

THE
CIRCULAR
WAY

GROWTH
INNOVATIONS
CLIMATE NEUTRALITY
E-MOBILITY RESOURCES
ZERO EMISSIONS
RENEWABLE ENERGY
POSITIVE ENERGY BUILDINGS
CIRCULAR ECONOMY
MATERIAL HEALTH
STAKEHOLDER DIALOGUE
SDG EMPLOYEE HEALTH
GRI EDUCATION TALENT ACQUISITION
GLOBAL COMPACT FAIR SUPPLY CHAINS
HUMAN RIGHTS EQUAL OPPORTUNITIES
DIVERSITY

**DRIVING FORWARD
SUSTAINABILITY
TOGETHER**

Magazine on sustainability in the Würth Group



1 BIG FAMILY

6 CONTINENTS

9 CULTURAL GROUPS

12 LANGUAGES

88 NATIONS

> 400 COMPANIES

> 40,000 SUPPLIERS

> 83,000 EMPLOYEES

> 4,000,000 CUSTOMERS

ONE WORLD, ONE WÜRTH, ONE FAMILY.

A committed European, but above all a global activist

Currently, the Würth Group consists of over 400 companies in more than 80 different countries with over 83,000 employees, more than 33,000 of which are working on the sales force. According to its preliminary annual financial statement, the Würth Group reported a sales volume of EUR 17.1 billion for the 2021 fiscal year.

A new record.

Global market leader in the production of fastening materials

The Würth Group is the world's market leader in the development, production, and distribution of assembly and fastening materials. The product range for the trades and industry includes more than 125,000 products: from screws, screw accessories, and anchors to tools, chemical-technical products, and personal protective equipment.

The Allied Companies of the Würth Group, which either operate in business areas related to its core business or in diversified business areas, round off the range by offering products for DIY stores, material for electrical installations, electronic components such as circuit boards, and financial services.

We are a family business

Today, more than 4 million customers around the world place their trust in the Würth Group. The long-term success of the Würth Group is underpinned by real people and an extraordinary corporate philosophy. Würth is a family business that was founded in 1945 by Adolf Würth. Today's Chairman of the Supervisory Board of the Würth Group's Family Trusts, Prof. Dr. h. c. mult. Reinhold Würth, took over the business at the age of 19 after his father Adolf passed away and expanded the company in the years that followed. Starting during the period of reconstruction in post-war Germany, he turned the former two-man business into a globally operating corporation.

Our philosophy

We owe it to Reinhold Würth that the Würth Group has a clearly defined business model: This includes a strong brand policy, a future-oriented product strategy, customer proximity, a clear commitment to quality, thinking in terms of visions, and, last but not least, a strong corporate culture. Bettina Würth, Reinhold Würth's daughter and Chairwoman of the Advisory Board of the Würth Group, together with the members of the Central Managing Board see to it that these values are filled with life and developed further.



We have only one earth, and only one chance to make life sustainable on this planet.

Even today, climate change and the resulting natural disasters are wreaking havoc on the world. Earth Overshoot Day, the day on which global resources are used up for the current year, landed on **29 July** in 2021. Everything that we consumed after this date was at the expense of future generations. To counteract this and work toward achieving the 1.5 °C target from the Paris Agreement, we have to stop talking and start acting. But how can we grow economically while promoting good health and fair cooperation in an environment characterized by diversity without continuing to exploit the earth's resources and pollute the environment with toxins and waste?

A new forward-thinking economic model offers potential solutions: the circular economy, a regenerative economic system in which raw resources, materials, and products circulate in loops without any loss in availability, quality, or value. We would no longer throw away, dispose of, and destroy things, but rather use existing resources over and over again, creating added value and benefits for all stakeholders in the process. This circular value creation system can only be effective if we work together to implement it. And we aim to do just that.



With **THE CIRCULAR WAY**, our intention is to highlight the opportunities and potential that active environmental protection and the sustainable use of resources represent. For companies in the Würth Group and how we can achieve these objectives together and in cooperation with our customers, suppliers, and employees. Doers wanted.

Let's promote sustainability together!

CONTENTS

6 SUSTAINABILITY AS AN OPPORTUNITY

12 THE POWER OF THE WÜRTH COMMUNITY: DEVELOPING SOLUTIONS TOGETHER

14 CLIMATE NEUTRALITY

- 16 Useful information: Why are forests so important for climate protection?
- 19 Up to 53 % less CO₂ in industrial logistics
- 21 Interview: Being prepared for CO₂ emissions trading with solar power
- 22 3,500 m² of roof space provide solar power for screw manufacturing in Austria
- 25 100 % green power and an in-house solar power system
- 26 Alternative drive concepts for zero emissions in the mobility sector

28 MATERIAL LIFE CYCLES

- 30 Useful information: Why are circular supply chains so important for sustainable material life cycles?
- 32 Interview: Effective CO₂ reduction via product design
- 34 Circular materials for a healthy and positive building culture
- 37 Wooden materials transform new industrial buildings into carbon sinks
- 39 Recyclable carbon fibers for 3D printing
- 40 Verified circular quality for VARIFIX® system products and ORSY® shelving

42 SOCIAL STANDARDS

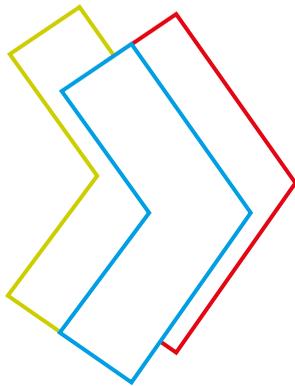
- 44 Useful information: Why is human rights due diligence so important in the supply chain?
- 46 Interview: Protecting social standards in the global supply chain
- 49 Sustainability in the supply chain
- 50 Ensuring delivery standards

52 THE WÜRTH GROUP'S SHIFT TO A CIRCULAR ECONOMY

- 53 Sustainability reporting
- 54 Global frameworks
- 57 Learning from each other
- 58 Vision 2045: Connect, amplify, inspire
- 59 THE CIRCULAR WAY online, contact, imprint

SUSTAINABILITY AS AN OPPORTUNITY

Circular economy and climate neutrality¹ are the key for sustainable growth that values and preserves the livelihood of our descendants. But how can we stop consuming resources?



The “take, make, waste” economic principle from the Industrial Revolution—which involves exploiting raw materials, manufacturing products, and then throwing those products away—not only consumes resources, but also produces high CO₂ emissions. Thanks to the circular economy, quality is now understood as retaining value instead of creating waste. This means taking into account the useful life across the entire product life cycle and adapting the product design so that it is possible to reclaim virtually one hundred percent of all materials used.

At the same time, this involves avoiding, reducing, compensating, and binding CO₂ emissions to effectively combat climate change. Product benefits, quality criteria, and workflows have to be fundamentally redefined, which will require a sustainable culture based on values and innovation. Circularity, climate neutrality,¹ social justice, intergenerational justice: these are all values that point the Würth Group in the right direction for a sustainable future together with our customers, suppliers, and employees.

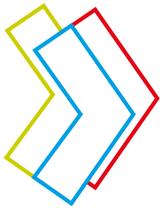
¹ Climate neutrality according to Greenhouse Gas Protocol, see pages 14–15



» The solution lies in placing our value system and our culture on a foundation that is fair to future generations. «

BETTINA WÜRTH

Chairwoman of the Advisory Board of the Würth Group



Four questions for the Chairman of the Central Managing Board, Robert Friedmann, about the current situation in the construction industry

1 Mr. Friedmann, let's take a look at the current situation: Construction materials have become scarce during the corona pandemic. What is the situation like at Würth currently?

Of course, we have also felt the impact of the global supply chain crisis. There are bottlenecks with the containers. We have to deal with delays of six to ten weeks. On the global market, it is difficult to find semiconductors for our power tools, DIN and standard parts, and raw materials for PU foam and silicone. Our top priority is to maintain the supply chains. Thanks to our many Group-owned production companies, we are able to guarantee deliveries in Germany and Europe, for example, and can supply high-quality, comparable replacements if necessary. In parallel, we are setting up new alternative suppliers. This will allow us to avoid supply problems and become independent of global supply chains.

2 As a result of material bottlenecks and high demand for real estate, construction costs are on the rise. When will this return to normal?

The situation on the procurement markets is extremely tense at the moment. However, we see some individual sectors in which the situation is starting to calm down. This gives us hope that the situation will improve again in many sectors in the course of 2022. Currently, procurement prices are rising, in part due to cost increases in the energy and commodity sectors. In the last several months, however, we have seen how fragile international supply chains can be, which is why further development will depend on our ability to overcome the coronavirus on a global scale.

3 Climate change is becoming increasingly important for the construction and real-estate sectors. How easy is it to cut construction-related greenhouse gas emissions?

As a matter of fact, not much attention has been paid to the building and construction sector so far—unlike the

automotive industry, for example—even though the building and construction sector is one of the biggest emitters of greenhouse gases and is also responsible for producing an enormous amount of waste. Thus, the sector is on the verge of a major transformation. In the future, it will be necessary to manage buildings sustainably, which will mean relying on renewable energy, without sacrificing efficiency. Focus will be placed on buildings that can generate their own power, meaning they can operate with net zero emissions. If you take a look at the construction sector itself, producing construction materials, notably cement, requires a great deal of power and is a major driver of emissions. For this reason, we see that the construction industry is increasingly using alternative and regenerative construction materials, such as wood from sustainable forestry. However, concentrating on renovation work will be much more important when it comes to complying with the Paris Agreement. Manufacturing new materials produces significantly more CO₂ than reclaiming old ones. Renovation work takes advantage of and reuses existing materials. Reuse is a key element of the circular economy. Therefore, the construction industry has great potential for reducing greenhouse gases. A carbon tax on fossil fuels would support the development of renewable energy.

4 Will climate protection drive up prices if materials have to be sustainable and processes have to be adjusted so that they are climate neutral?

At the moment, we do not anticipate this in the medium term. Of course in the short term, we will feel the price increases and the challenges on the procurement markets for various raw materials. The requirements will continue to change, and initial legal provisions have already been introduced. For this reason, the market will quickly correct itself and prices will not rise due to sustainable materials. On the contrary, products that are considered sustainable will be the new standard.



