



SUSTAINABILITY REPORT

» Issue 2021/2022

zedler-Gruppe
Technology and Passion for Bicycles

PREFACE



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May 2022



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November 2022

Resilience through sustainability

Dear Readers,

Hardly any snow in the mountains, dry rivers, weather chaos: Never before has it been so evident as this winter that the climate is changing dramatically, even in our country. Today, hardly anyone should dare to deny that it is high time to question our cherished behaviour patterns and see if there is a better, more sustainable way.

There are citizens as well as entrepreneurs who bring forward that there are economic reasons that speak against change. "Every euro can only be spent once" or "It doesn't pay off" are phrases that we often hear.

This report is to refute these arguments. Precisely because we are so sustainable, we have mastered the past months with an excellent performance.

The energy crisis provoked by the unspeakable war against Ukraine has made clear how fragile our system is and how dangerous dependencies are. Rising energy costs have caused inflation that brings continuing concern to many citizens, even in wealthy Europe.

For our group the past three years have not been easy either. As the hidden champion of a globally positioned industry whose production is mainly located in Asia, it was sometimes very quiet in the laboratories and the just-in-time deliveries of operating instructions to the assembly lines of the bicycle and e-bike manufacturers occasionally came to a forced standstill.

In spite of all this, thanks to **complete independence from fossil fuels**, almost **40 % of self-generated electricity**, around half of the domestic water from the roof and **the recovery of process heat** for heating **2022 was the best year in the company's history**.

One "trick" in this connection: for example, we were not forced to raise the prices for our testing services and expert's reports.

In the years from 2018 to 2020, based on the measured values and compared to the electricity costs at the time we had predicted the amortisation of the **photovoltaic system** with **65 kWp (kilowatt peak)** to be 7 years and 3 months. Due to the current electricity prices, the system is paid off after **5 years and 9 months**. From then on, it will still supply electricity for 20 years without any costly maintenance.



It is correct that you can only spend each euro once, but paying into sustainable business management pays off in the short term through independence, in the medium term through profitability and in the long term through resilience.

We have already set off a long time ago and give the advice to everyone else: "Go for it, it doesn't hurt!"

With this in mind, enjoy reading and have good thoughts

Dirk Zedler for the entire team



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For the preparation of this third sustainability report, we compiled the facts and issues relevant to the Zedler-Group as a pure service company. Now as before, self-performed measurements, countings and bills of the providers have been evaluated. Our calculations are not based on the manufacturers' values stated in their prospectuses or on idealised model calculations.

The new thing is the assignment of the commitment, which is not only focused on CO₂ but very diverse, to the 17 development goals of the United Nations <https://sdgs.un.org/goals>

More information also at #17goals.

In the course of preparing the fourth sustainability report, various frameworks will be discussed in order to select the one with the best application to the Zedler-Group's CSR commitment, which has already been celebrated as "best practice" by many institutions and has received numerous awards from ministries.

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SDGS – OUR CONTRIBUTIONS TO SUSTAINABLE DEVELOPMENT

As part of the 2030 Agenda for Sustainable Development, the United Nations (UN) agreed on the Sustainable Development Goals (SDGs) in 2015. The 17 goals with their 169 targets are each dedicated to a global challenge. The Zedler-Group supports the implementation and successfully attends to important topics: #17goals



Our contributions to sustainability are diverse – challenge accepted!

SDGS – OUR SUSTAINABILITY INDEX

| SDG | Goal | Page-Index |
|--|--|--|
|  | SDG 1 No poverty End poverty in all its forms everywhere | 32, 50, 54, 58, 60 |
|  | SDG 2 Zero hunger End hunger, achieve food security and improved nutrition and promote sustainable agriculture | 58, 60 |
|  | SDG 3 Good health and well-being Ensure healthy lives and promote well-being for all at all ages | 10, 20, 22, 32, 36, 50, 52, 54, 62, 64 |
|  | SDG 4 Quality education Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all | 10, 14, 16, 32, 50, 52, 58, 59, 60, 66 |
|  | SDG 5 Gender equality Achieve gender equality and empower all women and girls | 12, 56, 58, 62 |
|  | SDG 6 Clean water and sanitation Ensure availability and sustainable management of water and sanitation for all | 22, 32, 38, 50, 52, 54, 57, 62 |
|  | SDG 7 Affordable and clean energy Ensure access to affordable, reliable, sustainable and modern energy for all | 22, 32, 34, 36, 40, 42, 44, 46, 50, 51, 52, 62 |
|  | SDG 8 Decent work and economic growth Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all | 14, 16, 32, 50, 52, 54, 56, 58, 60, 62, 66 |
|  | SDG 9 Industry, innovation and infrastructure Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation | 10, 14, 16, 22, 32, 34, 36, 38, 42, 46, 50, 51, 54, 59, 60, 62, 64, 66 |

| SDG | Goal | Page-Index |
|---|---|--|
|  | SDG 10 Reduced inequalities Reduce inequality within and among countries | 54, 56, 58, 60 |
|  | SDG 11 Sustainable cities and communities Make cities and human settlements inclusive, safe, resilient and sustainable | 10, 20, 34, 35, 38, 40, 44, 46, 50, 52, 59, 64 |
|  | SDG 12 Responsible consumption and production Ensure sustainable consumption and production patterns | 20, 32, 36, 46, 48, 50, 51, 52, 57, 59, 62, 64 |
|  | SDG 13 Climate action Take urgent action to combat climate change and its impacts | 10, 20, 22, 32, 34, 35, 36, 38, 40, 42, 44, 46, 50, 52, 57, 59, 62, 64, 66 |
|  | SDG 14 Life below water Conserve and sustainably use the oceans, seas and marine resources for sustainable development | 38, 48, 58 |
|  | SDG 15 Life on land Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss | 32, 35, 48, 50, 58, 62 |
|  | SDG 16 Peace, justice and strong institutions Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels | 58, 60, 62 |
|  | SDG 17 Partnerships for the goals Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development | 36, 51, 58, 59, 60, 62 |

ZEDLER-GROUP: SUSTAINABLE CORPORATE CONCEPT FOR ENVIRONMENT AND SOCIETY

BUSINESS MODEL – SUSTAINABLE MOBILITY

In 1993, the first company for the bicycle was founded and commented on by an employee of the Stuttgart Chamber of Commerce and Industry: “Who needs that?”. Today, the Zedler-Group is in all their business fields one of the contact partners of the global cycle industry

SUSTAINABLE MOBILITY

It is not only our business model of engineer-driven services that turns exclusively around compatible bicycle mobility, the employees live for the topic when commuting, but also in their leisure time

SOCIAL RESPONSIBILITY AND COMMUNICATION

We work for the employees of the company, for the well-being on the premises, but also for better conditions of life on other continents; in addition, we try to motivate others through transparency, publications and events

CONSUMPTION OF RESOURCES AND CREATION OF VALUE

Taking as little as possible from nature when operating the companies, this is what has driven the managing director since the companies have been founded. With thousands of small and large measures he is getting closer and closer to that goal. The good thing is that the company gains resilience with every step in our world



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VSF.Ethics Prize of the cycle industry 2018

THE TEAM OF THE ZEDLER-GROUP

The realisation of social commitment and the observance of ecological and sustainable regulations receive a strong boost by the entire team. By contributing their knowledge and providing facts the team made the preparation of this sustainability report possible.



Our team, almost completely
2021/2022



Supported by our apprentices **Lea Heinle** was responsible within her dual studies programme as sustainability representative at Zedler-Institut for the topics environment and data recording as well as for the monitoring of the more than 70 measuring points in the building. This field of activity also included the preparation of the first two sustainability reports.

For the third issue of the sustainability report she returned as a working student to update the report together with Kirsten Krümmel and managing director Dirk Zedler because environmental awareness at the Zedler-Group is a matter for the boss.



Kirsten Krümmel, the media designer of Zedler-Institut, developed the graphic concept, visualised the consumption data and graphically prepared the present sustainability report. She also took many of the photos.



Apprentices office management assistant and two-wheeler mechatronic bicycle technology: Our apprentices Fynn Heit, Kevin Togonal und Arne Macher. They are responsible for the recording of consumption and generation data, traffic counting, checking the tightness of the compressed air network and, last but not least, for the recycling by type of all materials in the group of companies.



What has a bicycle expert to do with sustainability? In the case of Sebastian Martin a lot! His bachelor thesis on the efficiency of our test laboratory/compressed air preparation and the entire building electricity was the basis for the concept of the new building. In the meantime, the energy-efficient building has repeatedly been audited by DGNB (German Sustainable Building Council) in the "Buildings in Use" programme and certified as "Climate Positive".



David Heil joined the company as one of the first apprentices to become a bicycle mechanic in 2009; today he is also one of those who contributed many photos to the report.

- 0 % photos made available by agencies
- 0 % texts made available by agencies
- 0 % brochure values
- 100 % Zedler-Group team work
- 100 % facts

COMPANY PRESENTATION

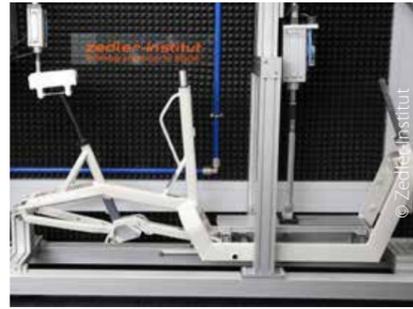
FIELDS OF WORK OF THE ZEDLER-GROUP

Technical documentation



- » User manuals and operating instructions
- » Risk assessments
- » Analyses of test certificates (electrical, mechanical and chemical)
- » CE labels and type plates
- » Declarations of conformity
- » Training
- » Recall assistance
- » Technical journalism

Testing technology and services



- » Performance: showing riding characteristics into figures
- » Safety: testing operational strength and safety with more than 80 testing systems
- » Quality: evaluating the characteristics that cannot be specified with forces and load cycles, i.e. durability of the paint, standardised weights, corrosion tests

Expert's reports/ loss analyses



- » Analyses of loss and deficiencies
- » Manipulation check
- » Accident reconstruction
- » Product liability claim
- » Motor third party claim
- » Private liability claim
- » Burglary/theft claim

Training



- » Basic and Advanced training – bicycle and e-bike reports for
 - › motor vehicle experts
 - › insiders of the sector (bicycle dealer etc.)
 - › employees of insurers
- » Training and workshops for manufacturers, importers and retailers to the topics
 - › CE marking
 - › entry to various markets
 - › state-of-the-art tests
 - › workshop quality
- » Other lectures/workshops, e.g. on sustainability topics

SUBDIVISION OF THE BUSINESS FIELDS



*The Loss Adjusting Agency (Sachverständigenbüro) is active exclusively in the field of expert witness reports for the courts



HISTORY AND AMBITIONS

Since the foundation of the company in 1993, we have set the pace for progress in the cycle industry and for the perception of the bicycle as a serious means of transport and economic asset. In those days, company founder Dirk Zedler was a pioneer in this field.



Sustainability with regard to bicycles was not an issue in the 1990s. As a successful triathlete in his age group and everyday cyclist since 1984, Dirk Zedler knew about the advantages of the bicycle in the full spectrum and believed in its potential as a sustainable means of transport of the future.

Zedler – Institut für Fahrradtechnik und -Sicherheit GmbH and Gesellschaft der Fahrrad-Sachverständigen mbH are part of the Zedler-Group which has accompanied the technical development of the bicycle in terms of comfort, safety and user-friendliness as well as the perception of the courts and the insurers for almost 30 years. It is our guiding principle to bring more people on bicycles through better bicycles and make the bicycle a product that avoids as much waste as possible through longer operating times.

