

Businessland 2024

Accelerating progress with public transport

An interview with
Minister Claus Ruhe
Madsen on paving the
way for the mobility
transition

14

Wheels are turning

In Lübeck, Wache
is rolling smoothly
into the future

20

Healthy business

Why mental health is
a management issue

34

Arctos Industriekälte

In their comfort zone at
minus 90 degrees Celsius

38

They can cut it

The secrets to Original LÖWE's
success? Attention to detail.
The human factor. And a modern
leadership culture. The company
with the famous shears has been at
the sharp end for over a century.

18



Schleswig-Holstein
Germany's True North



- 1 Flensburg: BAJAO GmbH, page 33
- 2 Flintbek: Gebr. Schröder GmbH – Original LÖWE, page 18, 19
- 3 Kiel: Business Development and Technology Transfer Corporation of Schleswig-Holstein (WTSH), page 3, 8, 9, 10, 22, 23, 30
DESIGNA Verkehrsleittechnik GmbH, page 26, 27
Federal Employment Agency, Regional Directorate North (RD Nord), page 23
Kiel University (CAU), page 16, 17
GEOMAR Helmholtz Centre for Ocean Research Kiel, page 16, 17
Ministry for the Energy Transition, Climate Protection, Environment and Nature Conservation (MEKUN SH), page 8
Ministry of Social Affairs, Youth, Family, Senior Citizens, Integration and Equality, page 23
Ministry of Economics, Transport, Labour, Technology and Tourism of the State of Schleswig-Holstein, page 14, 15, 23
osteolabs GmbH, page 17
pulmedix GmbH, page 32
Soulbreak GmbH, page 34, 35
State Office for Migration and Refugees, page 23
University Hospital Schleswig-Holstein (UKSH), page 16, 17
Wissenschaftspark Kiel GmbH, page 24, 25
- 4 Lägerdorf: Holcim (Deutschland) GmbH, page 12
- 5 Lübeck: Coher Sense UG, page 31
Wache GmbH, page 20, 21
- 6 Neumünster: Tuch + Technik Textilmuseum Neumünster, Museum, Art and Culture Foundation of the City of Neumünster, page 40, 41
- 7 Quickborn: HanseWerk AG, H2 Hanse, page 9, 10
- 8 Rendsburg: Stadtwerke SH GmbH & Co. KG, page 12
- 9 Schönkirchen: Stryker Trauma GmbH, page 16, 17
- 10 Sörup: ARCTOS Industriekälte AG, page 38, 39
- 11 Trappenkamp: Sea & Sun Technology GmbH, page 17
- 12 Wedel: SET – Selected Electronic Technologies GmbH, page 11

EDITORIAL

Dear reader,

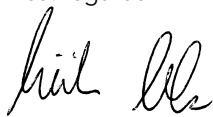
The happiest people in Germany live in the True North - at least, that's the conclusion of the Happiness Atlas 2023. For a decade now, we've held an unrivalled position at the top of this list. Does that surprise you? It doesn't surprise me! As a "repatriated" Schleswig-Holsteiner, I can attest that living in Germany's True North is genuinely rewarding. And so is working here.

Our innovative, internationally active SMEs offer excellent career opportunities across all sectors and pioneering industries. Moving forward, we will highlight this even more clearly to attract international professionals, showcasing the opportunities that go hand in hand with working and living in our region. This is how we will tackle the skilled labour shortage.

By 2040, Schleswig-Holstein aims to be the first climate-neutral industrial location. The conditions to achieve this goal are already in place. By virtue of its location, Germany's True North is perfectly positioned to harness wind energy and other renewable resources. This gives us a significant long-term advantage, as the availability of green energy will increasingly play a role in companies' decisions regarding their future locations. The expansion of renewable energy not only contributes to value creation in our own country but benefits others as well. Schleswig-Holstein is facing the opportunity of a lifetime, not only to master the energy transition but also to benefit from it in multiple ways and play a pioneering role across many sectors.

Together, we will seize these opportunities and overcome the associated challenges, ensuring that, in the future, we will emerge as an even stronger and more innovative location, rich in green energy - a truly inviting "hygge" destination to call home. This is my firm conviction. Let's get to work!

Best regards



Dr Hinrich Habeck



Dr Hinrich Habeck,
Managing Director of
the Business Development
and Technology Transfer
Corporation of Schleswig-Holstein
(WTSH)

CONTENTS

04



Renewable energy: Schleswig-Holstein is on track to become the first climate-neutral industrial region. Germany's True North is tackling this ambitious goal on two fronts, with a primary focus on expanding sources of renewable energy. Simultaneously, Schleswig-Holstein's relocation strategy for this sector is designed to create both jobs and added value.

06



BlueHealthTech: The fact that new therapeutic drugs and diagnostic procedures in the fight against chronic diseases are being researched and developed in Germany's True North is old news. What is new, however, is an interdisciplinary approach that promises genuine innovation. Institutions and companies from the fields of pharmaceuticals, medical technology, marine biology and marine research are now working together to find solutions for the healthcare sector. The BlueHealthTech research and development alliance in Kiel has united a diverse collection of world-class research institutions that are now breaking new ground.

16

Welcome Center: The shortage of skilled professionals and workers is set to become one of the greatest challenges in the coming years. In Schleswig-Holstein, the new Welcome Center serves as a central hub for foreign professionals.

22



Industrial history: Visitors to the Tuch + Technik Museum in Neumünster can travel back in time to a bygone industrial era. Its gigantic relics recount the very beginnings of industrial production.

40

- 06 The first climate-neutral industrial region**
Germany's True North is making this a reality
- 14 Public transport can accelerate the energy transition**
A "Businessland" interview with Minister of Economic Affairs Claus Ruhe Madsen
- 16 Medical science plus marine research equals innovation**
The BlueHealthTech alliance
- 18 A sustainable global market leader for over a century**
Original LÖWE in Flintbek
- 20 Rolling towards a successful future**
Wache GmbH in Lübeck
- 22 Welcome to Germany's True North!**
The new Welcome Center in Schleswig-Holstein
- 24 Inspired by great minds**
The Science Park Kiel is a breeding ground for innovation
- 26 Guiding lights in every respect**
Designa Verkehrsleittechnik GmbH in Kiel
- 28 Fostering pan-European cooperation for over 15 years**
A "Businessland" interview with Jenny Dümon from the Enterprise Europe Network
- 30 Young movers and shakers in Germany's True North**
Schleswig-Holstein's startups showcase their innovations
- 34 Hey companies, we need to talk!**
Mental health in the workplace - megatrend and taboo subject
- 36 Schleswig-Holstein in a different light**
Curious and remarkable facts about Germany's True North
- 38 In their comfort zone at minus 90° C**
Arctos Industriekälte AG in Sörup
- 40 Travel back in time to "Holstein's Manchester"**
Imposing giants are on display at the Tuch + Technik Museum Neumünster
- 42 Imprint**

A GENERATIONAL CHALLENGE

THE ENERGY

- 06 *Climate change is happening. Decisive action is needed to achieve our climate goals. In Schleswig-Holstein, innovative concepts and tangible projects have been in progress for years as the region strives for a clean future and energy independence. Germany's True North has been steadfastly progressing towards climate neutrality, with robust support from all stakeholders. Schleswig-Holstein is poised to become Germany's first climate-neutral industrial state by 2040.*



TRANSITION

07

SCHLESWIG-HOLSTEIN IS ON TRACK TO BECOME THE FIRST CLIMATE-NEUTRAL INDUSTRIAL REGION

Schleswig-Holstein boasts unique conditions: geographically and climatically, Germany's northernmost state is the perfect location to harness wind energy and other renewable resources. By producing wind energy, it can not only supply itself and other regions but also contribute to value creation through the expansion of green energy. In short: Schleswig-Holstein is facing the opportunity of a lifetime - not only to master the energy transition but also to reap multiple benefits and play a pioneering role.

To achieve this goal, Germany's True North is tackling this challenge from two sides. On one hand, the ambitious and ongoing expansion of renewable energy sources is a focal point, in order to provide regenerative solutions not only for electricity production but also for the heating and transportation sectors.

At the same time, a business relocation strategy is being pursued to make Schleswig-Holstein the first climate-neutral industrial region - with the aim of creating new jobs and added value within the state's renewable energy sector. Unlike more heavily industrialised states that face the challenge of guiding their existing industries towards net-zero emissions, Schleswig-Holstein is witnessing the opposite scenario. Green energy is already here. The next step is its industrialisation.

THE ENERGY TRANSITION IS THE OPPORTUNITY OF THE CENTURY

As a result of the regional planning process for wind power in 2020, Schleswig-Holstein has positioned itself at the forefront of wind power expansion in Germany. This small federal state is demonstrating its commitment to the energy transition via several major projects, including the planned construction of a large international battery cell factory in Heide and funding for green hydrogen production. Consequently, it is also encouraging companies to establish new facilities within its borders, potentially leading to the creation of numerous jobs across various cutting-edge industries. Schleswig-Holstein holds the potential to emerge as a "green power station" for the whole of Germany. Along its coasts, the groundwork is being laid for a fully decarbonised industrial region - essential if Germany is to reach its net-zero goal by 2045.



Climate-neutral business practices

THE TRANSFER HUB SUPPORTS BUSINESSES

Despite the fact that transitioning traditional industries towards a carbon-free economy will remain a Herculean task in the coming years, many companies in Schleswig-Holstein are now actively working towards the goal of achieving climate-neutral operations. In response to this challenge, Schleswig-Holstein is committed to supporting its companies on this transformative journey. The state's Ministry for the Energy Transition, Climate Protection, Environment and Nature Conservation (MEKUN SH) has commissioned the WTSH to establish a "Transfer Hub for Climate-Neutral Business Practices".

Its goal is to help companies introduce transformation processes in order to promote both energy and resource efficiency. The Transfer Hub's activities also include consolidating regional expertise, initiating projects, exploring opportunities and highlighting successful initiatives. These efforts are based on close collaboration with various partners, including economic development agencies, clusters, associations and chambers of commerce. It goes without saying that the introduction of innovative, resource-efficient technologies and production methods, as well as the establishment of regional and transregional material cycles, is crucial for the future viability of companies in Schleswig-Holstein. These measures will not only contribute to commercial success but also have a positive impact on the environment. In Germany's True North, everyone is pulling together.

Transfer Hub for climate-neutral business

WTSH - Business Development and Technology Transfer Corporation of Schleswig-Holstein

Your contact

Jens Sandmeier

P +49 431 66 66 6-807
sandmeier@wtsh.de

Peer Biskup

P +49 431 66 66 6-857
biskup@wtsh.de

Timo Saager

P +49 431 66 66 6-561
saager@wtsh.de

As the country's northernmost state, flanked by two seas, Germany's True North is inherently suited to its pioneering role in the expansion of wind energy - both onshore and offshore. In 2022, Schleswig-Holstein set a new record by exporting approximately 9,043,000 MWh - equivalent to the annual consumption of 2.6 million households. This was calculated by SH Netz, whose findings state that exports of green energy from Schleswig-Holstein increased by 2 million MWh compared to the previous two years. In 2022, Germany's northernmost federal state met 185 per cent of its electricity demand (balanced), primarily from wind and solar energy sources.

WEST COAST LINE - A MILESTONE IN TERMS OF GRID EXPANSION

Grid expansion has long been a high priority for Schleswig-Holstein. In 2020, the "Mittelachse" (central axis), a newly reinforced 380 kV overhead power line to Denmark, was put into operation.

The new submarine cable connection "NordLink" was put into operation in 2021. And wind energy from our region now also reaches consumers via a crucial new route. The new power line from the Danish border to Brunsbüttel - the West Coast Line - is a key milestone on the path to the energy transition. At 380 kilovolts, the new overhead line is capable of transmitting the vast amounts of wind power generated along Schleswig-Holstein's west coast. By 2025, the line is scheduled to be connected to the Danish electricity grid as well.

