

Sustainability Report 2022

KNAUER Wissenschaftliche Geräte GmbH

Period: January 2022-December 2022



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CONTACT

Do you have any questions or suggestions?

Please write to:

quality@knauer.net

Welcome to KNAUER Sustainability!

KNAUER is concerned about the changes in the world (marine pollution, climate change, species extinction...) and feels responsible for the environmental impact of the company's business activities. Our policy is to keep the environmental impact as low as reasonable and possible for us.



KNAUER signed the commitment letter in February 2018 (Figure 1) and is guided by the ten principles of the Global Compact. Every summer, KNAUER prepares a "Communication on Progress" report, submits it to Global Compact. It is freely accessible there¹, as well as on the KNAUER website².

The UN Global Compact is the world's largest and most important initiative for responsible corporate governance, involving more than 12,800 companies and organizations from more than 160 countries, including 454 from Germany. The vision of this initiative, led by the United Nations, is a sustainable and inclusive global economy based on ten universal principles, including human rights, labor standards, environmental protection and corruption prevention.

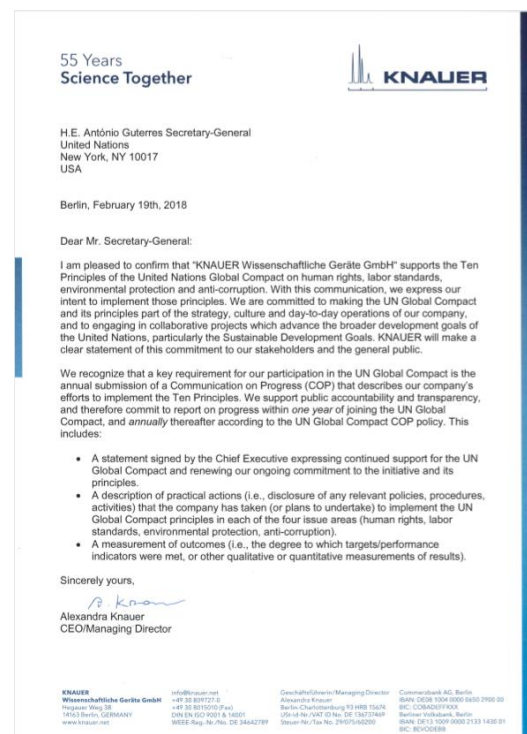


FIGURE 1: Declaration of affiliation Feb. 19th, 2018

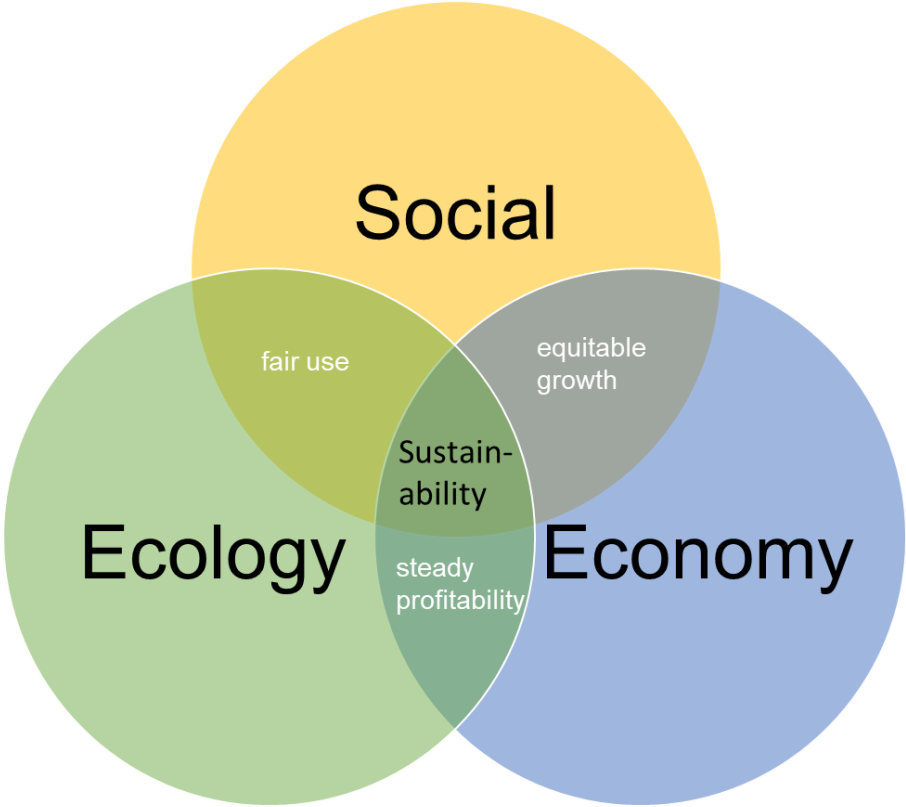
We still with vigour support the SDG Nr. 3 GOOD HEALTH AND WELL-BEING, by being part of the vaccine production against the corona disease. This year the focus was on the KNAUER Nano-Scaler, the system for optimization and development of lipid nanoparticle formulations³. With every KNAUER system we contribute to a better health care development concerning vaccine productions.

