

An aerial photograph of a vibrant turquoise river winding through a dense, lush green forest. The river is flanked by wide, light-colored gravel bars. The water's color is strikingly bright, contrasting sharply with the deep greens of the surrounding trees. The perspective is from directly above, looking down at the river as it flows.

Sustainability Report 2022

maxon

The most important figures at a glance



817 MWh

Solar energy produced on our sites



3,636 t CO₂e

Greenhouse gas emissions, Scopes 1 and 2 (location-based)



31.2%

Recycling rate



17,203 MWh

Total energy consumption



7.3%

Investment in research & development and prototype production as a proportion of revenue



50.5% & 49.5%

Women & men in the workforce



8.3 years

Employees' average years of service



82.9% & 17.1%

Full-time & part-time employees



12.3%

Voluntary employee turnover rate



“We drive research and development, to help tackle the challenges of our time. Our products and our buildings are energy-efficient. And in all our regions, we have close ties to the local people.”

Eugen Elmiger, CEO of the maxon Group

The start of a new chapter

The moment has arrived: you have in your hands maxon's first Sustainability Report. Why now though? Why did we decide to produce this report – after sixty years in business?

Sustainable production and management have always been part of our DNA. One very simple motive was to maintain the environment that is the basis of our existence. Without it, we are nothing. As a long-established Swiss family-owned company, however, we also feel a strong sense of responsibility toward our employees. We care about their well-being, we want them to be proud of where they work – and we would like them to stay with us for the long term.

That's why we regularly modernize our buildings to make them as energy-efficient and accessible as possible. It's why we commit ourselves to forward-looking projects like the CYBATHLON and Solar Butterfly (p. 20 and p. 44). In our maxon stories you'll learn more about them.

Don't hide your light under a bushel – easier said than done in unostentatious Switzerland. However, it became increasingly obvious to us that reporting on sustainability topics is important. It is essential to the whole undertaking. Especially now, in times of climate change and the energy crisis, solutions must be made visible. By doing so, an international company like maxon can be a role model, motivating employees, customers, and suppliers to act sustainably. What's more, stakeholders are taking an ever greater interest in how sustainably companies conduct themselves. They have every right to expect transparency in this regard.

When you're producing a report in which facts, figures, and principles are summarized and set down in black and white, you need to engage in a lot of reflection and discussion beforehand. We realized that maxon can and wants to improve further and learn more. To do that, we need to take an even closer look and examine where the potential points of leverage lie along the entire life cycle of our products.

I am very pleased to see the effect that this first edition of the Sustainability Report has already had within the company alone.

Eugen Elmiger, CEO of the maxon Group



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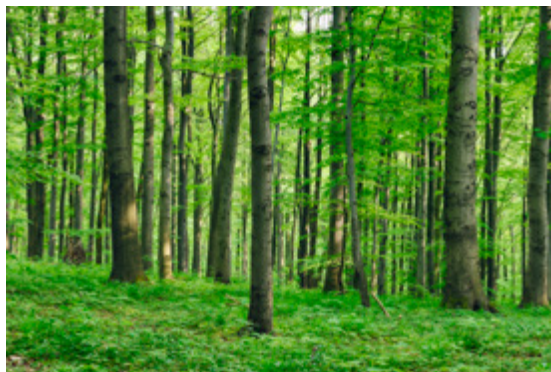
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A passion for precision

As a leading manufacturer of electric drive systems, maxon is active all over the world. Our products save lives on Earth and move robots on Mars. Since 1961, we have been developing and delivering high-precision systems that are used in the fields of medical technology, aerospace, robotics, industrial automation, and mobility solutions: from brushed and brushless DC motors to gearheads, sensors, controllers, and mechatronic drive systems; from unique, customized items to high-volume production. Swiss firm zub machine control AG became part of the maxon Group in 2017, followed by British company Parvalux Electric Motors Limited in 2018.

Swiss-standard quality worldwide

maxon stands for quality and innovation. We redefine the boundaries of technology and precision to build next-generation drive systems. We make the components of our drive systems at nine production sites: at maxon's headquarters in Sachseln (Switzerland), in Sexau (Germany), Veszprém (Hungary), Cheonan (Korea), Beynost (France), Enschede (Netherlands), Taunton (USA), Suzhou (China), and in Poole near Bournemouth (UK). We develop our own machines and production lines, which permit extremely high production standards, flexibility for custom modifications, and rapid and reliable order processing. Our products undergo numerous tests in our own test laboratories. We check our components' resistance to vibration, extreme temperatures, and pressure and impact loads. This is how we manage to ensure that our motors continue to function flawlessly even 125 light-minutes away from Earth, on the surface of Mars.

maxon is represented in all key global markets, to maintain close relations with our customers. In addition to our nine production sites, a sales network encompassing 40 countries spans the entire globe. maxon's online shop has played a pioneering role within the industry, and now offers over 6,000 individual components with approximately 10 million possible combinations. With the online configurator, customized drives can be created by selecting the motor, gearhead, and encoder, and the order is then transferred directly to our automated manufacturing process.



Progress is what drives us

The maxon Group has approximately 3,300 employees worldwide. They all pursue a common goal: to make exceptional drive technology even better. One in ten of our employees works in research and development. Every year, maxon invests about 7 percent of its revenue in developing viable solutions from the latest research. In Switzerland, our development focus is on motors, encoders, and controllers; in Germany, it is on gearheads; and in Korea, it is on high-torque motors with slotted stators. Also valuable is our regular collaboration with institutions of higher education, including maxon's innovation labs at Lucerne University of Applied Sciences and Arts and our presence in the Innovation Park of the EPFL in Lausanne. Through the involvement of students and researchers, we are not just investing in future staff, but also creating new products.

Maximum power packed into the smallest of spaces

Our drives are used wherever there is no room for compromise on precision, performance, reliability, and quality. Nowhere are the requirements higher than in medical technology: Absolute precision, sterilizability, minimal vibration, power density in a compact size, and low heat buildup in the motor are all essential. In industrial automation,

notwithstanding the complexity of the mechatronics systems, and perfectly matched components, the focus must always be on cost. The aerospace industry – whether long-distance aircraft, UAVs, or Mars rovers – requires powerful drive systems that can function reliably with high precision even under extreme conditions. The future of mobility is electric. In the field of mobility solutions, maxon develops safe and efficient drive systems for people and goods: from lightweight e-bike drives, to underwater vehicles and autonomous logistics robots.

Corporate governance and division of responsibilities

maxon is a Swiss company with its headquarters in Sachseln. As a privately held, family-owned company, we are independent and can therefore make quick decisions, think about the long term, and prioritize uncompromising quality and operational excellence. The organizational structure of the maxon Group is designed according to the OECD rules. The principal entity (the control center of the Group) is maxon international AG, with the Board of Directors, Group management, and the business units Medical, Industrial Automation, Mobility Solutions, Aerospace, and Intralogistics. This provides the link between customer projects around the world and our development departments and production sites, in order to meet the specific needs of our individual, highly diverse markets. The principal entity is also home to various central services.

Our history

- **1961: The story starts here**
Interelectric AG is founded as a production plant of BRAUN, the electrical engineering company based in Frankfurt, by the brothers Erwin and Artur Braun along with Bodo Fütterer.
- **1963: Shearing foils for BRAUN shavers**
The company begins producing metal-coated items, in particular, shearing foils for BRAUN shavers.
- **1967: Braun GmbH is sold to the American company Gillette.**
- **1968/69: Development of the maxon DC motor**
The cornerstone for all subsequent innovations is laid, with the development of DC motors with an ironless rotor. The benefit: The absence of iron in the rotor almost doubles the efficiency in comparison with traditional motors. The diamond-shaped winding and the manufacturing process are patented.
- **1979: maxon motor gmbh**
Interelectric AG founds its first subsidiary in Munich.
- **1997: Mars landing**
The first rover to land on the Red Planet, the Sojourner, has eleven maxon DC motors on board.
- **1999: Interelectric becomes maxon motor ag.**
- **2004: Spirit lands on Mars**
The NASA rovers Spirit and Opportunity land on Mars. They are each powered by 35 maxon motors. These drive the robot arms, the rock abrasion tool, the control mechanism, the camera controls, and the six high-tech wheels.
- **2007: Establishment of the Medical business unit**
Drives are now developed for items like insulin pumps, prostheses, and surgical robots.
- **2012: Online configuration**
maxon presents a world's first with X-drives – motors that are configurable online.
- **2015: MARS on Earth**
The MARS business unit (maxon advanced robotics & systems) is established for the development of mechatronic drive systems, including BIKEDRIVE.
- **2019: maxon motor becomes maxon**
- **2020: Unmanned vehicles**
maxon joins forces with drone startup Flybotix to develop BLDC motors for an innovative inspection drone. maxon also collaborates with robotics startup ANYbotics to develop drive systems for the inspection robot ANYmal.
- **2021: Successful mission to Mars**
The Perseverance rover lands on Mars. It uses several maxon electric drives.
- **2023**
maxon now has more than 3,300 employees worldwide, 11 production sites, and a sales network in 40 countries.

Sustainable progress

Sustainability is something of a tradition at maxon – a tradition in the sense that maxon, being a family company, thinks about the long term. We do so with the goal of advancing the company and all our employees by developing ever more perfect solutions for our customers. An intact social and natural environment is a fundamental prerequisite in this respect. We are part of the society in which we are rooted, so we take responsibility for people and the environment. This is enshrined in our guiding principles and in our Code of Conduct.

