



# **SUSTAINABILITY** **BY PERFORMANCE** **AND PRECISION**

Sustainability Report 2021

**CHIRON**   
**Group**

[www.chiron-group.com](http://www.chiron-group.com)



# TOGETHER FOR A BETTER TOMORROW

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Economic performance  
and sustainability go  
hand in hand



Dear reader,

The four core values of the CHIRON Group are: Competent, smart, innovative, sustainable. These are the values by which we measure ourselves as a Group, as individual employees and as managers. This, the first sustainability report of the CHIRON Group, was preceded by a process of analysis, strategy development and the consistent implementation of this strategy. With our »Sustainability@CHIRON Group« program, we have laid the foundation for making sustainability a strategic factor in our business model, for us and our customers.

As we demonstrate in this report, which has been drawn up in accordance with the official core guidelines of the Global Reporting Initiative (GRI), sustainable behavior is not only of huge importance when it comes to maintaining our economic performance, but is also part of our DNA. We have adopted a climate strategy which will make our production operations completely CO<sub>2</sub>-neutral by 2025. We will, however, continue to develop solutions for our customers that work to their economical and ecological advantage. With our product portfolio and comprehensive services, we offer solutions that help our customers conserve resources while increasing productivity. We have a holistic mindset, which ensures our employees at all CHIRON Group sites throughout the world receive valuable training and carry out day-to-day tasks that are responsible, future-oriented and inspiring for each individual.

The Board of Management, the Board of Directors and the shareholder family are all confident that the sustainability strategy of the CHIRON Group outlined in this report will make a decisive contribution to maintaining its positive economic performance. And because, as we mentioned above, it is important that we measure ourselves by our values, you will find new or concluded sustainability ideas that are currently being implemented throughout the chapters of this report under the heading »Forward looking@CHIRON Group«. We will have more to tell you about these in the next sustainability report – see how we're doing, talk to us. We look forward to hearing from you!

Carsten Liske  
CEO

# Ideally positioned for a sustainable future

Learning from established fields of knowledge and adopting new skills early, we combine the individual strengths of our employees (around 1,900 as of December 2022) to create real added value for customers throughout the world: This is what the family-owned CHIRON Group with headquarters in Tuttlingen, Germany, has been all about for 100 years.

## Brands, core areas of expertise and customer industries

The CHIRON Group is a global company specializing in CNC vertical milling and mill-turn machining centers, as well as turnkey and automation solutions. Comprehensive services, digital solutions and products for additive manufacturing complete the portfolio. The Group has a global presence, with production and development sites, sales and service subsidiaries, and sales agencies worldwide. Around two thirds of machines and solutions that are sold are exported. Key customer sectors are the automotive, mechanical engineering, medical and precision technology, and aerospace industries, as well as tool manufacturing.

With its CHIRON, STAMA, CMS, FACTORY5, GREIDENWEIS and HSTEC brands, the CHIRON Group is ideally

positioned for a sustainable future. CHIRON machining centers are renowned for their highly dynamic design and their precision, while STAMA's focus is on stability and complete machining. CMS provides completely refurbished machines from the Group, while the expert area of FACTORY5 is high-speed machining of micro-technical components. GREIDENWEIS is a system partner for custom, end-to-end automation solutions, and HSTEC for motor spindles and mechanisms as well as manufacturer- and brand-independent service and repairs (since mid-2022). The final core area of expertise in the CHIRON Group is in additive manufacturing products and solutions.

chiron

STAMA

CMS

FACTORY5

Greidenweis

HSTEC

CHIRON Group


Single spindle vertical milling Multi-spindle vertical milling Mill-turning	Refurbish- ment	Microprecision machining	Automation, specialized machining for general and auto- motive industries	Spindles Fixtures Automation	Additive manufacturing
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Automation


Digital Solutions


Turnkey


Services


 Aerospace

 Automotive

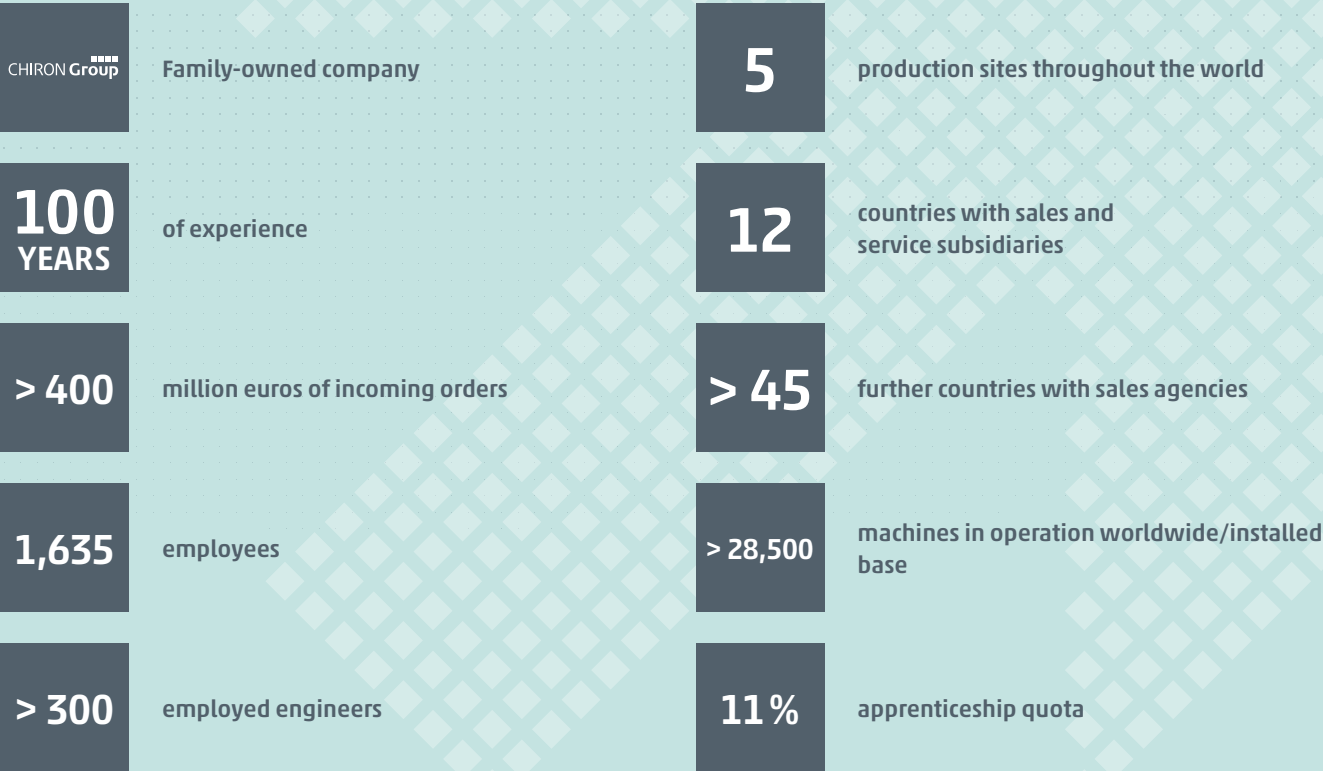
 Mechanical Engineering

 Medical Technology

 Precision Technology

 Tool Manufacturing

## The CHIRON Group in numbers (as of 31.12.2021)



## PERFORMANCE MEETS PRECISION

Competent, smart, innovative, sustainable – the interplay between these four core values is integral to our actions and, consequently, to the quality of the products and services of the CHIRON Group. Day in, day out.

From development, to production, all the way through to sales and service: With a strong sense of team spirit, employees at all sites and in all subsidiaries develop future-proof solutions for complex challenges. Working together to fulfill the promise the CHIRON Group makes to its customers throughout the world: PERFORMANCE MEETS PRECISION.

This promise is both a requirement and an obligation. The same applies to our increasing focus on economic, ecological and social aspects: The CHIRON Group also takes its responsibility in this area extremely seriously and tackles global challenges such as climate protection, resource efficiency and reducing CO<sub>2</sub> emissions head on. Environmental protection, quality, energy consumption, and occupational health and safety therefore play a central role in the practices of the CHIRON Group. Both today and tomorrow.





# Expertise and know-how in numerous industries

Top quality, low unit costs, short production times and efficient processes – these are the challenges faced by the production and mechanical engineering industry throughout the world. The most important prerequisite for this is reliable and precise machines, the highest possible degree of automation, innovative digital solutions and competent service. With its comprehensive product portfolio, the CHIRON Group has created a solid basis for this.

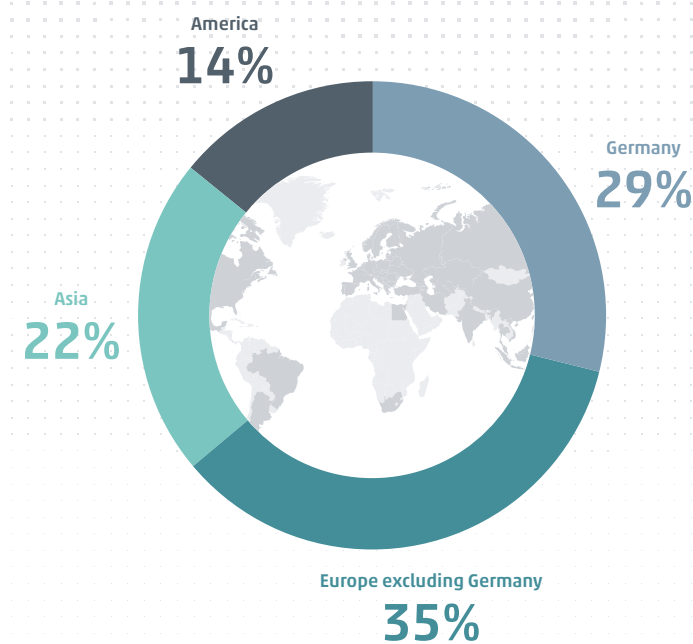


»The CHIRON Group is on exactly the right track when it comes to sustainability, as it places the focus firmly on people, rather than 'profit at all costs'.«

Markus Fink, CEO of Südwestmetall  
Schwarzwald-Hegau Regional Group

The CHIRON Group receives almost 50% of all orders from the automotive industry. With the medical & precision technology and mechanical engineering industries each accounting for around 20% of incoming orders, the CHIRON Group is also a reliable partner to numerous customers in these areas when it comes to precision and innovation. The Group's business operations have been managed from the headquarters in Tuttlingen (Baden-Württemberg), Germany, since the company was founded.

The CHIRON Group also has five production sites worldwide (Germany, Switzerland, China and the USA) as well as sales and service subsidiaries in 12 countries. The company is also represented by sales agencies in more than 45 countries. The installed base of the CHIRON Group amounts to more than 28,500 machines worldwide.

