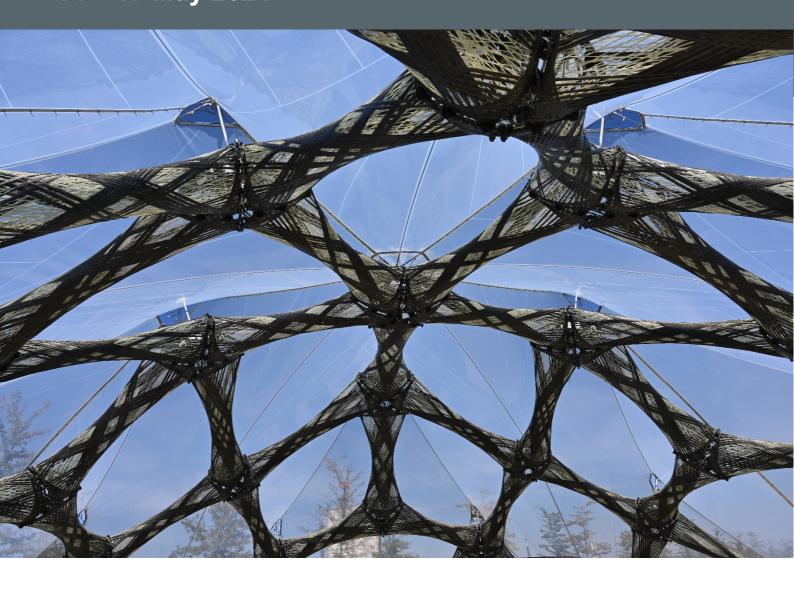


German Business Mission: Lightweight technologies 14–17 May 2024





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Bundesministerium für Wirtschaft und Klimaschutz

Message of Greeting from the German Federal Ministry for Economic Affairs and Climate Action

A warm welcome to all participants of our Estonian-German Business Forum: Lightweighting Solutions. This Forum is part of the Market Development Programme launched in 2012 by the Federal Ministry for Economic Affairs and Climate Action to support German companies in exploring foreign markets. Since the inception of the programme, over 10,000 SMEs have taken part in its projects, thus gaining access to new markets, securing existing markets and establishing networks.

Lightweighting is an enabling technology based on a design philosophy which aims to reduce weight, integrate different functions and optimise the construction design in terms of load-bearing and materials. Lightweighting solutions have lower material requirements, allowing manufacturers to save costs. Lightweight products also help to keep down costs by using less energy and by reducing carbon emissions. Sustainable lightweight construction is one of the drivers of climate change mitigation and sustainability, the overriding global challenge in the years to come.

Both Estonia and Germany have recognised the potential of lightweight construction as a game changer and are actively promoting technological development in this field. Lightweighting plays a crucial role in many different areas, ranging from the automotive and aviation industries to the construction sector and medical technology. Estonia is not merely a sales market for lightweight products and new materials, but offers ample opportunity for industrial cooperation. There is excellent potential for enhanced bilateral business cooperation across all areas related to lightweighting, including components and machinery, the marketing of new materials and manufacturing technologies, as well as joint research and development projects. This is our common goal. I wish all the participants every success!

Werner Loscheider Head of Division IVB4 Construction industry, lightweight construction/new materials, resource efficiency Federal Ministry for Economic Affairs and Climate Action



Message of Greeting from the Organiser: econAN international GmbH

On behalf of econAN international GmbH, I welcome you to this showcase event. The German Federal Ministry for Economic Affairs and Climate Action has commissioned us to organize this trip which we are doing in collaboration with the German-Baltic Chamber of Commerce in Estonia, Latvia, Lithuania (AHK Baltic States).

Industry and transportation are two sectors with big leverage potential for reducing greenhouse gas emissions and lightweight construction offers a huge potential for resource-efficient systems. Key players from research institutions, industry and supporting organisations in Estonia and Germany are active in this field. The aim of this project is to unite these stakeholders and further advance bilateral cooperation. We seek to provide possible interfaces where they can work together more efficiently in order to be able to tackle the challenges of climate change, and working together to promote energy efficiency in a better way.

