

The Leichtbau BW Network and Matchmaking Opportunities in Sustainable Construction

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Less is more. Added Value.

Leichtbau BW and Light weighting Technology from Germany/Baden-Württemberg, Stuttgart



**Baden-Württemberg
a tiny spot on the
European map, but a
heavy weight for
industry**

Less is more. Added Value.

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Baden-Württemberg –one of the most heavily industrialized regions in Europe – focus on automotive, capital goods, industries

Population	11 million / 2019	<ul style="list-style-type: none">• Comparable in size to Belgium, Greece• Larger than Sweden, Hungary or Switzerland
Gross Domestic Product - GDP	493 billion Euros / 2019	<ul style="list-style-type: none">• Comparable in size to Norway, Belgium• Higher than Austria or Denmark
GDP per Capita	44,886 Euros / 2019	<ul style="list-style-type: none">• Comparable to Switzerland• Higher than Netherlands or Sweden
Most important trading partners (Import and Export)	France, Switzerland, USA, China, Netherlands, UK	<ul style="list-style-type: none">• Strongest import and export state of whole Germany
Innovation Index	82 index points / 2018	<ul style="list-style-type: none">• Baden-Württemberg topping the list• Ahead of Bavaria (65), Ile de France (64,4), Berlin (62,4)

source: Statistisches Landesamt BW

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Leichtbau BW and Light weighting Technology from Germany/Baden-Württemberg, Stuttgart

- **Lightweight technology** is a key factor for the society and industry of tomorrow. The saving of weight, material and energy is a prerequisite for a sustainable, intact world in view of a steadily growing world population and dwindling resources.
- From product concept to design methods to new materials, lightweight technology enhances all stages of the value creation process: concept – engineering – simulation – manufacturing.
- **Leichtbau BW** is a collaborative network of more than **2.200 companies** and **270 research facilities** – which is probably the largest lightweighting network in the world.
- For the individual needs, the most suitable institutions and persons are selected and bring partners into contact with suppliers, project partners and research institutes from the lightweighting sector in Baden-Wuerttemberg.

Lightweight technology – thinking differently from the start



- Leichtbau BW is an economic development corporation to promote industrial relations and technological innovation
- Lightweight technology is a philosophy for design engineering and production that seeks to **reduce weight** and promote the **sustainable use of materials and resources**.
- Lightweighting shows strong potential for **reducing energy** requirements. Lighter vehicles require less energy to drive and it needs less material resources to produce. Less mass and material also lead to a **reduction of CO₂ emissions** offering an additional ecological benefit.

Hybrid lightweight technology



source: str.uctureGmbH

- The trend in lightweight is moving towards multi-material design. This involves combining different materials and using them where they perform best. The idea is to use the right material in just the right amount in the right place. New approaches have led to unique projects such as a high-tech bridge constructed out of fiberglass in combination with and high performance concrete.

Services Portfolio of Leichtbau BW GmbH

Platforms for connecting Businesses

Road mapping and long-term Visioning

Market Innovation Support in marketing	Stimulate Innovation Project development	Coach Innovation Promoting education	Added Value Services
Technology Day Hybrid Lightweighting Plus other events	Strategy process And technology roadmapping	Certification courses and additional qualifications (IHK) for lightweighting	Strategic trend analysis E.g. market studies, competitive analysis, cost analysis etc.
Trade Fair Participation And creating international business contacts (excursions for entrepreneurs)	Project groups For implementing the technology roadmap	School programs Learning and planning games for schools	Competence database Internal database and online competency atlas
PR Support Technical articles, publications e.g. ThinkKing	Project support Information and consulting on financing options	Training Finder For qualification courses	Matchmaking B2B and from project partners Tailored matching, web or event based, domestic and intl.
Presentations In-house presentations for companies, clusters, associations etc.	Patent monitoring For lightweighting topics	Job exchange For employers and job applicants	Startup support Investor contacts and non- financial support