Additional lines, including the East Coast Line, the Elbe-Lübeck Line, as well as new HVDC connections (high-voltage direct current connections) for future vital north-south and north-west links, are in the planning stages.

A DIGITAL, CLIMATE-NEUTRAL INDUSTRIAL REGION - WITH GREEN IT

Schleswig-Holstein aims to be the first climate-neutral industrial region by 2040. To achieve this goal, a digital transformation is essential, and this is where "green IT" comes into play. In Schleswig-Holstein, the corresponding initiative is called the Green IT Strategy 2.0. More digitalisation means higher energy consumption and, consequently, an increase in harmful CO₂ emissions. Currently, IT-related systems account for around a quarter of the total energy consumption at state properties. The new "Green IT Strategy" outlines 46 specific measures to reverse this trend and save up to 2,400 MWh annually. Building on the initial Green IT Strategy launched back in 2019, the updated initiative now includes a concrete implementation plan covering core IT infrastructure, IT workplace equipment and overarching measures. Ten million euros have been allocated for financing.

THE HYDROGEN ECONOMY: ON THE PATH TO SUPPLY SECURITY

By updating its hydrogen strategy, Schleswig-Holstein is continuing what it started in 2020 – and taking its commitments in this sector to a new level. These include increasing the expansion target for hydrogen power to 1.5 gigawatts by 2030. In essence, Schleswig-Holstein's hydrogen strategy revolves around accelerating the pace of infrastructure expansion in the region and, consequently, also the energy transition itself.

It is built on four pillars: production, import, infrastructure and utilisation, and aims to further integrate the use of hydrogen into businesses and industries. The expanded package of measures is designed to facilitate infrastructure roll-out, establish import partnerships, develop the hydrogen network and promote the training and education of skilled professionals.

In Schleswig-Holstein, green hydrogen has thus far only been available from decentralised sources and in relatively small quantities. However, industrial customers now need a consistent, large-scale supply of green H₂ to reduce their reliance on fossil-based hydrogen. Annika Fischer from the State coordination office for the Hydrogen economy in Schleswig-Holstein emphasises, *“Comprehensive infrastructure is now a crucial prerequisite for the ramp-up of the hydrogen economy. This is to ensure rapid, flexible, secure and cost-effective supplies of hydrogen, not only to individual regions but ultimately to the rest of Germany, Europe and the world.”*

In the long term, green hydrogen is poised to play a pivotal role in energy security and climate protection. It is estimated that green hydrogen could eliminate over 2.5 million tons of greenhouse gases by 2030

A HYDROGEN NETWORK FOR NORTHERN GERMANY

The goal is to establish a hydrogen core network in Germany by 2032, connecting major industrial centres such as the steel and chemical industries, storage facilities, power plants and import corridors. The German transmission system operators presented an initial draft for a nationwide network in July 2023. While major hydrogen consumers will play a crucial role in the initial phase of establishing a core network, the subsequent roll-out of hydrogen infrastructure within individual regions will be equally important in the longer term. Regional expansion is crucial for developing a comprehensive solution in the hydrogen sector. The H₂ Hanse Netz initiative aims to extend the planned nationwide hydrogen core network across Northern Germany. The envisioned network will stretch from Flensburg through Husum and Kiel to Brunsbüttel, encompassing Hamburg, Parchim, Stralsund, and Wolgast, and potentially integrating our gas storage facility in Mecklenburg-Vorpommern. Benjamin Merkt, technical director of Schleswig-Holstein Netz, explains, *“As a distribution grid operator, our goal is to act as the link between consumers, various hydrogen producers and the H₂ core network at both regional and local levels. This is what the H₂ Hanse Netz hopes to achieve in the future.”* To expedite this initiative, existing gas pipelines will be used and supplemented with new routes wherever necessary. According to a study by European utility companies, the process of converting existing pipelines for hydrogen transport is relatively straightforward. In most cases, it is only necessary to retrofit or inspect key components such as valves, pressure control systems or compressors.

09



A HYDROGEN NETWORK FOR ALL OF EUROPE

The H2 Hanse Netz initiative builds on the planned German hydrogen core network, which, in turn, takes into account the European aspirations for a European Hydrogen Backbone (EHB) network. The aim is to create a hydrogen network spanning Europe, with plans to lay 39,700 kilometres of gas pipelines by 2040 and continuous expansion thereafter. This infrastructure will link 21 European countries, with approximately 69 per cent of the network comprising repurposed natural gas pipelines. The remaining 31 per cent of pipelines, essential for connecting new consumers and yet to be constructed, will be situated in countries with relatively small existing gas networks. Nevertheless, these countries anticipate a significant future increase in both the demand for and supply of hydrogen.

Additionally, the LNG terminal in Brunsbüttel - operational since 2023 for the landing and injection of Liquefied Natural Gas (LNG) - will be expanded to make it "H2 ready", i.e. to ensure its hydrogen compatibility. This expansion will provide an additional foundation for injecting H2 into the German network.

AUTONOMOUS MONITORING OF CRITICAL INFRASTRUCTURE

Climate change and the current geopolitical situation repeatedly highlight the need for adequate protection of critical infrastructure, such as gas and hydrogen pipelines. Autonomous monitoring holds the promise of faster response times in case of failures. An intelligent system, capable of learning, could potentially predict when maintenance work will be necessary. While this may sound like science fiction, it is already a reality at Selected Electronic Technologies GmbH, or SET GmbH, based in Wedel. The company has made a name for itself in the global energy and electronics industry.

SET GmbH manufactures complex systems known as "isolation units" for high-voltage-influenced pipelines. These systems safely discharge voltages that would otherwise be hazardous to humans, while safeguarding the pipelines' critical electrochemical corrosion protection. Frederic Korupp, business development and process manager at SET GmbH, adds: *"Our isolation units ensure that employees working on the technical facilities are protected. At the same time, they allow the intensive measurements necessary for corrosion protection to be carried out - without distorting the measurement results."*

WASSERSTOFF WIRTSCHAFT.SH

Landeskoordinierungsstelle

Contact

Annika Erichsen
Director of the state coordination
office for the hydrogen economy
P +49 431 66 66 6-835
erichsen@wtsh.de
[wasserstoffwirtschaft.sh](https://www.wasserstoffwirtschaft.sh)

"The State coordination office for the hydrogen economy in Schleswig-Holstein serves as a central hub for the region's emerging hydrogen economy. It assists the various stakeholders with initial project and funding consultations, facilitates the networking of expertise, and contributes to making the market ramp-up more visible. Its goal is to increase transparency in the context of expanding the hydrogen economy, making it easier for businesses to identify synergies and potential partnerships with other stakeholders in the same sector."

Annika Erichsen,
Director of the State coordination office
for the hydrogen economy

H₂



The team at SET GmbH in Wedel led by CEO Karl Korupp

Intelligent, AI-supported systems make reliable monitoring of energy infrastructure easier, safer and more efficient



SMART SYSTEMS FOR ENHANCED RELIABILITY

In the past, maintaining these systems required frequent and labour-intensive inspections. SET GmbH is now digitalising the systems with the help of an intelligent IoT device (Internet of Things), which monitors the isolation units remotely. This enables an immediate response in the event of a malfunction or damage to the system - a crucial factor that can safeguard devices and lives in critical situations. Furthermore, the technology can even predict when the next maintenance work will be necessary. *“By utilising artificial intelligence, we analyse the behaviour and ageing rate of the components. We then use this data to derive an algorithm, which is subsequently implemented in the intelligent IoT device,”* explains Frederic Korupp.

SMART SYSTEMS FOR A SAFE ENERGY TRANSITION

The intelligent IoT device used by SET GmbH, named iMona, serves as an example of how systems can be managed throughout their life cycle, ensuring safe operation through predictive maintenance. *“SET GmbH’s initiative enables more cost-effective operation of the facilities, enhancing reliability and reducing the reliance on skilled workers, which in turn contributes to a secure energy transition,”* adds managing director Karl Korupp.



Innovating

COLD LOCAL HEATING

Cold local heating sounds almost like a contradiction in terms, but it is future-orientated and highly efficient. In contrast to district heating, the energy is obtained directly from the surrounding area. Together with partners from research and development, Stadtwerke SH is currently realising a pilot project for the large-scale implementation of an underground ice storage facility for heating and cooling in the "An den Wichelkoppeln" development area in Schleswig (61 residential units in total). In this pilot project, which is being funded as part of the German government's energy research programme, the ground ice storage system serves as a source of heating and cooling for the heat pumps. In a nutshell, the ice store utilises the energy that is released when the water in the store freezes in winter and thaws again in spring and summer. The advantages of the ground ice storage system are the significantly higher storage density compared to conventional geothermal fields, and thus the possibility of storing heat and cold on a seasonal basis. With this research project and the "cold local heating" system, Stadtwerke SH has been making an important contribution to emission-free, renewable heat supply in our region and throughout Germany for several years.

More information is available at:

stadtwerke-sh.de/forschungsprojekte



In an ice thermal storage system, multiple pipe layers are stacked on top of each other. The soil between the layers is then frozen in a controlled manner. This saves a lot of space.

INNOVATIVE, CARBON-NEUTRAL CEMENT

Holcim Deutschland recognises the pivotal role of sustainable construction materials in the success of the energy transition. In seeking to curb the harmful emissions linked to the production of construction materials,

Holcim, a provider of innovative, sustainable and digital construction products and solutions, has marked a milestone on the road to green cement production. In its "oxyfuel process", pure oxygen is used instead of ambient air during combustion in the cement kiln. The oxygen, in turn, is produced via electrolysis processes in which water is split into hydrogen and oxygen - with the help of green electricity and Holcim's industrial partners, naturally. The ensuing combustion produces pure CO₂, which is subsequently transformed into methanol for use in the chemical industry. thyssenkrupp Industrial Solutions AG and Linde Engineering serve as the technology and project partners for this initiative, resulting in an annual reduction of 1.2 million tons of CO₂ emissions at Holcim's Lägerdorf site alone. *"We're transforming our cement plant in Schleswig-Holstein into a pioneering example of green cement production. It now stands as a technological beacon with international influence,"* declares Thorsten Hahn, CEO of Holcim Deutschland. This innovation project is being funded by the European Union to the tune of 109.8 million euros. Holcim itself is investing a nine-figure sum in this trailblazing venture.

Schleswig-Holstein is embarking on a journey to become the first climate-neutral industrial region - an ambitious goal that demands both willpower and action. The unwavering pursuit of this goal by policymakers is creating a framework for sustainable lifestyles and economic activity. Companies are increasingly recognising and capitalising on the opportunities presented by the energy transition to innovate and develop trendsetting business models. Green energy is emerging as an increasingly significant "location factor".

The energy transition is a generational challenge, and one which Schleswig-Holstein embraced at an early stage. Virtually its entire population (96 per cent) supports the energy transition and endorses the expansion of green energy infrastructure, according to a representative survey by the YouGov polling institute. In Germany's True North, the energy transition - as a critical aspect of moving to a sustainable, future-focused economy and society - has become an integral part of life and business. (eli/lei/ml) //

More info on this topic? It's right here.





We are the wind champions.

Germany's true number 1 in the expansion of wind energy. #echteAussichten

der-echte-orden.info/english



Schleswig-Holstein
Germany's True North

CLIMATE-NEUTRAL MOBILITY

OUR PUBLIC TRANSPORT MUST BECOME MORE ATTRACTIVE AND REMAIN AFFORDABLE FOR EVERYONE

14

Minister of Economic Affairs Claus Ruhe Madsen discusses the role of public transport in Schleswig-Holstein in the context of the mobility transition, and where Germany's True North is already playing a pioneering role.



