



**KROHNE**

# KROHNE GROUP ANNUAL SUSTAINABILITY REPORT 2022

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## 1 Introduction

KROHNE Sustainability Report is based on the findings of the global sustainability assessment carried out throughout our company worldwide.

The global annual sustainable development reporting provides an overall view of the KROHNE Group environmental impacts, health & safety achievements and social & ethical practices for our clients and stakeholders.

We value the importance of this analysis which allows us to measure our environmental footprint and fulfil our social and ecological responsibilities. Engaging in a more resource-efficient, greener business and fostering trustful lasting relationships with our employees, customers and partners are priorities which all KROHNE companies share.

As a family-owned company sustainability is one of our core values and we aim to contribute to a cleaner planet as well as long-term business success, both from which future generations will benefit.

KROHNE ranks among the world 's leading companies involved in the development and production of innovative and reliable process measuring technology for all sectors around the globe.

We provide our customers with products which optimise their processes, highly contributing to a reduction in raw material and energy consumption and consequently to cost savings in production and maintenance.

Our specific technologies providing safe and efficient measuring solutions for our customers' applications in many industries, ensure that sustainability targets are achieved.

Unless otherwise indicated, the statements in this consolidated report apply to the entire KROHNE group of companies.



## 2 KROHNE – A Global Business

KROHNE Group is an international company with **16 production facilities** worldwide to meet the needs of our global clients. Producing locally not only ensures proximity with our customers and optimised lead times, but also has a significant effect on cutting energy consumption, greenhouse gas emissions and air & noise pollution due to overseas transport.

### **Organisation and Sustainable Management**

KROHNE Group comprises a network of legally independent companies. Management is in the hands of the Executive Board chaired by the CEO and overseen by KROHNE Group Advisory Board which is presided by a chairman. The Advisory Board is granted an important role in corporate governance. Its task being to oversee the work of the Executive Board by providing constructive feedback. Fundamental and far-reaching decisions are taken with the approval of the Advisory Board.

Central Management is further supported by KROHNE Group Corporate Managers.

As a family business we think long term and see it our goal to ensure cross-generational, sustainable growth. The owner and family shareholders are committed to our customers and to our staff, our adherence to independent economic growth and innovative technologies, all of which contribute strongly to the sustainable development and perennity of our company.

## 3 Environmental Sustainability

KROHNE has an environmentally aware corporate culture, and we recognise that the quality of life for future generations very much depends on how we manage the environmental performance of our facilities today. We view sustainable practices as the best way to minimize the impact of our manufacturing operations on the environment as well as reducing operating costs and contributing effectively to the perennity of our business. Implementing KROHNE Net-Zero Emissions Strategy, increasing the number of solar panels on factory rooftops, promoting our permanent digital exhibition and remote factory tours, and developing our sales in the area of sustainable energies, are just a few of our current green initiatives towards a sustainable future.

Implementing and maintaining an environmental management system according to ISO 14001 is required of all our production sites. At the end of 2021, **94% of KROHNE factory employees** work in a company certified by an external body. Furthermore, several sales companies have also obtained external certification, representing 59% of sales and service staff.



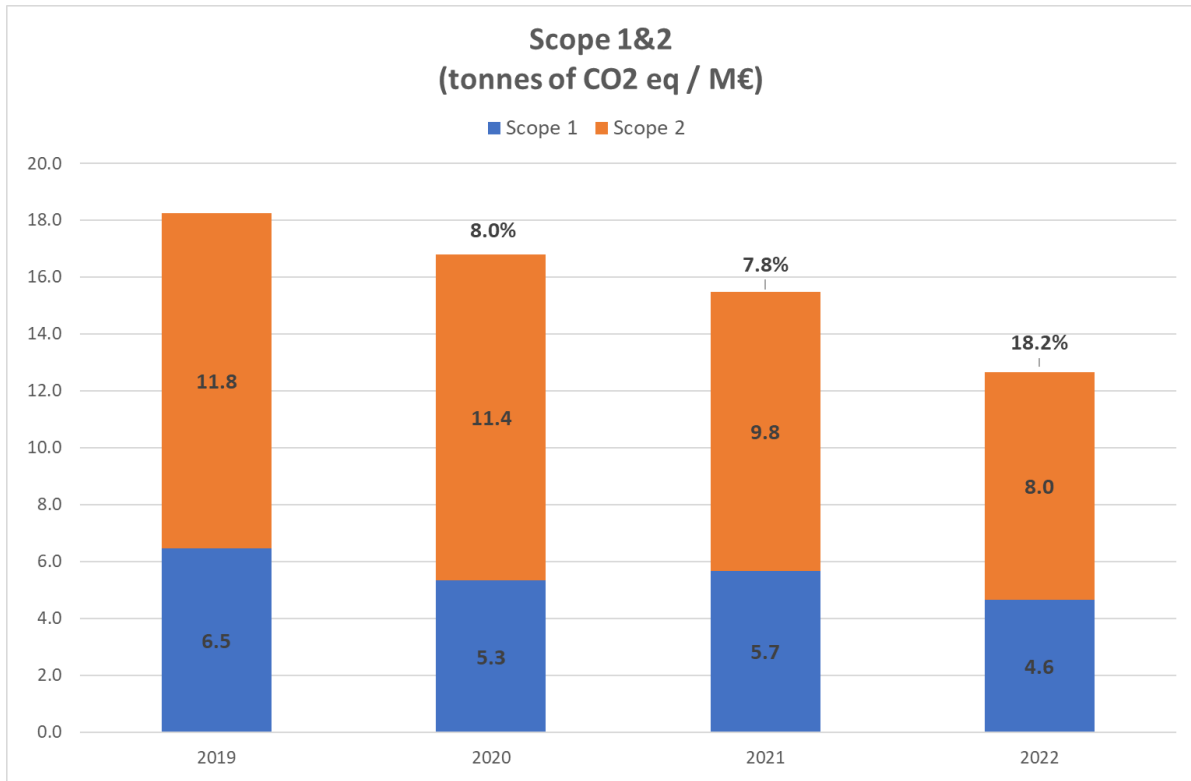
**Energy Consumption & KROHNE’s Drive to Zero CO2 Emissions**

