

SUSTAINABILITY REPORT 2022

WE LIVE SUSTAINABILITY.



GLOBAL. AHEAD. SUSTAINABLE.



*Our aim by 2029:
Carbon neutrality*



Editorial



Dear Reader,

The future needs a past, as they so rightly say. We can look back as far as 1779; our company is now in its seventh generation. But the future also needs us to act responsibly and, above all, with foresight if the enterprise is to hold its course. This refers not only to economic stability in order to remain an attractive employer and a reliable partner for industry, but also to sustainability aspects so that as a company we can use our influence to help preserve a pleasant, liveable environment for future generations.

2022 was a particularly challenging year in this regard as we were, and continue to be, confronted with a global crisis of ecological, economic and social dimensions. Russia's attack on Ukraine at the end of February, at the latest, forced us to bid farewell not only to some apparent certainties but also to economic and social stability in a whole range of aspects.

Yet this too has proven that by keeping a level head and reacting decisively, crisis can also be a motor for positive developments. This Sustainability Report, which we are now presenting for the second successive time, features a series of examples. Faced with possible energy shortages, we immediately set up a crisis team to quickly and consistently implement the necessary savings in the consumption of natural gas and other energy sources so that even if the energy crisis deepened, we would still remain manoeuvrable. Details of the extent to which we were able to contribute to conserving energy and other natural resources can be found in the chapter "Sustainable Production".

We have reacted to the disruption in supply chains and sharply-increasing inflation by building up our own stocks – and we have invested "in the future". This term may be somewhat overused, but it is totally apt here: We have accelerated our GoGreen250 initiative and ring-fenced funding to set up large-scale PV systems, for example, and to drive forward the change-over of our fleet to electric drive vehicles.

We have also seen how the crisis has strengthened solidarity, be it at interpersonal level or in the relationship between (western) states. An identical system of values, a spirit of trust in encounters and collaboration and commitment to common goals serve as a protective shield as we face crisis-laden developments. We are sparking this impulse at Kurtz Ersa too and with "OneFamily" have initiated a wide-ranging process of change intended to rejuvenate the sense of belonging and strength the awareness of being part of the long-established and successful Kurtz Ersa Family. Details can be found in the following report.

We have developed from the erstwhile hammer forge to a global machine-engineering enterprise. This constant process of transformation will continue into the future, as new challenges demand new responses. Since 1779, i.e. for almost 250 years now, we have practiced change as an active process, for we have learned that long-term success has its roots in courageous entrepreneurship. We therefore regard sustainability as more than just a label we attach to ourselves; it is a duty towards our staff, customers, partners and the environment and, above all, an appeal not to allow our business activities to place an undue burden on future generations.

In this Sustainability Report we show the progress we have made on the journey towards our goal of being a CO₂-neutral enterprise by 2029. If we are able to continue using crises as a motor for positive change, I am confident that this transformation will be crowned with success.

We hope that our 2022 Sustainability Report will provide you with an interesting and informative read.

A handwritten signature in blue ink, appearing to read "Ralph Knecht". The signature is fluid and stylized, with a long horizontal stroke at the end.

Your Ralph Knecht
CEO Kurtz Ersa Group, April 2023

[GRI 102-14]

Notes for reading comprehension

With this overview, Kurtz Ersa is now presenting its second successive Sustainability Report. Once again we have drafted it in accordance with the requirements of the Global Reporting Initiative (GRI). The GRI has defined a comprehensive standard for sustainability reporting, setting out the information that helps to assess the environmental, economic and social performance of an organization. The aim of sustainability reporting in accordance with the GRI standard is to create transparency with regard to how an organization is contributing, or wishes to contribute, to sustainable development. By applying the standard, we want to ensure the comparability and quality of the information published.

With publication of new “Universal Standards” in October 2021, the GRI has comprehensively updated the structure and criteria for GRI-compliant sustainability reporting. We already incorporated these new features in the previous report, which primarily affected the structure and breakdown of the content. In addition, the mandatory data relating to corporate governance have been expanded and stipulations on risk assessment and due diligence have been added, in particular in relation to the observance of human rights and climate change. The aim of the new features is to further increase transparency with regard to the effects on the economy, the environment and people.

Our report with information on the 2022 business year is drafted with reference to the new GRI standards. This means that in

addition to the general information we also report on those topic standards which affect essential themes as a result of our business activity. Furthermore the GRI is also successively publishing sector standards. At the time of going to press, however, no handout was available for the engineering sector (as was the case for most other branches). Consequently no presentation of sector standards was possible; apart from that, we have reported as comprehensively as possible.

The structuring into seven thematic areas as appeared in the first report has been retained; the selection of reported aspects corresponds to the systems of the GRI standards. For better comprehensibility, we refer at the end to the paragraphs to the number of the relevant standards; in addition, the GRI content index provides simple orientation as to where exactly in the report we address which GRI topic. Graphs and illustrations also show the content covered.

We have expanded the report on the 2022 business year to include details and figures from our international subsidiaries. Anywhere we build on results from the previous year, we refer to the respective changes in order to clearly indicate developments. The latter is not always possible for first publication of figures from the international sites. Where available, we consistently identify data from 2019 onwards or add these separately in order to create transparency for the following reports. [\[GRI 2-4\]](#)

Strategy for sustainable development – Our GoGreen250 programme



Since 2020, sustainability has had a label of its own at Kurtz Ersa: That year saw the launch of the “GoGreen250” initiative with the aim of having the transformation to a carbon-neutral enterprise completed by 2029, the 250th anniversary of the company’s foundation. With this aspiration, Kurtz Ersa far exceeds the current statutory stipulations and, as a representative of a very material-intensive and energy-intensive branch, has set itself very ambitious targets.

The initiative reached its next milestone on 6 June, 2022. Since this date, Kurtz Ersa has had membership of the UN Global Compact (UNGC). To date, this global network has been joined by over 20,000 companies publicly committed to the ten principles of the UN Global Compact. As a member of the world’s largest and most important initiative for sustainable and responsible corporate management, Kurtz Ersa thus supports the developments leading to a more inclusive and future-oriented economy. The primary focus is on human rights and labour rights, combating corruption and the environment.

As an UNGC member, Kurtz Ersa now enjoys access to worldwide

networks and training opportunities (both international and national) and demonstrates its sustainability endeavours more visibly. As a political and industrial union, the UNGC aims to shape globalization in a more socially and ecologically responsible way. The network supports companies in the strategic anchoring of sustainability in their corporate behaviour.

Correspondingly, our “Go-Green250” programme expresses the aim of operating more sustainably in all areas of the enterprise and significantly reducing our carbon footprint – in terms of both our own production and the entire supply chain. In order to facilitate the practical implementation, we set up a number of working groups as far back as 2020 in which our processes are examined and sustainable solutions developed for the various areas in production and the supply chain. In addition, many of our employees have become involved in this process, contributing constructive suggestions. Not only ecological aspects play a role; rather we take a holistic approach, covering the topics development, procurement, production, selling, management and living. This Sustainability Report provides information on the main points of focus and on progress in the individual topic areas. [\[GRI 2-23\]](#)

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Editorial comment: This report addresses all individuals equally, in line with gender mainstreaming. Where this is not reflected in the text, this serves only to aid reading comprehension and is completely free of discriminatory intent.



About us.

As a family company now operating in its seventh generation, thinking and acting sustainably is in our DNA.



Organizational details

Kurtz Holding GmbH & Co. Beteiligungs KG (hereinafter: Kurtz Ersa) is presenting its second successive Sustainability Report. We have drafted this report for the 2022 business year in accordance with the updated content and guidelines of the GRI Standard (Global Reporting Initiative) which ensure uniform and comparable presentation. [\[GRI 2-1a; 2-3\]](#)

Kurtz Ersa is a globally-active machine engineering company. It is an owner-managed family company now operating in the seventh generation with the legal structure of a private limited company. The three main business sectors comprise the areas soldering systems and soldering tools (Electronics Production Equipment), foam and foundry machines including modern 3D-metal printers (Moulding Machines) and automation solutions (Automation). The Kurtz Ersa headquarters are located in Kreuzwertheim (Franconia, Germany). [\[GRI 2-1 b, c; 2-6 a\]](#)

The Kurtz Ersa Group also incorporates subsidiaries in Europe, North America and Asia. In total, the company operates production sites in three countries (Germany [4], USA, China) and has a further twelve subsidiaries abroad (China [5] France, India, Mexico, USA, Vietnam). Due to the ongoing war of aggression in Ukraine, which broke out in February 2022, the subsidiary in Russia has been taken out of service until further notice since the first quarter of 2022. Consequently, no business data from there have been included in this report. [\[GRI 2-1 d\]](#)

As per 31.12.2022, the Group incorporated 17 companies. Apart from the companies and subsidiaries named in the GRI 2-1 details, Kurtz Ersa is not involved in any further entities (such as subsidiaries, joint ventures or minority shareholdings) so that no further relevant details can be given in our sustainability reporting. [\[GRI 2-2\]](#)

Following completion of the takeover of SCHILLER AUTOMATION GmbH & Co. KG as per 01.01.2022, we have assigned their business activities to our Automation division. Furthermore, in addition to our activities in Germany we are reporting for the first time on our activities in the international production and sales sites of the Kurtz Ersa Group. This relates to Region Asia where we maintain our own production sites for Ersa and Kurtz machinery, and to Region USA which, in addition to small-scale production has specialized in repairs to Ersa and Kurtz machinery. Turnover in the 2022 business year amounted to EUR 360.4 million. [\[GRI 2-3; 2-6\]](#)

In total, all parts of the company employ 1,518 staff (+132 compared to the previous year), of whom 1,032 (+84) work at the headquarters in Wertheim and Kreuzwertheim. SCHILLER AUTOMATION GmbH & Co. KG employs a further 147 (-3), with further employees in USA 44 (+1) and in Region Asia 295 (+50); Status 31.12.2022. [\[GRI 2-7\]](#)

Locations in Germany:

- Kurtz Holding GmbH & Co. Beteiligungs KG
- Kurtz Ersa Logistik GmbH
- Ersa GmbH
- Kurtz Ersa Hammer Academy GmbH
- Kurtz GmbH & Co. KG
- SCHILLER AUTOMATION GmbH & Co. KG
- Kurtz Ersa Automation GmbH
- Kurtz Ersa Vietnam Company Limited
- globalPoint ICS GmbH & Co. KG
- Kurtz Ersa Mexico, S.A. de C.V.

International locations:

- Kurtz Ersa, Inc.
- Kurtz Ersa India – Smart Production Technologies Private Limited
- Kurtz Ersa México, S.A. de C.V.
- Kurtz Ersa Asia Ltd.
- Kurtz Ersa France
- Kurtz Shanghai Ltd.
- 000 Kurtz Ost (currently inactive)
- Kurtz Zhuhai Manufacturing Ltd.



*Electronics
Production
Equipment*

*Moulding
Machines*

Automation



Kreuzwertheim

WORLDWIDE APPLICATION CENTERS
ONE FAMILY
 WORLDWIDE
PARTNERSHIPS
 MULTICULTURAL · CONNECTIVITY
 PROCESS KNOW HOW

**CUSTOMER
SERVICES**
 ANY TIME – ANYWHERE
 MADE BY KURTZ ERSA
GLOBAL PLAYER
 UNIFIED QUALITY STANDARD



worldwide
1.518
employees



since
1779
innovative

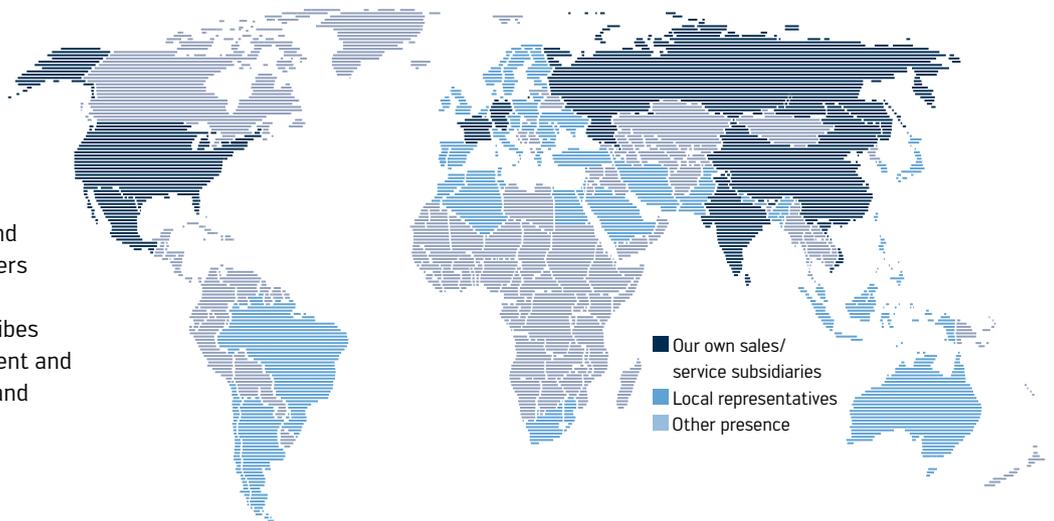


by 2022:
360 million
EUR turnover

GLOBAL. our products and services are available worldwide

AHEAD. stands for our technological market leadership and our aim to be a benchmark for others

SUSTAINABLE. describes sustainable management, permanent and reliable partnerships and respect and protection for the environment



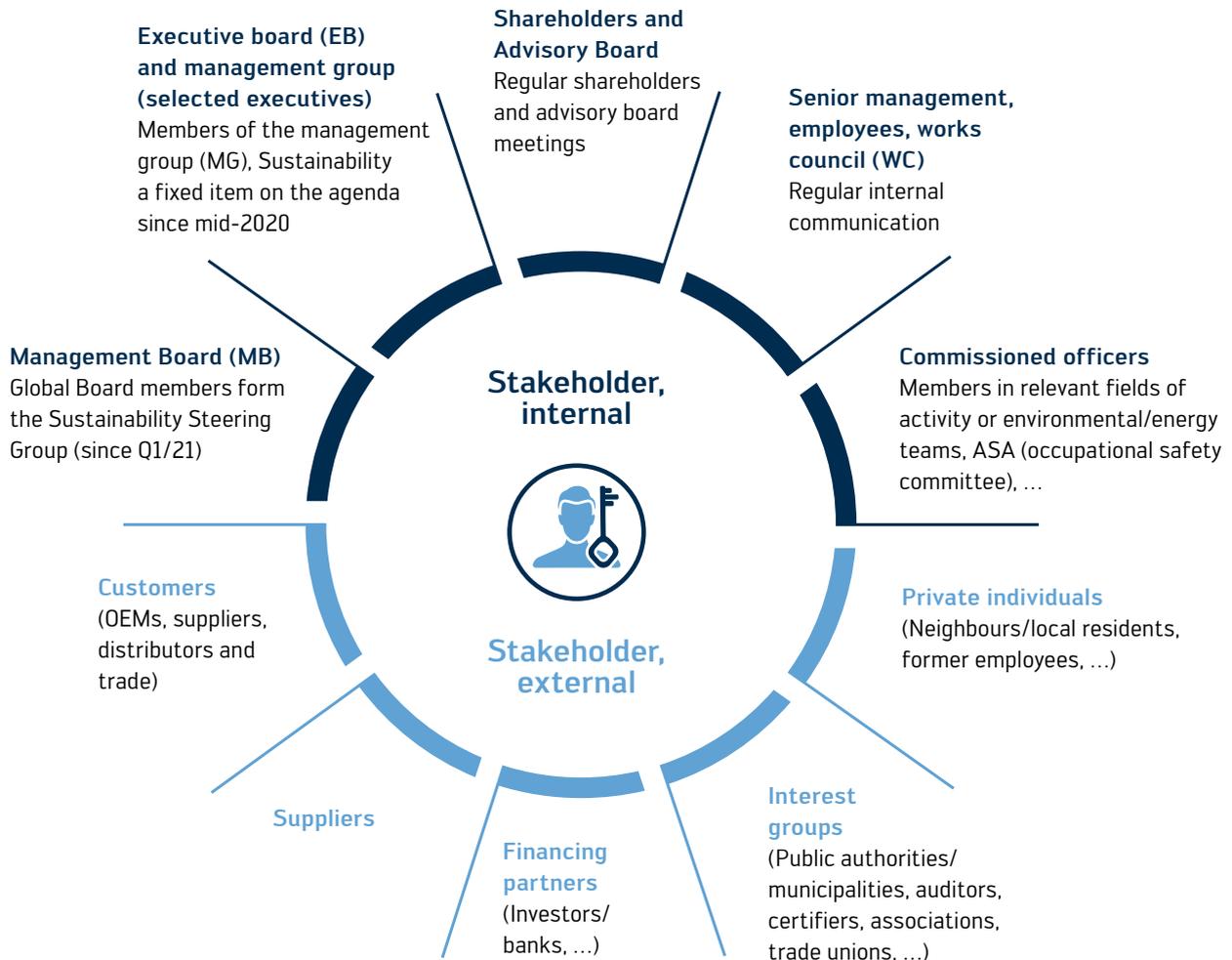
Involvement of stakeholders

We are aware that as a globally-active machine engineering group we have a responsibility to initiate and consistently implement sustainable action at all levels of our business activities. To do so, we receive valuable impetus from the exchange with the various stakeholders (stakeholder groups). In recent years we have intensified this contact, including and with particular with regard to our sustainability strategy. In this context we want to integrate experiences and expectations, promote the implementation of our strategy and define specific steps towards sustainability. In the context of our other business activity too, we interact regularly and closely with a range of stakeholders.