For this purpose, we work in the following 6 business fields:

- 1. Preparation of bicycle reports, accident reconstructions and loss analyses** for the courts, insurers, manufacturers and private individuals not only in Germany, but all over Europe, in the USA as well as worldwide.
- 2. Development and building of scientifically-based, practice-oriented testing systems** (test stands, control and analysis software) for bicycles, electric bicycles, cargo bikes and individual components for our own laboratories and for manufacturers worldwide.
- 3. Testing services in view of optimisation for bicycle/e-bike/carrier cycle and component manufacturers.** In our company test labs we accompany the development of frames and components from the prototype to market launch. In doing so, we go beyond the currently incomplete and from our objective point of view partly insufficient international standards (DIN, EN, ISO) with our more than 80 testing systems and/or complete them where necessary.
- 4. Technical documentation, e.g. concept, preparation and (stipulated) printing of EN and ISO standard-compliant user manuals in accordance with the Product Safety Act and the Machinery Directive** in more than 40 languages. The **risk analyses, declarations of conformity and CE markings** for electric-assisted bicycles, e-MTBs and carrier cycle models from Zedler-Institut passed the state authorities of many countries without initial suspicion. **Recall** accompanying **documents** have been “daily business” for us for about 20 years.
- 5. Publication of findings from expert’s reports** about defective component principles, unsuitable manufacturing processes, incompatible assembly groups or mounting deficiencies in the leading special-interest press (such as for ex. BIKE, EMTB, Eurobike Daily, Freeride, MY BIKE, TOUR etc.).
- 6. Training/lectures/workshops** are increasingly matters of the heart for us. In doing so, we not only keep an eye on the industry with its constantly growing requirements due to legal framework conditions and ever more demanding customers. We also want to share our foundation, the wealth of experience from far more than ten thousand expert’s reports on bicycle accidents of all kinds, with future experts.



In our innovative and climate-positive energy-efficient building with “platinum certification” by DGNB (German Sustainable Building Council), we offer seminar and event spaces equipped with state-of-the-art technology for rent.

There is space for up to 120 people in a pleasant and unique ambience on around 600 sqm, among more than 100 historic bicycles. Barrier-free, of course. On the covered terrace or while walking through bicycles originating from the past 200 years and beyond, participants relax during breaks and enjoy local food or refined delicacies from the excellent organic caterer.

Optionally, we offer guided tours of the Performance and Safety test laboratories and/or a museum tour by a designated historic bicycle specialist.

In addition, we offer training by the bicycle experts of GDFS. The training is aimed at experts-to-be and motor vehicle experts who intend to expand their portfolio by including bicycles and e-bikes, as well as employees of insurers dealing with claims.

The test engineers of Zedler-Institut provide training on the topics of CE marking, product quality and durability, reasonable tests according to bicycle category and offer guidance on how to avoid liability in the jungle of standards and laws.

With these publications and training we provide a continuous increase in the quality awareness of the cycle branch and their users. We herewith not only raise the bicycle’s safety level, but also its user comfort level and ensure an improved exploitation of its potential. Bicycles and e-bikes are thus recognised and used as attractive mobility alternative for the broad population.

In short: We offer (almost) everything with and around bicycles except from designing, repairing and selling them.

MILESTONES OF THE GROUP

1987

Construction of the first disc wheel cover made of GFRP (glass-fibre reinforced plastics).

1989

Thesis on carbon. Optional subject during the studies: non-conventional energy engineering.

1991

Completion of studies as a graduate engineer. Dirk Zedler is employed business manager of a large cycle shop.

1993

Foundation of Ingenieur- und Sachverständigenbüro für Fahrradtechnik in Ludwigsburg.

1994

Public appointment and swearing in of Dirk Zedler as an expert for bicycles at the CCI Stuttgart.
Construction of the first stiffness test stands for bicycles.

SINCE 1995

Drawing up of trend-setting instructions for bicycles and bicycle components.

2007

20th TV shooting: The German channel Kabel 1 brings Dirk Zedler as a bicycle expert and thus as an expert on German TV.

2004

First company in Baden-Wuerttemberg to take on apprentices for the job as bicycle mechanic.

SINCE 1996

Critical bicycle technology journalism.

2009

Extension of the production capacities for bicycle test stands due to an increasing demand for zedler.de test stands by customers in Germany, Europe, the USA and Asia.

2001

Employment of the first full-time employee.

2010

Foundation of Zedler – Institut für Fahrradtechnik und -Sicherheit GmbH. Proof of research and teaching established, therefore permission to use designation institute.

1997

Development of test methods for the testing of bicycle frames made of carbon after accidents.

2012

Development of specific testing systems for electric-assisted bikes.

2013

The first Zedler-Institut newsletter is sent to more than 1,000 specialists from the bicycle industry.

2014

One of the first companies to take on apprentices for the job as two-wheeler mechatronic technicians, subject bicycle, in Baden-Wuerttemberg, Germany. Extension of the public appointment and swearing in of Dirk Zedler as an expert for bicycles and electric bicycles.

2017

Move into the building, partly still under construction.

2019

Publication of first sustainability report

2022

First company booth at the global bicycle trade fair Eurobike in Frankfurt am Main. All in all 31 permanently employed team members and up to 40 freelancers work for the Zedler-Group.

2018

Official inauguration of the innovative company building with Transport Minister Winfried Hermann, Mayor Werner Spec, Bernhard Lange (Presidium Member of the German bicycle association ZIV), Albert Herresthal (Managing Director of VSF e. V.), Dr. Gudrun Zuehlke (Chairwoman of ADFC e. V. Baden-Wuerttemberg) and Thomas Musch (Chief Editor of road bike magazine TOUR and MY BIKE).

2016

Foundation of GDFS – Gesellschaft der Fahrrad-Sachverständigen mbH. Ground breaking ceremony for the construction of the new, energy-efficient and employee-friendly company building.

Third apprenticeship is created within the Zedler-Group for the job of a digital and print media manager.

MOBILITY – BICYCLE WINS

75 % of the employees in 2022 came without car (bicycle, pedestrians, local public transport)

66 % is the share of cyclists and pedestrians all over the year

0 % business travels by plane since 2018

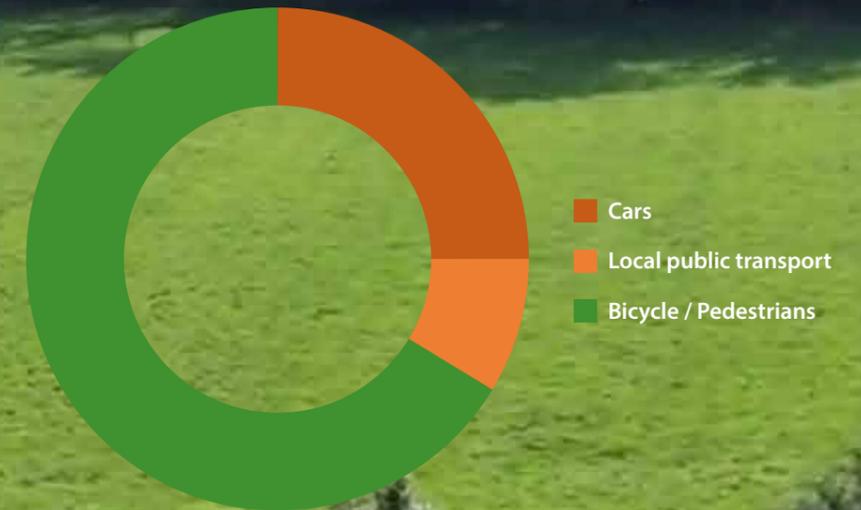
75 % (rounded) of local business trips were made by bicycle, electric-assisted bike or e-cargo bike

65 % (rounded) of the business trips were made with Deutsche Bahn, i.e. with green electricity

2022

Team members of the Zedler-Group during the annual cycle tour through the surrounding region of Ludwigsburg

MODAL SPLIT – COMMUTE



21.2 km/day average distance of employees travelled by bike

27.5 km maximum distance one way that our employees are commuting by bike

27,288 km/year were driven by the two motor vehicles (including private trips of the management) in the last two years. 17,047 km/year were driven in the past 25 years. The CO₂ emissions resulting thereof have been compensated since 2018

13,929 kg CO₂ saved by our employees with their annual kilometres cycled to work in 2022 (ADFC calculator)

2022



BICYCLE PROMOTION – A SUCCESSFUL CONCEPT

Cycling of the employees has been promoted and optimized by the infrastructure since the foundation of the company. When designing the new company building particular importance was paid to optimal cycling infrastructure.



It starts with a bicycle parking located directly adjacent to the entrance of the employees to the company building. Besides its high bicycle capacity the bicycle parking also provides numerous charging possibilities for electric-assisted bikes. In the parking which is also chip secured there are tyre pumps, chain oil and cleaning rags.



Just a few steps from the entrance adjacent to the bicycle parking there are two spacious change rooms with many high-quality showers, lockers as well as towels. The changing rooms and one well-aerated drying room for the clothings heated by the compressor exhaust air are further elements in the building to lower the barriers of commuting by bike.

For this reason most of our employees commute by bike throughout the year.



In addition, the building includes a spacious bicycle workshop where the employees can have their bicycles checked in regular intervals and repaired, if necessary.

Especially in winter everyone has the opportunity to make their bicycle winter-proof.

Either the employees tackle the job on their own or give it to the apprentice under the guidance of our master mechanic.



Company bikes/electric-assisted bikes are available on loan to all employees. There are also several different types of bikes for short trips into the city, for ex. during the break. The company bikes that are available to our employees are always current, state-of-the-art products. Particularly in the case of electric-assisted bikes this means a high motivation for the employees, as technology is developing at a rapid pace presenting a still more efficient alternative in mobility.

When buying private bicycles, employees also benefit from the favourable purchase prices of the company.



The increased use of electric-assisted bikes leads to a significant reduction of CO₂ and particulate emission, a particularly important measure in the metropolitan area of Stuttgart.

For this reason new space for cargo bikes was created with the new building and the bicycle parking and a company cargo bike was purchased with the move into the new building. With this cargo bike courier journeys can be performed yet more consequentially by bike. Our cargo bike replaces a company car, this is a matter of fact.



But we not only motivate our own employees, but also convince our stakeholders of the alternative in terms of mobility by taking several measures. Besides the already described seminar area created in the new building for bicycle-related seminars, a tandem was also purchased. Visitors are picked up by this tandem at the train station. On the occasion of events we inform the organisers and the participants about sustainable alternatives in terms of mobility, such as the availability of bikes and electric-assisted bikes at rental stations close to the train station.

MILESTONES BICYCLE – EXPERT’S REPORTS

1993

Foundation of Ingenieur- und Sachverständigenbüro für Fahrradtechnik in Ludwigsburg.

1994

Dirk Zedler is publicly appointed and sworn in as bicycle expert by the CCI Stuttgart.

1997

Development and use of zedler.de testing systems for the testing of bicycle frames made of carbon involved in accidents for the drawing up of expert's reports.

2000

Courts from the Higher Regional Court Hamburg to the District Court Schoenau (Black Forest), from Regional Court Saarbruecken to the Higher Regional Court Dresden commission Dirk Zedler to draw up expert's reports.

2007

The archives comprising data on department store bicycles exceed the number of 10,000 data sets.

2008

The Expert's Report division draws up more than 400 reports on material failure, accident reconstructions, motor and personal liability claims as well as household claims (burglary/theft).

2013

The Expert's Report division with four experts draws up more than 750 reports for courts, lawyers, insurers, companies and private individuals.

2014

The public appointment and swearing in of Dirk Zedler is extended upon another examination by the CCI Stuttgart to the field of electric bicycles.

2016

The foundation of GDFS – Gesellschaft der Fahrrad-Sachverständigen mbH accounts for the growing division and the growing number of team members.

2017

The explosive order growth calls for raising the profile. "Simple" expert's reports with claims less than 2,000 € are mainly replaced by telephone consultation to regain capacities for material analyses, accident reconstructions etc.

2018

Expert's reports ordered on material failures with severe consequences of accidents placed from Israel, all over Europe and the USA are daily business for the bicycle experts.

