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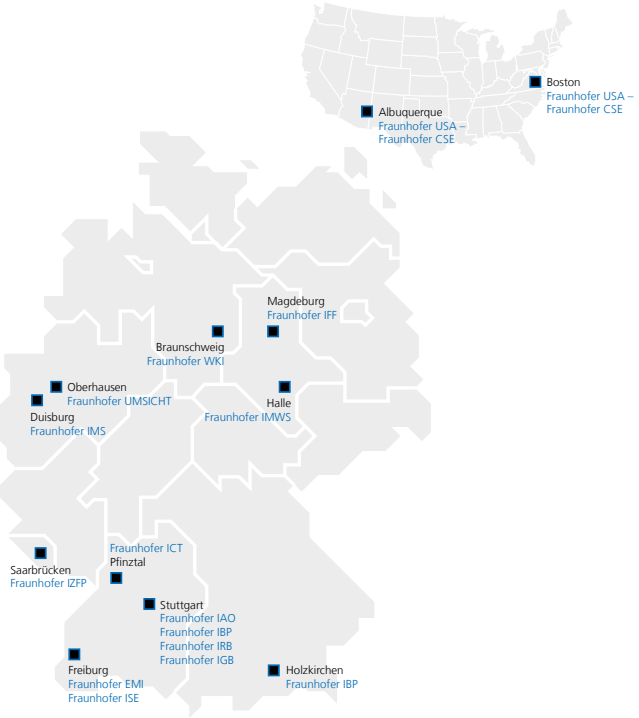
FRAUNHOFER BUILDING INNOVATION ALLIANCE

BUILDING RESEARCH FOR FUTURE CITIES

MEMBERS OF THE FRAUNHOFER BUILDING INNOVATION ALLIANCE

Fraunhofer Institute for…

- High-Speed Dynamics EMI
- Industrial Engineering IAO
- Building Physics IBP
- Chemical Technology ICT
- Interfacial Engineering and Biotechnology IGB
- Microelectronic Circuits and Systems IMS
- Fraunhofer Information Center for Regional Planning and Building Construction IRB
- Solar Energy Systems ISE
- Microstructure of Materials and Systems IMWS
- Non-Destructive Testing IZFP
- Environmental, Safety and Energy Technology UMSICHT
- Wood Research, Wilhelm-Klauditz-Institut WKI
- Fraunhofer Center for Sustainable Energy Systems CSE
- Factory Operation and Automation IFF



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BUILDING RESEARCH
FOR FUTURE CITIES

Advanced Materials

Modular Construction

Comfort and Health

Digitalization and BIM

Energy and Resource Efficiency

Smart Building

Safety

Smart Cities

THE FRAUNHOFER BUILDING INNOVATION ALLIANCE

For some years now, growth drivers such as demographic change, energy retrofitting of existing buildings and digitalization have induced continued growth in the construction industry. At the same time, increasing challenges need to be faced:

Urbanization and lack of affordable housing, severer requirements on adaptability, safety and comfort, progressive digitization and building automation create increasingly complex problems which often require cross-disciplinary skills and competences for their solution.

Against this backdrop, the capability of integrating knowledge from other sectors will become a key factor for competitiveness in the construction industry within the next few years, along with a company's readiness to apply innovative technologies and processes.

The Fraunhofer Building Innovation Alliance has set itself the task of strengthening the innovative power of the construction industry by addressing current building trends in the scope of its research and development work and by developing application-oriented solutions. The Alliance provides a broad range of services that address small and medium-sized enterprises as well as large companies or corporate groups.

Within the Fraunhofer Building Innovation Alliance, 14 Fraunhofer institutes have joined together to pool their expertise and thus offer the construction sector a central contact for intra- and interdiscipilinary approaches and integral solutions along the entire value chain.

Besides responding to inquiries from construction industry clients, the Fraunhofer Building Innovation Alliance also supports political bodies by providing counselling and by proposing guidelines with regard to sustainable buildings that meet the needs of the people.

PORTFOLIO

Services offered by the Fraunhofer Building Innovation Alliance include eight business units. We focus on the areas of:

Advanced Materials
- Development of new materials
- Construction materials with added value
- Phase change materials (PCM)
- Material testing

Modular Construction
- Modular systems
- Configurators
- Prefabrication processes

Comfort and Health
- Health-related evaluation of construction products
- Performance-enhancing environment
- Haptic properties of materials
- Acoustics and optics

Digitalization and BIM
- Process management
- BIM tools and applications
- BIM and CAFM
- Building simulation and digital twin

Energy and Resource Efficiency
- Energy performance of buildings
- Material performance
- Green materials
- Substitution of materials
- Recycling
- Water / wastewater management

Smart Building
- Planning, expanding and operating electronic infrastructure
- Development of sensors
- Building monitoring
- Building networks and communication

Safety
- Hazard and risk analyses
- Safe construction materials
- Fire safety
- Seismic safety
- Non-destructive testing
- Inspection-oriented design

Smart Cities
- Energy concepts for districts and cities
- Substance flow and material flow analyses
- Decentralized energy storage units
- Heat recovery