We assume our responsibility in the role demanded of companies to fight against climate change. Acting on emissions will most importantly lead towards a more sustainable planet but also strengthen our company’s performance and perennity. KROHNE’s recently introduced Net-Zero Emissions Strategy defines objectives and actions to reach our net-zero commitment by 2045. Our impact is initially being calculated and measures implemented to reduce scope 1 and scope 2 emissions by 60% by 2030, in comparison to the reference year 2019.

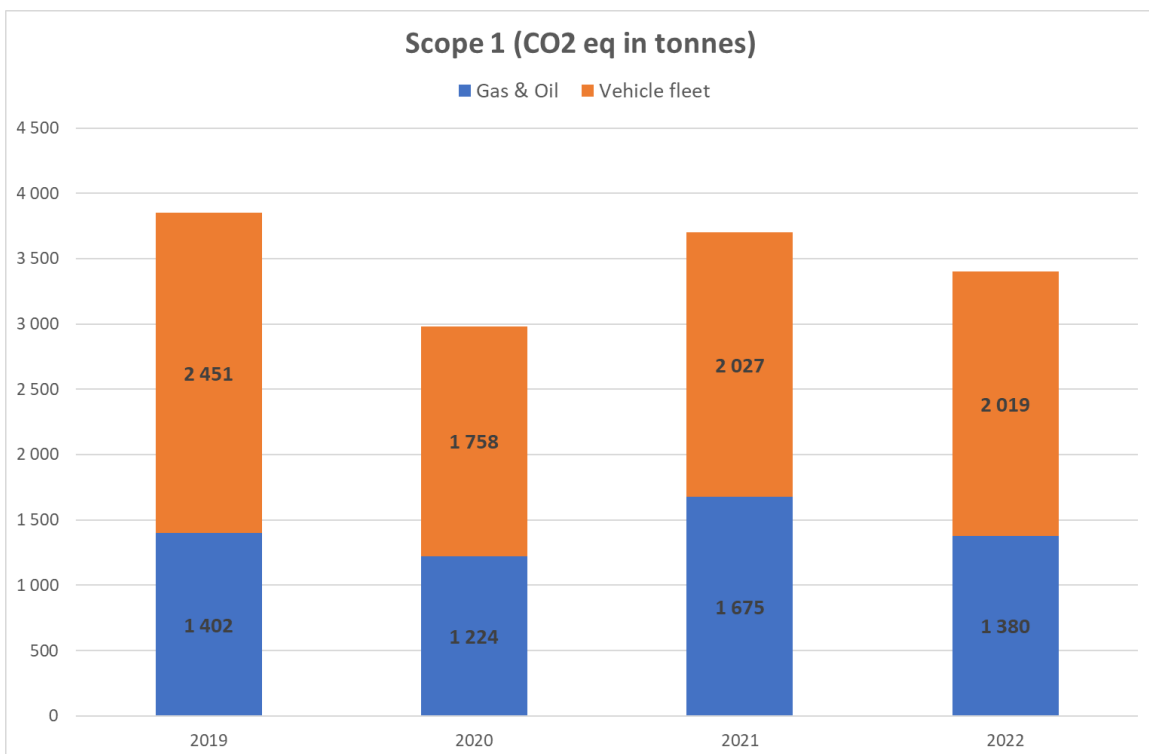
This year, the report covers the whole of scopes 1 and 2 and for the first time, we have also reported the use of sold products and business travel of our scope 3. We see that the subset of the reported scope 3 represents 80% of the whole CO2 eq emissions and further details will be related in the chapter related to scope 3.



As demonstrated in the below graph, an overall drop of 30,6 % was made in 2022 in these areas which include gas & oil, the company vehicle fleet, purchased electricity & district heating:



It is also to be noted that scope 1 (absolute value) dropped by 12% in comparison with 2019. Furthermore, the number of vehicles has remained steady and the number of electrical and hybrid vehicles has continued to grow.



Despite a significant increase in the number of instruments produced and the associated turnover, the data shows that the scope 2 (mainly electricity) has decreased contributing to a reduction in CO2 emissions.



***Below, Solar panels on one of KROHNE's buildings.  
Our company continues to make a transition to Green Electricity.***



## Scope 3 Emissions

We report the use of sold products (electrical energy used by our converters) and business travel. The electrical consumption is based on a product lifetime of 10 years and 387 CO<sub>2</sub>eq / KWh corresponding to the weighted value of the countries where KROHNE is present. This energy is mainly driven by our 4 wire converters used for flow measurement. Actions have already been implemented, via KROHNE's Eco-design golden rules and associated procedure for the design of new converters. However, the associated flowmeter technology provides a low-pressure drop-in comparison with older technologies. In next years' report, we will also include the pressure drop influence on the energy needed for our clients' pumps. We estimate that the associated energy consumption could be highly significant as we produce flowmeters up to a diameter of 3000mm.



We continue to pursue our efforts to reduce work-related travel.