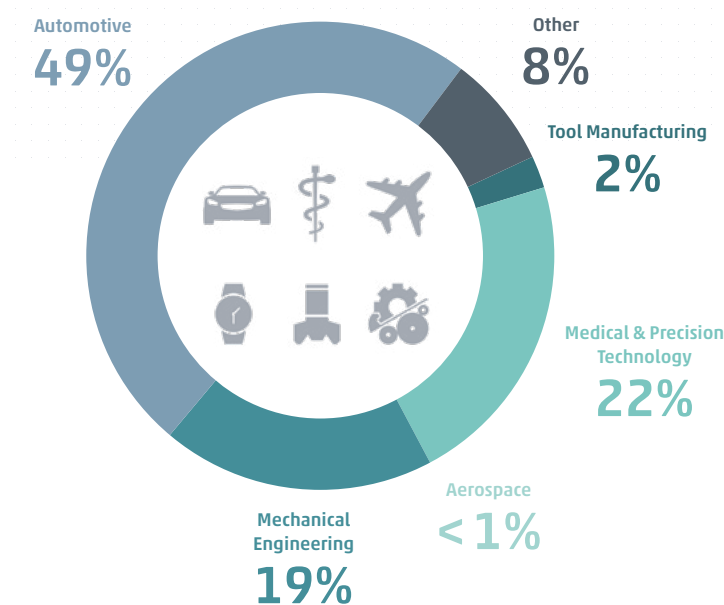


## Incoming orders by region

The CHIRON Group generates more than half of all orders in Germany and Europe. With its own production sites, sales and service subsidiaries and sales agencies, the company has a global presence. This is solidified by close customer contact, competent advice and fast support from the CHIRON Group Service.

## Incoming orders by industry

The expertise of the CHIRON Group in the automotive, medical & precision technology, mechanical engineering, tool manufacturing and aerospace industries did not come about by accident. It is the result of continuity and a stark change in technology and product range as well as a willingness to change according to demands from customers and markets.



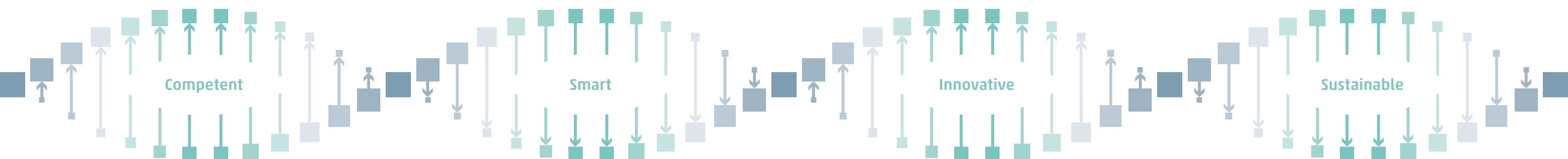
## The most important industries of the CHIRON Group

- ➔ **Automotive:** Whether it's components for vehicles with conventional drive systems, hybrid models or electric vehicles: Everybody wants dynamic, precise machining in quick cycles at reduced unit costs. With the right, future-proof manufacturing technology for the entire range of parts.
- ➔ **Medical & Precision Technology:** Reliably implement specifications for surface quality, precision and dynamics, in stable, productive processes with machining centers from the CHIRON Group. Developed using the expertise of the Medical & Precision Technology Center.
- ➔ **Mechanical Engineering:** The machining centers of the CHIRON Group stand for productivity, process reliability and the fast, precise machining of the most diverse range of workpieces, meaning peak performance from the first workpiece.
- ➔ **Tool Manufacturing:** Whether it's prototypes, single-piece production of special tools or large-scale production of standard tools, the CHIRON Group offers flexible process solutions for the machining of innovative and high-quality tools and machined parts.
- ➔ **Aerospace:** Perfection, maximum safety, quality and durability are the benchmark of the aerospace industry. For this, it needs productive future concepts as well as innovative manufacturing solutions that make operating procedures more efficient. Following the coronavirus crisis, this industry is once again on the upswing.



# Making the sustainability in our DNA visible

The roots of the CHIRON Group lie in the manufacture of precision medical instruments. In Ancient Greece, CHIRON – from whom the company gets its name – was the founder of surgery, had an extensive medical knowledge and was a good blacksmith. Medical technology continues to be one of the markets the CHIRON Group supplies with machining solutions. All machines supplied by the company are efficient and conserve resources, providing visible proof of the sustainability in the CHIRON Group's DNA.



»Quality, environmental protection, energy, occupational health and safety are an obligatory commitment for every employee.« This is the first principle of the Integrated Management System (IMS) of the CHIRON Group. This IMS also describes the ambition, attitude and perspectives of the company that are at the heart of its quality standards and sustainability strategy. CSO Bernd Hilgarth puts it another way: »We are competent, smart, innovative, sustainable.«



»We ourselves, and our machines, conserve resources and avoid waste.«

Bernd Hilgarth, CSO

**The core values of »competent, smart, innovative, sustainable« are set forth in the Integrated Management System (IMS) of the CHIRON Group under the following points:**

- Worldwide compliance with legally binding standards
- Comprehensive health and safety for all employees
- Internal training on quality, environmental, safety and energy awareness
- Failure management
- Public transparency
- Sustainable supplier and customer relationships
- Prevention and avoidance of environmental damage
- Implementation of emergency plans (e.g. to guarantee delivery capacity)
- Conscious use of energy to reduce our CO<sub>2</sub> footprint
- Avoidance of waste and environmentally harmful emissions in the air and waste water
- Operating with the objective of continuously improving processes, minimizing risks and increasing customer satisfaction



# Prioritized criteria for the CHIRON Group



The 2021 reporting year marks the birth of the »Sustainability@CHIRON Group«, a program that involves every department and site. This is based on a sustainable climate strategy, which will be continuously further developed over the coming years.

The CHIRON Group plans to be carbon-neutral by 2025. But that's not all: Under the motto of »Sustainability by Performance and Precision«, studies have been and will continue to be carried out at all sites at the same time as addressing climate questions and possible (structural) solutions. These are designed to help make the energy consumption and results delivered by machines more efficient and thereby more sustainable from the customer's perspective. The CHIRON Group has also joined the Science Based Target Initiative (SBTi).

The sustainability strategy of the CHIRON Group is based on the following Sustainable Development Goals (SDGs) of the United Nations:



## Health and welfare

It is not only the health of employees that takes top priority according to the Integrated Management System (IMS), but also the health of customers. In order to prevent accidents, all machines are designed according to the highest standards.



## High-quality training

Training, continued training and further training form the backbone of the CHIRON Group. The objective is to provide trainees worldwide with high-quality training and offer appropriate continued and further training to employees in order to meet the high quality demands of the company group. The exceptional performance of trainees compared to their national and international counterparts is the best evidence of this.



## Gender equality

This is practiced on an intercultural and worldwide level throughout the CHIRON Group.



## Affordable and clean energy

The objective of carbon-neutral production by 2025 has been set in stone. New photovoltaic systems are also being planned for the sites in Tuttlingen and Neuhausen (Germany) and Taicang (China). In Taicang, the company already operates a geothermal cooling system in the summer.



## Humane working conditions and economic growth

The 1,635 employees of the CHIRON Group are not only contractually employed but also work under conditions that at least meet and often exceed the legal standard of the respective site. This is based on the conviction of shareholders and the management that the wellbeing of employees goes hand in hand with the wellbeing of the company.



## Industry, innovation and infrastructure

The CHIRON Group is an innovative company group with subsidiaries that both strengthen their positioning and benefit from the parent company. They all share the promise of quality with regard to the respective products, systems and services.



## Sustainable consumption and production

Production within the CHIRON Group is designed with both economic and ecological efficiency in mind. This goal can only be achieved if employees are suitably educated, trained and prepared.



## Climate protection measures

The climate strategy has already been adopted – the CHIRON Group will be carbon-neutral by 2025. The individual building blocks that have already been planned and implemented are outlined in this report.



## Working in partnership to achieve our goals

The CHIRON Group was one of the first members of »Blue Competence«, the sustainability initiative for mechanical and plant engineering from the VDMA.



# The methodical path to important matters

The CHIRON Group conducted a multi-stage stakeholder survey, which formed the foundation for this sustainability report. During the first stage, customers, suppliers, employees, trainees as well as employee, employer, association and municipal representatives received an online questionnaire. This was drawn up on the basis of the SDGs and was used to prioritize the various topics with regard to their economic, ecological and social relevance and effects on the company. The second stage involved detailed interviews.



As central stakeholders, all heads of department, as well as managers, were also surveyed within the employee segment. A representative number of customer representatives spanning the industry cross-section served by the CHIRON Group also received the online questionnaire. The evaluation of the questionnaire also included input from suppliers.

»All of the stakeholders we identified as relevant responded in great detail to the topics in our online questionnaire and shared their opinions with us. This not only demonstrates the good and transparent relationships we have with stakeholders, but also their keen interest in the subject of sustainability.«

