



# Sustainability Report 2023

A comprehensive overview of PTW's commitment to environmental responsibility and social stewardship



## Sustainability Management at PTW

Since joining PTW in August 2023 as our dedicated Sustainability Manager, Celestine has been leading our sustainability journey, focusing on establishing a comprehensive understanding of our current sustainability practices. Her role so far involved developing environmental statements, compiling this annual sustainability report, and calculating our CO2 footprint. Furthermore, she is actively working towards PTW obtaining the EMAS certification in 2024 and is preparing for our first CSRD reporting obligation in 2026. The vision also includes the formulation and execution of a roadmap which outlines steps for a substantial reduction in CO2 emissions by 2030.

Underpinning this ambitious agenda is the leadership of General Manager Tobias, who serves as the team lead of the Sustainability Team. In 2024 the Sustainability Team is set to expand, underscoring the growing emphasis on sustainability within the company. Moreover, PTW embraces the philosophy that sustainability is a collective responsibility. In this spirit, every employee of PTW is considered an integral part of the Sustainability Team, as every idea, action, and decision contributes to our collective environmental impact. This inclusive approach fosters a culture of environmental stewardship across the entire organization, ensuring that sustainability is woven into the fabric of everything we do.

PTW Freiburg GmbH

Dr. Tobias Schüle  
Managing Director

Celestine Stihler  
Sustainability Manager

2024-01-22 TS/Stih

# Executive Summary

This sustainability report provides a comprehensive overview of PTW's commitment to environmental responsibility and social stewardship. PTW's endeavor towards carbon dioxide equivalent (CO<sub>2</sub>e) neutrality by 2030 highlights our proactive approach to environmental sustainability, marked by significant efforts in reducing Scope 1 and 2 emissions, promoting green transportation, harnessing renewable energy, and employing innovative building technologies. These measures not only demonstrate PTW's dedication to reducing its ecological footprint but also align with global efforts to mitigate climate change. Additionally, the company's adherence to ISO 13485 and robust risk management processes ensure high standards in product safety and operational efficiency, reaffirming its commitment to quality and environmental responsibility.

In the realm of social responsibility, PTW fosters an inclusive and supportive work environment, with a focus on fair and equal pay, health and wellbeing, and opportunities for continuous learning and development. The company's active involvement in community health initiatives and educational programs like The Dosimetry School extends its impact beyond its immediate business operations, contributing positively to societal wellbeing. Looking ahead, PTW's pursuit of EMAS certification and preparation for CSRD reporting obligations are indicative of its ongoing commitment to sustainable business practices. Through our concerted efforts, we aspire to not only reduce our environmental impact but also inspire and lead by example in the realm of corporate sustainability.

## Introduction

Environmental, Social and Governance (ESG) reporting has become a crucial aspect of corporate transparency and accountability, reflecting an organization's commitment to sustainable development and ethical practices. In today's business landscape, ESG reporting is not just a regulatory requirement but a strategic imperative that enhances stakeholder trust and corporate reputation. It involves a comprehensive disclosure of a company's operations in relation to its environmental impact, social contributions, and governance practices. This form of reporting allows businesses to measure and communicate their performance in critical non-financial areas, providing stakeholders with a clear understanding of the company's values, risks, and opportunities.

In this sustainability report, we present PTW's dedicated efforts in integrating sustainable practices across all aspects of our operations. As a global leader in high-precision dosimetry solutions for radiation therapy, diagnostic imaging, and metrology, we recognize our responsibility to balance operational excellence with environmental stewardship and social responsibility. This report details our comprehensive strategies and initiatives aimed at reducing our environmental impact, upholding high standards of quality and safety, and fostering a supportive and inclusive work environment. Our commitment to these areas not only reflects our core values but also underscores our role as a forward-thinking, responsible organization in the healthcare sector.

# Company Portrait



»As a pioneer in medical radiation measurement, PTW has always been – and will continue to be – at the forefront of advancing patient safety through innovation in a cutting-edge measurement technology.«

Dr. Tobias Schüle, Managing Director

## About PTW

PTW is an internationally operating company, manufacturing specialized dosimetry and quality control equipment for the radiation therapy, diagnostic imaging, and metrology markets. Founded in 1922, the company is located in Freiburg on the western side of the famous Black Forest in southwestern Germany.