New Electric Vehicle (NEV) require lightweight

- New vehicle concepts reduce the use of resources massively



Examples of lightweight construction in the urban system

- **Bundesgartenschau2019, Heilbronn**

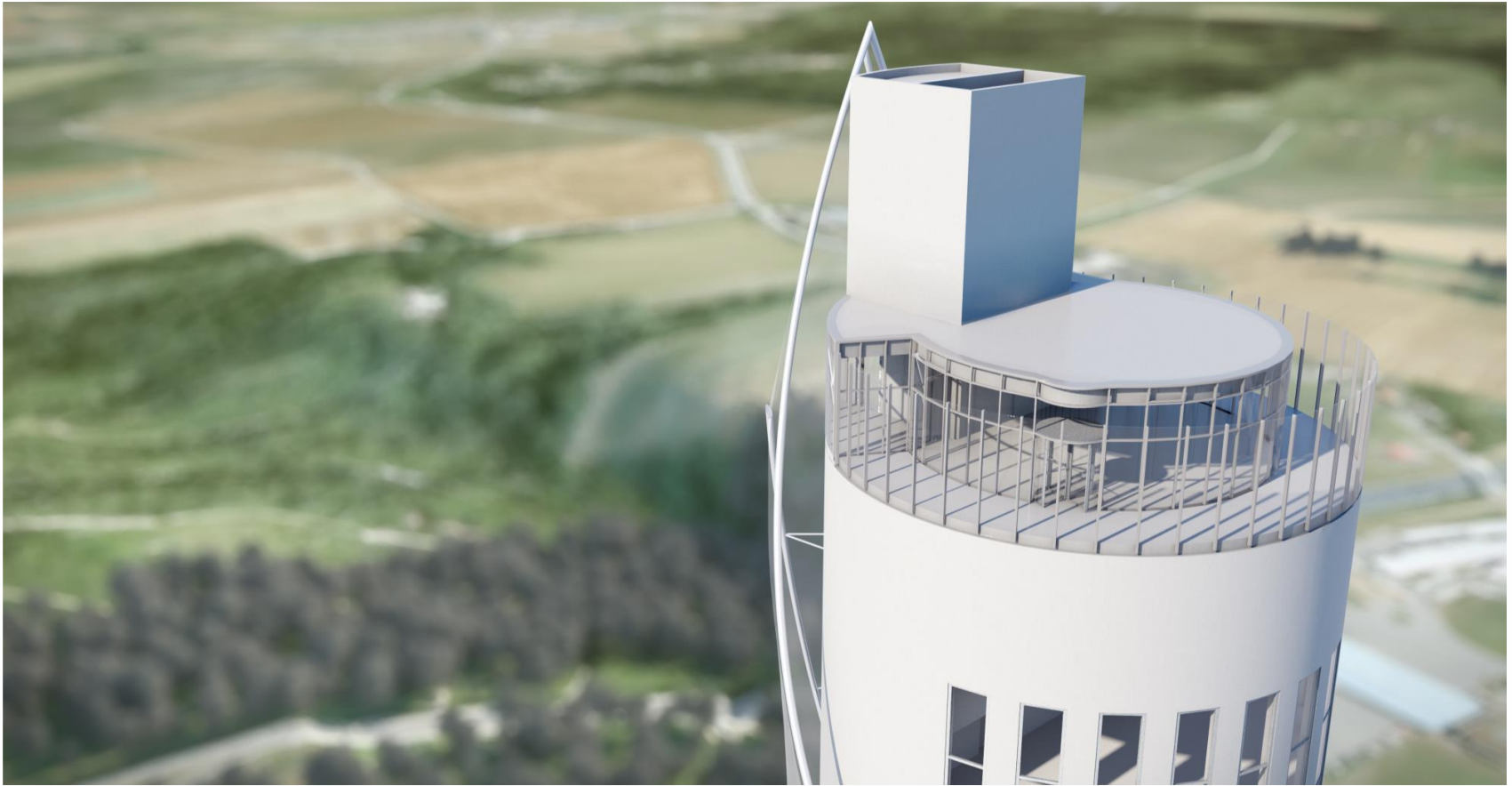


source: ICD/ITKE Universität Stuttgart

Winter meeting of SG Sustainable Construction

17-19 February 2020 - Venice, Italy

Adaptive support structures and aerodynamic textile facades save concrete



source: ThyssenKrupp

Highway cover -Merging divided neighborhoods

- **City of Freiberg a.N., str.ucture GmbH**



source: str.uctureGmbH

Winter meeting of SG Sustainable Construction
17-19 February 2020 - Venice, Italy

Highway cover - View from the lane

- **City of Freiberg a.N., str.ucture GmbH**




Online Knowledge Map Lightweight Technology

This map offers a clear and concise summary of the range of lightweight technology know-how in Baden-Württemberg. Please select the category you are interested in below or enter a search word. On the left side next to the map, you will find profiles of the institutions that match your criteria.