¹<https://www.unglobalcompact.org/search?utf8=%E2%9C%93&search%5Btype%5D=all&search%5Bkeywords%5D=knauer>

²<https://www.knauer.net/de/KNAUER/Soziale-Verantwortung#GC>

³https://www.knauer.net/Application/application_notes/VPH0076_Development_and_Optimization_of_LNP.pdf

The KNAUER sustainability is divided in three sections which are all interdependent. In the following report the events and actions are sorted after social, ecological and economic sustainability.



Social Sustainability

Summary: Social sustainability is about people! Our goal is to enable all people along our supply chain to live and work in dignity. KNAUER understands its social responsibility, is a signatory of the "Diversity Charter" and a training company. Events and theme days such as "Equal Pay Day" and "Diversity Day" are fixed components of our CSR activities (Corporate Social Responsibility).

Supplier reviews

For years, KNAUER has preferred to purchase the materials regionally. In doing so, we consciously ensure that the majority of deliveries come from Germany and, in the best case, from Berlin (in 2022: 75 % by value). Compared to 2020 we increased the number by 3 % overall. A smaller proportion of purchases is made in the EU (18 % by value). At 7 % of deliveries, the proportion of purchases that cannot be procured in the EU and come from third countries such as Switzerland or the USA. In this way, we reduce the likelihood of forced labor, child labor and human rights violations in our supply chain. Figure 2 shows the suppliers with the biggest contribution at KNAUER.