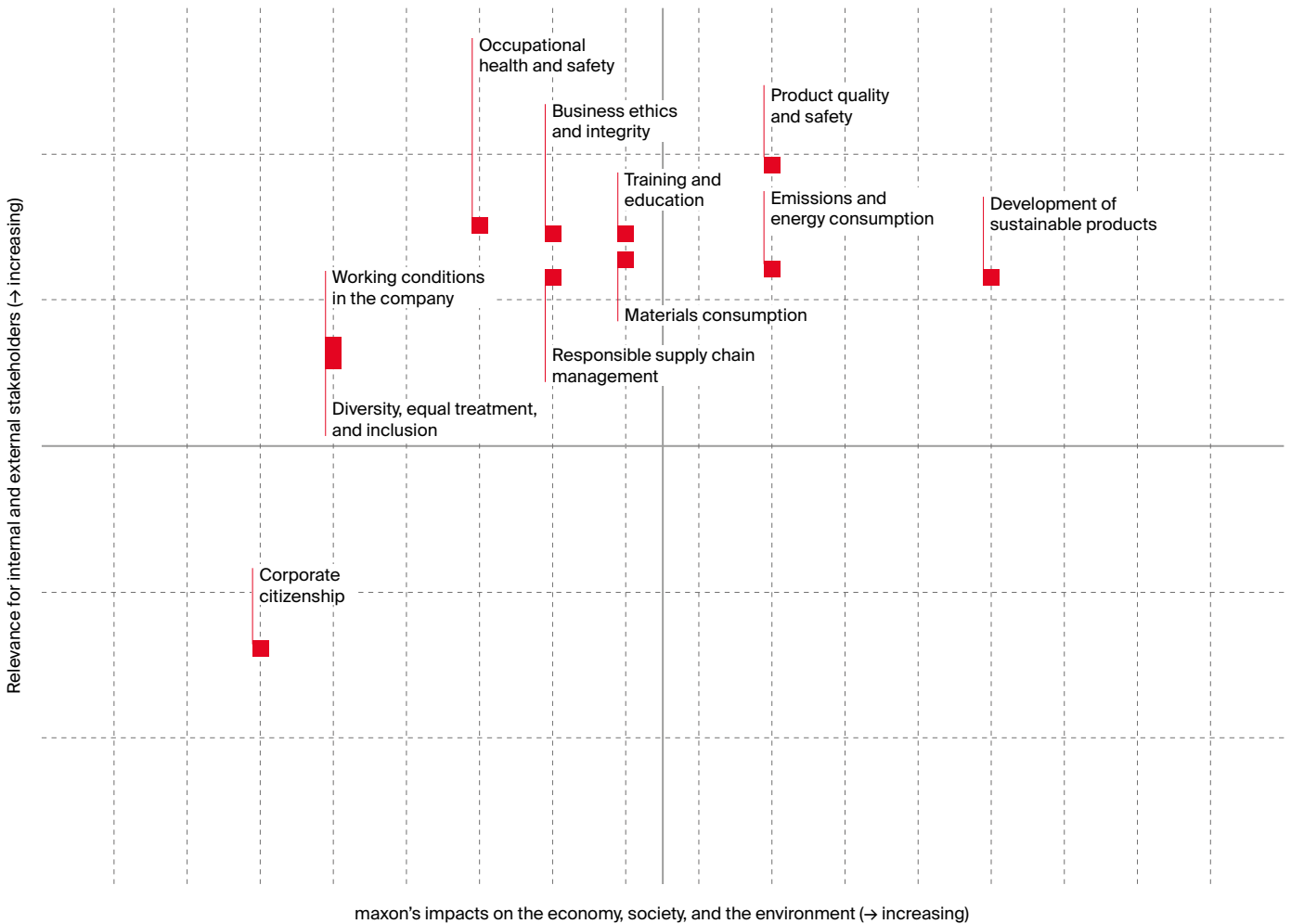
What does sustainability mean to maxon?

The concept encompasses social, environmental, and economic aspects. In an initiative in 2022, we worked with external experts to determine which of these aspects are relevant for maxon and how sustainability should be understood in regard to our company. We began by defining eleven sustainability topics based on our business model.

1st step: Our sustainability topics

People	Environment	Responsible business conduct
Labor practices within the company	Emissions and energy use	Product quality and safety
Diversity, equality and inclusion	Use of materials	Business ethics and integrity
Health and safety	Development of sustainable products	Responsible supply chain management
Training and development		Community engagement

Materiality matrix



2nd step: Materiality analysis

We assessed the sustainability topics in what we call a materiality analysis. On the one hand, we evaluated how strong maxon's impacts are on the economy, society, and the environment for a particular topic. On the other hand, we asked stakeholders inside and outside the company how relevant the topics are for them in their relationship with maxon. The materiality matrix summarizes the results of the analysis.

The internal assessment of these impacts and relevance took place in a workshop with the Extended Management Board of the maxon Group. In a second step, we conducted ten discussions with customers and suppliers, and also with representatives of the media and the authorities. We asked them how relevant the topics are in their relationship with maxon, and where they see the biggest impacts of the company. The discussions enhanced our understanding of sustainability. The various people we spoke to also communicated their expectations, desires, and aspirations, in the course of our discussions. We took this feedback on board when discussing our goals and prioritizing the topics, in order to develop and implement well-targeted measures effectively.

The development of sustainable products was seen as having the single greatest potential impact. That was followed by product quality and safety, and emissions and energy consumption. A high impact was also associated with the topics of "Training and education" and "Materials consumption," both of which are related to the "Development of sustainable products." Moreover, relatively high relevance was attested for all topics – with the sole exception of corporate citizenship.

To meet the information needs of our stakeholders, we decided to address all the topics in this Sustainability Report. The document has been produced in accordance with the current GRI Standards, meaning that maxon is applying an internationally recognized and widely used reporting practice. maxon has an international presence, with sites in many regions of the world. For this first publication, the Group focused on our headquarters, plus the four production sites in Switzerland (Sachseln), Germany (Sexau), Hungary (Veszprém), and South Korea (Cheonan). About 77 percent of all the employees of the maxon Group work at these sites (as at December 31, 2022).

“Sustainability is not just about the environment, it is also about people”

As Norbert Bitzi, CFO of the maxon Group, knows very well, sustainability is a complex topic where many different aspects need to be considered. In this interview, he talks about the background to the company’s first Sustainability Report – and all that still remains to be done in the future.



maxon is publishing its first Sustainability Report for the year 2022. What were the motivations behind this?

Recently, we became aware of increasing interest among our stakeholders about how maxon approaches the issue of sustainability. I am very happy about this publication, as it tells the world what maxon has long been doing as part of our commitment to the environment and to people: as a vendor to our customers, as a customer for our suppliers, as the employer of our employees, and as a partner for the regions where our company has become established.

So at present, the report is a summary of what already existed at maxon?

Yes and no. Yes, because we have already implemented numerous measures in the past, such as installing heat pumps and photovoltaic systems on our buildings. We also operate our own daycare center at our largest site in Sachseln to make it easier for our employees to reconcile the demands of work and family life. And no, as the report was preceded by a systematic analysis of the issue of sustainability. Last year, we specified in detail what sustainability means to maxon in social, environmental, and economic terms, which aspects of this crosscutting issue are especially relevant, and what we want to highlight in our undertakings.

What exactly can we expect? What role does maxon want to play for the benefit of sustainability, and what role can it play?

Sustainability is an integral component of our business model and our company. Our strengths are innovation, efficiency, and quality. They find their expression in our products, and impress our customers. For this reason we want to address the impacts of our products, looking at their entire life cycle. However, all that can only be achieved with healthy, motivated, highly trained employees. Our social responsibility toward them is a further important pillar of our sustainability commitment. On top of that, we want to make the issue a more explicit part of our relationships with stakeholders, especially in our exchanges with customers, suppliers, and our own employees. Accordingly, this Sustainability Report is an important milestone.

What have you yourself learned during this process and taken away from it?

Sustainability is a complex topic where many different aspects need to be considered. It is not just about the environment, it is also about people. Consequently, sustainability is not only multifaceted, it also entails contradictions that need to be resolved or for which we continuously need to find answers. This dialogue, in which we develop a shared understanding and engage in constant reflection, is something that I find extremely valuable. On the Management Board, we have had stimulating discussions about the purpose and mission of the company, which are not always at top of mind in day-to-day operations. I would like to take that awareness with me into my everyday work – and I hope that many others involved in the initiative feel the same.

What still remains to be done?

We still have a long way to go. Not because we have been idle, but rather due to the previously mentioned complexity of sustainability and the manifold opportunities and challenges that it presents to us. We have worked out an action program, which we are now fleshing out with details and priorities, and which we will then implement. We also want to establish clearer governance around the issue of sustainability and thus further promote it systematically throughout the Group. This also involves expanding our data management to additional business units in order to quantify our performance where appropriate and increase our transparency both inside the company and outside it. On this basis, we want to be able to formulate clear and binding objectives in the near future.

About Norbert Bitzi

Norbert Bitzi has been CFO of the maxon Group and a member of its Management Board since 2012. Previously he worked as CFO at maxon motor ag for six years. Norbert Bitzi is in charge of the initiative to further develop sustainability management at maxon and to anchor it more strongly within the company.



For our employees

A working environment characterized by trust and respect

The success of maxon would not be possible without our employees. They make our company what it is, keep our customers happy, and develop the technologies that take us all further. A strong sense of responsibility toward our employees is ingrained in our family-run company. We think in terms of generations and are happy to have so many employees of long standing, some of whom have children who now also work with us.

Fair and socially minded – our relationship with our employees

We have placed customer focus, precision, curiosity, and collaboration at the center of our corporate culture, which we embody in our work inside the company and our interactions with those outside it. Our Code of Conduct (see also p. 41) specifies that staff treat each other with respect, that all are valued equally, and that maxon takes responsibility for the well-being of the company’s employees. As the employer, we lay the foundation with fair working conditions and company rules of behavior that apply equally to everyone. At any time, our employees can call on these to be respected. In all locations, these rules and conditions are founded on the locally applicable labor laws, contractual rights, safety regulations, social security systems, and other requirements.

Human resources management is decentralized, under the supervision of Group HR. In this way, we accommodate local specificities and can respond to the needs of the employees at each site. At those sites, we make use of proven formalized approaches such as appraisal interviews and surveys to understand the expectations and desires of the workforce. To that end, we also work with employee representation bodies. We foster an open communication culture and constantly strive to ensure that employees feel comfortable and valued at maxon and enjoy their work.



Job satisfaction and a culture of open communication are central at maxon.

The well-being of our employees is paramount

It is part of our responsibility as an employer to provide our employees with safe workplaces that do not endanger their health. In our production and manufacturing, many of our staff work with precision technologies, and not on large industrial machinery. Health risks arise primarily when handling adhesives and hazardous substances (see p. 31), from unhealthy postures, repetitive sequences of movement, or from excessive eye strain. Outside of maxon’s buildings and grounds, accidents during business travel, such as traffic accidents, are among the greatest dangers.

Working safely

Our employees complete mandatory safety training and are schooled in the specific hazards of their area of activity by experienced trainers. Some of this training recurs at quarterly intervals. Where necessary, we conduct events, campaigns, and other awareness-raising initiatives to encourage our employees to be more safety conscious – even during their leisure activities. Regulated procedures, work instructions,

protective clothing and equipment, and safety data sheets all help to prevent accidents and to ensure safe handling of risky materials. When we modify work processes or deploy new machines, tools, or materials, we take safety-critical aspects into account. Company doctors, as well as a local network of doctors and first responders, can provide rapid and expert assistance if required at our sites. In addition, we have emergency plans and evacuation procedures in place that are regularly tested and updated.

The safety officers are responsible for ongoing monitoring of safety at our production sites and for improving the existing processes and tools. They occupy a core function in the company’s internal occupational safety structure, which at some sites is supervised and directed by an occupational safety committee. The relevant authorities regularly check our compliance with all the legal requirements, and we report to the government bodies in accordance with the local regulations.



Our employees also provide maxon with valuable information regarding occupational safety.

Physical and mental health

In addition to continuously adapting and enhancing the safety conditions of our workspaces, our in-house health management focuses on the physical and mental health of our staff. The global guidelines for workplace health management set out the cornerstones and general direction of health-promoting and preventive measures at our international sites. A key area of focus is workplace ergonomics. Particular employees receive training to give them in-depth knowledge, which allows them to provide expert assistance when questions arise. It is also important to us that our production site staff do actually take all their breaks. In addition, we encourage them to move their bodies as much as possible during those breaks, for example by doing group gymnastics or stretching. In the office areas, sitting and standing workstations have been installed, and experts provide ergonomic consultations on how to set these up correctly. All across the Group, we offer free eye tests in our operational units and supplementary health checks and consultations on site, according to local needs and priorities. Gyms have been set up in Sachseln and Veszprém, while employees in Sexau benefit from offerings for improved mobility and for relaxation.