"Businessland"
Interview

"Businessland": Minister Madsen, under the current state government, in which the CDU and Alliance 90/The Greens hold sway, there is a commitment to making Schleswig-Holstein the first carbon-neutral industrial region. What role does transportation play in achieving this goal?

Madsen: A significant one! The transportation sector is responsible for 20 per cent of greenhouse gas emissions. This hasn't changed much since the 1990s, if anything, it has actually increased. Therefore, we can see an urgent need for action and also a great opportunity to make progress towards our net-zero goal.

"Businessland": How do you plan to achieve this?

Madsen: First and foremost, by making public transport more attractive. We want to encourage people to make the switch. This is only possible if the available services tick the right boxes. A train or bus journey

shouldn't break the bank, and I must be able to reach my destination promptly without constant delays and cancellations. In particular, there are a number of challenges when it comes to regional rail transport.

"Businessland": The "Deutschland-ticket" has made public transportation more affordable for many commuters. However, this is futile if the trains are not reliable. How do you plan to motivate even more people to use public transport?

Madsen: The infrastructure is outdated; DB Netz urgently needs to invest more here. After all, our transport companies pay 160 million euros per year as track access charges and, in return, are given damaged tracks and numerous slow-speed sections. However, we need not only to maintain the existing infrastructure but also expand the existing services.

In this legislative period, we are focusing on reactivating routes. In the coming years, the plan is for trains to run once more between Wrist and Kellinghusen, between Rendsburg and Rendsburg-Seemühlen, and between Kiel and Schönberger Strand. This way, we can reach even more people.

"Businessland": What would you say to the people in Belau or Goldelund? Should they get rid of their cars and walk to the nearest railway station?

Madsen: Of course not, and our goal isn't to ban cars. However, even just driving to the nearest station by car then taking the train makes a difference. We need to combine and interconnect the various modes of transportation even more closely.

Of course, we won't be able to connect every community to the rail network, and not every place can expect a bus to arrive every 20 minutes. That's why we need alternatives such as car-sharing, rental bikes or on-demand services. These options can bridge the critical last mile, reach the nearest station, or provide connections late at night.

"Businessland": On-demand services - the concept is not yet widespread. Are there any existing projects that could serve as a model?

Madsen: Yes, there have been such projects for several years. Remo in Rendsburg is one example. In the Schlei region, an all-in-one package called Smile24 is being organised, with on-demand buses, bike and

car-sharing. In a few years, we will know how and where such concepts can be applied.

"Businessland": If more people occasionally leave their cars at home, it will undoubtedly have a positive impact in terms of greenhouse gas emissions. But surely diesel buses and diesel trains are anything but climate-friendly?

Madsen: Correct! Which is why we've started a mini revolution in railway transport in Schleswig-Holstein. We've ordered a total of 55 battery-powered trains that will gradually replace diesel trains on a total of eleven routes. This will save ten million litres of diesel and 26,000 tons of CO₂ per year. In Schleswig-Holstein, we have the fewest electrified routes nationwide at 29 per cent. Despite this, with battery-powered trains we can still achieve climate-neutral mobility. By the way, we are the first federal state with battery-powered trains in regular operation. And Schleswig-Holstein's municipalities are also leading the way in terms of climate-neutral bus transport. Our state capital Kiel, for example, is among the top ten cities with the most electric buses in Germany. And I'm convinced this trend will continue. (ks) //

"We need to combine and interconnect the various modes of transportation even more closely. To achieve this, we also need car-sharing, rental bikes and on-demand services."

Claus Ruhe Madsen





GEOMAR's Professor Anton Eisenhauer, the BlueHealthTech alliance coordinator, in the cleanroom laboratory

BLUEHEALTHTECH MEDICAL SCIENCE PLUS MARINE RESEARCH EQUALS INNOVATION

*The Kiel-based research and development alliance **BlueHealthTech** is venturing into uncharted waters in terms of scientific progress and technology transfers. Medical scientists and marine researchers, in partnership with companies, are working to develop new therapeutic drugs and diagnostic methods in the fight against chronic diseases.*

What usually happens when numerous world-class research institutions are based in the same city? Actually, not much, because everyone tends to stay firmly within their own bubble. In the past, this was also the case for institutions like Kiel University (CAU), the University Hospital Schleswig-Holstein (UKSH), Stryker Trauma GmbH and the GEOMAR Helmholtz Centre for Ocean Research Kiel. However, this is now changing thanks to the BlueHealthTech joint project funded by the Federal Ministry of Education and Research (BMBF), and partially also by the state's Ministry of Economic Affairs. Research institutions and companies in the fields of pharmacy, medical technology, marine biotechnology and general marine research are working together to discover interdisciplinary and transdisciplinary

solutions and innovations for the healthcare sector.

"We aim to discover entirely new approaches to develop innovative therapeutic drugs and improved diagnostic methods - particularly for the treatment of chronic diseases such as osteoporosis, Parkinson's, diabetes, and eye conditions like macular degeneration," explains GEOMAR's Professor Anton Eisenhauer, coordinator of the BlueHealthTech alliance.

The initiative gives regional companies the opportunity to engage in collaborative projects with scientific partners, enabling them to advance innovations to market maturity and secure funding for these endeavours. *"Additionally, we aim to support startups that may emerge from various research projects,"* emphasises Professor Eisenhauer. As an example, he explains that the added value generated via the resulting knowledge transfer and patents could potentially be exploited via a public-private partnership with a newly founded commercialisation company. *"We see enormous potential here. The collaboration between two such distinct fields - medicine and marine sciences - that's happening here in Kiel is unparalleled globally. Every step we take is onto new ground,"* explains the marine researcher. He adds that osteolabs GmbH, a highly regarded spin-off from GEOMAR that was established in 2018, provides a perfect illustration of how this knowledge transfer could evolve into a successful corporate strategy.

At osteolabs, an idea emerged - to achieve early detection of osteoporosis via the use of trace elements in the human body, which was not previously possible. GEOMAR's researchers, in collaboration with medical professionals from the UKSH, developed an early detection method for bone loss based on an analysis technique used in marine research. *"It allows an early diagnosis of this widespread condition, enabling therapy before the onset of physical symptoms,"* explains Stefan Kloth, co-founder and current partner at osteolabs, who holds a doctorate in natural sciences. *"We use a non-invasive analysis method for calcium isotopes, using only urine or blood."* The OsteoTest is now a tried-and-tested diagnostic procedure used by doctors and patients alike. Today, osteolabs employs around 25 highly qualified specialists in the fields of research, medicine, laboratory, technology and finance.

The Federal Ministry of Education and Research has also recognised the opportunities presented by this innovative transfer of knowledge - in September 2021, BlueHealthTech was selected to join its WIR! (Change through Innovation in the Region) funding programme along with 22 other projects nationwide. The Federal Ministry of Education and Research will provide the alliance with up to 15 million euros in funding over the next five years. The alliance, launched at the end of 2021, is now steaming full speed ahead.



Among the numerous funded projects is "Pro-ASTAX", focusing on astaxanthin - one of nature's most effective antioxidant substances, found in particularly high concentrations in a species of microalgae. This substance has various health-promoting properties that, for example, can help in the prevention of diabetes. Since continuous and efficient production of astaxanthin is currently not possible, researchers are working with Sea & Sun Technology in Trappenkamp, a high-tech manufacturer of underwater measurement systems, to develop an automated, industrial system for astaxanthin production.

One of the major contributors to BlueHealthTech is Stryker Trauma GmbH (based in Schönkirchen near Kiel), a medical technology company and global leader in the development and production of surgical bone nails. Within the BlueHealthTech framework, Stryker, in partnership with osteolabs GmbH and medical professionals from UKSH, is researching and developing various "Aug4ment" bio-regenerative materials. The end goal is to develop a bio-replacement material that can be used for tissue stabilisation after bone fractures in osteoporosis patients.

Across all BlueHealthTech projects, the researchers also anticipate significant progress in the areas of trace substance analysis, sensor technology and the evaluation of imaging data for the diagnosis of diseases, while also advancing the digitalisation of processes. Professor Eisenhauer predicts that this will lead to a significant step forward in terms of preventing, diagnosing and treating chronic diseases. BlueHealthTech also offers opportunities for young researchers - workshops on technology transfer, patents and spin-offs create the necessary framework to turn flashes of inspiration into economic success stories that could help shape the future of "blue medicine". (wel) //

bluehealthtech.de

More info on this topic? It's right here.



ORIGINAL LÖWE

OVER 100 YEARS AT THE SHARP END OF SUCCESS

18

Cutting-edge manufacturing? It's a family tradition! Over a century ago, Walther Schröder invented the first Original LÖWE anvil shears. Now in its third generation, the family business is currently led by Randolph Schröder. He and his team celebrated this milestone anniversary last year.



Location
Flintbek



Workforce
60 employees*



*Another 80 employees at the
"Drachensee" foundation



Company founded
1923

Randolph Schröder,
managing director of
Gebr. Schröder GmbH



SUSTAINABLE GLOBAL MARKET LEADERSHIP FOR OVER A CENTURY

He was ten years old when he produced a drawing of his grandfather's Original LÖWE shears. Precise. Accurate in every detail. With the logo, anvil and spring in the right place. He knew even then: *"Some day, I'll be running the company. I hadn't even considered what that actually meant. I just knew I would be in charge one day."* He joined the company back in 1998, and became its sole managing director in 2008. Back then, there were 12 employees. Today, that number has grown to 60. The Original LÖWE 1, the first anvil shears, was developed by his grandfather Walther Schröder in 1923. It featured a blade drawn against a fixed surface, establishing the original LÖWE cutting principle that endures to this day. Even more than a century later, this principle remains unique. From the very first models, every component was designed to be interchangeable - a tradition that holds true to this day. *"For our shears, 50 years is nothing. They have an unlimited lifespan,"* remarks Randolph Schröder. Sustainability has been ingrained in the business, the product and the manufacturing process since day one. This commitment has positioned Original LÖWE as a leading global brand, renowned for the high quality of its products - a status it still holds today. Another aspect of Original LÖWE's success lies in producing bypass shears, perfect for precision cutting in hard-to-reach places. Furthermore, the company has proudly distributed shears to more than 80 countries. Initially designed for professional use in viticulture, fruit cultivation and horticulture, its product range was expanded to include cable duct shears and cutters for sealing profiles. At Original LÖWE, the philosophy is simple: cut, don't saw.