In preparation for focused stakeholder communication, the key stakeholder groups, both internally and externally, were defined in 2021. The decisive criterion, in addition to the proximity to at least one of the companies in the group, was the active involvement of the individual stakeholders. These included in

particular (frequently institutionalized) communication and the possibility to influence the activities of Kurtz Ersa. Correspondingly, a stakeholder is at least the addressee for certain communication forms, frequently also driving force in the form of (operative and strategic) decision making. In some cases, the contact is (partially) subject to legal regulation (e.g. in the case of unions, works council), in any event we are mindful of the need for open and equitable dialogue.

Internally, the list of our stakeholders encompasses all employees, in particular, the management, the executive board, the shareholders, the members of the advisory board and the works council. Among external stakeholders, the focus is on customers, suppliers and further business partners, journalists, interest groups (such as investors/banks, public authorities/municipalities, auditors, certifiers, associations, trade unions) and private individuals/neighbours/abutting owners, former employees) and private individuals. [\[GRI 2-29; 2-6-c\]](#)





Reporting procedure

This report in reference to the GRI Standards complies as closely as possible with the stipulations of the standard as completely updated and in part extended in 2021. References to the respective chapters have been adapted accordingly in the GRI Content Index. The content index can be found at the end of the Report (page 74).

With our GoGreen250 initiative, we are elevating sustainability to one of the central leitmotifs of our corporate orientation. This is the path we want to, and have to, tread, taking all the relevant stakeholders into account, which is why we established a Sustainability Steering Committee in the first quarter of 2021, composed of the international Management Board of

Kurtz Ersä. The Steering Committee tasks the Project Management Offices (PMO), among others, with the continual further development of the GoGreen250 initiative and with the collection of relevant data and the presentation of a sustainability report.

The committee determines the orientation and main focus of the sustainability strategy, decides on the implementation of the proposed projects and measures and monitors the result in project reviews. Among the responsibilities of the Steering Committee is the examination and approval of the Sustainability Report prior to publication. To date, we have dispensed with an additional external examination with regard to compatibility with the GRI Standards [GRI 2-5; 2-9; 2-12; 2-14]

Analysis of material topics

The term “material topic” encompasses a central element of sustainability reporting and therefore moves to occupy a central position in corporate sustainability management. According to GRI, material topics are determined by consideration at two dimensional levels: At one level the significance from the stakeholder perspective, at the other level the effects of the corporate action. With the updated specifications for determining material topics, the GRI particularly emphasizes the effects of a company’s business activity. Of particular importance is an inside-out perspective, which means that material topics are to be determined on the basis of the impacts of the company’s own business activity on the economy, environment and society. This is augmented by the stakeholder perspective in which all relevant stakeholder groups (including internal groups) determine the material topics from their standpoint.

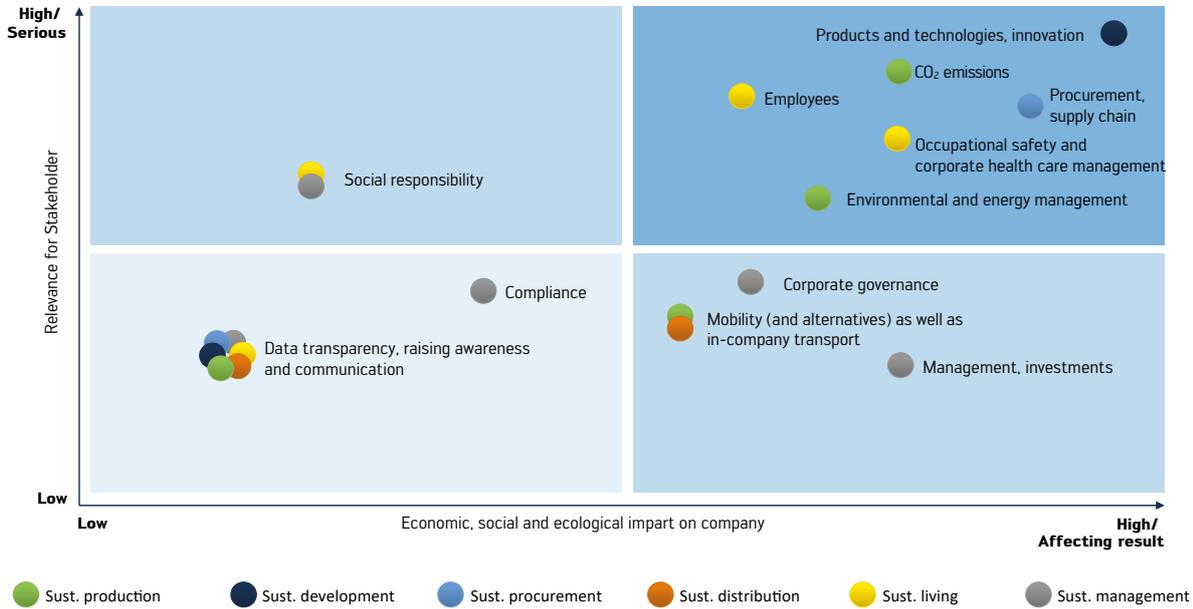
At Kurtz Ersa too, an analysis of material topics is the basis for the selection of central topics and fields of activity. A fundamental basis for this was a stakeholder survey initiated by the Sustainability Steering Group in mid-2021 with the aim of identifying and prioritizing major topic areas. In addition, since the second quarter of 2020, a process has been in place in which, within the framework of workshops and meetings, specialised staff and senior management from all parts of the company reflect on and further develop Kurtz Ersa’s sustainability strategy with the involvement of the Management Board and the PMO. Here, aims and measures are specified more closely and assigned to the topic areas. This approach ensures that various points of view and priorities with regard to the structuring of the points are taken into account. The final definition of the six major topics ensues in the Steering Group. In addition, on a quarterly basis, the PMO reports to the steering committee on progress and measures from the individual teams. [\[GRI 3-1\]](#)

Within the context of the material topics analysis, the various stakeholders have undertaken an assessment of the significance of sustainable aspects. This emphasis and the demarcation of less significant topics resulted in the following points of focus on which we are concentrating in this report and on the basis of which we illustrate our targets, measures and development potential with regard to sustainability. The list of topics matches that of the previous year, as the major themes have not changed. This also ensures comparability with data from the previous report and the clear visibility of a development with regard to the material topics. We are reporting specifically on

- **Sustainable Development** – Products, technologies and innovations
- **Sustainable Procurement** – Procurement, delivery chain, packaging waste
- **Sustainable Production** – Internal energy consumption (production processes, administration, buildings, mobility [and alternatives]) as well as internal transport, production, packaging and municipal waste, carbon emissions
- **Sustainable Selling** – Mobility (and alternatives) as well as opportunities to use digital tools to avoid business travel by road or by air
- **Sustainable Management** – Compliance, social responsibility, corporate governance, management/investment
- **Sustainable Living** – Social responsibility, employees, occupational safety and corporate healthcare management [\[GRI 3-2\]](#)

We are, of course, aware that the stakeholders’ requirements with regard to sustainability at Kurtz Ersa are constantly growing. We are also drawing on the material topics analysis of our business activities to determine the topics and measures with the greatest impact on sustainable development and thus provide grounds for the focusing of our resources on certain measures.

Material topics matrix



Report profile

The reporting period of this Sustainability Report encompasses the 2022 business year from 01.01. to 31.12.2022. Editorial deadline was 31 March, 2023. Every year, Kurtz Ersa publishes a new edition of this Sustainability Report relating to the previous business year. The data in this report covers the same period as the current financial report. [\[GRI 2-3 a-c\]](#)

At Kurtz Ersa, sustainability is an inter-disciplinary issue, consequently the contributions of a wide range of stakeholders from the group companies are incorporated into the report.

Responsible for the implementation and contact partner for queries are

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[\[GRI 2-3 d\]](#)

Governance structure and governance body

The Kurtz Ersa Management Board (Global Board) comprises seven senior executives, each of whom is responsible of a relevant business division or a region. The Management Board can call on the support of an Advisory Board which is on call to provide assistance. For the last two years, the Sustainability Steering Group, consisting of the international Management Board of Kurtz Ersa has been directing the company's sustainability management, i.e. the impact of Kurt Ersa's business activity on the economy, the environment and on people. This group is also tasked with the role of most senior supervisory authority when it comes to the scope and progress of the sustainability measures. Members of the Steering Group are:

- Ralph Knecht – CEO, Chair of the Management Board, responsible for IT, Quality Management & Communications
- Thomas Mühleck – CFO, responsible for Corporate Finance, Controlling, Human Resources, Procurement & Supply Chain, Real Estate, Logistics
- Uwe Rothaug – Director Kurtz GmbH & Co. KG, responsible for Moulding Machines, Global Sales Europe & Asia
- Bernd Schenker – President & COO Kurtz Ersa Asia, responsible for Region Asia and China
- Albrecht Beck – President & COO Kurtz Ersa America, responsible for Region USA & Mexico
- Dr. Michael Fischer – Director Ersa GmbH, responsible for Electronics Production Equipment
- Dr. Michael Wenzel – Director Kurtz Ersa Automation GmbH and SCHILLER AUTOMATION GmbH & Co. KG, responsible for Automation
[\[GRI 2-9; 2-11-a\]](#)

The inclusion of the respective directors from the international operations in the supervisory body ensures that all regions and parts of the company enjoy equal representation. At the same time, these positions bundle comprehensive budgeting and staffing responsibility, so that measures promoting sustainable development can be passed and initiated directly. [\[GRI 2-10\]](#)

Advisory Board and shareholders are regularly informed on the status of planning and implementation. The PMOs are tasked with the implementation of all measures arising from the management of the specified impacts. [\[2-13\]](#)

Remuneration policies

We aim to anchor the awareness of sustainable processes and our desire to implement the GoGreen250 initiative even more firmly in our corporate actions. For this reason, we have linked one element of the annual bonus for Management Board Members and executives to sustainability criteria. In this we are guided by the ESG rating which represents an objective benchmark for the performance of a company in the areas environment, social affairs and corporate management (ESG) and is drawn up annually by external experts. Thus progress in sustainable development is reflected for the first time in our remuneration practice. [\[2-19-b\]](#)



The Global Board of the Kurtz Ersä Group with the former CEO Rainer Kurtz (front, left to right): Albrecht Beck, President and COO Kurtz Ersä, Inc., Uwe Rothaug, Director Kurtz GmbH & Co. KG, Michael Fischer, Director Ersä GmbH, Michael Wenzel, Director Kurtz Ersä Automation GmbH and SCHILLER AUTOMATION GmbH & Co. KG, Ralph Knecht, Kurtz Ersä CEO, Rainer Kurtz (former CEO), Bernd Schenker, President & COO Kurtz Ersä Asia, and Thomas Mühlecke, CFO

Organizational structure of the Kurtz Ersä Group



17 goals for sustainable development

In September 2015, the United Nations (UN) adopted the 2030 Agenda. At the heart of the agenda are 17 Sustainable Development Goals (SDG) which are intended to make a significant contribution to solving global challenges in the areas of sustainable economic activity, environmental protection and social justice. The community of states therefore places the focus on combating extreme poverty, improving the living conditions of all people and protecting our planet, and emphasizes that the global challenges can only be solved through joint action. Since 2016, the member countries have been in the process of translating this vision into national development plans and organizing their implementation. Civil society is thus also called upon to play its part and promote sustainable development.

Kurtz Ersa welcomes the UN sustainability goals and supports the implementation as far as possible. Many elements of our sustainability strategy correspond to one or more of the goals of the 2030 Agenda, so that many of our measures in specific implementation are also a contribution within the meaning of the UN Sustainable Development Goals. In preparing our Sustainability Report on the 2022 business year, we have, for the first time, specifically assigned our fields of activity to the 17 SDGs in order to demonstrate the common direction of movement more clearly. Here we have identified eight SDGs which are significantly matched or correspond to our corporate actions. In the long term, it is our aim to ensure that our sustainability management contributes to implementing as many of these goals as possible.



SDG 3: Good health and well-being

The goal is to ensure good health for people of all ages and promote their wellbeing. We pursue this goal by making the health of our employees our primary concern in our internal processes and also by ensuring that our products, both in their manufacturing and in their use, do not negatively impact on human wellbeing.



SDG 4: Quality education

Here the focus is on an inclusive, equal-opportunity and high-quality educational system. In addition, the possibility of life-long learning should be available to all. We are aware that education is key to a just and viable future society and that our company too is dependent on the (advanced) training of our employees. This is why we established the Kurtz Ersa Hammer Academy, cooperate with universities and invest in the education of employees.



SDG 7: Affordable and clean energy

In this way, access to affordable, reliable, and modern energy is to be widely secured for all. Particularly such energy-intensive branches as machine engineering bear a responsibility to promote resource-preserving energy sources. We not only use green energy, but also increasingly rely on our own energy generation by means of photovoltaic.



SDG 8: Decent work and economic growth

The focus here is on permanent, wide-scale and 'sustainable economic growth and on measures geared towards full employment and fair work for all. Because work not only secures livelihoods but should also hone the workers' own skills and provide meaning. Our workplaces ensure secure employment and an element of economic growth.



SDG 9: Industry, innovation and infrastructure

This goal describes the aspiration to develop a stable infrastructure which, in a widespread and sustainable way, will promote industrialisation. Together with our customers, we are working on innovative solutions for the challenges of the future and in part developing a modern infrastructure, the development and utilisation of which will become ever more sustainable.



SDG 12: Responsible consumption and production

The increasing scarcity of resources on our planet necessitates fundamental change in our production and consumption practices. Accordingly, the goal promotes the implementation of more sustainable consumption and production patterns. This area is a central one as we can greatly influence the production and use of our products. For this reason, we pay close attention to ensuring economical use of resources in production, the reduction of waste and energy use, durable products and – where possible – replacement of parts rather than whole machines.



SDG 13: Climate action

The threat posed by climate change requires immediate measures to combat it and to curb its effects. For us, this means reducing the proportion of the harmful CO₂ output by forgoing, or increasingly foregoing fossil fuels.



SDG 17: Partnerships for the goals

This goal aims to strengthen the means of implementation and revitalize the global partnerships for sustainable development. We too are convinced that we can only achieve the sustainable development goal by working together and therefore address all stakeholders in our measures. In addition, we are involved in national and global networks and avail of transparent and sustainable supply chains.





Sustainable Development.

Right from the product idea and its development, we influence the sustainability of our components and applications.



Introduction

Sustainability is an issue that doesn't only rear its head in the production, use or even disposal of products, Rather it is vital to take sustainable aspects into account as early as the product planning and development stage. Studies show that up to 80 % of all product-related environmental impacts are determined in the design phase. This leads to the conclusion that the overall environmental impact of products could be significantly reduced by taking sustainable aspects into account from the very beginning of their development.

Far-sighted development

As a globally-operating machine engineering company, we develop highly-specialised solutions for our customers and are therefore an active part of a particularly energy-intensive and material-intensive sector. As a result, our corporate activity brings with it the special responsibility to record and appropriately take into account all dimensions of sustainability (material topics) as early as the product development stage. Sustainability is closely aligned with the idea of a closed-loop economy on the one hand and with defined standards regarding workers rights and human rights on the other. [GRI 3-3b]

Even the development of new product components and solutions should factor in ethical, social and ecological aspects. We intend pursuing this aim, step by step in the coming years until it has been completely implemented. This extends across the entire life cycle of a product, from the choice of required commodities and materials and where they are sourced, to procurement and production processes and to delivery methods and environmental impacts. Thus, even at this early stage, we influence the consumption of energy and resources as well as the social aspects in product conception and use. Similarly, we factor in the greatest-pos-

sible waste prevention in production and the issues of disposal and recycling at the end of the service life of a product. This focus on the entire life cycle of a product is particularly important as otherwise the result could be a relocation of environmental problems from one life cycle phase to another.