**KROHNE Insights**, a comprehensive library of virtual tools, including webinars on industry related topics, and numerous informative videos and exhibits, allows our customers worldwide to benefit from a one-to-one personal guided tour via the 360° digital exhibition, now available in several languages. The principle has also been extended to industry fairs in various locations meaning that customers can discover KROHNE highlights without having to travel. Since the introduction of this concept in 2021, more than 200 customised tours have taken place with an estimated 20 international flights and 180 national trips avoided. For more information visit [insights@krohne.com](mailto:insights@krohne.com)

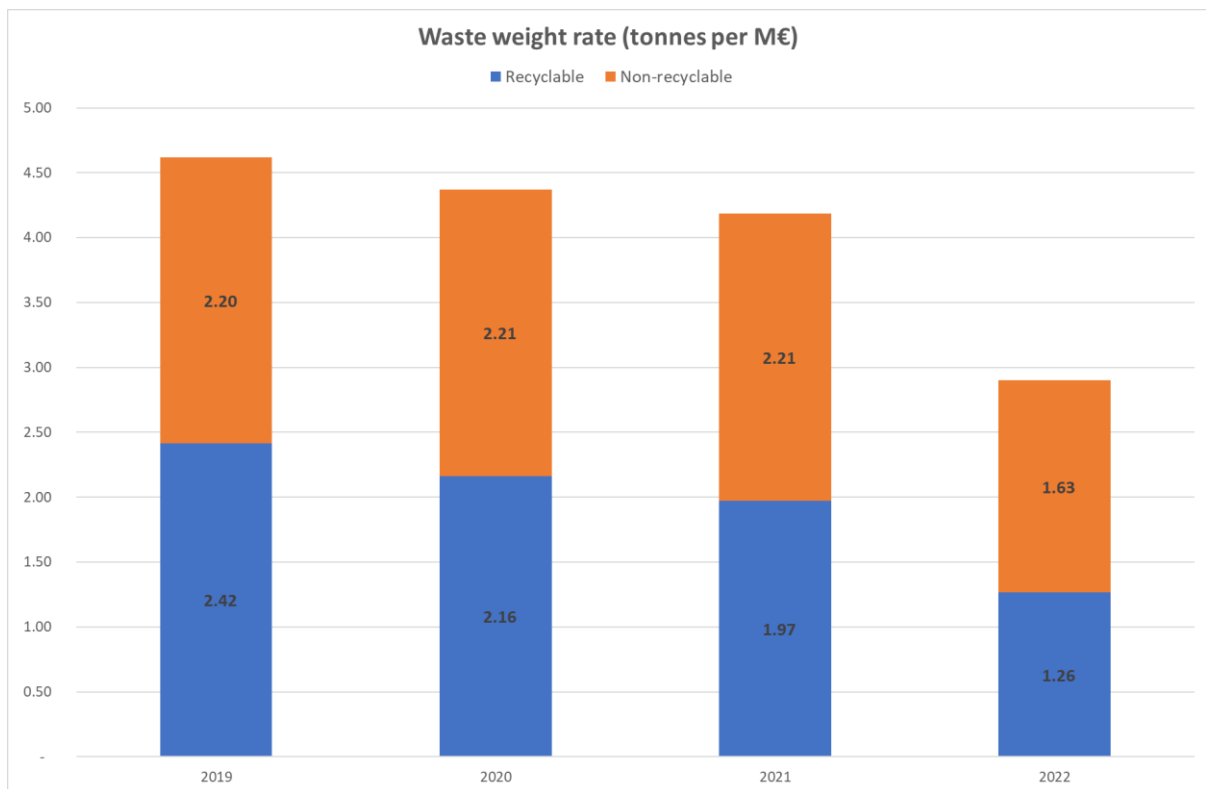
Even though employee commuting is not yet included in our scope 3 reporting, by offering our staff the possibility to tele-commute at least 2 days per week, whenever the post allows so, we directly reduce our scope 3 emissions.