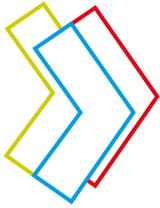
» Climate-neutral and sustainable companies, products, and supply chains will be the new standard. «

ROBERT FRIEDMANN

Chairman of the Central Managing Board of the Würth Group

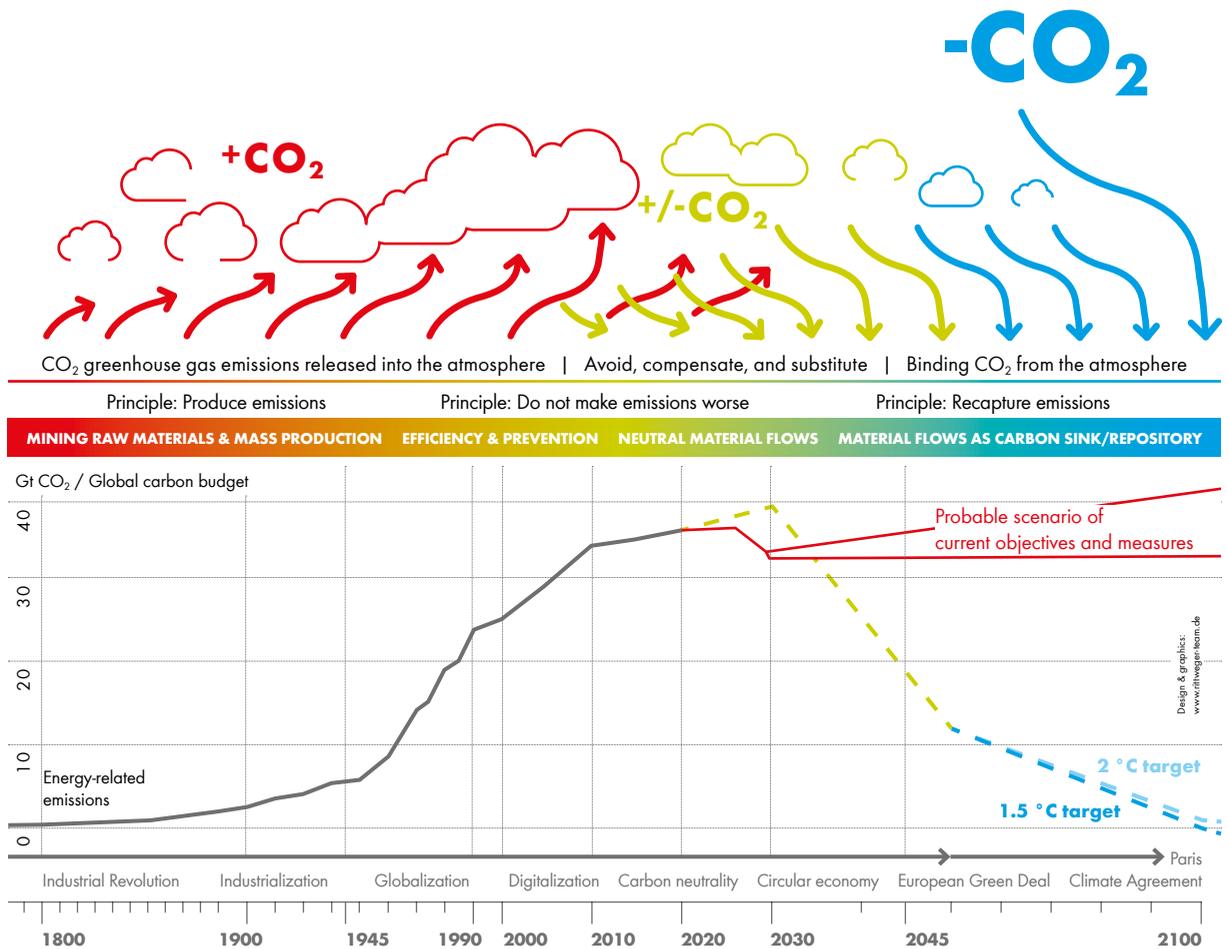
Climate neutrality
+ Material life cycles
+ Social standards

**100 %
CIRCULAR WAY**



The question is how can we effectively support the energy transition based on the circular way?

To achieve this, we first need to take a closer look at the development of CO₂ emissions and their role in our economy. In the wake of the Industrial Revolution and industrialization, both the economy and CO₂ emissions grew exponentially. Today we find ourselves at a decisive turning point. Trying to achieve the 1.5 °C target based on our current objectives and measures does not seem realistic, as illustrated by the chart below illustrates. Therefore, we have to take a giant step forward and, in addition to achieving climate neutrality, also capture carbon dioxide from the atmosphere and bind it in material cycles, for example.

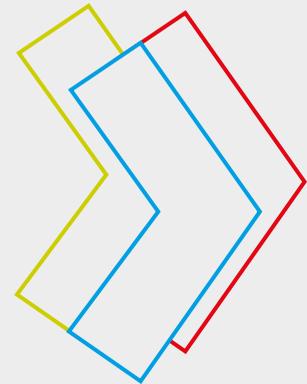


MODEL OF INDUSTRIAL AND ECONOMIC DECARBONIZATION

Principle and classification according to stages of economic development (model by © RITTWEGER + TEAM)

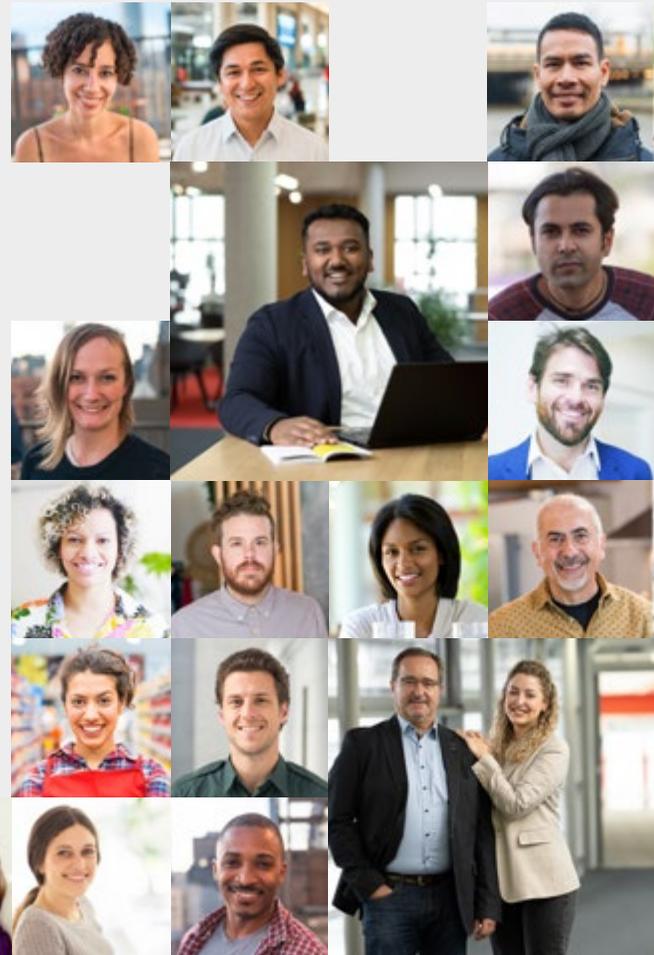
The power of the
Würth community:

DEVELOPING SOLUTIONS TOGETHER



The word “we” is the key
to our success.

We have the necessary solidarity, diversity, potential, and energy, as well as the responsibility to future generations, to create a sustainable, fair, and colorful world through and through. Every individual company, division, team, customer, employee, supplier, and business partner is important and contributes in their own way. We are in an ideal position to make a difference and to do more than we might have thought possible at first glance. Why? Together, we have perspectives from more than 80 countries, viewpoints from over 83,000 people, and a wealth of experience from a wide range of different sectors and from more than 4 million customers around the world. This diversity can help us to make a real contribution to sustainable development across all continents on earth. If we join together and work with our customers and suppliers, we can develop solutions for global challenges and a better future—our future.





» The earth does not need us humans, but we need the earth. This connects us all on our common journey – the circular way. «



CARINA LEBSACK

Head of Corporate Sustainability | Circularity of the Würth Group

CLIMATE NEUTRALITY

The Würth Group bases its understanding of climate neutrality on the scope of the Greenhouse Gas Protocol. For us, this means avoiding or offsetting all direct and indirect greenhouse gas emissions in the long term, even along the supply chain. We can achieve this by concentrating on, for example, renewable energy sources, zero-emission mobility, closing material life cycles, and compensation projects.



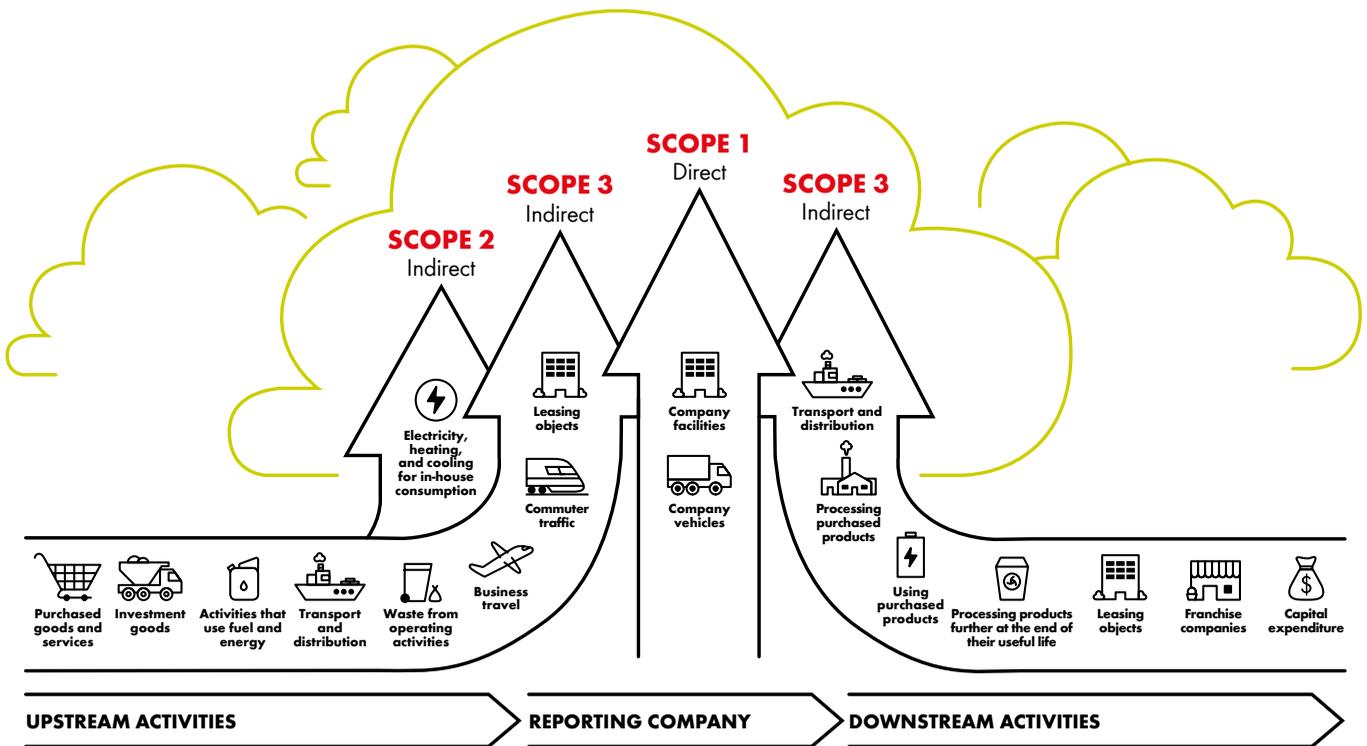
OUR 7 STEPS TO CLIMATE NEUTRALITY:

Scope 1 and 2:

- + Avoiding and reducing**
- + Generating power in-house**
- + Sourcing green energy**
- + Transitioning to electromobility**
- + Not heating with fossil fuels**
- + Offsetting unavoidable emissions
with biodiversity projects**

Scope 3:

- + Climate neutrality in the supply chain**



Greenhouse Gas Protocol: A global accounting standard for greenhouse gas emissions

The Greenhouse Gas Protocol (GHG) was created as part of an initiative by various private organizations and global enterprises and comprises several standards for offsetting the greenhouse gas emissions they produce, including a special corporate standard. The corporate standard is dedicated to calculating greenhouse gas emissions along the entire value and supply chain and reporting them transparently (for example, as a carbon footprint). The GHG Protocol divides the greenhouses gases produced by all business activities into three categories or "scopes":

SCOPE 1

Scope 1 includes all direct, meaning from sources within the company, emissions produced as a result of power generation, vehicles, and production activities.

SCOPE 2

These indirect emissions are produced by energy generated outside the company and purchased, such as electricity, heat, and cooling.

SCOPE 3

Scope 3 contains all other indirect emissions. These include emissions from manufacturing and transporting purchased goods, from distributing and using products, and from disposing of those products. Emissions resulting from business trips taken without a company vehicle and the employees' commute to work are included here.



WEBSEITE

Greenhouse Gas Protocol Corporate Standard
www.ghgprotocol.org/corporate-standard

USEFUL INFORMATION

WHAT ARE WE TALKING ABOUT WHEN WE SAY:

Climate neutral/Greenhouse gas neutral

Not harmful to the environment; the greenhouse gas emissions in the individual scopes of the Greenhouse Gas Protocol are prevented or offset

Carbon neutral

Similar to climate neutral, but only refers to carbon dioxide emissions (CO₂) and ignores other greenhouse gases; no additional CO₂ emissions are produced or CO₂ emissions are offset in full

CO₂ equivalent (CO₂e)

Unit used to standardize the climate impact of all greenhouse gases; indicates how much a greenhouse gas contributes to global warming over a certain period of time compared to the same amount of CO₂

Negative emissions (- CO₂e)

All greenhouse gases that are removed from the atmosphere

Positive emissions (+ CO₂e)

All greenhouse gases that are released into the atmosphere

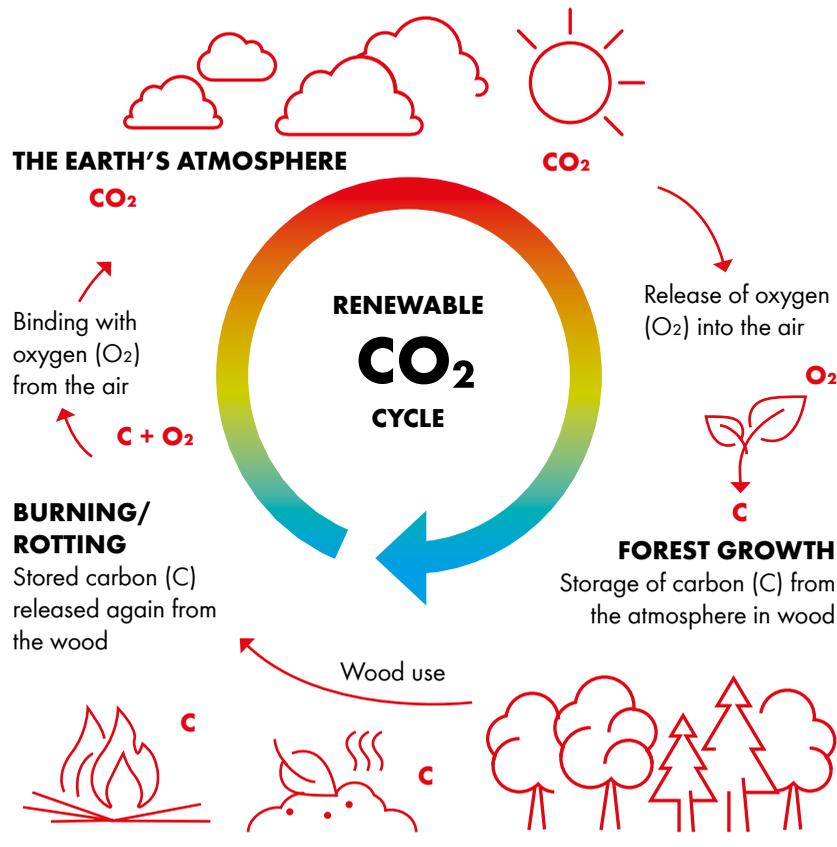
Zero emissions

Refers to a product, process, or other system whose life cycle phases (production, use, implementation, disposal, etc.) do not produce any greenhouse gases; in contrast, net zero refers to the state in which the balance of positive emissions and negative emissions is zero after all compensation measures



Why are forests so important for climate protection?

Forests are the lungs of the planet and one of the most effective carbon sinks. In particular, old-growth and intact forest ecosystems with their living biomass, high biodiversity, and stocks of dead wood represent significant carbon sinks within the natural, renewable carbon cycle. Commercial forest use involves wood rotting and burning: With the help of solar energy, the carbon (C) from the carbon dioxide (CO₂) in the earth's atmosphere is captured in the tree during photosynthesis and oxygen (O₂) is released. The carbon (C) stays there until it is released as the wood slowly rots or burns, binding with the oxygen (O₂) from the atmosphere again to form CO₂. In the process, the same amount of CO₂ is produced as the tree removed from the environment while growing. The absorption and release balance each other out. The stored solar energy is released as heat.



» By streamlining logistics processes, we can reduce CO₂ directly and without delay. «



MARTIN JAUSS
Managing Director
Würth Industrie Service GmbH & Co. KG

WEBSITE

www.wuerth-industrie.com



Up to 53% less CO₂ in industrial logistics



With its KANBAN services, Würth Industrie Service GmbH & Co. KG offers an immediate system solution for climate-neutral logistics.



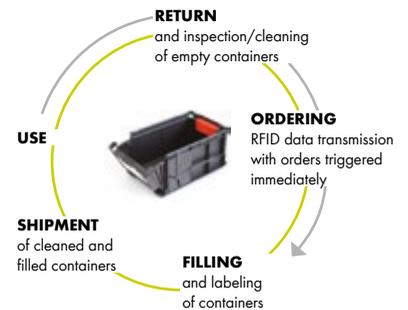
Automated system solutions that reorder products according to demand using digital and contactless technology provide for optimal supply cycles based on actual consumption, shorter reaction times, and cost-effective logistics. Highly flexible Kanban systems help manage warehousing and product activities effectively and transparently. In addition to streamlining processes, Würth Industrie Service is also focusing on reducing its resource consumption and CO₂ emissions. Kanban containers could therefore replace traditional transport packaging and circulate multiple times through the supply and logistics cycle.

STATUS: The Kanban solution can help industrial manufacturing companies both avoid conventional packaging waste and reduce CO₂ emissions by up to 53% compared to a traditional manual order processing system.

In addition, we are concentrating on the Kanbar containers themselves, in particular by using circular materials to make the containers and shelves. We use regranulate in the production process, which is made from 100% recycled materials and can be reused. Any defective containers that we have to sort out from customer returns are ground into small pieces and transformed into new regranulate. Roughly one ton of CO₂ is saved per ton of regranulate compared to using new raw material.

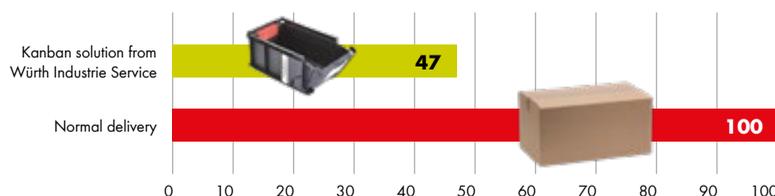
PERSPECTIVES: More than 6,800 customers already rely on our automated procurement concepts, 1,850 of which are using Kanban solutions. In combination with digital systems and the use of renewable energy, we are striving to further reduce our CO₂ emissions in logistical processes together with our customers and partners.

Kanban solution from Würth Industrie Service:



COMPARISON OF DELIVERY TYPES

CO₂ emissions per ton as a percentage



Adolf Würth GmbH & Co. KG Up to 30% less CO₂ thanks to consolidated shipments

Würth Delivery Day was introduced in October 2020 and has been available to all Würth customers since October 2021. In 2021, it was possible to economize on almost 40,000 parcels. That means we emitted 8.3 tons less CO₂ than we would have if we had not introduced Würth Delivery Day. We are expected to exceed 5,000 customer bookings for Würth Delivery Day by the end of 2022, thus potentially saving up to 400,000 parcels and up to 100 tons of CO₂ per year. This is the equivalent of 100 beech trees growing for approximately 80 years and capturing carbon from the atmosphere.



INTERVIEW

Being prepared for CO₂ emissions trading with solar power

The Würth Group has over 20 companies in China, making it the Group's second largest market. The climate protection goals there have become more ambitious as well. In July 2021, the People's Republic of China launched its national scheme for trading CO₂ emissions (ETS), which is the largest in the world. Therefore, we asked Reiner Haberstock, Managing Director of **Arnold Fasteners at Würth Industrial Park in Shenyang**, what that meant in terms of CO₂ management and follow-up measures at the production site.

1 Mr. Haberstock, China recently introduced a national emissions trading scheme. What does that mean for Würth?

China already introduced seven pilot emissions trading schemes in 2013. This year, China launched its first national emissions trading system, which is the largest

of its kind in the world. The city of Shenyang in Liaoning province, where Würth Industrial Park Shenyang (WIP) is located, has started to prepare for emissions trading. In this context, WIP was selected as a pilot company for emissions trading in Shenyang. An external agency will now calculate our CO₂ emissions from the last three years to determine our total emissions.