PTW specializes in developing, designing, manufacturing, and distributing measuring devices and software solutions for radiation measurement and quality assurance, primarily focused on medical applications. Our products are designed to meet the specific needs of healthcare professionals in ensuring the safety and effectiveness of radiation-based medical procedures.

Since its inception in 1922 by Prof. Dr. Wilhelm Hammer, PTW has been at the forefront of dosimetry innovation,

marking each decade with ground-breaking developments. From the first Hammer Dosimeter in the early 1920s to the microDiamond detector in 2013, PTW's journey has been fueled by the pursuit of technological excellence in radiation medicine. Each milestone reflects not just advancement but a deep-seated commitment to enhancing patient care and safety in medical applications, making PTW a trusted name in the field of medical dosimetry.

After more than 100 years, PTW remains a family-owned and operated business, that has grown to encompass twelve subsidiaries worldwide with a combined workforce of more than 450 employees. We take immense pride in the depth of our production processes at our facilities in Freiburg and Umkirch, Germany, where the dedication to precision and quality reflects our enduring commitment to innovation and excellence in the field of medical dosimetry.



## The Sustainability Team within PTW

In today's rapidly evolving corporate landscape, embedding a sustainability team directly within the organisational chart, under the direct oversight of general management, is not just beneficial but imperative for fostering a culture of sustainable practices. This strategic placement ensures that sustainability is not an afterthought but a core component of decision-making processes, aligning environmental initiatives with

business objectives seamlessly. Moreover, appointing a general manager as the team lead of the sustainability team further emphasizes the organization's commitment to sustainability. It ensures that sustainable practices are championed at the highest levels, facilitating the integration of these principles into every facet of the business.

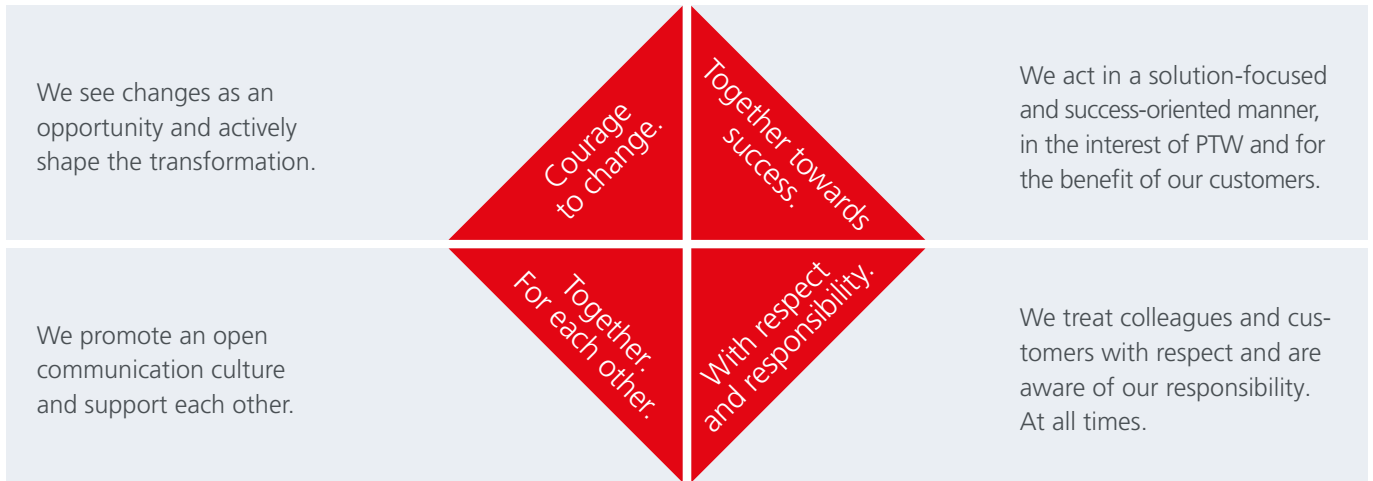
## Our Mission

# Making Radiation Safer.

We strive to advance quality in modern radiation medicine by setting standards in dosimetry.