2022

Training programme on bicycle and e-bike expert's reports for experts-to-be and motor vehicle experts as well as employees of insurers is being expanded in order to share the experience gained from well over 25,000 expert's and test reports

MILESTONES BICYCLE – TESTING

1994

Construction of the first test stand for bicycles for the German special-interest magazine TOUR – Europe’s road bike magazine no. 1, sparking off the stiffness tests for sports bicycles, coining the term STW (stiffness-to-weight factor).

1997

Development and use of zedler.de testing systems for the testing of bicycle frames made of carbon involved in accidents for the drawing up of expert’s reports.

2002

Extension of the test lab by further test stands: fork stiffness, test stand frame precision, test stand hardness, roller type test stand.

2006

A new frame testing system measuring comfort is developed and presented in the German special-interest magazine TOUR – Europe’s road bike magazine no. 1 thus changing bicycle development.

2007

Re-equipment and extension of the test laboratory of Delius Klasing Verlag (Europe’s leading bicycle magazines) with zedler.de test stands.

2009

Extension of the production capacities for bicycle test stands due to an increasing demand for zedler.de test stands by customers in Germany, Europe, the USA and Asia.

AS OF 2010

Development and construction of fatigue testing systems as well as establishment and set-up of a spacious fatigue test laboratory for testing services for customers.

2011

The German special-interest magazine TOUR – Europe’s road bike magazine no. 1 perform seat post tests on testing systems in the lab of Zedler-Institut. Initial operation of further testing systems of the SAFETY series (fatigue (durability), impact (crash test) and overload).

2012

Development of specific electric-assisted bike testing systems. Completion and initial operation of further testing systems for luggage carriers and pedals. Extended service in the field of SAFETY testing services: Customers in the field testing services obtain Zedler-Institut test seals in the categories EN, Basic, Advanced and Advanced Plus.

2013

Extension of testing capacities by doubling the number of testing systems successively. Development of the block programme: mixed Multiload tests for handlebars.

2014

Presentation of the new BCS-testing system. For the first time, the three major parameters of the riding behaviour in the case of a full-suspension bicycle chassis can be put into figures with one testing system. Initial operation of the first dynamic fatigue testing system for the overall system handlebar-stem and bicycle fork.

2015

The test lab of Zedler-Institut meanwhile comprises 37 static and dynamic testing systems that are in operation around the clock (24/7).

2016

From now on BIKE, Europe’s mountain bike magazine no. 1, relies on the BCS testing system for the evaluation of chassis and affectionately call it Triceratops.

2017

The test lab space alone in the new company building of Zedler-Institut covers 600 sqm, including show lab.

2018

The 48 hour promise until test start is given

2022

Four dynamic laboratories are fully equipped. All fatigue testing systems are now available several times. 23 frame, 10 fork, 9 handlebar-stem-combinations and 5 saddle testing systems can perform tests at the same time. In addition, 2 testing systems respectively for luggage carrier, pedals, cranks/motors and others more.



MILESTONES BICYCLE – TECHNICAL DOCUMENTATION

1995

First and at the same time trend-setting user manual. Concept, photography and texting by Dirk Zedler.

1997

First customers from other European countries order user manuals.

1998

Lecture about user manuals and liability "Instruction – product safety" at the fahrrad.markt.zukunft. conference.

2002

First steps to build up a pool of translators with a high affinity to bicycles for the common European languages.

2006

From now on, the technical documentation department accompanies recalls and draws up relevant documents in several languages.

2008

The language offer becomes exotic: the 16 languages offered include among others Arabic, Chinese, Japanese and Korean.

2009

German foundation for comparative product testing (Stiftung Warentest) tests 14 bicycle user manuals (test 05/2009):

4 x VERY GOOD –
of these 3 from Zedler.de
 3 x GOOD –
of these 1 from Zedler.de
 7x SATISFACTORY –
of these 0 from Zedler.de

2010

Development of the modular user manual system: Customers can choose between Basic, Brand Basic, Individual and Premium manuals.

2012

More than 100 bicycle brands and component manufacturers are regular customers of Zedler-Institut user manuals.

2013

The range of user manuals meanwhile comprises more than 30 languages for customers worldwide. Supply of the one millionth Basic and/or Brand Basic manual.

2014

Extension of the portfolio to the needs of electric-assisted bikes and bicycle fleets. Risk analyses, declarations of conformity and type plates complete the portfolio.

2016

Accompanying documents for electric-assisted bikes pass the tests by the trade supervisory authorities and comparable authorities repeatedly without initial suspicion, not only in the D-A-CH-region, but also for example in France and Poland.

2018

The Stiftung Warentest balance remains flawless. Since 2009, the manuals made by Zedler-Institut have been rated 5 times "very good", 9 times "good" and only once "satisfactory". None of the manuals was rated "adequate" or worse.

2019

FSC-paper for all customers as standard.

2020

The success story Basic – Brand Basic – Individual comprises the types BMX, toy bike, city-trekking, city-cargo bike, MTB, road bike-gravel, supplementary manual EPAC, e-city/trekking and e-MTB.

2021

Emissions from logging, paper production and transport will be offset from now on.

2022

E-MTB und e-city/trekking are bestsellers.

SINCE 2022

Digital versions are being prepared so that they can be made available as soon as they will be legitimate.

MILESTONES BICYCLE – JOURNALISM / LECTURES



1994

Start of cooperation with most important European bicycle magazine TOUR – Europe's road bike magazine no. 1.



1998

Future-oriented lecture on the Product Safety Act, topic "Instruction – product safety" at the fahrrad.markt.zukunft. conference.



1997

From now on, consultancy contract with the German publishing house Delius Klasing Verlag, market leader special-interest bicycle magazines. At the beginning "bike" and "TOUR", later on also "FREERIDE" and "Trekkingbike".



2002

Publication of the first edition of the second book "Das Rennrad im Selbstaufbau" ("How to assemble your road bike by yourself").



2001

The first edition of the first book "Die Rennradwerkstatt" ("Road bike Maintenance and Repair Manual") is published and turns out to be one of the most successful bicycle repair books on the market.



SINCE 1996

First article about safety deficits of bicycle components, many will follow.



SINCE 2010

Every year, several critical articles for the Eurobike Show Daily.



2017

Dirk Zedler is honoured for 250 series of the workshop section in the German special-interest magazine TOUR



2020

Dirk Zedler presents four lectures at "Infotech" in Switzerland.



2011

Publication of the first edition of the third book "Die Rennrad-Werkstatt für Profis" ("Advanced Road Bike Maintenance").

2013

Consultancy contract is extended for newly published magazines "e-bike", "EMTB" and "Mybike" of Delius Klasing Verlag.



2022

Six lectures for the Eurobike Career Center and four articles in the daily Eurobike Show Daily by Dirk Zedler underline the importance of the group of companies for the global cycle industry.



AWARD FOR SUSTAINABLE BUILDINGS IN USE



© Zedler-Institut



Klima Positiv
Eine Auszeichnung der Deutschen Gesellschaft für Nachhaltiges Bauen – DGNB e.V.
Gültig bis Februar 2025

Zedler - Institut Fahrradwelt

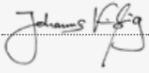
| | | | |
|--|-----------------------------------|--|--|
| 2021 Ausgezeichnet als klimapositives Gebäude im Betrieb | Gültig bis Februar 2024 | Ausgestellt am März 2023 | Ausgestellt von DGNB GmbH Tübinger Straße 43 70178 Stuttgart |
| Standort Hundshalde 4 71634 Ludwigsburg | Eigentümer Dirk Zedler | Energiekonzept und CO ₂ -Bilanzierung Kelzenberg + Jahnke - freie Architekten GbR mit Dirk Zedler | Architekt Kelzenberg + Jahnke - freie Architekten GbR |
| Eine Initiative von  | |  Dr. Christine Lemaître DGNB Geschäftsführender Vorstand |  Johannes Kreißig DGNB Geschäftsführender Vorstand |

Diese Auszeichnung ist für Gebäude, die durch eine negative CO₂-Jahresbilanz einen erheblich positiven Beitrag zum Klimaschutz haben. Grundlage dieser Bilanzierung ist das von der DGNB herausgegebene „Rahmenwerk für klimaneutrale Gebäude und Standorte“.

DGNB Zertifikat in Platin
für nachhaltig betriebene Mischnutzungen



Zedler - Institut Fahrradwelt

| | | |
|---|--|--|
| Antragsteller Zedler – Institut für Fahrradtechnik und -Sicherheit GmbH | Standort Hundshalde 4 71634 Ludwigsburg | Projektbewertung Gesamterfüllungsgrad: 89,3 % Auszeichnung: Platin |
| Bauherr/Eigentümer Dirk Zedler | DGNB Auditor Lea Heinle Zedler – Institut für Fahrradtechnik und -Sicherheit GmbH | |
| Aussteller DGNB GmbH Tübinger Straße 43 70178 Stuttgart |  Johannes Kreißig DGNB Geschäftsführer | Ausgestellt am 07.2021 |
| | | Gültig bis 02.2025 |



Platinum certificate and "Climate-Positive Award"
presented by the German Sustainable Building Council



CLIMATE-POSITIVE COMPANY BUILDING

The start of the construction of the new energy-efficient company building in 2016 was another major step towards sustainable management. With the new building the Zedler-Group intended to set an exclamation mark for (electric) bicycles and the smart merger of real estate and movables in the automotive region.

0 % of rain water into sewerage by roof drainage into the cistern.

24 % of the total area (including courtyard and parking spaces) are covered with water-permeable open joint paving.

27.6 % of the total area of the company premises cover the area with photovoltaic system.



© Zedler-Institut

Since 2019, the Zedler-Group's certified climate-positive company building has already represented what is to come. With its details, such as electric-assisted bike service stations and a photovoltaic system on the roof, the new company building stands exemplarily for a change in energy and mobility. Electricity must be generated in a decentralized way and stored in the batteries of the electric vehicles and e-bikes.

Everyone knows that you never stop learning, but for us in the rapidly developing world of bicycles it is more topical than ever. For this very reason, we created a platform for training events and seminars in a bicycle-friendly atmosphere in Ludwigsburg. This seminar area is used to pass on bicycle-relevant topics as well as to explain and inform about the aspects of sustainable working at the Zedler-Group.



© Zedler-Institut

The company building reflects the holistic approach of the environmental protection and adds the final sustainable touch to the company



© Zedler-Institut

The seminar facilities including an integrated museum with more than 200 historic bicycles covers nearly one third of the total building area. Pauses and discussions about what has been learned are held on a 150 sqm large terrace with a view on nature



FRIENDLINESS TOWARDS INSECTS

During the construction of the building it was important for us to create the area as closely to nature as possible. The garden around the new company building was planned and realised as an orchard meadow with native crop plants and an insect-friendly, NABU-certified meadow.

26.5 % built on area (without the bicycle parking with green roof)

49.5 % of the entire company area is an insect-friendly green area.



© Zedler-Institut



© Zedler-Institut

The big insect hotel was set up in the middle of the orchard meadow in summer 2018



© Zedler-Institut

The insect hotel offers living space for various insect species



AWARD AS COMPANY FOR CLIMATE PROTECTION

In 2022, founder and managing director Dirk Zedler received the first ministerial award at federal level in Berlin.

The admittance into the select circle of German Companies for Climate Protection was signed by the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), the Federal Ministry of Economic Affairs and Climate Action (BMWK) and the Association of German Chambers of Industry and Commerce (DIHK).



© Klimaschutz-Unternehmen e.V.



Solemn presentation of the certificate at the Federal Ministry of Economic Affairs and Climate Action in Berlin

f.l.t.r. Markus Schleyer – laudator and adviser Klimaschutz-Unternehmen e.V.; Christian Maaß – Head of Department Heat, Hydrogen and Efficiency BMWK; Dirk Zedler; Joerg Schmidt – Chairman Klimaschutz-Unternehmen e.V.