PERFECTION FIRST, THEN SALES

The company's innovative roots can be traced back to Walther Schröder, the consummate inventor. And Randolph shares his grandfather's passion for technology. At just 20 years old, he successfully restored a vintage car, an accomplishment he proudly recalls, *"It worked, it drove afterwards."* Motivated by this experience, Randolph chose to study mechanical engineering. While his father was a natural businessman, Randolph aimed to shift this dynamic, convinced that a leader of a technical enterprise should possess a deep understanding of technology. His trained eye and professional perspective on every small detail are viewed as major assets by the company's production team. This synergy between his experience and the team's expertise has given rise to the high-quality Original LÖWE shears - a product born of teamwork, equality and collaboration. Under Schröder's leadership, the manufacturing process at LÖWE underwent a complete overhaul. While digitalisation has increasingly shaped the company's production processes over the last 30 years, there is still a belief that the ability to assess a finished pair of shears through touch, sight and sound simply cannot be



replaced by digital tools or AI. The human touch remains indispensable. Reflecting on joining the company as its only university graduate at nearly 30, Schröder recalls the initial skepticism among the workforce. *"Here he comes, the boss's son, probably clueless. Just another graduate. I had to learn how to earn my stripes and assert my ideas, and especially in the early days I learned a lot from our employees - and still do today."* Learning from his team, listening to them, motivating them to develop and pass on their own skills. Empowering them to take the lead. At Original LÖWE, they have taken precisely this path. *"There's no longer someone at the top, calling the tune from on high. Success is now measured by what I achieve and contribute as a person."*

FROM A CARING TO AN INCLUSIVE CULTURE

A cultural shift is underway, and everyone is on board. It even encompasses a new approach to dealing with mistakes. Conversations with individuals within the company leave no room for doubt - the entire team genuinely believes that the Original LÖWE shears are exceptional tools. The significance of this strong connection to the product is unmistakable. But what is fuelling this transformation? Perhaps, a guiding principle crafted by Schröder himself, drawing on his own experiences from the company's early days. *"The truth is, every morning, rain or shine, our team gets up early, commutes through all kinds of weather and assembles shears to make the company successful. They put in a lot. That's why I genuinely want everyone to be happy."* Sounds good, right? And it is good. So far, the global market leader has shrugged off the ongoing shortage of skilled workers. Word seems to be getting around that working at Original LÖWE is a positive experience. We hope it stays that way. The whole team will play a part in that. Collectively, the company plans to keep evolving. Here's to another 101 years of Original LÖWE shears. (lei) //

"Sustainability is our focus and the basis for our actions. Because it's more than just a project; sustainability is a fundamental attitude."

Randolph Schröder,
managing director of Gebr. Schröder GmbH

[original-loewe.de](https://www.original-loewe.de)



WACHE GMBH

ROLLING TOWARDS A SUCCESSFUL FUTURE

20

They are always ready to reinvent the wheel for their customers - especially if they can't find what they need among the 30,000 standard variants in the company's product catalogue. Wheels, castors and transport devices of all kinds constitute one of the two business segments at Wache GmbH; the other being the production of precision mechanical parts. Three members of the Wache family jointly manage the SME as equal managing directors. They are now investing in the future at their Lübeck location.



Location
Lübeck



Workforce
110 employees



Company founded
2006

The portfolio includes small castors and wheeled units with a load capacity of 100 tons - and everything in between.



In autumn 2023, the family business achieved a significant milestone when it inaugurated a new building on its premises in Lübeck's Roggenhorst industrial estate, effectively doubling its production and storage capacity. The new hall covers an area of 4,500 square metres and stands at a height of ten metres. Despite its substantial size, Dr Thies Wache notes that its thermal insulation values are comparable to that of a typical detached house. He, his sister Bettina Wache-Möhle and his wife Claudia Wache form the triumvirate at the helm of the company. **Sustainability is extremely important to us. We have taken steps to recover heat energy from our systems and almost entirely reintegrate our production waste into our material cycle. Furthermore, our products are approximately 90 per cent recyclable,**" explains the co-CEO. Claudia Wache gestures towards additional areas behind the new production hall, where, following the completion of the construction work, a wildflower meadow has been sown: **"A reserve for future growth, currently providing a habitat for bees and other insects."**

MEDICAL TECHNOLOGY, AVIATION, OPTICS, MECHANICAL ENGINEERING - THE WHEELS ARE ALWAYS IN MOTION

Since 2012, the family business has been based in Lübeck and has steadily expanded during this time, both spatially and in terms of its workforce. **"We evolve with the market and our customers. We're not just selling a product, but above all our know-how and expertise. We take pride in our longstanding customer relationships,"** explains Bettina Wache-Möhle. In the field of precision engineering and machining, Wache's customers predominantly hail from the technology, aviation, optics and mechanical engineering sectors. Wache offers high-quality solutions - from individual parts to large series and complete assemblies, with dimensions ranging from under a millimetre in diameter to three metres in length, and encompassing a wide range of materials. This diversity is equally apparent when it comes to the manufactured wheels, castors and transport systems - from small castors that must withstand extreme conditions, such as high temperatures or aggressive media, to units with a load capacity of 100 tons.

TWO WHEELS ARE BETTER THAN ONE

The company's presence in two distinct sectors has historical roots. In 1984, Manfred Wache established the wheels and castors business in Hamburg, with his children Thies and Bettina actively involved. Following this, Thies Wache and his wife Claudia founded the precision engineering company, Feinmechanik Wache GmbH, in 2006. After the senior Wache passed the reins to the next generation, both companies joined forces in 2012. **"Having these two pillars is an advantage for us today, allowing us to navigate through changing economic conditions,"** explains Claudia Wache.



The management triumvirate: Claudia Wache, Dr Thies Wache and Bettina Wache-Möhle keep everything rolling smoothly

21

ROLLING TOWARDS THE FUTURE ON SOLID GROUND

At their Lübeck location, the three joint CEOs still see a lot of untapped potential. This is partly attributed to its strategic position on the "axis of the future" between Hamburg, the "Gateway to the World", and the growth markets in the Baltic Sea region, which will become even more accessible with the completion of the Fehmarn Belt Tunnel. **"The North is capitalising on its strengths,"** notes Bettina Wache-Möhle with satisfaction. In her role on the board of the HanseBelt network, she actively forges connections between individuals and businesses in the region, championing the virtues of Germany's True North. **"According to the 'Happiness Atlas', the happiest people in Germany live in Schleswig-Holstein. We can confirm that assessment,"** says the Hamburg native with a smile.

When searching for skilled workers and apprentices, the natural benefits of the location, such as its proximity to beaches and vibrant heritage cities like Lübeck, come into play. Additionally, Wache takes proactive steps to maintain its appeal as an employer: **"For instance, we've recently introduced a shortened shift on Fridays,"** says Thies Wache. To attract young talent, the company attends school events and trade fairs, and maintains an active presence on social media platforms. **"Especially among young people, we need to rekindle the appeal of manual and production work."** (sas) //

"We're not just selling a product, but above all our know-how and expertise."

Bettina Wache-Möhle, joint CEO of Wache GmbH



wache.de

**Contact**

Alexandra Hübler
Team leader
Welcome Center Schleswig-Holstein
P +49 431 66 66 6-818
huessler@welcomesh.de
welcomecenter-sh.de

WELCOME TO GERMANY'S TRUE NORTH!

WELCOME CENTER SCHLESWIG-HOLSTEIN

PROVIDES MORE **SKILLED LABOUR AND WORKERS**

The consensus among politicians, business leaders and the scientific community is that the anticipated shortage of skilled workers is poised to present a significant challenge for our country over the coming years. The problem is then expected to worsen further still as the Baby Boomer generation gradually retires from the workforce. In Schleswig-Holstein, proactive measures are underway to tackle

this impending issue. The recently launched Welcome Center Schleswig-Holstein, which opened its doors at the end of 2023, aims to raise the region's profile among international professionals and workers. The Welcome Center Schleswig-Holstein is positioned as a central hub for international professionals and workers, as well as companies based in Schleswig-Holstein.

Providing vital services for foreign professionals and workers, as well as Schleswig-Holstein's companies (from left to right): Sunniva Först, Alexandra Hüssler, Andreas Wilken, Jakub Czarnecki, Marieke Fischer, Matthias Guist

Schleswig-Holstein alone is projected to suffer from a deficit of approximately 180,000 workers by 2035, primarily in professions requiring a qualified vocational education across various sectors and industries. And this anticipated shortfall in the workforce cannot be overcome with the existing human resources in Schleswig-Holstein alone. The state is therefore reliant on the immigration of skilled labour, both from the EU and third countries. *"When it comes to attracting international professionals, Schleswig-Holstein is not only competing with other German federal states, but also with other nations,"* explains Minister of Economic Affairs Claus Ruhe Madsen. Consequently, he adds, it is now crucial that we leverage the Welcome Center Schleswig-Holstein to enhance the visibility and attractiveness of Germany's True North as an immigration destination, with the goal of significantly boosting labour migration.

A DIVERSE SOLUTION TO THE SKILLED WORKER SHORTAGE

The Welcome Center is intended to serve as a central hub, providing assistance to international professionals and their families, as well as their potential or existing employers in Schleswig-Holstein. It offers guidance and information, catering to a diverse audience.

COMPREHENSIVE SERVICES FOR INTERNATIONAL PROFESSIONALS AND BUSINESSES

To accomplish this, the Welcome Center provides a broad array of services and support, covering advice on immigration and residency regulations, assistance with registration and accommodation, information on social infrastructure, housing, the healthcare and education systems and family reunification, as well as guidance on accessing the German job market. Additionally, it supports small and medium-sized enterprises (SMEs) and organisations, especially those seeking to hire or already employing foreign skilled workers. The services on offer to Schleswig-Holstein companies include assistance for recruitment projects in EU and non-EU countries, integration management, advice on fostering a welcoming culture within the company, and guidance on funding opportunities linked to the employment of international professionals.

CONNECTING PEOPLE AND COMPANIES

To address this challenge and successfully match employees with employers, several partners have joined forces. The Welcome Center is the result of collaboration between the state's Ministry of Economic Affairs and its Ministry of Social Affairs, represented by the State Office for Migration and Refugees. Additionally, it involves the Federal Employment Agency, Regional Directorate North (RD Nord), represented by the Kiel Employment Agency (Agentur für Arbeit Kiel). Markus Biercher, Director of the Regional Directorate North at Germany's Federal Employment Agency, expresses optimism about the future services: *"Reducing barriers and simplifying immigration and integration into the job market are crucial steps. The Welcome Center Schleswig-Holstein will serve as a one-stop-shop covering all formalities. As an employment agency, it's firmly within our mandate to facilitate the recruitment of skilled workers, both locally and internationally, for companies in Schleswig-Holstein. We offer information, guidance and support to both foreign workers and businesses. We also provide access to our expansive network, which operates at a national, regional and local level through joint initiatives, and is also integrated into the European network of employment services."* The WTSH has been commissioned by the Ministry of Economic Affairs to operate the Welcome Center Schleswig-Holstein. The state government has allocated 12.8 million euros for the operation of the Welcome Center Schleswig-Holstein until 2028. As you can see, they really mean business in Germany's True North. (lei) //

23

Welcome Center 
Schleswig-Holstein
Connecting Companies and International Talents





24

Dirk Cordes, managing director of Wissenschaftspark Kiel GmbH and authorised signatory Melanie Kampe are convinced that the knowledge campus is the "place to be" for innovators based in Schleswig-Holstein

KIEL SCIENCE PARK

INNOVATION INSPIRED

BY GREAT THINKERS

Kiel Science Park (Wissenschaftspark Kiel) is a prime location for innovative companies in Germany's True North. One hundred companies with a total of 2,000 employees have set up shop right next to Kiel University, benefiting from extensive services including a data centre, kindergarten and supermarket; as well as a barbecue area for relaxation after work.

Einstein, Bosch, Darwin - the street names alone leave no doubt as to where you are. And anyone entering the buildings will immediately recognise their entrepreneurial added value, named as they are after prominent figures such as Werner von Siemens and computer pioneer Konrad Zuse. Even the Nikola Tesla car park, with its 48 charging points for electric vehicles, exudes a special aura thanks to its futuristic facade and iconic name. For Dirk Cordes, Managing Director of Wissenschaftspark Kiel GmbH, future-proof infrastructure for electric cars is just one aspect of making the "knowledge campus" the "place to be" for companies and their highly trained staff. **"We offer fast access to topics related to innovation, and create opportunities for collaboration with the scientific community,"** explains Cordes, who runs dc Services GmbH, the company responsible for developing and managing the park. Its thriving culture of innovation, he says, is far from an empty soundbite. **"We maintain close links with Kiel**

University (CAU), and also with the other universities in Kiel. For growth-orientated companies, proximity to the university is a strategic investment in the future."