# Our Values



## Continuous Improvement Process

PTW maintains two fundamental Continuous Improvement Processes (CIPs): the Vertical CIP and the Horizontal CIP. The Vertical CIP involves the leadership defining guidelines for processes, providing necessary resources, monitoring these processes through regular management reviews, and determining corrective actions. The Horizontal CIP ensures

that customer requirements are met through our processes, leading to product and service outputs. Feedback from customers, including satisfaction, complaints, and product observations, leads to the redefinition or improvement of these processes.

## Quality Management and Environmental Standards

PTW is certified under ISO 13485:2016, affirming our commitment to maintaining high standards in medical device manufacturing. Our Quality Management System (QMS) not only fulfils the ISO 13485 standard, focusing on key quality

management aspects but also adheres to ISO 14001 basic principles, highlighting our dedication to effective environmental management. This showcases our balanced focus on quality, safety, and environmental responsibility in our operations.

## Risk Management Process

The executive team at PTW is responsible for allocating resources and qualified personnel to implement and oversee risk management processes. This includes setting risk acceptance criteria and regularly reviewing the suitability

of these processes. Our risk management approach is documented, ensuring systematic and structured handling of potential environmental risks.

## Whistleblower Protection

PTW has established a reporting channel in compliance with the new Whistleblower Protection Act, designed to protect individuals reporting legal violations or serious misconduct. This initiative ensures that employees who learn of such issues in the course of their work can safely report them, with protection against any discrimination for their actions. The portal, managed by an independent party to maintain

neutrality and adhere to data protection laws, allows for anonymous submissions, further securing the confidentiality and safety of whistleblowers. For detailed information or to submit reports, visit the PTW whistleblower portal at:

<https://ptwdosimetry.hinweisgeberportal-mittelstand.de>



# Environmental Responsibility



»Sustainability can mean adopting the latest energy-efficient technologies and turning to renewable sources of power. Yet, equally important to the success of sustainability is a mindset of stewardship where we recognize that the choices we make today can safeguard the future of our planet for generations to come.«

Celestine Stihler, Sustainability Manager

**PTW's commitment to environmental protection encompasses both operational and product-related aspects. To consistently uphold and enhance our environmental standards, PTW is establishing an environmental management system.**

## Analysis of CO<sub>2</sub> Emissions

The analysis CO<sub>2</sub> emissions is a crucial part of our commitment to transparently reporting our ecological footprint and continuously seeking ways to reduce our environmental impact.

**Emissions are categorized into Scope 1, 2, and 3**, which describe the different sources of greenhouse gas emissions within the company, each representing a distinct area of environmental impact. It is important for PTW to analyze these emissions accordingly to identify and manage their environmental impact, comply with regulations, and improve sustainability practices.

**Scope 1 emissions** are direct emissions from sources that are owned or controlled by PTW, such as emissions from heating, cooling and company vehicles.

**Scope 2 emissions** are indirect emissions from the generation of purchased energy consumed by PTW.

**Scope 3 emissions** are all indirect emissions (not included in Scope 2) that occur in the value chain of a company, including both upstream and downstream emissions.

This report focuses on Scope 1 and Scope 2 emissions\* due to their direct association with the company's operations and energy use, which offers clearer data and a more immediate impact on regulatory compliance and sustainability strategies. We plan to analyze our Scope 3 emissions in the near future once we have built the capacity to address their complexity and the challenges with respect to data availability and accuracy.

\*based on 2022 data, including QRM (accounting for about 4% of PTW's energy consumption)