This is a great opportunity for companies from Estonia to explore new business opportunities and to discover potential synergies with the German participants. Five outstanding German companies with innovative product solutions are taking part in this business mission. Please find on the following pages brief company profiles with further information on the German companies and their business interests. We cordially invite you to join our conference on May 15, and to schedule individual meetings with the German companies.

econAN international GmbH has been conducting these business missions for different industry sectors for several years. Established as a specialized boutique consultancy we support developments in bilateral trade between Germany and foreign countries. We advise our clients – mainly SMEs – in strategy, performance and transformation. Our broad portfolio provides synergy effects between businesses, institutions and other players. Services for enterprises include company formation and local business setup in Germany. We also advise companies regarding sustainability performance and reporting in Germany and Europe (e.g. EU Taxonomy, sustainability labels).

We are looking forward to collaborate with you in the future and hope you enjoy the program of this business mission!

Sabrina Lopp Project director



Alformet GmbH

Tube structures made out of metal are inflexible, isotropic, and globally over-designed for the weakest part of the tube. An alternative for metal materials are continuous fiber reinforced thermoplastic (CFR TP) materials, which are tailor- designed for a part's load applications at a fraction the weight of metal, while keeping metal's advantages of being machinable, recyclable and produced at scale. These materials can be produced on the laser-assisted tape deposition (LATD) equipment from the company AFPT GmbH.

Alformet GmbH specializes in contract manufacturing using this additive manufacturing process from its parent company, which is a clean, flexible, single-step process that has minimal electricity requirements, uses no harsh chemicals, and has no harmful emissions. The core of Alformet's business model, down to the choice of ERP-system, is optimized for high-mix/low-volume production by utilizing Quick Response Manufacturing (QRM) Principles to run a highly automated and costeffective production.

Alformet is also part of Digital Composites Factory. Digital Composites Factory is a joint venture between AFPT, Alformet and New Frontier Technologies. It consolidates the expertise and capability of each company to create a unique digital manufacturing platform for advanced composite structures. We offer a value chain characterised by expertise in tailored design of high-performance structures, additive manufacturing of high-value bespoke thermoplastic components, scalable automated processes for serial production, and 3D digital twinning for unsurpassed quality characterisation and high-fidelity performance simulation of as-manufactured structures. Alformet GmbH Trinkbornstraße 10 D-56281 Dörth

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Unique Selling Propositions

- Advanced Material Technology
- Innovative Manufacturing Process (LATD)
- Highly Optimized Production for Customization
- Digital Integration and Collaboration
- Tailored Design and High-Performance Structures

References

- Part of Digital Composites Factory, a joint venture between AFPT, Alformet, and New Frontier Technologies
- Creation of a unique digital manufacturing platform for advanced composite structures

Looking for

We are searching for new markets that may utilize the half-products made on our machines.



LiCoMo GmbH

LiCoMo GmbH is specialised in manufacturing of components made of fibre-reinforced materials (carbon, glass, and aramid fibre in combination with thermoplastic or thermosetting plastics). Based on composite materials, we produce high-performance components according to the requirements of our customers.

The scope of services covers:

- Technology development of components made of reinforced plastics
- Manufacturing of components
- Assembly of components and modules
- Production of tailor-made solutions

The product range of LiCoMo includes:

- CFRP-/GFRP sheets
- Composite sandwich panels
- Torsion shafts,
- Pipes, tubes, and pods
- Pressure vessels
- Supporting beams, bars, and carriers

We support our customers in all phases of the development process from the initial idea up to manufacturing as well as material and component qualification. For manufacturing, we use the following technologies and processes:

- Prepreg technology based on low pressure and autoclave processes
- Vacuum infusion and injection-based technologies (e.g. Resin Transfer Moulding) for infiltration
- Filament winding
- Hot and cold moulding of thermoplastic and thermosetting plastics
- Hand lay-up of component
- Surface coating and painting of components
- Additive manufacturing

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Markus Mütsch CEO

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Unique Selling Propositions

- Specialization in Fiber-Reinforced Materials
- Diverse Product Range
- Advanced Manufacturing Technologies
- Additive Manufacturing Integration
- Expertise in Both Thermoplastic and Thermosetting Plastics

References

Products of LiCoMo: https://www.licomo.org/de/produkte.html Pressure Vessels: https://www.licomo.org/files/Produkte/Flyer_ Druckzylinder.pdf Torsion shafts, pipes, tubes, pods, supporting beams, bars and carriers https://www.licomo.org/files/Produkte/Flyer P rofilstrukturen.pdf CFRP-/GFRP sheets and composite sandwich panels: https://www.licomo.org/files/Produkte/Flyer P latten.pdf Additive manufacturing https://www.licomo.org/files/Produkte/Flyer_3 <u>D-Druck.pdf</u> Production of tailor-made solutions https://www.licomo.org/files/Produkte/Flyer S onderl%C3%B6sungen.pdf

Looking for

We are looking for industry-specific manufacturers.