We at Kurtz Ersa are convinced of the necessity of not only keeping a careful eye on costs but also of making economical use of the necessary resources. In addition to the typical technical requirements we also factor in essential eco-balance data in the early phase of development, for example data on the subsequent consumption of energy and operating resources and on manufacturing efficiency. Of course in doing so we work closely with our customers and their specific requirements. The aim is to reduce the use of resources (in particular energy and operating resources) in the subsequent operational phase, as well as reducing the noise and heat emissions and increasing the maintenance intervals. This approach also brings cost advantages: By using the appropriate technology combined, for example, with an energy-efficient soldering system, the costs for resource use can be reduced by a five-figure sum – for just one machine. [GRI 3-3d]

¹„It is estimated that over 80 % of all product-related environmental impacts are determined at the design phase of a product.“
Source: <https://joint-research-centre.ec.europa.eu/scientific-activities-z/sustainable-product-policy>

Outstanding environmental management in compliance with ISO 14001

Firmly-established environmental management contributes to ensuring that such sustainability factors as endeavours to attain a closed-loop economy and economical use of natural resources are incorporated into our corporate activities. For many years, certification of the German sites in accordance with the ISO 14001 Standard have shown that Kurtz Ersa consistently applies a transparent and verifiable environmental management system. At all certified sites, the examination by independent experts encompasses the entire range of activities of the respective

company and thus assesses the entirety of the operational processes. The certificate underlines the seriousness and professionalism of a business model with sustainability orientation. This is further supported by the AMGTA (Additive Manufacturer Green Trade Association) which bestowed the Environmental Management Systems Award to Kurtz GmbH & Co. KG in May 2022 in recognition of its dedicated environmental management. Among other things, the non-profit organization promotes the ecological benefits of additive manufacturing, AM). [GRI 3-3 c-e]



Outstanding innovative quality

In order to achieve national and global climate goals, innovations are needed which drive forward environmental and climate protection. For this reason, in 2022, the Federal Ministry of Economic Affairs and Environmental Action is honouring innovative technologies, processes, products and business models which are breaking new ground in the area of climate and environmental protection and thus acknowledging commitment in the areas of business and research. At the very first event, Kurtz Ersa was awarded the prize in the category "Environmentally-Compatible Technologies". As a manufacturer of moulded parts machinery, we entered the competition with the project "Resource-efficient production of moulded parts in bio and recycling materials using radio waves (RF process)". Kurtz Ersa invested almost four years in the market-ready development of this technology. In the RF method, particle foam is processed using electromagnetic waves in the high-frequency area. Compared to conventional steam processing, and depending on the material used, RF allows savings

of up to 70 % CO₂, 90 % energy and even 100% water. In the conventional process, the consumption of water, in particular, is considerable, on the one hand for water vapour, and on the other for cooling the special water basins. Furthermore, RF technology makes a substantial contribution to the closed-loop economy, achieving a recycling rate of 100 % and, for the first time, permitting the processing of biological materials. This by-product of foodstuff manufacturing is generally disposed of as waste. Due to a welding temperature of up to 250 °C, the RF process opens up access to new business fields requiring the processing of high temperature resistant materials, for example the aviation and automobile industries and, in particular, for various components for e-mobility. Criteria for the awarding of the prize were innovative quality, the contribution to climate and environmental protection, the market potential of the innovation, benefits for the consumer and the enterprise and possible synergy effects. [GRI 302-4a, 303-1]

Solid basis for greater efficiency

Our entrepreneurial activity is inseparably linked to a drain on natural resources. For this reason, we are particularly anxious to improve efficiency in their use, to increase the proportion of recycled materials and to reduce the energy demand of our products and services. In doing so, we call on scientific support, cooperating with the Duale Hochschule Baden-Württemberg. Here, in the context of a number of project reports, the energy consumed during the operation of a range of Erska GmbH soldering machines is examined in detail. A further focus of the work lies on the life cycle of the machines, and how these differ under certain environmental aspects (for example with regard to the production of raw materials, installation of the plant, operation at the customers and disposal). We anticipate that the results will provide specific reference points for a further reduction of the energy used.

Even today, measures are deployed at Kurtz Erska which take all value chain phases into account in order to ensure economical use of natural resources in the planning and development stage. Our internal focus is on increasing the proportion of recycled materials and packaging and reducing the energy requirements.

Specifically, we will measure and optimize the energy consumption of our machines. To this end, we are currently developing key performance indicators (KPIs) which will allow us to ensure comparability between different machine generations. This process is to be concluded for our entire machinery range by the end of 2024. Each new machine generation and new developments will then assume the KPIs. [\[GRI 3-3 d,e\]](#)

We wish to revise the statements in the Sustainability Report 2021 in respect of the development of

KPIs with regard to the heat radiation of our machines. In the meantime it has become evident that the former goal of a maximum surface temperature of 30 °C for newly-developed machines will not be attainable in the foreseeable future. Therefore data on corresponding comparative values and target values are neither being collected nor pursued at present. [\[GRI 2-4\]](#)



***By end of 2024:
 Definition of KPIs as a
 standard in development***



***Raising staff awareness
 through goal setting and
 personal initiative***

A wealth of ideas serving one goal

The sustainable development process at Kurtz Ersa also includes our staff. In many regards we bring possible improvements into sharper focus, for example self-commitment to CO₂ neutrality or assessments from external experts such as the ESG Rating. One tool in this improvement process, particularly important due to its low-threshold nature, is our idea management in the framework of which every staff member can submit ideas of their own and point out unexploited potential. In 2022, almost 19% of all the ideas sub-

mitted related to the area of sustainability. Following on a level of 16% in the previous year, this is a new record.

Similarly, the number of suggestions submitted was higher than ever before. Due to the looming energy shortage in spring of 2022, a large number of the suggestions related to savings on natural gas, further expansion of the use of regenerative energies and the further reduction of (packaging) waste. [\[GRI 2-29\]](#)



Reduction of energy consumption

A particular challenge is posed by the fact that soldering technology is developing almost as fast as electronics for which soft-soldering remains the major joining technology between the individual components. Therefore we are constantly engaging with new processes and technologies in soldering and solder paste printing and integrate new developments into our machines and applications. New findings are examined by senior management and by the Sustainability Steering Committee to determine their suitability for implementation into the production process.

We see a further contribution to sustainability in the ongoing developments in reflow soldering (common soft-soldering process in electrical engineering). For example, for the HOTFLOW THREE model series, Kurtz Ersa developed a special motor and control unit which only draws as much power as is actually required. The process ensures efficient utilization of the power used, thus sinking the energy requirement. In addition, a special cleaning system lengthens the servicing intervals.

Another sustainable element is the modular development of our selective soldering systems. The individual modules in the VERSAFLOW model series can be practically combined, offering an infinite number of options. This allows our customers to expand parts of the soldering unit to meet new requirements; a completely new acquisition is therefore unnecessary. This cuts down on the use of material and energy resources, in particular the electrical power which would have been needed for production. With increased demand, for example, the machine throughput can be adapted with the installation of a module with two parallel soldering nozzles (double pot module) or the transport of components via two belts (dual-track transport) without the need for additional spaces. For the manufacture of new products, or for an increase in production volumes, our customers can expand the system by adding further modules; in addition, they have the option of configuring or retrofitting modules individually. In addition to the cost benefits ensuing from the lower investment volume, better use is made of the existing production space and equipment, and natural resources conserved. [\[GRI 302-4\]](#)

Sustainable Procurement.

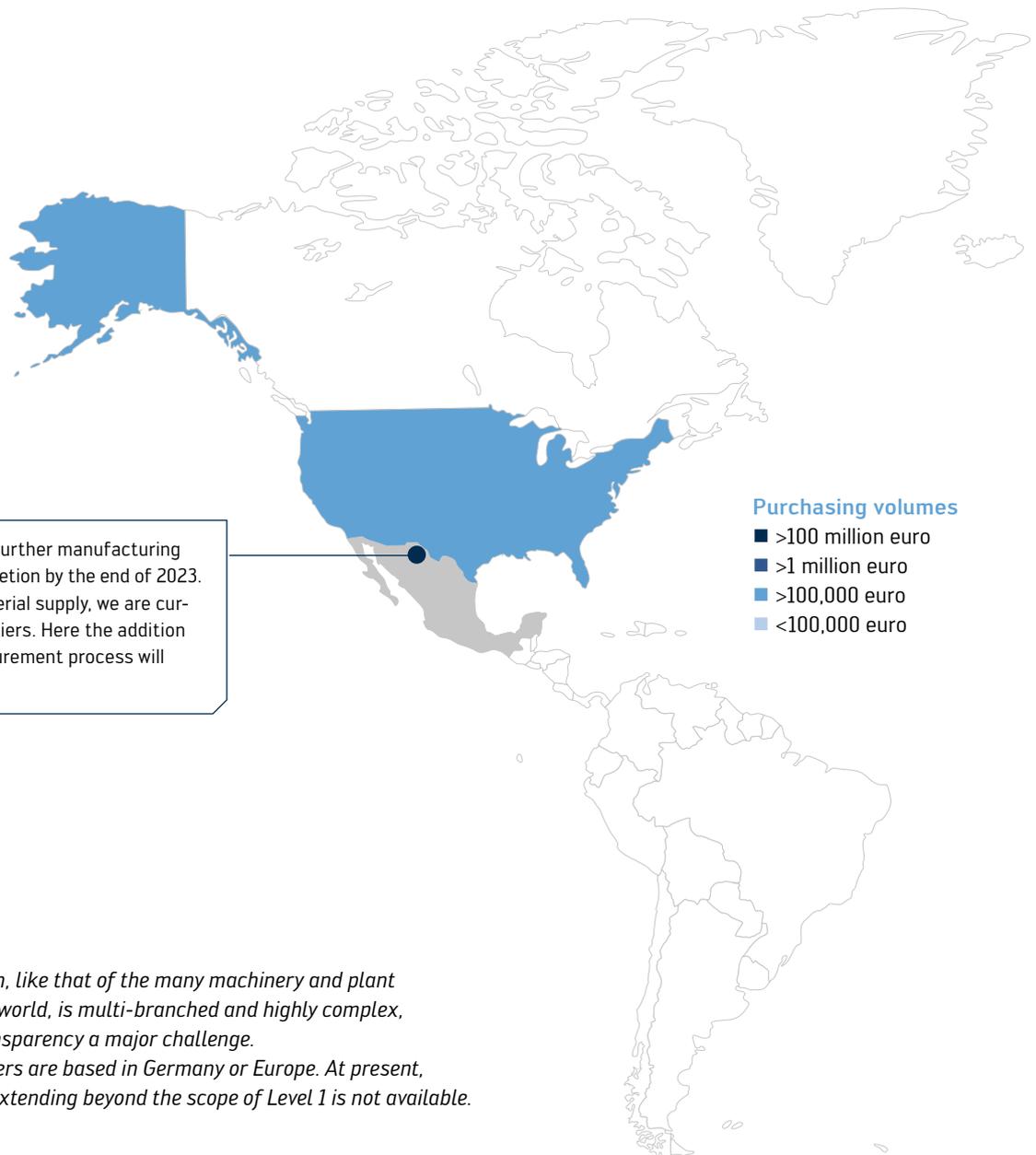
We rely on our suppliers but we don't allow ourselves to become totally dependent. We keep a very close eye on where our parts and components come from.





Introduction

In order to achieve our CO₂ neutrality goal, taking action at our own production site alone is not enough; we also look at our supply chain. Even apart from the CO₂ emissions which arise, the procurement of goods and services impacts on environment, society and the economy in a range of different ways. Sustainable procurement takes the entirety of these impacts into account. One of our aims is therefore: to develop a consistently sustainable supply chain which complies entirely with SDG 17 (UN Sustainable Development Goals, see p. 16 et seq.) – “Partnerships for Goal Attainment”. To do so, we initiate change at a wide variety of levels and thus help shape the changeover to holistically sustainable procurement. [GRI 3-3]



We are currently building a further manufacturing site in Mexico, due for completion by the end of 2023. In order to secure local material supply, we are currently looking for local suppliers. Here the addition of sustainability in our procurement process will come into play.

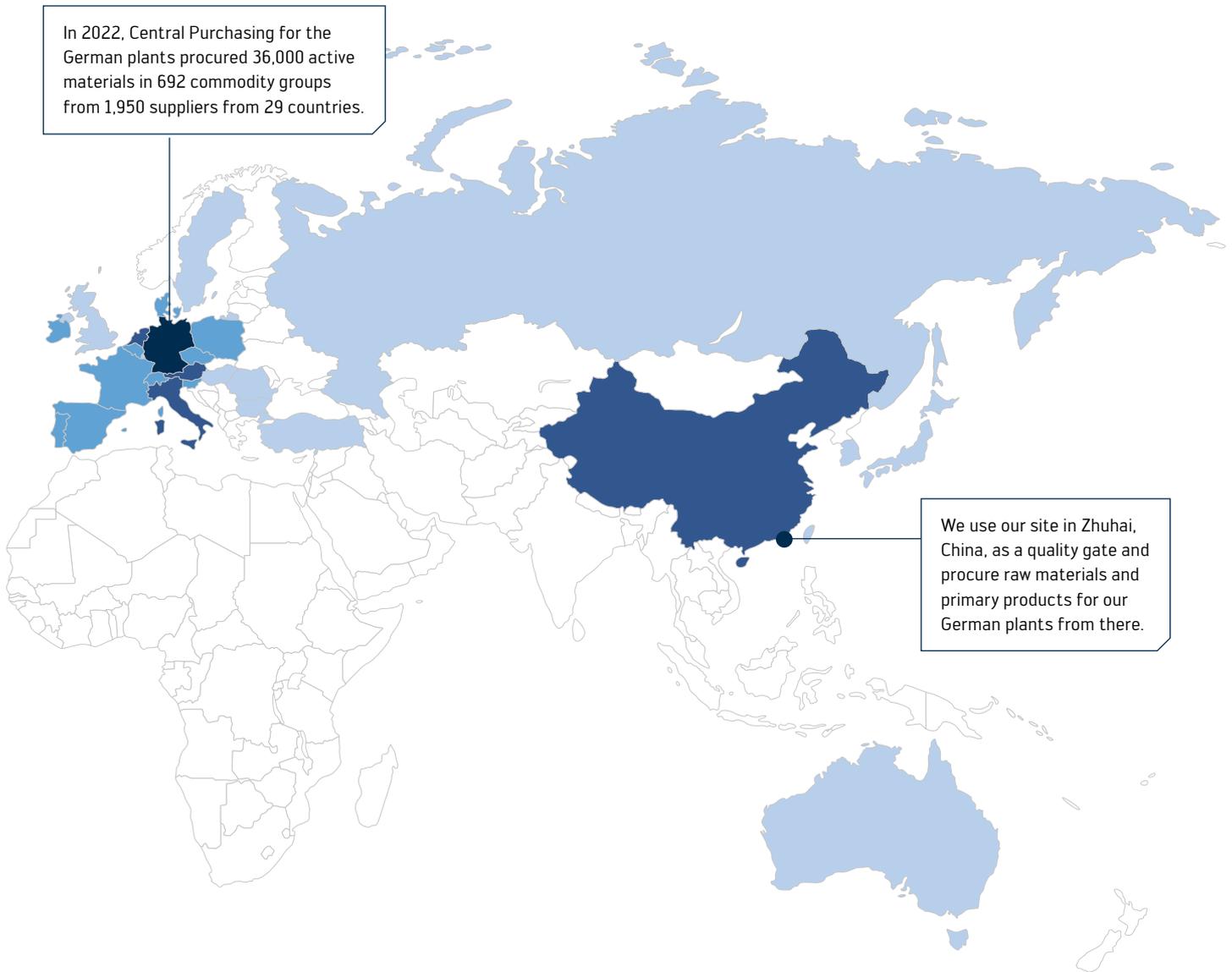
The Kurtz Ersa supply chain, like that of the many machinery and plant manufacturers around the world, is multi-branched and highly complex, making the creation of transparency a major challenge. Most of our contract partners are based in Germany or Europe. At present, data on indirect suppliers extending beyond the scope of Level 1 is not available.

Assuming responsibility in the supply chain

At Kurtz Ersa, sustainable procurement means keeping a close eye on the environmental, social and economic impacts of the goods and services we buy. Our goal is to advocate for humane working and living conditions and comprehensive environmental protection across the entire supply chain, for all products. A major challenge is posed by the often non-existent or highly-limited transparency along the supply chain, increasing the risk of disregard for working and social standards and harmful environmental impacts. We respond to this challenge by main-

taining long-term, partnership-based relationships with our direct suppliers and improving the quality of our data, step by step.