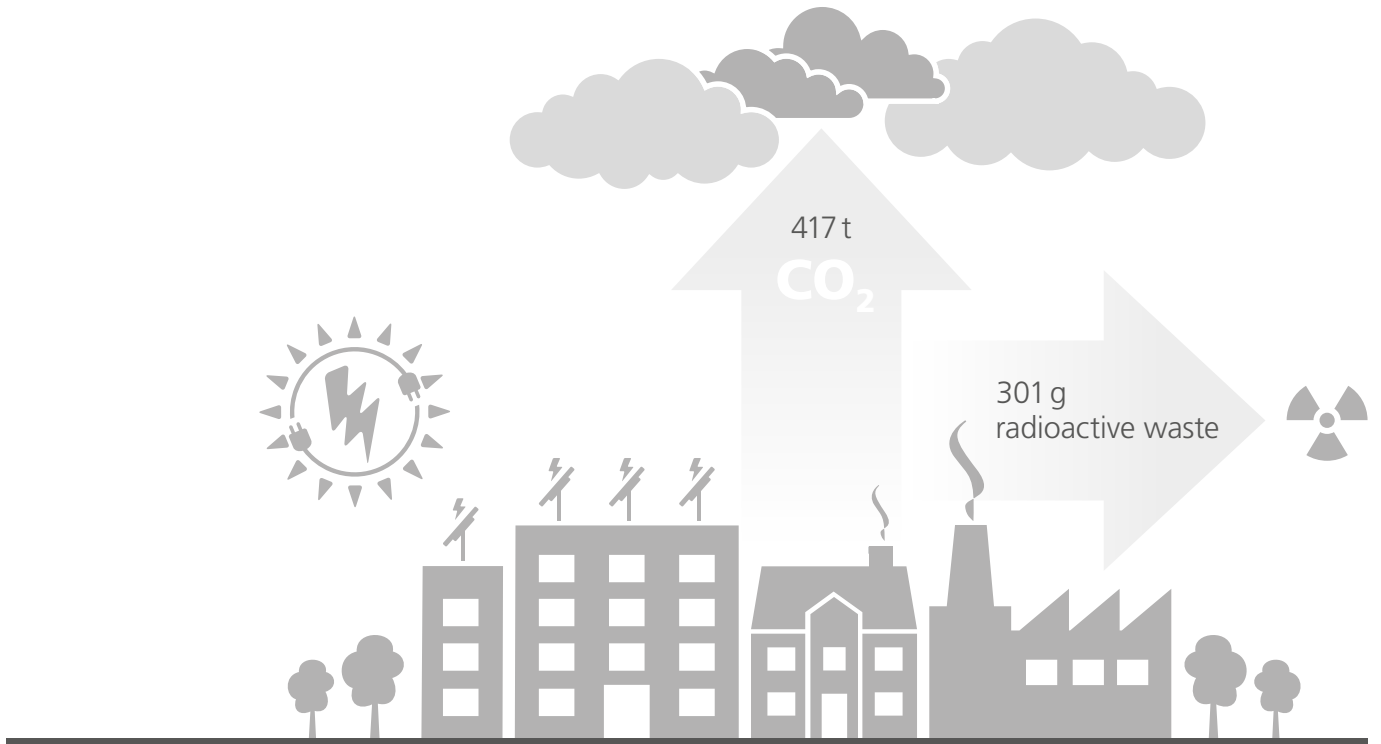


Figure 2: PTW's Scope 1 and 2 Emissions

## Scope 1 Emissions at PTW

Scope 1 emissions encompass all direct emissions from sources that are owned or controlled by PTW. In 2022, these included:

### Heating (Gas):

The gas consumption for heating purposes amounted to 799,054 kWh, leading to emissions of 147 tons of CO<sub>2</sub>e.

### Cooling (Refrigerants):

The usage of 10,00 kg of refrigerants used primarily in our 2022 newly installed air conditioning units resulted in 7 tons of CO<sub>2</sub>e emissions.

### Company Vehicles:

Our company fleet in 2022 consisted of 5 petrol, 8 diesel, 1 hybrid and 4 electric vehicles. In one year, they covered a total distance of 316,537 km, leading to emissions of 41 tons of CO<sub>2</sub>e.

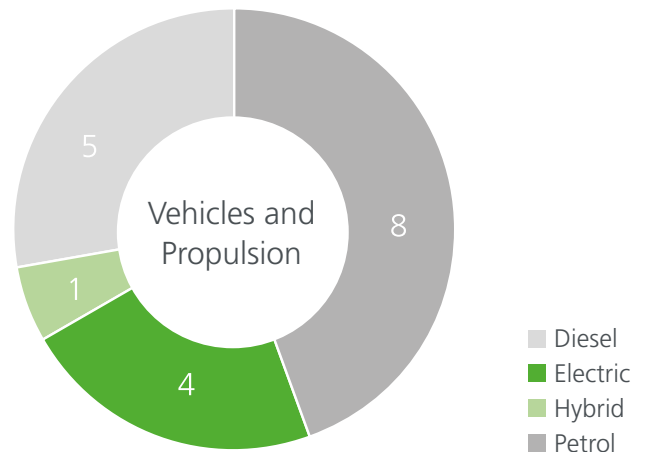


Figure 3: PTW's company fleet (2022)

## Scope 2 Emissions at PTW

Scope 2 refers to indirect emissions from the purchase of electricity, which we use to support our operational activities. In 2022, our purchased electricity consumption was 981,300 kWh, resulting in 223 tons of CO<sub>2</sub>e emissions.