We see our role and main responsibility as an employer as being to create healthy working conditions and motivate our employees to look after their health. For that purpose, we regularly launch awareness-raising initiatives regarding nutrition, sports, and recuperation, such as a sleep and resilience campaign in Switzerland, and a fitness competition in Hungary. In Sachseln, staff also have access to two relaxation rooms.

If an employee is absent due to illness for long period of time, we do all we can to enable them to return to the workplace. In Switzerland, we make use of professional case management to collaborate with other involved entities. To reintegrate one employee in Special Production, for example, we set up a protected workstation. The healthcare systems in the countries where maxon is present are structured differently and do not all cover the same services and therapies. In Hungary, we have therefore set up a fund through which we provide financial support for the medical treatment of employees.

Identifying potential improvements and working together to achieve them

We compile meaningful key figures on occupational health and safety every quarter so we can review our management systems. We also conduct inspections, both in-house and external. Some sites collect feedback from employees through questionnaires on health topics. In addition, in 2023, we intend to conduct a pilot survey on “psychological safety” in our operational units to find out how employees are doing and whether any action needs to be taken.

The reporting and documenting of incidents and near-accidents likewise provide valuable information for the further development of our safety mechanisms. We analyze the causes of these in order to implement effective measures. We integrate the employees affected into these processes, because they are the ones who know their workplace and its workflows best.

Individuals with a wide range of valuable talents

We foster a culture of lifelong learning that establishes curiosity, collaboration, and innovation as core values in the company. We help our employees to fulfill their personal and professional potential. If they desire it, and are willing to put in the necessary effort, we work with them to further their skills and expertise. When doing so, it is important to identify the individual strengths of the employees, because everyone has their own talents. We believe that this not only boosts their employability, but also the competitiveness and success of maxon, because in our highly specialized market, we are reliant on highly skilled workers. Our goal is to give our employees exciting potential pathways of development within the company, in order to retain them in our workforce for the long term.

The Global maxon Academy

Through our in-house program of education and training, we enhance our employees' technical skills, organizational and leadership capabilities, and their knowledge of processes, machines, and tools. The Global maxon Academy forms the core of this internal study program, encompassing courses in the form of in-person training, e-learning, and self-study. A skills matrix lists the functions and positions in production. This matrix shows which skills are required for each task. It also indicates which training must be completed in order to qualify for a given area of activity. Additionally, our training platform has a wide range of offerings covering all areas of the company.

In our international leadership program, we promote cross-border exchange and collaboration. We learn about new tools and methods and apply them in practice. We want our leaders to always keep developing, and we believe that good managers are a key factor in maxon's success. We apply other methods such as mentoring or coaching in an individualized way, according to the employees' particular needs and development goals. Beyond that, maxon also supports training outside the company with financial contributions and time credits.

Foresight in succession planning

Succession planning and talent scouting take place each year at global level. The two processes ensure sustainable leadership and business continuity, thus reducing the associated risks. With our succession planning process, we critically examine the organization in order to adapt it continuously to changing needs and objectives, and to keep maxon fit for the demands of the future. The Management Board of the Group systematically discusses key management positions. In this way, it can identify hiring risks at an early stage and take action.

Through our Talent Review process, we identify and develop our employees at all levels. The aim of this is to give employees visibility in this global talent pipeline and to implement targeted development measures on a global or local level. We encourage cross-company talent exchange, thus developing the next generation of leaders and experts within our organization.

Vocational training

Traineeships and apprenticeships within the company are an additional opportunity for development. In Germany and Switzerland, we train people for various professions, and regularly recruit interns. Tertiary graduates can join maxon through our Global Trainee Program. The local maxon units maintain close relationships and partnerships with various universities and colleges, partly in order to raise the company's profile as an employer. In Germany, maxon has developed its own course of study together with the Offenburg University of Applied Sciences, and in Switzerland we sponsor laboratories at the Swiss Federal Institutes of Technology (ETH in Zürich and EPFL in Lausanne). If employees do not have vocational training, we give them the opportunity to undertake it. Since 2018, long-term employees in Switzerland have been able to complete an apprenticeship as an automation technician with a nationally recognized certificate of proficiency. It takes only two years instead of the usual three, and is largely financed by the canton of Obwalden. maxon offers the participants company coaching and provides them with training days to help them prepare for their intermediate and final exams.

Dialogue and review

The yearly interview with employees looks at their development and goals. Training plans are thereby reviewed at least once a year. Besides course evaluations, these interviews give us valuable feedback on maxon's training program. An additional channel for feedback is our employee surveys, and the exit interviews with employees who leave the company. In these ways, we discover how we can further improve our offering.



In Switzerland and Germany, maxon trains people for various professions.

Diversity, inclusion, and equal opportunity

We want all of our employees to feel valued. An inclusive environment and equal opportunity are a promise to our employees that is anchored in our mission statement. Inclusion is specified as a guiding principle, which reads as follows: “We guarantee that everyone is treated fairly and with dignity. We ensure that different views and opinions are respected and that every person feels valued. We create a feeling of belonging.” This therefore also means that we do not accept discrimination or harassment. Any grievances can be reported through our anonymous reporting process (see p. 41). Misconduct is considered a violation of our Code of Conduct, and can ultimately result in the dismissal of the person performing the discriminatory act.

This firm stance is in accordance with our values and our moral compass. Moreover, we view diversity and inclusion as drivers of innovation. We also firmly believe that our employees go about their tasks with more joy, commitment, and motivation if they feel comfortable and respected at maxon. In addition to respectful interaction among work colleagues, it is above all our managers who must express appreciation for our employees in their daily interactions. We prepare them for this key role in specialized training – based on locally defined leadership principles. When designing preventive measures, we bear in mind that discrimination often happens unconsciously and without malicious intent. Therefore, raising awareness is a central concern, which we address with training on the topic of unconscious bias.

Tackling gender inequality

In the company units that are covered by this report, there are roughly just as many women employed as men. In terms of gender, however, major differences are found at maxon in relation to function and job description. Women form a greater proportion of the production workforce in particular – at maxon in Hungary, for example, they make up 79 percent. In senior management, it is a different picture, with women occupying just under 9 percent of these positions. One of the challenges for us is that we still see significantly fewer women opting for a technical apprenticeship or degree program. With our Women in Engineering initiative, we seek to encourage women to train for technical professions, to highlight what women are already doing for the future of drive technology, and to strengthen the network of women within the company. Apart from that, we have long recognized that starting a family has a strong influence on a professional career. This is one reason why we have had an in-house daycare center at our largest site in Sachseln for 51 years now.

With flexible working arrangements such as part-time work and working from home (the feasibility of which depends on the employee's function and tasks), we strive to make it easier to reconcile employment at maxon with all kinds of lifestyles. Whenever possible, we advertise positions in Switzerland as part-time, and we have analyzed and improved the advertisements with the aid of independent experts to ensure inclusive language. In addition, we give equal pay for equal work and have this reviewed regularly in accordance with local laws.

People with disabilities

Our drive systems are installed in technical assistance systems for people with disabilities. As a result, we have always been sensitive to the needs of the individuals affected, and actively support the CYBATHLON (see p. 24). We want to be just as supportive in our role as an employer, and hire people with disabilities. The maxon Group is a member of the Valuable 500, an international network of companies who have publicly committed themselves to the inclusion of people with disabilities. We also regularly assign work to sheltered workshops. In Sachseln, we have reached the stage of employing individuals on a temporary basis through one such collaboration. Their positive attitude influences our other employees, in turn making them more positive and motivating teams. We see our commitment in this area as a solution that benefits all parties.

Employees with a migrant background

In the same way, we give persons with a migrant background the opportunity to find work with us, to help them get settled in their new homeland. In Germany, maxon participates in work integration programs for migrants. In Switzerland, maxon covers the cost of German language courses. Migrant workers are also potential candidates for shortened apprenticeships (see p. 16).

maxon staff at the Sachseln, Sexau, Veszprém, and Cheonan sites in numbers

Employees	Sachseln (Switzerland)	Sexau (Germany)	Veszprém (Hungary)	Cheonan (South Korea)	Total
Employment status					
Permanent employees	1,346	528	584	127	2,585
Temporary employees	155	18	0	10	183
Full-time equivalent	1,344.8	490.9	580.8	137	2,553.5
Proportion of temporary employees	10.3%	3.4%	0.0%	5.3%	6.6%
Proportion of full-time employees	74.4%	84.0%	97.8%	100.0%	82.9%
Proportion of part-time* employees	25.6%	16.0%	2.2%	0.0%	17.1%
Employee turnover (voluntary departures)	10.7%	8.5%	17.8%	19.6%	12.3%
New hires	198	40	128	40	406
Average years of service	9.3	9.6	6.0	3.5	8.3
Occupational health and safety					
Workplace accidents or work-related illnesses	11	6	3	2	22
Absenteeism rate*	0.10%	0.07%	0.32%	0.11%	0.15%
Diversity					
Women in the workforce	43.1%	42.3%	79.1%	40.9%	50.5%
Women in senior management positions*	7.2%	3.6%	27.8%	12.5%	8.8%
Employees under 30 years of age	16.6%	11.8%	16.2%	28.0%	16.1%
Employees between 30 and 50 years of age	54.7%	51.5%	62.6%	66.4%	56.4%
Employees over 50 years of age	28.7%	36.7%	21.2%	5.6%	27.5%
Training and education					
Hours of training	9,758	1,209*	1,339	483	12,789
Hours of training per employee	7.2	2.4	2.3	3.9	5.0
Number of appraisal interviews	1,033	325	580	123	2,061
Proportion of appraisal interviews carried out	76.6%	64.1%	100.0%	98.4%	80.5%

* Explanations and further information about these figures can be found in the GRI content index.

For a world without barriers

Walking in the name of science

Despite his paraplegia, Werner Witschi often walks for miles. What drives this Swiss 64-year-old is the aim of making exoskeletons more practical for daily use by disabled people. That's why Werner Witschi is once again going to be a pilot at ETH Zürich's CYBATHLON 2024. With world-first technology, if all goes as planned.



Sustainable improvement in quality of life

maxon products are used anywhere particularly high requirements must be met, such as the daily life of people with disabilities. maxon's motors, gearheads, and controllers have been used for years in prostheses, exoskeletons, and wheelchairs. So that progress can be made in demanding markets such as this, the company invests a large part of its turnover in research and development. maxon has supported the CYBATHLON from day one. The company didn't hesitate to get on board for the third edition of the event – this time as a Gold partner. maxon strongly believes that the quality of life of many people can be improved sustainably by new technological solutions.