REINER HABERSTOCK
 Managing Director of Arnold
 Fasteners (Shenyang) Co. LTD

WEBSITE
www.wurth.cn



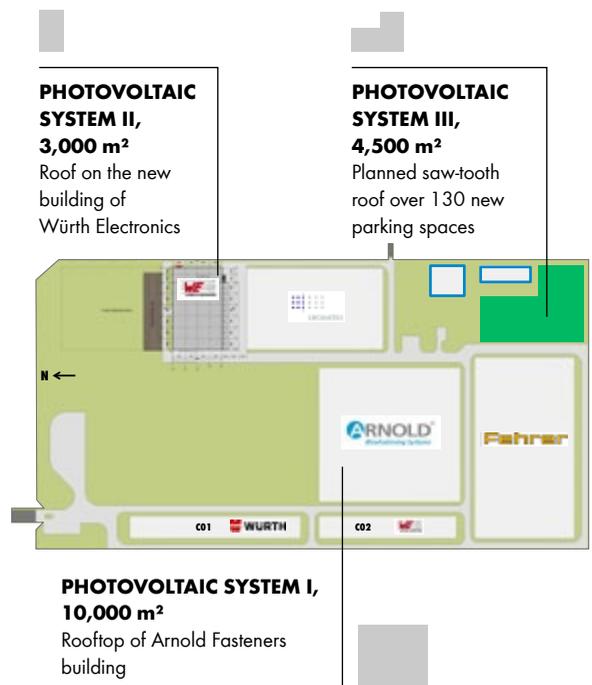
2 What is the objective of the emissions trading scheme?

It is intended to motivate manufacturing companies to use green and clean energy, especially for electricity and heating, in order to minimize their own carbon footprint.

3 How does Würth plan to minimize its carbon footprint in Shenyang?

Every year WIP—including Arnold, WE eiSos, and other Würth Group companies located in the industrial park—consumes 12 to 15 million kilowatt hours of electricity. The planned installation of photovoltaic systems at three locations in the industrial park on a total area of 17,500 square meters will allow us to generate an average of 1.9 million kilowatt hours of electricity per year from solar energy. This represents a reduction of nearly 2,200 tons of CO₂ emissions.

Photovoltaic master plan of Würth Industrial Park in Shenyang (WIP)



3,500 m² of roof space provide solar power for screw manufacturing in Austria

Expanding our in-house power generation facilities at Schmid Schrauben Hainfeld GmbH will allow us not only to be independent of rising energy costs and speculations on the energy market, but also to increase our energy autarky, or self-efficiency, through in-house consumption.



Manufacturing screws consumes a great deal of energy due to the required electricity and heat. Not only does that affect our energy costs, it also has an impact on the sustainability of our production process. At Schmid

Schrauben, we have relied on local production and “Made in Austria” quality for many years. We would also like to follow this approach with regard to the use of resources and energy, which is why we are producing our own electricity in addition to implementing measures to improve energy efficiency. Our previously unused and empty rooftops were ideal for installing photovoltaic modules.

is located in a valley basin. By using highly efficient photovoltaic modules, we can still use our roofs practically to generate electricity. At full capacity, the system covers 12% of our power requirements. This has allowed us not only to reduce our electricity costs by about EUR 65,000, but also to cut roughly 300 tons of CO₂ emissions each year.



STATUS: In 2021, a photovoltaic system with 2,080 modules was set up on a total surface area of 3,500 m². With a maximum output of 700 kWp, the system on the roof of the production facilities in Hainfeld is one of the largest private photovoltaic systems in Lower Austria.

The geographic conditions were particularly challenging for installing the system since Schmid Schrauben

In addition to the photovoltaic system, six vehicle charging stations have been set up for visitors and employees in the new customer parking lot. They can now be supplied with our own solar power, thus taking us one step closer to achieving zero-emission mobility.

PERSPECTIVES: In addition to generating electricity from renewable energy sources, we are also currently working on reducing our heat consumption by using recovery technology. Here we are focusing on the biggest consumers in our production process: the heat treat furnaces. Alternatives to the current energy source, gas, are still being discussed and tested, including hydrogen. We are currently experimenting with hydrogen-powered furnaces in our heat treatment shop.



Left picture: The monitor at the reception in Hainfeld offers transparency and a true understanding of what we are accomplishing with this system. It displays the current power output and the equivalent amount of CO₂ saved in real time.

» The infrastructure for solar energy is already in place: our rooftops. We simply have to use them. «

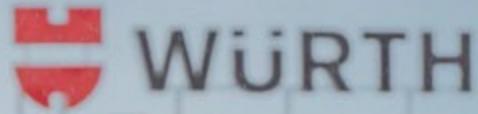


ANDREAS GEBERT

Managing Director
Schmid Schrauben Hainfeld GmbH



WEBSITE
www.schrauben.at



» Our commitment to renewable energy is helping to improve our carbon footprint. «



LAURA ROSSINYOL

Environmental technology and sustainable development Würth España S.A.



WEBSITE
www.wurth.es





100% green power and an in-house solar power system

Würth España S.A. sources all of its power requirements from green energy and is in the process of expanding its in-house power system by using photovoltaics.



Many countries around the world are striving to reduce their greenhouse gas emissions significantly by 2030. To achieve this goal, it will be necessary to replace fossil fuels with renewable energy sources. Transitioning to green power generated from solar energy, hydropower, and wind energy, improving energy efficiency, and using new technologies—such as heating with geothermal energy, heat pumps, or cogeneration—will play a key role in achieving our goal of becoming climate neutral.

Until the expansion project for in-house power generation from renewable energy is complete, the company can remain net zero according to Scope 2 of the Greenhouse Gas Protocol by sourcing green energy from an external energy provider.

STATUS: At Würth Spain, we purchase 100% of our electricity from renewable and therefore green energy sources. At the location in Agoncilla, 144 photovoltaic modules produce 3.5% of their required electricity. In addition, we have a contract with an energy provider guaranteeing that 100% of our electricity is generated from renewable energy sources.

PERSPECTIVES: At our Palau location, 50 photovoltaic modules are currently being designed so that we can increase our in-house electricity generation by 34.75 Mwh/year.



Alternative drive concepts for zero emissions in the mobility sector

As a traditional sales company, the majority of our employees spends a great deal of time on the road. Even our products travel a great distance. Because of this, we are ideally positioned to make use of alternative drives to drastically reduce our greenhouse gas emissions. **Würth Norge AS** is leading by example by transitioning to electromobility.



The transport and mobility sector accounts for roughly 16%* of global emissions. The first step involves changing over to electromobility and expanding the charging infrastructure. Electric cars powered at charging stations supplied with in-house electricity from renewable energy sources will make the greatest contribution to achieving net-zero emissions.

STATUS: Charging stations have already been installed at the headquarters of Würth Norway. Starting in 2022, charging stations are being set up at the Würth pick-up shops. Customers will be able to charge their electric vehicles there while they shop. This will encourage our customers to choose an electric car, too.

PERSPECTIVES: Würth Norway is planning to replace all of its company and service vehicles with electric and hybrid vehicles by 2030. Moreover, Würth employees and customers will have the option of charging their cars. Our company is expecting 30% of all company vehicles to be electric or hybrid vehicles by mid-2022. When renewing future vehicle leases, employees will be required to choose between an electric and a hybrid vehicle.

* Source: <https://ourworldindata.org/emissions-by-sector>

» Electromobility is essential for Würth's zero-emission strategy. «



CHRISTOPHER GRANUNG

Health, Safety, and Environment Officer and Sustainability Manager Würth Norge AS

WEBSITE
www.wuerth.no



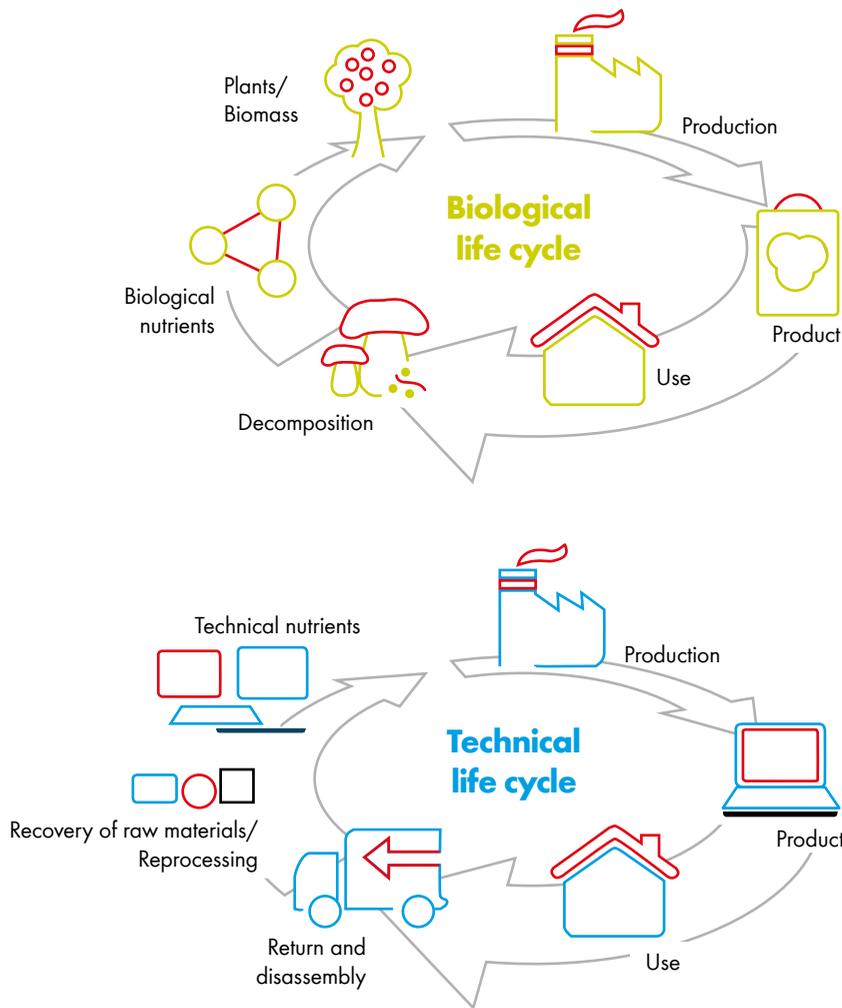
MATERIAL LIFE CYCLES

The circular economy offers companies a common, forward-looking basis for action. The basic understanding of circular value creation follows the Cradle to Cradle® design principle, with a focus on using infinite material life cycles as a qualitative foundation for growth. Our aim is to pave the way toward reducing our consumption of finite resources.