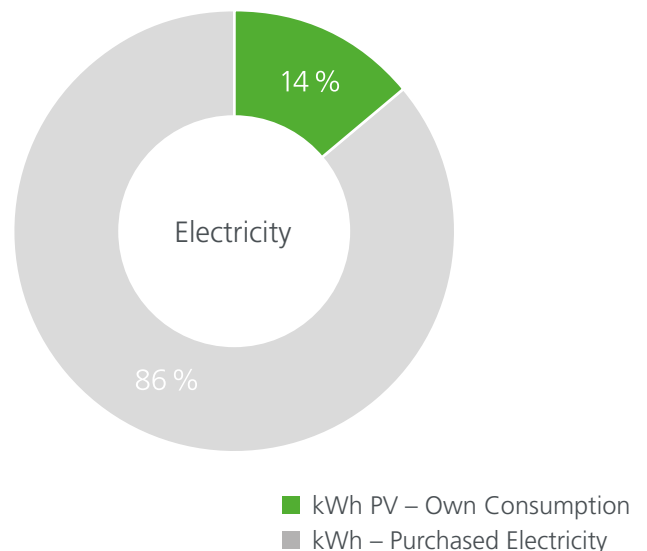


Figure 4: PTW's electricity consumption (2022)

# Total Emissions

In total, PTW's CO<sub>2</sub>e emissions in 2022 amounted to 417 tonnes. This figure not only represents our current standing but also forms the basis for our future endeavors to reduce emissions. Through the implementation of efficiency measures, the utilization of renewable energies, and continuous monitoring of our emissions, we aim to significantly lower this value in the coming years.

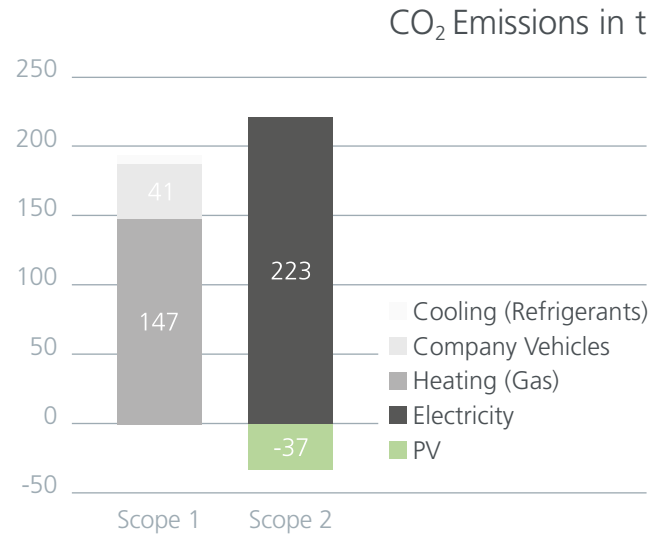


Figure 5: PTW's CO<sub>2</sub> emissions in tonnes. Including the CO<sub>2</sub>e tonnes we were able to save through the operation of our photovoltaic (PV) systems.

# CO<sub>2</sub>e neutrality by 2030

Aiming to achieve CO<sub>2</sub>e neutrality of Scope 1 and Scope 2 emissions in our operations by 2030, reflects our commitment to reducing direct and indirect greenhouse gas emissions. This goal aligns with global climate change mitigation efforts and emphasizes our role in sustainable business practices. By focusing on the most controllable aspects of our carbon footprint, such as energy use and operational emissions, we aim to set a standard in environmental stewardship and meet evolving environmental regulations.

To achieve Scope 1 & 2 CO<sub>2</sub> neutrality by 2030, PTW has initiated a multifaceted strategy focusing on the reduction of Scope 1 and 2 but also Scope 3 emissions. This includes transitioning to renewable energy sources, such as adopting eco-electricity and expanding our photovoltaic systems, alongside implementing a sustainable heating concept. Efficiency improvements are also key, as is promoting the use of electric vehicles. PTW also plans to invest in CO<sub>2</sub> compensation projects for emissions that are currently unavoidable.