A loose roof tile, a moment's carelessness, one wrong step – and Werner Witschi's life as he knew it smashed to pieces on the ground. Ten years ago, he fell backward from a roof while working. That was Werner Witschi's last step on his own legs; today he sits in a wheelchair. "But I'm still alive!" he says thankfully. "And back then I was nearer to death than to life." The 64-year-old is paralyzed from the chest down, but has relatively high stability in his upper body. "That helps me when I'm doing testing and training on exoskeletons and wheelchairs for the two 'enhanced' teams." Werner Witschi, you see, is a kind of elite athlete, dedicated to helping research. How did that come about?

From paraplegic to long-distance walker

Nine years ago – just a short time after his devastating fall – Werner Witschi met the VariLeg team at the Swiss Handicap trade fair in Lucerne. The team was already working on making exoskeletons more practical for paralyzed people to use in daily life. They were looking for what they called "pilots": people who could contribute their experience of paralysis to tests with exoskeletons and wheelchairs. Werner, being a guy who is very open to new things, jumped at the idea – even though the tests meant he had to travel long distances from his home in Bern to the training site near Zürich. The team, for their part, are thrilled by his lust for life: "Werner never gave up or lost heart. A lot of people in wheelchairs don't like so much public exposure, or are done with pedestrian life," says team leader Silvia Rohner. "But Werner even became a well-connected ambassador for our teams."

"You hardly feel the walking itself anymore in the exoskeleton. You're strapped into it and you're standing on the ground, so it takes the weight off you. But it has to be light enough for my wife to be able to lift it into the car."

Werner Witschi, pilot and wheelchair user



Werner Witschi tests the practicality of exoskeletons.

So, Werner Witschi is the one "with the confidence to venture out," as he puts it. He keeps on walking for miles, now in the name of science with the exoskeleton, attracting media coverage as he ascends steep Swiss mountains like Pilatus or the Stanserhorn. He also competes as a pilot and substitute pilot at the CYBATHLON event, which takes place every four years, the next one being in 2024.

New hope for walking and driving

He's showing everyone that yes, it can be done! Nevertheless, much work still needs to be done to make the assistance systems more practical. "The idea of the CYBATHLON is to drive progress for people with disabilities. It spurs people to excel, and promotes networking between researchers and those in need of assistance." However, he says it calls for exercises and movements that he wouldn't exactly do in real life. Such as using the exoskeleton to get up from a low sofa. "Even for that, you need to be a top athlete," he observes. "In everyday life, you buy a high couch instead so that you don't need to do it."

“The enhanced teams have been taking part in CYBATHLON from the start and haven't made a mistake yet. We've nearly always won the wheelchair challenges so far. We're very proud of that!”

Silvia Rohner, enhanced team leader

Alongside the competitive aspect inherent in the CYBATHLON, the researchers focus intensively on real problems that life with a disability brings. Such as restricted mobility. “When I plan an outing somewhere, it always depends on how I can get around the place with the wheelchair,” explains Werner Witschi. “We are now working on a solution.” Specifically, the VariLeg team is working on a world's first: the “enhanced Hybrid” project, in which the advantages of a wheelchair are combined with those of an exoskeleton. Like something out of a science fiction film, this new “Transformer” (as the device has been affectionately dubbed) can adapt to the circumstances of the trip. If stretches of ground have to be covered, Werner Witschi travels in the wheelchair. If obstacles are encountered, like some steps, the chair transforms into the exoskeleton in which the passenger can stand up and walk. After that, he seamlessly goes back to rolling along in the chair. A further advantage, according to the team leader, is that “most exoskeletons work only with crutches, which prevent any other use of the hands. We would like to enable walking without crutches, by automating the crutches.”

Currently the prototype is still too heavy, weighing around 70 kilograms (154 pounds). “This kind of device has ten drive units from maxon. They are reliable, robust, very powerful, and quiet; they are the best motors that can be found on the market,” says Silvia Rohner. “But we are hoping that in the future, the technologies will become smaller and more compact in general.” If all goes well, this hybrid solution will prove itself in 2024 at the CYBATHLON. Either way, Werner Witschi is sure of one thing: “The development process is moving ahead! And I'm happy for everyone whose daily life gets a little bit easier as a result!”



Science fiction within your grasp: the new “Transformer” is a wheelchair and exoskeleton in one.

The enhanced teams

In December 2015, staff and students at the Eastern Switzerland University of Applied Sciences (OST) formed the original enhanced team together with Florian Hauser as their first pilot.

Their objective was to develop a racing wheelchair for CYBATHLON 2016. After the team won the gold medal in the wheelchair discipline, they founded an additional team for the exoskeleton discipline in 2018. Since then, the two teams, Robility enhanced and VariLeg enhanced, have been a permanent feature of all major CYBATHLON events. Ideas for solving new challenges are usually worked out by students in various disciplines. If the solutions pass testing, they are integrated into the mobility aids by OST staff.

50

teams took part in the last CYBATHLON in 2020. One in four teams used maxon products. Five of those teams made it onto the podium. A huge success!



Share in the excitement! CYBATHLON 2024

The CYBATHLON is a unique competition where people with disabilities compete against one another to master everyday situations with the aid of the latest technical assistance systems. The competitions are comprised of various disciplines that test the pilots' ability to navigate using powered arm and leg prostheses and wheelchairs, exoskeletons, electrical muscle stimulation, and new brain-computer interfaces. The assistance technologies are both commercially available products from companies, and also prototypes from research institutes. The next competition takes place from October 25 to 27, 2024.

For all the details, visit: www.cyathlon.com





At a glance:

maxon motors face the demands of competition

The drives for exoskeletons and wheelchairs must above all be lightweight and space-saving. At the same time, high power density and dynamic response are required, because the motors frequently need to change direction very quickly when used in someone's everyday life. Flat motors such as the EC 90 flat are very appealing in this context, precisely because of their flat design and high torque density.

The MiniMACS6 is also utilized in the exoskeletons. The fully programmable controller with integrated power stages and encoder inputs enables fully synchronized control of up to 4 axes. This has the advantage of saving space and simplifying the wiring. The power density is very high, with 600 W nominal output and 1,800 W peak output per axis.

3 questions for: Alessandra Moretti



Corporate Marketing
and Innovation at maxon,
Project Manager for CYBATHLON

Alessandra, why has maxon been part of CYBATHLON since the beginning?

CYBATHLON and maxon have a shared mission. We share a drive to excel in technology, and we are fighting for progress in assistance technologies for people with disabilities. It is very important to maxon to make a contribution toward an inclusive world. We strongly believe that curious technology developers can have a positive impact on the world, and we give them the support of our many years of experience. We are very proud to be a partner of such a significant project.

How exactly does maxon contribute?

Our drives and controllers are used in many devices, such as exoskeletons, wheelchairs, and prostheses. Sometimes this is not so obvious, because our products might be hidden. They are nonetheless there, doing their work reliably. With our Young Engineers Program, we support the teams in their innovative projects with our products and our technical expertise. On top of that, we also support the event financially as a long-standing partner.

What does maxon get out of it in return?

We learn a lot. Through our close collaboration with the teams, our engineers find out what demands the market will place on our products in future. That helps us to develop even better drive systems for assistance technology.

maxon's academic network

In addition to the CYBATHLON, maxon maintains numerous college partnerships, such as:

- Zürich Lab (ETH Zürich)
- Lausanne Lab (EPFL Lausanne)
- Lucerne Lab (HSLU Lucerne)
- Auterion
- Fourier Intelligence



Our responsibility to future generations

Climate change, the loss of biodiversity, and the overuse of the resources of our planet threaten the very basis of our existence. In its business activities, maxon seeks to take responsibility for the environment and society, to make a life worth living possible for future generations. This commitment is expressed in our Code of Conduct, which applies to the entire Group. We consider the environmental impacts of both our business activity and our products. It is our goal to reduce negative impact on the environment and climate, and in particular to reduce greenhouse gas emissions.

Conserving resources – the guiding principle of our environmental management

The efficient use of energy and other resources, the reduction of greenhouse gas emissions, and responsible waste management with a high rate of recycling are all central to maxon's corporate environmental management.

At our largest site, in Sachseln, we have installed heat pumps as an ecofriendly option for the building's energy, and use two groundwater wells for heating, cooling, and ventilation. We also feed waste heat from production processes and exhaust air into the energy cycle. To meet our electricity requirements – including those of the efficient heat pumps – we purchase green electricity. We do the same in Sexau, and as a result, at least 73 percent of our procured electricity comes from renewable sources. In addition, seven arrays of photovoltaic panels on our buildings in Sexau and Sachseln produced 817 MWh of solar energy in 2022. In the year under review, the production plant in Hungary also constructed an array with a capacity of 500 kWp, which is about to go into operation. In 2022, we offset part of our emissions in Sachseln, 350 metric tons of CO₂e* to be exact, with a climate protection project in Madagascar run by the myClimate foundation.

However, aside from that, it is also and especially important to use energy efficiently. For that purpose, we continuously undertake optimization measures, such as converting to LED lighting, installing heat pumps, insulating new buildings to Minergie standards, and conducting targeted energy efficiency analyses of our production machinery. Our company operates internationally, so air, car, and train travel is part of our business operations. For the Group, we check in each case whether a trip is necessary, whether public transport can be used, or whether a flight in business class is appropriate. We also try to combine trips efficiently and to make greater use of virtual meetings.

Waste management and disposal

Professional waste management in our operations entails thorough sorting and type-specific disposal. We take advantage of the recycling options available in local waste management systems, as well as those of our disposal providers. Special attention must be paid to hazardous waste (e.g., chemicals, contaminated water, and other hazardous substances), which made up approximately 1.5 percent of our

Greenhouse gas emissions	Unit	Sachseln (Switzerland)	Sexau (Germany)	Veszprém (Hungary)	Cheonan (South Korea)	Total
Scope 1	tCO ₂ e*	219	264	203	14	699
Natural gas	tCO ₂ e	0	208	193	0	400
Fuels (own vehicle fleet)**	tCO ₂ e	219	56	11	14	299
Scope 2 (location-based)	tCO ₂ e	68**	1,780**	855	234	2,937
Purchased electricity	tCO ₂ e	68**	1,780**	855	234	2,937
Scope 3	tCO ₂ e	709	212	108	97	1,126
Business travel by air**	tCO ₂ e	593	-	26	87	706
Waste (hazardous waste and non-recyclables)	tCO ₂ e	102	198	52	8	359
Paper*	tCO ₂ e	7	12	27	3	49
Water	tCO ₂ e	7	2	4	0	13
Fuel- and energy-related activities**	tCO ₂ e	0	0.014	0.013	0	0
Total emissions	tCO ₂ e	995	2,255	1,166	344	4,762
Offsetting with emissions certificates	tCO ₂ e	(350)				(350)
Net emissions	tCO ₂ e	645	2,255	1,166	344	4,412
Energy consumption						
Heating energy	MWh	0	1,022	948	0	1,970
Purchased electricity	MWh	5908	5256	3506	563	15,233
Solar energy produced on our sites	MWh	648	168	0	0	817

* CO₂-equivalent metric tons (tCO₂e) is the standard unit for all greenhouse gas emissions.