Benjamin Kurth, Global Program Manager Sustainability

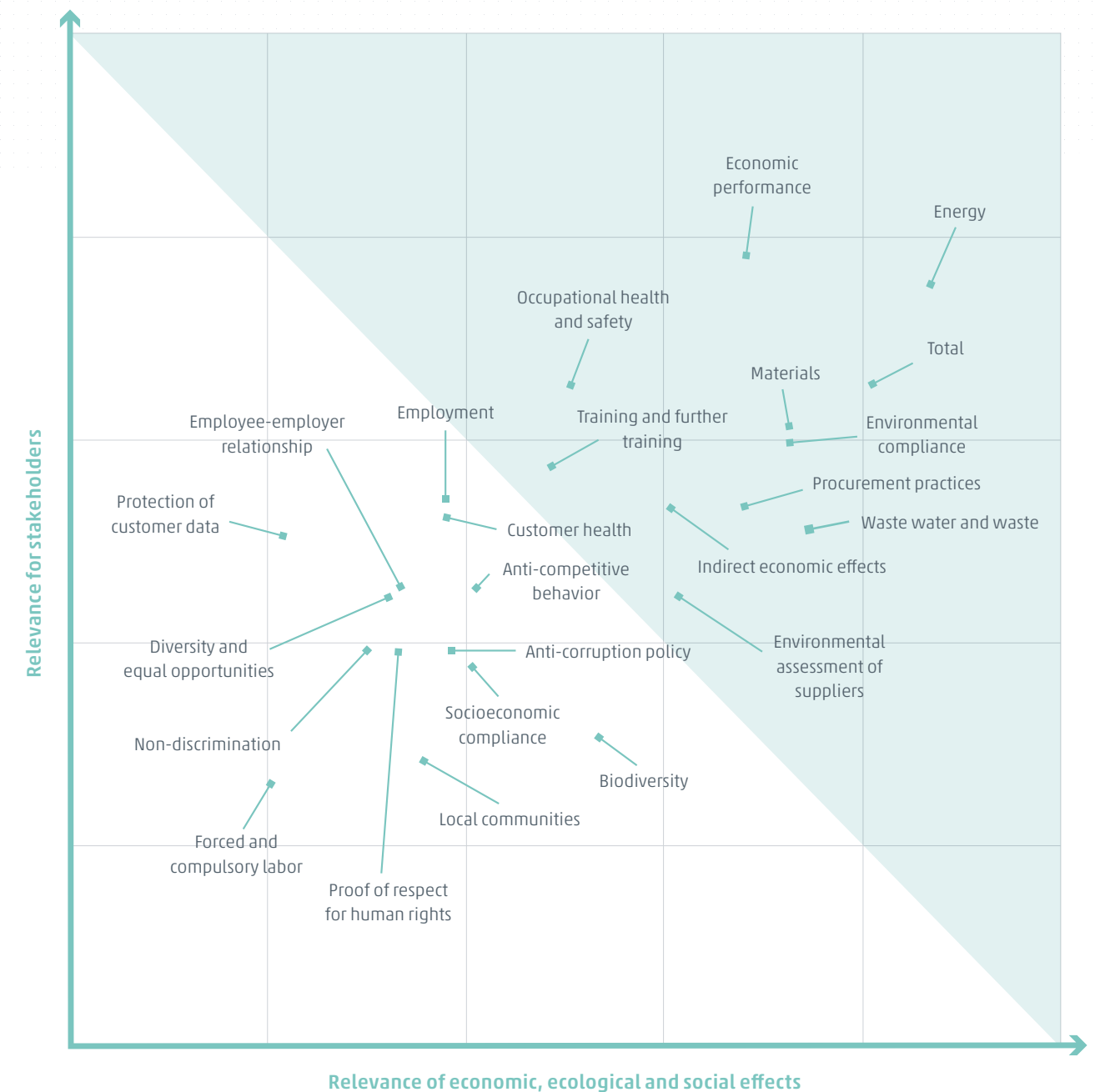


## Topics of the stakeholder survey according to relevance and effects

All participants were asked to rate both the relevance of the respective topic and its effects on the CHIRON Group. A total of 47 stakeholders were surveyed and personal interviews were also conducted. This methodical stakeholder survey was used to derive the below materiality matrix. All 24 key topics are covered in the following

chapters of this report. Particular focus has been placed on the highly rated topics, which are shown in green in the materiality matrix (see below).

### Materiality matrix of the CHIRON Group



# Blue Competence for mechanical and plant engineering

The CHIRON Group is a founding member of the VDMA Blue Competence initiative. This demonstrates the company group's active commitment to sustainability in mechanical and plant engineering and its social, ecological and economic effects at association level.

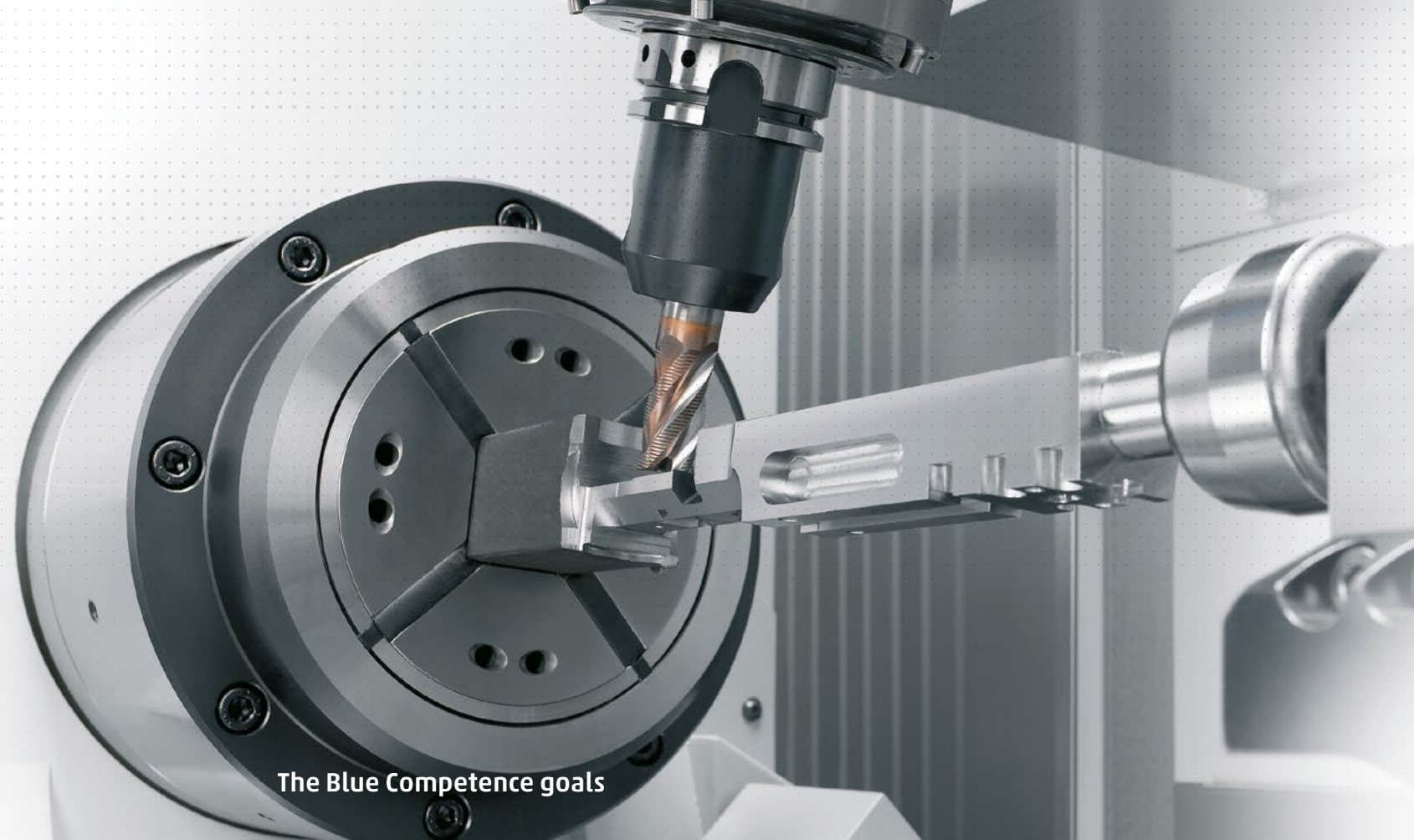
## »Thinking and acting in a sustainable way pays off«

»We are certain that thinking and acting in a sustainable way pays off«, emphasize CEO Carsten Liske and Chair of the Board of Directors, Dr. Armin Schmiedeberg, unanimously. Both go on to explain: »It is only with economic success and value creation that we are able to further discuss ESG (Environment Social Governance) issues.« Both are therefore committed to the principle that also underlies the VDMA Blue Competence initiative: Creating the possibility of future-focused sustainability on the basis of economic success, fairness, respect and responsibility.

Blue Competence was launched in 2019 by members of the VDMA and places innovation and technology at the forefront of sustainable solutions in mechanical and plant engineering. By displaying the Blue Competence logo, the partner companies publicly pledge their commitment to the twelve sustainability principles of mechanical and plant engineering, which are based on the applicable Sustainable Development Goals of the United Nations. The partners all share the same values, and their corporate activity is shaped by their responsible approach to natural resources and their social responsibility. These values are expressed through sustainable products, and production and management processes.



Further information at [www.bluecompetence.net](http://www.bluecompetence.net)



## The Blue Competence goals

### Goal 1: To shape the world of tomorrow through technology

As a technical innovation and market leader, the CHIRON Group is already making its contribution to overcoming the global challenges of tomorrow and beyond with highly efficient and durable machines.

### Goal 2: To achieve more from fewer resources

Innovative, efficient and smart technology is the key to resource conservation. The CHIRON Group applies this key in a highly individual, customer-specific manner and, with CMS, has a dedicated business area that specializes exclusively in refurbishment.

### Goal 3: To take responsibility

The CHIRON Group is not a listed company, but one that is family-owned. Shareholders, the Board of Directors and company management stand by their social obligations at all sites and take this social, economic and ecological responsibility for employees, customers and suppliers throughout the world seriously.

### Goal 4: To set an example

Blue Competence demonstrates that sustainability pays off. This is because sustainable new developments also increase profitability. This understanding and attitude sets an example to other companies and organizations.





# Decisive contribution to sustainable success

The foundation on which the leading market position and growth of the CHIRON Group is built is its committed and qualified employees throughout the world. It is these employees who are not only preparing for the coming challenges, but embracing them as an opportunity for professional and personal further development. With their commitment, they are making a decisive contribution to the sustainable success of the company.



### Authentic and attractive employer brand

From production, to research and development, through to management: An authentic and attractive working environment with a modern team-, customer- and solution-oriented approach is the most important basis for sustainable company management. Employees with a keen interest in the respective user industry, to whom a family-friendly working model is important and who also take an active approach to continuous further development are in exactly the right place in the CHIRON Group. This applies to all employees across all departments.

### Fair pay and numerous benefits

By way of acknowledging commitment and performance, around 89% of CHIRON Group employees at the sites in Germany are paid according to the IG Metall pay scale. As such, the company clearly places great importance on ensuring that all employees are paid fairly – primarily according to their knowledge and skills, their professional experience and level of responsibility.

The CHIRON Group also offers all employees numerous benefits, regardless of whether they are employed on a full-time or part-time basis:

- Individual qualification opportunities
- Flexible working hours and working models
- Performance-based pay
- Active health management
- Team-building activities
- Corporate benefits: Attractive discounts from A to Z
- Discounts at local shops and leisure facilities
- Events for employees and their families
- Free organic fruit and mineral water
- Staff canteen in Tuttlingen, Germany



### Employees of the CHIRON Group

Region	TOTAL	Of which active	Of which not active*	Of which trainees	Of which managers
Europe	1,349	1,183	37	122	7
America	101	92	0	8	1
Asia	185	163	2	17	3
Total	1,635	1,438	39	147	11

\* This refers to employees on parental leave or extended sick leave.

### Employees of the CHIRON Group in Germany

Gender	TOTAL	Of which full time	Of which part time	Of which temporary	Of which permanent
Male	1,010	996	14	49	961
Female	189	142	47	6	183
Total	1,199	1,138	61	55	1,144

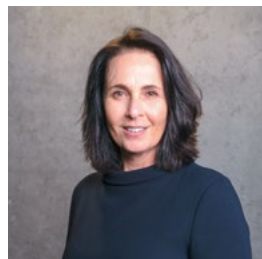


# Diversity makes all the difference

The Code of Conduct of the CHIRON Group defines the rules regarding behavior inside and outside the organization. These are a fundamental component of the corporate culture – and are therefore binding for all employees.