According to the manager of this extraordinary campus, it enables them to develop innovative products and attract qualified specialists - including university graduates - through close collaboration with the scientific community. The park covers eight hectares and is conveniently located between the B76 arterial road, the Holstein Stadium and the university district. In the space of a decade, an area once associated with the production of analogue record players and electrical components for shipbuilding has evolved into one of the most sought-after locations for companies specialising in knowledge-intensive roles.

STATE-OF-THE-ART OFFICE BUILDINGS IN GERMANY'S TRUE NORTH

"We're creating a neighbourhood with a distinct character that also embraces its surroundings. It offers a wide range of amenities and is an inviting place to explore," says authorised signatory Melanie Kampe. Visitors are welcomed by the striking Neufeld House with its green courtyard, which hosts open-air concerts during the Schleswig-Holstein Music Festival in the summer. Alongside the existing buildings, three modern structures have recently been constructed, as well as a multi-storey car park. The architecturally outstanding Science Centre, financed by Kiel University and the City of Kiel, serves as the centrepiece. It is at once an engine of innovation, a sought-after conference centre, and a source of inspiration for numerous startups.

Several companies have recently moved into the newly inaugurated Emmy Noether House - named after a famous mathematician. The technology group Rohde & Schwarz has also opened its naval headquarters there. The Minister President of Schleswig-Holstein, Daniel Günther, extended his congratulations and expressed interest in learning more about the operations of the global company (13,000 employees, turnover 2.3 billion euros). He no doubt also observed that its new office building, constructed to the EH55 energy efficiency standard, stands out as one of the most modern in the North. *"We integrate smart technology into all new constructions - maximising comfort and energy efficiency through building and room automation,"* explains Dirk Cordes.

The shading, temperature and air quality are all intelligently controlled. Human Centric Lighting (HCL), which automatically regulates the colour temperature and illuminance, is used for the room lighting. HCL, which is based on the natural circadian rhythm, is designed to enhance well-being, concentration and performance. Cordes believes that all of this represents contemporary added value for companies and their teams.

THE "PLACE TO BE" WITH FOOD TRUCKS AND A BICYCLE GARAGE

A supermarket and a bakery with a café, where people from the neighbourhood and the district can meet and shop, also offer real added value. *"Table tennis and boules are permitted in the green spaces, and at lunchtime, many colleagues use the outdoor areas for communal meals. After work, it's a place for barbecues or summer parties,"* explains Melanie Kampe. A restaurant, a snack bar and various food trucks offer hot meals, while outdoor seating in green areas will further enhance the quality of life in the neighbourhood once the construction work is complete. Visitors can stay overnight at the B&B Hotel, and short walks of up to five minutes to all facilities are all part of the concept. *"We're also connected to Premium Cycling Route 10, and will soon start building our own bicycle parking garage,"* says Cordes. In addition, a car-sharing station is scheduled to be built on city-owned land.

The two modern new buildings, which should be ready for occupancy by 2026/27, will provide space for a prominent tenant: the NDR state broadcasting centre. Billboards on site depict the neighbouring office building, for which the planning process is also in full swing. Naturally, it will bear the name of another visionary: Johannes Gutenberg, inventor of the printing press and thus a pioneer in the dissemination of global knowledge. (wel) //

wissenschaftspark-kiel.de



Innovative car park management from Kiel. Modern car park systems prioritise multimedia technology over traditional barriers and ticket booths.

DESIGNA VERKEHRSLITTECHNIK GMBH

GUIDING LIGHTS IN EVERY RESPECT

The fact that Schleswig-Holstein can boast several hidden champions is no longer a secret, especially for the readers of this magazine. However, it might surprise some that technology from Kiel also plays a crucial role at the world's largest airports and shopping centres.



Location
Kiel



Workforce
550 employees



Company founded
1951

“From the mobility transition to the potential for digitalisation - we’re already developing tailored solutions for the world of tomorrow.”

Oliver Suter, CEO of
DESIGNA Verkehrsleittechnik GmbH

designa.com



When Heinz Bula and Gerard Vogel founded DESIGNA, the German signal and advertising company, in 1951, they could hardly have foreseen the impressive path their company would take. Initially with three employees, they focused on the production of traffic and advertising signage. The decisive turning point came just over 30 years ago when they launched their first proprietary parking system, not only expanding their portfolio but also laying the foundation for a successful entrepreneurial journey. Today, DESIGNA specialises in parking systems, providing tailored solutions that are used and appreciated worldwide. *“What started a few years ago with simple barriers, tickets and cash machines is now much more complex and includes a vast range of hardware and software components,”* says CEO Oliver Suter.

The impact of this strategic decision is made clear by the numbers. The company’s initial five-person team has now grown to over 550 employees, of whom 150 are still based at the company’s headquarters in Kiel. *“DESIGNA operates in over 60 national markets and now has subsidiaries in many countries including Australia, France, the United Kingdom, India, Italy, Mexico, Hungary and the USA. This year, our revenue will surpass the 100-million-euro mark,”* adds Suter. Currently, over 17,000 DESIGNA systems are in use worldwide.

The Kiel-based company’s references also speak for themselves - from airports in New York, Denver, Sydney, Frankfurt and Hamburg to the gigantic Mall of the Emirates in the United Arab Emirates as well as shopping palaces in Australia and Malaysia. From clinics in major cities like Philadelphia or Seattle to the entire metropolitan parking concept for the City of Grand Rapids in the US state of Michigan. This worldwide presence is also reflected in their daily work. *“There are definitely weeks when we speak more English than German,”* says Chief Marketing Officer Phillip Veldten in reference to their global sales. *“This not only applies to video calls, phone calls and emails, but also to the numerous international trade fairs that we attend. It’s all part of the job and quite enjoyable, to be honest. We’re proud to use these opportunities to showcase our presence - as a global player in the industry but also as a traditional company from Schleswig-Holstein,”* adds Veldten.

TICKETLESS, SEAMLESS, EFFORTLESS - THE DIGITALISED CAR PARK

“Smarter Solutions for a Digital Planet” - this is not merely a corporate slogan but also an expression of the next strategic step, which DESIGNA has long since taken. The future demands new, flexible and innovative approaches - including the design of parking facilities. When discussing this with Florian Leiber, the company’s technical managing director, it soon becomes clear why this is the case.

“Digitalisation, the mobility transition, changes in urban working and living environments - all these buzzwords for the ongoing changes in society are also closely linked to the future evolution of our products,” says Leiber. *“This includes the integration of charging stations for electric cars and e-bikes, but it also goes much further. Fully automatic, cashless parking systems with number plate recognition instead of barriers are already a reality for us,”* adds Leiber. Payment can be made at our state-of-the-art terminals or online, either beforehand, while in the car park or afterwards - either on the spur of the moment or via a subscription. *“This allows our customers to offer their users even more flexibility. The elimination of paper tickets on this scale is also a significant factor in terms of the environment,”* he concludes.

Another step towards the future is the development of cloud-based systems. The DESIGNA Cloud allows the company’s customers to conveniently outsource their entire IT organisation, providing real-time access to system data and protection against cyberattacks. The company’s support team is promptly alerted in the event of disruptions. With so much innovative capacity, it’s evident that DESIGNA’s journey is far from over. (as) //

Oliver Suter, CEO of the internationally positioned DESIGNA Verkehrsleittechnik GmbH from Kiel



EEN: UNITING EUROPE

FOR MORE THAN 15 YEARS

28

With around 600 partners worldwide, the Enterprise Europe Network – the EEN is the world’s largest international network for economic development. It has offices in 60 countries and has been helping small and medium-sized enterprises (SMEs) break into international markets for more than 15 years.

“Businessland” spoke to Jenny Dümon, who has headed the EEN Hamburg - Schleswig-Holstein for 15 years, i.e. from the very beginning, about current challenges in the European single market.



Jenny Dümon from the Enterprise Europe Network Hamburg - Schleswig-Holstein takes stock



“Businessland”
Interview

“Businessland:” The Enterprise Europe Network (EEN) is the world’s largest international network for economic development. What specific benefits do companies in Schleswig-Holstein derive from the EEN?

Dümon: Companies and research institutions in Schleswig-Holstein can effortlessly connect with international partners, both within and outside the EU, via the EEN network. This includes opportunities for market entry, support in target countries, collaboration

on projects, and generating business contacts. In essence, we cover the entire spectrum of economic development. Through this network of over 600 validated partners, a company from Schleswig-Holstein can establish direct contacts across the EU. We are the interface for this.

“Businessland:” Last year marked the 30th anniversary of the European single market, and the EEN celebrated its 15th anniversary. Has it become easier to forge partnerships?

Dümon: As for the EU single market, it has undergone significant development in the last 30 years, with many new countries joining. This diversity makes it more interesting and exciting, especially with an active presence in these countries. Most companies want to go where a large market is waiting for them. However, many companies looking to expand abroad for the first time often choose neighbouring countries such as Denmark or the Netherlands. The European idea behind the EEN is that

both countries should benefit, and businesses within Europe should collaborate across borders. This is what defines Europe – a shared economic space – shared progress.

“Businessland:” Topics such as digitalisation, innovation and sustainability are high on the agenda throughout Europe. How do they influence the European single market, and how is the EEN adapting to them?

Dümon: Europe aims to take a leading role on these long-term issues. We’re aligning our services with these key objectives and organising relevant events and matchmaking opportunities. As part of our standard service, our network also incorporates a sustainability check, the goal being to advance this topic within companies in Schleswig-Holstein. These services are combined within the EEN network – there are specific hubs that specialise in these topics and support companies accordingly. Entrepreneurial actions should, if possible, be aligned with these themes to ensure the company is well-positioned in the European single market. However,

within the EU, it’s usually necessary to establish a common baseline. Within each of these upcoming topics, each country possesses unique strengths and weaknesses across different domains.

“Businessland:” The scarcity of skilled workers poses a challenge throughout Europe. Is it not inevitable that rapidly expanding companies will encounter this issue?

Dümon: Most companies seek local personnel with specialist knowledge of the country, the local market and, of course, potential customers. The skills shortage is mainly a problem in western European countries. In many other countries, there are plenty of skilled workers who can be easily recruited. In some cases, there are so-called “recruiting bridges”, such as bilateral training programs with Spain. These are designed as long-term solutions, but each country naturally faces its own unique challenges.

“Businessland:” Looking into the future. How will the EEN operate in 15 years?

Dümon: I hope that the EEN will maintain its current size and strength, promoting pan-European collaboration. The EEN network will still exist because the need for it will still be there. The network’s offerings will undoubtedly become more digital because the respective structures will need to become more agile and responsive. In 15 years, new technologies and economic themes will also be in focus. While SMEs are the network’s main beneficiaries, there is an increasing emphasis on startups and micro-enterprises.

I hope it will maintain its presence in the regions and see increased uptake at regional level. It should not be viewed as a distant EU project, but rather as a practical tool to support businesses. (nh) //



Contact

Jenny Dümon, Team Leader
Enterprise Europe Network Hamburg –
Schleswig-Holstein
P +49 431 66 66 6-862
duemon@wtsh.de
wtsh.de/de/enterprise-europe-network

FRESH IMPETUS FOR STARTUPS

STARTING A BUSINESS IN SCHLESWIG-HOLSTEIN?

THAT'S A SAFE BET!

30

Entrepreneurs face many questions as they prepare for a startup journey: how will I support myself during the start-up phase? Where will I find investors? And who can give me advice along the way? In Germany's True North, young movers and shakers will not only find answers to such questions, but also an expansive support network.

In Schleswig-Holstein, aspiring entrepreneurs receive the guidance and impetus they need to achieve success. This includes diverse funding opportunities and a wide range of advisory services - from the pre-seed phase to market maturity and beyond. Germany's True North is renowned for this and offers a wide range of support for startups.