In order to lend the topic of sustainability the necessary strategic relevance, a Sustainability and Supply Chain Compliance Management unit was set up in the Central Procurement Office as of 1 July, 2022. This is responsible for the implementation of the associated goals and reports directly to the Chief Procurement Officer. [\[GRI 2-25-a\]](#)



Supplier locations

- | | | | | | | | |
|---------|-------------|----------------|----------|---------|------------|-------------|------------------------------------|
| Germany | Netherlands | Switzerland | Slovenia | Denmark | Bulgaria | Hungary | Australia |
| China | Hongkong | Spain | Poland | Sweden | Romania | Japan | |
| Austria | USA | Czech Republic | Ireland | Russia* | Luxembourg | Taiwan | |
| Italy | Portugal | Belgium | France | Turkey | UK | South Korea | *Prior to imposition of sanctions. |



Purchasing volumes of the German plants approx. 150 million euro

A large proportion of the purchasing volume is accounted for by productive materials which we procure primarily in the form of pre-fabricated components. We purchase raw material only to a minor extent. [GRI 2-6-b]



*Transport
0,6%*



*Energy
0,8%*



*Services
6%*



*Productive
material
87,2%*



*Non-productive
material
3,9%*



*Steel
(raw material)
0,7%*



*Other
raw materials
0,8%*

Social and ecological standards for suppliers

Before we enter into a business relationship with a new supplier, they receive a copy of our Supplier Code of Conduct for acknowledgement.

The intention is to draw up a new, group-wide Kurtz Ersa Code of Conduct in 2023, which summarises our understanding of ethical and sustainable con-

duct. For the future, this will apply not only for all employees but also for all business partners, and consequently also for suppliers. In addition, we consider various management system certificates such as ISO 14001, ISO 45001 or ISO 50001 in the selection of our suppliers. [GRI 2-6-b]

Changes resulting from Supply Chain Due Diligence Law

In view of the Supply Chain Due Diligence Law (LkSG), which will affect Kurtz Ersa as per 1 January, 2024, however, this will no longer suffice which is why supply chain management has been under review since July 2022. The existing supplier selection, approval and onboarding processes will be adapted accordingly. In the course of regular analysis, potential human rights and environmental risks will then be assessed on the basis of various country indices, and taking information on branch groups and commodity groups into account, an additional questionnaire on the topics of human rights and environment as well as, where necessary, quick checks and audits augment the risk assessment at supplier level. Based on the identified risks, we will devise preventative and remedial measures together with risky suppliers and make reparation where infringements have occurred.

We will introduce these changes step by step at our existing suppliers and define them as the basis for cooperation in relationships with new suppliers. In order to monitor the effectiveness of our action, we will develop a corresponding performance measurement system and by adapting the supplier evaluation, provide suppliers with feedback on their sustainability performance.

Even today we are actively approaching our suppliers to prepare them for the upcoming changes. Thanks to our standardized slideshow, the Supply Chain Due Diligence Law and sustainability are already an established topic in our meetings with suppliers.

In the course of 2023, the communication relating to the two themes will be considerably expanded, in both internal and external training courses and workshops. [\[GRI 414\]](#)

Implementation with digital support

It became clear to us very quickly that the newly-emerged processes which are currently undergoing constant further development display a high degree of complexity – as do our supply chains. Software solutions can provide excellent support. In the course of a comprehensive selection process, the solutions offered by various suppliers were examined and assessed until we ultimately selected the most suitable solution and partner for long-term and fair cooperation.

Together with our supplier osapiens, we will begin with the implementation in our sites in Wertheim and Kreuzwertheim from April 2023. For 2024/25, its intro-

duction is planned for the subsidiaries SCHILLER AUTOMATION GmbH & Co. KG and Kurtz Zhuhai Manufacturing in China.

The cross-group complaints mechanism will also be reflected in the new system. This can be used by register complaints regarding suppliers or others involved in the supply chain. To date it has been possible to submit complaints regarding suppliers by e-mail through our website, although it should be mentioned that no complaints were submitted in 2022. A special process has been defined for dealing with complaints regarding suppliers. In future, all results will be incorporated into our risk management. [\[GRI 2-6-b, GRI 414\]](#)



First steps towards CO₂ neutrality

Purchasing too has a contribution to make towards the Kurtz Ersa major goal of CO₂ neutrality by 2029. First steps have already been implemented in the past few years with the use of green energy (see p. 35) and the recording of CO₂-emissions in transport (see p. 31). For the year 2024, we plan to change over to the use of biogas at our German sites (see p. 35).

Purchasing of non-production materials also offers numerous opportunities with regard to sustainability. We are currently determining the relevant potential. The spectrum extends from sustainable office material to certified IT products from companies which practice inclusion. [GRI 308]

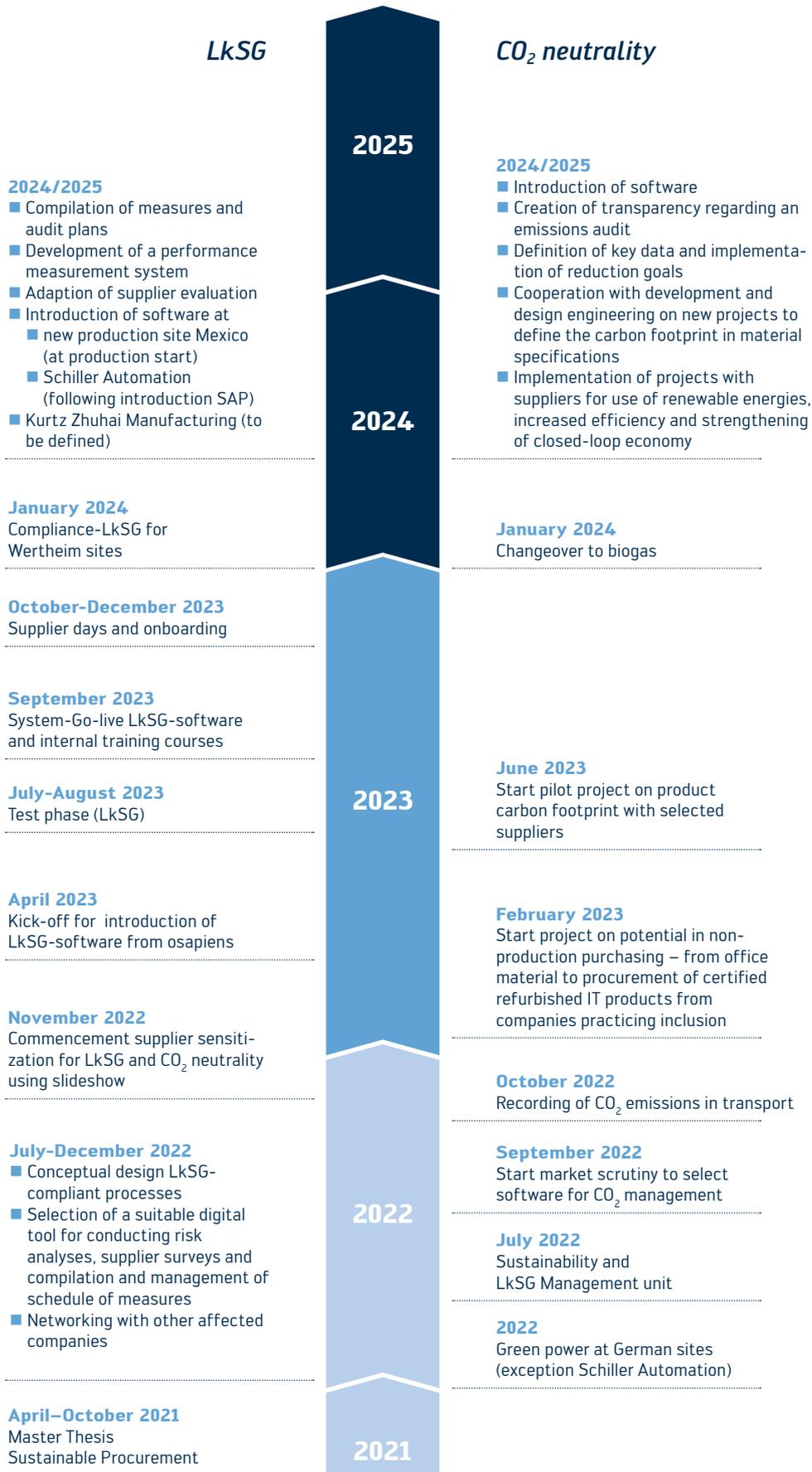
CO₂ software for purchasing

From mid-2024 onwards, we will increasingly be moving our CO₂ neutrality goal more firmly into the focus. We regard the basis as being in the selection and introduction of CO₂-software, with the aid of which we intend gaining an overview of the emissions of our purchased goods and services. In the next step, we will then define the key data and reduction goals. In order to provide incentives to our suppliers, we will also incorporate these into our supplier evaluation.

However we will not only be initiating projects on renewable energy, increased efficiency and closed-loop economy externally with our suppliers, we will also be intensifying the internal cooperation, in particular with development and design engineering. The aim is to establish the carbon footprint in the material specifications and take these into account in the product conception process in new projects.

Together we are strong

Implementing the specifications arising from the Supply Chain Due Diligence Law, as well as achieving CO₂ neutrality present us with challenges. In this context, we engage in an exchange of information not only with our suppliers but also with our network partners. Numbered among them are VDMA, the „Helpdesk on Business and Human Rights “ of the Agency for Business and Economic Development and with closely-associated companies under the motto “Cooperation rather than competition”. [GRI 2-28]



Sustainable Production.

*We invest heavily in making our
production more resource-efficient.
For example by producing
our own solar energy.*





Introduction

Our product offering at Kurtz Ersa is wide-ranging and extends from modern soldering systems to foundry machines and the production of moulded particle foam parts and the associated automation solutions. In manufacturing goods to meet our customer needs, we are dependent on the use of resources, in particular with regard to our material and energy needs. This results in a variety of potentially significant sustainability aspects that are relevant for the company. Due to our commitment to sustainable processes we undertake major endeavours to minimize negative impacts on the environment and continuously intensify our activities in the area of environmental and climate protection. In view of the most significant influencing factors, we concentrate our internal undertakings on the reduction of our energy requirements, waste management and the reduction of CO₂ emissions (material topics). The measures not only support us in anchoring sustainable processes permanently in our production cycles, but also in operating our buildings and sites more efficiently.

Overview of entire product life cycle

Both in our “GoGreen250” programme and with our membership in the UN Global Compact we commit to consistently orienting our products and process towards sustainability goals. To this end, we want to significantly reduce our CO₂ footprint – particularly with regard to production in our own plants and to the individual product life cycles. Furthermore, within the framework of our Integrated Management System (IMS) we are committed to defining energy and environmental protection goals and to reviewing these annually and having them verified by external auditors. Because, in addition to the material and energy requirements for production, machines also consume further resources in the course of their life cycle – up to their disposal. Oils and other lubricants, in turn, contain fossil-based components, while energy is required for operation. It is therefore essential for us to reduce the impact on the environment as early as the development and production phase. When implementing new

products, we also keep a close eye on the operating phase in addition to meeting customer requirements.

Significant fields of activity in relation to our production are the areas of energy, CO₂ emissions and waste. Having looked only at the German sites in our first Sustainability Report for the 2021 business year, we are now expanding this report to include all international production sites; After all, we want to align our business activities with sustainable processes worldwide. For this purpose, we developed a concept in the course of 2022 on how the IMA standards can be brought into alignment at international subsidiaries and in the context of the respective regulations applying locally. This applies to the certified areas DIN EN ISO 9001 (Quality), DIN EN ISO 14001 (Environment) and DIN EN ISO 50001 (Energy), as well as DIN EN 45001 (Occupational Health and Safety). [\[GRI 3-3\]](#)

Energy

In addition to saving on material, a central credo in production at Kurtz Ersä is the efficient use of natural resources. For this reason, we take particular care to reduce energy use and waste. At the same time, we are increasing our efforts to produce our

own power and increase the share of alternative energy sources in the energy mix. In this way, we want to make a verifiable contribution to reducing the environmental impact in production.

[GRI 302]

Energy consumption within the organisation

The central energy management of Kurtz Ersä in Germany is certified according to the current version of the ISO 50001 standard. In addition to Kurtz Holding GmbH, this includes the companies Ersä GmbH and globalPoint ICS GmbH & Co. KG as well as Kurtz GmbH & Co KG and Kurtz Automation GmbH and also applies to Kurtz Ersä Logistik GmbH and our internal training unit Kurtz Ersä Hammer Academy GmbH. All company units therefore fulfil the requirements of the European Energy Efficiency Directive and its legal implementation in Germany, where it is regulated in the Energy Services Act.

The energy demand at Kurtz Ersä consist primarily of power, gas and diesel. Power is required above all for the operation of machines, equipment and IT systems, for the lighting of assembly halls and administrative buildings and for the generation of compressed air.

Natural gas is used mainly as an energy source for heat generation and, to a minor extent, as process gas. In addition, the company needs fuel (diesel, power, petrol) for its vehicle fleet. We report on the development of energy use for mobility in the Chapter Sustainable Selling (see p. 52).

Expansion of regenerative energies

Since January 2023, we have been using 100 % energy from regenerative sources (green energy) at all our German sites. We have also set ourselves ambitious goals for the remaining energy sources. We want to similarly change over our gas consumption to 100 % regenerative generation (biogas). The aim was to achieve this goal by the beginning of 2023. However, we had to postpone this plan by a year (to the beginning of 2024) as the energy crisis resulting from the war in Ukraine prevented the conclusion of contracts for biogas in the past year.

Furthermore, we want to increase the proportion of power generated in-house to 16 % of our ent-

ire energy consumption at the Kreuzwertheim and Wertheim sites by the end of 2023, at a minimum, however, to 400.000 kWh. With our own combined heat and power plant (CHP), we generated around 2.5 % of the entire power requirement of our German sites in 2022 (as was already the case in 2021). Despite the unchanged value, we continue to pursue our in-house power generation goals. For the planned expansion, we are currently installing three large-scale roof-mounted photovoltaic systems on the business premises of Kurtz GmbH & Co. KG (Kreuzwertheim) and Ersä GmbH (Wertheim-Bestenheid), which are to go into operation in the course of 2023. [GRI 3-3b]

Reduction of energy demand

Even more decisive than the step-by-step increase of in-house generated power is the reduction of the energy demand. For this reason, we are undertaking various endeavours to lower our power requirements. While in 2019 the group-wide demand lay at 4,328 MWh, it had dropped by 2021 to 3,307 MWh. In 2022, the overall consumption lay at 5,247 MWh, including however, for the first time, the figures for Schiller Automation as well as the international sites. If we deduct this share (539 MWh plus 1,742 MWh), the figure of 2,966 MWh remains, a drop of 10.6 % compared to 2021 or around 31.7 % compared to 2019. A smaller but growing share originates from in-house generated power (through a CHP) which rose from 21 MWh (2019) to 81.5 MWh (2021), an increase of 286 %. While, in 2022, the volume of in-house generated power rose by 13 % to 71 MWh, the 2.5 % share of the entire power requirement remained constant. The remaining power requirements came from energy suppliers.

While we missed our ambitious goal of a 550,000 kWh reduction in 2022, we have still achieved significant savings. At the German sites, the reduction amounted to around 400,000 kWh, despite a rise in order volumes. In the current year, 2023, we are striving for a further reduction of 250,000 kWh. [\[GRI 302-1a\]](#)

The reduced power requirement is due to a large extent to the decommissioning of galvanic coating and powder coating systems as well as to optimisation in the compressed air network. We have invested in new, energy-saving compressors and have consistently conducted measurements to detect leaks and reduced the compressed air network in a small number of places. In addition we have driven forward the conversion to LED lighting in company buildings. The lighting optimisation is to be extended across all German sites in 2023 and 2024.

The consumption of natural gas too as developed positively across the Group. In 2022 we consumed a total of 5.405 MWh of natural gas and have thus been able to keep consumption almost constant despite the inclusion of new sites. There, due to the reduction in room temperature in the past year, around 23 MWh less natural gas was consumed. A significant reduction in process gas, amounting to 196 MWh was a further contributory factor. Overall savings

lay at 1,019 MWh. This was achieved among other things by the decommissioning of galvanic coating and powder coating plant, so that the use of environmentally harmful operating resources has dropped. In addition, the more efficient planning of our production processes has had a positive impact. A further decisive factor was the completion of the decommissioning of galvanic coating. Specifically, the consumption compared to the previous year dropped by 18.0 % to 907 MWh; in 2019 the figure still lay at 2,011 MWh and in 2021 at 1,103 MWh. Thus the target savings of 380,000 kWh across the Group have been significantly exceeded (2021: 5,364 MWh, 2019 still 6,124 MWh). When only the German sites are taken into account, the reduction amounts to 19 %. In 2022, 78.8 % of the entire German gas consumption was accounted for by heating, 21.2 % by process gas. The ratio remains almost unchanged compared with the figures for the previous year.