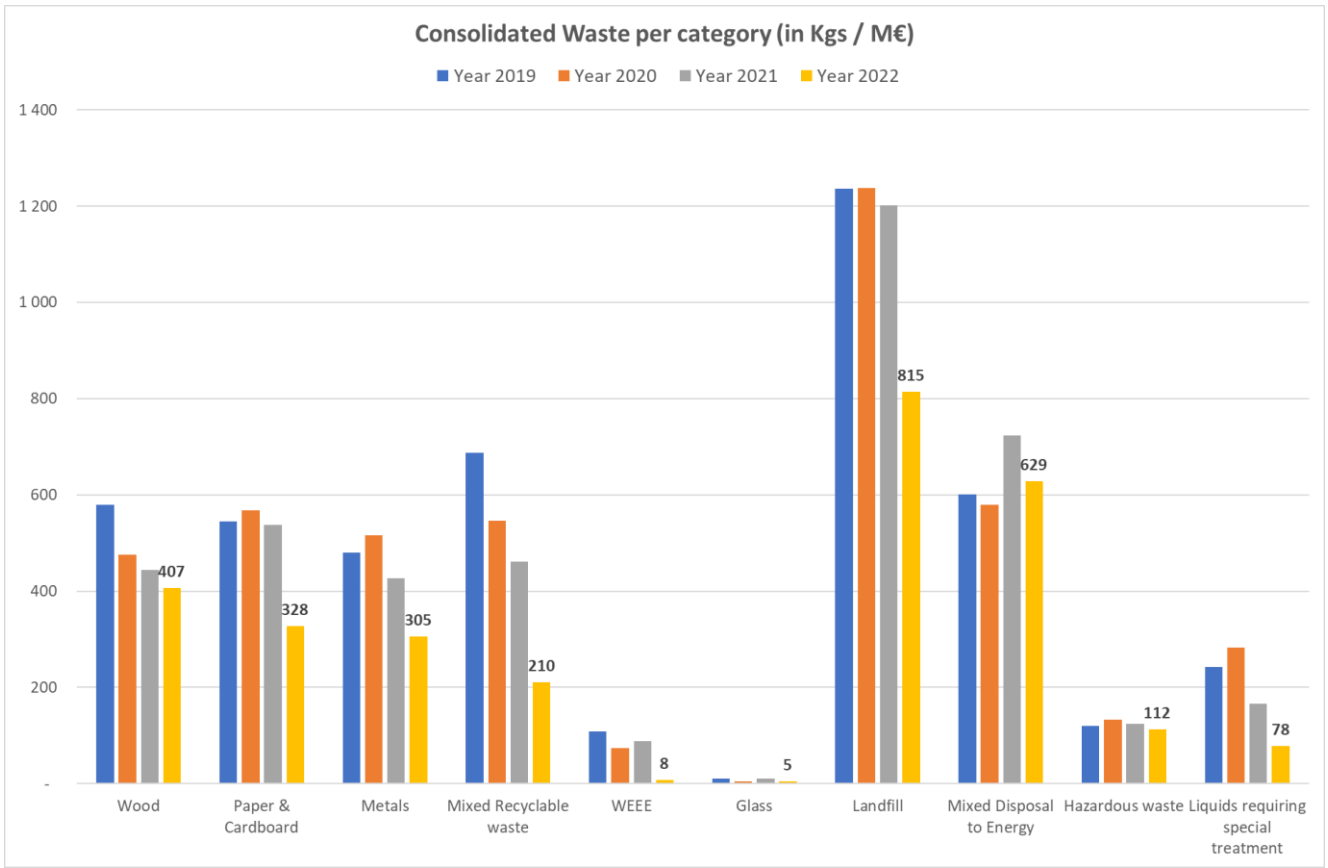
## Waste Reduction

We continually aim to limit the environmental impact of our products and processes by reducing waste and emissions to the surrounding environment.

- We take a pro-active approach towards eco-design with the idea of bringing to the market products which have both a good environmental performance as well as good performance for our customers.
- We are actively working towards a transition to reusable/recyclable packaging. Although expanding foam provides effective custom fit protective cushioning for packing our instruments, we are aware of its negative environmental impact and aim to eliminate its use. Testing the efficiency of suitable eco-friendly replacement packaging solutions is an ongoing task of our corporate test centre.
- We act responsibly and fulfil our obligation as a producer of electronic and electrical waste by either adhering to a compliance scheme or handling independently this type of waste. This enables end of life products to be effectively and economically recycled or reused.



*Our factories pursue efforts towards reducing waste. Figures show a decrease of 4,6 ton/M€ to 2.8 ton/M€ between 2019 and 2022.*



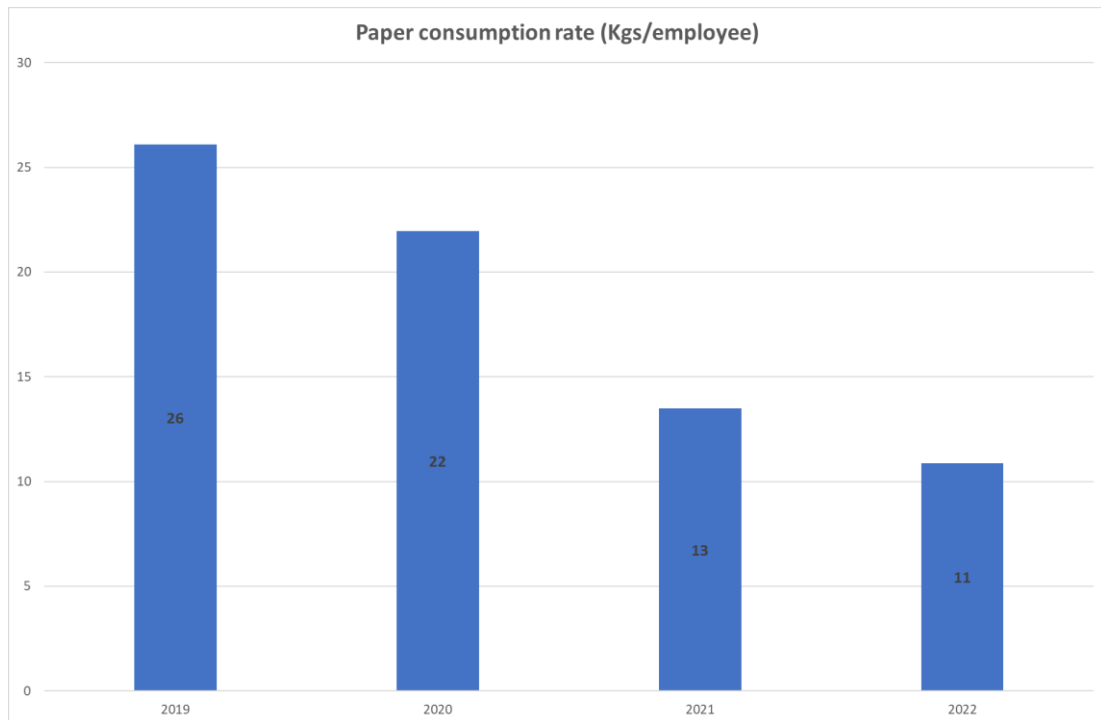
*The above graph shows the overall tonnage of waste per category. A considerable improvement has been made in the quantity of landfill and liquids requiring special treatment.*



