.</li> </ul>	Ongoing
	Responsible sourcing	CO <sub>2</sub>	<b>Simplified logistics by using bonded zones</b> <ul style="list-style-type: none"> <li>Management of several warehouses – “360 degrees Insight”.</li> <li>Quality documentation and product certificates.</li> <li>Calculation of CO<sub>2</sub> footprint – before / after.</li> </ul>	Ongoing
	Enabled and empowered competence	Competence	<b>Competence management system</b> <ul style="list-style-type: none"> <li>Successful implementation of HRM system at Sperre Air Power, including:               <ul style="list-style-type: none"> <li>Competence mapping and role descriptions.</li> <li>Training plans.</li> </ul> </li> <li>Structure and strategy for Sperre Academy.</li> </ul>	Ongoing
	Connectivity	Trust	<b>ISO27001 – Information security</b> <ul style="list-style-type: none"> <li>Phase 2 started – implementation. Expected certification in end of 2023.</li> </ul>	Ongoing
	Responsible sourcing	Trust	<b>Vendor Insight / Vendor compliance</b> <ul style="list-style-type: none"> <li>Commercial assessment (financial, delivery precision, cost etc).</li> <li>ESG compliance and assessment (incl. Scope 3).</li> <li>Information security.</li> <li>Etc.</li> </ul>	Not started