Employees who do not behave with respect and dignity towards one another or who do not follow these rules do not belong in the CHIRON Group. The Code of Conduct also explicitly defines further business practices: »Age, disabilities, ethnic origin, skin color, gender, pregnancy,

sexual identity, nationality, religion and marital status have no impact on equal opportunities during the employee selection process [...]. Managers support their employees in balancing their career and private lives and encourage them to take up health promotion offers.«



»The objective of the CHIRON Group is to attract committed and competent employees. We are delighted to see more and more women choosing a career in mechanical engineering, production or research and development.«

Cornelia Braun, Global Head of HR



*A token of appreciation!*

Combining a career with family commitments can be a huge challenge for many young families. This is why the CHIRON Group makes every effort to ensure that employees who are restarting their careers following parental leave or those who are reducing their working hours receive proper support.

Sarah Stumpe, who became a mother to a little girl in May 2021, describes her return to work following maternity leave:

»I remember my last working days before taking maternity leave at the end of March 2021 well. After more than 10 years in the CHIRON Group, I left with a smile and a tear in my eye. It was clear to me, however, that I wanted to return to my job after a year. When I came back to Sales at 40% of my original working hours and I was also handed responsibility for the entire organization of the Worldwide Management Meeting in Schlierbach, this was a clear sign of how much my work is

appreciated. As I have good childcare in place for my daughter and I receive fantastic support from the five members of my Asia team as well as the management, I was able to increase my working hours to 50% after just two months.«





# Responsible company management and compliance

The subject of sustainability is approached holistically by the CHIRON Group and incorporated into all business and strategic decisions. For this reason, the Executive Board and Chair of the Board of Directors initiated a special project in 2021. The project team is made up of employees and managers from different specialist departments. This project team also developed a sustainability strategy and roadmap in the reporting year and the first sub-projects have already been successfully started.

## Working on an equal level for 100 years

For a medium-sized, family-run business like the CHIRON Group, good and cooperative relationships are the key to economic success. And this has been the case for 100 years. Working on an equal level is therefore a deliberate choice throughout the company. The management and department/team leaders also place great emphasis on transparent communication. Any information or changes that employees need to be aware of are made available to all on the blackboard or intranet or communicated by the respective supervisors.

By defining a sustainability strategy with the goal, among others, of becoming carbon-neutral by 2025, this subject has been firmly anchored into daily business and is also reflected in the Code of Conduct. The importance of sustainability is also underlined by the fact that the Executive Board takes personal responsibility for it – and thereby makes direct decisions regarding economic, ecological and social issues within the context of sustainable company management.



»The subject of compliance and the definition and textualization of internal and external rules regarding behavior are of huge importance to the CHIRON Group. With this in mind, we provided around 100 Sales employees with training on this subject in small groups throughout 2021. This training showed us how important it is for employees to be able to share ideas and discuss individual topics in person, on the basis of practical examples. We therefore plan to further expand this training program in future.«

Dr. Astrid Brennecke, Head of Legal and Compliance



The management team of the CHIRON Group SE in the 2021 reporting year (from left): Bernd Hilgarth (CSO), Vanessa Hellwing (CFO), Carsten Liske (CEO) and Dr.-Ing. Claus Eppler (CTO).

## Maximum precision, including when it comes to compliance

Compliance means adhering to laws, regulations and internal instructions and guidelines. With this in mind, the CHIRON Group established its own Compliance Management System in 2015. Even though some measures and checks were already in place before this time, an internal structure with the express function of a Compliance Organization has been established since then.

It comprises the following:

- IT security
- Anti-corruption
- Competition law
- Occupational health and safety

The CHIRON Group reviews the defined focus areas every year and makes changes as necessary. This prevents corruption from occurring and ensures that all employees know what to look out for. Furthermore, the compliance guidelines are published and all employees are able to contact the compliance officer at any time.

All of these measures further underline the importance of this subject for the CHIRON Group.



## Fantastic career opportunities for talented trainees

The CHIRON Group offers fantastic career opportunities. Talented young trainees are provided with training in a total of eleven different technical and commercial professions, including electronics, mechatronics, industrial mechanics, IT, warehouse logistics and industrial sales. This continuous investment in the future pays off: In 2021, the CHIRON Group was once again able to fill all training positions and was recognized for its exceptional training.

### Recognized as best training company

»In order to meet the needs of all trainees and give them the best possible support, the CHIRON Group employs a total of 44 trainers. These trainers make sure that the talented trainees feel at home in the company and are given every opportunity to continuously expand their specialist knowledge«, says Thomas Haselmeier, Education Manager for the CHIRON Group.

During the 2021 reporting year, 126 young people undertook training or studies in 15 different areas – 25 of whom began their first year of apprenticeship on 01.09.2021.



Innovative technology and state-of-the-art equipment in the learning workshop as well as virtual learning content are at the heart of the company's professional training. The CHIRON Group's sustained success in this area is demonstrated by the coveted »Deutschlands beste Ausbildungsbetriebe« (»Germany's best training companies«) seal, which the company has been awarded four years in a row.

### Global training system

In 2021, the first measures to standardize the training system were defined within the CHIRON Group. The objective of this is to meet the strong demand for training both on a global scale and outside the company.

The CHIRON Group is a member of Apprenticeship 2000 in the USA, which is based on a dual training system. The CHIRON Group in China is currently implementing similar training standards.

»We are extremely proud of the fact that Lukas Müller completed his training in the 2021 reporting year as the best mechatronics engineer in Germany.«

Herbert Mattes, Head of Education Management

## Promoting further training and exchange of expertise

Offering excellent further training opportunities to all employees is a central element in surviving as a company amongst the global competition, in always staying one step ahead of market competitors and in guaranteeing top product quality at all times. For this reason, the CHIRON Group places great emphasis on »Training on the Job« – and on creating the framework for employees to support one another and share their expertise.

### Intercultural exchange of expertise within the CHIRON Group

The company also promotes the intercultural exchange of expertise and provides opportunities for employees from different subsidiaries to meet in person and benefit from each other's experience.

Within the scope of this intercultural exchange, the trainees and students who achieve the best results are also given the opportunity to travel to the CHIRON Group factory in Charlotte in the USA to gain an insight into American working methods.



»The knowledge potential of the CHIRON Group is huge – and this is why it is important to pool this potential and carry it into the future. In 2021, we started a training initiative in which highly qualified and motivated employees from various departments and in various positions offer training to their colleagues. This training program, which involves a type of sponsorship, is intended to further deepen our employees' expert knowledge and promote equal exchange.«

Roger Schöpf, Head of Global Operations

### ➔ Forward looking@CHIRON Group

In order to create a Group-wide training standard in the future, close collaboration has been established with the CHIRON Group subsidiary in Charlotte/USA. The same training standards that are already being applied internally in Germany will also soon apply in Taicang/China. In order to ensure that all specialists and employees experience relevant training content, a large digital information board in every production hall will provide details on upcoming training courses and their contents.



# Social responsibility throughout the world



Main sponsor of the NYE run Tuttlingen

Stadtradeln cycling campaign 2021 in Tuttlingen, Germany

## The CHIRON Group on the move

The CHIRON Group is proud to be a longtime sponsor and supporter of the following events – and even to take part in some of them with its own teams.

Initiator and partner of the »Apprentice Night« in Tuttlingen, Germany



Main sponsor of Run & Fun town race in Tuttlingen, Germany



The CHIRON Group places great importance on taking social responsibility at the individual company sites and making a positive contribution to local communities. At the headquarters in Tuttlingen, Germany, for example, the CHIRON Group sponsors regional universities as well as several cultural and leisure events.

### Exemplary commitment of the CHIRON Group

From associations to universities, all the way through to competitions: In the field of training and further training in particular, the commitment of the CHIRON Group is exemplary. Below are just some of the examples that demonstrate this:

#### Associations and universities

- Member of the VDW (Verein Deutscher Werkzeugmaschinenfabriken e. V.): Head of the technical committee, active in further committees and working groups
- Furtwangen University, Schwenningen site: Delivering lectures
- Friends of the Furtwangen University, Tuttlingen site
- Advisor on the Mechatronic Systems course at Furtwangen University, Tuttlingen site
- Member of the DIN (Deutsches Institut für Normierung): Active in more standardization committees

#### Chamber of Industry and Commerce

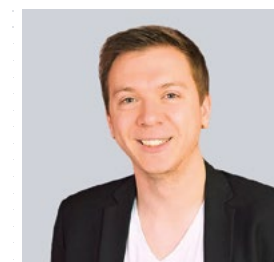
- Chair of the examinations board of the Chamber of Industry and Commerce for the professional field of industrial mechanics
- Member of various examinations boards
- Member of the occupational training committee (employer side)

#### Südwestmetall

- Member of regional working groups in the commercial and industrial field
- Member of the occupational training working group, Baden-Württemberg
- Member of the School of Economics working group

#### WorldSkills competition

- WorldSkills (Discipline: CNC milling, Skill 07)
- WorldSkills International as expert (jury member, country expert for Germany)
- WorldSkills Europe chief expert (competition leader)
- WorldSkills Germany national trainer



»The CHIRON Group is the third-largest employer in the region and therefore makes an important contribution to the attractiveness of Tuttlingen, Germany. The company is also an important and reliable partner to the annual apprenticeship fair. With its attractive training and study program, the company ensures that young people remain in the region. The CHIRON Group is also active in the town's company forum.«

Martin Wycisk, business promoter for the town Tuttlingen, Germany



# CHIRON Garden 1.0 in Taicang



The work of the CHIRON Group and the commitment of employees is bearing fruit. In the truest sense of the word. In the 2021 reporting year, several vegetable patches were created and seeds and seedlings were planted on the site in Taicang, China, under the supervision of HR and administration manager Joanna Gao, and finally the first fruits and vegetables are being harvested, prepared and enjoyed.

Divided into five groups with a total of 100 employees, work began in early 2021, within the scope of the »Happy CHIRON Gardening« project. The goal was to create vegetable patches, work the soil and remove any weeds, then to plant watermelons,

peppers, eggplants, cucumbers, beans and squashes. After a short time and with a huge amount of dedication, the garden in Taicang quickly became an urban gardening project that offers unequalled opportunities.