# Green Transportation Initiative

In a move to reduce our carbon footprint, PTW promotes sustainable mobility for our employees. In 2023, all additions to our company fleet have been fully electric or hybrid vehicles. These vehicles can be charged at our in-house charging stations, which in turn are powered by our photovoltaic modules. Furthermore, PTW offers its employees the 'Regiokarte Job' (discounted regional public transportation ticket) and the 'Deutschlandticket' (nationwide public transportation ticket), making public

transportation more accessible and appealing for our team. In addition, we recently adopted the 'Jobrad' program, offering employees bicycle leasing options and thus encouraging them to choose environmentally friendly bicycles and e-bikes for their commute. To further support this, we have installed charging stations for e-bikes and e-scooters, facilitating a shift towards cleaner transportation options. Biking not only benefits the environment but also supports employee well-being.

# Renewable Energy and Energy Efficiency

PTW harnesses the power of the sun. On the roofs of our buildings, we have photovoltaic (PV) systems installed with a total power of 230 kWp. This is enough potential energy to cover about 25 % of PTW's electricity needs – equivalent to continuously powering roughly 55 four-person households. Since 2014, our photovoltaic systems have generated a total of 1.125 MWh of solar energy, saving 501 tons of CO<sub>2</sub>e emissions.

In 2022 the system generated 249.191.02 kWh of electricity. Of the total energy generated, 85,748.80 kWh was fed into the grid, contributing to the wider community's sustainable energy needs. The self-consumption stood at 163.442.22 kWh, significantly reducing our reliance on non-renewable energy sources. Our PV system led to a reduction of 37 tons of CO<sub>2</sub>e emissions, underlining its role in our carbon footprint reduction efforts.



Figure 6: Photovoltaic systems installed on the roofs of our headquarters in Freiburg

## Innovative Building Technology

Our commitment to the environment is integrated into our building designs. Our mechanical manufacturing facilities in Umkirch stand as a testament to our commitment to sustainability. From the planning phase to construction, environmental

efficiency was the cornerstone. The used air from machinery is recycled and used to heat the building. The rooftops of several buildings are equipped with photovoltaic modules, contributing significantly to our energy generation and efficiency.

## Product-Related Environmental Protection

Product development at PTW prioritizes sustainable design, emphasizing recyclability and minimizing the use of hazardous substances. By adhering to RoHS (Restriction of Hazardous Substances) and REACH (Registration, Evaluation, Authorization,

and Restriction of Chemicals) standards, as well as WEEE (Waste Electrical and Electronic Equipment), we ensure our products and processes meet high environmental and safety criteria.

## Waste Management and Recycling

In our production facilities, we diligently collect and dispose of various recyclables and hazardous materials separately. The metal shavings generated from milling and turning processes are collected and reintroduced into the raw material market, demonstrating our commitment to resource efficiency and circular economy. Additionally, our use of environmentally friendly coolants further reduces our environmental impact.

In our offices, we collect “mixed packaging” materials, plastic, wood, metal, and paper, outsourcing the separation and recycling of these materials to a specialized service provider.

Our partnership with Freiburg Waste Management and City Cleaning (ASF) ensures that mixed waste is processed efficiently at their recycling center. This approach ensures that, despite not separating these materials in-house, they are still properly sorted and recycled.

This efficient waste management system reflects our ongoing commitment to environmental stewardship, yet there is always room for improvement. We are continually exploring opportunities to enhance our waste reduction and recycling processes.

# Social Responsibility



»We love what we do! At PTW, we all work hand in hand not only to deliver outstanding products and services, but also to create a working environment in which every employee feels comfortable – regardless of origin or identity.«

Matthias Becker, Director Human Resources

## Own Workforce

### Work Environment

At PTW we believe in the benefits of a culture of informality, as evident in the use of first-name terms and flat hierarchies, promoting a more open, collaborative, and inclusive work environment. We place great emphasis on equality and tolerance. The respectful and inclusive treatment extends to our senior colleagues as well, evidenced by frequent anniversaries where employees are celebrating 20, 30, or even 40 years at PTW. Additionally, we invest in the training of our leadership team. Together, they developed guiding principles

that embody our vision of leadership at PTW, emphasizing role-modelling, effective communication, and team collaboration. The focus lies on the personal and professional development of employees, the continuous improvement of processes, and on making informed, responsible decisions. These principles foster an entrepreneurial mindset among leaders, ensuring the company's success and sustainability through solution-oriented actions and a commitment to the collective vision.