WATER CIRCULATION – FRESH WATER HALVED

The rain water of the entire roof surface is collected in the cistern to supply the toilet flushing, the garden watering, the bicycle cleaning and the corporate fountain.

93.78 % of rain/cistern water for toilet flushing, bicycle cleaning, garden watering and fountain

46 % of rain water in total water consumption

6.22 % of fresh water supply to the cistern

93,325 litres of cistern water use

2022

The court yard and parking of the company building are covered with Stuttgart Sickerstein, i.e. open joint paving blocks. They allow rain water to seep away slowly into the ground. In case of excessive quantities of seeping away water through the open joint paving blocks, there are additional infiltration ditches under the parking spaces. In this area the water running through the ditches is guided into the ground and added to the ground water.

The total amount of water consumption, which decreased in 2021 and increased again in 2022, is easy to explain: Decrease in 2021 due to pandemic-related cancelled visits and events and more work from home. Increase in 2022 due to huge growth in turnover and many events and visits, therefore more increase in water consumption overall.



Seepage on the entire courtyard and parking space

Infiltration ditches for a slow seepage of the rain water

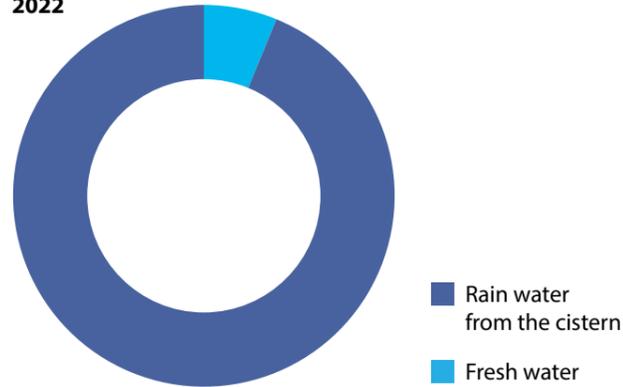


Rain water cistern (two times 5,000 l) prior to installation



Toilet flushing with water from the cistern – our informative signs in the toilets

Annual average 2022



The annual average for the supply of the toilets, the garden, the fountain and bicycle cleaning deviates in 2022 compared to previous years. The reason for this is a magnetic fault in the fountain, as a consequence of which the water did not circulate but ran through and had to be constantly refilled. In addition, the cistern pump was concerned by a failure, as a consequence of which the high water consumption of the fountain was not fed from the cistern despite sufficient filling level but with fresh water.

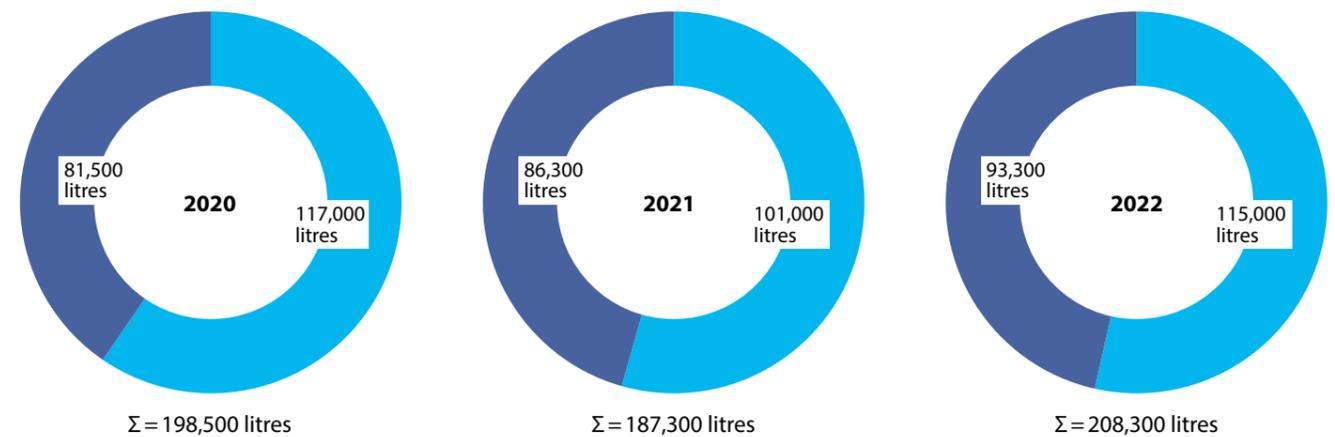
This is where our monthly data recording proves its worth, because without the recording we would not have become aware of the fountain's magnetic fault or the failed cistern pump in a timely manner.



Water consumption 2022



Annual water consumption



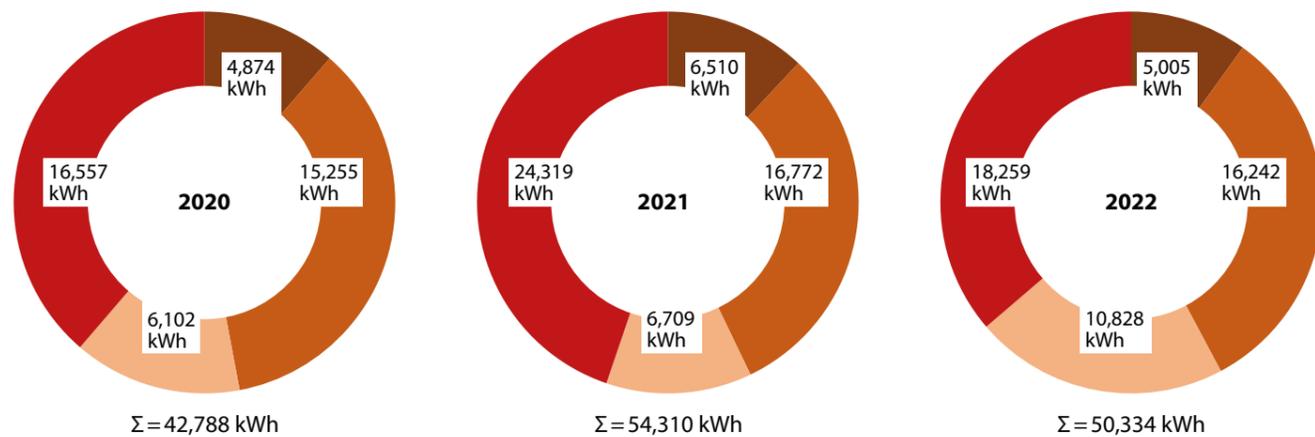
■ rain water from the cistern ■ fresh water

ELECTRICITY EXCLUSIVELY IN THE BUILDING – CLIMATE-POSITIVE

Electricity consumption 2022

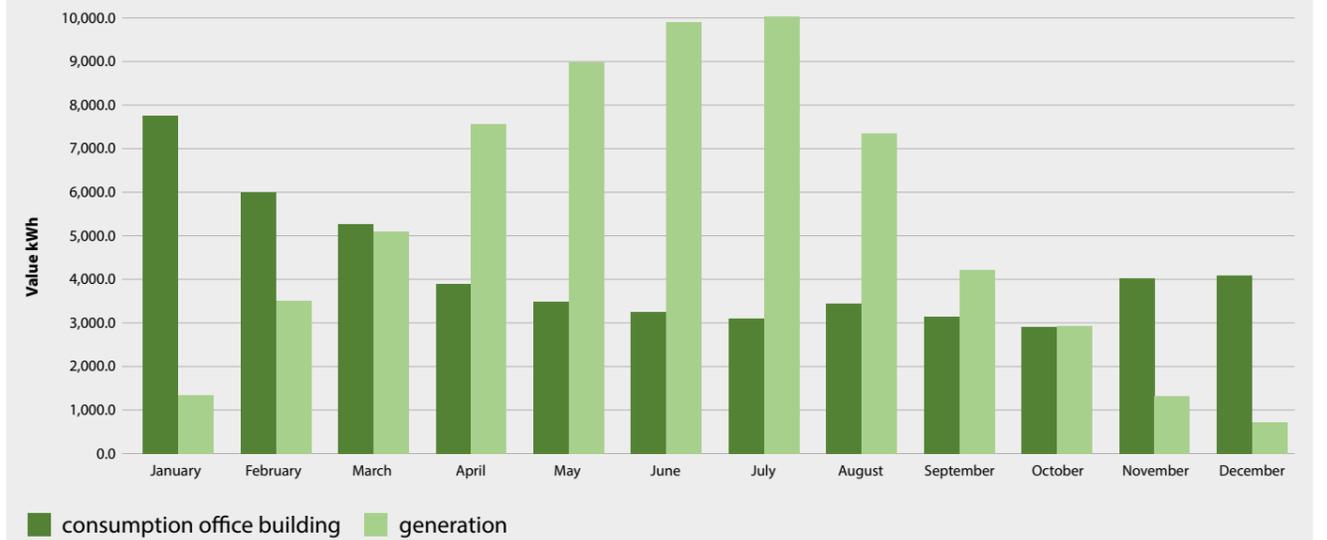


Annual electricity consumption

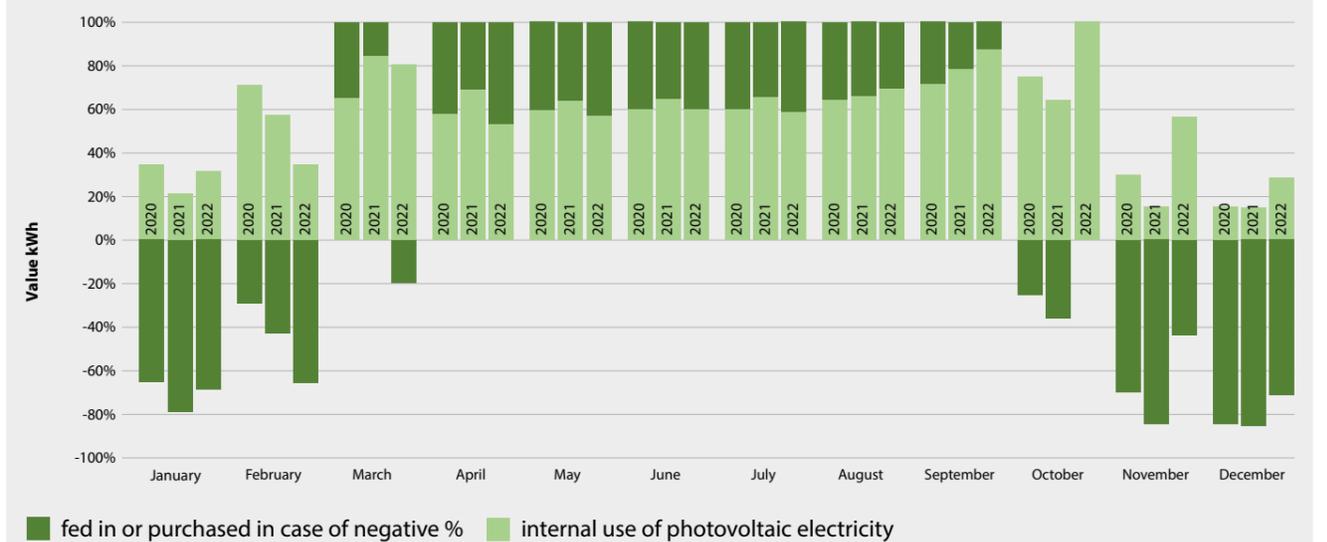


■ consumption first floor ■ consumption ground floor ■ consumption basement ■ consumption heating/cooling

Generation and own consumption of the building 2022 (incl. offices, kitchens, heating, etc., but without production/testing operations)



Year-on-year use of generated electricity



The values for the “electricity of the building” include the electricity used by the building. The testing operations and the associated electricity are not included in these values as they relate to the business operations. This is to achieve a separate presentation of the climate-positive company building and the climate-positive business operation (see pages 44-45).