** Explanations and further information about the marked figures can be found in the GRI content index.
Purchased electricity: maxon purchases renewable electricity products at its sites in Sachseln, Switzerland, and Sexau, Germany. As not all GHG emission factors for the individual electricity products were available at the time of publication of this report, the market-based Scope 2 emissions have not been reported.

operational waste in 2022. In addition to paper, PET, and cardboard, we also feed valuable raw materials back into the materials cycle, such as the metals and magnets that we use for the manufacture of our products. To reduce waste from packaging material, we already selectively use reusable packaging for transportation between our sites, and for transportation to our customers.

Certification and monitoring

maxon’s production plants are certified in accordance with the environmental management standard ISO 14001. Through regular recertifications, we subject our systems and processes to review by external specialists, receiving valuable feedback and tips in the process.

In all of our endeavors, the environmental management officers at our production sites play an important role. They propose improvements and assist in their implementation. With the support of various external information systems, they verify compliance with locally applicable laws. They also act as experts, providing advice to

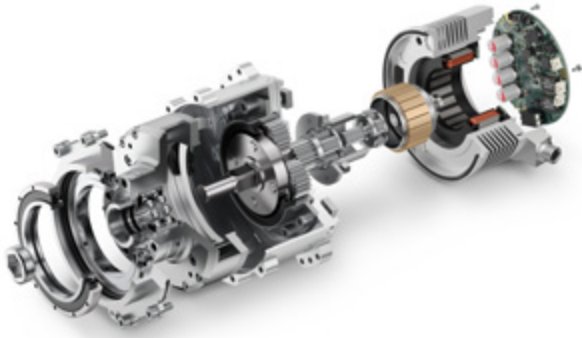
the Management Board and to staff on environmental questions encountered in day-to-day work. Ultimately, however, all employees make a significant contribution to reducing negative environmental impacts from maxon through attentive and responsible behavior. We heighten their awareness of the need for this in campaigns, training, and further education, with the aid of documented information. We also promote environmentally conscious behavior directly, for example through the use of an energy-efficient IT infrastructure.

Materials	Unit	Sachseln (Switzerland)	Sexau (Germany)	Veszprém (Hungary)	Cheonan (South Korea)	Total
Purchased materials (metals, electronics, magnets, plastic)	t	1,098	157	166	49	1,304
Waste						
Waste generated	t	182	195	106	24	506
Non-hazardous waste	t	170	117	97	24	407
Hazardous waste	t	12	78	9	0	99
Hazardous waste as proportion of the total waste quantity		6.8%	39.9%	8.6%	0.0%	19.62%
Waste by type of processing						
Waste for recycling		15.7%	42.9%	34.8%	38.5%	31.2%
Copper		1.5%	0.0%	4.1%	0.8%	1.4%
Other metals		10.1%	36.7%	5.5%	26.8%	20.2%
Paper		4.1%	6.2%	25.2%	10.9%	9.6%
Hazardous waste		6.8%	39.9%	8.6%	0.0%	19.6%
Waste for disposal		77.4%	17.1%	56.6%	61.5%	49.1%



Motors in drones must have especially high power density and durability.

Efficient, lightweight, and durable – our products



A look inside a drive system for robotics applications.

Our powerful drive systems bring high performance to insulin pumps, humanoid and mobile robots, and even camera lenses. One of the things that sets them apart is their high efficiency. We offer DC motors with efficiency of more than 90 percent. This means that more than 90 percent of the electrical energy fed into these selected products is passed on as mechanical drive energy. The same products are also very lightweight. Thanks to their high energy density, our systems therefore make an important contribution to the energy efficiency of the end product.

Minimalism in product innovation

Our engineers are constantly working to make our products even lighter, using even less material – while keeping performance at the same level or higher. This is crucial not only to maintaining and expanding our market position, but also for the conservation of resources. Thus, about 73 percent of our revenue in 2022 went to research and development and the production of prototypes.

Durability as a major goal

Our components should provide high-level performance in our customers' products for as long as possible – that is our quality commitment (see also p. 40). In the case of control electronics, durability also means that the software can be updated and expanded by the customer at any time. A further design requirement is for electronics to be repairable. Thanks to these features, serviceability is ensured.

Sustainable selection of materials

Looking at the upstream value chain and the processing involved, the choice of materials we use and how we handle them in our processes are critical for environmental impacts. In 2022, we purchased around 1,300 metric tons of metal, electronics, plastic, and magnets. For the production of high-performance motors with high efficiency, we use neodymium, a metal that is one of the so-called rare earths. It is important to use these carefully and sparingly, because the mining of them is damaging to the environment. Consequently, in each case, we check whether an alternative material could be used for a product. We also make use of the latest simulation tools to optimize our designs as much as possible in regard to the use of rare earths. For maxon, the careful and sparing use of resources also means that we regularly review our processes to minimize scrap from production. In addition, as described in more detail above, we recycle our waste wherever possible, including the metals from production.

Chemicals and hazardous substances are also used in our production processes. We have a Group-wide directive that is adapted and implemented locally. We have also specified a multi-stage approval process for the use of hazardous substances, involving specialists from areas within the company such as process engineering and occupational safety, and also the environmental officers. Adherence to regulations, both those of the company itself and external regulations, is regularly checked through audits and unannounced inspections. Similarly, rules on hazardous substances are part of risk management in our supply chains and are enshrined in our Supplier Code of Conduct (see also p. 42).

Compliance with the REACH and RoHS requirements of the EU is being ensured by a multi-year project conducted by a specialist in-house workgroup. This project aims to eliminate the environmentally harmful substances specified in the regulations from our products, or to lower them to the required maximum quantities. The project team also develops additional product design rules that are applied even before the legal regulations come into force.

Parvalux

“Our objective from the beginning: net zero”

Combining the three production facilities and offices at a single location and bringing together all the employees into one big Parvalux family – this was the impetus for the new headquarters of Parvalux, a company acquired by the maxon Group in 2018. However, the new building ended up being so much more: namely a statement on sustainability. Doug Sheppard, Managing Director of Parvalux, on energy-efficient materials, renewable energies, and the value of having one’s own garden.



Investments for the environment and society

Striving for sustainability and forward-thinking forms of work is also characteristic of maxon. This is why maxon invested around GBP 29.8 million in the development and construction of the new Parvalux headquarters at the Bournemouth production site, including land costs, plus another GBP 3 million for the purchase of state-of-the-art production machinery.

What makes Parvalux's new building so special?

From the beginning, it was about keeping the environmental impact as low as possible. Our objective is to cut our operational CO₂ emissions to net zero. We chose the materials based on their energy efficiency. For sustainable water heating and to heat the building, air-source heat pumps are used. In addition, around 7,000 metric tons of bricks and concrete from the old buildings on the site have been recycled for preparation of the foundations. But above all, the factory has one of the biggest photovoltaic systems ever installed on a single building in the region. I was on the roof – the system is really huge!

What will the generated solar energy be used for?

Not only will we be able to cover all the electricity needed to run the building, including lighting, elevators, and office equipment, in fact, we will be left with a surplus of more than 23,000 kWh per year. We will feed this into the production process and consequently reduce the purchase of renewable energies from the grid. Surplus electricity will also flow into the electric vehicle charging stations. This is how we want to motivate employees to make the switch to more sustainable means of transport.

“The new building is a major step in the right direction. It will be more than climate-neutral by 2030.”

Why is sustainability so important for Parvalux?

We want to run our business without any negative effects on the environment and society, from the source of supply over the entire life cycle of a product. To do this, we need to put our own house in order, as we English so elegantly put it. The new building is a major step in the right direction. It will be more than climate-neutral by 2030, because we are producing an energy surplus. We are proud of this.

What were the biggest challenges?

To be honest, energy efficiency has its price. In order to reconcile our desire for sustainability with cost considerations, we needed the right partners.



Doug Sheppard, Managing Director of Parvalux.

The building work will soon be completed. Are the employees looking forward to the move, or is there also a sense of nostalgia?

Our old headquarters were built in 1961. Since then we have grown, and the building has aged. The employees are looking forward to a large cafeteria, the latest machines, and a modern working environment. Unlike before, there will be enough meeting rooms as well as areas that allow for running into people and in this way promote mutual curiosity and collaboration. Of course, the new building is fully accessible and has gender-neutral facilities. And with multi-purpose rooms, which we make available for personal and religious use, we actively support the well-being of all employees, including those from ethnic minorities.

What are you personally most looking forward to?

The highlight for me is the garden, where the employees can grow fruit and vegetables. For anyone who does not have their own outside space at home, it is a small help in times of high inflation and a contribution to personal well-being. The roof terrace will also be a great place to enjoy a coffee in a relaxed atmosphere or to hold a social barbecue. But I'm a practically-minded man, and the most exciting aspect for me is that we can work in a world-class production center with motivated and highly qualified workers, making fantastic motor solutions. And at the same time, we are bringing together all the employees into one big Parvalux family.



About Parvalux

The British manufacturer of geared motors expands the maxon portfolio to include powerful drives, which are used in fields such as medical technology and industrial automation. Parvalux was founded in 1947 and has been based in Dorset, in the southwest of England, since 1957. It was acquired by maxon in 2018. With its move, the company is bringing together its three sites in the region and responding to many years of consistently high demand for its products. The new headquarters on Technology Road in Poole near Bournemouth not only offers the opportunity to increase production efficiency, but also to double the usable floor space if necessary.

The new headquarters in figures

- Number of employees:** more than 200
- Completion:** August 2023
- Grounds:** 3.54 hectares
- Usable floor space:** 14,000 m² (extendable to 28,000 m²)
- Total costs:** approximately GBP 30 million
- CO₂ savings:** 343 metric tons per year
- Electricity savings:** approximately GBP 110,105 per year (not including inflation)
- Charging stations for electric vehicles:** 58 (2023: 34, 2029: 58)
- Cafeteria:** 90+ seats

Solar power system

- Number of solar panels:** 1,508
- Annual output:** 610 kWp capacity
- Costs:** GBP 576,000
- Payback period:** 5 years



An overview of four sites

What are the special features of maxon’s buildings in these four different countries? Here is a brief tour of our quartet, looking at their most important characteristics.



The campus

At our headquarters, we develop and manufacture high-precision drive units and systems.

Site: Sachseln, Switzerland

Built: 1997–2021, continuously modernized since 2017

Production floor space: 12,300 m²

Employees: 1,346

Environment: Energy-efficient, in part to Minergie standard. Solar panels are installed on all the buildings of the campus. The solar electricity produced is enough to heat and cool the buildings. No fossil fuels are used on the campus – a liquid-to-water heat pump is used.

Accessibility: All the buildings are wheelchair accessible.

Special extras: Gym, cafeteria, and daycare center

Output: 650 kWp capacity in solar panels on all the campus buildings. This covers 10 percent of the site’s electricity demand.