OUR 6 STEPS FOR CLOSING MATERIAL LIFE CYCLES:

- + **Circular product design**
- + **Ensuring material health**
- + **Carbon neutral production and supply chain**
- + **Ensuring recyclability**
- + **Establishing reverse logistics**
- + **Complying with social standards in production and supply chain**



The Cradle to Cradle® design principle differentiates between biological resources that are returned to nature and technical materials that are continuously reused.

The purpose of the Cradle to Cradle® design is to create products that can be reused in recurring material life cycles. A distinction is made between biological and technical life cycles. In biological life cycles, the product materials are returned to the environment, as is the case with biodegradable materials. The objective of technical life cycles in material flow management is to reclaim almost one hundred percent of all product components instead of throwing away or incinerating the material or recycling it to produce lower-quality material.

Products and materials that are developed for the circular economy can therefore circulate in closed loops as “nutrients” and be used nearly an infinite number of times. This requires a product concept based on material life cycles. This development will ensure comprehensive quality in line with the strictest global sustainability standards, thus opening up a wide range of new and ecological growth prospects for businesses.



USEFUL INFORMATION

WHAT DO WE MEAN BY CIRCULAR ECONOMY?

In our current economy, we take material from the earth to manufacture products, which we then throw away as waste—the process is linear. In a circular economy, in contrast, we do not produce waste in the first place.

Circular economy is based on three principles driven by the product design:

Eliminating

waste and environmental contamination

Circulating

(high-quality) products and materials

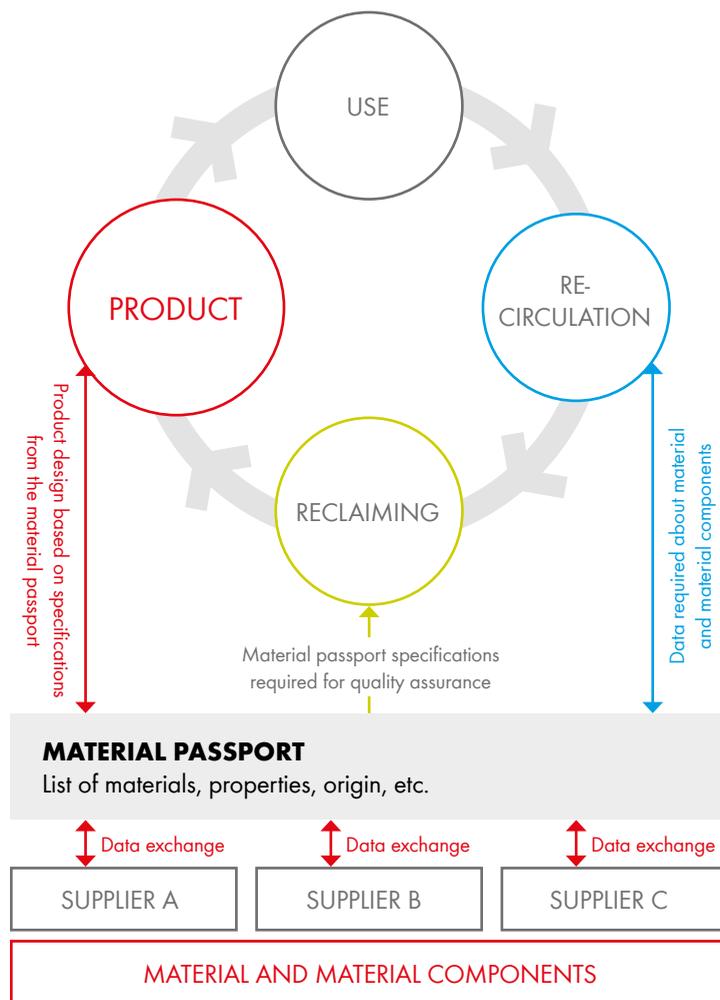
Regenerating

nature

This process is underpinned by a transition to renewable energy sources. A circular economy decouples economic activities from the consumption of finite resources. It is a resilient system that is beneficial to businesses, people, and the environment. The circular economy provides us with tools to tackle climate

change and the loss of biological diversity together, while at the same time fulfilling important social responsibilities. It gives us the power to increase prosperity, create jobs, and enhance our resilience, while reducing greenhouse gas emissions, waste, and environmental contamination.*

* Source: <https://www.ellenmacarthurfoundation.org>



Why are circular supply chains so important for sustainable material life cycles?

Circular economy is only possible with circular supply chains since an organization is not capable of closing the entire material cycle in a supply chain on its own. Therefore, coordination and cooperation within the supply chain is imperative in circular business models. All stakeholders along the entire value chain have to work together to make sure that resources from products that are no longer being used remain in the material cycle and are available for reuse. With the help of digitalization, the material passport can contribute significantly to accomplishing this goal. Several different material components and their properties can be stored in a material passport—including origin, toxicity, ability to separate raw materials into homogeneous groups, share of recycled materials, resistance to wear—in order to ensure that products are circular, meaning that they can be recovered and reused after their life cycle.

INTERVIEW

The key word OEM and tier supplier criteria for carbon-neutral production: As a direct and indirect supplier for electromobility components, **ARNOLD UMFORMTECHNIK Germany** advocates sustainable production methods with a view to reduce CO₂ emissions significantly and helps its customers optimize their activities within Scope 3 of their carbon footprint analysis. Five questions for Ralf Lagerbauer, Managing Director for Sales and Marketing.



Effective CO₂ reduction via product design



WEBSITE

www.arnold-fastening.com

1 Mr. Lagerbauer, what does it mean for Arnold to manufacture components for the electromobility sector?

Basically, we produce fasteners for a wide range of different applications, both for the automotive industry and other sectors. However, e-mobility as a whole is almost considered a symbol of social change with regard to zero-emission mobility and the industry's responsibility to achieve this. Against this backdrop, it is inspiring to be supporting this transformation process with our innovative fastening solutions and systems.

2 What characterizes the customers in the electromobility sector?

Companies operating in this sector will have to reorient themselves completely and overcome new challenges. In fastening technology, for example, sealing is very important. A battery pack is not allowed to leak under any circumstances. It is also important to think in terms of electricity—that is to say, conductivity—in fastening technology. Thus, fastening solutions can sometimes be used to transmit power in order to meet two demands at the same time. This means using different materials, processing methods, and surfaces than before. It is important to share ideas with stakeholders who are active in this sector because everyone wants to know where the road will lead for the power train with regard to fastening solutions. This applies to both

start-ups and established OEMs, and often a development partnership is pursued.

3 How can a manufacturer of fastening solutions contribute to sustainability and reducing CO₂ emissions?

Every product along the entire value chain leaves behind an individual carbon footprint. Thus, each little screw and each cold-formed part can protect the climate, even if that seems unlikely at first glance. With its ACO₂-Save initiative, ARNOLD UMFORMTECHNIK offers its customers various ways to cut their CO₂ emissions. For example, the design process starts out with an FEM simulation that can be connected to a CO₂ calculator, which calculates the carbon footprint that would be produced by manufacturing the component. Different solutions can then be compared with one another, in which case it is important for us to push these solutions together with the customer.

4 And what does that mean specifically into terms of reducing CO₂ emissions?

Approaches could include changing the production technology or a direct screw connection instead of screws with washers. For example, a turning blank with an initial volume of 25,630 mm³ and weighing 69.2 g per unit was being used to machine specialized screws. After performing an ACO₂-Save analysis, the part was changed to a formed part. The forming blank has a volume of 9,135 mm³ and weighs 24.82 g per unit. Up to 45% CO₂ emissions can be saved as a result.

5 Sustainability has been a priority at Arnold for a while now. Why?

With 123 of history, ARNOLD UMFORMTECHNIK is a traditional company through and through. This also means a commitment to the future, which is why Arnold has been acting in accordance with the "Blue Fastening System" claim since 2016, thus demonstrating the significance of sustainability for all corporate activities. Production processes cannot be considered independently of environmental protection. That is why thinking in terms of new solution-oriented approaches is important to us when it comes to sustainability. After all, the steel industry is one of the biggest CO₂ emitters. In this case, CO₂-optimized engineering is required from the outset, which is why it is good to be on the same page as the customer early on in the process so that we can be sure to head in the same direction.

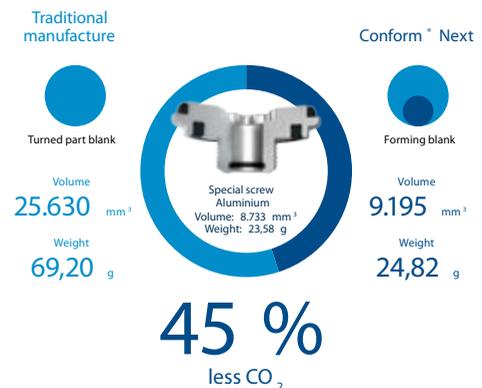


» Each little screw can protect the climate. «

RALF LAGERBAUER

Managing Director for Sales and Marketing in Germany, USA, and China, ARNOLD UMFORMTECHNIK GmbH & Co. KG

Example of reducing CO₂ emissions by changing technology used to produce specialized screws





Circular materials for a healthy and positive building culture

Division Construction International aims to be the first contact and a reliable partner for our customers in all topics related to “sustainable construction.” The specialists in the division focus on timber construction in particular since using wood as a carbon-neutral raw material makes it possible not only to avoid emissions, but also to create a healthy environment within the buildings with a natural indoor climate.



STATUS: Thanks to its wide range of new and innovative products, the Würth Group ensures that sustainable materials are used in buildings, thus making a positive contribution to the climate and promoting the health and well-being of the people who use those buildings. Material health is especially important because it protects the health of users and at the same time prevents pollutants from entering the environment. This enhances usability and circularity, while increasing the sustainability of the materials as a whole.

According to a report by the United Nations Environment Programm,* the construction and building sector accounts for 37% of global CO₂ emissions, which means it represents enormous potential to reduce emissions and prevent climate change. A large portion of the emissions can be attributed to using conventional raw materials such as steel or to the energy-intensive production of cement. The carbon balance of wood as an alternative material makes a clear case for the use of this renewable raw material.

PERSPECTIVES: Either as a building material by itself or as a material component, wood could replace materials containing a large share of fossil resources. The Würth Group’s Division Construction International is convinced that decarbonizing the construction industry will lead to a higher demand for structural timber construction. In addition to the sustainability-related aspect of using a renewable raw material that captures CO₂, wood also offers enormous advantages in terms of material health.