Expertise

Customer Value <input checked="" type="checkbox"/> Product Value <input type="checkbox"/> Conceptualization <input type="checkbox"/> New Applications <input type="checkbox"/> Product Development <input type="checkbox"/> Design	Methods <input type="checkbox"/> Simulation <input type="checkbox"/> Component Design <input checked="" type="checkbox"/> Component Layout <input type="checkbox"/> Component Optimization <input type="checkbox"/> Process Design <input type="checkbox"/> Process Optimization <input type="checkbox"/> Integration of functions <input type="checkbox"/> Prototyping	Materials <input type="checkbox"/> New Materials <input checked="" type="checkbox"/> Material Development <input type="checkbox"/> New Material Systems <input type="checkbox"/> Testing Engineering <input type="checkbox"/> Material Characterization	Production <input checked="" type="checkbox"/> Quality Assurance <input type="checkbox"/> Surface Technology <input type="checkbox"/> Joining Technology <input type="checkbox"/> Production & Processing <input type="checkbox"/> Automation <input type="checkbox"/> Process Security <input type="checkbox"/> (Post) Processing <input type="checkbox"/> Process Chains <input type="checkbox"/> Standardization	Crossover Applications <input type="checkbox"/> Hybrid Lightweight Construction <input checked="" type="checkbox"/> Networking <input type="checkbox"/> Marketing/Public Relations <input type="checkbox"/> Profitability <input type="checkbox"/> Education and Training <input type="checkbox"/> Subsidies <input type="checkbox"/> Ecological Impact <input type="checkbox"/> Work Organization <input type="checkbox"/> Work Safety <input type="checkbox"/> Health Protection
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Industries

Keyword 

INDUSTRY RESEARCH NETWORK/ASSOCIATION



The “inflated” lightweight column

Take two thinly cut superposable sheets of stainless steel, weld the edges of both sheets together and pump the space between them full with water, and there you have it: the form of the hybrid column “PERFECTO”. In reality, it’s a lot more difficult, of course.



Source: Karlsruhe Institute of Technology (KIT) Stahl- und Leichtbau.

Event Announcement:

EIP-SCC Matchmaking Event on 20 February 2020, in Brussels

This is the first event of a series of matchmaking activities. It offers a unique opportunity for the persons in charge of policy-making, representing cities / regions or offering advice to cities to learn from best practices, to present projects and to find investors.



You will get access to knowledgeable experts giving you independent and high-quality advice on proven and tested solutions

Explore

Shape

Deal

We assist you in developing an investment proposal for your smart city need(s)

Match your ideas/plans with a network of solution providers and interested investors to support you in sealing the deal

Location:

CROWNE PLAZA HOTEL, Rue Gineste 3, 1210 Brussels

Registration:

<https://eip-smart-cities-and-communities.b2mat.ch.io/signup>

Funding opportunity Announcement: Cascade funding for Smart Textile

Is a 3-year (2019-2022) collaborative project that has received funding from the **EU's Horizon 2020 research and innovation programme** to support the establishment of a **Smart Textiles Manufacturing Value Chain in Europe** through **Acceleration Funding & Coaching of SME's and Start-Ups**

SMARTX END MARKETS www.smartx-europe.eu

Protection incl. sport applications

Health and well-being applications.

Industrial applications incl. transport, architecture & interior



SMART X Partners

● EUROPEAN NETWORK ORGANISATION

Textile ETP (BE)
EURATEX (third party)

■ CLUSTER

UP-TEX (FR)
Po.IN.TEX (IT)
Smart Textiles (SE)
Cluster Textil Moda (PT)
Texfor (ES)
DSP Valley (BE)
CITC (FR)

● TECHNOLOGY CENTRE

Centexbel (BE)
DITF (DE)

▲ INNOVATION SUPPORT ORGANISATIONS

Steinbeis (DE)
IFM (FR)
Sourcebook (DE)



EUROPEAN SMART TEXTILES ACCELERATOR

The project process

1. Value chain mapping and platform development

2. Smart Textiles Community building & SME outreach

3. 3 Open calls and funding up to 40 trailblazer projects

4. Implementation, coaching and follow up of the trailblazer projects

5. Results dissemination and SmartX accelerator programme replication

2019

2020 – 2021

2021 – 2022

3 Open calls

The calls, application forms and applicant guidelines will be published in www.smartX-europe.eu and on the calls for proposals and tenders website of the EU's Executive Agency for SME's.

