Acknowledgement

A cordial thank you goes to the Bavarian State Ministry of Economic Affairs, Regional Development and Energy for its long-standing support of the Industrielle Biotechnologie Bayern Netzwerk GmbH and the Chemie-Cluster Bayern GmbH.

We would like to extend a special thank you for funding the International Sustainable Economy Forum 2022.







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Bavarian Ministry of Economic Affairs, **Regional Development and Energy**



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IP STARS

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Welcome to the International Sustainable Economy Forum (ISEF)! 3 Contact International Sustainable Economy Forum 4 Program 5 Exhibitiors 12 Consulting Corner 15 Dissemination/Media Partners 21 Our Partners 22



Best Lawyers

Welcome to the International Sustainable Economy Forum (ISEF)!

The ISEF is an exceptional event, which offers a new platform for stakeholders, including businesspeople, entrepreneurs, providers of sustainable solutions and investors as well as policy makers, determined to launch a new, future-proof economy. It is beside the point which raw materials are used, which methods are applied for manufacturing or which products result thereof, as long as the principles of sustainability are adhered to in all cases. Thus, representatives of all the outstanding strategies and concepts that cover different aspects of the transformation process towards a new economy, are called on to contribute. These strategies include Bioeconomy, Green Economy, Electromobility, CO₂ as raw material, "Zero Waste", Circular Economy, "Cradle to Cradle", Recycling (mechanical, chemical), Hydrogen Economy, and Industrial Biotechnology.

To reach true sustainability, a lot of effort is needed. The ISEF is a forum for pointing out current obstacles and challenges to the realization of a sustainable economy. At the same time, proposals to remove these obstacles are expected. Furthermore, the ISEF strives to connect its participants and facilitate productive

collaborations during and after the conference. These collaborations may include R&D projects but also the formation of interest groups aiming to promote a sustainable economy by all effective and permissible means.

The ISEF has further set itself the goal to become a vehicle for the communication of legal and financial requirements put forward by the speakers to policy makers and financial stakeholders, aiming to gain support and ultimately implementation. To this end, the relevant topics raised are to constitute the body of a political position paper.

And finally, as we all know, sustainability is not understood everywhere and by everyone in the same way. Perhaps - we hope - the ISEF can help to develop a comprehensive, clear, and tangible definition, which will be accepted and employed by many, if not all, stakeholders.

Enjoy the sessions and make full use of the networking breaks as well as the evening reception, which concludes the first conference day. And last but not least, contribute your ideas and input to help achieve the ISEF's goals!