We can achieve this goal by using a united and coordinated approach across national borders. This collaboration is essential since the necessary approvals and certificates will have to be obtained for the Würth Group’s construction products before they can be used at an international level. Furthermore, we are expanding our product portfolio in the wood connector and fire protection segments, for example. We support our markets and customers with technical consulting and assist our sales team with training and special marketing activities.



* Source: <https://globalabc.org/resources/publications/2021-global-status-report-buildings-and-construction>



» With our sustainable products and services, we support our customers on their path toward a zero-emission and healthy future. «



STEFAN WIRTH
Head of Division Construction International
of the Würth Group

WEBSITE
www.wuerth.com



» Building with wood
is the key to an
climate-friendly
building culture. «



TOBIAS SCHNEIDER

General Manager for Production Unit
SWG Schraubenwerk Gaisbach GmbH

WEBSITE
www.swg-produktion.de





As a screw specialist for timber construction, sustainability and environmental protection are key components for the growth strategy of **SWG Schraubenwerk Gaisbach GmbH - Produktion**. The company's own production floor with offices demonstrates that it is possible to construct industrial buildings out of wood instead of steel and reinforced concrete, while capturing eleven times more CO₂ than conventional buildings.

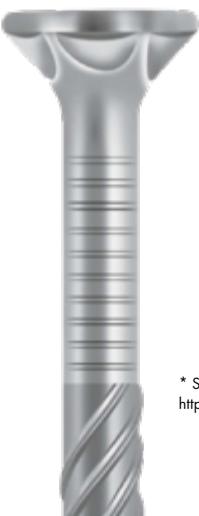


Wooden materials transform new industrial buildings into carbon sinks

STATUS: In Germany, roughly 8 million solid cubic meters of beech hardwood are left over each year.* A total of 1,800 m³ of wood was used for the cutting-edge wooden design of SWG Produktion's new building, with 400 m³ beech laminated veneer lumber being used for the largest roof structure made of this innovative and high-strength material in the world (trade name BauBuche). Thanks to the ASSY® wood screws approved specifically for this project as fasteners, the rooftop spans up to an impressive 40 meters in width. Furthermore, by using another 1,400 m³ of softwood materials, the builders were able to support the forestry sector in developing diverse mixed forests.



PERSPECTIVES: With its product solutions for mass timber construction, such as the ASSY® wood screw, SWG Produktion is also ensuring that more engineering structures can be made of wood in the future, especially as a suitable alternative to steel and reinforced concrete buildings. In doing so, SWG hopes to cultivate and help shape a new sustainable building culture. By making the company's sustainability efforts transparent, the management is also gaining approval for and positive recognition of the fastening and system solutions in timber construction, which is a prerequisite for establishing green buildings and structures as carbon sinks.



In addition to its function as a carbon sink, the new building will save eleven times more CO₂ than comparable industrial buildings in the long term. Using a wooden design produces significantly less CO₂ emissions than would be the case for a similar building with a conventional steel and reinforced concrete design, which require a great deal more energy to produce.



* Source: Federal Ministry of Food and Agriculture (BMEL); <https://www.waldkulturerbe.de/wald-und-forstwirtschaft-in-deutschland/waldwirtschaft/zahlen-und-fakten-zum-wald-in-deutschland/zahlen-und-fakten-zum-wald-in-deutschland>

» A hunger for innovation has always been part of Würth's DNA. That helps us implement new circular ideas today. «



ACHIM GRENNER
Chief Financial Officer (CFO)
Würth Additive Group Inc.

WEBSITE
www.wurthindustry.com



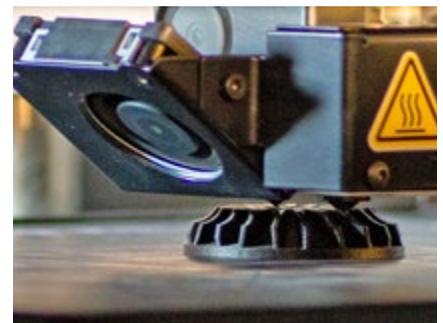
Recyclable carbon fibers for 3D printing

Würth Additive Group Inc. in North America is currently developing filaments for 3D printing from recycled carbon fibers in order to combine the advantages of new 3D production technology and the possibilities offered by the circular economy. The objective is to create healthy and positive 3D printing materials designed with the circular economy in mind.

Products have to be recyclable for the circular way in order to keep the materials inside the technical cycle at the end of the product life cycle. Taking into account the recyclability of the product and material components when designing products forms the basis for this endeavor. Various criteria are considered when selecting materials right at the start of the product design process, such as the toxicity, necessary service life and wear for use, whether homogeneous materials can be reused, repair options, whether parts can be replaced, and reprocessing.

STATUS: The relatively new 3D printing technology offers enormous potential for product development and for the sustainable manufacturing of specialized components. The material used to create the printing filaments is particularly important in this case. Würth Additive Inc. is currently running a pilot project in which filaments for 3D printing are being produced from recycled carbon fibers. Würth Additive is in charge of buying and selling the recycled material. The company purchases the recycled carbon fibers from one of its customers and then sells them back to the same customer or to other customers.

PERSPECTIVES: The goal is to develop processes and structures for reprocessing and utilizing used carbon fibers for 3D printing, to experiment with potential applications, and finally to create a blueprint for a successful circular economy model in the field of 3D printing. Research and development partnerships support the project.



Verified circular quality for VARIFIX® system products and ORSY® shelving



Adolf Würth GmbH & Co. KG demonstrates how to take the first step toward the Circular Way: with the Cradle to Cradle Certified™ stamp of approval from the Cradle to Cradle Products Innovation Institute in California. The idea behind this concept is to decouple growth from resource consumption: that is to say, to reuse raw materials effectively and create closed-loop material cycles.

STATUS: Obtaining certification for the VARIFIX® quick-mounting system in accordance with the Cradle to Cradle Certified™ product standard was the first milestone for Adolf Würth GmbH & Co. KG on its path toward a circular economy. Because the main material used in VARIFIX® is steel, the system and its more than 700 accessories were designed so that they could be broken down into homogeneous raw materials and components after their service life and then reprocessed for reuse. All substances are harmless and circular. In 2017, VARIFIX® became the first mounting system in the world to be Cradle to Cradle Certified™ Silver. VARIFIX® has already achieved Gold

status in terms of recyclability, with a 45 % share of recycled materials and 82 %* of its materials capable of being recycled. The certification level has been expanded to the national companies, which means that the Cradle to Cradle Certified™ standard is valid for VARIFIX® worldwide.

ORSY®, the organization system that has been successfully sold by Würth for over 40 years, has also met the criteria for the Cradle to Cradle Certified™ standard since 2021. During the certification process, all suppliers along the supply chain of the ORSY® shelving system modules were verified according to the following five

certification criteria and also rated as “Silver”: material health, material reutilization, renewable energy and water management, water stewardship, and social fairness.

PERSPECTIVES: The main objective is to transition to the greatest extent possible from linear resource consumption to a circular economy by 2030. By achieving the Cradle to Cradle Certified™ standard, VARIFIX® and ORSY® have shown that circularity is possible. This has motivated Adolf Würth GmbH & Co. KG to define circular economy and climate neutrality as an integral component of its sustainability strategy.



For its well thought-out Cradle to Cradle® concept, the VARIFIX® system won the German Award for Excellence 2018 in the “Sustainability Innovation” category and the 2017 international Green Product Award in the “Architecture” category.



*Based on 98% of the total weight, not including plastic parts



» Material cycles ensure the raw material availability and the quality of our products. «



JENS-UWE SCHÖN
Key Account Manager
Adolf Würth GmbH & Co. KG

WEBSITE
www.wuerth.de



SOCIAL STANDARDS

Within the Würth Group, we aspire to preserve the livelihoods of future generations. Therefore, minimizing any major social risks and developing solutions to reduce them is critical when introducing the circular way. This means identifying, assessing, and raising awareness for social disparities. By means of a supply chain management approach based on global guidelines, we can help make the lives of people in countries with a high risk of social standard violations more equitable, safer, and more participatory, while also protecting their resources.



OUR 5 STEPS FOR A SOCIALLY RESPONSIBLE SUPPLY CHAIN:

- + Using global standards as a guide
- + Committing to sustainability-related standards
- + Identifying and assessing risks
- + Screening and developing suppliers
- + Ensuring transparency using sustainability reporting

Social justice and fairness as part of corporate responsibility

Social justice and fairness are directly related to sustainable development with regard to the consequences of climate change, globalization, resource depletion, and environmental degradation for the natural and social livelihoods of people. In order to support global corporations in their responsibility for sustainable development and social justice and fairness, the Organisation for Economic Co-operation and Development (OECD) has provided a framework for action with its Guidelines for Multinational Enterprises.

OECD Guidelines for Multinational Enterprises

“...are one of the most important and comprehensive international instruments for the promotion of responsible corporate governance. They contain generally accepted principles for responsible corporate conduct in an international context, including human rights, social issues, the environment, anti-corruption, taxation, consumer interests, reporting, research, and competition.

The OECD Guidelines reflect a political consensus between the stakeholders regarding what can be considered appropriate and fair business conduct and what can be expected in terms of global competition. The OECD Guidelines [...] are directed toward multinational enterprises operating in or from one of the participating countries. Any company engaging in foreign activities related to trade or investment is considered multinational. This applies irrespective of its size, meaning that small and medium-sized enterprises can also be considered multinational.”*

The OECD Guidelines apply worldwide to these companies and enterprises and also pertain to suppliers and subcontractors. International agreements such as the Universal Declaration of Human Rights of the United Nations and the core labor standards of the International Labour Organisation (ILO) represent the basic principles of the OECD Guidelines and underscore the mission statement of sustainable development and the precautionary principle.



WEBSITE & VIDEO

OECD Guidelines for Multinational Enterprises
mneguidelines.oecd.org

* Source: Federal Ministry of Economic Affairs and Climate Change (BMWi), https://www.bmwi.de/Redaktion/DE/Textsammlungen/Aussenwirtschaft/oecd.html?cms_artId=240960

USEFUL INFORMATION

WHAT DO WE MEAN BY SOCIAL STANDARDS?

Multilateral agreements, laws, and guidelines by non-governmental organizations (NGOs) and joint initiatives on social standards all work toward one goal: upholding, protecting, and strengthening the dignity and fundamental rights of all human beings.