*An example of new cardboard packaging for Ultrasonic Flowmeters implemented within the scope of our Green Packaging. Our target is that 80% of all packaging used in factories is of a sustainable type by 2025.*

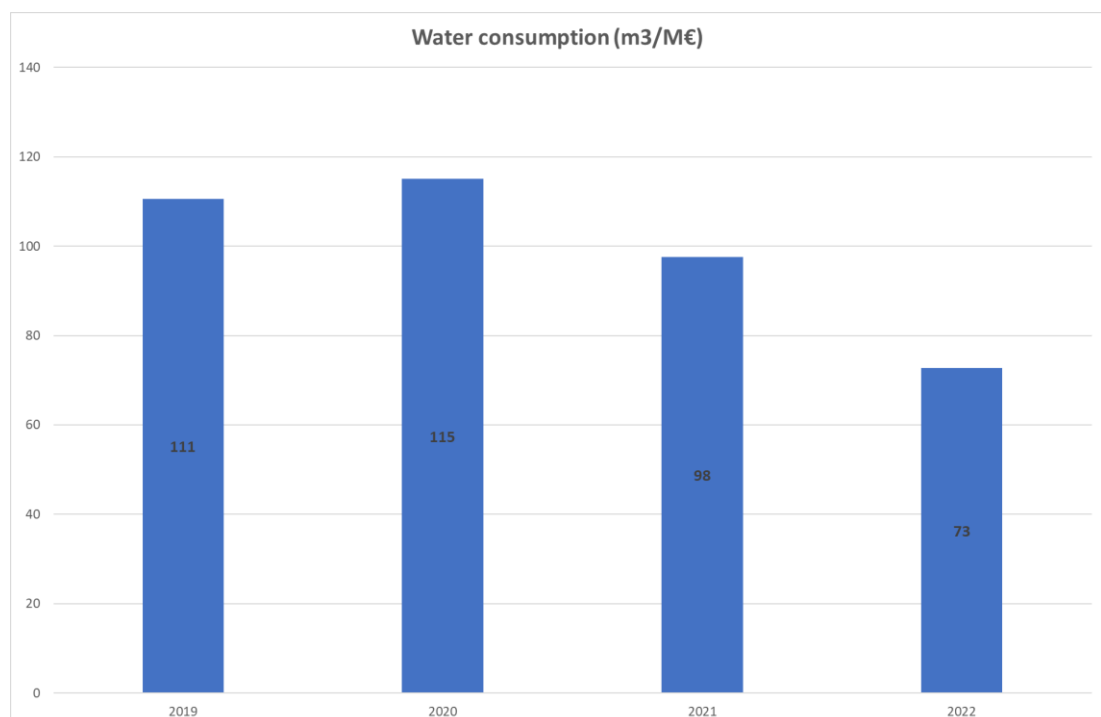
## Paper consumption

We see the importance of Industry 4.0 and the advantages for KROHNE and for the environment. Working towards a paperless factory is an ongoing project involving every step of the production process. As demonstrated below, latest figures show that paper consumption has been reduced by more than half since the reference year 2019, as we continue to focus on the digital transition of our processes and communication.



## Water

We continue to reduce our water consumption in most factories. However the increase in the group's turnover has also a positive effect on water consumption linked with stable infrastructures.