The certified climate-positive building itself, i.e. without the testing operations, generates more electricity than is used. The excess photovoltaic electricity is fed into the testing systems or the power grid.

The decrease in building electricity consumption is due to higher temperatures in winter and therefore lower heating consumption. As regards the consumption in the basement, the calculation was adjusted to the distribution of the employees to the floors.

PHOTOVOLTAICS – WORKS AND IS PROFITABLE

0 % of fossil fuels

35.7 % of photovoltaic-generated electricity of total electricity

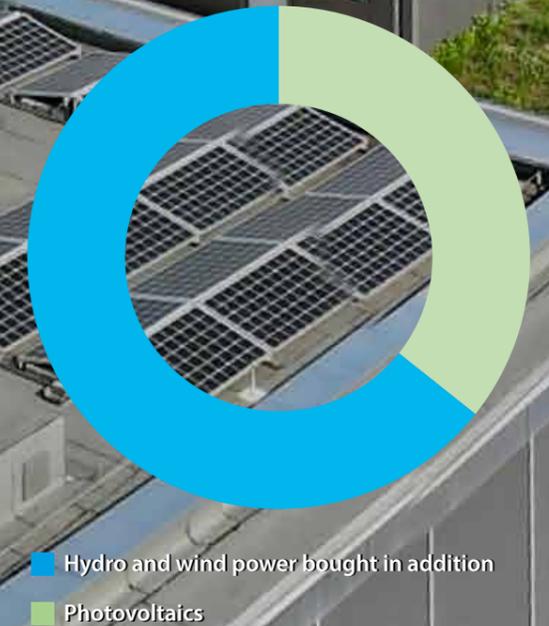
75.4 % use of the electricity company-generated by photovoltaics (realised by east-west-orientation and 24/7 testing operations)

100 % green electricity

-32.5 % of operating costs per sqm building surface
The operating cost calculation refers to the change in operating costs per sqm of the new building compared to the previous building (without PV system, without cistern and without heat pumps, with gas)

2022

ORIGIN OF BUILDING AND BUSINESS OPERATIONS ELECTRICITY



■ Hydro and wind power bought in addition
■ Photovoltaics

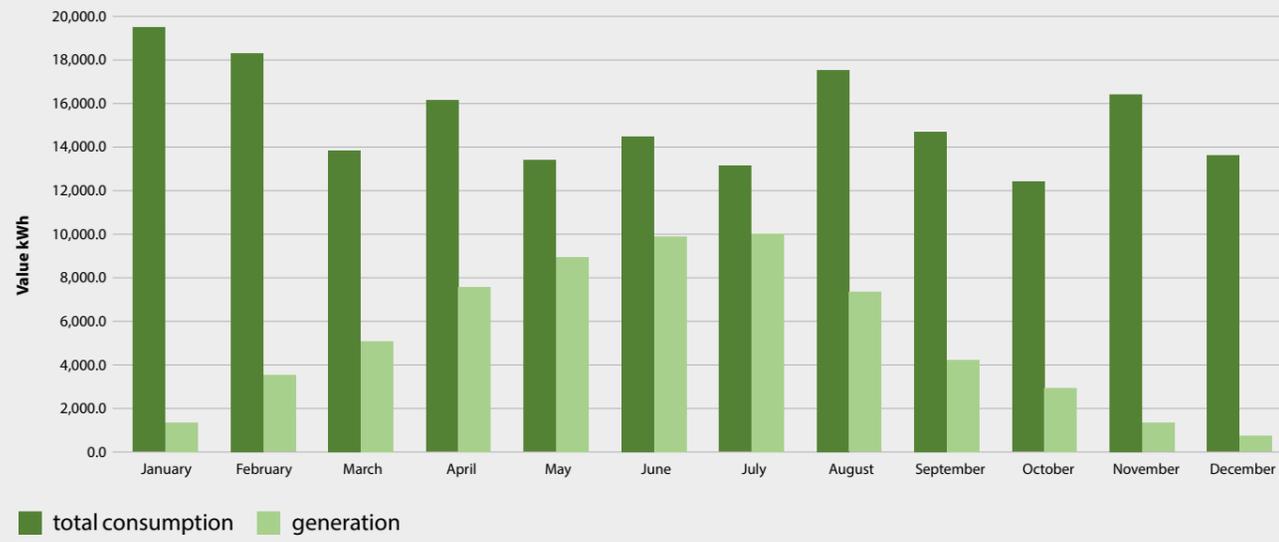
© Zedler-Institut

The Zedler-Group: since 2020 “climate-neutral” already according to DGNB (German Sustainable Building Council) “Buildings in Use”, without certificate trading

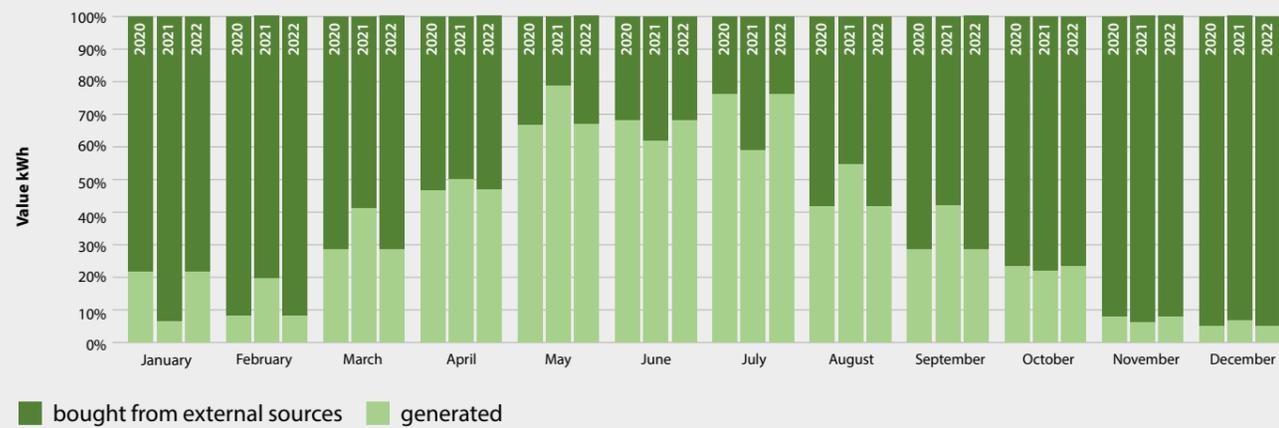
The photovoltaic system on the energy-efficient building of the Zedler-Group

ELECTRICITY OF BUILDING AND BUSINESS OPERATIONS – CLIMATE NEUTRAL

Generation and own consumption of the building incl. offices and production (testing operations) 2022



Total consumption incl. year-on-year generation



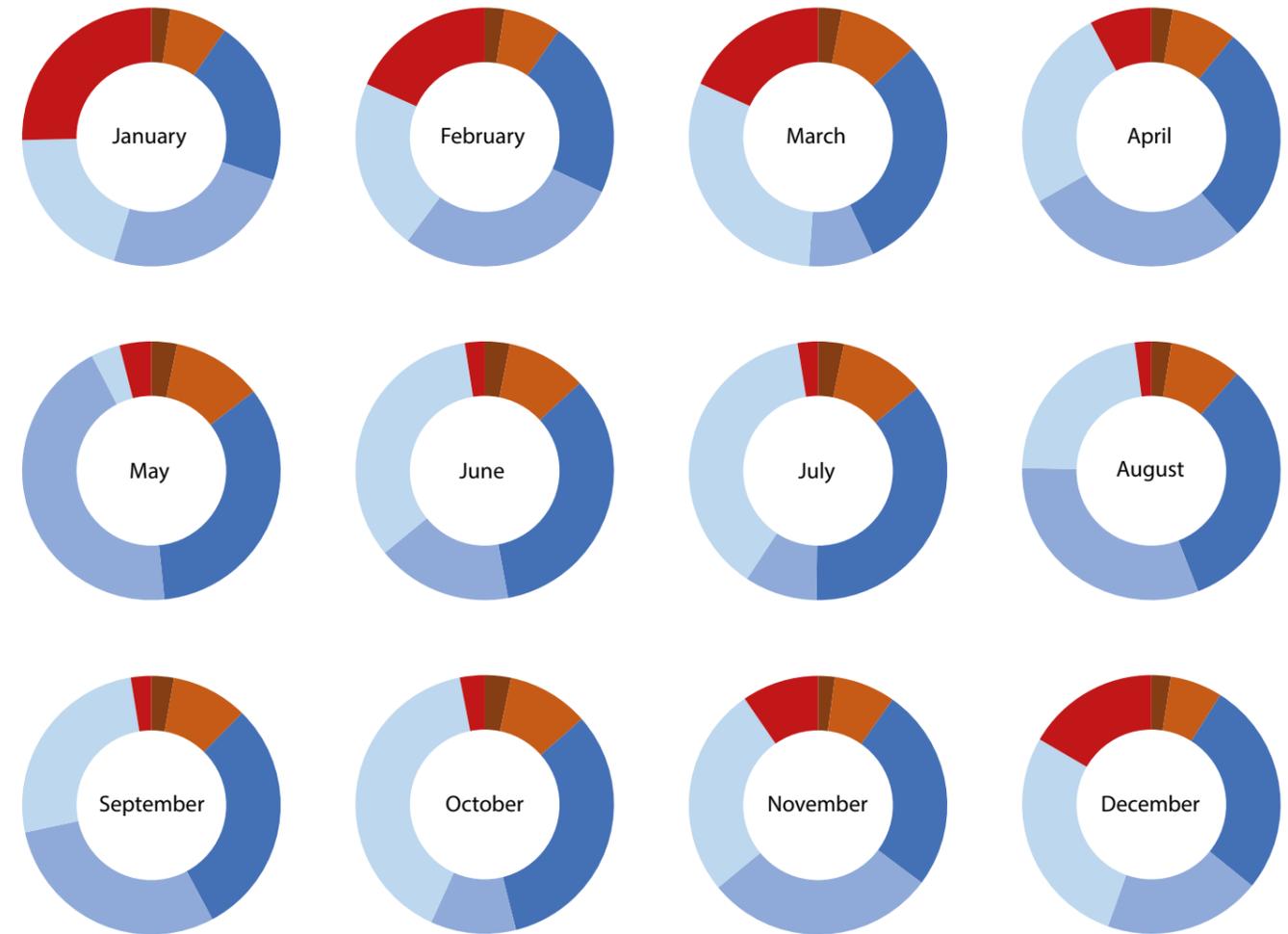
The building with testing operations, including test lab with compressed air processing is climate-neutral, as the electricity that is required on days with less sunlight and nights bought in addition from external sources is also CO₂-free.

The electricity bought in addition was obtained from EWS Schönau until September 2022 and from SWLB as of October 2022. The electricity purchased from both power suppliers originates from hydro and wind power. Fossil fuels are not used.