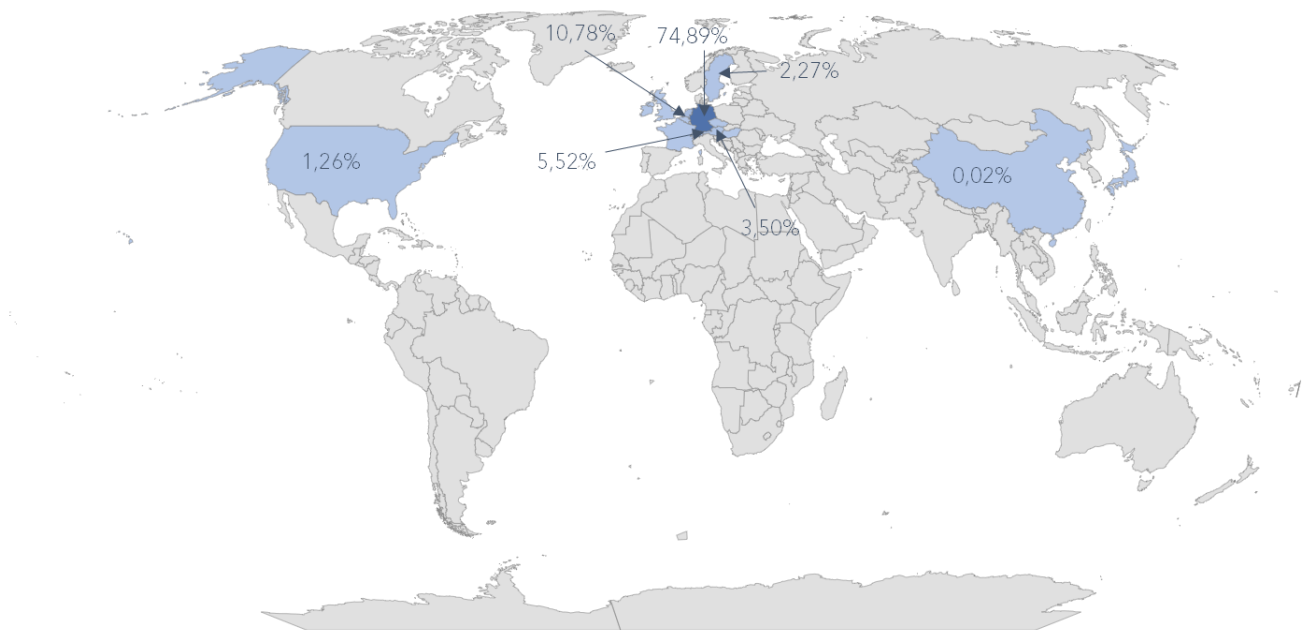


FIGURE 2: KNAUER WORLDWIDE SUPPLIER MANAGMENT

Gender Equality



FIGURE 3: ALEXANDRA KNAUER AND KATHARINA POHL PRESENTING THE PAY GAP

As SDG Nr. 5 ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS we believe in equal opportunities and fair compensation for all our employees, regardless of their gender. We are happy to see that our efforts towards closing the gender pay gap have been successful and that women at our company are being rewarded for their hardwork and dedication. We strive towards a 0% gender pay gap and don't fall into a "reverse discrimination" situation. We will continue to strive for gender equality in all aspects of our business and to foster a culture of diversity and inclusion. ⁴

Girls Day 28.04.2022

A concept that is urgently needed: Despite better school-leaving qualifications, girls still disproportionately often decide for occupational fields or fields of study in which there is a very high proportion of women. Apprenticeship statistics also show every year that almost half of girls choose just three apprenticeships: Office clerk, retail saleswoman and hairdresser. With this yearly event KNAUER encourage young people to make their first experiences in a scientific working area. Over the day, the kids learn how an HPLC system works, they are allowed to experiment



FIGURE 4: EXPERIMENTS ON 2022 GIRLS DAY

on their own and thus strengthen their self-confidence and trust in their own abilities. KNAUER support the SDG Nr. 5 to achieve gender equality and empower all women and girls with this event.

Diversity Charter 23.05.2022

Over 4.900 companies and institutions already signed the "Charta der Vielfalt" for committing, appreciating and prejudice-free working environment. The association thus represents 14.7 million employees in Germany. KNAUER celebrates the diversity of the employees every year and creates awareness.



⁴https://www.linkedin.com/posts/knauer_women-hardwork-diversity-activity-7019593045973073920-nl5V?utm_source=share&utm_medium=member_desktop

Donation

We showed solidarity with the people in the Ukraine by donating 50.000 € (13.450 € from the employees and 36.550 € from the Managing Direction). The money was donated to the “Aktion Deutschland hilft” and “Ukraine-Hilfe-Berlin e.V.”.⁵



FIGURE 5: [SOURCE](#)

Retirement provision

We at KNAUER value our employees. As of this year we firstly established a retirement pension. The purpose is to contribute to securing the livelihoods in old age and to promote the loyalty and motivation of the employees. KNAUER decided to make a contribution to deferred compensation that goes beyond the legal requirements in order to help compensate for possible pension gaps.

Go Green Ghana

Farmer Managed Natural Regeneration (FMNR) is a reforestation technique and was discovered by Australian agricultural economist Tony Rinaudo and developed in West Africa in the 1980s and 1990s. It is practiced in Niger, Chad, Burkina Faso, Ethiopia, Kenya, and Mali, among other countries. The technique is simple, inexpensive, and has the potential to re-green entire regions and also improve the standard of living of the population. In 2022 KNAUER supports this mission by donating money and the attendance of lectures. We are proud to contribute to this project and also by supporting the SDG Nr. 15 “Life on Land” by this.