The sister site

In Germany, gearheads, stators, rotors, and injection-molded metal and ceramic components are developed and produced.

Site: Sexau, Germany

Built: 2007–2021

Production floor space: 6,900 m²

Employees: 528

Environment: New building without fossil fuels: heat pump and underfloor heating. Elsewhere: gas heating (being replaced by a heat pump). Solar panels on the buildings.

Accessibility: All the buildings are wheelchair accessible.

Special extras: Staff restaurant with its own kitchen

Output: 160 kWp capacity in the solar panels on the buildings.





The architectural highlight

In Hungary, assemblies and drive units are manufactured. The administration building was designed by architects to a high aesthetic standard.

Site: Veszprém, Hungary

Built: 2004–2013

Production floor space: 6,400 m²

Employees: 584

Environment: Solar panels on all buildings except the production building, because the roof cannot take the weight (solar panels not yet operational in 2022).

Accessibility: All the buildings are wheelchair accessible.

Special extras: Staff restaurant with an award-winning chef, fire pond with fish, and fruit trees for the employees

Output: 500 kWp capacity in the solar panels on the factory site.

The site in the south

South Korea is our production site and specialized facility for iron-core internal-rotor motors and the large flat motors EC 60 flat and EC 90 flat.

Site: Cheonan, South Korea

Built: 2016–2024

Production floor space: 8,000 m²

Employees: 127

Environment: Building-Integrated Photovoltaic System (BIPV) on the new building (system not yet operational in 2022)

Accessibility: The new building is wheelchair accessible.

Special extras: Staff restaurant, gym, café lounge

Output: 265 kWp



A moral compass for ethical conduct and reliable products

The way we conduct our activities and make decisions is founded on our moral principles and values: high standards of quality and performance, and treating people with respect, both inside the company and outside it. This not only protects maxon's reputation but is also a prerequisite for strong partnerships. So we can achieve progress – for society, for people, and for the environment.

Fundamental and absolutely crucial – the quality and safety of our products

We make no compromises when it comes to our products. The satisfaction of our customers is of the utmost importance. For that, they must be able to rely absolutely on the safety of our drive systems, which must not pose any danger – through accidents, for example – to people or the environment. This is why we consider functional safety to be particularly important. The potential danger varies greatly depending on the area of application. If the motor in an insulin pump fails, the health of the diabetic person is endangered. A non-functioning lens on the camera of an amateur photographer, on the other hand, is hardly a danger to health, but still an annoyance.

The size, variety, and breadth of application of our product range has a major influence on our quality management. Its centerpiece is the quality manual. More specific instructions and guidelines exist for particular product lines and areas of application. However, quality management rarely happens in isolation. It is embedded in core processes from product development, to production and manufacture, to marketing and sales, in the form of checks, tests, systematic controls, and other dedicated steps.

The human factor

Our employees work on our products by hand, operate and service machines, and conduct checks. Despite automation, they play a central role in our quality management. We therefore train our employees for specific functions and roles. For example, some learn to carry out manual work neatly and flawlessly on tiny objects, using materials that are difficult to work with. High quality standards should be ever present in the way that the entire workforce thinks and acts. We emphasize this extensively in awareness-raising measures, training, and evaluation.

Quality and safety

The quality management in our production plants has been ISO 9001 certified for many years now. We have obtained further certifications for specific products and areas of product application. Our high-precision drive solutions for medical technology meet the requirements of the medical standard ISO 13485. As a developer and manufacturer of components for the aerospace



industry, we are certified in accordance with EN 9100. We are also certified to IATF 16949 for the automotive industry.

On top of that, we also place appropriately high requirements on the quality and safety of the materials, products, and components that we purchase from our suppliers. Specifications to this effect are laid down in our Supplier Code of Conduct, in our General Terms and Conditions, and in individual contractual clauses.

Checks and audits

We regularly measure our performance in-house using meaningful quality metrics, which enable us to continuously improve. With internal audits and external (re-)certifications, we check our quality management systems to ensure they are functional and up to date. That they have the desired effect is confirmed by our low complaint rates and high customer satisfaction.

Certificates and standards

- ISO 9001
- ISO 13485
- EN 9100
- IATF 16949
- ISO 14001

Fair, professional, and respectful – the cornerstones of our conduct

Collaboration with our employees and partners can only be successful in the long term if we treat each other respectfully and responsibly. As representatives of our company, our employees greatly affect how maxon is perceived by our stakeholders. Their behavior is fundamental to our good reputation and the high degree of trust that is placed in us.

Our Code of Conduct

The way we expect our employees to behave is set out in the Code of Conduct of the maxon Group. The Code of Conduct is binding for everyone. Its cornerstones are fairness, professionalism, and respect. Further stipulations relate to matters such as compliance with laws in general, the avoidance of conflicts of interest, corruption, bribery and anticompetitive conduct, and compliance with embargo and trade control regulations. The Code of Conduct also includes important provisions regarding the protection of maxon's assets. It specifies how we treat each other with fairness and respect, and how we act responsibly toward the environment. The Code of Conduct of the maxon Group is published on our website. For our suppliers, maxon has drawn up our own maxon Supplier Code of Conduct, which is likewise published on the website. maxon requires suppliers to familiarize themselves with this Code of Conduct and to confirm their compliance with it on a regular basis.

Training regarding the Code of Conduct

The Compliance function has its own area in the maxon intranet, which employees can access. The Code of Conduct and other information can be viewed there. New employees complete training on the Code of Conduct. In 2022, this initial training was delayed for employees at the Sachseln site, and consequently only 65 percent of newly hired staff there had completed this training sequence by the end of the year. However, this gap was almost entirely closed in the first quarter of 2023. For existing employees, most units also conduct refresher training.

A specific guideline against bribery and corruption, a specific guideline on compliance with the provisions of cartel law, and two directives for the sales units add more detail to the basic rules enshrined in the Code of Conduct. Employees who have contact with customers and suppliers, and are exposed to greater risks due to their roles, receive more in-depth training on avoiding anticompetitive conduct and bribery. We also make use of an internal control process to ensure that we do not breach sanction lists or trade embargoes.

Our reporting system

We have set up a reporting system for the reporting of potential violations of laws and internal regulations and guidelines. The processes are described in the "inform maxon" procedure, which has been communicated to all employees worldwide. If our employees notice potential violations, they can contact their immediate superior, or the local or global human resources managers and compliance officers. In addition, there is a communication channel and process for anonymous reports. The reports are received, reviewed by our Compliance function, and documented. If a suspected case of misconduct is confirmed, actions are initiated to remedy the irregularities, and the implementation and effectiveness of those actions are subsequently reviewed. The annual Compliance Report informs the Management Board and Board Of Directors about any incidents. Depending on the degree of severity, however, the boards may be informed and involved immediately. The compliance processes in all units are regularly audited by our internal auditors.

Our responsibility does not stop at our front door

We carry a sense of responsibility with us into our relationships with business partners and especially with our suppliers. By doing so, we seek to change things for the better. We know our important partners well, and are building on long-term, trust-based relationships. These relationships are handled by our professional supply chain team, in cooperation with relevant specialist departments and in close consultation with quality management (see p. 40).

Our supplier management

The core processes in supply management are standardized and controlled centrally. This global unit sets out general conditions and processes as a framework within which the local units can procure components and other products and services. We have commodity managers who take responsibility for purchasing important groups of goods. They work in a team that includes quality and purchasing specialists at headquarters and at other sites. The total value of the goods that are managed strategically in this kind of matrix structure comes to 65 to 70 percent of our total purchasing volume.

During our onboarding process, a new supplier must meet our minimum requirements in terms of quality, price, and availability of supply. The exact conditions can vary according to the supplier category. Something that does not vary, however, is that our Supplier Code of Conduct must always be accepted. It imposes requirements in the areas of labor rights and human rights (including child labor), health and occupational safety, environmental protection, and ethically responsible business practices (including conflict minerals: see inset box). If all the prerequisites are met, the supplier is considered qualified and is accepted into our supplier network. maxon checks their qualification regularly and, depending on the business volume, products purchased, and risk assessment, has the suppliers (re-)audited by their own employees.

The greatest risks

We regularly screen our supplier network for financial, geopolitical, and cybersecurity risks, and for whether companies could be affected by force majeure events such as earthquakes, hurricanes, or tsunamis. We also check the purchased goods for chemicals and ingredients that can be harmful to health and the environment, according to RoHS and REACH (see p. 31). Among the country-specific risks, we pay particular attention to conflict minerals. Once a year, our suppliers complete the Responsible Minerals Initiative checklist regarding reporting on conflict minerals. If this indicates that they have relationships with blacklisted smelters, they are urged by maxon to sever their ties with them. So far, there has never been a worst case scenario where maxon warned a supplier but to no avail, and had to terminate the business relationship as a result.



The term “conflict minerals” includes the elements tin, tantalum, tungsten, and gold. Their extraction and trade warrant critical assessment in conflict zones, where it could drive exploitation and be used as a source of finance for parties to the conflict. That could further fuel the existing conflict. The mining of raw materials in such regions carries with it a high risk of violations of human rights and international law, as well as environmental damage.

Getting things moving through our commitment to innovation and society



With drive systems, maxon provides impetus for innovative projects – in the truest sense of the term.

We seek to generate positive momentum as a reliable partner in the societies in which we are established. With our drive systems, we provide impetus for innovative projects – in the truest sense of the term. Through our Young Engineers Program, we support startups and educational institutions with discounted or even free drives, and advice for their projects. We know that innovation requires staying power, so we enter into multi-year partnerships, such as those with the CYBATHLON (see p. 20) or the Solar Butterfly (see p. 44). We tap into our expertise, and draw on the wide variety of applications and ideas for inspiration for the further development of our core business.

Commitment to the regions

At the same time, we support events and social initiatives in the locations that are home both to maxon as a company and to its employees. We are happy to commit ourselves to projects that promote sustainable development in the regions and benefit young people. In the past, we have made contributions to school camps, classical music festivals, and sporting events.

Generally speaking, we support sustainable and brilliant ideas and proposals for our local communities, for art and culture, education and science, and sport. We review all requests according to predefined criteria, and provide our support in the form of money, giveaways, products, expertise, and labor.



Solar Butterfly

An adventure with an ambitious goal

From greedy caterpillar to undemanding butterfly: With his Solar Butterfly project, Louis Palmer uses this striking metaphor of sustainability to call attention to climate change. The solar-powered tiny house has been traveling for about a year, with alternating crews, visiting future-oriented projects. What are its initial findings, and where is the butterfly's journey taking it?



Driving innovation

With its electric drive systems, maxon assists and supports hundreds of inventions. For the Solar Butterfly in particular, maxon contributed a motor to extend the butterfly's head, along with technical expertise. In return, the company is hoping to gain new findings and business connections from the project.

“Climate action means change, but not necessarily doing without. Climate projects can be fun. And if you think about the long term, many of the proposed solutions are even profitable.”

Louis Palmer, initiator of Solar Butterfly

The Solar Butterfly is spending four years traveling by eco-friendly means to visit about a thousand sustainability projects around the world.