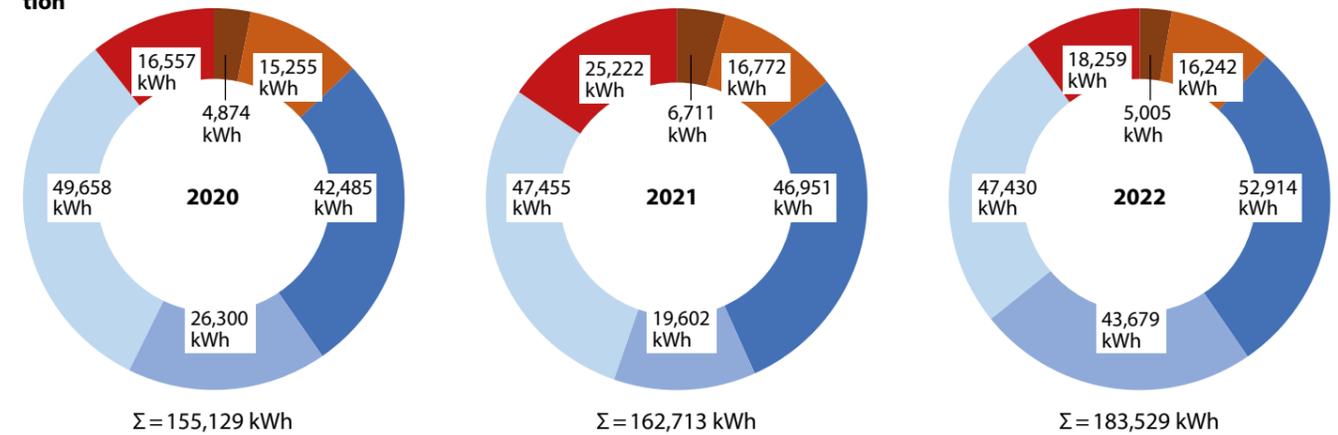
The increase in electricity consumption over the years can be attributed to the significant growth in turnover and the consequential greater testing volume.



Electricity consumption 2022



Annual electricity consumption



■ consumption heating/cooling ■ consumption first floor ■ consumption ground floor ■ consumption basement without Allegros (compressors) ■ consumption Allegro 23 ■ consumption Allegro 14

COMPRESSORS – LEAKAGES MINIMIZED

In performing our regular internal leakage detections by means of a specific ultrasound unit we were able to significantly reduce the leakages by more than 90 % with the initial scan of the network in the entire building alone.

< 5 % of loss in the network
(15–80 % is usual on a national level, source: Fraunhofer-Institut)

> 50 % of re-collected energy during the winter months.

100 % of controlled compressed air supply

Due to the fact that the testing systems in the laboratories are static as well as dynamic, relaxations in the compressed air network may occur during the course of testing operations. The system is therefore checked by employees every 3 months. The static ring line is checked every 6 months.

- » Compressed air supply with a central, higher-level control actuating the need-based or the individual torque-controlled energy-efficient screw compressors.
- » Controlled compressed air supply, savings of energy definitely great, however not quantifiable.
- » Heat exchangers cool down the compressors and heat dish washer, shower and other service water as well as the heating.
- » The bigger of both compressors (Alup 23) recovers up to 53.1 % of the total energy, the smaller one (Alup 14) even up to 61.2 %. The maximum of both compressors is 52.0 % of recovered energy. On average 29.6 % of the energy was recovered in the last three years.

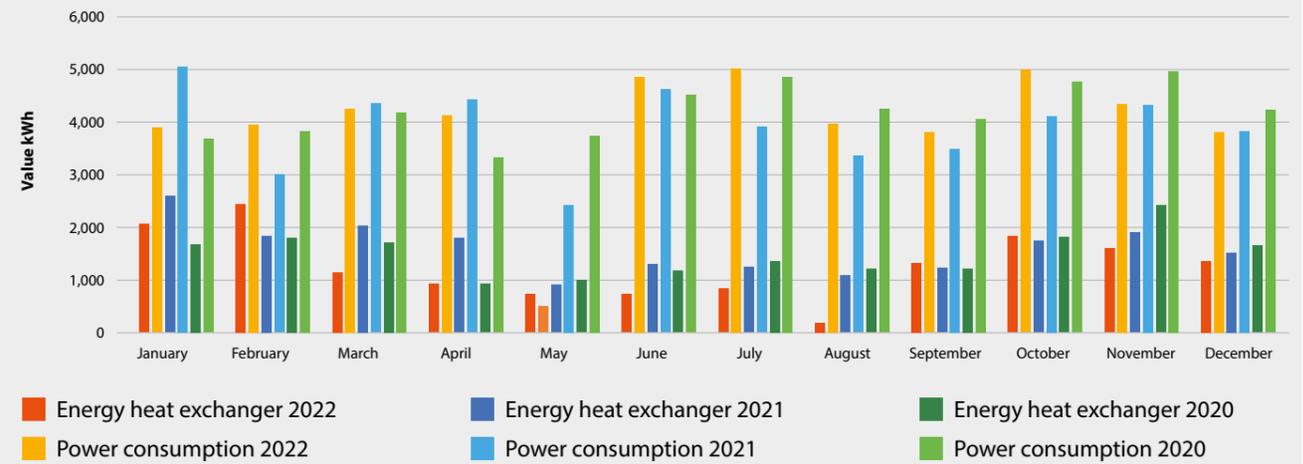
Taking into account that even with state-of-the-art compressors – depending on the honesty of the literature – only about 20 % of compressed air is recovered from 100 % electricity, then the efficiency of our entire system never falls below 46 %. That doesn't seem to be much, but it is far better than all the internal combustion engines in current motor vehicles.



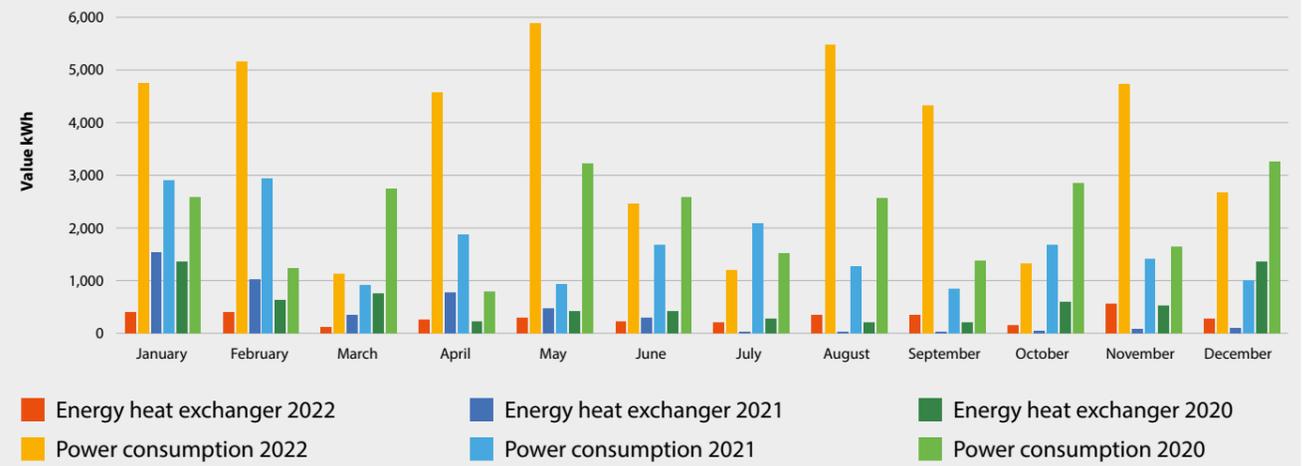
© Zedler-Institut

COMPRESSORS – PROCESS WASTE HEAT USED

Compressor Alup 14 from 2020 to 2022



Compressor Alup 23 from 2020 to 2022



Unfortunately, it was detected only during the evaluation that the heat exchanger had recovered significantly less process waste heat in percentage terms than in previous years. The analysis in the technical department revealed that only one of the two pumps was working. This deficiency has now been remedied.

The significantly higher monthly consumption reflects very well the growth in turnover in the testing operations of more than 50 % in 2022.



Kevin Togonal checking the compressed air network for possible leakages

WASTE MANAGEMENT

Sorting by type into the collection waste containers of external disposal companies (paper bank, organic waste collection bin, glass collection bin, paper collection bin, recycling bin, separate containers for alu scrap and steel chips as well as further waste metals, electronic scrap, batteries and inner tubes)



© Zedler-Institut



© Zedler-Institut



© Zedler-Institut

Prepared for real recycling
Shelf with sorted, already used packaging material

| | |
|---|---|
| <p>PAPIER</p> <p>Das darf rein:</p> <ul style="list-style-type: none"> Briefumschläge Info: Umschläge DIN A4 werden gesammelt und im Gutachernachb verwendet Kataloge Eierschalen Füllmaterial von Versandkartons aus Pappe, Papier & Karton Zeitung, Zeitschriften <p>Info: Backertüten werden gesammelt und als Biomülltüten verwendet</p> | <p>VERPACKUNG</p> <p>Das darf rein:</p> <ul style="list-style-type: none"> Milch- und Getränkekartons, Nudeltüten Shampoo- und Spülmittelflaschen Joghurt-, Sahne- und Quarkbecher Verpackungsfolien, Luftpolsterfolie, Styropor Kunststoffschalen und -folien für Lebensmittel Verpackungsfolien (schmutzig) <p>Info: Verpackungen sollen leer oder löflein sein – nicht extra auspulsen. Verpackungsbestandteile voneinander trennen, z. B. Deckel entfernen und lose einwerfen, nicht stapeln. Konservendosen und leere Spritzen werden in der „Metall allgemein“-Wanne entsorgt.</p> |
| <p>BIOMÜLL</p> <p>Das darf rein:</p> <ul style="list-style-type: none"> Gemüse-, Salat-, Obstabfälle Eier- und Nusschalen Kaffeefilter Teebeutel Pflanzen-, Gras- und Heckenschnitt Laub und Unkraut Spielreste (leht und gekocht) Käse-, Fleisch-, Wurst- und Fischreste Brot- und Backwarenreste Papierschutt (handtücher, taschentücher, servietten) <p>Info: Nicht in Plastiktüten verpacken. Ständes alle Backertüten sammeln und für den Biomüll benutzen.</p> | <p>RESTMÜLL</p> <p>Das darf rein:</p> <ul style="list-style-type: none"> Keilicht Staubsaugerbeutel Porzellan und Keramik Spiegel Kapseln, Spielzeug Musik- und Videokassetten Gläser Zigarettenkippen (ausgeglüht) Textilien und Schuhe Tropfen Katzenkot Dübel und Nägel mit festem Einband |
| <p>GLAS</p> <p>Das darf rein:</p> <ul style="list-style-type: none"> Einwegflaschen Kornervergläser Sonstige Verpackungsglas <p>Info: Glas sollte leer oder löflein sein und ohne Deckel. Behälter stehend sammeln.</p> | <p>ALTPAPIER</p> <p>Das darf rein:</p> <ul style="list-style-type: none"> Shredderpapier Kartons (verbraucht) Schachteln (verbraucht) Wellpappe (verbraucht) <p>Info: Sammlung noch verwendbarer Verpackungsmaterialien in der Warenwirtschaft.</p> |
| <p>METALL ALLGEMEIN</p> <p>Das darf rein:</p> <ul style="list-style-type: none"> Konservendosen leere Spritzen Deckel Stahlschrott Metallpläne | <p>ALU (keine anderen Metalle)</p> <p>Das darf rein:</p> <ul style="list-style-type: none"> Aluschalen Alufolie Aluspäne Alufelgen |
| <p>GESONDERTE SAMMLUNG</p> <p>Das wird separat gesammelt:</p> <ul style="list-style-type: none"> Elektroschrott (Recycling-Station) Reifen und Schläuche (Recycling-Station) Batterien und Akkus (Fahrradwerkstatt) | |

Specially made signs were installed for the respective containers to ensure sorting by type

UPCYCLING

With creativity and technical skills useful things (or is this already art?) can be created from bicycle components which not only fascinate bicycle enthusiasts.

In our company building we refrained from buying door handles, coat hangers, toilet paper holders, pen holders, towel holders, wall clocks and key tags and made them from bicycle components. This not only saved resources and energy in our company, but has meanwhile fascinated many hundreds of visitors in the building and in particular in the seminar area and inspired them to copy. Instead of disposing of irreparably damaged bicycle components (some of which are made of non-recyclable carbon), we re-use them.



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A variety of design options: old chains become key tags, handlebars become toilet roll holders, stems become door openers and rims become clothes hangers



Johannes Kreißig, Managing Director of DGNB (German Sustainable Building Council), was extremely pleased with the results during the presentation of the plaques and the certificates. With a degree of performance of 89.3% in the "Buildings in Use" system, the Zedler-Group took the 80% hurdle for Platinum more than clearly.

