



### Smart objects

Localization and activity detection are the key capabilities of the smart home. Fraunhofer IGD is actively researching new energy-saving and powerful sensor systems for this purpose. Electric field sensors make it possible to integrate smart living applications into everyday life in an unseen, unobtrusive way. We combine sensors with modern machine learning and signal processing methods to extract as much information as possible from sensor data. This allows activities in a living or work environment to be detected without contact and used for interaction with smart environments.

### Our services

Fraunhofer IGD is your partner in the development, advancement and evaluation of smart living systems. We offer a range of services, including:

- Development of smart living technology
- Development of system concepts
- Development of hardware and software components
- Consulting and design services
- Evaluation of and tests on available systems

FRAUNHOFER IGD: THE INTERNATIONAL LEADING  
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<https://fh-igd.de/smart-living-en>

## SMART LIVING LIVING SMARTER TODAY INSTEAD OF TOMORROW

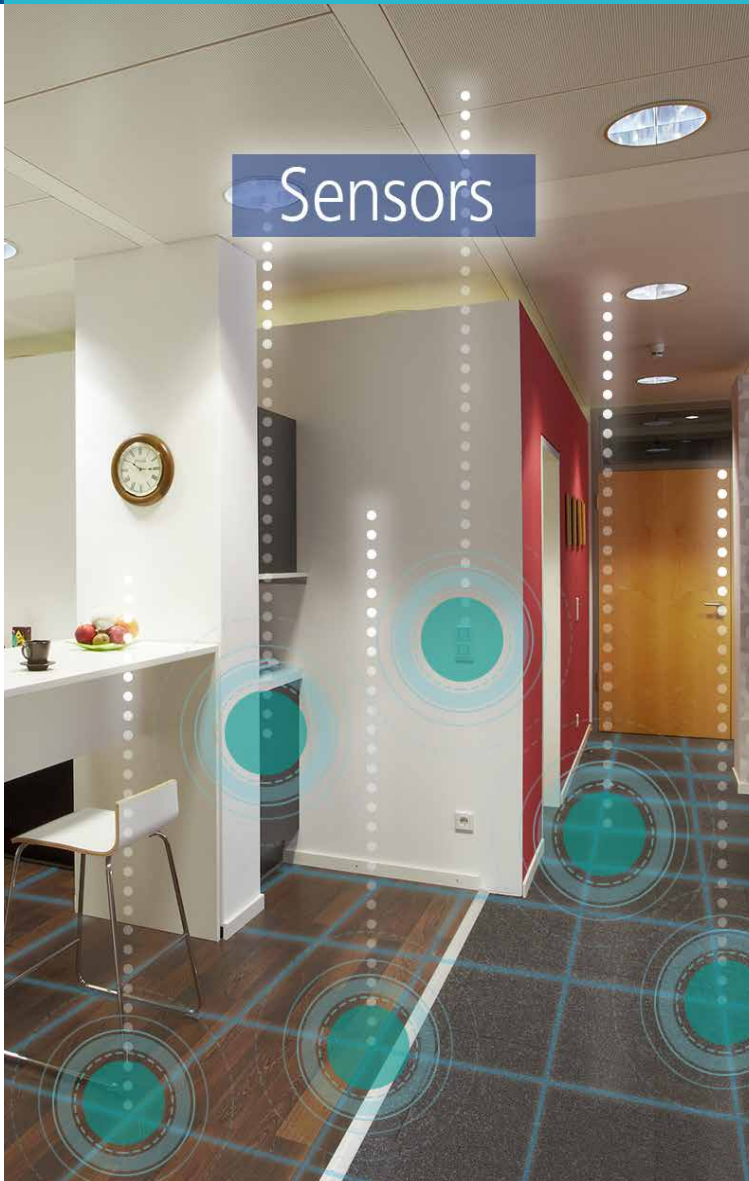




## LIVING SMARTER TODAY INSTEAD OF TOMORROW

The vision of smart living comprises all aspects of life. Work, public space and private residences. For example, sensors in Ms. Smith's couch can measure and evaluate her heartbeat while she's sitting on it watching TV. If Ms. Smith lays down and closes her eyes, the blinds are automatically closed without her having to do anything. If abnormalities are detected in Ms. Smith's heartbeat, her smart home automatically suggests scheduling a doctor's appointment and then makes it for her. Even Ms. Smith's ride is automatically ordered – and at half price, since someone from Ms. Smith's city has a similar destination. Smart living is more than just a smart house. Smart living means living intelligently. Fraunhofer IGD's smart living technology provides:

- Convenience
- Assistance
- Safety
- Health
- Resource conservation



### Smart environment

Sensors alone do not make an environment smart. Seamless networking along with the use of multimodal methods and intelligent platforms make it possible to assist people in their everyday activities.

UniversAAL IoT is an open-source, ontology-based software platform that offers seamless interoperability of devices, services and applications for smart living. It is available with the Apache software license 2.0 and is specially suited for building open and distributed systems. The platform provides a framework for communication, connectivity and compatibility between otherwise heterogeneous products, services and devices. By avoiding application-specific limitations, universAAL supports the operation of any AAL application, accommodating the versatility of smart living environments.