MC Technologies GmbH

Thanks to more than 20 years of expertise in mobile communications and industrial data transmission, offer you we proven remote maintenance solutions for every problem as one of the leading European manufacturers. In addition to our wide range of standard products, we also have the right solution for your individual challenge thanks to various customization and expansion options. We are a certified distributor of leading manufacturers such as Quectel and CAVLI and offer the complete range from NB-IoT to 2G, LTE Cat-M, Cat1, Cat4, and 5G.

Industrial remote maintenance saves time and costs in the maintenance of existing plants and machinery. You will reduce downtime and can prevent standstills. Our routers send status messages and alarms simply by SMS or e-mail to a recipient device of your service technicians. This allows you to maintain an overview of your plants and the respective operating states at all times and to react quickly if necessary.

Manufacturers of machines can use our LTE technology for plant-internal systems. Without using a DSL line or their customer's company network they have secure access to the customer's machines and systems via VPN and LTE

Secondly, we offer antennas for a wide range of mounting situations, whether for soldering or magnetic, adhesive, screw, or pole mounting, and for a wide range of applications from simple SMS applications to complex, data-intensive applications in the LTE/5G network. Our product range also offers antennas in the ISM and VHF/UHF range, as used in building technology (wM-BUS) or marine radio. At MC Technologies you will find what you are looking for if you are looking for a cellular antenna.

MC Technologies GmbH Kabelkamp 2 D-30179 Hannover

www.mc-technologies.com German, English

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Sebastian Stammeier CEO

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Unique Selling Propositions

- Our customers benefit from increased productivity through more efficient maintenance processes. Malfunctions can be detected quickly or, in the best case, avoided altogether.
- We offer special applications and custommade products in lower quantities, too
- Highest data security and protection against unauthorized access to your operational data. (LTE routers all have an integrated firewall as well as additional VPN transmission technologies)

Looking for

We are interested in meeting mechanical engineering companies and industrial customers who build e.g. vehicles or machines that require remote access or are involved in traffic technology or building technology (sensor technology).

Our products are also used for vending machines, smart metering, and in control centers.



With approximately EUR 350 million of annual revenue, the family-owned company SAERTEX® is the global market leader in the manufacturing of textile reinforcements made of carbon, glass, aramid, and natural fibers for lightweight construction. SAERTEX specializes in the manufacturing of so-called Non-Crimp Fabrics (NCF) and structural core materials for the production of fiber-reinforced composites.

Customers in the wind, aerospace, automotive, sports, and boat-building industries rely on SAERTEX® reinforcement materials to achieve lighter weights, enhanced stiffness, and corrosion resistance.

Particularly in segments like shipbuilding, railways, oil & gas, and construction, the company offers additional services to support customers in the transformation components steel of from to composite _ from calculations and process development to serial part production. SAERTEX specialists work hand in hand with you to ensure you get the advanced material that precisely matches your ideas.

With around 1,400 employees and 14 production sites on five continents, as well as an active distribution network in more than 50 countries, the SAERTEX® Group is globally positioned, to satisfy the rising demand for advanced-technology composite solutions and to be there for the customer locally.

With our products, we make a considerable contribution towards the minimization of global resource consumption. In doing so we are creating a world worth living for all of us and preserving it for following generations. In short: Innovation for a resource-saving future! SAERTEX GmbH & Co.KG Brochterbecker Damm 52 D-48369 Saerbeck

www.saertex.com/en English, German

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Marek Ščerba Technical Sales Manager

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Unique Selling Propositions

- Global Presence and Accessibility
- Sustainability Commitment
- Support Services
- Advanced Manufacturing Techniques
- Non-Crimp Fabrics (NCF)

References

- SAERTEX Innovations 2024: <u>Innovations</u> (<u>saertex.com</u>)
- Reference Automotive /Faurecia: <u>SAERTEX and FAURECIA Partnership:</u> <u>Advancing Automotive Lightweight</u> <u>Solutions</u>
- Reference Marine: Vision of the Fjords /Brodrene Aa: <u>Vision Of The Fjords – A</u> <u>Legend out of carbon fiber (saertex.com)</u>
- Video New SAERcore: <u>https://youtu.be/er7wqamLzqQ</u>

Looking for

We are looking for industry-specific manufacturers.