Platinum and Climate-Positive – this combination has only been presented twice worldwide by DGNB (German Sustainable Building Council). One of the buildings was built by the Zedler-Group to work in it.



SUPPLIERS – AWARDED

When selecting our suppliers it is important to us that their business management is ecological and socially compatible. Many of our suppliers have already been awarded for their sustainable and ethical business management.

For example:



Ensinger Mineral-Heilquellen | Among others regional prize winner "Business Award for the Environment"; "Medium-Sized Company Award for Social Responsibility", both in 2014; climate-neutral company



Electricity plant EWS Schoenau eG | The rebels among the energy suppliers have been making electricity from hydropower and other sustainable sources for about 30 years; i.a. German Environmental Award 2013, European Solar Prize 2003, Eco Manager of the Year 1996



Frosch | I. a. winner of the German Sustainability Award 2021



Goldeimer | I. a. also member of BNW e. V., ZEIT WISSEN-Prize – Mut zur Nachhaltigkeit – Encouraging Sustainability 2016, Project Sustainability 2018 and Top 3 Next Economy Award



Interstuhl-Büromöbel | I. a. DGNB gold-certified company building; regional prize winner "Business Award for the Environment" 2010 and 2016



Luchterhand Bio-Catering | I. a. also member of BNW e. V. and also signatory of WIN Charter, certified organic cooking; climate-neutral company



Mader Druckluft | I. a. also member Company for Climate Protection and signatory of WIN Charter; regional prize winner "Business Award for the Environment 2014"; Top 3 German Sustainability Award in 2015 and 2018



Olymp | Zedler corporate wear, i. a. climate-neutral company headquarters and only at 5.5 km linear distance from the Zedler-Group



Ortlieb | I. a. Eurobike Award in gold 2021, cooperation with GREENPEACE, certified by ADFC as bicycle-friendly company, also VSF member



Sick-Messinstrumente | I. a. regional prize winner "Business Award for the Environment" 2014



Vaude | Zedler corporate wear, i. a. also member of BNW e. V.; no. 1 in the ranking of sustainability reports 2019, regional prize winner "Business Award for the Environment" 2018; German Sustainability Award 2015



PRIZE WINNER BUSINESS AWARD FOR THE ENVIRONMENT



© Zedler-Institut





SOCIAL CORPORATE MANAGEMENT

FAIR TERMS

All employees are permanently employed on fair terms. Temporary work contracts, temporary employment agencies, etc. are not an option for us.

PART-TIME EMPLOYMENT

Since the foundation of the company we have offered part-time jobs to make it easier for job-returnees to re-enter into working life.

HEALTH

The Zedler-Group has long since attached great importance to promoting cycling. Change rooms, shower facilities, corporate towels and a drying room have been provided for quite a long time. The water dispenser as well as the coffee machine are available for free to all employees.

Five ventilation systems ventilate the building all-day with tempered and pollen-free fresh air and depending on the occupancy of the individual rooms.

WORK PLACES

All office work places have meanwhile been equipped with two low-radiation monitors. Bright work places with many plants and mainly real wood desks ensure an agreeable working climate. Employees are actively supported by the management if they wish to work from home.

PROTECTION

There are extensive personal protective equipment and other auxiliaries (sack truck, lifting carts, etc.) available for the daily work routine in the test laboratory to reduce physical stress or health risks as far as possible. All laboratories are noise-damped with targeted noise prevention measures.

The involvement and further training of employees into the organization of work, into ergonomics and process planning as well as into occupational safety and health protection in order to meet the individual needs and to enhance the motivation are a given in our company.



Large, friendly and bright – workplaces can be places of well-being. And to keep it as it is, the busy test labs are noise-reduced.



Communication point with tea maker, coffee machine and water dispenser, one of two kitchens for the employees



ERGONOMICS

One of our employees receives permanent further training in the field of ergonomics and ergonomic workplace design and implements the findings gained in the company.

An internal newsletter explaining in detail how implementation by the employees is possible was sent around.

High-quality furniture and the possibility of constantly changing between different sitting and standing options are integral part of our working environment.

BARRIER-FREE AND DISABILITY-FRIENDLY

The building was designed with barrier-free and disability-friendly aspects in mind. This includes among other things the disabled-friendly lift, the barrier-free hallway and a barrier-free toilet.

8.41 days / year per employee reported sick or in quarantine due to the situation. (18.2 days is the average in Germany, source: umbrella organisation of Germany's company health insurance funds).

No temporary workers

No temporary work contracts

Wages clearly above minimum wage and no gender gap



Standing, sitting on the ergonomic office chair or the sitting ball, just as it pleases



Friendly and barrier-free ways: Timber and exposed concrete as far as the eye can see

EMPLOYEES

42 % of women
4 different religions

WOMEN'S QUOTA

We do not need gender diversity or other buzz words. Women and men have always been welcome on equal terms as employees and as apprentices. Currently 13 of the 31 permanently employed team members are female.

RELIGIOUS DIVERSITY

At the Zedler-Group Protestants and Catholics as well as Muslims, members of the free churches and atheists work constructively together.

AGE STRUCTURE

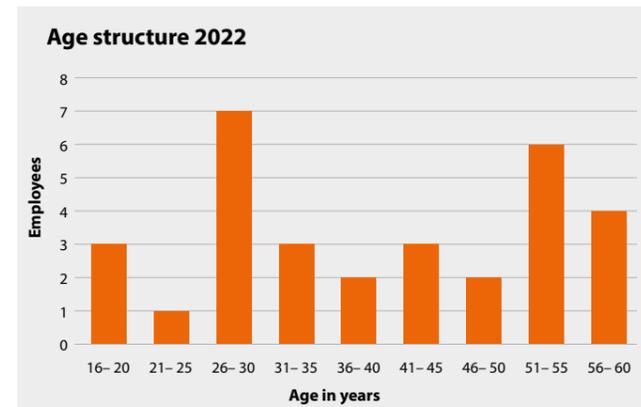
The age structure at the Zedler-Group is shown below. The average age is around 39.9 years. The large groups are due to a few long-time employees who have also reached a respective age as well as to various students who were taken over after successfully completing their bachelor/master theses. This structuring is also reflected in the average period of employment.

PERIOD OF EMPLOYMENT

The average period of employment of the present employees is 8.77 years.

However, this figure is not higher due to the considerable growth of the company especially in the past 10 years, as the team was joined by a few new members. Many of them are bachelor or master graduates who wrote their theses at the Zedler-Group before.

The new apprentices and interns hired in 2022 were not included in the average period of employment.



The young generation grows in



Even the signs to the loo have a bicycle character

OFFICE OPERATION

MATERIAL CONSUMPTIONS

No additional purchases of cardboard boxes since the foundation of the company. We re-use sent cardboard boxes as well as surplus, used cardboard boxes from the neighbouring bicycle shop.

PAPER

The paperless office has been pushed forward with customers and partners, e.g. insurers in the expert's report department, since the beginning of the technical possibilities. Today, 99.9 % of the correspondence is exchanged electronically. Necessarily, one exception are some few expert's reports for the courts.

- » Recycling paper
- » FSC paper
- » Blauer Engel
- » EU Ecolabel

Double-sided printing: if printing then efficient paper use is standard in our everyday routine in the office. Misprints of forced one-sided printings of expert's report for the courts are re-used by us as scratch paper.

PRINTING

Offsetting the CO₂ emissions generated in the course of the printing of the user manuals due to the logging, the emissions of paper production and those of transport. In order to make this offsetting project tangible and monitorable, investments are made in reforestation in natural forest in Germany.



Both the internal paper (mainly routing slips for tests and expert's reports for the courts) as well as the paper used for printing the user manuals is selected under sustainability aspects

0 % of additionally purchased packagings
99.9 % of electronic correspondence
100 % of printing of operating instructions and user manuals on FSC-paper, climate-neutral printing and transport

Climate-neutral dispatch with DHL

KLIMA-ZERTIFIKAT
über die Pflanzung von 4.378 Bäumen

| | |
|----------------------|--|
| ausgestellt für | ZEDLER - Institut für Fahrradtechnik und -sicherheit GmbH |
| Klimaprint-ID | D3238922 |
| Ausstellungsdatum | 25. Januar 2023 |
| Kompensiertes Objekt | Fahrrad Bedienungsanleitungen 2022 |
| Projekttyp | Naturwaldaufforstung |
| Klimaschutzprojekt | 3.287 x Eiche in Merseburg I 245 x Eiche in Merseburg II 312 x Lärche in Merseburg II 434 x Wildapfel /-kirsche /-birne in Merseburg II 100 x Eiche in Zollhaus VI |

Merseburg I
Ein Natur-Waldstück liegt zwischen Hufe und Zelle (Dachboden-Anlage). Es ist Teil des Landschaftsschutzgebietes „Jense und Tausen“.

Merseburg II
Ein Natur-Waldstück liegt zwischen Hufe und Zelle (Dachboden-Anlage). Es ist Teil des Landschaftsschutzgebietes „Jense und Tausen“.

Zollhaus VI
Ein Natur-Waldstück liegt zwischen Hufe und Zelle (Dachboden-Anlage). Es ist Teil des Landschaftsschutzgebietes „Jense und Tausen“.

Alle CO₂e-Emissionen, die bei der Umsetzung des o. g. zu kompensierenden Objekts entstanden sind, wurden erfasst und werden durch den wachsenden Wald ausgeglichen.

KLIMAPRINT® D3238922
CO₂-NEUTRALISIERUNG DURCH ÖKOLOGISCHE WALDPROJEKTE

Planungen, Januar 2023

Climate Certificate documenting the planting of 4,378 trees in Saxony-Anhalt



SOCIAL SUSTAINABILITY

Many times the amount that would be spent on Christmas presents is often donated by us to those who are less lucky and fortunate in terms of health. In doing so, we consider selected, regional projects, but also organisations well-known in the industry.

For many years, **> 10 %** of the expected profit has been donated by the Zedler-Group each year



- » Since 2014, we have donated 30 Cent per kilometre cycled by the "Zedler team" at the cycle tours Ludwigsburg and Sachsenheim. 10 bicycles especially designed for African conditions were financed and delivered.
- » In 2015, as many as 21 robust Buffalo bikes were donated for Africa.
- » In 2016, 11 bicycles and numerous accessories were donated.
- » In 2017, 1,100 € could be donated again, the sum being doubled by World Bicycle Relief (on the occasion of a special action), i.e. as a result 16 bicycles and further accessories were donated also in 2017.
- » In 2018 and 2019, the "proceeds" were also on a similarly high level.
- » In 2020 and 2021, due to the situation, the team's kilometre performance from the "City Cycling" campaign was used instead of the cycle tour.
- » In 2022, all in all 143 new Buffalo bicycles were donated on the occasion of a doubling action

But this is only a small part of the donation commitment.

| | | | |
|--|---|--|---|
| | Aktion Deutschland Hilft e.V. | | POEMA Deutschland e.V., poverty and the environment in Amazonia |
| | Doctors Without Borders | | SOS Children's Village |
| | Boarding school construction in Karansi, Tanzania | | TASSO Tierschutz e.V. (animal protection) |
| | Besi & Friends Foundation | | Unicef |
| | Fernanda Lange School in Ayoma, Ghana | | World Bicycle Relief |
| | Help for Children | | WWF |



VOLUNTARY ACTIVITIES

| | | | |
|--|---|--|--|
| | AGFK – Work Group Cycle and Pedestrian-Friendly Communities in Baden-Wuerttemberg; founding member advisory group | | DVM Workshop Bicycles & e-bikes; member of programme committee and speaker |
| | BdFS – Bundesverband der Fahrrad-Sachverständigen e. V. (German association of bicycle experts); founding member and chairman | | CCI-Stuttgart; founding member of board of examiners "Bicycle mechanic"; two members in the board of examiners |
| | Bike Charta; co-creator and signatory | | Climate Alliance – City of Ludwigsburg; cooperation at alliance of entrepreneurs |
| | DIN – Deutsches Institut für Normung e. V. (German Institute for Standardisation); cooperation | | Zukunft Fahrrad e. V.; founding member and deputy chairman |

MEMBERSHIPS/PARTICIPATION

| | | | |
|--|--|--|---|
| | BNW Bundesverband Nachhaltige Wirtschaft e. V. (German association of sustainable economy); Member and speaker Umweltprofis von morgen (Environmental pros of tomorrow) | | Company for Climate Protection; member |
| | BVMW – Bundesverband mittelständische Wirtschaft (German Confederation of Small and Medium-Sized Enterprises), Unternehmerverband Deutschlands e. V.; membership and participation in research project | | VSF – Verbund Service und Fahrrad e. V. (German service and bicycle association); supporter and speaker |
| | DGNB – German Sustainable Building Council; member | | Baden Wuerttemberg's WIN Charter; signatory |



PROMOTION OF YOUNG PEOPLE AND EDUCATION

EDUCATIONAL PARTNERSHIPS



Firmly established educational partnerships with three schools, i.a. educational partnership with Lichtenstern-Gymnasium in Großsachsenheim – “Junior-Engineer-Academy”.