FIGURE 6: LAUNCH FOR PROJECT CONTRIBUTION

⁵<https://www.knauer.net/de/ukrainehilfe-engagement-des-berliner-unternehmens-knauer-ladt-zum-nachahmen-ein/n42644>

Ecological Sustainability

Summary: Our policy is to keep a burden on the environment as low as possible and feasible for us. It is our concern to contribute to an improvement of the environmental situation. We are concerned about climate change, dwindling biodiversity and, for example, the pollution of the oceans. The most extensive reduction of CO₂ emissions ("reduction of emissions according to the 1.5 °C path") and of the resulting waste ("no waste") as well as the avoidance of environmentally hazardous substances and hazardous materials, are part of the core of our efforts.

CO₂ Emission

The basis for an efficient climate protection strategy is the precise calculation of the CO₂ emissions and a precise understanding of the various emission sources. Because what is not recorded, localized and measured, will not be able to steer.

Scope 1 emissions are emissions from sources for which KNAUER is directly responsible or in control. These include emissions from energy sources at your site, such as natural gas and fuels for example.

Scope 2 emissions are indirect greenhouse gas emissions from purchased energy, such as electricity, steam, district heating or cooling, that is generated outside the KNAUER system boundaries but consumed by it.

Scope 3 includes all indirect emissions that occur along your value chain which can be described as emissions as "the result of activities from facilities that KNAUER does not own or control, but directly impacts those activities within its own value chain." The following tables and figures show the different scopes and their emissions for the year 2022.

Scope 1	t CO ₂ e	Share	t CO ₂ e	Share
Heating oil	91,50	69,72%	91,50	69,72%
Fleet (Diesel)	39,56	30,15%	39,56	30,15%
Rental cars (Benzin)	0,17	0,13%	0,17	0,13%
Emissionen Scope1	<u>131,23</u>	<u>100,0%</u>	<u>131,23</u>	<u>41,4%</u>

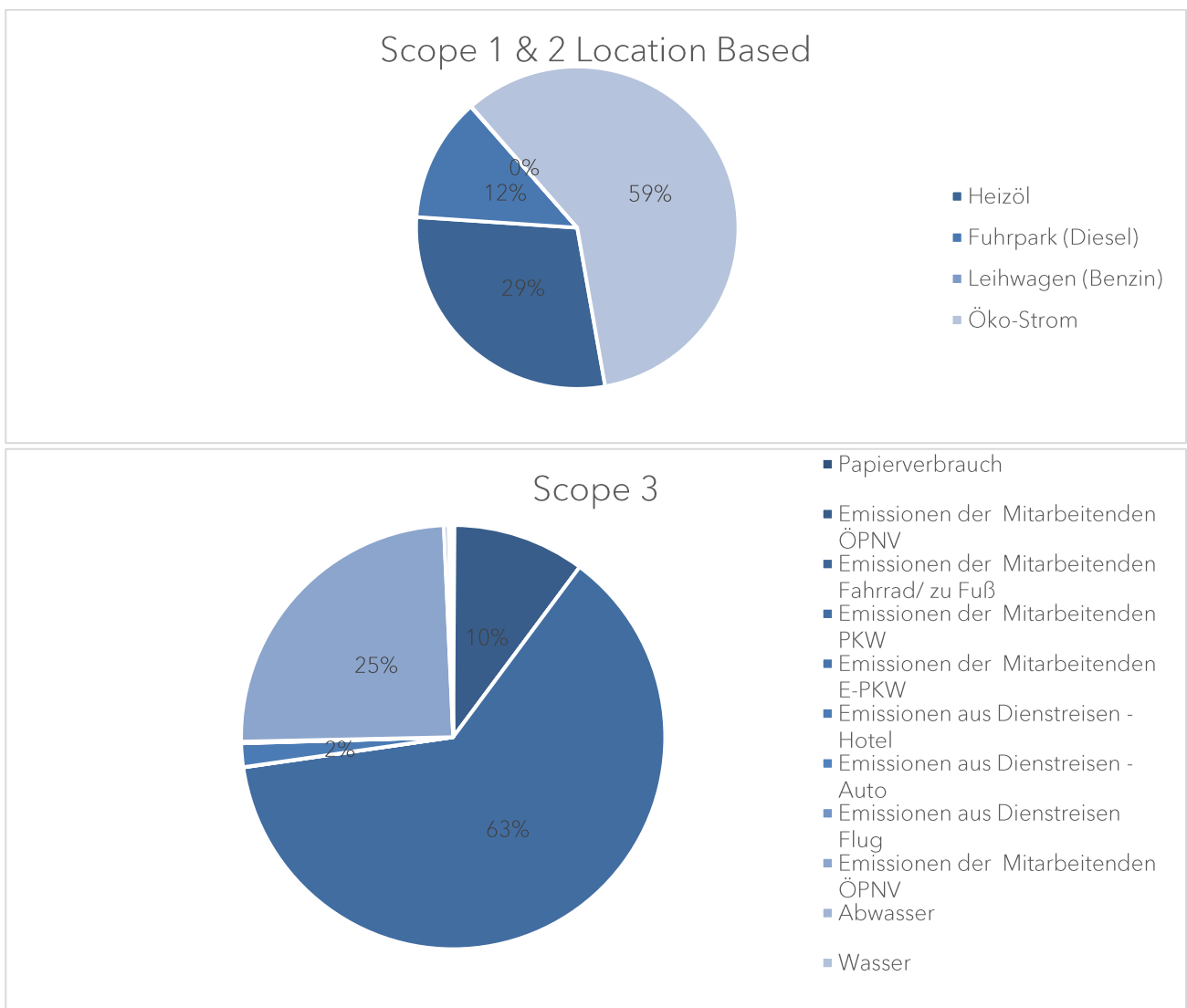
Scope 2	Market Based		Location Based	
	t CO ₂ e	Share	t CO ₂ e	Share
Eco power	0,00	100,00%	186,14	100,00%
Emissionen Scope 2	<u>0,00</u>	<u>0,00%</u>	<u>186,14</u>	<u>58,65%</u>