Stadur Produktions GmbH & Co KG

Founded in 1982, Stadur is today among the biggest and most innovative manufacturers of composite material items across Europe.

This way, we have created the basis for further successful areas of operation such as BUILDING, BATHROOM, ADVERTISING, TECHNICS.

As a family business, now in the second generation, we produce not only a wide range of standard versions but can custom-manufacture sandwich elements with dimensions up to 14,000 x 3,200 mm. We can respond flexibly to customers' wishes thanks to the wide range of facings and core materials.

The variations of shaping assure our customers of optimal design freedom - for individually tailored solutions.

Whichever product you decide on, the quality is first class - and Made in Germany. Stadur can offer you everything from one source. That saves you time and expense. Our work is process-oriented and resource-conserving. Continual training of our staff provides demonstrable evidence of our high-quality standards. The proximity to our suppliers and the active exchanges with our clients assure optimal results. Stadur Produktions GmbH & Co KG Ostereichen 2-4 D-21714 Hammah

www.stadur.com

German, English, Czech, Polish, Russian ∂



Vladimir Freylich

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Unique Selling Propositions

- Innovative Manufacturing
- Customization and Large-Scale Capability
- Versatile Applications
- German Quality Assurance
- Integrated Services
- Sustainability and Efficiency
- Continuous Improvement and Collaboration

References

 Areas of operation include building, bathroom, advertising, and technics

Looking for

We are searching for business partners from sectors like building, bathrooms, advertising, and technics that focus on composite material items.



AHK Deutsch-Baltische Handelskammer in Estland, Lettland, Litauen

Local Partner Organisation: German-Baltic Chamber of Commerce

The German-Baltic Chamber of Commerce in Estonia, Latvia, Lithuania, also known as AHK Baltic States, is the official representative of German businesses in the Baltic States. On the other hand, AHK Baltic States supports Baltic companies on their entry into Germany. AHK Baltic States has been the first point of contact for German-Baltic economic relations for more than two decades. The AHK Baltic States is the only foreign chamber of commerce that covers three independent countries with Estonia, Latvia and Lithuania. The AHK is therefore present at three locations with a total of more than 30 employees: in Tallinn (Estonia), Riga (Latvia) and Vilnius (Lithuania).

With more than 470 member companies, AHK offers excellent networking opportunities for German and Baltic companies. Sound knowledge of the German market supports Baltic companies that want to establish or expand business relationships in Germany. The AHK offers a wide range of services, from personnel recruitment and the search for business contacts to a comprehensive event service. The AHK Baltic States organizes marketing events and company celebrations and supports you from the planning of the event concept to the end of the evening. The AHK creates real added value, especially for events in a political or economic context. Thanks to its excellent network, it can attract outstanding speakers and discussion partners. In addition, AHK representatives can also moderate events in German, English, Estonian, Latvian or Lithuania.

Membership Benefits

- □ Largest network: With almost 500 member companies, the AHK offers you the most comprehensive German-Baltic network with numerous valuable contacts.
- □ 200 events: With numerous events throughout the year, we offer you a perfect platform in the three Baltic states to present yourself and actively participate in the AHK network.
- □ Addresses and contacts: As a member, you receive exclusive contact information from other members and can contact them directly. You will also receive up to 100 address data per year free of charge.
- □ Digital networking with our exclusive AHK app. Connect directly with other members and use the numerous functions and advantages of a virtual membership in our own social network.
- □ More visibility: We enter your company data in the online member database and present you in our business magazine "Baltic Business Quarterly".
- □ Better informed: You will receive our "Baltic Business Quarterly" magazine and our newsletter exclusively, so you will be informed more quickly and comprehensively about the latest market developments and new contacts.
- □ Representation of your interests: The AHK is in close contact with ministries, embassies, chambers and associations in your target market. We would be happy to represent your interests in dealings with the authorities and multipliers.

www.gtai.de/mep