Set up of a bicycle workshop with equipment, tools and practice material at the charge of Zedler-Institut at the school for children with special needs in Marbach in 2013.

Charity partnership with Ludwigsburg's cycle club RSC-Komet and Lichtenstern-Gymnasium. Both of them are organisers of one cycle tour per year to which we invite employees, customers and business partners and pay the costs of participation. By taking over the costs and with our additional donations, we support the youth work of RSC Komet and the Gymnasium.

SCHOOL CLASSES



Further education at schools and with schools is a matter of heart to Zedler-Institut. Therefore, school classes, e.g. those of the bicycle mechanic apprentices of the CCI Stuttgart and the Chamber of Crafts Stuttgart as well as of the BBW Waiblingen, are regular guests.

DHBW DUAL STUDY PROGRAMME



We have been a partner of the Baden-Wuerttemberg Cooperative State University in Stuttgart since 2018. One dual student has already finished her study programme in our company; we additionally integrate the following study programmes in theory and practice:

- » Business Administration – International Business
- » Business Administration – Digital Business Management
- » Mechanical engineering

In addition, we offer the opportunity to take up further dual study programmes with us, which we will include in our portfolio depending on demand.

SPONSORING



Sponsoring of our working student Julian Großkopf, who is a successful runner and has won several German and European championship titles in his age group in triathlon. Support from the Zedler-Group with cycling material, repairs and jerseys.



THESES



For many years, we have been offering students the opportunity to write their theses – bachelor, master or technical theses – at our company.

External theses enjoy wide acceptance at more and more universities and have already been written successfully at Zedler-Institut by numerous graduates of bachelor and master programmes as well as of technicians and graduate engineers.

PROMOTING YOUNG PEOPLE IN GENERAL



In particular, promotion of socially disadvantaged adolescents with special needs. One of our educational partnerships is a school for children with special needs and one of our employees graduated from such a school.

We offered him an apprenticeship, accompanied him until he successfully passed his exams and now employ him as assistant to technology. And what is more, he makes a great job in his field.

APPRENTICESHIP



Since 2004, we have trained young people in various professions. Currently, we have three apprentices. First training company in Baden-Wuerttemberg for bicycle mechanics in 2004. One of the first training companies for two-wheeler mechatronic technicians (specialising in bicycles) in Baden-Wuerttemberg in 2014.

We are currently training apprentices for the following jobs:

- » Media Managers
- » Apprentices Office Management Assistant
- » Bicycle Mechanic
- » Two-Wheeler Mechatronic Technicians

SPONSORSHIP OF CHILDREN



Sachverständigenbüro für Fahrradtechnik Zedler have been supporting godchildren since 2005, currently Edgar from El Salvador.

Zedler – Institut für Fahrradtechnik und -Sicherheit GmbH have been supporting godchildren since 2010. Currently, they support Rasmata from Burkina Faso.

Gesellschaft der Fahrrad-Sachverständigen mbH (GDFS) have been supporting our godchild Zahira from Ecuador since 2022.



INTERNAL AND EXTERNAL COMMUNICATION

INFORMING THE EMPLOYEES

Visualisation for all employees and visitors through direct access to the building computer located at the entrance. Domovea and SolarLog display the updated data relating to energy consumption and generation as well as the water values and waste and recycling data. In addition, the relevant facts from the monthly evaluated data recording are communicated verbally on a regular basis.

- » Smarthome
- » Data recording
- » SolarLog
- » Internal newsletters



Smarthome – the computer at the employee entrance shows in real time what is going on in terms of energy

SUSTAINABILITY REPORT

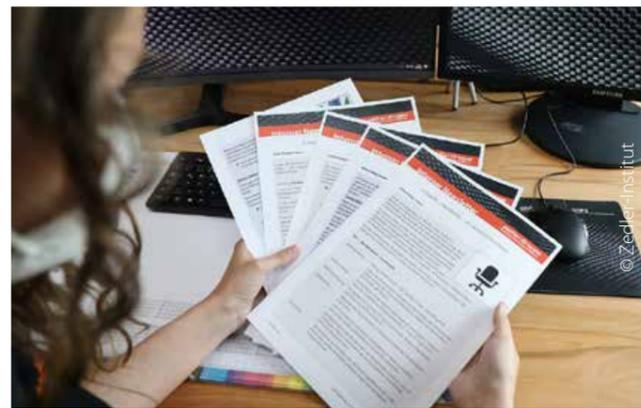
The sustainability report is an important component in our corporate communication. In our reporting on sustainability, we create trust and credibility with our customers, our employees and the public.

WIN CHARTER

For us as a company, signing the WIN Charter is a clear commitment to our economic, ecological and social responsibility. Sustainability is a competitive factor with a great external effect.



WIN Charter – our voluntary self-commitment to sustainability



Internal newsletters address current topics ranging from ergonomics, IT tips and energy-saving tips to preventive health care



Events are held internally, but are also regularly attended by employees externally (here the extreme athlete Jonas Deichmann visiting the company, as speaker at an event of Wuerttemberg's sports physicians)



SOCIAL MEDIA

The individual newsletter articles are published across the channels one after the other.

- » Xing
- » Facebook
- » LinkedIn

WEBSITE

Since 1999, we have been providing comprehensive information on our website, which also contains an archive of publications, TV reports and information material about our fields of business.



External newsletters provide the customers with information, e.g. on developments in the field of bicycle testing technology or judgements as to the technical documentation, and regular reports on our multiple commitment



VeloTOTAL – online report on the presentation of the certificate to Zedler-Institut as Company for Climate Protection

bike – print report on the sustainable way of working of the Zedler-Group

LECTURES

Sharing knowledge on events, e.g. trade fairs and workshops, has been a regular component since the foundation of the company.

PUBLICATIONS

- » special-interest magazines and trade journals (RadMarkt / Velobiz / SAZbike)
- » Eurobike Show Daily
- » cycle magazines (BIKE / EMTB / MY BIKE / TOUR)
- » media reports on TV and the radio
- » press mailing list local press



TV shootings for good, durable and safe bicycles and electric-assisted bikes – far more than 50 in the past years



Company visitors can convince themselves of the technical finesses of the building during tours through the company (visitor here Alexander Rosenthal, Head of Policy at the lobby association Zukunft Fahrrad)



AWARDS AND PRIZES

2022

Award presented by the Federal Ministry for Economic Affairs and Climate Action, the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection and the Association of German Chambers of Industry and Commerce as member of the Association of German Companies for Climate Protection.



2021

"Climate-Positive" Award, presented by Johannes Kreißig, chairman of the German Sustainable Building Council (DGNB).



2020

Winner of the "Business Award for the Environment" in the category "Retail and Services", Baden-Wuerttemberg's Ministry for the Environment, Climate and Energy Economy; awarded via video link by the Minister of the Environment Franz Untersteller.



2020

Certification "Buildings in Use" with the highest award level "Platinum" and the second best result ever achieved with a degree of performance of 92.2 per cent, awarded by Johannes Kreißig, chairman of the German Sustainable Building Council (DGNB).



2019/2020

"City Cycling" 2020: total distance of 7,632 km cycled (within 3 weeks) with a saving of 1,121.8 kg CO₂. Certificate presented by the Mayor of the City of Ludwigsburg Michael Ilk



2018

Prize winner "Grand Prix of Small and Medium Business" of the Oskar-Patzelt-Foundation under the patronage of Baden-Wuerttemberg's Minister for Economic Affairs, Work and Housing Dr. Nicole Hoffmeister-Kraut MdL



2018

Prize winner of VSF..Ethics Prize of the cycle industry for the future-oriented, ecologically well thought out to the last detail new company headquarters in the Swabian city of Ludwigsburg"



2016

Award as Top Ten Company within the State Prize for Young Companies of L-Bank, presented by Baden-Wuerttemberg's Minister President Winfried Kretschmann



2015

Award as a "Hero of the new mobility" for graduate engineer Dirk Zedler by Baden-Wuerttemberg's Minister of Transport



2014

Finalist of the "Business Award for the Environment" in the category "Retail and Services", Baden-Wuerttemberg's Ministry of Environment, Climate and Energy Economy



2014

Prize winner "Medium-Sized Company Award for Social Responsibility" Baden-Wuerttemberg's Ministry of Finance and Economy and Caritas



2011

Prize winner: Statewide competition award "Baden-Wuerttemberg's most bicycle-friendly employer" of the German Environmental Management Association (B.A.U.M. e. V.), presented by Baden-Wuerttemberg's Ministry of Transport and Infrastructure
2nd place in same-named nationwide competition



2009/2013

Award by German health insurance company AOK in their "Bike to work" campaign



QUOD ERAT DEMONSTRANDUM – WHICH WAS TO BE PROVEN*

* “Zwischen Umwelt und Wirtschaft gehört kein oder”
(Between environment and economy doesn't belong an or)

Cem Özdemir, Alliance 90/the Greens 2017



© Zedler-Institut

Grand Prix of Small and Medium Business of the Oskar-Patzelt-Foundation 2018

Finalist Grand Prix of Small and Medium Business 2016

OUTLOOK

The year 2022 has shown us more than clearly that sustainability is an ongoing process that needs attentive team members.

It was only through our monthly, almost pedantic data collection that we have been able to detect two defects. One of them has wasted (or would have wasted) plenty of fresh water uselessly and the other one has caused additional heating costs or would have done so in the future. What we have learned from this: Don't just let the monitoring run, but discuss it regularly.

In the second half of the year, we initiated two projects that take into account our enormous growth of over 50 % in 2022 in combination with the higher costs of purchased electricity. In spring 2023, the photovoltaic system on the projecting roof was connected to the power grid. In early summer, the system will be extended to the roof overhangs in the south and east. This additional performance of about 15 % is designed in a way that the company use is in the foreground.

Due to our tremendous growth in 2022, we were not able to calculate scope three of the Greenhouse Gas Protocol (GHG). This target postulated in the last report appeared to us as justifiable with our specific company portfolio. In our materiality analysis we have worked out a clearly different potential for our service company. As a result we prioritised action over theoretical calculation once again.

In this respect, we have further targets and are looking forward to the new DHBW students to venture on these topics in the next months.

CO₂-neutral printing on FSC® paper
 Since February 2021 for all printing jobs –
 without extra charge



Final photograph of the ceremony for the six awarded companies at the Federal Ministry for Economic Affairs and Climate Action

© Klimaschutz-Unternehmen e.V.



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zedler-Gruppe
Technology and Passion for Bicycles