Organizers



Prof. Dr. Haralabos Zorbas Managing Director IBB Netzwerk GmbH



Dr. Patrick Prühs Managing Director Chemie-Cluster Bayern GmbH

Contact International Sustainable Economy Forum

Conference and Partnership

Kristina Stricker Phone: +49 89 74 120 374 info@isef-munich.com

Lena Luebbe Phone: +49 89 74 120 370 info@isef-munich.com

Administration and Press

Fabienne Pieper Phone: +49 89 74 120 370 info@isef-munich.com

Germany



Exhibition

Matthias Scholz Phone: +49 173 653 17 28 info@isef-munich.com

Conference Venue

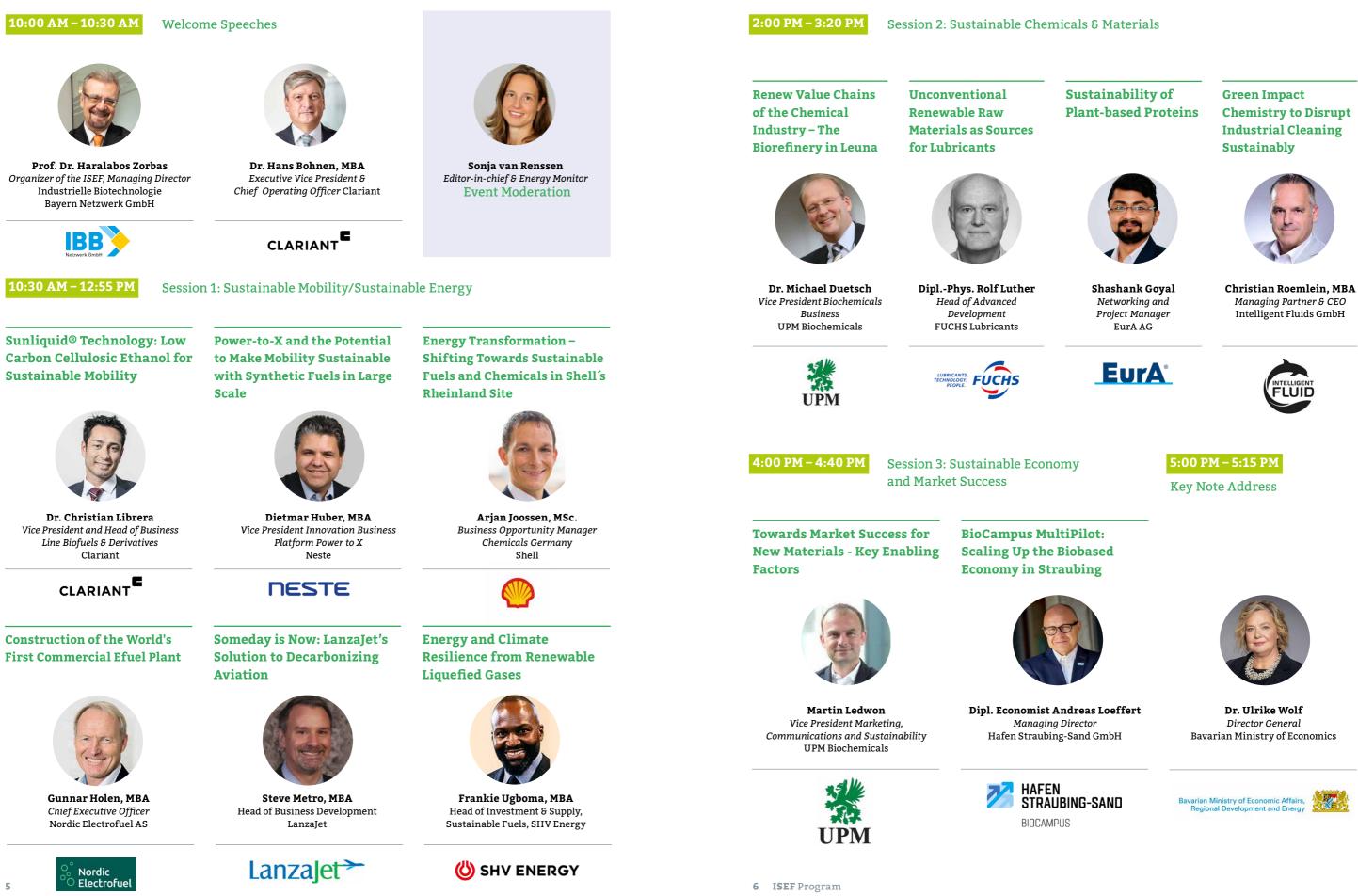
hbw Conference Center Haus der Bayerischen Wirtschaft Max-Joseph-Straße 5 80333 Munich

June 27-28 (Monday-Tuesday) WiFi is available



Program

Monday June 27 2022



Monday June 27 2022





Dr. Ulrike Wolf Director General **Bavarian Ministry of Economics**





Martin Ledwon Vice President Marketing, Communications and Sustainability **UPM Biochemicals**



6:15 PM - 9:00 PM

Evening Reception

The Challenge of Sustainability Ceremonial Speech



Prof. Dr. Haralabos Zorbas Organizer of the ISEF, Managing Director Industrielle Biotechnologie Bayern Netzwerk GmbH





Dr. Christian Librera Vice President and Head of Business Line Biofuels & Derivatives Clariant





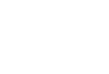
Dr. phil. Georg Gruber Owner & CEO Vereinigte Werkstätten für Pflanzenöltechnologie (VWP)





Michael Carus Managing Director & Founder nova-Institute







9:00 AM - 10:00 AM

The BIOMAC Open Innovation Test Bed an Innovative Route to Sustainable Bionanomaterials





Dr. phil. Georg Gruber Owner & CEO Vereinigte Werkstätten für Pflanzenöltechnologie (VWP)