Emissionen Scope 1+2 **131,23 t CO₂e** **317,37 t CO₂e**

Scope 3	t CO ₂ e	Share
Paper consumption	0,22	0,10%
Emissions of employees Public transport	21,17	10,08%
Employee emissions Bicycle/walking	0,00	0,00%
Employee car emissions	131,41	62,54%
Employee e-car emissions	0,05	0,02%
Emissions from business trips - hotel	3,77	1,79%
Emissions from business trips - car	0,06	0,03%
Emissions from business trips - flight	0,22	0,10%
Emissions from employee business trips - public transport	51,76	24,63%
Waste water	0,76	0,36%
Water	0,32	0,15%
Paper waste	0,19	0,09%
Residual waste/bulk waste/construction waste	0,20	0,09%
Hazardous waste		

Emissionen Scope 3

210,124 t CO₂e



Packaging impact

18.9 million tons of packaging waste was generated in Germany in 2018, according to the Federal Environment Agency (UBA). The leaders are paper waste and plastic. 87.7 percent of paper and cardboard was recycled, while only half of plastic was recycled. At KNAUER over 50% of the packaging is paper and cardboard. The other 50 % is composed of plastics 15% and other materials such as wood for the pallet transportation 33%. In 2022 a few projects for reducing the packaging impact were started at KNAUER. One project is to completely be plastic free with the KNAUER supplementary packs or the overall reduce of packaging materials. These project are defined as annual projects for 2023.

Material	Consumption	Share
Plastic	2829,3 kg	15,2 %
Other	6158,7 kg	33,0%
Paper/Cardboard	9592,3 kg	51,4%
Composite material	80,5 kg	0,4%
	18.660,81 kg	

My Green Lab

The My Green Lab (MGL) non-profit organization is improving the sustainability of scientific research. The organisation mainly focused on laboratories, due to the high energy consumption that is made in these working places. For an example laboratories use 10 times more energy and 4 times more water than offices spaces. Over the years, MGL rolled out several programs to improve sustainability.⁶ For example the so called “ACT Label” is made to reduce the environmental impact through smarter purchases (label seen in Figure 7). This is made by **A**ccountability, **C**onsistency, and **T**ransparency around manufacturing, energy and water use, packaging, and end-of life. In 2022, KNAUER signed the ACT Label Certification Proposal for two analytical systems to inform the customers more transparent and independent.