**1st Call open: Nov'19
to Feb'20**

**3rd Call open: Nov'20 to
Feb'21**

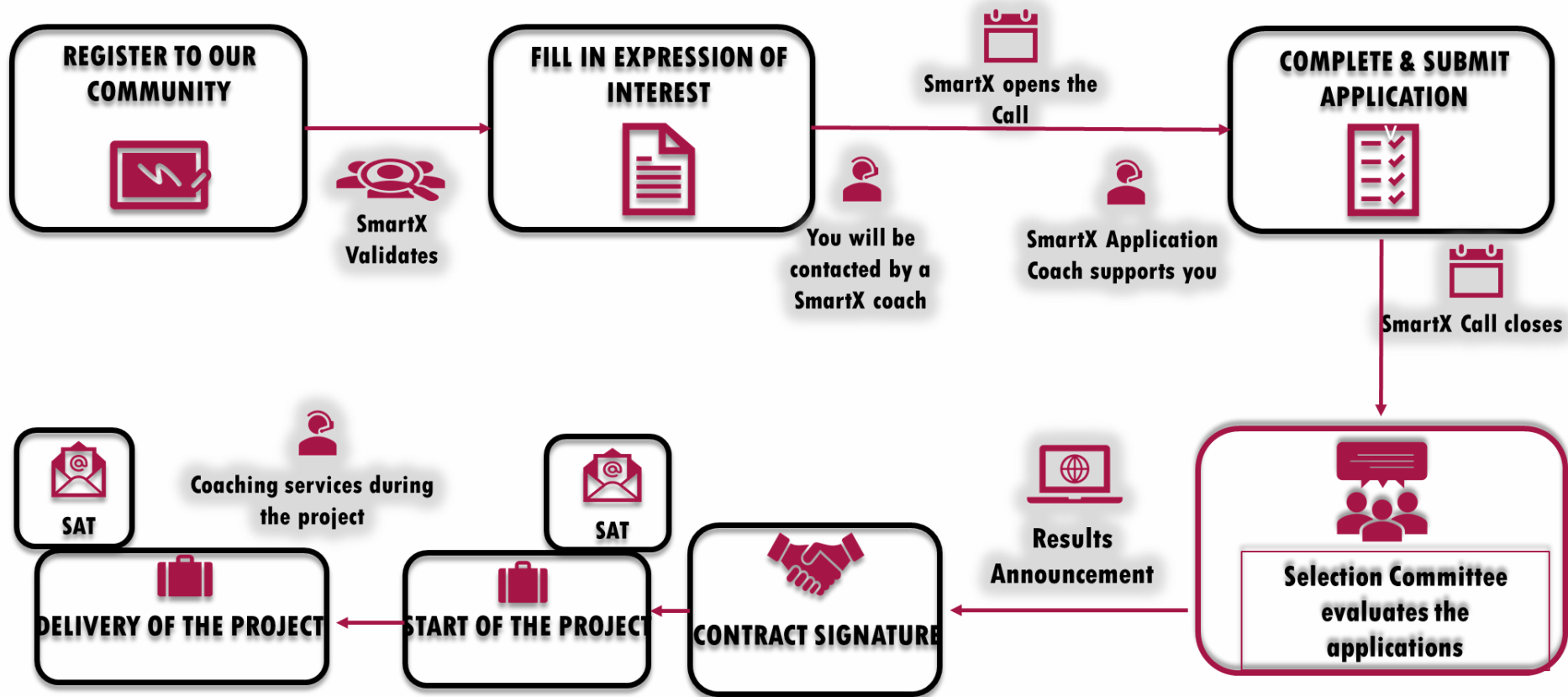
**2nd Call open: May'20 to
Aug'20**

12 internationally recognised Smart Textiles Innovation Experts form the SmartX Selection Committee to collectively select the best applications.

**START OF THE PROJECT
2 months after call closure.**

Application – Evaluation – Project Step By Step

THE COMPLETE SME JOURNEY



EEN Annual Conference Announcement:

29.09.2020 – 02.10.2020 Stuttgart, Germany

EEN Annual Conference: Suggestion workshop "Smart Cities"

- "Smart Cities and Communities" as an Open Innovation Hub
 - In the lighthouse cities of the "Smart Cities and Communities" initiative of the European Commission, the areas of **energy**, **mobility** and **communication technology (ICT)** are integrated in the course of sustainable urban development.

EEN Annual Conference Announcement:

29.09.2020 – 02.10.2020 Stuttgart, Germany

- For this purpose, all relevant actors are involved, from **citizens, the city administration, energy and mobility providers, local industry** (small to large) to **research institutions**, to name just a few.
- Proven technologies and business models are implemented and new ones are tested. Technology, research and social, ecological and economic aspects all play a role here.
- The result is ecosystems and OI (Open Innovation) platforms that **bring experts together** with established **companies** and **start-ups** so that new innovations emerge and start-ups are founded.

EEN Annual Conference Announcement:

29.09.2020 – 02.10.2020 Stuttgart, Germany

- In this workshop, experts from Europe will present Open Innovation success stories from "Smart Cities and Communities" EU projects.
- Offers?
- We are open to suggestions (= willing to listen to ideas from you).

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