Dr. Annika Frank Project Manager IBB Netzwerk GmbH





10:15 AM - 11:25 PM

Session 5: Valorization of CO2 and Industrial Waste

Clariant's Catalysis Technologies Enable a Sustainable Hydrogen Economy and CO₂ Usage

CO₂ Recycling through Biological Methanation: Electrochaea's Contribution to the **Green Deal**



Norbert Ringer Global Methanol Industry Director & Global Syngas Industry Expert Clariant







Tuesday June 28 2022



Session 4: Sustainable Projects

Tech4Biowaste – A **Dynamic Database** of Technologies for **Biowaste Utilisation** **Renewable Carbon as** a Guiding Principle for Sustainable **Carbon Cycles**



Dr. Lars Krause Senior Expert nova-Institute





Michael Carus Managing Director & Founder nova-Institute



A Simple Biotechnological **Route to Enzymatic CO₂ Fixation**



Dipl.-Ing. Birgit Lewandowski Director Development Electrochaea





Prof. Dr. Arne Skerra Chair of Biological Chemistry Technical University of Munich



Tuesday June 28 2022



R&D Contracts: Some Practical Considerations



Dr. Christiane Maxien Partner at Wallinger Ricker Schlotter Tostmann Patent- und Rechtsanwälte Dartnerechaft mhB





Thomas Schachl, LL.M. Partner at Wallinger Ricker Schlotter Tostmann Patent- und Rechtsanwälte Partnerechaft mhR



Seed Financing



Dr. Nikolaus Raupp Investment Manager High-Tech Gründerfonds

High-Tech Gründerfonds

From Start-up to Scale-up: **Investing in a Sustainable** and Circular Bioeconomy



Michael Brandkamp Founder & General Partner European Circular Bioeconomy Fund (ECBF)



2:30 PM - 3:40 PM

Session 7: Artificial Photosynthesis & Synthetic Biology

Chemicals Production in the Post Fossil Era What Can We Expect from Artificial **Photosynthesis and Other** Synthetic Biology Approaches?





Prof. Dr. Volker Sieber Rector of the TUM Campus Straubing & Chairholder Chemistry of Biogenic Resources Technical University of Munich Technical University of Munich Patentund Rechtsanwälte Partnerschaft mbB

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IBB Netzwerk GmbH | ISEF Munich Home (isef-munich.com) Scan the QR code to see more information

DNA Synthesis – an Essential **Tool in Synthetic Biology Enabling Efficient Research and Development of Applications**



Prof. Dr. Tobias Erb Director of Department Biochemistry & Synthetic Metabolism Max Planck Institute for Terrestrial Microbiology





Dr. Axel Trefzer Director Research & Development Thermo Fisher Scientific Geneart GmbH



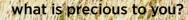
CLARIANT

CELLULOSIC ETHANOL FROM AGRICULTURAL RESIDUES

Sustainable mobility with sunliquid®



www.sunliquid.com



Exhibitiors

Clariant

Clariant is a focused, sustainable and innovative specialty chemical company based in Muttenz, near Basel/Switzerland. The company reports in four business areas: Care Chemicals, Catalysis, Natural Resources, and Plastics & Coatings.

The Clariant Biotech & Renewables Center, located in Planegg, Germany, develops solutions for biocataysis and biorefinery. The innovation focus here is on the energyefficient and resourcesaving development and production of bio-based chemicals and fuels. Clariant has developed the sunliquid® technology that uses enzymatic hydrolysis followed by fermentation to produce second-generation bioethanol, so-called cellulosic ethanol, from wheat straw or other agricultural residues.

Since July 2012, Clariant has been operating a precommercial plant in Straubing, Germany, which produces up to 1,000 metric tons of cellulosic ethanol every year,

WALLINGER RICKER SCHLOTTER TOSTMANN Patent- und Rechtsanwälte Partnerschaft mbB

WR was formed in 2007 through the merger of several long-established law firms and practice groups. The leading firm in the fields of mechanical and automotive engineering, Wallinger and Partner, led by Dr. Michael Wallinger, joined forces with the chemicals/pharmaceuticals practice group of Dr. Mathias Ricker (formerly IP Coordinator Europe at the major law firm Jones Day in Munich). Since its foundation, the firm has grown fast-paced. In particular, WR's knowledge base has been strengthened by experienced industrial lawyers from the biotechnology, medical technology and electrical engineering sectors as well as lawyers from large law firms.