GROUP 1

Name:  
Little melon at CHIRON



GROUP 2

Name:  
Happy farmhouse



GROUP 3

Name:  
Beautiful princess



GROUP 4

Name:  
Our land



GROUP 5

Name:  
Dongli Garden



## The CHIRON Group in Taicang:

- Size of the site: 35.330 m<sup>2</sup>
- Production: 9.680 m<sup>2</sup>
- Office complex: 1.300 m<sup>2</sup>
- Outdoor facilities: 13.700 m<sup>2</sup>
- Football pitch: 800 m<sup>2</sup>
- Basketball court: 420 m<sup>2</sup>
- Vegetable garden: 550 m<sup>2</sup>



»Particularly worthy of mention at our plant in Taicang is the technical sophistication of the building, which has been built according to German standards. It features, among other things, its own geothermal system, good thermal insulation of the entire building as well as effective solar protection thanks to double-glazed windows. This saves a huge amount of energy and creates a comfortable working atmosphere.«

Willi Riester, CTO CHIRON Machine Tools (Taicang) Co. Ltd.



## ➡ Forward looking@CHIRON Group

Following its success in its first year, the CHIRON Group is planning to expand the vegetable garden in Taicang in 2022 by a further 300 square meters. The new section of the garden will also feature an automatic irrigation system and the families of employees will also be invited to get involved in the garden project in future. CHIRON Taicang is also planning to install a photovoltaic system on the roof of the plant.



# Safety at the workplace takes top priority

The health of all employees is a valuable asset. Safe-to-operate machines, qualified personnel and an in-house health group are the central elements of good and effective health care. This is how the CHIRON Group lives up to its reputation as an excellent employer brand and promotes team spirit and good relationships between employees across the different departments.

## Qualitative health protection

Precision is a corporate mindset within the CHIRON Group, which spans all areas and activities. This is demonstrated, among other things, by the Integrated Management System (IMS) for occupational health and safety. The company places great emphasis on top quality, which is why the sites in Tuttlingen and Neuhausen are certified according to DIN EN ISO 9001:2015, VDA 6.4, DIN EN ISO 14001:2015 and DIN EN ISO 50001:2018. The health and safety management system covers the sites in Tuttlingen, Neuhausen, Schlierbach and the other service branches. Of course,

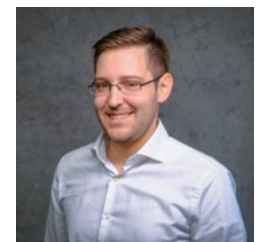
the other sites of the CHIRON Group are supported in guaranteeing occupational health and safety at all times. The legal requirements for occupational health and safety for all relevant persons are listed and described in the compliance database. This ensures that the relevant employees have a detailed knowledge of the respective requirements.

Employees are able to report any near-incidents and make suggestions for improvements at any time. This enables occupational health and safety



## Procedure for identifying occupational risks:

- Site visits and internal audits
- Occupational safety committee (consisting of: Board of Management, Works Council, representative body for disabled employees, safety specialist, safety officers and heads of department) and safety officer meetings
- Documentation of employee notes
- Idea management
- Analysis of accidents and near-incidents



»We have defined our own process for risk assessments at the workplace. First and foremost, this involves identifying the process trigger, for example the procurement of a new machine. Then a risk assessment is carried out, before various protective measures are defined.«

Patrick Bausert, HSE (Health, Safety and Environment) Expert

to be optimized directly on site. In order to make this workflow more effective and simple in future, the CHIRON Group is working on digital solutions. More on this can be found at the end of this chapter under »Forward looking@CHIRON Group«.

## Occupational health checks in the CHIRON Group

Occupational health checks and advice are provided by the ias Group. Company doctors are generally on site once or twice a month and also regularly take part in occupational safety committee meetings and site visits. Health checkups are managed in a database. This also contains an assessment of the need for examinations and advice, voluntary examinations and requested appointments.





# Team training on health and safety

Occupational health and safety within the CHIRON Group predominantly involves implementing preventive measures and offering employees training on maintaining or improving their health. As such, the company has established both an occupational safety committee and its own health group.



**Promoting team spirit**  
What brings people together more than working as a team towards a common goal? Sport calls for team spirit and solidarity. For this reason, the CHIRON Group is not only the main sponsor of the »Run & Fun« town race and the NYE run in Tuttlingen, Germany, but also on the starting line with several teams. The cycling sports groups at the sites in Italy and Tuttlingen, Germany also call for team spirit and solidarity.

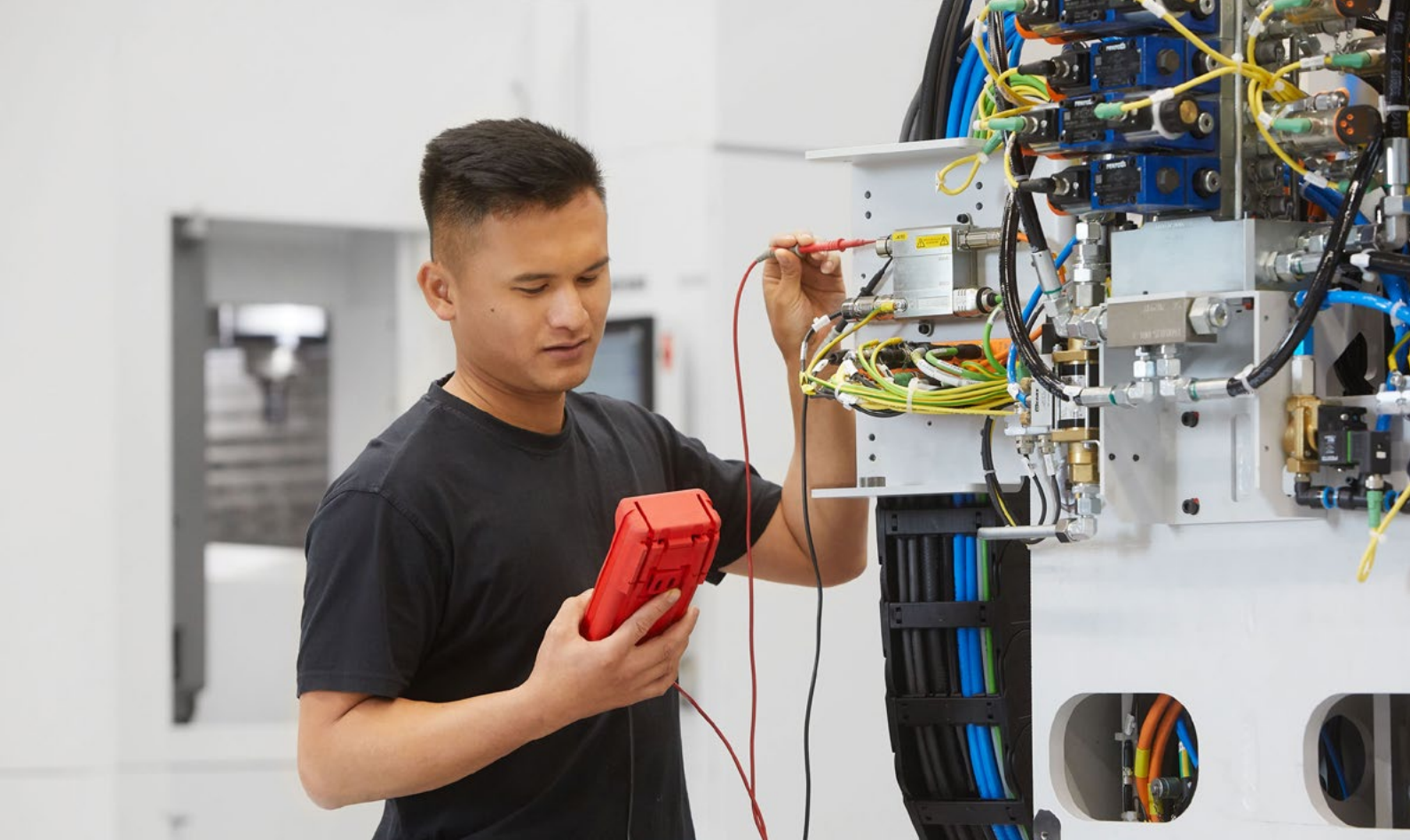


**Sports and course offerings**  
A total of six employees lead, plan and organize various sports and course offerings, such as bike races, cooking classes, Christmas baking, meditation classes, hikes with the whole family, and numerous other fitness and nutrition classes. The management provides the health group with its own annual budget for this purpose.

### Safety training courses

Training needs are determined according to activity:

- Departmental safety briefings
- Activity-related training (e.g. for cranes, forklifts and other industrial trucks)
- Practical safety training (e.g. for working at heights).
- Instruction and information on relevant incidents/accidents



**Transparency and knowledge**  
For the CHIRON Group, it is a matter of course that employees are always well informed and are also able to introduce improvements themselves at any time. An improvement suggestion system has been established for this purpose. Close cooperation between the safety officers at each site and the Works Council, as well as their participation in the occupational safety committee meetings, ensures high-quality and comprehensive health and safety management. Finally, employees receive important information and notices via e-mails, notices, information boards in the departments, at works meetings, via the respective departmental management or via the intranet.

The occupational safety committee - consisting of safety officers, the occupational safety specialist and the Executive Board or representative of the Executive Board - met regularly in the 2021 reporting year. In addition, a total of 15 internal site visits took place with a focus on occupational safety.

Accident statistics 2021	
Occupational accidents	30
Reportable accidents	19
Commuting accidents	7

### Forward looking@CHIRON Group

In future, the requirements, legal regulations and standards applicable at German sites are to be firmly anchored at all international CHIRON Group sites in the form of guidelines. In addition, to enable quick and easy hazard identification for all employees, work is currently underway to develop our own e-learning software on the subject of occupational safety - this is to be used from 2023. The e-learning software will also provide employees with the opportunity to participate in online training as well as safety briefings.



# Creating added value with innovative products

The innovative products of the CHIRON Group efficiently conserve resources and create added value for customers around the world through their outstanding availability, productivity and value creation. And we do this in all areas of expertise throughout the entire lifecycle.



Micro5

## Forward looking@CHIRON Group

### Micro5: Maximum precision in every tiny detail

Small like a fridge, quiet like a modern dishwasher and low in energy consumption like a coffee machine, the Micro5 is smart, for more than just machining. The Micro5 is not only smart when it comes to machining. The Micro5 is leading a small revolution in the dynamic and highly precise world of machining tiny medical instruments, delicate jewelry and the most intricate watch parts. The FACTORY5 machining center with five axes is extremely compact and can be set up very quickly almost anywhere – in the production hall or directly at the workplace.

The '5' in the name stands for the ideal 5:1 ratio of machine size to workpiece, for five times lower weight, and for maximum efficiency. Energy consumption is 50 times lower in comparison to conventional systems. The newest generation of Micro5, which was introduced in the 2021 reporting year, has undergone more than 50 improvements, small and large, enhancing its practical reliability, efficiency and autonomy. Further improvements are certain to follow soon.

DZ 16 W



## Selected examples, practical advantages

Competent, smart, innovative, sustainable – the interplay between these four core properties is integral to our actions and, consequently, to the quality of the products and services of the CHIRON Group. Of course, this applies to all areas of expertise: From milling/mill-turning, to additive manufacturing, automation, turnkey, digital solutions and services, all the way through to machine refurbishment. The following selected examples from the CHIRON Group portfolio show the sustainable advantages that customers benefit from in practice.