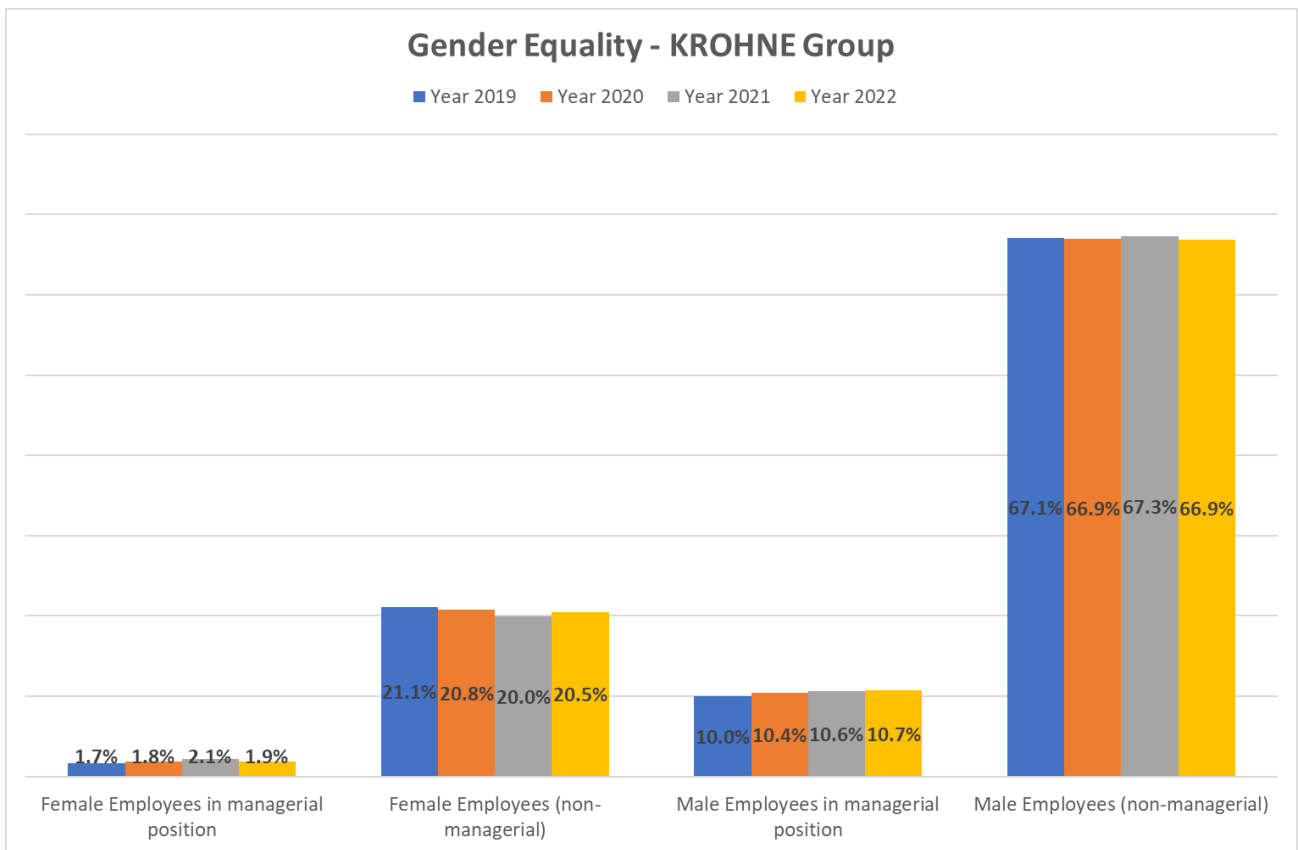
**4 Social Sustainability**

**Employer of Choice**

Effective human resource management throughout the KROHNE group is essential to fostering a positive work environment, maintaining substantial employee-employer relations and therefore ensuring that we remain a purpose-driven, sustainable and high-performing organization.

We reject any form of employment discrimination; uphold the importance of a healthy work-life balance and we strive to provide a safe and pleasant work environment for our staff.

Historically, process instrumentation is a male-dominated industry, however this is continually evolving, and we recognise the importance of making progress with regards to gender equality. The fact that KROHNE has a loyal workforce and low employee turnover means that this is a slow, but nevertheless, improving process.



*Above figures show a slight improvement in the number of females occupying non-managerial positions. It is our goal to progress in this area and improving the balance is one of the targets of KROHNE 2025 Excellence Plan.*

**Career Development, Competence Training and Awareness**

Our employees are our greatest asset and at KROHNE we encourage both creativity and ambition. We recognize the values, competence and knowledge which are valuable to our company’s vision and to contributing to our technological excellence. Our performance management ensures that continuous learning is supported and that interesting career opportunities are offered, meaning that professional and personal development are nourished and come to the fore.

Employees benefit from an annual assessment during which training needs are assessed and all staff are encouraged to improve their knowledge and skills by taking part in external courses and internal training sessions specific to their field of activity.

In 2022, the following KPIs were monitored and registered for the whole KROHNE group:

- ✓ Number of employees who received an annual appraisal
- ✓ Average training hours per employee
- ✓ Number of employees who received skills-related training (see below)



*The graph shows the percentage of employees benefiting from training courses (internal and external).*

## 5 Ethics

As a corporate citizen, KROHNE is committed to respecting fundamental responsibilities in the areas of human rights, labour, environment and anti-corruption as defined in the charter of the United Nations. We understand that transparency in our business practices is crucial for sustainability. We are committed to conducting our activities with respect of universally held ethical and social values, especially integrity, honesty and respect of human dignity and to pursuing responsible leadership and fair business practices. The principles to which we adhere have been outlined in several corporate documents cited below and a training course in the form of a Code of Conduct eLearning and associated quiz has been deployed throughout our companies world-wide. In 2022 1795 employees in companies worldwide benefited from the training course with many more in progress. Employees are required to renew the course every two years. These measures ensure a mutual and global understanding of our expectations and a means of harmonising practices throughout our company.

### **KROHNE's Code of Conduct for Corporate and Social Responsibility**

KROHNE endorses the ZVEI-VDMA code of conduct. This self-imposed commitment transcribes our basic understanding of social responsibility, clean business practices, environmental protection and other core principals which are in alignment with the human rights stated in the charter of the United Nations and in ISO DIS 26000

**KROHNE'S Whistleblowing and Grievance Procedure.** This procedure provides a framework for responsible and secure reporting of misconduct, protecting our staff and allowing any concern of public interest arising from our business to be raised and where appropriate acted upon in compliance with regulatory directives.

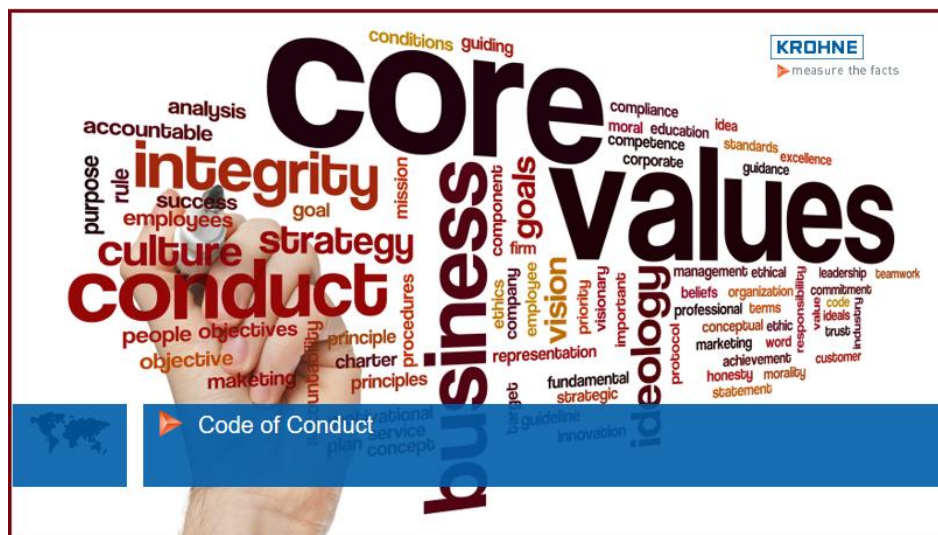
### **KROHNE Gift policy**

In order to protect our reputation and our values we have established a policy for what is acceptable and non-acceptable in terms of gifts and hospitality. **This gift policy ensures a transparent code of conduct for what is tolerated and expected of our employees and business partners alike as well as providing a guideline on sensitive subjects such as bribery. These anti-corruption guidelines are an integral part of our corporate sustainability strategy.**