The fall in process gas is accounted for primarily by the decommissioning of powder coating plant, as a result of which the use of environmentally harmful operating resources has sunk. A further contributing factor was the partial shutdown of the process steam generator and the completed decommissioning of galvanic coating plant.

Having significantly exceeded our target savings in natural gas in 2022, we aim to keep consumption constant this year. Optimisation of our existing heating system will only start at the end of 2023 and continue in 2024. For the year 2024 we will then announce specific target savings.

Savings will be achieved primarily through optimisation of our existing heating system, or through the installation of new and more efficient heating.

In the long term, we aim to draw up a greenhouse gas audit for our entire production facility, optimize it, step by step, and achieve complete neutralization or compensation by the end of 2027. In a first step, we will establish our CO₂ footprint in production by the end of 2023. [\[GRI 302-1\]](#)

The following graphs provide information on the actual extent of the reduction in energy consumption resulting directly from energy-saving and energy-efficiency initiatives. [\[GRI 302-4\]](#)

2021



2,5 % Internally-generated power



2022



-550.000 kWh power
(100%²)



Changeover to green power
(100%²)



-380.000 kWh natural gas
(100%²)



2023



16% internally-generated power



2024



100 % biogas



2029



CO₂ neutral

²Erreicht bis 31.12.2022.



Measures to reduce power consumption



Continuous optimisation of lighting (2%²)



Optimisation of production processes, (e.g. compressed air generation and air conditioning) (100%²)



Continuous optimisation of administrative processes (e.g. IT infrastructure and equipment) (0%²)



Optimisation of product-dependent consumption, (e.g. galvanic coating commissioning) (50%²)

Measures to reduce natural gas consumption



Dismantling of powder coating (100%²)



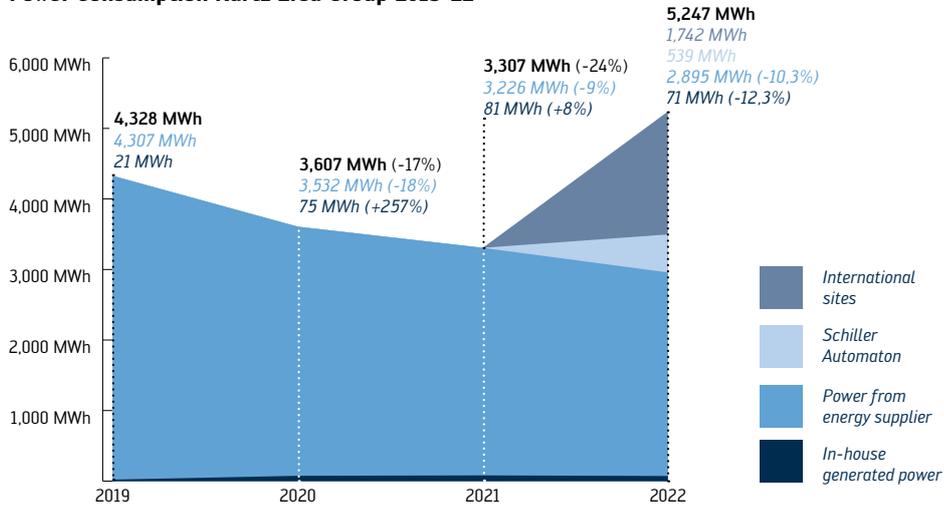
Reduction of process steam supply (40%²)



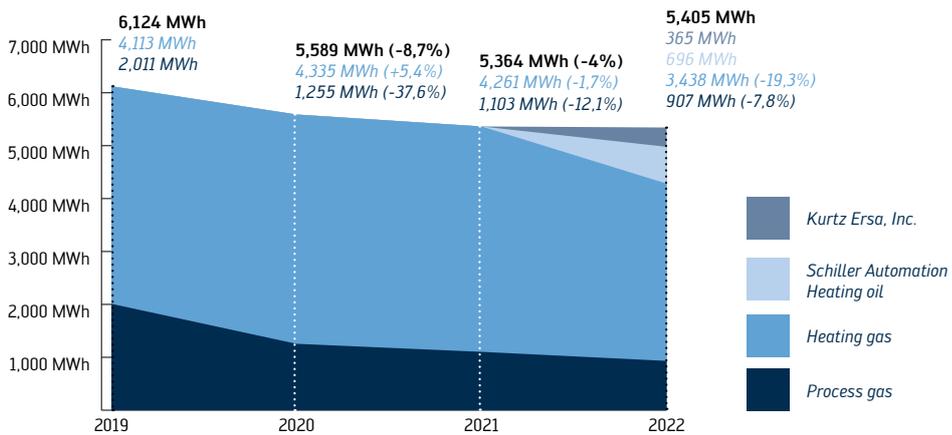
Continuous heating optimisation (3%²)

²Achieved by 31.12.2022.

Power consumption Kurtz Ersa Group 2019-22



Natural gas and heating oil consumption Kurtz Ersa Group 2019-22



Water

Water is a central resource and at the same time one which is increasingly unevenly distributed. Globally, water scarcity is becoming more severe in many parts of the earth. Our company too is dependent on water, which is why sustainable water management is a central element in our corporate environmental protection endeavours. This also extends to waste water which could become polluted with trace elements. We scrupulously observe the water protection laws and react immediately when these are tightened up by adapting our processes. [GRI 303]



-40,2 %

*Water consumption
from 2019 to 2022*



-79,5 %

*Process water consumption
from 2019 to 2022*



*Dismantling of
powder coating
(100%²)*



*Reduction of
process steam supply
(50%²)*

²Achieved by 31.12.2022.

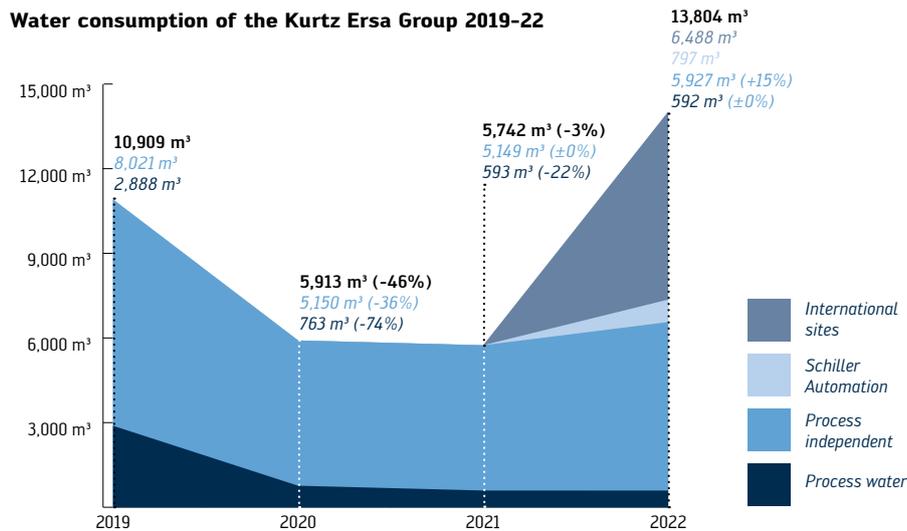
Sustainable water management

Sustainable water management at Kurtz Ersa encompasses several aspects. The central aspect is not to aggravate water scarcity by drawing this resource from an area suffering from water stress in which the water used is less than the inflow. In addition we are careful to ensure that as far as possible polluted water is only returned after purification.

In addition, our current and future construction projects are planned with large cisterns or infiltration ditches. These will be used to collect rainwater in order to cover water needs not requiring drinking water. When the Logistic Centre in Kreuzwertheim was being extended, for example, we availed of the opportunity to install infiltration ditches while earthworks were going on. By means of these, excess rain water seeps back into the groundwater.

Otherwise, our water requirements are drawn almost completely from the public water supply network. Due to the use of such innovative processes as RF-technology (see "Sustainable Development", p. 21) the proportion of process water in overall consumption shows a further sharp decrease to under 5 %. We involve our suppliers and business partners in our sustainable water management measures by reporting, where requested, on our own successes and offering process solutions which permit a reduction of consumption. Furthermore we raise staff awareness of economical use of drinking water, in order to further reduce water consumption. [GRI 303-1, -2]

Overall, water consumption figures throughout the Group are down on those of the reference year, 2019.



With the abatement of the Covid-19 pandemic and the downturn in WFH, however, consumption has risen compared to the figures for the previous year. Overall, consumption in 2022 lay at 6.519, following the 2021 figure of 5,742 m³ (plus 12 % and 10,909 m³ in 2019. Compared to 2019, the reduction amounts to 40,2 %. A significant reduction can be reported for process water. While this still accounted for 2,888 m³ in 2019, by 2022 the figure had dropped to 592 m³ (2021: 593 m³). This equates to a reduction of 79.5 % compared to 2019. The overall consumption of drinking water across the Group, however, has risen from 5.742 m³ to 13,804 m³ (plus 240.4 %). Here too, the increase is the result of the inclusion of the international sites and Schiller Automation.

When water consumption is shown on a pro capita basis, Covid-19-related effects also become evident. Many employees switched over – where possible – to a working from home model in 2020 and 2021, resulting in a pro rata drop in water consumption. The effects of the savings measures could also be seen in 2022. At the Wertheim site, consumption dropped from 12 m³/employee in 2019 to the current level of 9.1 m³/employee. Consumption is also falling in our international subsidiaries: Here the quantity consumed was reduced from 7.6 m³/employee (2019) to 6.7 m³/employee (2022). [GRI 303-5]

Greenhouse gas emissions

Global warming is primarily responsible for man-made climate change. One of the main drivers of this process are CO₂ emissions of the kind also occurring at Kurtz Ersa in the course of manufacturing as well as in the transport and operation of economic goods. As our contribution to observing the 1.5-degree goal¹, we have therefore committed ourselves to a constant reduction of greenhouse gas emissions. This ambitious goal is reflected in our resolution to achieve CO₂ neutrality (in relation to Scope 1 and Scope 2 emissions, as well as selected Scope 3 emissions) group-wide by 2029. The complete changeover to power and gas from regenerative sources is a significant contribution towards achieving this aim. [GRI 305]

In the analysis of the groups own emissions we use the Greenhouse Gas Protocol as orientation, developed as a tool for determining the greenhouse gas emissions of companies. Due to the low level of natural gas consumption in the reporting period, it was possible to significantly reduce our Scope 1 emissions. CO₂ emissions, on the other hand, rose as a result of the more intensive use of our vehicle fleet (greater fuel consumption) increase in customer and business appointments in 2022 following the abatement of the Covid pandemic (see "Sustainable Selling" Page 53) Additional emissions are also accounted for by the inclusion of the fuel and heating oil consumption of Schiller Automation for the first time and to a minor extent the collection of data on other emissions.



Conversion to green power
(100%²)



Conversion to biogas
(0%²)



Reduction of process steam supply
(0%²)



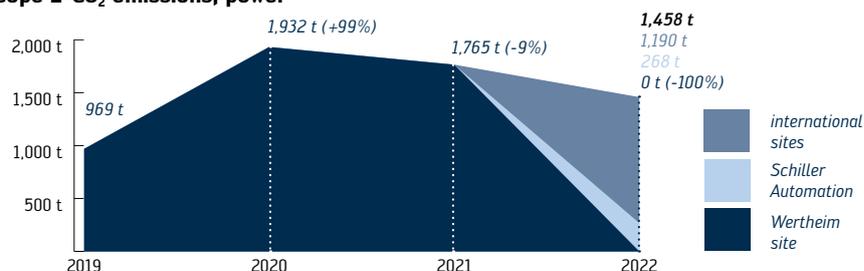
Heating optimisation from 2023
(3%²)

Monitoring and reducing energy consumption

One important aspect of our sustainability strategy is the avoidance of emissions which are harmful to the environment which we intend achieving primarily by saving energy. Given the sharp rise in energy prices, this strategy also increasingly gains in economic significance. This results in steps to measure, optimize and re-

duce energy consumption – thus consistently reducing the CO₂ footprint via direct and indirect emissions. In this way, we also meet the environmental protection standards we have set ourselves in our Integrated Management System (IMS) policy.

Scope 2-CO₂ emissions, power



¹In the Paris Climate Agreements of 2015, the signatory states undertook to limit global warming to significantly below 2 °C, if possible to 1.5 °C compared to pre-industrial levels (1850).

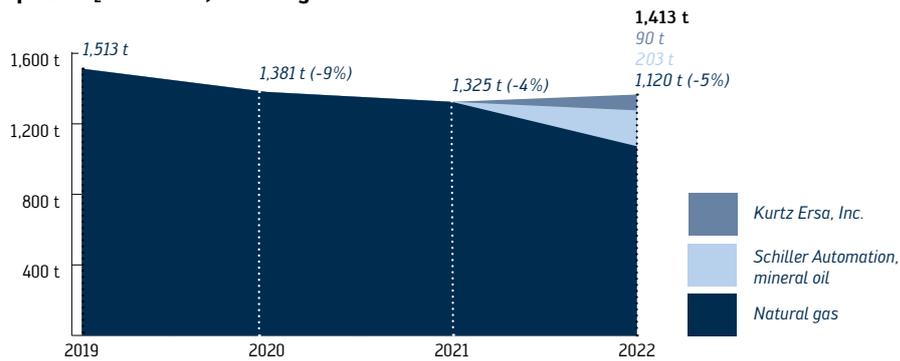
²Achieved by 31.12.2022.

One measure which proved particularly effective with regard to the CO₂ emissions for the German sites (Scope 2: indirect energy-related emissions) was the switch to a tariff with 100 % green energy: as of its introduction on 01.01.2022, no emissions of this kind occur, at least at the Kreuzwertheim and Wertheim sites; the figure in 2021 still lay at 1,765 tonnes CO₂. Not included in this survey, however, is Schiller Automation, newly-integrated into the Group; there, the purchase of power in 2022 caused CO₂ emissions to the amount of 268 tonnes. However, here too we are able to

change over to green electricity as of 01.01.2023, so that in the Sustainability Report for 2023 we will only have to show Scope 2 emissions for the international sites. [GRI 305-2]

As a result of the ongoing conversion of the vehicle fleet, we anticipate an annual increase in power demand of up to 300,000 kWh by 2024 which, however will not affect the CO₂ output from the purchase of power, as we are purchasing only CO₂-neutral power or producing it ourselves.

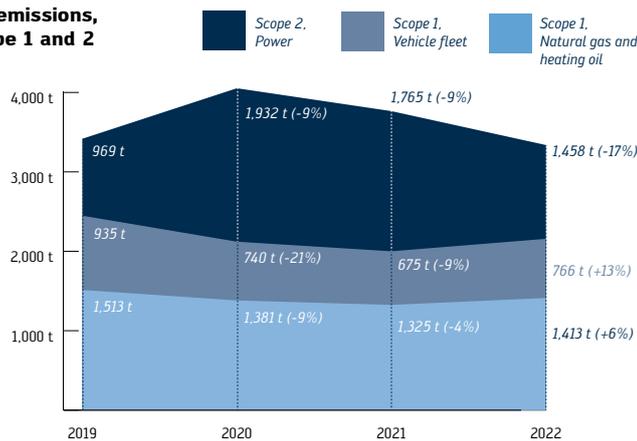
Scope 1-CO₂ emissions, natural gas/mineral oil



The CO₂ emissions from the consumption of natural gas (Scope 1: direct emissions) dropping during the reporting period, primarily as a result of savings.

For example, the figure dropped from 1,325 to 1,120 tonnes CO₂, a saving of 19%. [GRI 305-1]

CO₂ emissions, Scope 1 and 2



The overall emissions have dropped significantly compared to the previous year, even though we have to report higher Scope 1 emissions for our vehicle fleet (Sustainable Selling, page 52 et. seq.). Even when Schiller Automation and the international sites are in-

cluded in 2022, we have reduced CO₂ emissions by 3 %, specifically from 3,765 to 3,637 tonnes. This significant reduction is primarily due to the switch to green energy. [GRI 305-5]

Waste

Waste is unavoidable in the production process. Even so, it constitutes a significant environmental problem. For example, when it is disposed of incorrectly, harmful and toxic substances can make their way into the environment. Therefore Kurtz Ersä considers it a matter of course to ensure to ensure proper handling of waste of every kind. At the same time, waste often con-

tains valuable resources which can be of great importance for production. We believe that the most effective strategy to limit the loss of raw material and rule out possible environmental impact is the avoidance of waste. Where this is not possible, we make every endeavour to recycle the waste which occurs. This can only be achieved with consistent separation of waste.