FIGURE 7: EXAMPLE OF AN ACT LABEL FOR LAB PRODUCTS

⁶ <https://www.mygreenlab.org/about.html>

Climate Actions at KNAUER

ORCA - Organization for Rapid Climate Action

KNAUER has been recognized as a project partner with ORCA. This certificate acknowledges our commitment to understanding the climate change potential of our company, developing a comprehensive climate protection plan, and implementing it effectively. Being a part of this project means that we are taking an active role in addressing the urgent issue of climate change, and we're proud of the steps we're taking to reduce our carbon footprint and promote sustainability. We believe that as a company, it's important to lead by example and we're excited to continue our work with ORCA to make a real difference.⁷



FIGURE 8: ORCA CERTIFICATE

Mobility Survey

A mobility survey was made in 2022 as part of the annual projects "Expansion to Scope 3 and first reduction projects are defined" and "We produce climate neutral in 2025 and are known for our diverse commitment to sustainability". A report was made and showed that a positive trend was noted towards the data in 2017. The use of less combustion engines and increase of electromobility as well as bikes/public transports. The overall km driven by the KNAUER employees shows Figure 9. The report can be seen here [Mobility Survey 2022](#).

From this survey, actions for 2023 were made. For example the increase of charging station at KNAUER, or the purchase of company bikes is now pursued.

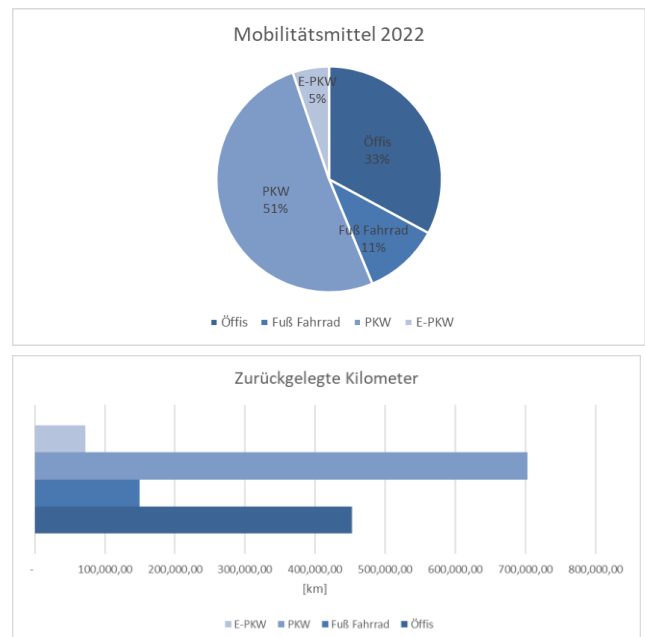


FIGURE 9: MOBILITY USE AT KNAUER 2022

⁷ https://www.linkedin.com/posts/knauer_orca-climate-protection-activity-7021051988683444225-Jto?utm_source=share&utm_medium=member_desktop

The KNAUER Garden

The ecologically managed and award-winning company garden is an oasis for bees (since 2018) and other insects. The garden was awarded the special prize "Biodiversity" in the competition "Berlin's most beautiful company garden" ⁸. In 2021, for the first time, there are 2 bee colonies on the property. Not only that: the near-natural



FIGURE 10 KNAUER GARDEN

and extensive organic garden on the company's property is a place where



FIGURE 1 Hive

people, plants and animals feel at home. No use of pesticides or insecticides and only selective intervention. We see the garden as a model for a sustainable circular economy and are committed to reusing a greater proportion of materials wherever possible in the

future. In new plantings, preference is given to both insect-friendly plants and plants with higher resistance to heat and drought.

KNAUER Sustainable Week

In October 2022 we again celebrated the sustainable week with a presentation from My Green lab, a cooking course and sustainable updates from different departments such as Sales, R&D and Marketing. The week is yearly repeated with different topics to create awareness for sustainability. To all pleasure our subsidiary company moduvision was also present at KNAUER during that event. Additional this week was used to make a survey about the mobility of the KNAUER employees. The results were already mentioned above in the report section "Mobility Survey". ⁹



FIGURE 11: LOGO AND COOKING CLASS FROM THE SUSTAINABILITY WEEK

⁸<https://www.ihk.de/blueprint/servlet/resource/blob/3735946/157c3518e0ccfe346787f1f64bad492f/naturschutz-broschuere-firmengaerten-2016-data.pdf>

⁹https://www.linkedin.com/posts/knauer_nachhaltigkeitswoche-nachhaltigkeit-thinklc-activity-6983421639401029632-q10J?utm_source=share&utm_medium=member_desktop

Clean Energy

KNAUER has been using green electricity (water, wind, sun) for several years. In addition, the company's own photovoltaic system contributes to the production of green electricity. The motivation to change not only the energy source of the company but also the energy source of all employees to green energy was a topic in 2021/22. For this reason, a presentation by Simone Schütz from Greenplanet Energy was held in 2021 to inform employees about good energy alternatives. In 2022 KNAUER provided each employee with 50€ to change their current electricity provider to a greener version.