In 2022, the following KPIs on ethics were monitored and registered for the whole KROHNE group:

- ✓ Number of confirmed incidents or legal actions in related to business ethics (3 cases)
- ✓ Number of cases of discrimination reported to HR (2 cases)
- ✓ Number of cases of harassment reported to HR (6 cases)
- ✓ Number of detected breaches of confidential information in IT system (2 cases)

In comparison with 2021, we notice an increase of reported cases. We consider this a positive sign demonstrating that the implementation of the Corporate whistle blowing procedure has lead to increased transparency.



*1795 employees have completed the corporate code of conduct training e-learning course.*

## 6 Health and Safety

Implementing and maintaining a health and safety management system according to ISO 45001 is required of all our production sites. At the end of 2022, **70% of KROHNE factory** employees work in a company certified by an external body.

H&S indicators are consolidated for the KROHNE Group. The lost time injury rate (LTIR) has decreased. The occupational accident gravity (LTI-G) rate has increased however as has the number of accidents with days lost. Nevertheless, both are relatively low in comparison to the industry average and overall H&S results demonstrate the efficiency of our ISO 45001 management systems.

KROHNE Group H&S results		2018	2019	2020	2021	2022
	Fatal Accident(s)	0	0	0	0	0
	Number of accidents > 3 days lost	20	15	14	19	16
	Number of accidents between 1 and 3 days lost	9	16	9	17	9
	Medical Treatment Cases (doctor)	20	19	48	36	37
	First Aid (internal)	333	300	391	391	167
	Near-miss	54	73	62	62	79
	Number of employees ***	3079	3247	3844	3838	3 571
	Number of days lost due to accidents	744	246	203	372	425
KOAR	KROHNE Occupational Accident Rate (Qty of accident > 3days / 1000 employees)	6.5	4.6	3.6	5.0	4.5
LTIR	Lost Time Injury Rate (Frequency Rate)	4.9	5.0	3.1	4.9	3.6
TLTIR	Total Lost Time Injury Rate	8.29	8.02	9.62	9.77	9.0
LTI - G	Lost Time Injury Rate (Gravity Rate)	0.13	0.04	0.03	0.05	0.06

The health and safety of both our staff and our customers is our top priority. We pay attention to our workers' well-being and prevent injury and illness by providing a safe and healthy working environment.

### Hazardous Chemicals and Waste

KROHNE complies with international legislations to limit the impact of chemicals and hazardous substances in order to protect the environment, the health of our workers, clients and in a larger sense the population. We supply only non-chemical products which are intended uniquely for industrial purposes.

In order to prevent occupational illness due to exposure to hazardous substances, we have taken actions to reduce the presence of CMR (Carcinogenic, Mutagen & toxic for reproduction) in our products and manufacturing process. We prohibit the introduction of new chemicals containing CMR in our new developed instruments and as far as possible, we substitute these chemicals with safer ones. We also limit the number of staff exposed to CMR.

KROHNE products comply with **REACH REGULATION** regarding the registration, evaluation, authorization and restriction of chemicals.

For further information on KROHNE's compliance regarding hazardous substances and waste visit our web page via the following link:

<https://krohne.com/en/company/group/quality-health-and-safety-and-environment>

### On-Site Safety

Process and people safety are a key focus in the development of our instrumentation solutions, both for direct occupational safety and for reliable measurement. Extremely reliable measured values and safety related features, characteristic of KROHNE technology, contribute directly to plant safety and accident prevention.

For further information on field-proven safety solutions by KROHNE follow the link below:

<https://krohne.com/en/trends/safety/occupational-and-process-safety>

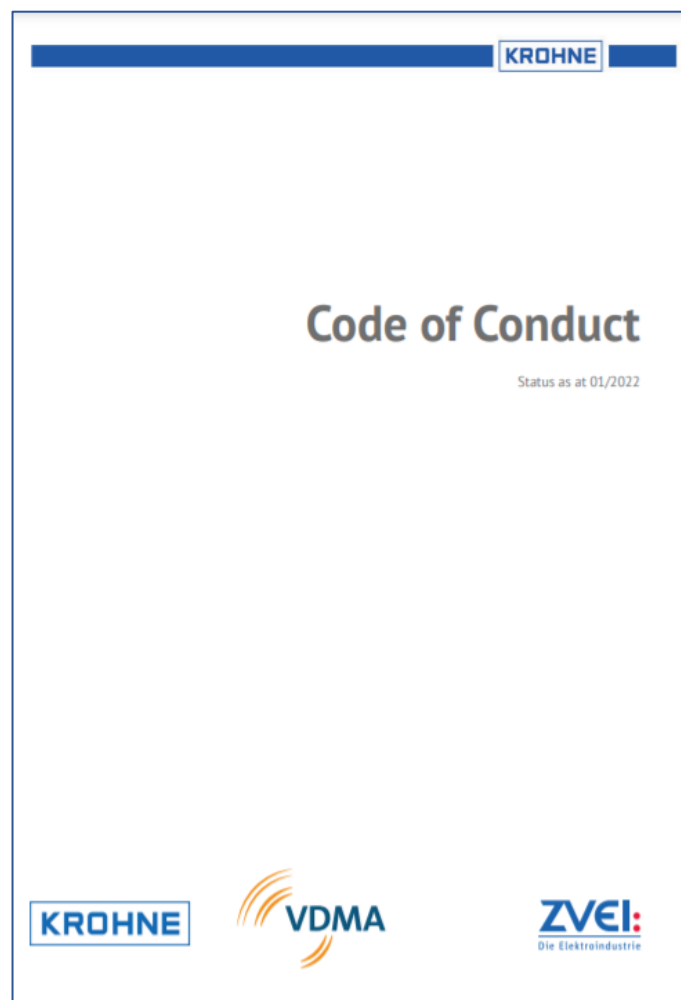
In 2022, safety alerts were introduced by Corporate Services. Any occupational incident occurring within our service organization worldwide is shared with other countries. This information includes photographs, root causes, corrective actions and lessons learned.