Louis Palmer, the initiator of Solar Butterfly, believes that many intelligent and feasible solutions for the challenges of our time have already been developed. They now need to be made known and scaled up – and put into practice. In 2022, Palmer and his crew launched their solar-powered tiny house on a tour all across Europe. Their goal was to bring much-needed attention to the numerous projects that are working toward greater sustainability.

Eye-catching sustainability

The butterfly-shaped caravan is built from a material made from oceanic waste, and accommodates a four-person crew. The folding wings are made of solar panels and supply both the Solar Butterfly and the Tesla that pulls the tiny house with the power they need. With water purification, a specially designed shower, and the biodegradable clothing of its inhabitants, the footprint of the Solar Butterfly and its passengers is reduced to a minimum.

On a journey around the globe

Due to the supply chain bottlenecks caused by the COVID-19 pandemic, the Solar Butterfly very nearly did not make it out of its cocoon on time. But now the technology is working perfectly, with the last teething problems sorted out over the winter break. Louis Palmer has even more important concerns: “Everywhere we go, we encounter open ears, and discover exciting new solutions.” So the journey continues: In this year alone, the Solar Butterfly is being shipped from Liverpool to Canada, before voyaging through North and Central America. 2024 will take it across Asia, and one year later the journey will end by going through Australia and South America. The destination is Belém in Brazil, where the COP30 global climate conference is scheduled to take place in 2025.



“maxon wants to be one of the climate trailblazers. That’s why we develop and support solutions that conserve the world’s resources. Mobility is a very important area in this regard.”

Eugen Elmiger, CEO of the maxon Group



Facts

- **200,000 km**
is the distance that the Solar Butterfly will cover on its journey through 90 countries across 6 continents.
- **120 m² of solar panels**
provide about 120 kWh of power per day. This enables the Solar Butterfly to cover a distance of up to 220 km.
- **60% less energy**
is used by the shower in the Solar Butterfly compared to a conventional shower.
- **800 kg**
of PET bottles from the sea were used to build the caravan, its furniture, and its solar panels.
- **4.3 kg per square meter instead of 16 kg**
is the weight of the solar panels of the Solar Butterfly. This low weight is due to innovative materials.
- **100 volunteers**
are committed to the project for its entire duration.
- **1 year**
for development and six months for construction were needed before the Solar Butterfly could unfold its wings.

“maxon and Solar Butterfly have a common goal: to give more impetus to climate action. The Solar Butterfly shows what can be done when we all pull together.”

Louis Palmer, initiator of Solar Butterfly



The initiator

Louis Palmer is experienced in climate projects. In 2008, the former teacher from central Switzerland became the first person to drive a solar taxi around the world, earning the accolade “Champion of the Earth” from the UN. That journey motivated the 51-year-old to embark on his next adventure with the Solar Butterfly. When he's not returning to his teaching roots by visiting schools with the Solar Butterfly, he works as a motivational speaker, raising awareness among decision-makers for new solutions for dealing with climate change.

Louis Palmer's three highlights

1. Heating houses with sand

In the summer months, the sand is heated in a tank to 500 °C by solar energy. When it gets cold, the sand slowly gives off its heat again, heating an entire house. In this way, the energy collected in the summer can be stored until the winter in a very simple way.

www.youtube.com/watch?v=EQQDJxwcjao

www.polarnightenergy.fi

2. A search engine with a green thumb

When you use the search engine Ecosia, you don't just get answers to your questions, you're also promoting biodiversity at the same time. This is because all the revenues from the search advertising go to environmental protection. The primary focus is on planting trees all over the world – and not monocultures, but rather native species adapted to each location.

www.youtube.com/watch?v=TcOVT3tffU8

www.ecosia.org

3. Electricity from the earth

In Tuscany, geothermal power plants produce almost as much electricity as a nuclear power plant. Steam rising up from the earth's interior is conveyed to steam turbines where it is transformed into electricity. After that, it condenses in cooling towers, and the water is injected back under the earth. The technology has stood the test of time, but is by no means gathering dust; on the contrary, it is very clean.

www.youtube.com/watch?v=0te15BiJzaE



Since 2022, the Solar Butterfly has been traveling across the entire world on a search for future-oriented sustainability projects. The final destination of its journey is the global climate conference in Belém in Brazil in 2025.

About this report

This Sustainability Report deals with the significant economic, environmental, and social impacts of maxon, and sets forth our commitment to a sustainable future. maxon has reported in accordance with the GRI Standards for the period from January 1, 2022 to December 31, 2022. The presented metrics, activities, and impacts were selected based on our materiality matrix (see p. 9) and in consultation with managers and experts within the company.

The report covers our headquarters together with the four production sites of the maxon Group in Switzerland (Sachseln), Germany (Sexau), Hungary (Veszprém), and South Korea (Cheonan). These sites employed 2,585 permanent staff as at December 31, 2022. This equates to 77 percent of the workforce of the entire Group, which numbered 3,341 employees in total as at December 31, 2022.

This is the first time that we have published this report. We do so for the purpose of transparency and to provide further impetus for dialogue with our stakeholders. Our aim is to present achievements and challenges in a clear, accountable, and assessable way. We are happy to receive any questions and feedback at media@maxongroup.com.

GRI content index

GRI content index

The following GRI content index is based on maxon's current materiality matrix (see p. 9), which the company drew up in 2022 with the involvement of external and internal stakeholders. Relevant information is presented transparently in the Sustainability Report 2022 and is supplemented with further details in the content index. The correlation of the GRI Standards to the topics assessed in the materiality analysis (see p. 9) is shown in the following table:

Sustainability topics of the maxon Group	GRI Topic Standards
Employees	
Labor practices within the company	GRI 401 Employment (2016)
Diversity, equality and inclusion	GRI 405 Diversity and Equal Opportunity (2016)
Health and safety	GRI 403 Occupational Health and Safety (2018)
Training and development	GRI 404 Training and Education (2016)
Environment	
Emissions and energy use	GRI 302 Energy (2016) GRI 305 Emissions (2016)
Use of materials	GRI 301 Materials (2016) GRI 306 Waste (2020)
Development of sustainable products	Not covered in the GRI Topic Standards
Responsible business conduct	
Product quality and safety	GRI 416 Customer Health and Safety (2016)
Business ethics and integrity	GRI 205 Anti-corruption (2016)
Responsible supply chain management	Management approach reported
Community engagement	Not covered in the GRI Topic Standards

Standard	Indicator	Reference, comments, and further information
Foundation (2021)		
GRI 1	Foundation	
The organization and its reporting practices (2021)		
GRI 2-1	Organizational details	<p>Interelectric AG, the holding company of the maxon Group, is a family-owned joint-stock company with its headquarters in Switzerland, which owns 100% of the principal company maxon international ag.</p> <p>Headquarters (of the principal company): maxon international ag Brünigstrasse 220 6072 Sachseln Switzerland Other sites: - maxon Catalog, p. 613 – 616</p>
GRI 2-2	Entities included in the organization's sustainability reporting	P. 9 and p. 50
GRI 2-3	Reporting period, frequency, and contact point	<p>P. 50</p> <p>maxon has reported in accordance with the GRI Standards for the period from January 1, 2022 to December 31, 2022.</p>
GRI 2-4	Restatements of information	None.
GRI 2-5	External assurance	The report has not been audited externally.
Activities and workers (2021)		
GRI 2-6	Activities, value chain, and other business relationships	<ul style="list-style-type: none"> - P. 6 - Website: About maxon - Website: Product overview
GRI 2-7	Employees	<ul style="list-style-type: none"> - Information on the workforce: P. 19 - The key workforce figures were recorded per person and analyzed as at December 31, 2022, unless otherwise stated. - Part-time work is defined as all employment contracts with a workload below 100%.
GRI 2-8	Workers who are not employees	As a fundamental rule, maxon does not employ anyone without a contractual employment relationship.

Standard	Indicator	Reference, comments, and further information
Governance (2021)		
GRI 2-9	Governance structure and composition	<p>The Board of Directors of maxon international ag as at December 31, 2022:</p> <ul style="list-style-type: none"> - Dr. Karl-Walter Braun (Chairman of the Board of Directors) - Dr. Bianca Braun - Dr. Andreas Casutt - Dr. Ulrich Claessen - Eugen Elmiger (Chairman of the Management Board and Vice Chairman and Delegate of the Board of Directors) - Kurt Kwapil - Kurt Meier - Dorothea Zünd-Bienz <p>The Management Board of maxon international ag as at December 31, 2022:</p> <ul style="list-style-type: none"> - Website: Company profile
GRI 2-10	Nomination and selection of the highest governance body	maxon is a privately owned family company. This information is not made public for reasons of confidentiality.
GRI 2-11	Chair of the highest governance body	Dr. Karl-Walter Braun (Chairman of the Board of Directors); see GRI 2-9
GRI 2-12	Role of the highest governance body in overseeing the management of impacts	<p>maxon has been systematically expanding its sustainability management through an initiative that began at the start of 2022. Overall responsibility for it lies with the CFO of the maxon Group, Norbert Bitzi. The materiality analysis (see p. 9) was conducted within that process.</p> <p>The Management Board of the Group was regularly and actively involved. Among other things, the Management Board assessed the sustainability topics as part of the materiality analysis, discussed the results, and derived goals from those results. Members also took part in interviews with stakeholders and actively contributed to developing and defining future action. The Board of Directors welcomed this systematization of the company's sustainability management. The Audit and Risk Committee was kept informed about interim results and the general procedure during the course of the project. A member of the Board of Directors also actively participated in many steps of the process, putting forward the Board's point of view.</p>
GRI 2-13	Delegation of responsibility for managing impacts	<p>Overall responsibility for the expansion of our sustainability management lies with the CFO of the maxon Group, Norbert Bitzi. He is supported in this by a core in-house team comprising the head of Human Resources, the general counsel, and the Group's head of Risk, Compliance, and Environmental Management. Decisions on general measures are made by the Management Board, while the relevant specialist units and functions have the duty of implementing them.</p> <p>The Board of Directors is informed of relevant progress and results at least once a year through internal reporting. These results also include maxon's impacts on the economy, society, and the environment. Examples of this reporting include the annual reports on compliance, risk management, human resources, and on the environmental management system.</p>