### Fair & Equal Pay

At PTW, we firmly believe in fair and equal pay for all our employees, which is why we strictly adhere to tariff-based compensation. This approach ensures that our payment structure is transparent, equitable, and consistent, eliminating

any biases or disparities in wages. By aligning our pay practices with established tariff agreements, we guarantee that compensation is based on the position, experience, and qualifications, rather than subjective factors.

## Health & Wellbeing

At PTW, the health and wellbeing of our employees are of utmost importance. We partner with our neighboring BZ-canteen, ensuring that our staff have access to healthy, nutritious food during their workday, subsidized by PTW. For breaks, and in order to promote casual interaction and relaxation, each department is furnished with a tea kitchen, and we also offer equipped outdoor seating areas with umbrellas and benches. Our office spaces are air-conditioned for comfort, creating a conducive working environment even during Freiburg's hot and sunny summer days. We also provide water (cold, sparkling, still) dispensers for hydration. Our commitment extends to ergonomic workstations,

ensuring a healthy and comfortable working posture. Through our partnership with Hansefit, we offer our employees affordable access to a variety of fitness and wellness programs, promoting physical health and stress reduction. We prioritize a positive work atmosphere, supported by regular feedback conversations that contribute to employee satisfaction and engagement. In addition, we support preventive health measures such as a biannual colorectal cancer screening with PTW covering all associated costs for our staff members. These initiatives collectively create a workplace that not only cares for the immediate needs of our employees but also invests in their long-term health and wellbeing.

## Identification & Collaboration

PTW places great importance on fostering a strong sense of identity and collaboration among our team members. To encourage this, we provide subsidies for departmental outings, recognizing the value of team bonding experiences outside the workplace. Additionally, we organize an annual company outing, which every second year extends an invitation to employees' families, strengthening the sense of community

and belonging. Our digital bulletin board serves as a hub for information and interaction, enhancing internal communication and engagement. Furthermore, we support team events such as the participation in the Freiburg Marathon or B2Run, with PTW covering the entry fees, promoting teamwork and a healthy, active lifestyle among our staff.



Figure 7: PTW's B2Run team in front of the Europa Park Stadium in Freiburg

## Work-Life Balance

In our commitment to balancing family and career, PTW has implemented several key initiatives to support our employees. We offer flexible working hours and the option for remote work, recognizing the diverse needs of our workforce. Our flexible working model is designed to accommodate various

life situations, enabling our employees to maintain a healthy work-life balance. Additionally, we provide reserved day-care spots and subsidies towards childcare costs, easing the burden for working parents and demonstrating our dedication to supporting our staff in both their professional and personal lives.

## Continued Learning and Personal Development

PTW places a high priority on continuous learning and personal development, offering extensive training opportunities. We are committed to supporting each employee's growth, provided it aligns with their job responsibilities and the likelihood of applying the newly acquired skills within

the company. Our international employees are offered the opportunity to attend German language courses tailored to their individual language skills and learning. This initiative not only enhances skillsets but also fosters an inclusive and supportive workplace environment.

# Education

Education is a key pillar of social sustainability as it empowers individuals with knowledge, skills, and critical thinking abilities, leading to improved quality of life, economic opportunities, and societal advancement. PTW's initiatives like The Dosimetry School, the support for SCMPCR's e-learning program in Bangladesh, and the Dietrich Harder Master's Thesis Award,

collectively invest in human capital, encourage knowledge exchange, and nurture professional development in medical physics. By encouraging learning and development, education contributes to building resilient communities, reducing inequalities, and promoting a more equitable and sustainable society.