Reduction of hazardous waste



Continuously-optimised waste separation



Reduction of packaging waste through the introduction of shuttle packaging and recycling of packaging material



Prioritising waste prevention

The best type of waste is the kind that does not occur in the first place. This is why we make every effort to prevent the occurrence of waste, for example by optimizing production and improving existing processes. In addition to production, a major source of waste are the processes in the supply chain. For this reason, we involve our partners in strategies aimed at sensible use of packaging material. In order to reduce the volume of waste at our administrative, production and storage sites, we have defined targets depending on the amount generated.

Less waste should be produced throughout the Group. In relation to the base year, 2019, the aim is a 20 % reduction of the volume of waste by 2025. The amount of waste in terms of full-time equivalents is to decrease even further – by 2025, waste should have been reduced by 50 %. Here too 2019 serves as the reference year. In addition, we are developing a project under the leadership of Kurtz Ersa Logistik GmbH to reduce waste in the supply chain. Specific values are not yet available. Our goal is to present the concept by the end of 2023, with implementation currently planned for the end of 2025. Content and scope of the concept are presented in the following sustainability report. [\[GRI 306-2\]](#)

The total volume of waste across all German sites increased significantly in the reporting period. From 314 tonnes (2021) to now 408 tonnes (plus 29.9 %). In the reference year 2019, the figure was 378 tonnes, so that the increase, com-

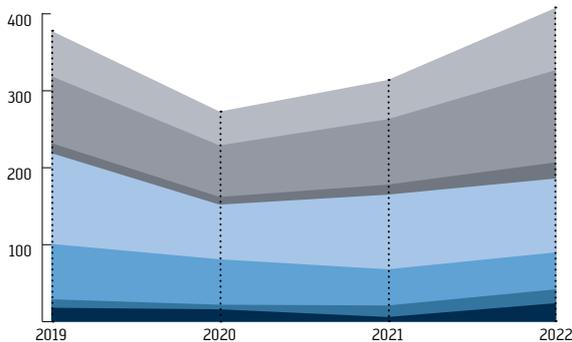
pared to 2019, still amounts to 7.9 %. Once again, the reasons are to be found in the inclusion of Schiller Automation as well as in the higher overall production capacity utilisation. The greatest increase relates to the category residual waste (up 300 % on the previous year). Here, however, the volume had displayed a significant downturn: compared to 2019, the increase is only 33 %. The volumes of mixed scrap and plastic packaging also rose at an above-average rate with figures of 59 % and 62 % respectively compared to the previous year.

The reasons lie, on the one hand, in the decommissioning of galvanic coating, which resulted in a one-off greater proportion of mixed scrap and other waste (residual). Furthermore, in order to ease supply chain problems we have also bought ahead, purchasing supplies of the products and components needed. This resulted in significantly more packaging waste in the course of the year, which will be balanced out in the medium term.

from 2019 to 2025
-50 %
waste (in relation to full-time equivalent)

However, the absolute increase masks positive trends. Seen in terms of major efficiency ratios, the volume of waste has actually dropped slightly. The volumes of packaging waste per full-time equivalent or per productive hour have declined, by 0.49 % to 204 kg/full-time equivalent and by 4.67 % to 143 g/productive hour. Considering the total volume of waste in the Group, the decline represents 4.11 % in terms of full-time equivalents, or 2.70 % in terms of productive hours. Thus, in 2022 too, we have once again moved closer to our goal of 50 % in terms of the full-time equivalent. [\[GRI 306-3\]](#)

Waste



Waste	2019	2020 (Cf. PY)	2021 (Cf. PY)	2022 (Cf. PY)
Mixed scrap (ASN 12 01 01)	59 t	44 t (▼)	51 t (▲)	81 t (▲)
Paper and cardboard packaging (ASN 15 01 01)	87 t	67 t (▼)	85 t (▲)	120 t (▲)
Plastic packaging (ASN 15 01 02)	13 t	10 t (▼)	13 t (▲)	21 t (▲)
Wooden packaging (ASN 15 01 03)	118 t	71 t (▼)	97 t (▲)	96 t (▼)
Mixed packaging (ASN 15 01 06)	72 t	59 t (▼)	47 t (▼)	48 t (▲)
Cable residue (ASN 17 04 11)	11 t	6 t (▼)	15 t (▲)	18 t (▲)
Residual waste	18 t	16 t (▼)	6 t (▼)	24 t (▲)
Total	378 t	273 t (▼)	314 t (▲)	408 t (▲)

In addition, we have reduced the volume of toxic waste in 2022 particularly through the decommissioning of galvanic coating mid-2022. We have also begun with the introduction of a new

waste separation system. We expect further increases in efficiency from 2023 onwards with its expansion to the entire group.



DIGITIZATION



Sustainable Selling.

*The essence of selling is personal contact.
And clever digital solutions, which are no
less important.*



Introduction

At Kurtz Ersa, “selling” means selling in the most sustainable way possible. Like every profit-oriented organisation, we are dependent on the sale of our products and solutions and have integrated sales promotion measures into our corporate strategy. The sales of products and services should contribute to healthy corporate growth and set sustainable trends.

Our focus, however, is not on short-term profit maximization but rather on long-term success and the securing of the future of the company. In addition to sales successes, this approach encompasses a high level of customer satisfaction and loyalty. This is augmented by investment in future-oriented products which will also be able to cope with future challenges. For example we produce resource-efficient machines and develop specific key performance indicators to prove the efficiency (see p. 32 et. seq.).

We serve a diversity of markets and customers so that the themes relevant for our target groups vary. Thus, in communicating with our customers, marketing and sales rely on credibility and transparency and also on a target group-oriented approach, to convince them of the benefits of more sustainable product solutions.

In both our communication and our business activities, more and more digital processes are being used, such as our new CRM system (see p. 50). This allows us to support the sustainability process in the company and considerably reduce time and money spent on sales-related travel (car, air rail), and the associated emissions. (see p. 52). We have set ourselves the goal of centrally recording all international travel activities from the end of 2023. Subsequently we want to develop a concept for the handling and further reduction of offsetting of business travel, and present it by the end of 2025. [GRI 2-6, 3-3]

Customer health and safety

For Kurtz Ersa, the safety of our products and services has top priority. This applies first and foremost to the commissioning, operation and production of our machinery and systems. We do everything we can to ensure the safety of our customers and to exclude any danger to the people involved. This approach also includes the safe handling of harmful and hazardous substances to prevent leakages or improper use which could harm people in the vicinity of the machines.

Where, despite all precautionary measures, danger to or a negative impact on the health of our customers occurs, our detailed crisis and safety management ensures that quick and comprehensive help can be provided.

During the reporting period, no incidents were reported which could impact on the health or safety of customers. [GRI 416, 416-2]



Markets supplied

Kurtz Ersa is a broadly-positioned machine engineering company and a sought-after partner in numerous sectors. We generate around 80% of our turnover with international business partners. The largest share of our business activity relates to the automotive industry, where the figures lie between 20% and 30% per year. Other key industry sectors are electronics production (sensors, in-

dustrial electronics, automation...) 5G, aerospace, construction, electronics manufacturing services (automotive, consumer goods industry, mobile devices, IT, (servers, networks) medical technology, the aviation industry, e-mobility (cars, bikes, scooters) energy supply, the food industry (fish boxes), air conditioning technology, artificial intelligence and the Internet of Things (IOT). [GRI 2-6a]

Digitalization

The far-reaching transition in business and society, also with regard to greater sustainability, has a variety of drivers. Digitalization is seen as one important motor. It allows industry to vastly reduce its CO₂ emissions. In many branches, digital technology promotes and accelerates sustainable development, for example through data-based efficiency enhancement or digital innovations.

Industrial manufacturing and machine engineering are especially affected by the transformation with modern information technology: machines and systems are designed and planned with the aid of digital technology and controlled using modern operating software. Kurtz Ersa avails of the extensive possibilities of digitalisation, but is also aware of the associated challenges and knows how to deal with them.

Data-based processes also have an influence on sales and aid us in optimizing sales and making needs-based decisions from the customer's perspective. Examples of this are individualized offers and applications for specific customer requirements. However, responsible use of data must also include sustainable aspects. For example, the use of analytical tools can save valuable resources.

In addition, IT-supported, demand-oriented planning can allow inventory and logistics processes to be managed as efficiently as possible. Finally, a digital infrastructure is the prerequisite for making supply chains more transparent.

New CRM system further reduces energy demand

At Kurtz Ersa, digitalization is also helping to reduce the energy previously required for sales, customer care and service. Effects stem mainly from travel activity on several levels: For example, the digital infrastructure makes customer meetings via online conferencing possible. Similarly, meetings and presentations can be moved to the virtual conference room. The more sensitive approach to business travel significantly reduces the costs of mobility (car, plane, train) required for sales and consequently the emissions caused by business.

Kurtz Ersa is also hoping for a further boost in sustainability arising from the new CRM system (Customer Relationship Management) which is to be launched in 2023. The activities via the current system bind resources in terms of time and often require business trips some





of which could be avoided with the aid of digitalization measures. With the introduction in 2023 of the new software for the recording, management, planning and implementation of marketing activities, Kurtz Ersa aims to create the basis for more efficient and sustainable work in this area.

The new CRM system makes it possible to store all important customer data in one place and guarantees access from all over the world, particularly at all Kurtz Ersa sites and during mobile working. This makes it easier for sales and marketing teams to access constantly-updated data and make soundly-based decisions using this information. In addition, the improved connection of marketing, sales and service via automatic data reconciliation leads more quickly to tailor-made products and services. This too reduces the number and length of sales calls and partly shifts sales processes to digital workflows.

Overall, by using the CRM system, Kurtz Ersa plans to reduce the time and money that goes into coordination and the resulting travel, to digitalise paper processes and in this way to save CO₂. In the long term, the new software should support our transformation into a sustainable company.

Further measures

Even more far-reaching are the process changes due to the technology around "Industry 4.0". This refers to the progressive digitalization of industrial production and networking with complementary services. For example, the evaluation of data collected in real time leads to better process and machine monitoring. Networking with digital terminals for control enables our specialists to perform remote maintenance or intervention. A customer visit, including the energy required, is therefore no longer necessary. At the moment we are working on the implementation of "predictive maintenance" which would allow us to proactively maintain machinery and systems in the future. [GRI 302-5]



Vehicle fleet

Kurtz Ersa is pursuing the long-term goal of significantly reducing the fuel consumption of its own vehicle fleet and the associated emissions within the framework of what is technically feasible, primarily through the use of electric vehicles. Our concept developed in 2022 is to have just under 70 charging stations for electric vehicles operational at German sites by 2023. In addition we are building a photovoltaic plant so that at least in part the electric vehicles will run on our own power. The remaining demand will be met with the purchase of green electricity.

With regard to the requirements of our vehicle fleet, current analyses show that electrical vehicles are currently the most practicable and economical choice for short and medium-range trips with diesel vehicles preferable for those travelling

farther. Hybrid vehicles did not fully meet our expectations in practice and will play a more minor role in future vehicle fleet planning.

In addition to the conversion of the vehicle fleet to electrically-powered vehicles, we have taken further measures to reduce fuel consumption. For example we are endeavouring to reduce the emissions occurring as a result of business travel. Our employees are encouraged to consider whether the trip is actually necessary in the first place, whether train travel is possible or whether a number of appointments could be amalgamated so that, for example, several appointments could be covered with just one flight. In addition, our employees check whether meetings with customers can be held via online video conferencing in order to avoid or reduce travel.

Development process of Kurtz Ersa vehicle fleets by end of 2024:



**Increase to 23 %
electric vehicles
(43%²)**



**Increase to 32 %
hybrid vehicles
(50%²)**



**Reduction to 45 %
vehicles with
conventional drive
(39%²)**

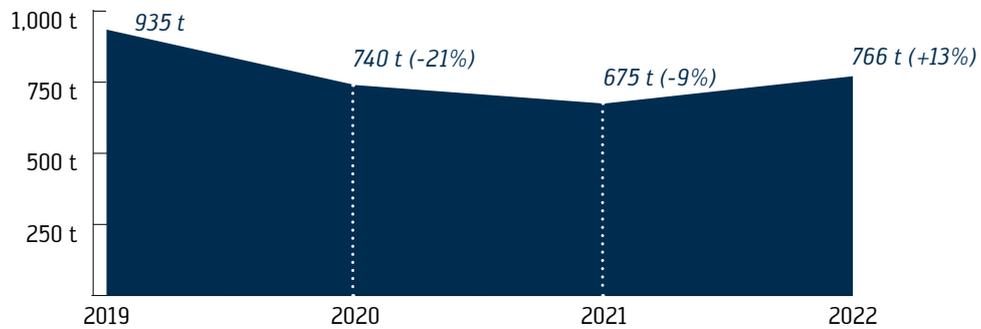
²Achieved by 31.12.2022.

Higher capacity utilisation causes 2022 consumption to rise

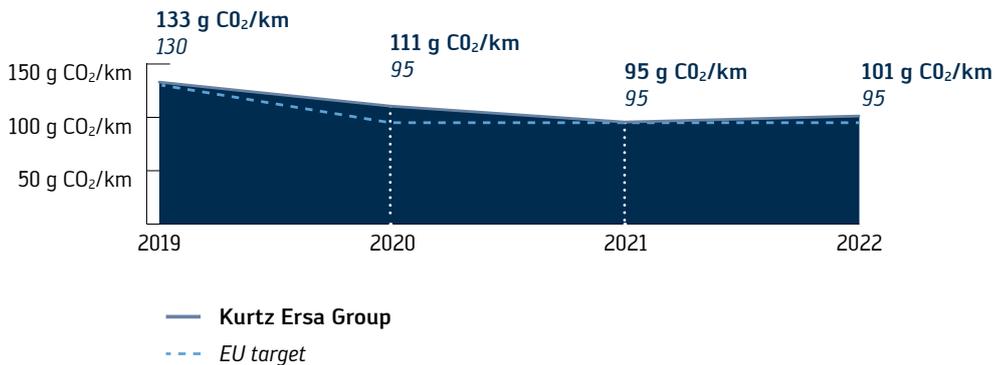
In 2022, a good 30,000 litres more fuel than in 2021 were consumed at our German sites, and thus around 100 tonnes more CO₂ emitted. The output from greenhouse gas emissions rose by 13 % over the figure for 2021; in comparison with the reference year 2019 this still represents a reduction of 18 %. There are two reasons for the

year-on-year increase: higher capacity utilisation and normalization of business following the Covid pandemic, on the one hand, have led to our employees in the Wertheim region travelling 500,000 kilometres more. A further 500,000 kilometres are accounted for by the vehicles of the newly-integrated Schiller Automation. [\[GRI 302-1\]](#)

Scope 1 CO₂ emissions, vehicle fleet



Development of emissions of Kurtz Ersa vehicle



Sustainable Management.

*Long-term success ensures values are retained.
So too does our commitment to social and
cultural initiatives.*





We see business and ecology as going hand in hand.

Sustainable thinking and acting has always been part of Kurtz Ersa's DNA. As a family business that is almost 250 years old and has already existed for seven generations, we are committed to securing the long-term value of the company and always act with future generations in mind.

For us, economical and ecological aspects have always gone hand in hand. A clear example of this is the reduction of commodity consumption through increased efficiency and higher productivity. In our investments we always consider both economic and environmental aspects and make our decisions accordingly. The development of photovoltaic systems to generate our own regenerative power is just one example (see p. 35).

Sustainability-oriented management must also look beyond its own horizon and consider the relevant areas in our society. At Kurtz Ersa we are aware that our way of doing business and our own growth are based on a stable socioeconomic system. We therefore make a clear commitment to support and strengthen social initiatives. We see advancing the common good as an important contribution to ensuring a diverse and vibrant society. This is of major importance for healthy economic structures and our long-term success. We therefore regard giving something back and assuming environmental and social responsibility to be a matter of course.

Corporate responsibility

As a family company, Kurtz Ersa attaches great importance to financial independence and a continuous increase in the value of the company. Similarly, in terms of key financial data, we aim to out-perform the industry average.

Financial stability and profitability

As a family business that is not listed on the stock market, we must of course also be guided by economic requirements. Success and stability make up the orientation framework for our economic development and are closely linked to our sustainability strategy: Our economic performance also reinforces our efforts towards sustainable transformation. Financial stability and profitability ensure our sustainable growth in the context

of long-term positive development in economic, ecological and social terms.

