ECS 2024 GHENT BELGIUM 5-6 December

Listen2Future

Sensors and Devices

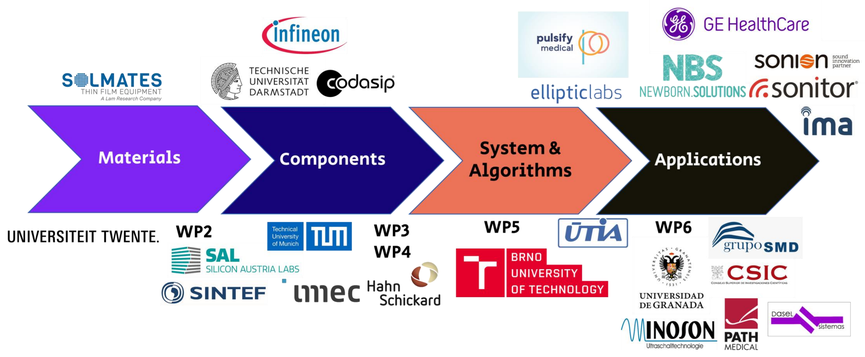
Acoustic sensor solutions integrated with digital technologies as key enablers for emerging applications fostering society 5.0

Challenges and objectives

The expected growing market for **MEMS-based acoustic transducers** (microphones, ultrasonic transducers) in medical and industrial devices creates a new high demand for miniaturized low power sensors. In combination with intelligent signal processing and customized packaging, these technologies are the key to achieve performant, low power consuming, miniaturized and cost-saving systems that should be predominantly covered with acoustic sensors made in Europe. **Our integral acoustic sensor solutions are listening to theses needs and mapping the acoustic senses and perceptions into Society 5.0.**

The **L2F VISION** is to strengthen and unleash the potential of digital MEMS transducer technologies in the European ECS industry to address the emerging needs of Society 5.0 in Health & Wellbeing and Digital Industry & Energy.

The **L2F MISSION** is to pave the way for MEMS piezoelectric acoustic transducers based on novel thin-film materials and technologies to high volume production by enhancing European industrial leadership throughout the value chain.



Contact details:
Infineon Technologies Austria AG
Coordinator: Andreja Rojko
Project Manager: Irene Karitnig
Email: L2F@infineon.com
Website: https://www.listen2future.eu/
Find us on LinkedIn: Listen2Future

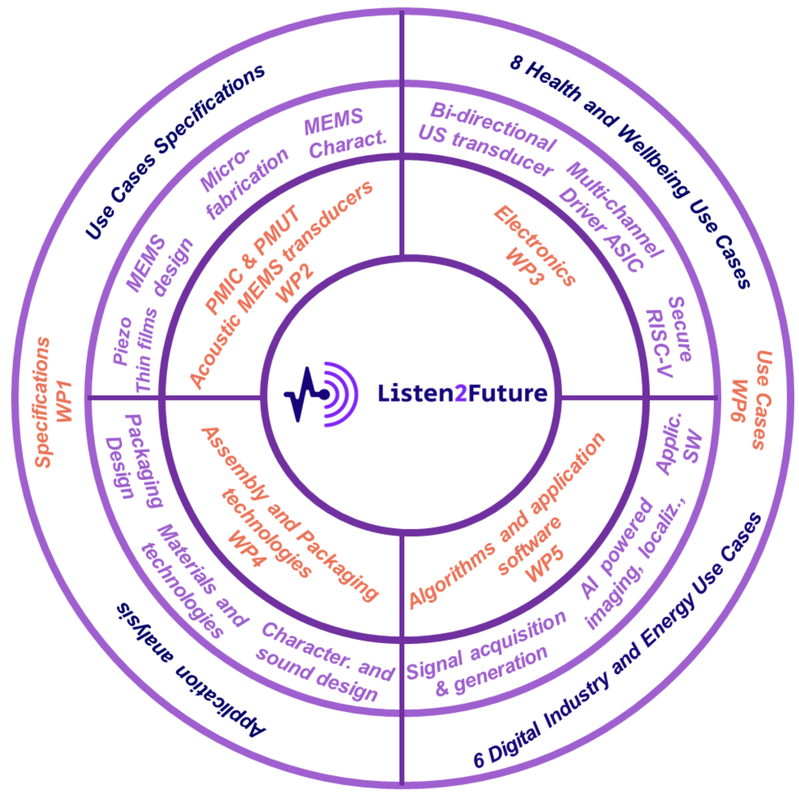
Technical goals

Listen2Future will boost the potential of piezoelectric acoustic transducers to provide new solutions in the key application areas of **Health & Wellbeing** and **Digital Industry & Energy**, addressing many of the challenges in emerging applications towards a more digitalized society.

Objective 1: Create a new generation of MEMS transducer with increased performance for acoustic applications. Generate a strong IP portfolio to foster European leadership and excellence in international competition.

Objective 2: Provide dedicated hardware accelerators/processors and AI powered algorithms for real-time, integrated signal processing. Enable best-in-class, intelligent and low-power acoustic systems.

Objective 3: Demonstrate the innovation potential, usability, and versatility of the new acoustic system solutions in existing and emerging applications in Health & Wellbeing and Digital Industry & Energy key applications areas.



Expected impact

14 use cases will benchmark in low power consumption, small size and low cost to open the door for disruptive acoustic applications. This will create a major impact on quality of live for humans as well as on industrial and medical appliances. The EU position in Acoustic Sensors will be strengthened by new piezoelectric materials and technologies with the capability to outperform the existing capacitive MEMS technologies. This will contribute to reinforcing the EU's strategic autonomy in electronic components and systems.

Additional information

Project partners: 27 partners from 7 European countries, from that: 6 LEs, 10 SMEs, 11 RTO/academic Org.

Run time: 01.02.2023 – 31.01.2026

Project duration: 36 months

Total person months: 2713

Total project costs: ~ EUR 30 Mio.

Scan me!

Chips JU