The firm has established itself as one of the most respected IP law firms in Germany—(see "JUVE" rankings of the last years, in which WR ranks among the top 30 of all IP law firms in Germany) in particular as a litigation firm in infringement proceedings.

CLARIANT

confirming technical and economic performance. In September 2018, Clariant broke ground for its first-ofits-kind commercial facility in Podari, Romania, which is now completed. Clariant licenses its sunliquid® technology platform globally. So far, five license agreements have been concluded with renowned industry players in Slovakia, Poland, Bulgaria and China.



FUCHS Lubricants

Founded in 1931 as a family business in Mannheim, FUCHS is now the world's largest supplier among independent lubricant manufacturers with around 6,000 employees and 57 operating companies in more than 50 countries. Throughout Germany, a team of more than 1,000 specialists at 5 locations (headquarters: Mannheim, plants in Mannheim, Bremen, Kiel and Wedel as well as a branch office

in Hamburg) is committed to customer satisfaction at FUCHS Schmierstoffe GmbH. From 2020, FUCHS is a CO₂-neutral company. In order to implement CO₂ neutrality as early as 2020, FUCHS will offset its CO₂ emissions, which had not been avoided until then, with compensation measures by investing in high-quality climate protection projects that above all promote the expansion of renewable energies.



MOVING YOUR WORLD

By empowering our customers to perform more sustainably

For example, by reducing CO₂ emissions for our customers, who can save around 9,600 liters of diesel and thus 30 metric tons of CO₂ with our premium hydraulic oils when used in earthmoving equipment for an operating time of 8,000 hours.

www.fuchs.com/de



EurA AG

EurA AG is an international consulting company founded in 1999 and based in Germany, Portugal and Brussels. EurA has become one of the most experienced support service providers in the field of funding consultancy and funding management. With over 180 professionals, we work with more than 2,500 mainly medium-sized companies throughout Europe, covering all industrial sectors with emphasis on circular economy and environment.

EurA AG offers a one-stop service: evaluation of innovative ideas, market assessment, funding programme advise, support in the application process and through the entire project by means of management, controlling, business consulting and life cycle analysis services.

Our core business is innovation and strategy consulting. Here, we provide research and technology consulting, consulting for technological realization, innovation management and internal innovation processes. Further, we are national leader in innovation network management, especially in industries as circular economy, biotechnology and engineering.

In addition, we provide Life cycle costing (LCC) and techno-economic analyse improving knowledge of the cost drivers in the process (e.g. influence of energy costs), to evaluate alternative technologies and to support investment decisions.

EurA[®]



Consulting Corner

Bayerische Forschungsallianz (Bavarian Research Alliance) GmbH

The Bavarian Research Alliance GmbH is a private organisation promoting Bavaria as a centre for science and innovation within the European Research Area. It supports and advises scientists from Bavaria and stakeholders from the private sector - as well as their international consortia – in the competition for European research, development and innovation funds. The focus is directed at the EU's current

Framework Programme for Research and Innovation "Horizon Europe". To achieve this, BayFOR provides subject-specific information and offers strategic advice and active support for initiating projects, setting up international research consortia and submitting applications, during the contract preparation with the European Commission and for project management.

BayFOR also coordinates the ioint activities of the Bavarian **Research Associations and** supports their networking



efforts at European level. BayFOR's Scientific Coordination Offices Bavaria-Québec/ Alberta/International, Bavaria-Israel and Bavaria-Africa provide support for bilateral and multilateral research projects with stakeholders from these regions.

We take the production of wood-based renewable biochemicals from idea to reality.

FOR A SUSTAINABLE TOMORROW

We are "investing in the planet" by accelerating the transformation of the chemical industry, from fossil to renewables. The climate crisis is our biggest challenge, and we have solutions that can make a difference.