Within a business context, the following social criteria take priority within the organization and along the supply chain:

- Employment and education
- Occupational health and safety
- Diversity and equal opportunity
- Non-discrimination
- Right to collective bargaining
- Fair remuneration
- No child labor
- No forced or compulsory labor

- Independence from political influence

The violation of a fundamental right constitutes a social risk and is determined independently of the situation in a given country.

Two corporate instruments serve to minimize social risks by requiring businesses to comply with social criteria: Code of Conduct/Code of Compliance and Supplier Code of Conduct.

Code of Conduct/Code of Compliance (CoC): Guidelines and rules of conduct for companies and their business partners to ensure responsible, ethical, and moral conduct.

Supplier Code of Conduct (SCoC): Code of conduct for suppliers containing guiding principles and directives on work practices, labor standards, environmental guidelines, ethics, auditing, and record-keeping.



Why is human rights due diligence so important in the supply chain?

Because every human being has value. This is why the issue of human rights in the supply chain is so important in our increasingly globalized world. The requirements regarding social justice and fairness are becoming more complex, be it as a result of national and international legal requirements related to the environment and social responsibility or the widespread attention within society and the growing demand for transparency.

Corporate due diligence in supply chains refers to guidelines companies are required to comply with in order to minimize risks to human rights along the entire global value chain. Relevant legal provisions are already in place, such as in the US (Dodd-Frank Act), Australia (Modern Slavery Act), and several EU countries. In Germany, corporate due diligence with regard to human rights and environmental protection is regulated within the scope of the Act on Corporate Due Diligence in Supply Chains (LkSG).

Sources:

- 1) <https://www.bmz.de/de/entwicklungspolitik/lieferkettengesetz>
- 2) https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/publication/wcms_575479.pdf
- 3) <https://www.bmz.de/resource/blob/60000/69fe0aac1e4e7062790db534885e1f5f/faq-lieferkettengesetz>
- 4) https://www.ilo.org/wcmsp5/groups/public/-ed_dialogue/-lab_admin/documents/publication/wcms_819788.pdf
- 5) https://ilo.org/wcmsp5/groups/public/-dgreports/-stat/documents/publication/wcms_696387.pdf

INTERVIEW

Protecting social standards in the global supply chain



Upholding human rights, safe working conditions, fair remuneration, anti-discrimination, and anti-corruption: social criteria play an essential role in enabling companies to transition to sustainable business practices. The textile industry in particular is a well-known example of this. Therefore, we asked Anna Schubert, Sustainability Officer at **Würth MODYF Germany**, what this meant for designing workwear.

1 Ms. Schubert, what does supply chain management have to do with social standards?

More than 60 million people in the global textile industry are still subjected to insufficient and sometimes even dangerous working and manufacturing conditions. Thus, every textile company must strive to promote equal partnerships along the supply chain, to both demand and secure ethical and social standards in the countries of origin, to guarantee respect and dignity, and above all to value the work performed by workers.

2 How are you working to achieve this goal?

Supply chain transparency is the key since we can only change something if we are aware of it. This requires all levels of the supply chain to be examined thoroughly and systematically. Joining initiatives or obtaining certifications is helpful in this regard. By applying global standards, we can ensure transparency and, above all, comparability. In addition, we are currently setting up a risk management system and introducing the Supplier Code of Conduct by Würth MODYF.

3 How exactly will the Supplier Code of Conduct help establish a sustainable supply chain management approach?

The Supplier Code of Conduct is a contractual document that is included in every supplier contract. The purpose of this code of conduct is to define minimum standards for a business partnership with us as a company. It is based on international standards and covers requirements concerning human rights, labor rights, environmental protection, business ethics, and prevention of cruelty to animals. By signing this document, the supplier pledges to fulfill these requirements. This is the basis for our partnership and the first step required to work with us.

4 How does Würth MODYF intend to continue pursuing this goal in the future?

In our opinion, what we are doing within the scope of supply chain management represents the absolute minimum that every company should strive to achieve. Over the next several years, our job will be to expand on this and increase transparency. In particular, an ongoing exchange of information between our sustainability management, quality assurance, and strategic purchasing departments here in Germany and our national companies and suppliers around the world is crucial for identifying direct social and ecological risks quickly and responding accordingly.

National supply chain regulations, such as the Act of Corporate Due Diligence here in Germany, are becoming a reality and call for us to guarantee informed business decisions and legal certainty in supply chains—especially at a global level. To achieve this, we will have to prioritize this issue more. The creativity and passion that we at Würth MODYF inherited from the Würth Group will help us in this undertaking. Certification models such as the MADE IN GREEN label for select products from our CETUS collection and our commitment to social compliance as a member of amfori are the first steps in the right direction, which will be followed by further steps in the years to come. amfori is an association that aims to improve social standards and compliance with worker rights within global value chains.



» Sustainable supplier management is the key to ensuring corporate due diligence in the supply chain. «



KLAUS ROTH
Group Compliance Officer
of the Würth-Gruppe

WEBSITE
www.wuerth.com/compliance



Sustainability in the supply chain



Many countries are striving to pass legal regulations that force companies to ensure fair working conditions and effective environmental standards along their supply chains. At Würth our sustainability management and compliance departments are working together on a Group-oriented strategy for sustainability in the supply chain, which will now be rolled out gradually following the example of **Adolf Würth GmbH & Co. KG**.

A major driver behind the project is the adoption of the legally required standards laid out in the German Act on Corporate Due Diligence in Supply Chains (LkSG), which will enter into force starting on 1 January 2023. This act will determine the main requirements of our customers for the companies in the Würth Group as suppliers. It demands compliance with corporate due diligence with regard to human rights and environmental protection along global supply chains. However, the Würth Group's strategy goes far beyond the legal requirements: Our objective is to help protect natural resources and livelihoods and to improve the efficiency of our supply chains. We are capitalizing on synergies within the Group: We are learning from one another, defining common standards, and communicating those standards to suppliers.



STATUS: At Adolf Würth GmbH & Co. KG, we have already started to integrate sustainability criteria into our corporate processes. Out of a sense of responsibility for sustainability and human rights, Adolf Würth GmbH & Co. KG joined the United Nations Global Compact

in 2019, the largest and most important initiative for responsible corporate management in the world. With this commitment, we can apply our values to the supply chain and contribute to more sustainable business practices.

If a company qualifies as a supplier for Adolf Würth GmbH & Co. KG, they commit to complying with Adolf Würth GmbH & Co. KG's Code of Compliance and Supplier Code of Conduct within the scope of their supplier agreements. As a result, suppliers are also obliged to comply with ethical business practices, human rights, and environmental standards. Exclusion criteria have been defined with regard to the ecological and social aspects, which can be summarized as follows:

- Child labor, forced labor, and failure to comply with working hours
- Business practices that pollute the environment (e.g., waste water)
- Product-related environmental damage (e.g., hazardous product materials)
- Lack of a quality management system
- Gross violations of occupational health and safety

If any of these criteria apply to a supplier, they are asked—depending on the severity of the violation—to take corrective measures by a specified time, and then the successful implementation of those measures is verified. If no improvements have been made, this can be cause to terminate the supplier relationship. However, our preference is for the general conditions in the factories of our suppliers to improve instead of changing suppliers.

PERSPECTIVES: In the future, Adolf Würth GmbH & Co. KG plans to revise and adjust its position and the implementation of its strategy on a regular basis, always from the perspective of the Würth Group.



Ensuring delivery standards

Würth Industrie Service GmbH & Co. KG has established an international network of source quality engineers (SQE) who systematically audit and develop the suppliers of critical fastening elements in close collaboration with the entire Würth Group.

This preventive quality assurance approach ensures the quality of our suppliers and minimizes the risk of negative impacts on our customers. Especially when supplying products to industrial customers, consistently high quality is decisive for success. Fastening elements in particular are installed by customers in high quantities and often in automated workflows. Any variation in quality could interrupt the process and result in far-reaching economic consequences. If the deviation first has an impact when using the finished end product, there is a risk of material damage or even personal injury.

STATUS: The international SQE network of the Industry division consists of 30 highly qualified colleagues who are stationed in the main procurement markets for fastening elements in the US, Central Europe, Southern Europe, India, China, and Taiwan. This bridges any linguistic and cultural barriers, while ensuring a good supplier partnership. This network is rounded off by additional source quality engineers from other business units.

Supplier audits and supplier development processes are carried out according to uniform standards and are coordinated centrally by Würth Industrie Service GmbH & Co. KG. The results form the basis for decisions to approve suppliers for the entire Würth Group.

The SQEs were trained systematically over a period of several years by the operations team at Würth Industrie Service GmbH & Co. KG. This makes it possible to identify quality risks in the organizational and technical processes of suppliers. Based on these findings, detailed demands for corrections and improvements are drawn up and pursued. At this stage of the supplier development process, the SQEs provide advice and support, thus helping the suppliers to improve the quality of their products and optimize their business processes.

In addition to the systematic screening of quality risks, general risks related to environmental hazards, occupational health and safety, and compliance with social standards are discussed.

PERSPECTIVES: Similar to the SQE network model, a classification system can be developed within the Würth Group for a significantly higher number of suppliers to apply the auditing requirements described in the German Act on Corporate Due Diligence in Supply Chains (LkSG) or a future European due diligence law.



» Reaching suppliers locally means being able to assess and verify measures directly. «

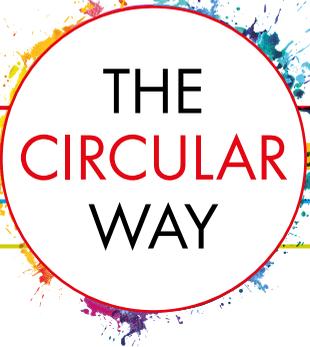


DR. UWE HASSELMANN

Director of International Quality and Supplier Management Division Industry

WEBSITE
www.wuerth-industrie.com





THE
CIRCULAR
WAY

Social standards

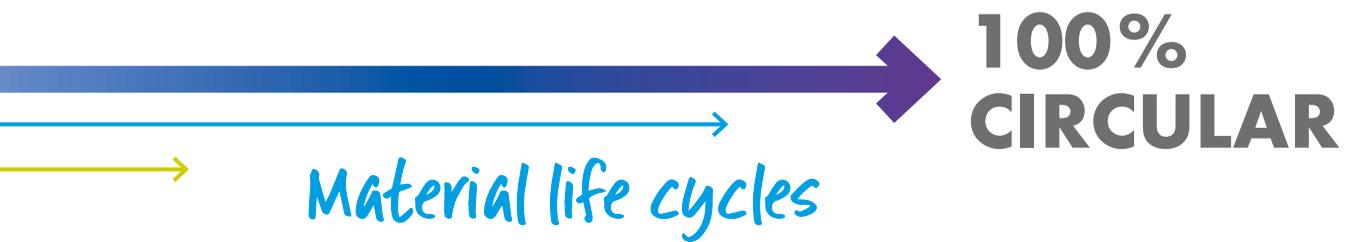


Climate neutrality

THE WÜRTH GROUP'S SHIFT TO A CIRCULAR ECONOMY

Our world is full of possibilities, and new innovative solutions and initiatives are emerging each day. Therefore, in order to maintain focus, all elements of the Würth Group's global sustainability management strategy come together at the headquarters of the Central Managing Board in Germany.