Standard	Indicator	Reference, comments, and further information
GRI 2-14	Role of the highest governance body in sustainability reporting	<p>The Sustainability Report 2022 was approved by the Board of Directors. Even before its approval by the highest governance body, the CEO of the maxon Group and delegate of the Board of Directors, Eugen Elmiger, was involved in the review and approval of its contents.</p> <p>The list of material topics was discussed and approved by the Management Board. Views and expectations expressed by the Board of Directors were taken into account when defining the topics.</p>
GRI 2-15	Conflicts of interest	All staff, including the members of the Board of Directors and the Management Board, are bound by legal obligations and maxon's Code of Conduct, which states requirements for dealing with conflicts of interest.
GRI 2-16	Communication of critical concerns	The Board of Directors is informed at least once a year about critical matters through the internal reporting process (see GRI 2-13). In the event of major incidents, the Board of Directors is informed and involved immediately, subject to the assessment of the Management Board and especially of the CEO or the compliance officer.
GRI 2-17	Collective knowledge of the highest governance body	<p>The annual internal reporting informs the Board of Directors about current developments, including those in the area of sustainability in general and in specific aspects of that area. In this regard, the reports on risk management, human resources management, and compliance are especially relevant.</p> <p>Participation in many steps of the ongoing initiative has led to increased knowledge and understanding of sustainability among the members of the Management Board and the Board of Directors.</p>
GRI 2-18	Evaluation of the performance of the highest governance body	
GRI 2-19	Remuneration policies	maxon is a privately owned family company. This information is not made public for reasons of confidentiality.
GRI 2-20	Process to determine remuneration	
GRI 2-21	Annual total compensation ratio	
Strategy, policies, and practices (2021)		
GRI 2-22	Statement on sustainable development strategy	- P. 3
GRI 2-23	Policy commitments	- Code of Conduct - P. 41
GRI 2-24	Embedding policy commitments	- P. 41

Standard	Indicator	Reference, comments, and further information
GRI 2-25	Processes to remediate negative impacts	<p>maxon pursues different approaches to remediating negative impacts depending on the sustainability topic in question. For details, see the descriptions of the management approaches (see GRI 3-3 in the specific disclosures).</p> <p>Staff can use the internal reporting procedure to report critical incidents and (potential) irregularities (see p. 41).</p> <p>Compliance with human rights in general and with specific human rights is laid down internally within the company in our Code of Conduct, and externally for our supply chain in our Supplier Code of Conduct. For more details, see:</p> <ul style="list-style-type: none"> - P. 41 - P. 42
GRI 2-26	Mechanisms for seeking advice and raising concerns	<ul style="list-style-type: none"> - P. 41 - See also GRI 2-25
GRI 2-27	Compliance with laws and regulations	maxon is a privately owned family company. This information is not made public for reasons of confidentiality.
GRI 2-28	Membership associations	The maxon Group is a member of a number of local associations in Switzerland, but as a medium-sized company, it can exercise only a limited influence in them.

Stakeholder engagement (2021)

GRI 2-29	Approach to stakeholder engagement	<p>maxon liaises with external partners and stakeholders on a daily basis through its employees. This engagement is manifested in activities and platforms such as membership in associations and interest groups (see also GRI 2-28), discussions with customers and suppliers, evaluations and inspections by authorities, media relations, and complaint and feedback processes. Internally, dialogue with employees is fostered and maintained through various channels (see p. 12-19).</p> <p>As part of the materiality process, maxon consulted selected stakeholder groups regarding the defined sustainability topics and asked for their views on sustainable development (see p. 9).</p>
GRI 2-30	Collective bargaining agreements	maxon employees are not subject to any collective bargaining agreement. maxon formulates its own conditions of employment in the local units of the company. When doing so, compliance with local legislation is ensured. The provisions are also based on typical conditions for the industry and on maxon's ethical principles and corporate values.

Disclosures on material topics (2021)

GRI 3-1	Process to determine material topics	P. 9
GRI 3-2	List of material topics	P. 9 and p. 52

Standard	Indicator	Reference, comments, and further information
People		
→ Labor practices within the company		
GRI 3: Material topics	3-3 Management of material topics	P. 14
GRI 401: Employment (2016)	401-1 New employee hires and employee turnover	P. 19
→ Diversity, equal treatment, and inclusion		
GRI 3: Material topics	3-3 Management of material topics	P. 18
GRI 405: Diversity and Equal Opportunity (2016)	405-1: Diversity of governance bodies and employees	<p>Board of Directors by gender and age as at December 31, 2022:</p> <ul style="list-style-type: none"> - Men: 6 - Women: 2 - Under 30 years of age: 0 - 30 to 50 years of age: 2 - Over 50 years of age: 6 <p>Management Board and the Extended Management Board by gender and age as at December 31, 2022:</p> <ul style="list-style-type: none"> - Men: 7 - Women: 1 - Under 30 years of age: 0 - 30 to 50 years of age: 2 - Over 50 years of age: 6 <p>Employees by gender and age as at December 31, 2022:</p> <ul style="list-style-type: none"> - P. 19 <p>Comment regarding the figure for “Women in senior management positions”: Senior management positions are defined as those that involve the management of persons who have managerial responsibilities.</p>
→ Occupational health and safety		
GRI 3: Material topics	3-3 Management of material topics	P. 14

Standard	Indicator	Reference, comments, and further information
GRI 403: Occupational Health and Safety (2018)	403-1 Occupational health and safety management system	P. 14
	403-3 Occupational health services	P. 14
	403-5 Worker training on occupational health and safety	P. 14
	403-6 Promotion of worker health	P. 14
	403-8 Workers covered by an occupational health and safety management system	All employees are covered by an occupational health and safety management system that has been audited internally and externally.
	403-9a/403-10a Work-related injuries and ill health	– P. 19 – The recorded absenteeism rate (p. 19) is defined as absences due to work accidents as a percentage of the planned working hours. However, note that in Hungary, parental leave is recorded under absence due to illness and is included in the absenteeism rate for 2022. We are working on adapting our documentation and data collection.

→ **Training and education**

GRI 3: Material topics	3-3 Management of material topics	P. 16
GRI 404: Training and Education (2016)	404-1 Average hours of training per year per employee	P. 19 The figures are not broken down further by gender and employee category. The training hours for the production site in Germany have been estimated.
	404-2a Programs for upgrading employee skills and transition assistance programs	P. 16
	404-3 Percentage of employees receiving regular performance and career development reviews	P. 19 The figures are not broken down further by gender and employee category.

Standard	Indicator	Reference, comments, and further information
Environment		
→ Development of sustainable products		
GRI 3: Material topics	3-3 Management of material topics	P. 31
Own key figure	Investment in product innovation	In 2022, the maxon Group invested 7.3% of its revenue in research and development and in the production of prototypes.
→ Materials consumption		
GRI 3: Material topics	3-3 Management of material topics	P. 28
GRI 301: Materials (2016)	301-1 Materials used by weight or volume	
GRI 306: Waste (2020)	306-1 Waste generation and significant waste-related impacts	P. 28
	306-3 Waste generated	P. 29
	306-4 Waste diverted from disposal	P. 29 Waste data broken down according to specific methods of recycling and recovery is not currently reported.
	306-5 Waste directed to disposal	P. 29 Waste data broken down according to specific methods of disposal is not currently reported.
→ Emissions and energy consumption		
GRI 3: Material topics	3-3 Management of material topics	P. 28
GRI 302: Energy (2016)	302-1 Energy consumption within the organization	P. 28 Standards, methods, and assumptions: – Conversion factors for natural gas: Federal Office for the Environment FOEN (2016) <i>Faktenblatt CO₂-Emissionsfaktoren des Treibhausgasinventars der Schweiz (Factsheet on CO₂ emission factors of Switzerland's greenhouse gas inventory)</i> .
	302-2 Energy consumption outside of the organization	P. 28 Standards, methods, and assumptions: – See GRI 305-3

Standard	Indicator	Reference, comments, and further information
GRI 305: Emissions (2016)	305-1 Direct (Scope 1) GHG emissions	<p>P. 28</p> <p>Standards, methods, and assumptions:</p> <ul style="list-style-type: none"> - The GHG emissions have been reported and categorized in accordance with the Greenhouse Gas Protocol (according to the GHG Protocol Corporate Accounting and Reporting Standard). - Sources for the emission factors of the greenhouse gases: Federal Office for the Environment FOEN (2018) Switzerland's Greenhouse Gas Inventory 1990–2016, National Inventory Report, Tables 3-12 to 3-16, 3-75; United States Environmental Protection Agency EPA (2018) Greenhouse Gas Emissions from a Typical Passenger Vehicle; carbon footprint (2023) International Electricity Factors, v0.1, based on Association of Issuing Bodies (AIB) 2022; treeze and PSI (2023) mobitools-Faktoren v3.0
	305-2 Energy indirect (Scope 2) GHG emissions	<p>P. 28</p> <p>Standards, methods, and assumptions:</p> <ul style="list-style-type: none"> - The GHG emissions have been reported and categorized in accordance with the Greenhouse Gas Protocol (according to the GHG Protocol Corporate Accounting and Reporting Standard) - See the sources of the GHG emission factors under GRI 305-1 <p>maxon purchases renewable electricity products at its sites in Sachseln, Switzerland, and Sexau, Germany. As not all GHG emission factors for the individual electricity products were available at the time of publication of this report, the market-based Scope 2 emissions have not been reported. Efforts are currently being made to enable the calculation and transparent disclosure of market-based Scope 2 emissions in future.</p>

Standard	Indicator	Reference, comments, and further information
	305-3 Other indirect (Scope 3) GHG emissions	<p>P. 28</p> <p>Standards, methods, and assumptions:</p> <ul style="list-style-type: none"> - GHG emissions have been reported and categorized in accordance with the Greenhouse Gas Protocol (according to the GHG Protocol Corporate Accounting and Reporting Standard and the Corporate Value Chain [Scope 3] Accounting and Reporting Standard). - When calculating the GHG emissions from paper consumption and for fuels and energy emissions, the values and factors have sometimes been estimated. - See the sources of the GHG emission factors under GRI 305-1. <p>In our efforts to ensure transparency and in accordance with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard, maxon has collected data for the Scope 3 categories as was feasible and appropriate at the time of publication of this report. maxon recognizes that the creation of a Scope 3 inventory provides greater understanding of greenhouse gas emissions along our own value chain. This constitutes a significant step toward efficiently managing risks and opportunities around emissions and contributes to the reduction of GHG emissions throughout the entire value chain. Consequently, maxon is striving to collect data for further Scope 3 categories, in order to disclose it in future reports. Currently, the categories 1 (partially with purchased water and paper), 5 (disposal partially), and 6 (business flights; not including the production site in Germany because no data was available) are reported.</p>

Responsible business conduct

→ Product quality and safety

GRI 3: Material topics	3-3 Management of material topics	P. 40
GRI 416: Customer Health and Safety (2016)	416-1 Assessment of the health and safety impacts of product and service categories	For the areas of application of maxon products in medical technology, aerospace, and the automotive industry, impacts on health and safety are examined specifically.

→ Business ethics and integrity

GRI 3: Material topics	3-3 Management of material topics	P. 41
GRI 205: Anti-corruption (2016)	205-2 Communication and training about anti-corruption policies and procedures	P. 41
	205-3 Confirmed incidents of corruption and actions taken	No cases of corruption are known from the reporting period.

Standard	Indicator	Reference, comments, and further information
→ Responsible supply chain management		
GRI 3: Material topics	3-3 Management of material topics	- P. 42 - Website: Suppliers
→ Corporate citizenship		
GRI 3: Material topics	3-3 Management of material topics	P. 43
	Sponsorship payments	CHF 715,252

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