OUR PRODUCTS HELP TO MITIGATE CLIMATE CHANGE





Climate neutral feedstock

Sustainable forestry

> Improved CO₂-footprint



biochemicals@upm.com

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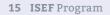
Bayern International - Bayerische Gesellschaft für Internationale Wirtschaftsbeziehungen mbH

Bayern International is a company of the Free State of Bavaria and has been a key player in promoting Bavarian foreign trade for more than 25 years. A large number of projects are organized worldwide every year in cooperation

with the Bavarian Ministry of Economic Affairs. They all aim to support small and mediumsized enterprises (SMEs) from Bavaria in their export efforts. The extensive service programme includes trade fair participations, delegation trips, business trips, delegation visits, digital events and the "Key to Bavaria" company database. Another central task is the promotion of new businesses and location marketing



for Bavaria. Together with the Ministry of Economic Affairs, **Bayern International uses** the "Invest in Bavaria" brand to attract direct investments to the Free State of Bavaria world-wide.





WE ARE BUILDING A STATE-OF-THE-ART **BIOREFINERY IN LEUNA**

UPM is investing EUR 750 million to build the world's first biorefinery to produce a range of 100 per cent wood-based biochemicals that will initiate the critical switch to sustainable raw material use and significantly reduce the carbon footprint in everyday products – from PET bottles to shoe soles, from rubber to flooring, radically improving their CO₂ footprint compared to fossil-based alternatives.

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15 HECTARE

Our construction site is roughly 20 times the size of a football field

> 100 JOBS We are building a new organization and are recruiting for various roles in Leuna

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2020 TO 2024

The biorefinery is expected to be operational by the end of 2023 and ramp up in 2024.

4 PRODUCTS

Bio-Monoethylene Glycol (BioMEG), Bio-Monopropylene Glycol (BioMPG), Renewable Functional Fillers (RFF), Industrial Sugar.

UPMBIOCHEMICALS

Solutions for an endangered planet



INDUSTRIA BIOTEC

Industrial Biotech Day > 7 October 2022, Berlin

The climate catastrophe threatens to irrevocably harm our planet's biosphere. Our economies must be defossilised immediately, industries must be harmonised with nature's cycles. A real Circular Economy must come about. On October 7th 2022, Europe's biotech industry will meet in Berlin and show what it can contribute to solving the most dire problems of our time – INDUSTRIA BIOTEC, the show-case for industrial biotechnology!

What can visitors expect?

Exhibition | Partnering | Start-up Village | Sessions:

BIOTEC FOOD: e. g. Alternative Proteins > Precision Fermentation > Biobased vs. Bioengineered > Food Additives BIOTEC CAPITAL: e. g. Green Deal > Sustainable Investments > Industrial Biotech Funds > Stock Markets > ESG BIOTEC WASTE: e. g. Raw Materials: Waste to Value > Bioplastics > EcoDesign > Biorecycling > Cradle to Cradle BIOTEC ENERGY: e. g. Synthetic Fuels and Gas > Land Use-Neutral Biofuels > Fuels from CO₂ vs. Biobased BIOTEC CHEMISTRY: e. g. Building Blocks from CO₂ > Biorefineries > Biotensides > Biotech Cement > Biohydrogen

Save the date and stay informed: www.industria-biotec.com



Bayern Kapital

Bayern Kapital was founded in 1995 as a venture capital company of the Free State of Bavaria. We currently manage twelve investment funds with an investable volume of investment of approximately EUR 700 million. The focus is on financing the founders of Bavarian high-tech companies as well as young, innovative technology companies to facilitate their access to venture capital for the development and market launch of new products. We invest from specifically structured investment funds and work closely with other venture capital companies, business angels, family offices and experienced business experts. In addition to fresh capital, the Bayern Kapital network provides investee companies with supplementary business expertise and specific market contacts. The innovative, technology-oriented companies come from a wide variety of industries such

BCNP Consultants GmbH

BCNP is a specialist consultancy in the bioeconomy and chemical industry - since 2002, and since 2017 organizer of the ECP - the first industry speed dating event. The focus is on commercial due diligence. BCNP's customers benefit from expert market and competitor analysis, technology scouting and customer surveys, as well as professional in-depth interviews in order to gain non-textbook knowledge. Young growth companies also value business plan-

Cluster New Materials

The Bavarian Cluster New Materials connects companies from various industries and scientific institutes within the broad field of materials and production processes. The objective is to further promote the competitiveness of the Bavarian economy and accelerate growth. The Cluster provides important impulses for innovations and establishes regional, national and international networks required to close value chain gaps. The Cluster New Materials is managed by Bayern Innovativ GmbH.