The state of Schleswig-Holstein has earmarked 2.7 million euros for the Schleswig-Holstein Startup Grant from 2022 to 2027. Under the scheme, university graduates and individuals who have completed vocational training are eligible for a monthly non-repayable subsidy of 1,750 euros for eight to twelve months. Students will continue to receive the existing grant of 800 euros per month.

STARTUP GRANT AND NETWORKS

Baltic Business Angels Schleswig-Holstein e. V. helps entrepreneurs on the road to success - with advice, action, experience and capital. The business angels gladly support aspiring entrepreneurs with promising ideas and potential. StartUp Schleswig-Holstein e. V. provides additional funding and networking opportunities. With support from the state government, startups can benefit from the region's network of universities and university-related organisations. (eli) //



Contact

StartUp Funding & Financing at the WTSH

Dr Annelie Tallig

P +49 431 66 66 6-848 · tallig@wtsh.de

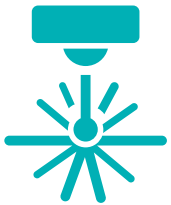
StartUp Schleswig-Holstein e. V.

Dr Anke Rasmus

P +49 431 880-4698 · rasmus@startupsh.de



Laser-focused: Dr Oliver Lischtschenko, Dr Patrick Schmidt-Kaeding and Mathias Groß, the founders of Coher Sense UG in Lübeck



COHER SENSE UG LASER MEASUREMENT MADE EASY

A single device instead of three different ones, significantly smaller, more cost-effective, robust and easier to operate – a technical innovation that virtually sells itself. The three founders of Coher Sense are understandably optimistic about the future: *“We believe our sensor is ideal for applications in many different fields,”* states Oliver Lischtschenko with confidence. The PhD physicist developed this high-tech product to measure lasers and, together with two friends, launched a startup in Lübeck to bring the KISA fibre-optic sensor to the market. And with success – the trio soon found their first customers in the laser industry.

“We’re currently focusing on applications involving quality assurance for lasers and structural monitoring of buildings, bridges and wind farms,” explains co-founder and environmental technology engineer Mathias

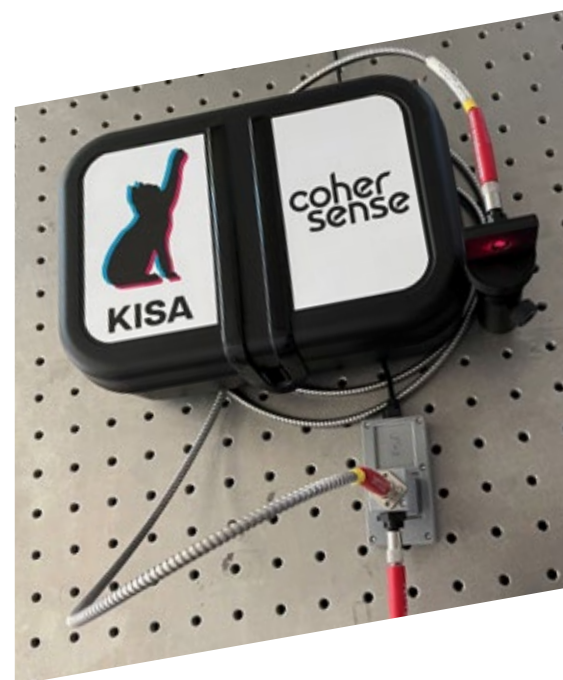
Groß. *“However, since lasers are now ubiquitous in industrial settings, the possibilities go far beyond that,”* adds Patrick Schmidt-Kaeding. Like Oliver Lischtschenko, he holds a PhD in physics and has been a member of the Coher Sense team since its inception in the summer of 2022.

The three men already knew each other well, both professionally and personally. *“I actually told Mathias about my startup idea one day after football training,”* recalls Lischtschenko. For nearly ten years, he had dedicated his spare time to refining a sensor, aiming to simplify and, most importantly, downsize the laser sensing devices he used daily at work. *“Upon achieving this, I realised I needed support.”* And in Patrick and Mathias, he found partners whose expertise and personalities were a good fit for him and his project.

The three founders were supported by the Technikzentrum Lübeck and the startup accelerator Gateway49, receiving financial assistance, coaching and access to a vast business network. *“That was perfect for us,”* says Lischtschenko, adding that Lübeck and Coher Sense are a perfect match. *“This city is a leading – if not the leading – location for laser technology in Germany, with an excellent ecosystem of research and support programmes, suppliers and end customers.”* He feels that Schleswig-Holstein both believes in and supports innovations from the business sector: *“They really believe in high-tech here.”*

Coher Sense has now hired its first two employees and is literally aiming for the stars. In 2023, the Lübeck-based startup was accepted into the “BIC Northern Germany” funding programme established by the European Space Agency (ESA). *“Of course, it would be a milestone to put our sensor in space one day. That’s still a long way off. But we can dream,”* says Oliver Lischtschenko. (sas) //

cohersense.de



PULMEDIX GMBH

HOPE FOR COPD SUFFERERS

32

COPD (chronic obstructive pulmonary disease) has emerged as one of the most prevalent and deadly diseases globally. The severity of the condition often necessitates the use of a ventilator. However, this provides only partial relief, as individuals with COPD struggle to fully exhale the supplemented air due to their symptoms. This causes permanent pressure on the lungs, leading to frequent shortness of breath unless respiratory assistance is provided.

Falko Menzel, a former product manager at a medical technology company, and his colleague Ralf Pott sought a solution. In 2022, they founded Pulmedix and developed the "eva" pressure ventilator, a novel respiratory aid that counteracts pressure during exhalation using a device called a lip brake. The inventor of this method, sleep specialist Dr Stephan Rüller, collaborated with them to enhance the device's ventilatory function. Rüller has since become a permanent member of the Pulmedix team.

Falko Menzel, managing director and co-founder of pulmedix GmbH



"We wanted to make this treatment accessible to a broader range of people with COPD, enabling them to engage in life once more. However, we didn't want to reinvent the wheel. Instead, we built on existing technology," explains Falko Menzel.

Developing a housing and bringing an entirely new medical device to the market is highly cost-intensive and takes years - time that many COPD sufferers simply do not have. Menzel and Pott went looking for partners, and soon found one. JFR Medical Instruments in Heikendorf already had a suitable housing that met the entrepreneurs' requirements. The company's location in Schleswig-Holstein also played a part in sealing the deal.

"Customs clearance is easier from Kiel, which was essential for us. We want to conquer the world with our ventilators, and the best way to achieve this is by sea," says Menzel. Moreover, they wanted to establish their headquarters in a region where "energy is made". The quality of life, the commute along the Kiel Fjord and the entrepreneurial spirit of the people in the North of Germany also appealed to the two natives of Lower Saxony. *"In JFR, based in Schleswig-Holstein, we found exactly the right partner to help us revolutionise the home ventilator market."*

Not only is the ventilation technology revolutionary, but so is the product design. Pulmedix has turned everything on its head, resulting in a sleek anthracite-coloured ventilator with a modern feel, user-friendly controls and appealing aesthetics. *"Patients don't want their homes to resemble an intensive care unit,"* Menzel adds.

The sustainability aspect was also taken into account - in the past, the expensive precursor models had to be discarded after use, i.e. when a patient passed away. *"Our device can be easily cleaned with ozone after use, ensuring it's sterile and ready for use by a new patient."* Additionally, the concept is designed to make health insurance companies more inclined to rent the devices instead of purchasing them. To facilitate this, their collaboration partner nova:med in Höchststadt (Bavaria) offers a complete package of equipment, tubing, accessories, customer services and emergency support.

Using "eva", we have successfully reduced the ventilation period for patients and achieved notable outcomes in COPD treatment. So much so that they can even manage without a breathing aid at times, experiencing a substantial improvement in their quality of life," explains Menzel with pride.

So far, the devices have been approved in accordance with the EU Medical Device Directive (MDD). The startup is currently still awaiting MDR (Medical Devices Regulation) approval for "eva", a crucial step before a unique identification number can be assigned and the new ventilator placed on the market. *"We won't let anything stop us. Once the approval is granted, we'll be ready to help people with COPD all over the world from our base in Heikendorf."* (nh) //

pulmedix.de





Sailing into international waters: Julia Görisch and Christoph Mantz, the founders of BAJAO GmbH

BAJAO GMBH MULTI-TOOL FOR SUP BOARDS



Stand-up paddleboards are conquering waters on every continent. A startup based in Flensburg is disrupting the market with an ingenious idea: Bajao is the only manufacturer worldwide to have developed a stand-up paddleboard tent - a versatile "multi-tool" that is making waves in the outdoor scene.

"As active stand-up paddleboarders ourselves, we wanted a tent for multi-day tours and brought the idea to market readiness in three years," explain the founders Christoph Mantz and Julia Görisch. In 2022, their "crowning achievement" followed: Bajao won the Brand New Award at the ISPO international sports trade fair in Munich - essentially the industry's "Oscar" for startups. The Flensburg-based duo even had reasons to celebrate while showcasing their prototype at various competitions; specifically, Bajao picked up both the Förderpreneur and Nordpreneur startup and concept awards. Besides earning cash prizes, the founders also secured a pre-seed investor for their startup phase. The resulting high-quality, professionally designed product caused quite a splash, especially in the stand-up paddleboard (SUP) community, where more and

more "tour paddlers" are eager to spend entire weekends, or even their entire holiday, on rivers and lakes. *"Our Bajao Cabin lets you camp on the water. The integrated inflatable 'sidepipes' give the board stability,"* explains Christoph Mantz, a well-known figure on the scene, having run several SUP schools and voluntarily served on the board of the sport's national association. He even met fellow paddle-boarding enthusiast Julia Görisch by chance while on the water, successfully convincing her to join Bajao in 2019. *"The initial test tours with customers in Sri Lanka have shown that the concept is a resounding success. We're now the only manufacturer worldwide to offer an SUP tent,"* says Julia, a Flensburg native. Bajao has commissioned a tent manufacturer in southern Germany for mass production, and the high-quality cabins are currently still manufactured in China. *"We're actively exploring ways to bring production to Europe,"* explains the water sports enthusiast and trained paramedic. Orders from various parts of Europe are pouring into their online shop, and the major specialist retailer Globetrotter is showcasing the Bajao tent in its shops nationwide. *"We were surprised to discover that the Bajao Cabin is not*

just a hit with SUP enthusiasts," says the marketing specialist. *"You can use it for camping on water or land, as a roof tent on your car, or as a tent for fishing or trekking."* The Bajao Cabin has even found its way onto the roof of a Porsche sports car. According to Mantz, anglers can pursue their hobby on the water while using the tent as protection from the rain. And when on muddy terrain - as was the case at the Heavy Metal Festival in Wacken - the innovative product from Flensburg, being made from tear-resistant, ultralight nylon, naturally holds its ground, with the SUP serving as a protective foundation. *"The structure only weighs 3.4 kilograms, and 4.5 kilograms with the stabilisers. The tent can be set up in under two minutes - perfect for trekking trips without the SUP."*



And this, they claim, is just the start: *"We aim to establish Bajao as a leading provider of SUP accessories and become the world market leader. Lots more ideas are in the pipeline,"* reports Julia Görisch. Positioned in the higher-priced segment, the spacious, patented Bajao Cabin tent was their first major success. *"Next, we're working on a compact tent for smaller boards that will be much more affordable."* When devising their innovations, the duo from Flensburg likes to draw inspiration from the outdoor scene - for example, with their new social media campaign entitled "And where do you camp?" (wel) //

bajao-sup.com/de

Mental illnesses are increasing dramatically. In combination with the shortage of skilled workers, they are becoming an existential threat for individuals and for companies. It's now time to act.