### Short cycle times

The more productive a machining center is in manufacturing components, the more economically and thus sustainably the resources of space, energy and raw materials can be used. Manufacturing is even more productive and therefore more sustainable if multi-spindle systems are used instead of single-spindle systems: »Our goal is for a double-spindle machine such as the DZ 16 W or the MT 733 to produce two workpieces in the same time it takes a single-spindle machine to produce one workpiece - with the same top quality, of course,« says Dr.-Ing. Claus Eppler, Managing Director (CTO) in the CHIRON Group.

Automatic tool changes, workpiece changeover via a pallet changer or a tool change unit as well as loading and unloading the magazine in parallel also contribute to the short cycle times – which can be implemented, for example, by the 16, 22, 25 and 28 series and the MT 733.

### Greater energy efficiency

Sustainability is also reflected in a variety of other technical solutions, which add up to considerably more energy efficiency:

- Continuous use of frequency-controlled drives or IE3 motors
- Standard feed-back of the servomotors' brake energy
- Hydraulic units in storage-charge operation
- Consistent mass optimization of all mobile components in the machining center
- Milling spindles with energy-efficient synchronous and asynchronous motors to reduce the magnetic flux during turndown
- Optional machine recooling in place of the customer's chilled water distribution
- PowerSave function for switching the machine to energy-saving mode as required



»For our customers, the most attractive aspect of using multi-spindle systems is the reduced need for floor space, energy and investment costs compared to two single-spindle machines«

Dr.-Ing. Claus Eppler, CTO



Automated machining

An important trend in manufacturing is the continuously increasing use of sustainable automation solutions. »Ideally, several machines are operated by one employee, in the best case scenario in just one or a maximum of two of three production shifts. The night shift, which is expensive for the customer, should run by itself if possible,« says Dr.-Ing. Claus Eppler. This can be achieved with an automation solution such as the Variocell Uno. Digital monitoring and messaging functions make it possible to have disruption-free, highly efficient production even in autonomous operation.

Digital assistance

With its digital systems in the SmartLine portfolio and its SmartServices, the CHIRON Group offers optimum support during operation and delivers additional advantages in terms of the efficiency, availability and productivity of the machining centers. And when it comes to conserving resources, all maintenance work required at a single site can be combined and scheduled for just one date. Thanks to remote support, malfunctions can be remedied remotely in the shortest possible time and callouts can be avoided - along with the associated CO<sub>2</sub> emissions. In addition, virtual commissioning of the machine and simulation of the customer's processes shorten the run-in times and commissioning of the actual machining centers.

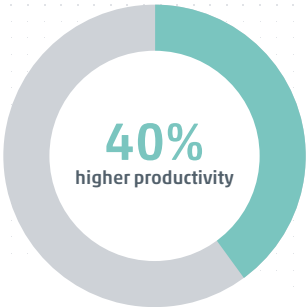
Easy 3D manufacturing and repair

The AM Cube, the first 3D metal printer from the CHIRON Group, has many outstanding features. One of them is sustainability: Larger components can be precisely assembled directly in the customer's production facility without the otherwise high material costs, long procurement times and environmentally damaging transport. Components are protected from corrosion and wear if they are coated using laser deposition welding (AM Coating) procedures, they last longer and release fewer harmful substances - for example, abrasion from brake disks - into the environment. In addition, the AM Cube is ideal for repairing parts - another advantage in terms of sustainability with manufacturing solutions of the CHIRON Group.

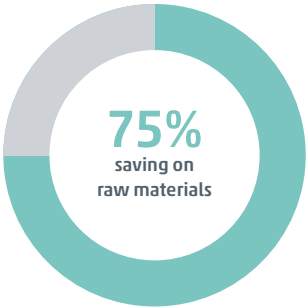
**Machine refurbishment instead of a new purchase**  
Sustainability also means preserving values. A machining center from the CHIRON Group represents such a value, even if it has been in operation for many years. With an individual refurbishment solution from CMS, the lifecycle of existing machines can be extended - and not only that: All key elements such as drives, main spindles and controls are replaced, enabling the centers to produce 30 to 40 percent faster than before. At the same time, the energy demand decreases:

The thermal energy from the cooling circuits can be fed into the customer's central water circuit, special drive motors feed any energy that has been generated but

is not required back into the mains supply. The greatest potential for savings provided by a refurbishment compared to a new purchase is with the raw materials at 75 percent. The central criterion for customers, apart from the lower investment costs, is the delivery time: Some of the machining centers from the CMS portfolio that have already been modernized are available in only two weeks; a customized refurbishment is possible in six to twelve weeks.



**Pure productivity**  
Following refurbishment, the machines are up to 40% more productive.



**High raw material savings**  
75% of the material mass is retained during the complete refurbishment.



**Shorter delivery times**  
Instead of waiting up to a year for a new investment, a refurbishment takes only six to twelve weeks, depending on the work involved.

The competence fields of the CHIRON Group at a glance

<p>➔ <b>Milling/mill-turning</b></p> <p>Top technologies for CNC-controlled vertical milling and mill-turning with the special combination of the highest dynamics and precision. For productive and flexible machining from individual parts to large series.</p>		<p>➔ <b>Additive manufacturing</b></p> <p>Innovative products and solutions with laser cladding technology for coating, repair and 3D metal printing. For a wide variety of processes and industries - and even more possibilities in additive manufacturing.</p>	
<p>➔ <b>Automation</b></p> <p>Every automation solution is as individual as the requirements. And always leads to an optimum process. For consistently high production quality, low unit costs, short throughput times, high autonomy. And the flexibility required for different tasks.</p>		<p>➔ <b>Turnkey</b></p> <p>The big picture, perfect down to the last detail: Machining center, tools, fixtures and automation. Brought together in a ready-for-production machining process. Turnkey, from a single source.</p>	
<p>➔ <b>Digital solutions</b></p> <p>Digital systems and services for real added value in the machining centers, in the production environment, in the company: The modular SmartLine software portfolio and SmartServices for every phase of the machine lifecycle.</p>		<p>➔ <b>Services</b></p> <p>More time for machining, lower operating costs - throughout every phase of the machine lifecycle. With LifetimeSolutions, an individual complete package and the right services at the right time.</p>	
<p>➔ <b>Machine refurbishment</b></p> <p>Refurbishment and modernization of CHIRON and STAMA brand machines with manufacturer expertise: Sustainably productive and giving machines a new lease of life, using fewer resources.</p>		<p>➔ <b>Machine pool</b></p> <p>Expand capacities quickly, enter quality production more economically with CHIRON and STAMA machining centers. Thanks to top technology available at short notice on the basis of refurbished and existing machines.</p>	

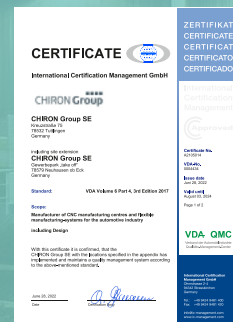


# Certified quality in all areas

Quality, the environment, energy, occupational health and safety all play a fundamental role in both the practices of the CHIRON Group and its products. Guiding principles and binding specifications define the respective standards, which are officially confirmed by all relevant certifications.



**DIN EN ISO 9001:2015**  
certified quality management system



**VDA 6.4**  
certified quality management system



**DIN EN ISO 50001:2018**  
certified energy management system



**DIN EN ISO 14001:2015**  
certified environmental management system



»When it comes to quality and environmental management, we deliberately go one step further: Our machining centers and the machining processes they perform are highly efficient and extremely environmentally friendly in design. Their environmental balance not only leads the way in terms of energy requirements, but also in terms of the use of resources such as production time, space requirements, investment and personnel.«

Nicolas Zarak, Head of Quality Management



# Close to customers and suppliers worldwide

Whether in Europe, Asia or America: The CHIRON Group has a presence in all relevant markets with its own branches. Which means it is always close to customers and suppliers worldwide. By keeping distances as short as possible, personal contacts are cultivated and valuable resources are conserved during transport.



## Binding self-disclosure according to clearly defined criteria

The CHIRON Group maintains trusting, fair and respectful business relationships with its customers and suppliers - and expects the same from them. In order to ensure that the ethical and corporate guidelines of the company as well as the applicable laws and regulations in the respective countries are taken into account, suppliers of the CHIRON Group are obligated to make a binding self-disclosure.

This means that they can be objectively evaluated, compared and, if necessary, checked directly on site at

any time according to clearly defined economic, ecological and social criteria. These include:

- Negative social impacts in the supply chain and measures taken
- Assessment of the health and safety impacts of different categories of products and services.
- Violations related to health and safety impacts of various product and service categories.

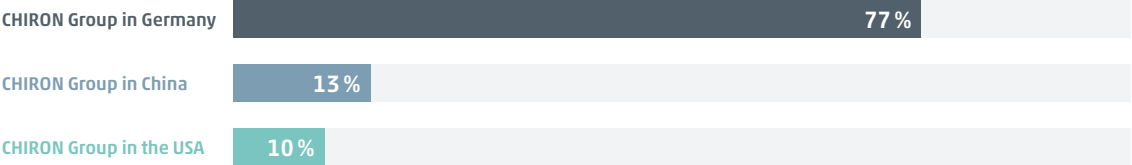


## Business relationships built up over many years

The result is long-standing business relationships with around 2,000 suppliers worldwide. Depending on the market and location, production materials from a wide range of product groups were supplied in the 2021 reporting year - from control cabinets and

spindle technology to DIN standard and catalog parts. »There were no significant changes in the organization and its supply chain during the reporting period,« says Peter Bosch, Head of Global Supply Management in the CHIRON Group.

## Procurement volume of production materials





# Reducing the volume of waste and waste water in a targeted manner

The CHIRON Group is officially certified according to DIN EN ISO 14001:2015 at the main production sites in Tuttlingen and Neuhausen. This demonstrates that the company sustainably conserves resources, avoids environmental damage and, as far as economically feasible, always uses the best available state-of-the-art technology. The avoidance of waste and hazardous waste water clearly demonstrates this.

**Waste management**

The waste generated is collected and disposed of or recycled separately according to the type of waste at all CHIRON Group sites worldwide in accordance with local requirements. On the one hand, the clear separation according to waste types has made it possible to continuously reduce the residual waste quota in recent years. On the other hand, the total volume of all waste in the 2021 reporting year also decreased significantly compared to 2018 - by a total of 31.5 % at the Tuttlingen and Neuhausen plants alone. However, this is also at least partly due to the COVID-related decline in production during this period.

The same applies to recyclable waste: The share of this rose steadily from 2018 to 2021, while its total volume also fell steadily. Metal chips, for example, fell by 16.8 %\* and paper and cardboard packaging by as much as 25.2 %\*.