The Cluster New Materials offers support in innovation activities, knowledge and technology transfer. The Cluster can support connecting you with companies manufacturing biobased materials, research organizations that help developing innovative materials and technologies, or they find new collaboration partners applying your product. The organization provides all companies and research institutions with comprehensive information on various funding programs and current funding calls and provides individual and tailored advice

Bayern Kapital

as biotechnology/life science, software & IT, medical technology, materials & new materials, nanotechnology and environmental technology; as a consequence more than 8,000 jobs have been permanently created in sustainable and future-oriented companies.



ning and coaching provided by the two managing directors, Dr. Holger Bengs and Tobias Kirchhoff.



on your project ideas and your planned research and development projects. It offers support in identifying suitable funding programs and funding lines, provides information on conditions, funding modalities and procedural paths, and puts you in touch with the relevant contacts at the Bavarian Research and Innovation Agency, other project sponsors and other organizations (free of charge for all interested parties).

BioCampus Straubing GmbH

BioCampus Straubing GmbH is a public regional business development agency for Straubing, Bavaria's region of renewable raw materials and bioeconomy. As subsidiary of the Port of Straubing, the organization develops and markets the Port as a prime location for a sustainable, biobased economy, focussing on industrial biotechnology and chemical-material use of biomass.

BioCampus Straubing provides individualized networking and innovation services for companies interested or located in Straubing and the surrounding region. Specific focus is put on support for start-ups committed to the change from a fossil- to a biobased economy. The core of these activities is the competition "PlanB - Biobased.Business.Bavaria", which is co-funded by the Bavarian Ministry for Economy, Rural Development and Energy. Also, **BioCampus Straubing offers a** broad portfolio of infrastructure solutions for individual needs: conference facilities. lab and office spaces in their branch-dedicated technology & start-up incubation center, industrial plots from S to XL, trimodal logistics options, shared services, and, starting in late 2024. infrastructure and services for industrial bio-

tech process upscaling in their

BioCampus MultiPilot.



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SHV ENERGY

Gründerlotse Bayern – Bavarian founders guide Gründerlotse Bayern supports

founders and start-ups in their search for consulting and financing opportunities. The organization supports prospective entrepreneurs from all sectors and in every start-up phase - from the initial idea or the preparation of a business plan, through the search for suitable financing options, to the growth phase. As Bavaria's start-up guide, we direct you to the right offers for your project and provide an initial insight into issues such as:

- Financing & Funding
- Consulting & Coaching
- Networking & Infrastructure.

In the discussion, Gründerlotse Bayern determines the next steps together with the founders and put them in touch with the relevant contacts for their project.

IBB Netzwerk GmbH

The Industrielle Biotechnologie Bayern Netzwerk GmbH (IBB Netzwerk GmbH) is a network and service enterprise in the field of industrial biotechnology and sustainable economy. Connecting partners from corporations, SMEs and academia is one of IBB's core activities. We bridge their expertise in joint projects and accelerate the transfer from scientific evidence into innovative, sustainable and competitive products and processes. Further services include project development and management, marketing, and lobbying.

Invest in Bavaria

Since 1999, Invest in Bavaria assists companies from abroad to set up or expand business operations in Bavaria. We provide customized information, help find the ideal location in Bavaria as well as identify and connect with the key contacts required for project implementation: government agencies and associations as well as relevant local networks and partners. Invest in Bavaria is supported by the worldwide network of 31 Bavarian representative offices.

Moreover, Invest in Bavaria actively promotes Bavaria as a business location worldwide and as home of cross-industry innovation. It is a more radical way of creating something new by connecting industries, disciplines and skill sets that in the past - didn't go together. Bavarians are good at it, because it's good for business – and it may just be the reason why cross-industry innovation in Bavaria is an exciting opportunity for you. Are you a founder or entrepreneur or leading

Energising tomorrow starts today

Our courage to care for generations to come is visible in the role that we play in the energy transition. As a leading global distributor of off-grid energy, SHV Energy provides low-carbon and clean energy solutions today and we are advancing energy together by accelerating the development of sustainable fuels for tomorrow. ınding oaching nfrastructure.







a team? Then discover your new business opportunities.

The services offered by Invest in Bavaria are free of charge and all inquiries are, of course, treated confidentially.

Dissemination/ Media Partners

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