FIGURE 12: EXAMPLE FOR GREEN ENERGY: WIND/SOLAR POWER [SOURCE](#)

Spectaris Sustainability in Labs- Best -Practice Company Example

The importance of the topic of sustainability in the laboratory is increasing, even if the path to a sustainable laboratory is a long journey with many stages and quite a few hurdles. We at KNAUER are proud to be part of the 2022 sustainability lab report from the industry association Spectaris. In this report, KNAUER was named as a best practice example company.¹⁰ With this article presence we give impulses for other companies and can expand our sustainability projects with partners of interest.



Stadtradeln



Rediscover the city, do something for your health and protect the climate at the same time: That is the idea behind STADTRADELN. In June 2022, the campaign entered its sixth round in Berlin. This time, 19,539 Berliners got on their bikes for a climate-friendly Berlin - more than ever before. With a total of 4,325,861 kilometres, they cycled together around 108 times in just 21 days, avoiding 666 tonnes of CO₂. A new record for Berlin - and a strong signal for climate protection and more cycling.¹¹ KNAUER contributed 4.170,0 km and was therefore on place 220 with the prevention of 642,2 kg CO₂.

¹⁰ <https://www.spectaris.de/analysen-und-labortechnik/zahlen-fakten-und-publikationen/>

¹¹ <https://www.berlin.de/sen/uvk/verkehr/verkehrsplanung/radverkehr/radprojekte/stadtradeln/>

Economic Sustainability

Summary: KNAUER is convinced that economic activity will no longer be separable from ecological and social aspects in the future. Economic sustainability and frugality help to limit the negative impact on the environment and society. KNAUER is committed to sustainable investment, considerate use of resources, sustainable supplier management and regional purchasing.

Expansion

As an example for KNAUERs sustainable economic approach, a contract was signed on the 13th of June 2022, for the acquisition of the company moduvision. Moduvision is an expert of lab automatization based in Vlissingen Netherland. As a subsidiary now, both parties will expect advantages in knowledge transfer as well as economic growth by opening up new customer groups.



FIGURE 13: TEAM MODUVISION (GERDA VAN DE BEEK, JAN WILLEM MOL) AND THE KNAUER MANAGING DIRECTORS (ALEXANDRA KNAUER, CARSTEN LOSCH) AT THE ANALYTICA TRADEFAIR IN MUNICH, 2022¹²

¹²<https://www.knauer.net/de/good-news-knauer-wissenschaftliche-geraete-geht-partnerschaft-mit-moduvision-ein/n43041>

Certification



Economic sustainability means using strategic approaches. We at KNAUER are certified after ISO 9001/14001. This is regularly reviewed by an independent certification body in addition to our internal reviews. With this continuous monitoring we ensure to optimize our processes on bases of sustainability and effectiveness.¹³

Repair & Sale



At KNAUER we try to repair our system as long as possible instead of completely exchange it for a new one. We have processes established where old systems from customers are refurbished or used as spare parts. We are pro long-term use of the systems, a good example is a customer who uses its functioning Well Chrom K-120 pump for about 12 years now.¹⁴

¹³ <https://www.knauer.net/de/KNAUER/Qualitaet-Zertifikate>

¹⁴ Reference: Customer Support KNAUER, eWay File 22137

Outlook

The year 2022 had many sustainable focuses. In 2023, many of these projects will be continued and improved, especially the reduction of packaging materials. The company KNAUER cares about Planet Earth and is committed to combining social, environmental and economic aspects in order to create a future worth living for the people of the world. Creating awareness and acting sustainably together.

KNAUER Science and Sustainability with Passion.