Each business year, Kurtz Ersa makes 1% of the earnings before interest and tax available for sustainable projects. In 2023 for example, this will finance the intended conversion to LED and the installation of photovoltaic systems for environment-friendly power generation (see p. 35 f.). [GRI 3-3]



Economic performance

The net turnover of the entire Kurtz Ersä Group amounted to EUR 360.4 million in the 2022 financial year. The significant rise compared to EUR 275.5 million in 2021 is attributable, among other things, to the takeover of Schiller Automation and increased productivity at Ersä. Total assets at the end of the financial year as per 31.12.2022 amounted to EUR 48.7 million, of which EUR 128.6 million was equity and EUR 120.1 million outside capital. The equity ratio therefore lay at 51.7%. [GRI 201, 201-1]

Compliance with legal regulations and regulatory requirements is a matter of course for Kurtz Ersä. In the reporting period, no legal proceedings were pending against Kurtz Ersä for non-compliance with legal regulations in the environmental, social and economic fields, nor were any significant fines imposed. [GRI 307-1, 419-1]

by 2022:
360 million EUR
net sales

Economic equity ratio:
52%
as per 31.12.2022

Indirect economic effects

Kurtz Ersä is a company which, for generations, has maintained close ties to the Main-Franconia region. We see ourselves as part of society and want to play an active role in shaping it. We are already making our contribution as an employer offering secure jobs and as a reliable business

partner. But we also assume responsibility beyond our core area of business and rely on long-term partnerships because this is the only way to ensure reliable support. In our social involvement we concentrate on projects which benefit the common good.



ESG rating in bronze on the first attempt

With its comprehensive sustainability strategies and the numerous associated measures, the Kurtz Ersa Group is on the right road: The very first time we participated in the ESG rating, we achieved a bronze medal. ESG stands for Environment, Social and Governance and measures the voluntary contribution made by companies towards sustainable development which goes beyond the legal stipulations. The accolade is awarded by the renowned rating agency EcoVadis. In the overall evaluation of four thematic areas, Kurtz Ersa achieved 48 of a possible 100 points. With 60 points, the assessment in the category Environment was better than is common in the sector. In this area, EcoVadis evaluated, among other things, energy and water

consumption, waste volumes in the company and the relevant guidelines and documentation. We similarly achieved above-average results in "Labour and Human Rights" which also encompasses diversity at the workplace, the frequency and severity of accidents and the training on offer. The rating agency sees potential for improvement in the areas "ethics" and "sustainable procurement" although the ethic rating corresponds to the average in the sector and we are slightly above this average in sustainable procurement. This rating spurs us on to improve further, particularly in these two areas. The aim now is to implement corresponding guidelines and derive operating figures and suitable measures.

Score C for Carbon Disclosure Project

The Carbon Disclosure Project (CDP) sees itself as an international climate protection programme within the framework of which companies, as well as institutions and organizations disclose information on the environmental impacts of their activities. This is backed by a non-profit organization which collects and evaluates annual data on harmful environmental impacts. Participation in the project is voluntary for those involved. By now, around 10,000 companies, cities and further institutions around the world are

availing of the offer. Once the data has been analysed, each participating organisation receives a rating. Kurtz Ersa took part in the CDP rating process for the first time in 2022. The Climate Change Report, which primarily concerned itself with greenhouse gas emissions, straightaway awarded us Score C, which corresponds to a good mid-range assessment.

We plan to participate annually in the future with the aim of successively improving our rating.



Social commitment

Kurtz Ersä assumes its social responsibility in a number of ways. Due to our longstanding close links to the Main-Franconia region, it is our desire to include this region in a special way, although not exclusively, in our social commitment. Our focus of support for external organisations and projects is in the area of culture, education and training, as well as in the social sector. We coordinate these activities through the non-profit Anna Göbel and Otto Kurtz Foundation. This was founded in 2006 in memory of the former head of the company and his sister. [GRI 203-1]

Culture

Mozartfest Würzburg: The venerable festival began back in 1921 as a music and theatre week and was called the "Mozart Festival" in 1923 for the first time. The series of concerts serves to maintain and convey the work of the composer and encourage people to engage with it.

Association for the Promotion of the Mainfränkentheater¹: The association has set itself the task of "continuously and sustainably promoting the artistic work of the Mainfränkentheater and the Würzburg Philharmonic Orchestra". The funding is used, among other things, to support theatre and music education and for the staging of productions in all sectors.

Stifterkreis Rosenkavaliere: With the "Stifterkreis Rosenkavaliere", the Würzburg Theatre and Orchestra Sponsorship Association created a special forum for civic engagement in 2001. The grants help to support the extraordinary standard of the Mainfranken Theatre Würzburg in the long term.

¹See website mainfrankentheater.de/foerderer-und-partner/foederverein/



Training and professional advancement

Endowed chair at SRH Distance Learning University Riedlingen: The state-registered university specialises in on-the-job online studies. It offers 51 Bachelor and Master courses as well as 60 university certificates to which our endowed chair makes a contribution. Furthermore, the educational institution is among the few climate-neutral universities in Germany.

Mobile University Wertheim: The Wertheim Study Centre is one of the largest facilities of the SRH Distance Learning University. Here students can attend on-campus lectures and sit exams.

Social commitment

Parish Hall Michelrieth: With our donations we support the maintenance of the building as well as the various community activities that are planned or carried out in the parish hall.

Wertheim Observatory: With our donations we contribute to the maintenance and modernisation of the observatory.

“Young Parents and Career “ Association: We support the association to enable young parents to quickly re-enter the world of work.

Earthquake victims in Turkey and in Syria: Following the serious earthquake in parts of Turkey and Syria, Kurtz Ersa made a donation of EUR 2,500. A local humanitarian organisation passed this financial support on directly to people affected in the region.





Sustainable Living.

*We have made up our minds:
equal opportunity, diversity and
health protection are givens.*





Personal wellbeing is in the foreground at Kurtz Ersä.

Employees are a decisive factor in a company's success. If these are qualified, motivated and satisfied, this has a positive impact on a company's performance. For this reason, Kurtz Ersä aims to establish the Group as an attractive employer, create an internal performance culture and fulfil its social responsibility towards its employees.

Therefore, from our point of view, sustainable corporate management includes giving all employees the same opportunities, paying them appropriately, protecting them from discrimination and exploitation, offering them secure jobs and promoting their health. In this way, we create a corporate climate that is characterised by respect and is supportive and motivating at the same time.

A company is always more than just a production site or a daily workplace. It is a social structure with a long-term perspective that depends on the successful cooperation of all the people involved. This is why, for many years now, we have considered ourselves to be one large family – as expressed in one of the central guiding principles of our corporate identity, which is, quite simply, "One Family".

„One Family: People & Culture“

The programme to further develop the partnership-based corporate and management culture

Kurtz Ersä is a family company with a long tradition which will continue to make us an attractive employer and a sought-after business partner in the future. The long-term focus, the strong quality orientation as well as the staff-friendly corporate culture and the significance of sustainable management are central values which shore up the term “One Family”. Kurtz Ersä places great emphasis on a good, partnership-based corporate culture which can be experienced throughout the entire Group. In order to further develop this corporate culture, strengthen the “team feeling” across the whole workforce, and confirm our reputation as an attractive employer, we initiated our internal “One Family: People and Culture” programme in 2022, which should be completely implemented by the end of 2027.

Within the framework of an extensive preliminary project in 2022, we developed a concept with an initial 19 specific measures and activities in six over-riding fields of activity. The beginning of 2023 saw the commencement of the step-by-step implementation of the individual topics. In 2023 alone, we are investing around one million euro. What is important to us is that the changes are not decreed “from the top down” but rather supported and driven forward, step by step, by all employees working together. We want to concentrate on the areas which strengthen our community of values, advance our strategic goals and have the greatest effect in everyday life: on the awareness of “this is my contribution to the success of Kurtz Ersä”, on the work-life balance and on the greatest possible satisfaction of all employees of the Kurtz Ersä Group.

In 2022, the “People & Culture Focus Team” made up of people from all Kurtz Ersä sectors and hierarchical levels, iden-

tified six specific fields of activity which contribute fundamentally to achieving the project goal: The role and self-identity of the senior management, staff at all levels and internal communication as well as working environment and quality of work. First results are already evident which will improve dialogue and flow of information communication in the future. These include, among others the Hammer App as a communication platform which also includes a dialogue box, where all employees can post their own contributions and enter into dialogue with the management. In addition, senior management will receive regular information on current developments in the group which they, in turn, can pass on to their teams.

The idea of “People & Culture” also finds expression at Kurtz Ersä in the programme Attractive Employer and the promotion of employee health (through health-related preventative measures). These are augmented with extensive company further training programmes, most of them via the offer of the Kurtz Ersä Learning Campus and the Hammer Academy established in 2016 as well as measures promoting the compatibility of family and career such as flexible working models or arrangements for parental leave. In these points, the management always works closely and confidentially with the employee representatives in the Works Council. [GRI 3-3]



Responsible employer

Kurtz Ersa places its faith in satisfied and motivated employees as they contribute to the long term economic success of the company. We are constantly on the look-out for qualified

specialists and young talent and create a working environment which encourages them to remain with the company long term.

Employment

The companies of the Kurtz Ersa Group are among the largest employers in the Main-Spessart region. The overall number of employees at the German sites in the Wertheim area has risen from 935 in 2021 to 967. In the reporting year, 13.8 % of these jobs were short-term. At 91.1 %, the share of full-time employees in our operations is still very high. The share of part-time employees lay at around just

8.9 % in the reporting period (2022). Included in the figures are all employees who were registered in the personal management system on the reporting date of 31.12.2022 and were thus drawing a salary. This encompasses salaried workers, industrial workers, management, trainees, temporary workers and interns. [\[GRI 2-7\]](#)

	2019		2020		2021		2022		
	m	f	m	f	m	f	m	f	d
Full-time	650	136	638	129	733	131	752	130	0
Part-time	14	54	13	50	20	51	28	59	0

In the course of 2022, Kurtz Ersa hired a total of 159 new employees. Due to the many newly-created jobs, this figure is significantly above the previous year's level (2021: 116; 2020: 105). The proportion of women among the new employees has dropped to 17.6 % from a figure of 19.8 % in 2021. [\[GRI 401-1a, 1b\]](#)

categories mentioned above, so that an appraisal interview is guaranteed in any case. [\[GRI 404-3\]](#)

All employees at Kurtz Ersa receive an assessment of their performance and feedback on their professional development at least one a year. This can be integrated into the framework of the appraisal interviews (ERA) or during the updating of the skills profile. Another possibility is in connection with the regular evaluation of the objectives agreement. Each employee falls into at least one of the

The Hammer Innovations Programme ("HIP") is designed to help us remain an innovation leader in our business sector, to secure jobs and to retain and acquire satisfied customers. The HIP bonus is a voluntary benefit at Kurtz Ersa which is paid out along with the payslip in February of the following year. In addition, every employee can submit their own ideas for optimizing operational processes which are evaluated independently. If the idea is successfully implemented, the employee will share in the annual savings achieved.

Employment*	
Permanent	Temporary
86,2 %	13,8 %

Type of employment*	
Part-time	Full-time
8,9 %	91,1 %

Temporary workers*	
105	
Most frequent type: Contract staffing	
White-collar	Blue-collar
7	98

*As relates to Kreuzwertheim and Wertheimer sites.

Diversity and equal opportunities

We live in an increasingly-diverse society – our aim is to reflect this in our employee structure. Equal opportunities for every applicant and all employees improves the attractiveness and the image of a company. We regard the promotion of diversity to be an important factor in our corporate success.

At Kurtz Ersa, people from many different countries and cultural backgrounds work together. An environment and atmosphere free from discrimination based on gender, age, religion, sexual identity, origin or handicap is the prerequisite for our successful business operations. For this reason, we ensure that all employees are given the same opportunities and can interact free of discrimination. Our human resources management is particularly sensitive to this and supports a diverse workforce as well as cooperation between all employees that is as conflict-free as possible. [GRI 405]

The share of women among our employees in 2022 was 28.0% and is thus up on the figure of 26.6% in 2019. By comparison, the share of women among the industrial employees decreased in the same period. Following on 14.4% in 2019, the figure in 2022 was only 10.0%. We are intensifying our efforts to increasingly employ women in the industrial area. The age structure in the reporting period was as follows: Among the employees, 23.8% were 30 years of age, 51.5% between 30 and 50 and 24.7% older than 50. Among the industrial employees, a different ratio can be seen. In this group, 38.8% were still under 30 years of age, 34.6% lay between 30 and 50 years of age and 26.6% were older than 50. [GRI 405-1a, 1b]

In the make-up of the Management Board, Kurtz Ersa has not yet formulated specific data with regard to gender and age. In the reporting period, six of the seven-member Management Board were male and one female. Six members were already over 50, two between 30 and 50 and no member was under 30 years of age (see graph on this page).

Management Board by gender and age



Employees by gender*

	2019		2020		2021		2022		
	m	f	m	f	m	f	m	f	d
White-collar	403	146	377	138	372	137	382	145	0
Industrial	261	44	274	41	381	45	383	41	0

Employees by age*

	2019			2020			2021			2022		
	< 30	30-50	> 50	< 30	30-50	> 50	< 30	30-50	> 50	< 30	30-50	> 50
White-collar	142	264	143	120	258	137	106	275	128	126	271	130
Industrial	115	93	97	114	106	95	165	146	115	164	147	113

*As relates to Kreuzwertheim and Wertheimer sites.

Equal pay for equal work

Payment irrespective of gender is a matter of course at Kurtz Ersa. For this reason, women receive the same pay as their male colleagues for the same or similar work. For most of the workforce (2022: 74.0 %),

this is already regulated in the negotiated wage settlements which lay down payment independent of gender and other factors. [\[GRI 405-2\]](#)



Parental leave

The early days of parenthood is a challenging life phase for those involved. Kurtz Ersa supports its employees during this period, for example with information on parental leave and return-to-work models. As a matter of principle, all employees have a right to parental leave, regardless of fixed-term or part-time contracts. In the reporting period, 41 employees availed of parental leave, among them 26 men (see table on this page).

This shows that the proportion of male employees on parental leave has significantly increased (2019: 35; 2020: 32; 2021: 47). In 2022, 41 employees returned to their workplaces at the end of their parental leave (26 male, 15 female). In the reporting period, the return rate for men following parental leave lay at 100 %; among females the figure was 26.7 %. Thus the rate among women is once again significantly down on 57.1 % in 2021. [\[GRI 401-3a, 3b, 3c, 3e\]](#)

	2019		2020		2021		2022		
	m	f	m	f	m	f	m	f	d
Employees on parental leave	35	14	32	16	47	14	26	15	0
Returns from parental leave	100 %	35,7 %	90,6 %	31,3 %	93,6 %	57,1 %	100 %	26,7 %	0

Training and professional advancement

Kurtz Ersa needs highly-qualified skilled personnel and places great importance on specifically fostering employees in their career and personal development. With the creation of the Hammer Academy in 2016, we installed an educational platform which is open to all employees. It is the basis for providing them with

the necessary technical knowledge for their careers as well as an important qualification for their personal further development. The wide-ranging offer on the platform combines know-how and experience from the long company tradition with current findings from the global markets.



Successful apprentices

At the same time, Kurtz Ersa is at pains to provide young people with a successful career perspective and train them accordingly. For that reason, we offer school-leavers an apprenticeship or Combined Studies in eight different faculties. As per 31.12.2022, 77 apprentices were undergoing training at Kurtz Ersa. Four apprentice electronic technicians specializing in technical equipment and installation received their craft certificates on 31.01.2023 after three-and-a-half years of training. Their final grades all lay between 1.11 and 1.77. The particularly good results achieved by one of our apprentices were rewarded with the award for most promising young talent from the Government of Lower Franconia.

Concept of Life-long Learning

The quality of a company, its products and its performance depends on the level of knowledge and skill of the workforce. That is why, in addition to education and training, the Hammer Academy also promotes the individual advancement of our employees. At the same time, it permits us to create an environment in which technical and senior management are prepared to face the challenges of the future and see their long-term prospects with the company.

To a large extent, our seminars and further training offers are based on instructors drawn from among our own staff and management. This secures the transfer of know-how within the Group and offers the skilled personnel involved a further motivating role. In short: The Hammer Academy is an intrinsic element in our corporate structure.