## 7 Sustainable Procurement

We are aware that the supply chain is a key factor in our company's corporate social responsibility and has an important role in the full lifecycle environmental impact of our products and services. It is why KROHNE engages in working only with well-established, certified (ISO or equivalent) and reputable suppliers with whom we seek to establish a solid and lasting business relationship.

The following measures demonstrate our engagement to improve our supply chain sustainability and transparency:

- KROHNE adheres to legal due diligence requirements, notably the German Supply Chain Act
- We have signed a contract with a service provider specialised in ESG (environmental, social & governance) to ensure we meet the requirements, manage risks and overall improve our supply chain sustainability and transparency in this field
- KROHNE has endorsed the ZVEI-VDMA Code of Conduct and require of our suppliers to do likewise
- We carry out regular onsite audits of our main suppliers including quality and HSE aspects.



### **Conflict Minerals**

In response to US and European legislation regarding conflict minerals (US Dodd-Frank Act 2010 & EU regulation) KROHNE acts in due diligence by abstaining from purchasing minerals 3TG in conflict countries and by ensuring that our suppliers engage in responsible sourcing of minerals. The CMRT and EMRT templates are available on the KROHNE website.

<https://krohne.com/en/company/group/quality-health-and-safety-and-environment>



## 8 Eco-Design

In October 2019 a product eco-design guideline was released aiming to promote a pro-active approach towards eco-design with the idea of bringing to the market products having both a good environmental performance as well as good performance for our customers.

To quote a renowned environmental advocate ***“We don’t need so many things. We need to use our imagination more, which is in infinite supply.”***

Hereunder are the Eco-design Golden Rules on which our corporate guideline is based:

- Ensure that newly designed products have a more POSITIVE environmental impact than the previous generations.
- Promote LONG LIFE, especially for products with most significant environmental aspects out of usage phase.
- Promote REPAIR and UPGRADING, by enforcing MODULARITY DESIGN and providing clear instructions manuals to our clients.
- Ban or reduce TOXIC substances in accordance with regulations (e.g.: ROHS & REACH...).
- Minimise WEIGHT by reducing instrument sizes and using high quality materials which do not impact functional properties.
- Minimise the overall ENERGY consumption especially during the usage phase by reducing pressure drop and/or current consumption of instruments.
- Use as FEW JOINING ELEMENTS as possible to facilitate recycling.
- Promote RECYCLING by using fewer, simple, non-blended materials and no or few alloys.
- Prefer quality materials and surface treatments to PROTECT products from corrosion and wear.
- Select recyclable PACKAGING materials and minimize their weight to reduce consumption in TRANSPORT.

## 9 Avoided Emissions – KROHNE Sustainable Technological Innovation

Among other technological benefits, KROHNE's state of the art products and measuring solutions offer other pathways to sustainability across numerous industries by enabling a greatly reduced ecological impact and considerable cost-savings. The GHG Protocol identifies avoided emissions as *"emission reductions that occur outside of a product's life cycle or value chain, but as a result of the use of that product."* Energy Transition is one of the main tools in achieving carbon neutrality and KROHNE instruments have a key role to play in this shift from energy based on fossil fuels to clean, green and renewable energy sources, thus contributing to avoided emissions. Historically, KROHNE has extensive experience with hydrogen applications in the process industry, in chemical, oil & gas and custody transfer. In the energy transition hydrogen plays a new role as a clean and flexible energy carrier and can deliver or store a tremendous amount of energy. KROHNE sees an increasing demand from customers in this developing market and our portfolio continues to prove its efficiency in new hydrogen applications.



Our flowmeters provide measuring solutions for other green energy sources such as Biogas measurement, in solar power plants, heat recovery in district heating, LNG (liquefied natural energy) and CHP (combined heat & power).

Another example of how our technology contributes to reduced fuel consumption.



*KROHNE EcoMate™ fuel and emission monitoring system for seagoing vessels along with high accuracy flow readings from OPTIMASS Coriolis mass flowmeter allow for the continuous measurement and reporting of fuel consumption and CO2 emission.*

Furthermore our instruments meet the highest quality and safety requirements of the nuclear industry.

Nuclear is the second largest source of low-carbon electricity in the world behind hydropower. With more than 40 years of experience in the nuclear industry and possessing all of the required approvals KROHNE is taking our expertise a step further **by implementing a dedicated nuclear excellence centre, located at its production site in south-east of France, to serve the world-wide sector.**



By providing measuring solutions in the broad range of applications across clean, green and renewable energy sources, KROHNE indirectly reduces emissions and contributes positively to decarbonisation and the sustainability of our planet.