

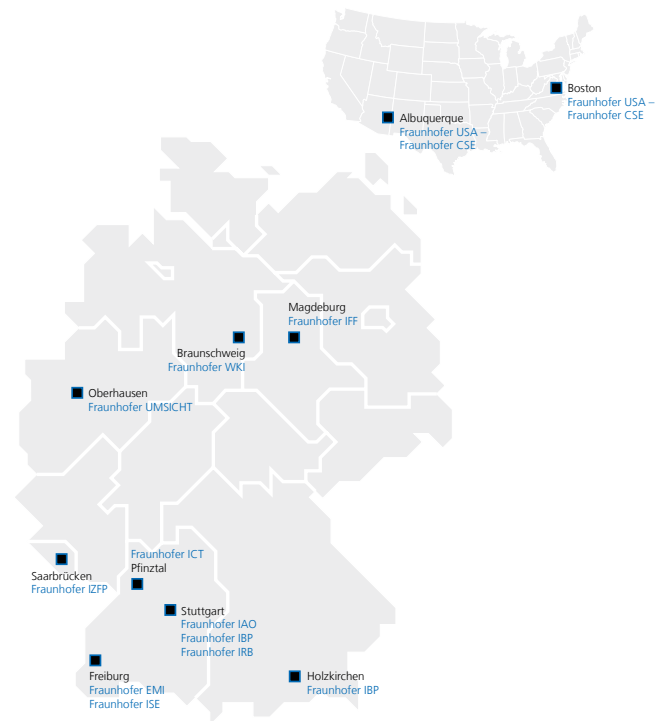
BUILDING RESEARCH FOR FUTURE CITIES



MEMBERS OF THE FRAUNHOFER BUILDING INNOVATION ALLIANCE

Fraunhofer Institute for...

- High-Speed Dynamics EMI
- Industrial Engineering IAO
- Building Physics IBP
- Chemical Technology ICT
- Fraunhofer Information Center for Regional Planning and Building Construction IRB
- Solar Energy Systems ISE
- 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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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, 11 Fraunhofer institutes have joined together to pool their expertise and thus offer the construction sector a central contact for intra- and interdisciplinary 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
- Green materials
- Substitution of materials
- Recycling

Smart Building

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

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