Via workshops and interactive presentations, Soulbreak GmbH in Kiel raises awareness of mental health issues in a sustainable way and anchors this in corporate practice

HEY COMPANIES, WE NEED TO TALK!

Mental health in the workplace - megatrend and taboo subject

For accidents, there's first aid; for occupational health and safety, there's the company doctor, and as an antidote to sedentary office jobs, there are even subsidised sports clubs. While executives might assume they have covered all bases through such measures, they are in fact overlooking a blind spot that still remains shrouded in myth. Mental health is also an important long-term issue that no company can afford to ignore. The numbers tell a clear story; according to the latest Psych Report by DAK-Gesundheit, sick leave due to mental health issues has increased by 48 per cent compared to a decade ago. Young people between 25 and 29 years old are particularly affected. In Schleswig-Holstein, according to the Barmer Health Report 2022, 18 per cent of absences were attributed to mental health issues. Mental health disorders rank third at 15.1 per cent as the most common reasons for absenteeism (DAK/Statista 2023), with women being more affected than men. Given the ongoing shortage of skilled labour, companies simply cannot afford to put their heads in the sand. Anyone hoping to attract and retain skilled workers must also actively promote mental health in the workplace.

EXECUTIVES ARE SIMPLY OUT OF THEIR DEPTH

Many people are reluctant to engage with the topic of mental health due to a lack of awareness and a fear of stigmatisation. Moreover, when it comes to tackling this sensitive issue, many executives are simply out of their depth. There is a lack of both strategies and competencies in this area, with little investment in prevention. And with employees potentially already at risk, the question arises: how can companies tackle this problem?

The good news is that businesses are not alone. Health insurance providers are legally obligated to engage in preventive measures. Additionally, a broad network of partners exists, both regionally and nationally, ready to assist companies and organisations with advice and support. A pivotal step towards greater awareness of mental health issues and preventive measures involves education and awareness - a problem cannot be addressed until it has first been recognised.

But how is this possible, especially as the topic of mental health leaves so many people feeling uneasy?

MENTAL HEALTH CONCERNS EVERYONE

The coalition agreement reached by Schleswig-Holstein's state government in 2022 outlined plans to destigmatise mental health and enhance the visibility and accessibility of support services. Numerous initiatives, projects and companies are actively working to break the taboo, including efforts by the state association for health promotion in Schleswig-Holstein (LVGFHS). The goal is to raise awareness among executives, those directly affected and the entire workforce, by providing education and ensuring easy access to assistance. One component of this is a special first aid kit, designed to destigmatise mental illnesses in the workplace. It serves as an introduction to the topic, providing information, practical tips, action plans and points of contact. The target audience includes executives, team members and colleagues who may be affected. Specialist conferences and training sessions complement this offering.

FIRST AID FOR MENTAL HEALTH EMERGENCIES

Pretty much every company has trained first-aiders on the roster. But who can provide mental health support in times of crisis? In Schleswig-Holstein, the state association for health promotion (LVGFHS) offers MHFA first aid courses. Mental Health First Aid (MHFA) is a programme developed in Australia in 2000, based on the global concept of physical first aid and grounded in scientific knowledge. MHFA is now used in 26 countries and enables individuals to recognise and appropriately respond to signs and symptoms of mental distress. The importance of early support in the workplace is highlighted by a worrying trend: unlike in the 2000s when the unemployed were most at risk from mental illnesses, today it is predominantly working professionals who are affected.

SOULBREAK: STRENGTHENING COMPANIES FROM THE INSIDE OUT

As managing director Britta Brechtel explains, the motivation to establish Soulbreak in 2021 was intrinsic. Co-founder Katrin Knehans, in her previous role in the marketing department of a large company, had essentially served as the organisation's "informal feel-good manager". And Brechtel, in her former position as MD of a software company, had herself also recognised the need for action. Collaborating with an interdisciplinary team of experts in psychology, systemic expertise, sports science, nutrition and more, the Kiel-based startup now offers a host of measures to improve mental health, both for individuals and within the corporate context. The focus is on integrating mental health into corporate culture and communication while ensuring it is also on the radar of each individual. The crucial aspect is to first create awareness of this important topic, impart knowledge and then guide behavioural change. The measures - tailored to each company's needs and preferred tempo - are available online, in a hybrid format and in person.

"Soulbreak's main focus is on supporting defined groups to effectively facilitate both genuine behavioural change and the establishment of a support network within the company."

And the demand for approaches to protect and enhance mental health is enormous, with the onus firmly on those in leadership roles. *"However, we must avoid making assumptions,"* emphasises Brechtel. Many executives, she explains, do acknowledge the need for intervention and want to fulfil their responsibilities to their employees. However, the sensitivity of the topic often leaves them uncertain about the boundaries of their role. Moreover, entrenched thought patterns persist - you go to work, meet the performance expectations and everything else is regarded as a personal or private matter. According to Brechtel, individuals often fail to recognise that they are feeling overwhelmed until this manifests itself as a serious problem. Soulbreak's sensitive and strategic approach to the field of mental health aims to prevent precisely that. This, in turn, strengthens the entire company in the long run: *"If a company balances employee interests and business interests, it can reap the rewards in the long term. It's not easy and is an ongoing process, but it's worth pursuing,"* says Brechtel, who believes that the added value for companies that choose to strategically address the issue of mental health is clear. *"Employer attractiveness increases, and consequently also job satisfaction and performance. If the team members recognise that the company places a high importance on the mental health of the workforce, they, in turn, become significantly more focused on the corporate goals and tasks."*

Actual intervention is only the last of many steps. Similar to physical health, companies should prioritise the prevention of mental stressors. They should also see the enhancement of psychological resilience as both an opportunity and a long-term priority. In the process, they are not only investing in skilled professionals who will remain healthy, motivated and loyal in the long run, but also in building trust and camaraderie within their team. In other words, they are strengthening the resilience of the entire company. In our rapidly changing world, confronted as we are with multiple disruptions - from digitalisation and artificial intelligence to political upheaval - resilience is arguably the most crucial tool of all. (eli) //



SCHLESWIG-HOLSTEIN IN A **DIFFERENT** LIGHT

36

These fascinating insights into Germany's True North might just leave you in awe. We've gathered twelve quirky and intriguing facts that, should the occasion arise, will allow you to pass yourself off as a well-read "northern light".

01



Cheers!

The Westensee Nature Park is home to **Germany's northernmost organic winery**. The fact that wine is cultivated here and in other vineyards in Schleswig-Holstein is thanks to another German federal state. **Rhineland-Palatinate transferred** a portion of its unused **planting rights** to Germany's northernmost federal state. This decision was prompted by EU regulations, which stipulate exactly where and how much wine may be produced.

02



World-class stone throwing

Once again in 2023, numerous people chanced their arm at the **"Ditsch World Cup" on the beach at Schönhagen** near Kappeln. "Ditschen" is all about who is best at skipping stones on the water. The "Ditsch World Cup" has been held in the region since 2016. The **world record in "Ditschen"** has remained unbroken at 88 skips since 2013, set by the American Kurt Steiner in Red Bridge, Pennsylvania, USA.

03



Small, but charming

Germany's smallest town can be found in Schleswig-Holstein. Situated on a peninsula along the Schlei inlet, **Arnis** only has around **300 residents** and covers an area of 0.45 square kilometres.

04



A way with words

Schleswig-Holstein is a land of **poets and intellectuals**. Numerous famous literary figures **hail from Germany's True North**. The most noteworthy are Matthias Claudius, Friedrich Hebbel, Theodor Storm, Klaus Groth as well as Heinrich Mann and Thomas Mann.

05



Food that will get you hooked

No visit to Sylt is complete without a fish roll. Around **750,000 fish rolls** are sold on Sylt each year. But this vast number is hardly surprising - the island hosted nearly **4.8 million overnight stays**, in 2022 alone. Sylt is one of the **most popular domestic holiday islands** for Germans.

06



Explosive ingenuity

In 1866, the Swedish chemist **Alfred Bernhard Nobel** invented dynamite at his Krümmel explosives factory near Geesthacht, on the site of what is now the **Helmholtz-Zentrum Geesthacht**.

10



Linguistic diversity

In Schleswig-Holstein, there are four regional and minority languages - Low German, Frisian, Danish, and Romansh - contributing to the distinctive cultural and linguistic diversity of the region. These languages have long been granted special protection in Germany's True North and, twenty-five years ago, this was extended across Europe.

37

07



Special guests make a splash

From time to time, **dolphins** are also sighted in the Baltic Sea. As recently as spring 2023, a dolphin entertained onlookers and alert passers-by in the **Bay of Lübeck** and the River Trave.

11



North Frisian national sport

Frisians first learn to walk, then they learn "**Boßeln**", a traditional bowling game. Originally conceived as a village defence exercise, two teams attempt to throw a ball over a set distance with as few throws as possible. **Boßeln is played on the street** rather than a dedicated bowling field. Due to a lack of weapons, people used to defend themselves with stones and well-aimed clay balls.

08



Seeking happiness?

The **happiest Germans live in Schleswig-Holstein**. According to the "Happiness Atlas", Schleswig-Holstein has been home to the happiest people in all of Germany since 2013.

12



Counting ships instead of sheep

Based solely on the number of ship passages, the Kiel Canal is the **busiest artificial waterway in the world**, ahead of the Panama and Suez Canals. The federal waterway, which is **98.56 kilometres long**, is used by around **30,000 ships** every year.

09



Watching the ships come in

Take a seat - on the **575.75-metre-long** bench along the Kiel Canal. It's the **world's longest bench**, inviting passers-by to sit back and watch the hustle and bustle on the canal.



Kai Selmer, graduate engineer and one of two board members at ARCTOS Industriekälte AG, headquartered in Sörup, Germany

ARCTOS INDUSTRIEKÄLTE AG

IN THEIR COMFORT ZONE AT MINUS 90°C

The systems supplied by the refrigeration specialists at ARCTOS ensure arctic conditions in breweries, dairies, meat and fish processing plants and in the chemical industry. Since heat is generated in the process, climate-friendly heat pumps are also part of this "cool company's" core expertise.



Location
Sörup



Workforce
130 employees



Company founded
2006

“You can’t leave talented people behind just because they haven’t passed their exams.”

Kai Selmer, graduate engineer and board member of ARCTOS Industriekälte AG

arctos-ag.com



According to a Nordic proverb, “cold will never be your friend”. Yet this certainly does not apply to Kai Selmer, a graduate engineer and one of the two board members at ARCTOS. **“Our logo features a team of huskies pulling a sledge, symbolising our expertise in industrial refrigeration. At the same time, it represents our drive to achieve our goals as an innovative team,”** explains the 63-year-old, who co-founded the company in 2006 with specialists in industrial refrigeration technology. **“Our expertise is sought across Germany, wherever industries need refrigeration. For example, food needs to be cooled during production. So we develop, build and maintain highly complex refrigeration systems that don’t rely on ozone-depleting chemicals.”**

ONE COMPANY, TWO LOCATIONS IN SCHLESWIG-HOLSTEIN

Certain chemical processes can only take place under extremely cold conditions - ARCTOS (revenue: 43 million euros in 2022) tailors each project to the specific requirements of its industrial customers, including large-scale refrigeration plants costing up to eight million euros. Numerous renowned producers of frozen foods and beverages rely on the services of this company, which has its headquarters, including a development department, assembly hall and training workshop, in Sörup near Flensburg. Its Schleswig-Holstein branch in Braak near Hamburg, which offers easy access to the motorway network, houses a spare parts and machine repair service alongside a second construction department.