## The Dosimetry School

The Dosimetry School, launched by PTW in January 2014, is an educational initiative focused on clinical dosimetry, offering its courses at cost price, ensuring accessibility for a broad audience. This program, leveraging the extensive expertise of the world's oldest dosimetry company, combines scientific theory with practical skills, tailored to the evolving needs of the medical physics community. Embodying its ethos of "Sharing knowledge, inspiring practice", the Dosimetry School not only facilitates a diverse range of training

opportunities but also establishes a global forum for professionals to exchange ideas, engage in meaningful discussions, and build a network of expertise, significantly contributing to the advancement of the field and the broader scientific community. Its commitment to professional development and education, without the aim of profit, aligns with the principles of social sustainability, enhancing skills crucial for healthcare improvement and benefiting the wider society and health sector.



Figure 8: Tino Ebnetz, Head of the PTW Dosimetry School

## PTW: Medical Physics Education made in Bangladesh

Bringing medical physics knowledge to the region of South Asia and out into the whole world: this is the mission of the South Asia Centre for Medical Physics and Cancer Research (SCMPCR) in Bangladesh. SCMPCR does not receive any funding from the state, which is why the support of companies such as PTW is vital. Since 2020 the proceeds from our fundraising efforts through our Black Forest Calendar sales

were used to fund training and educational activities such as e-learning and on-site workshops. This initiative contributed to SCMPCR's development of an extensive e-learning program, a response to the challenges posed by the COVID-19 pandemic. The program successfully reached medical physicists not only in South Asia but also from Europe, Africa, and South America, with an overwhelming response and interest in the training offered.

## Dietrich Harder Master's Thesis Award

The Dietrich Harder Master's Thesis Award is a prestigious recognition traditionally presented at the Annual Meeting of the German Society for Medical Physics (DGMP). Sponsored by PTW since 2016, this award, endowed with 1,000 Euros, honors the exceptional scientific contributions of master's

graduates in the field of medical radiation physics. By fostering academic excellence and recognizing emerging talents in medical physics, the Dietrich Harder Master's Thesis Award is a testimony of PTW's commitment to education, skill development, and the empowerment of young scientists.



Figure 9: From left to right: Mark E. Ladd, Yuri Simeonov, Brigitte Harder, Ute Behrend, Björn Poppe, Dominik Ceska;  
Photo credit: Conventus Congressmanagement & Marketing GmbH

## Patient Care

### Tour de RON

In 2023 Professor M. Heinrich Seegenschmiedt and his son Johannes once again embarked on a 1,780 km journey across Germany for the TOUR DE RON 2023. During their charity tour, they visited radiotherapy practices of the Radio Onkologie

Netzwerk - Ergéa Group (RON) and other supporters to collect donations for psycho-social cancer aftercare - a cause that PTW is honored to support as part of our dedication to social responsibility, community health and patient care.



Figure 10: Professor M. Heinrich Seegenschmiedt (second from right) sets off on charity cycle ride TOUR DE RON from Freiburg to Essen on 23 August 2023.



# Conclusion

PTW's commitment to environmental and social responsibility is evident in our comprehensive approach to sustainable practices. Our efforts in analyzing and reducing CO<sub>2</sub> emissions, with a clear goal of achieving CO<sub>2</sub>e neutrality by 2030 (Scope 1 & 2), demonstrate a proactive stance in addressing climate change challenges. Initiatives like the Green Transportation Initiative and the adoption of renewable energy sources underscore PTW's dedication to reducing its environmental footprint.

PTW's adherence to stringent environmental and quality standards, including ISO certifications, reflects its commitment to maintaining high operational standards while minimizing our ecological impact. Our investments in sustainable building technologies and efficient waste management practices further

highlight PTW's commitment to environmental protection. Additionally, PTW places significant emphasis on social responsibility, with initiatives aimed at creating a supportive and equitable work environment, promoting health and wellbeing, and fostering continuous learning and personal development. Our active involvement in educational and community health initiatives extends our impact beyond our immediate operations, contributing to societal wellbeing.

Through stringent compliance, robust risk management, and an ingrained culture of continuous improvement, PTW is not only fulfilling its current environmental responsibilities but is also paving the way for an even more sustainable and resilient future.

PTW Freiburg GmbH  
Lörracher Str. 7  
79115 Freiburg · Germany  
Phone +49 761 49055-0  
Fax +49 761 49055-70  
info@ptwdosimetry.com

[ptwdosimetry.com](http://ptwdosimetry.com)

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D425.210.01/00 2024-02

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