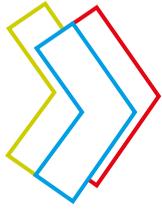
From there, the information is pooled together, shared with the companies, and incorporated into a sustainability network intended specifically for developing practical solutions. Sustainability reporting helps show our progress along our shared circular way and which actions are necessary.



Ensuring transparency using sustainability reporting

Group-wide sustainability reporting serves to illustrate the overall strategic direction on our circular way with maximum transparency and shows how successful our operations are in relation to the three pillars of sustainability: economy, ecology, and social responsibility. This helps us maintain sight of the individual development trajectories and promotes communication with one another, thus gradually taking us closer to our goal of a completely circular economy in the future.

Together with the data-based control mechanisms of the Group-wide sustainability management strategy, we are creating a shared understanding of sustainable development in and with the Würth Group. This understanding is underpinned by the global sustainability indicators of the Global Reporting Initiative (GRI), the accounting standard for greenhouse gas emissions according to the Greenhouse Gas Protocol, and the strategic direction laid out by the UN sustainable development goals (SDGs).



Global frameworks provide the basis for sustainability reporting in the Würth Group.



First of all, global standards help us identify where we stand on a global scale. After all, companies within the Würth Group are subject to global benchmarking and ratings, even with regard to sustainability.

Recognized frameworks allow for standardized benchmarking and offer a uniform response to the different legal requirements and standards. As a result, we can provide our stakeholders with the necessary guidance and support for making decisions to compare and rank the current level of our sustainable development against our competitors. For us in the Würth Group with companies operating around the world, these frameworks are the only way to ensure uniform sustainability reporting as a basis for sustainability management.



GRI:
Sustainability standards defined by the Global Reporting Initiative

The GRI indicators provide us with practical guidelines for documenting our economic, ecological, and social performance. They focus on standardization and comparability by defining key figures and indicators and ensuring transparency. Reporting according to GRI standards means communicating both positive and negative contributions to sustainable development, while taking into account the risks and opportunities posed by climate change for us as the Würth Group.



UNGC:
The 10 Principles of the United Nations Global Compact

With its ten universal principles for strategically anchoring sustainability in companies, the UN Global Compact is considered the largest global initiative for sustainable and responsible corporate management. In addition to establishing ten principles related to human rights, the environment, and anti-corruption, the compact is intended to promote projects that support the wider SDGs of the United Nations. Adolf Würth GmbH & Co. KG pledged to comply with the UNGC in 2019.



WEBSITE
GRI organization
www.globalreporting.org



WEBSITE
UN Global Compact initiative
www.unglobalcompact.org



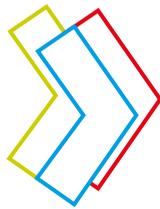
SDGs:
Goals defined by the United Nations for sustainable development

SDGs stands for "Sustainable Development Goals," which consist of 17 goals for sustainable development as the political objectives of the United Nations at the economic, ecological, and social level. They were adopted by all members of the United Nations together in 2015 as part of Agenda 2030 for sustainable development. Governments, businesses, and private individuals all contribute to achieving the SDGs.



WEBSITE
The 17 Sustainable Development Goals
sdgs.un.org/goals





Learning from each other

The internationally acclaimed Sustainability Management training program offered by **Akademie Würth** provides an overview of the dimensions of sustainable economic activity and allows participants to strengthen their sustainability skills and apply what they have learned to their own field of work. The program is available to anyone who is interested.



Akademie Würth won the “Money for Change Impact Award” in the “Corporate” category for its Sustainable

Management training program. This training program shows an extraordinary commitment to educational work to support the United Nation’s 17 Sustainable Development Goals (SDGs).

With this professional training program, Würth makes the SDGs available to a wider audience: not just its employees, but also customers, suppliers, and anyone interested in receiving further training in this field. The Sustainability Management training program promotes critical thinking, provides an overview of the dimensions of sustainable economic activity, and allows the participants to apply what they have learned to their field of work. The program encourages participants to implement a circular value-creation approach, pointing out the benefits of the associated changes.

The Sustainability Management training program represents Akademie Würth’s commitment to education for sustainable development. In principle, anyone who is interested can participate in the training program. The basic module is intended to

teach the basics on the subject. If the participants already have prior knowledge, they can start with the advanced modules. The training program consists of three modules and can therefore be adapted flexibly and individually to different learning goals.

AKADEMIE WÜRTH

IN-PERSON AND ONLINE SEMINARS

Available languages

German
English (dates on request)



WEBSITE (IN GERMAN)

Sustainability Management training program by Akademie Würth Germany
www.wuerth.de/akademie_entwicklung

VISION 2045

The Würth Group as a reference for the United Nation's Vision 2045 campaign and as a panelist at the associated summit in Edinburgh



VIDEO

Sustainability in the Würth Group
youtu.be/Rfsx1kUUCI4



WEBSITE

VISION 2045 campaign and summit
www.vision2045.com/vision-2045-summit



VIDEO

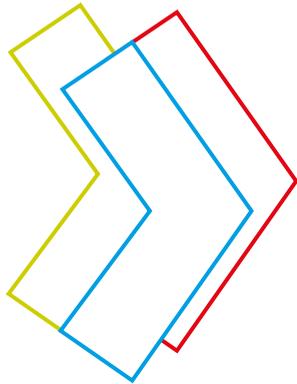
Episode about the Würth Group on "EARTH with John Holden"
youtu.be/ysH_GvW_GOk

CONNECT AMPLIFY INSPIRE

The Würth Group is one of only 45 companies and corporations that were selected to submit their own video contribution to the "Vision 2045" campaign. In addition, the contribution was part of the three-day "Vision 2045" summit in Edinburgh, which took place in parallel to the UN Climate Change Conference in Glasgow. The reason for this was the exemplary commitment of these companies to reaching the 1.5 °C target from the Paris Climate Agreement. In addition, several discussions were held in connection with the United Nation's 17 Sustainable Development Goals, which will celebrate their 100th anniversary in 2045. In addition to Robert Friedmann (Chairman of the Central Managing Board), other representatives such as Norbert Heckmann (Managing Director of Adolf Würth GmbH & Co. KG), AJ Strandquist (CEO of Würth Additive Group Inc.), and Carina Lebsack (Head of Corporate Sustainability/Circularity of the Würth Group) also have a chance to speak in the video.

The Würth Group on the US TV show "EARTH with John Holden"

The Emmy Award winning TV show "EARTH with John Holden" features companies and organizations that are striving to make the world a better place by using advanced technology and sustainable solutions. In Episode 18, John Holden presents the Würth Group's commitment to sustainability. He takes viewers on a journey to Germany, where he talks to Robert Friedmann, Chairman of the Central Managing Board, in Künzelsau and visits the new production facilities of the screw manufacturing company SWG in Waldenburg. Back in the United States, he continues his TV journey to Würth Additive Group and Lemyn Organics, operated by Würth Line Craft North America. Based on these examples from the Würth Group, John Holden demonstrates that it is possible to create an economic model for future generations with the help of innovative ideas in line with the circular economy and the 1.5 °C target from the Paris Agreement.



FOLLOW OUR CIRCULAR WAY ONLINE

The Würth Group communicates its sustainability activities at the multinational level and across its global network. The Würth Group's website and its various social media channels provide glimpses of our sustainable development on our way toward a circular economy.



WEBSITE

Official sustainability website of the Würth Group
www.wuerth.com/sustainability



Facebook

www.facebook.com/Wuerth.Group



Instagram

www.instagram.com/wuerth_group



YouTube

www.youtube.com/WuerthGroup



LinkedIn

www.linkedin.com/company/wuerth-group

GET
CON
NEC
TED!



CONTACT

Sustainability management team
sustainability@wuerth.com

IMPRINT

Published by

Würth Group
 Adolf Würth GmbH & Co. KG
 Reinhold-Würth-Straße 12-17
 74653 Künzelsau, Germany

Responsible for the content

Carina Lebsack
 Head of Corporate Sustainability |
 Circularity of the Würth Group

Editorial staff

Rabea Klöpperpieper,
 Sustainability Manager
 of the Würth Group

Contact: Rabea Klöpperpieper, LN
 T: +49 7940 15 2173
 Rabea.Klopperpieper@wuerth.com
sustainability@wuerth.com

Strategic consulting, editorial concept, and design by

RITTWEGER + TEAM GmbH
 99084 Erfurt, Germany
www.rittweger.team.de

Photo credits

Adolf-Würth GmbH & Co. KG (unless otherwise specified), Arnold Fasteners (Shenyang) Co. LTD [20, 21], ARNOLD UMFORMTECHNIK GmbH & Co. KG [32,

33], Freepik [2/3], istockphoto [2, 8, 12/13, 16/17, 25, 46, 54], Schmid Schrauben Hainfeld GmbH [22, 23], Shutterstock [44/45], StarMedia Productions, Earth with John Holden [58], SWG Schraubenwerk Gaisbach GmbH [35, 36, 37], Würth Additive Group Inc. [38, 39], Würth España S.A. [24], Würth Industrie Service GmbH & Co. KG [18, 19], Würth MÖDYF GmbH & Co. KG [46], Würth Norge AS [27]

Print version

Umweltdruckerei Lokay e.K.
 64354 Reinheim, Germany

LN-RTW-LOK-5.620-03/2022
 Printed in Germany.

Digital version

www.wuerth.com/sustainability

© Würth Group, Künzelsau.

All rights reserved. Reprint, in whole or in part, is subject to prior approval.

Cradle to Cradle® and C2C® are registered trademarks of MBDC. Cradle to Cradle Certified™ is a certification mark of MBDC, exclusively licensed for the Cradle to Cradle Products Innovation Institute.

Date: 02/2022
 Item number: SBRO040980



Highest eco-effectiveness
 Cradle to Cradle Certified®
 print products by Lokay



~~Could~~
~~Should~~
~~Must~~
Do!



www.wuerth.com/sustainability
[#thecircularway](https://twitter.com/thecircularway)