“Around half of our 130 engineers, technicians, supervisors and service specialists are currently on the road as installation teams throughout Germany,” says Selmer. To maintain its technological edge, ARCTOS places a major emphasis on providing comprehensive training for its apprentices at its training workshop in Sörup. **“Through continuous training and further education, as well as our own training program for refrigeration mechatronics technicians and experts in refrigeration plant construction, we safeguard our quality standards and develop our workforce for the future.”**

RESEARCH PROJECTS WITH UNIVERSITIES

In addition, ARCTOS has forged partnerships with Hamburg University of Technology (TUHH) as well as the universities of applied sciences in Flensburg and Rostock. **“Since our foundation, around 30 students have carried out research projects for their bachelor’s or master’s theses at our company,”** explains the CEO, who is passionate about technology. As a welcome side effect, this makes it easier for ARCTOS to retain talented and qualified young staff. **“Besides attractive salaries, we also offer a friendly working atmosphere as well as opportunities for independent work and training.”** The company even opens its doors to students without a graduate degree, provided they are a good fit. **“You can’t leave talented people behind just because they didn’t pass their exams,”** says Kai Selmer with conviction.

Wherever cold is produced, waste heat is generated as a byproduct, which is often released, unused, into the environment. **“More and more companies want to harness this valuable energy. We offer them heat pumps for this purpose,”** explains the engineer. **“Our technology raises the waste heat from production processes and refrigeration systems to a higher temperature level, providing district heating for buildings.”** Essentially, the innovative systems from Germany’s True North kill two birds with one stone. With relatively low power consumption, they can cool industrial processes and supply heat simultaneously - thanks to ARCTOS’s expertise in creating comfortable temperatures ranging from minus 90 to plus 90 degrees Celsius. (wel) //

Idyllic location, cool business:
without the experts at ARCTOS
Industriekälte AG, entire branches of
industry would be breaking a sweat





Astrid Frevert, historian and director of the Tuch + Technik Textilmuseum Neumünster, pulls all the strings to make her exhibition a success

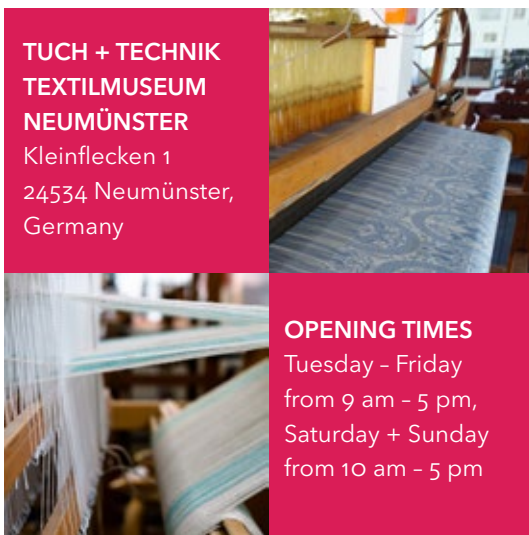


TUCH + TECHNIK
TEXTILMUSEUM NEUMÜNSTER

TRAVEL BACK

IN TIME TO "HOLSTEIN'S MANCHESTER"

They are silent relics of a bygone industrial era - and yet, at times, they can still make quite a statement. Many of the machines that were decommissioned decades ago and now stand in the large hall of the Museum Tuch + Technik in Neumünster are still fully operational, and are even occasionally demonstrated during special events. However, due to their often monstrous and quirky appearance, these contraptions have the power to captivate visitors even in their dormant state.



**TUCH + TECHNIK
TEXTILMUSEUM
NEUMÜNSTER**
Kleinflecken 1
24534 Neumünster,
Germany

OPENING TIMES

Tuesday - Friday
from 9 am - 5 pm,
Saturday + Sunday
from 10 am - 5 pm

The City of Neumünster's coat of arms proudly bears five industrial smokestacks, a clear reminder of its historical role as a major industrial centre situated between the North and Baltic Seas. When city officials chose this coat of arms back in 1929, they took pride in these symbols of economic strength and progress. Astrid Frevert, a historian and the museum's director, elaborates, **"For a considerable period, the numerous textile and leather factories, along with their production sites, were major providers of employment and revenue for this region."** The museum, inaugurated in 2007 in a new building on the city's oldest square, Kleinflecken, showcases the city's technological, urban and cultural heritage simultaneously in its permanent exhibition. **"This innovative approach sets us apart from other industrial museums,"** says the director, who took up her role in 2010. **"Our visitors can embark on a journey through 2,000 years of textile and city history."**

The exhibition hall, intentionally designed around steel girders, concrete and a high glass facade, exudes an industrial ambience that is also present in the air itself - a subtle scent of machine oil wafts from the old machines, blending with the organic aroma of wool. **"Anyone who has worked in a textile factory will immediately recognise this distinctive combination,"** says the museum director during a tour of the exhibition space, which covers around 2,000 square metres. A life-size model of a sheep guides visitors to the first exhibit - a display cabinet containing stones that were used as weaving tools in this region thousands of years ago. **"Spinning and weaving are among humanity's oldest inventions because people have always needed clothes, protection and warmth,"** explains the historian. **"That hasn't changed to the present day, but the work processes and social environment have. That's exactly what we aim to illustrate here."**

The largest machine in the hall is the "Selfaktor", a 23-meter-long, motor-driven spinning machine on wheels with 396 spindles, built in 1928. Nearby, the "Wolf" looks downright terrifying - a black contraption with fangs that was tasked with loosening the wool into flakes. **"These are real monsters,"** says the museum's director. By comparison, the "Spinning Jenny" (invented in 1767) and the Jacquard loom (1805) - the first significant steps towards mechanising the industry - seem almost dainty. Alongside these exhibits, there are also objects linked to different aspects of the city's history, including a ridge turret with a weather vane, the last remnant of a monastery that once stood in Neumünster.

Shortly before full-scale industrialisation took hold and Neumünster received the approving nickname "Holstein's Manchester" in the 19th century, at its peak the city was home to 84 clothmaking businesses. Its last cloth mill was decommissioned in 1991. Since then, Neumünster has re-invented itself and successfully fostered industries beyond manufacturing, including life sciences, the food industry and the creative sector. The city has always benefited from its central location - many roads lead through the heart of Germany's northernmost federal state. These days, more and more people look back on the era of Neumünster as a textile city with pride rather than a sense of loss, says Astrid Frevert. With events, special presentations and a diverse educational programme for all age groups, the director and her team maintain an open, vibrant exhibition venue. This includes four to seven special exhibitions each year, of which at least one is dedicated to contemporary textile art, **"a field long neglected by art museums,"** according to the expert. However, the main attraction remains the "monsters". And when the old machines are set in motion on special occasions, the hall is filled with visitors every time. (sas) //

tuch-und-technik.de



IMPRINT

Published by

WTSH - Business Development and
Technology Transfer Corporation
of Schleswig-Holstein
Lorentzendamm 24, 24103 Kiel
P +49 431 66 66 6-0, F +49 431 66 66 6-700
Email: info@wtsh.de
wtsh.de/en

42

Responsible in accordance with press law

Dr Hinrich Habeck
Managing director, WTSH
District court Kiel, commercial register
HRB 3358 VAT ID no.: DE134868530

Editor in Chief

Ute Leinigen, Head of Regional Marketing/
Public Relations/Press Relations Officer, WTSH
P +49 431 66 66 6-820, F +49 431 66 66 6-769

Authors

Nelly Eliasberg (eli), Nastasja Heuer (nh),
Maike Lefteroff (ml), Ute Leinigen (lei),
Karen Sierksmeyer (ks), Sabine Spatzek (sas),
Alexander Streif (as), Joachim Welding (wel)

Overall concept

New Communication GmbH & Co. KG
Werbe- und Marketingagentur, Kiel

Project management

Nelly Eliasberg, New Communication

Proofreading

Schmieder Übersetzungen GmbH
Übersetzungen & Sprachmanagement
Schussenstraße 14, 88273 Fronreute-Staig

Design

Frauke Heinsohn, New Communication

Production

ppa.bumann
Print- und Produktionsagentur
Friedrich-Voß-Straße 1a
24768 Rendsburg

The layout and design of this publication are protected by copyright. The same applies for the individual editorial contributions and their composition as well as photos and graphics. If you would like to use the contents and photos, please contact the editorial office at leinigen@wtsh.de. This publication has been released as part of the public relations work undertaken by the WTSH. It may not be used by political parties or by persons engaged in campaigning or election assistance, or for election-related campaigning. Even without reference to an upcoming election, this publication may not be used in any manner that infers a partisan interest on the part of the state government in favour of any individual groups. The parties are permitted to use the publication to inform their own members.

Photo credits

page 01: fabianfruehling.de (Gebr. Schröder GmbH, Original LÖWE),
page 03: Frank Peter (Dr Hinrich Habeck), page 06, 07: grafikfoto.de
(M. Staudt), page 09: istockphoto.com (Scharfsinn86), page 11: SET -
Software Engineering GmbH, page 12: Energie PLUS Concept GmbH
(Schleswiger Stadtwerke GmbH), page 14: istockphoto.com (A-Digit),
page 15: Ministry of Economics, Transport, Labour, Technology and
Tourism of the State of Schleswig-Holstein (Claus Ruhe Madsen), page
16 (04): Kiel University (Prof. Dr. rer. nat. Anton Eisenhauer), page 18,
19: fabianfruehling.de (Gebr. Schröder GmbH, Original LÖWE), page
20: Wache GmbH, page 21: Sabine Spatzek, page 22 (05): Frank Peter,
page 23: istockphoto.com (Courtney Hale), page 24, 25: Joachim
Welding, page 26: istockphoto.com (Maksym Belchenko), page 27:
DESIGNA Verkehrsleittechnik GmbH, page 28: Timo Wilke (Jenny
Dümon) page 29: istockphoto.com (rarrarorro), page 30: istock-
photo.com (Mary Ne), page 31: Sabine Spatzek, Coher Sense UG,
page 30: pulmedix GmbH, page 33: Joachim Welding, BAJAO
GmbH, page 34: Kathrin Knehans (Workshop Soulbreak GmbH),
page 36: 01 grafikfoto.de (M. Staudt), 02 istockphoto.com (SGA-
Photo), 03 istockphoto.com (Frederick Doerschem), 04 Wilhelm
Schulz (Wikipedia, public domain), 05 istockphoto.com (urbazon),
page 37: 06 istockphoto.com (rrodrickbeiler), 07 istockphoto.com
(Ruediger Arp), 08 istockphoto.com (stockfour), 09 New Communi-
cation (F. Heinsohn), 10 grafikfoto.de (M. Staudt), 11 grafikfoto.de (M.
Ruff), 12 istockphoto.com (Bjoern Wylezich), page 38: Joachim Weld-
ing, page 39: ARCTOS Industriekälte AG, page 40 (05), 41:
Tuch + Technik Textilmuseum Neumünster

SUCCESS STORIES AHEAD!

WE DISCOVER
AND SHOW THEM



Among plenty of good reasons for the location Schleswig-Holstein, there are many good stories. About successful entrepreneurs and their innovative ideas. We show them in Businessland.

Do you want to write your own success story?
Welcome to Germany's True North!

Your first contact

WTSH - Business Development and
Technology Transfer Corporation of
Schleswig-Holstein
Lorentzendam 24, 24103 Kiel
P +49 431 66 66 6-0
info@wtsh.de
wtsh.de/en



WTSH

Business Development and
Technology Transfer Corporation
of Schleswig-Holstein GmbH

Lorentzendam 24
24103 Kiel

T +49 431 66 66 6-0
info@wtsh.de
www.wtsh.de

The Business Development and Technology Transfer Corporation of Schleswig-Holstein (WTSH) is the business development agency of the state of Schleswig-Holstein, the chambers of industry and commerce, the chambers of the craft trades and the state's universities.

WT.SH 

Business Development and
Technology Transfer Corporation
of Schleswig-Holstein