Cooperation partners

An opportunity to expand our horizons beyond the boundaries of our own company is provided by our four academic cooperation partners with whom we have been working closely for many years. In this way we ensure the scope and quality for training and further education at Kurtz Ersa and create joint training formats. In detail these are:

- Baden-Württemberg Cooperative State University (Mosbach): Our cooperation partner for combined studies where the practical element can be completed in one of our Group companies.
- SRH Distance Learning University (Riedlingen): Here the cooperation includes on-the-job studies encompassing both partners. In addition, we offer employees the opportunity to do various Bachelor and Master courses.
- Steinbeis University (Berlin): Provided valuable support in setting up the Hammer Academy and continues to support the work of the institution by having lecturers from the university also teach at the Hammer Academy.
- Technical University (Munich): In addition to support and cooperation on student research projects, the collaboration also includes the publication of employer profiles and job advertisements on the campus-wide job board.

[GRI 103, 404]

Occupational health and safety

A healthy and motivated workforce is the mainstay of Kurtz Ersa. This is why we attach special significance to the protection of employee health. The primary aim of our occupational health and safety protection is to prevent accidents and

work-induced illness. Despite increased capacity utilization and additional new hiring, the accident figures dropped significantly once again in 2022 (see graph on this page).

Occupational safety

An important role in this area is played by occupational health and safety. At every site, Kurtz Ersa complies with all legal requirements and safety norms in the area of occupational health and safety. Therefore our occupational health and safety management system has been developed in accordance with the international DIN ISO 45001 standard, and certified at most of our sites. Its scope encompasses almost all workplaces and employees at our domestic sites. The intention is to expand the management system to the international sites by 2024. In addition, in accordance with the legal stipulations (Section 11 ASiG), we have established an Occupational Health and Safety Committee (ASA) which works in its regular meetings on continually improving workplace safety.

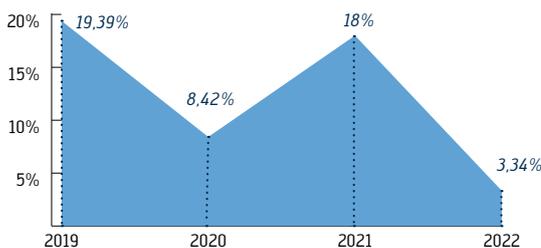
In recent years, one main point of focus was on improving the ergonomic design of workplaces. Whereas, in the past, assembly stations often required that heavy loads be lifted by a number of workers, all adopting a forced posture, it has been possible, to a large extent, to replace this method with suitable lifting equipment. The effect on the musculoskeletal system of the workers involved has been correspondingly positive.

In the identification of risks in our plants, we are supported internally by a health and safety officer (FaSi) who reports to the Management Board. The FaSi helps prevent accidents by informing staff on the topic of safety at the workplace and individually examining specific workplace. The health and safety officers conduct regular inspections on site. In addition, they support the operation managers in drawing up risk assessments and operating instructions.

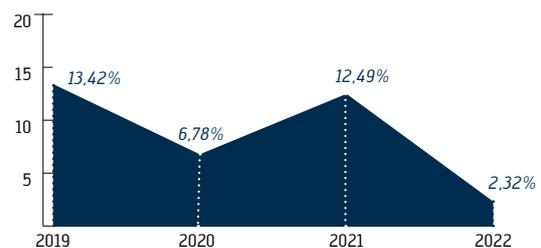
Briefings are carried out regularly and as the occasion requires. Each new employee takes part in a mandatory training session on workplace safety. Managers receive more advanced and detailed training. Employees with additional health and safety duties, such as first-aiders, fire officers and evacuation officers attend additional training courses.

Individual machinery and plant-related training sessions are also conducted. We systematically analyse all accidents so that an incident report is always completed by the responsible manager in the case of notifiable accidents. In addition, all first-aid log entries are assessed, among other things to ensure the timely identification of clusters of occurrences at particular workplaces or in relation to particular activities and, where necessary, take measures to combat them.

Incidents per 1,000 persons



Incidents per 1 million hours



Health protection

At Kurtz Ersa the promotion of good health begins at the workplace: We provide our employees with an ergonomically-correct working environment and to the greatest possible extent reduce the existing stress which results from strenuous work, noise, heat or similar factors. Regular inspections of the working conditions contribute to their improvement – should this be necessary. If an employee has been absent for a longer period due to illness, help is available from our company rehabilitation management scheme which, among other things, permits a gradual adaptation of the working times. In addition, in accordance with the Occupational Safety Act, we make a highly-motivated company doctor available, who can be contacted to answer questions, provide advice and for health checks. Here all employees can avail on a voluntary basis of an annual flu vaccination; they also receive vouchers for check-ups and for a full blood count.

Carbon emissions of our commuters determined

For the first time, we have collected data on the other indirect greenhouse gas emissions (Scope 3) caused by staff commuting between home and workplace. We used anonymised data on the home addresses and determined the likely route to work with the aid of an online map service. Taking the resulting total of all commutes, we calculated the expected emissions. For the year 2022, the figure for commuter trips amounted to the equivalent of 1,269 tonnes CO₂.

In recording the Scope 3 emissions caused by on-site transport (trips between the individual sites) we drew on the drivers' logs of the relevant service providers and the consumption statistics for the vehicle models. For 2022, this resulted in an emission figure of the equivalent of around 48 tonnes CO₂. [GRI 305-3]

Promoting employee health

Furthermore, Kurtz Ersa has developed a range of offers aimed at promoting health-conscious behaviour among employees. In this context, our in-house Hammer Academy offers a comprehensive training programme on sport and health, such as yoga courses, seminars on strengthening resilience and calmness or on quitting smoking. In cooperation with local health insurance companies, we hold annual health-awareness days at the German sites, focusing on education and advice on health-related subjects.

The legal stipulations relating to preventing the spread of Covid.10 are no longer in force. Even so, we continue to make free masks and tests available to our employees to be used on a voluntary basis. [GRI 403, 403-1, 403-2, 403-3, 403-5, 403-6]

Four years of bee patronage

For four years now, Kurtz Ersa has been involved in the beeswe.love initiative as a bee-patron. Our aim is to combat the worldwide decline in the bee population, safeguard the necessary protection for these vital insects and at the same time preserve the eco-balance and natural diversity. With this long-standing patronage, we help local beekeepers with the care, breeding and multiplication of their colonies – and promote the harmonious coexistence and interactive relationship between humans, bees and nature.



Key data

Primary energy consumption

		Natural gas and heating oil					
		2019	2020	2021	2022	Comp. 2022 to 2019	Comp. 2022 to 2021
national sites	HD 3	310 GJ	313 GJ	382 GJ	263 GJ	-15%	-31%
	KH 1,3,4	11.016 GJ	7.826 GJ	5.998 GJ	5.429 GJ	-51%	-9%
	Ersa 1,3,4	6.415 GJ	7.938 GJ	8.492 GJ	6.354 GJ	-1%	-25%
	KEL 2,3	1.357 GJ	1.699 GJ	1.588 GJ	1.519 GJ	12%	-4%
	AUTO 1,3,4	2.945 GJ	2.030 GJ	2.491 GJ	1.793 GJ	-39%	-28%
	KEHA 1,3	0 GJ	0 GJ	364 GJ	281 GJ	-	-23%
	KESA 1,3,4*	2.272 GJ	2.369 GJ	2.459 GJ	2.506 GJ	10%	2%
	— KEI 1,3,4	1.012 GJ	1.202 GJ	1.393 GJ	1.314 GJ	130%	-6%

*KESA site uses heating oil; all figures converted to MWh

		Vehicle fleet - Diesel and petrol					
		2019	2020	2021	2022	Comp. 2022 to 2019	Comp. 2022 to 2021
national sites	HD 3	1.703 BY	1.415 BY	2.509 BY	1.102 BY	-35%	-56%
	KH 1,3,4	2.390 BY	1.822 BY	1.498 BY	1.451 BY	-39%	-3%
	Ersa 1,3,4	5.598 BY	4.277 BY	3.208 BY	4.496 BY	-20%	40%
	KEL 2,3	54 BY	72 BY	7 BY	79 BY	45%	855%
	AUTO 1,3,4	497 BY	522 BY	166 BY	292 BY	-42%	76%
	KEHA 1,3				18 BY	-	-
	KESA 1,3,4				972 BY	-	-

Secondary energy consumption

		Power					
		2019	2020	2021	2022	Comp. 2022 to 2019	Comp. 2022 to 2021
national sites	HD 3	295 BY	407 BY	482 BY	540 BY	83%	12%
	KH 1,3,4	6.908 BY	4.669 BY	2.783 BY	3.204 BY	-54%	15%
	Ersa 1,3,4	5.526 BY	5.659 BY	6.566 BY	5.296 BY	-7%	-21%
	KEL 2,3	1.127 BY	1.015 BY	1.112 BY	817 BY	-27%	-26%
	KEL *	76 BY	270 BY	292 BY	256 BY	237%	-13%
	AUTO 1,3,4	1.595 BY	943 BY	526 BY	518 BY	-68%	-2%
	KEHA 1,3			40 BY	47 BY	-	23%
	KESA 1,3,4	2.077 BY	1.750 BY	1.944 BY	1.940 BY	-6%	0%
international sites	KMX 1,3	22 BY	25 BY	25 BY	29 BY	30%	8%
	KEIN 4	0 BY	0 BY	7 BY	11 BY	-	39%
	KEI 1,3,4	626 BY	605 BY	540 BY	666 BY	6%	24%
	KEV 4	40 BY	76 BY	18 BY	25 BY	-41%	36%
	KEF 4	0 BY	11 BY	11 BY	11 BY	-	13%
	KEA 3	83 BY	86 BY	79 BY	79 BY	-6%	-3%
	KZM 1,2,3,4	3.456 BY	3.924 BY	4.680 BY	5.112 BY	48%	9%
	KSL 3	403 BY	374 BY	342 BY	346 BY	-15%	1%

*Own power.

¹Production. ²Logistics. ³Administration. ⁴Distribution.

Information on CO₂ equivalent emissions

Scope 1 emissions

		Vehicle fleet - Diesel and petrol					
		2019	2020	2021	2022	Comp. 2022 to 2019	Comp. 2022 to 2021
national sites	HD 3	155,4 t CO ₂	129,1 t CO ₂	229,1 t CO ₂	100,7 t CO ₂	-35%	-56%
	KH 1,3,4	218,1 t CO ₂	166,4 t CO ₂	136,7 t CO ₂	132,6 t CO ₂	-39%	-3%
	Ersa 1,3,4	511,2 t CO ₂	390,5 t CO ₂	293,1 t CO ₂	410,5 t CO ₂	-20%	40%
	KEL 2,3	4,9 t CO ₂	6,5 t CO ₂	0,8 t CO ₂	7,2 t CO ₂	45%	855%
	AUTO 1,3,4	45,5 t CO ₂	47,8 t CO ₂	15,1 t CO ₂	26,5 t CO ₂	-42%	76%
	KESA 1,3,4				88,6 t CO ₂	-	-
		Natural gas and heating					
		2019	2020	2021	2022	Comp. 2022 to 2019	Comp. 2022 to 2021
national sites	HD 3	21,3 t CO ₂	21,5 t CO ₂	26,1 t CO ₂	18,1 t CO ₂	-15%	-31%
	KH 1,3,4	755,8 t CO ₂	536,9 t CO ₂	411,4 t CO ₂	372,5 t CO ₂	-51%	-9%
	Ersa 1,3,4	440,2 t CO ₂	544,7 t CO ₂	582,7 t CO ₂	435,9 t CO ₂	-1%	-25%
	KEL 2,3	93,1 t CO ₂	116,7 t CO ₂	108,8 t CO ₂	104,2 t CO ₂	12%	-4%
	AUTO 1,3,4	202,1 t CO ₂	183,4 t CO ₂	203,6 t CO ₂	146,6 t CO ₂	-27%	-28%
	KEHA	0,0 t CO ₂	0,0 t CO ₂	55,4 t CO ₂	42,8 t CO ₂	-	-23%
	KESA 1,3,4	184,2 t CO ₂	192,2 t CO ₂	199,5 t CO ₂	203,2 t CO ₂	10%	2%
-	KEI 1,3,4	69 t CO ₂	83 t CO ₂	96 t CO ₂	90 t CO ₂	30%	-6%

Scope 2 emissions

		Power					
		2019	2020	2021	2022	Comp. 2022 to 2019	Comp. 2022 to 2021
national sites	HD 3	18,5 t CO ₂	61,8 t CO ₂	73,3 t CO ₂	0,0 t CO ₂	-100%	-100%
	KH 1,3,4	431,7 t CO ₂	709,2 t CO ₂	422,9 t CO ₂	0,0 t CO ₂	-100%	-100%
	Ersa 1,3,4	345,3 t CO ₂	859,7 t CO ₂	997,7 t CO ₂	0,0 t CO ₂	-100%	-100%
	KEL 2,3	70,4 t CO ₂	154,4 t CO ₂	168,9 t CO ₂	0,0 t CO ₂	-100%	-100%
	AUTO 1,3,4	99,7 t CO ₂	188,2 t CO ₂	154,2 t CO ₂	0,0 t CO ₂	-100%	-100%
	KEHA	70,4 t CO ₂	154,4 t CO ₂	168,9 t CO ₂	0,0 t CO ₂	-100%	-100%
	KESA 1,3,4	286,0 t CO ₂	241,3 t CO ₂	267,9 t CO ₂	267,6 t CO ₂	-6%	0%
	international sites	KMX 1,3	3,1 t CO ₂	3,4 t CO ₂	3,7 t CO ₂	4,1 t CO ₂	30%
KEIN 4		0,0 t CO ₂	0,0 t CO ₂	1,2 t CO ₂	1,5 t CO ₂	-	24%
KEI 1,3,4		75,7 t CO ₂	73,1 t CO ₂	65,3 t CO ₂	74,1 t CO ₂	-2%	14%
KEV 4		6,1 t CO ₂	11,3 t CO ₂	2,7 t CO ₂	3,6 t CO ₂	-41%	36%
KEF 4		0,0 t CO ₂	0,3 t CO ₂	0,2 t CO ₂	0,3 t CO ₂	-	12%
KEA 3		16,7 t CO ₂	17,1 t CO ₂	16,1 t CO ₂	15,6 t CO ₂	-6%	-3%
KZM 1,2,3,4		691,2 t CO ₂	784,8 t CO ₂	936,0 t CO ₂	1.022,4 t CO ₂	48%	9%
KSL 3		80,6 t CO ₂	74,5 t CO ₂	68,3 t CO ₂	68,8 t CO ₂	-15%	1%

Other key data

		Water consumption (accumulated)					
		2019	2020	2021	2022	Comp. 2022 to 2019	Comp. 2022 to 2021
national sites	HD 3	269 m ³	202 m ³	212 m ³	288 m ³	7%	36%
	KH 1,3,4	5.905 m ³	2.457 m ³	1.559 m ³	3.009 m ³	-4%	89%
	Ersa 1,3,4	3597 m ³	2497 m ³	2583 m ³	1847 m ³	-49%	-28%
	KEL 2,3	361 m ³	291 m ³	938 m ³	889 m ³	16%	13%
	AUTO 1,3,4	778 m ³	466 m ³	303 m ³	188 m ³	-76%	-38%
	KEHA 1,3			147 m ³	298 m ³	-	103%
	KESA 1,3,4	1081 m ³	699 m ³	763 m ³	797 m ³	-26%	4%
internat. sites	KMX 1,3	100 m ³	120 m ³	180 m ³	200 m ³	100%	11%
	KEIN 4	0 m ³	0 m ³	10 m ³	20 m ³	-	100%
	KEI 1,3,4	143 m ³	127 m ³	136 m ³	233 m ³	63%	71%
	KEV 4	62 m ³	57 m ³	19 m ³	35 m ³	-44%	84%
	KZM 1,2,3,4	6.384 m ³	4.764 m ³	5.808 m ³	6.000 m ³	-6%	3%

		Waste volume (accumulated)					
		2019	2020	2021	2022	Comp. 2022 to 2019	Comp. 2022 to 2021
national sites	Mixed scrap	59 t	44 t	51 t	81 t	37%	59%
	Paper packaging	87 t	67 t	85 t	120 t	38%	41%
	Plastic packaging	13 t	10 t	13 t	21 t	58%	58%
	Wooden packaging	118 t	71 t	97 t	96 t	-19%	-1%
	Mixed packaging	72 t	59 t	47 t	48 t	-33%	3%
	Cable waste	11 t	6 t	15 t	18 t	65%	21%
	Residual	18 t	16 t	6 t	24 t	33%	300%
	Total	378 t	273 t	314 t	408 t		

GRI content index

We have prepared this report on our economic, environmental and social performance in accordance with the core option of the international guidelines developed by the Global Reporting Initiative (GRI).

Principles [GRI 1]

The content of the GRI 1: Principles standard were considered in the preparation of this Sustainability Report.

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