In addition, 24.5 % less contaminated waste was generated at the Tuttlingen and Neuhausen plants in the 2021 reporting year than in 2018. This mainly relates to residual quantities

of absorbent and filter materials, including oil filters, as well as wiping cloths and protective clothing contaminated by hazardous substances. This waste is collected separately, professionally stored temporarily and disposed of by experts.

**Waste water management**

The CHIRON Group uses fresh water at its sites mainly for sanitary areas, for cleaning, as drinking water and in canteens. In some cases, the fresh water is also used to water plants or as process water, for example for sprinkler or cooling systems. In principle, the waste water is hardly contaminated and can therefore be fed mainly through the public sewer system for regular waste water treatment.

Liquids required for certain production processes, such as halogen-free machining emulsions and solutions, on the other hand, are disposed of professionally by experts. The total volume of such liquids was significantly reduced by 56.4 %\* from 2018 to 2021.

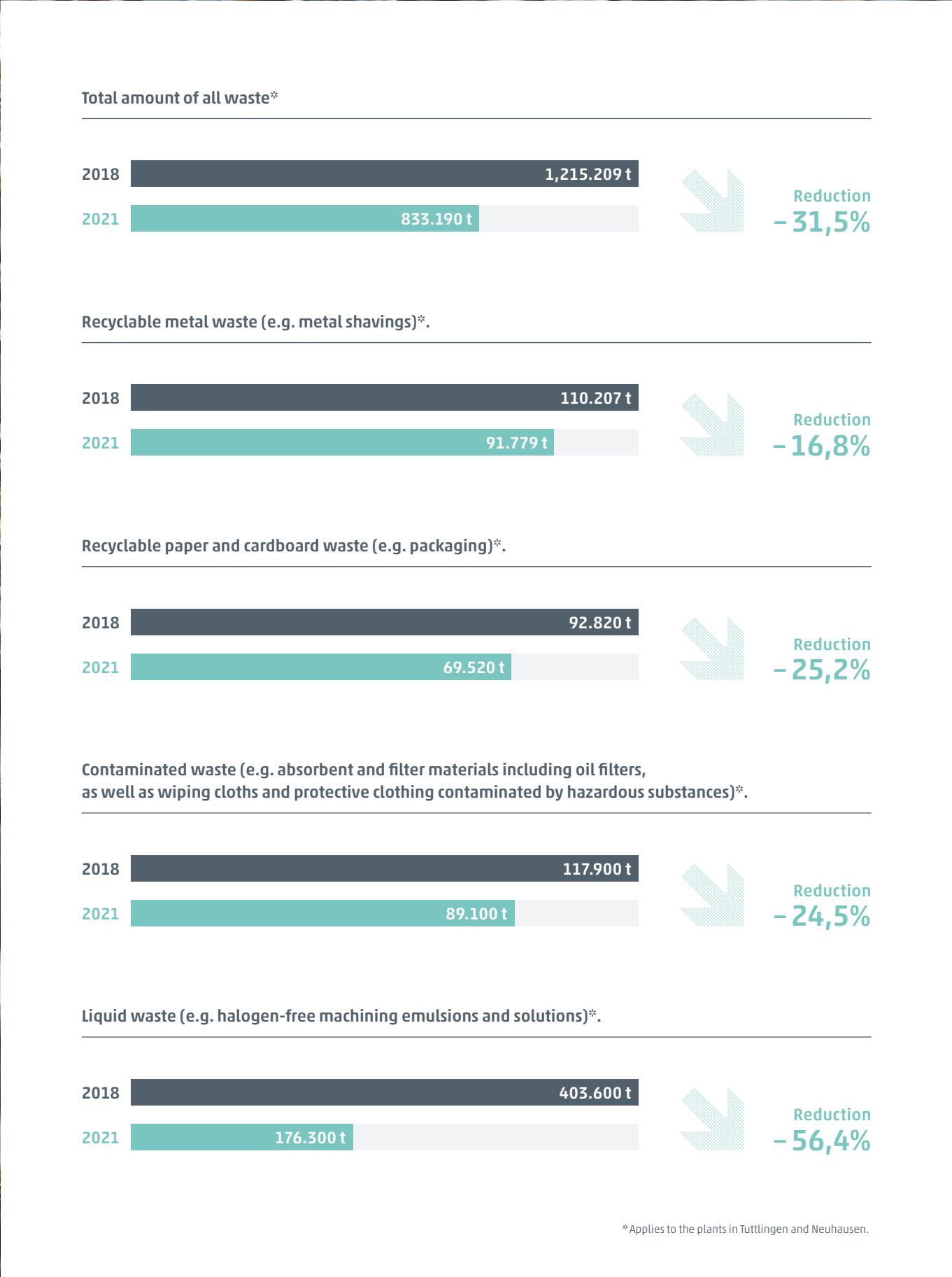


**Forward looking@CHIRON Group**

Whether storage or transport, sustainable packaging concepts currently still offer great potential for savings and optimization in the future:

- To further reduce packaging waste during transport, some machines and components are shipped unpackaged.
- Recyclable paper is the preferred filling material instead of bubble wrap.
- For regular standard transport to selected customers and suppliers, reusable containers made of recycled plastic are increasingly being used.







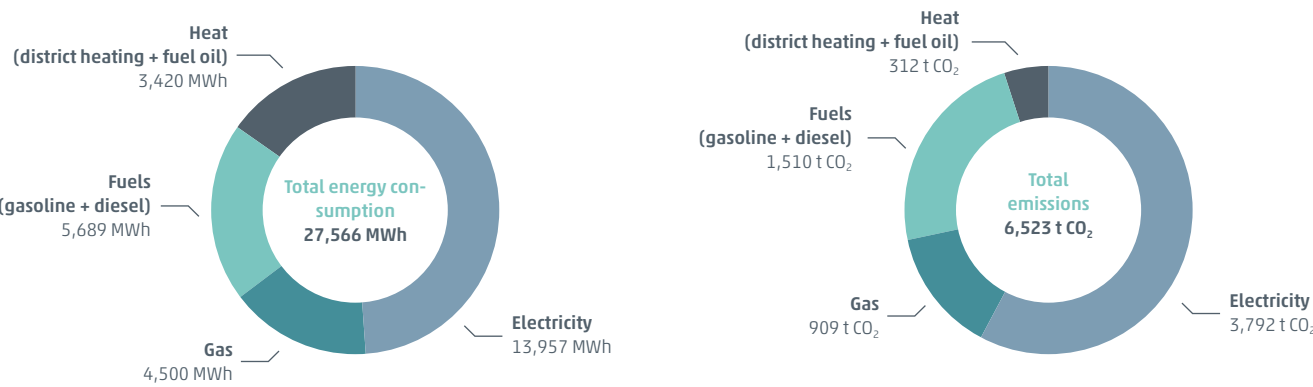
# CO<sub>2</sub> emissions and CO<sub>2</sub> drivers analyzed and balanced\*

In the 2021 reporting year, the CHIRON Group adopted a global climate strategy with the advisory support of Bosch Climate Solutions. Their clear goal: The CHIRON Group aims to achieve CO<sub>2</sub>-neutral production throughout the world by 2025. As a first step, the CO<sub>2</sub> drivers and CO<sub>2</sub> emissions were identified at site level in order to derive a carbon footprint for the CHIRON Group.

For this report, the energy consumption per energy source at the individual sites was determined, subjected to a plausibility check and a CO<sub>2</sub> driver analysis and thus verified. What is special about this initial report is that the energy consumption of the Greidenweis and CHIRON Croatia subsidiaries has already been included in the CO<sub>2</sub> balance sheet for the 2021 reporting year, even though both companies will not become part of

the CHIRON Group until 2022. This methodology was chosen for reasons of plausible comparability and transparency of all incoming values, which will be communicated in the sustainability reports from 2022 onwards. All of the following information relates to Scope 1 and Scope 2. The upstream and downstream activities (Scope 3) will be reported from the Sustainability Report 2022.

## Global energy consumption and emissions of the CHIRON Group in 2021



»We are conscious of our responsibility, which is why we as a company are taking great strides in numerous projects to reduce our CO<sub>2</sub> footprint.«

Dr. Jens König, Head of Mechatronics

\* All CO<sub>2</sub> figures on the following pages are CO<sub>2</sub>e values and therefore CO<sub>2</sub> equivalents. These represent a unit of measurement to standardize the climate impact of different greenhouse gases. In addition to CO<sub>2</sub>, these also include methane, nitrous oxide and the so-called F-gases: Hydrofluorocarbon, perfluorocarbon, sulfur hexafluoride and nitrogen trifluoride.

## The 4 levers for CO<sub>2</sub> reduction and their theoretical potential

With the adoption of the climate strategy, the CHIRON Group implemented an annual systematic collection of data on the consumption of all energy sources, their costs and CO<sub>2</sub> emissions across all worldwide locations with corresponding personal responsibilities. In addition, the strategy project introduced a catalog of measures that will not only systematically improve the company's carbon footprint in the future, but will also make a significant contribution to the goal of making CHIRON Group production CO<sub>2</sub>-neutral by 2025. The concept, which was individually developed for the CHIRON Group, sets forth the following four levers:

### 1. Disclosure of energy efficiency potential

#### Electricity as an energy source

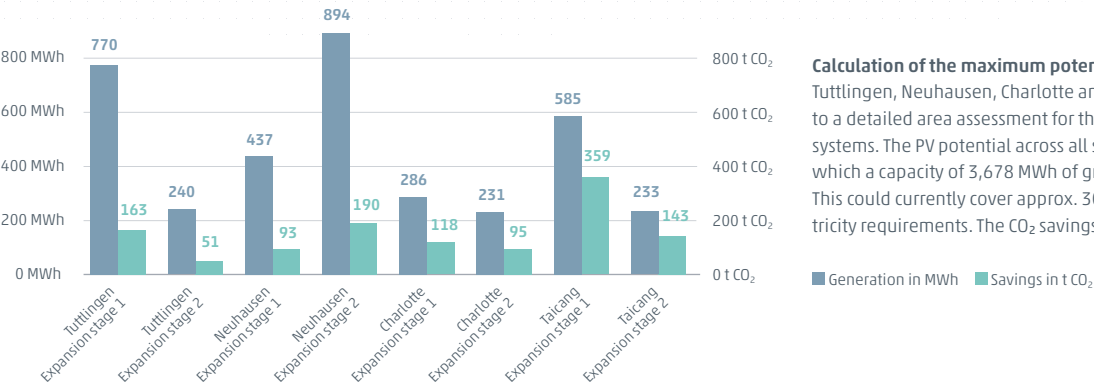
12 % savings potential	Corresponds to 1,400 MWh
Monitoring and mindset (energy data collection and employee awareness of energy efficiency)	49 %
Air conditioning and ventilation technology	23 %
Assembly	9 %
Compressed air	8 %
Mechanical machining	4 %
Application	4 %
Lighting	3 %

#### Heat as an energy source

10 % savings potential	Corresponds to 521 MWh
Gas	70 %
District heating	30 %

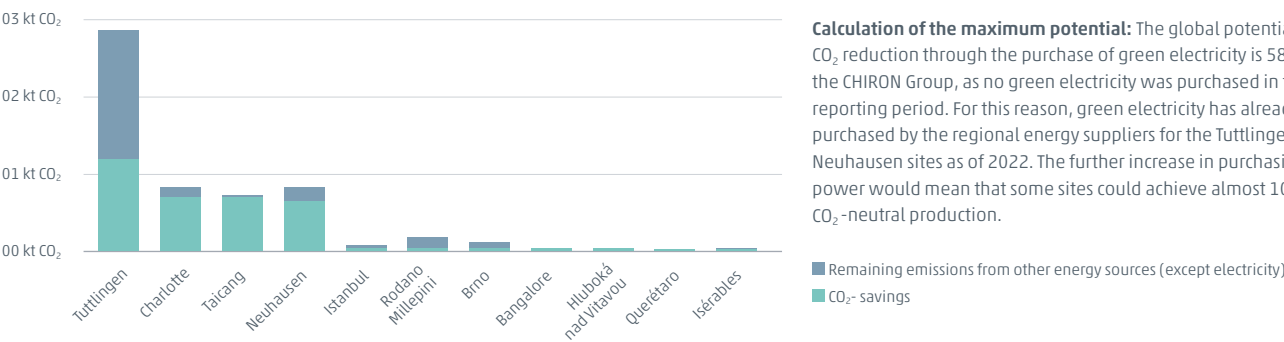
**Calculation of the maximum potential:** According to the concept, a total of 12 % efficiency potential exists worldwide for electricity as an energy source, which corresponds to a consumption saving of 1,400 MWh. Furthermore, an efficiency potential of 10 % was identified for heat as the energy source, which corresponds to a reduction of 521 MWh.

### 2. Expansion of renewable energy production



**Calculation of the maximum potential:** For the analysis, the Tuttlingen, Neuhausen, Charlotte and Taicang sites were subjected to a detailed area assessment for the potential installation of PV systems. The PV potential across all sites is 31,396 m<sup>2</sup> in area, on which a capacity of 3,678 MWh of green power could be generated. This could currently cover approx. 30 % of the CHIRON Group's electricity requirements. The CO<sub>2</sub> savings would amount to 1,212 tons.

### 3. Potential to use green electricity



**Calculation of the maximum potential:** The global potential for CO<sub>2</sub> reduction through the purchase of green electricity is 58 % for the CHIRON Group, as no green electricity was purchased in the 2021 reporting period. For this reason, green electricity has already been purchased by the regional energy suppliers for the Tuttlingen and Neuhausen sites as of 2022. The further increase in purchasing green power would mean that some sites could achieve almost 100 % CO<sub>2</sub>-neutral production.

### 4. Theoretical possibility of emission compensation

CHIRON Group global	6,523 t CO <sub>2</sub>
Germany	3,776 t CO <sub>2</sub>
China	1,337 t CO <sub>2</sub>
USA	465 t CO <sub>2</sub>
Other	945 t CO <sub>2</sub>

**Calculation of the maximum potential:** The analysis revealed a global CO<sub>2</sub> compensation potential of 6,523 tons. As a result of the decision already taken in reporting year 2021 to fuel the company's vehicles in Germany only with fuels for which the CO<sub>2</sub> emissions are offset, it has been possible to offset 182 tons of CO<sub>2</sub>. However, the strategic goal of the CHIRON Group is to only compensate for emissions that are technically unavoidable in the short term.



# Forward looking@CHIRON Group: Roadmap to carbon neutrality

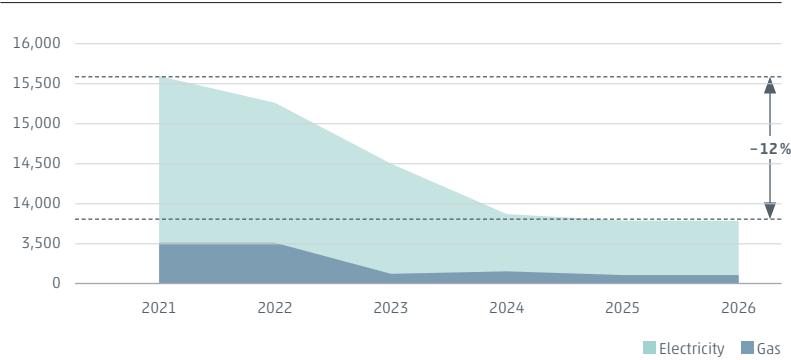
Based on the climate balance and potential analysis described above, the CHIRON Group has implemented a roadmap to achieve climate neutrality. In this initial report, projects and measures that were initiated but not yet realized in the reporting year were marked »Forward looking@CHIRON Group«. With this in mind, we present below the implications of defining the four levers on the company's carbon neutrality by 2025. This is in conjunction with investment volumes of around EUR 1 million per year for the years 2022 to 2025.

The climate roadmap of the CHIRON Group

	2022	2023	2024	2025	2026
Energy efficiency: electricity		Mindset and monitoring	Air conditioning and ventilation technol., compressed air, assembly and application	Lighting, mechanical machining	
Energy efficiency: heat		Tuttlingen, Modernization		Charlotte, Modernization	
PV projects	Neuhausen, Further expansion stages	Taicang, Further expansion stages	Tuttlingen, further expansion stages	Tuttlingen and Neuhausen, Further expansion stages	
Purchase of green power	Worldwide for all locations - decreasing with ramp-up of PV projects				

## Implication for lever 1: Energy efficiency

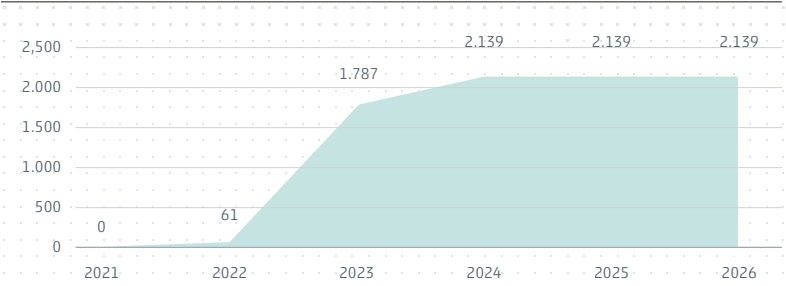
Reduction of electricity and gas consumption in MWh



With the implementation of the adopted climate strategy of the CHIRON Group, electricity and gas consumption worldwide will be reduced by 12 % between 2022 and 2026; this will be accompanied by a 17 % reduction in CO<sub>2</sub> emissions.

## Implication for lever 2: Green energy production

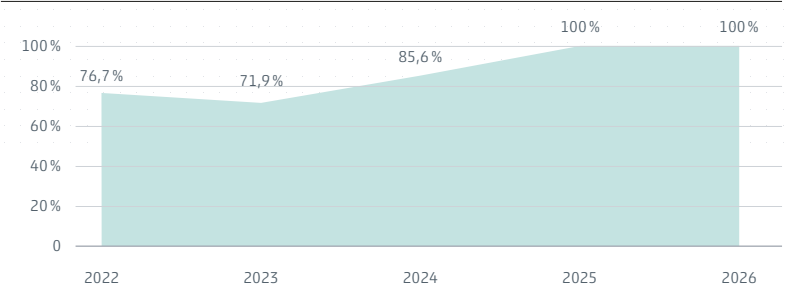
Electricity production at individual sites in MWh



With the installation of PV systems at the Neuhausen, Taicang and Zadar sites (production site of CHIRON Croatia, acquired in 2022), the annual green power production will increase to 2,139 MWh by 2026. The associated emissions will decrease from the current 3,792 t CO<sub>2</sub> to 2,467 t CO<sub>2</sub>.

## Implication for lever 3: Purchase of green power

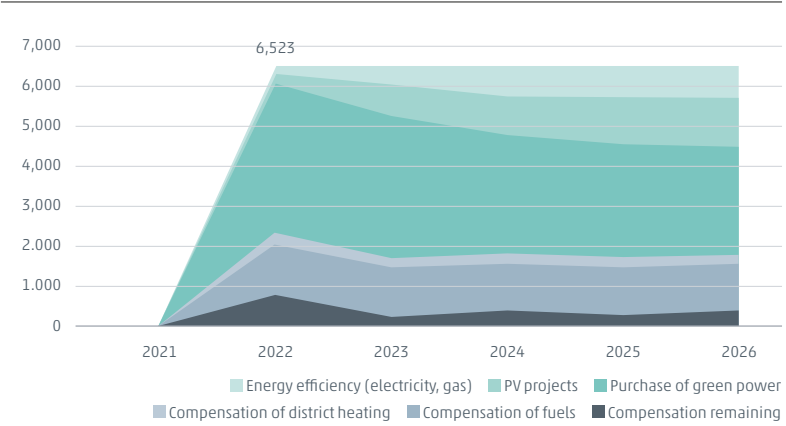
Purchase of green power in %



Purchasing green power has by far the largest and fastest impact. In Germany, the CHIRON Group already covers 100 % of its electricity demand from green electricity in 2022; globally, it is 76.7 % of the global electricity demand of 13,958 MWh. The fact that the purchase of green power is slightly declining in 2023 is due to the ramp-up of the PV plants, as described in the implication for lever 2. As of 2025, the CHIRON Group will also have covered 100 % of its electricity requirements globally from green electricity.

## Implication for lever 4: Remaining compensation

Compensation of remaining emissions in t CO<sub>2</sub>



For the 2021 reporting year, the CHIRON Group determined emissions from Scope 1 and Scope 2 in the amount of 6,523 t CO<sub>2</sub>. In 2022, Germany began implementing reduction measures consisting of energy efficiency improvements (Lever 1), green energy production (Lever 2), purchase of green power (Lever 3) and offsetting emissions according to the Verified Carbon Standard or GoldStandard (Lever 4). By 2025, these measures should also take effect globally and thus realize the goal of carbon neutrality for the CHIRON Group.

## ➡ Outlook for the Sustainability Report 2022

With the adoption of the climate strategy, it has already been decided for the next sustainability report for 2022 that Scope 3 emissions will be balanced on the basis of the entire value chain and that reduction potential will be identified in order to contribute further to sustainability in this area as well.



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## Legal notice

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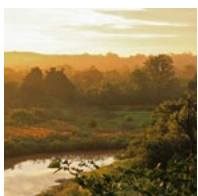
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