ASSIC

AUSTRIAN SMART SYSTEMS INTEGRATION RESEARCH CENTER

Bringing Technologies into Application

operated by

SAL
SILICON AUSTRIA LABS

www.assic.eu

VISION & MISSION

The vision that drives us

As a COMET K1 Centre, ASSIC is one of Austria's selected Centres of Excellence. This ensures trendsetting research in the field of intelligent systems and strengthens Austria as a leading research hub.

ASSIC offers profound system knowledge about micro- and nanotechnologies, components, technologies, materials, packaging and connected technologies. Products and processes become safer, more effective and more intelligent.

Austria and especially the region of Villach occupy an important position in the European microelectronics sector. With the research focus of ASSIC, we have the responsibility to extend this leading position.

Micro- and nanotechnologies will continue to thrive worldwide. With ASSIC and "Smart System Integration", Austria can play its part in this journey.

ASSIC AS A COMET CENTRE OF EXCELLENCE

International experts selected SAL GmbH (former CTR AG) with the research focus „ASSIC - Austrian Smart Systems Integration Research Center" for the COMET-K1 Excellence Status. This status is achieved by offering excellent, long-term and internationally visible research and implementing it together with industrial and academic partners.

ASSIC is funded as a K1-Centre within the framework of COMET - Competence Centres for Excellent Technologies by the Austrian Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), the Austrian Federal Ministry for Digital and Economic Affairs (BMDW) and by the Federal States of Carinthia and Styria.

History

1997 Foundation of CTR Carinthian Tech Research

1998 CTR becomes Austria's first Kplus Competence Centre

2003 ISO-9001:2000 Certification

2007 CTR – COMET K1 Centre - Competence Centre for Advanced Sensor Technologies

2015 Start of COMET-K1 Centre ASSIC – Austrian Smart Systems Integration Center operated by CTR AG

2016 Research Clean Rooms ISO 5 and ISO 8 established

2016 Si.A. Errichtungs GmbH established

2018 Successful COMET Evaluation ASSIC

2018 Official foundation of Silicon Austria Labs GmbH

2019 Merger of CTR & SAL

2019 Beginning of the 2nd Funding Period ASSIC

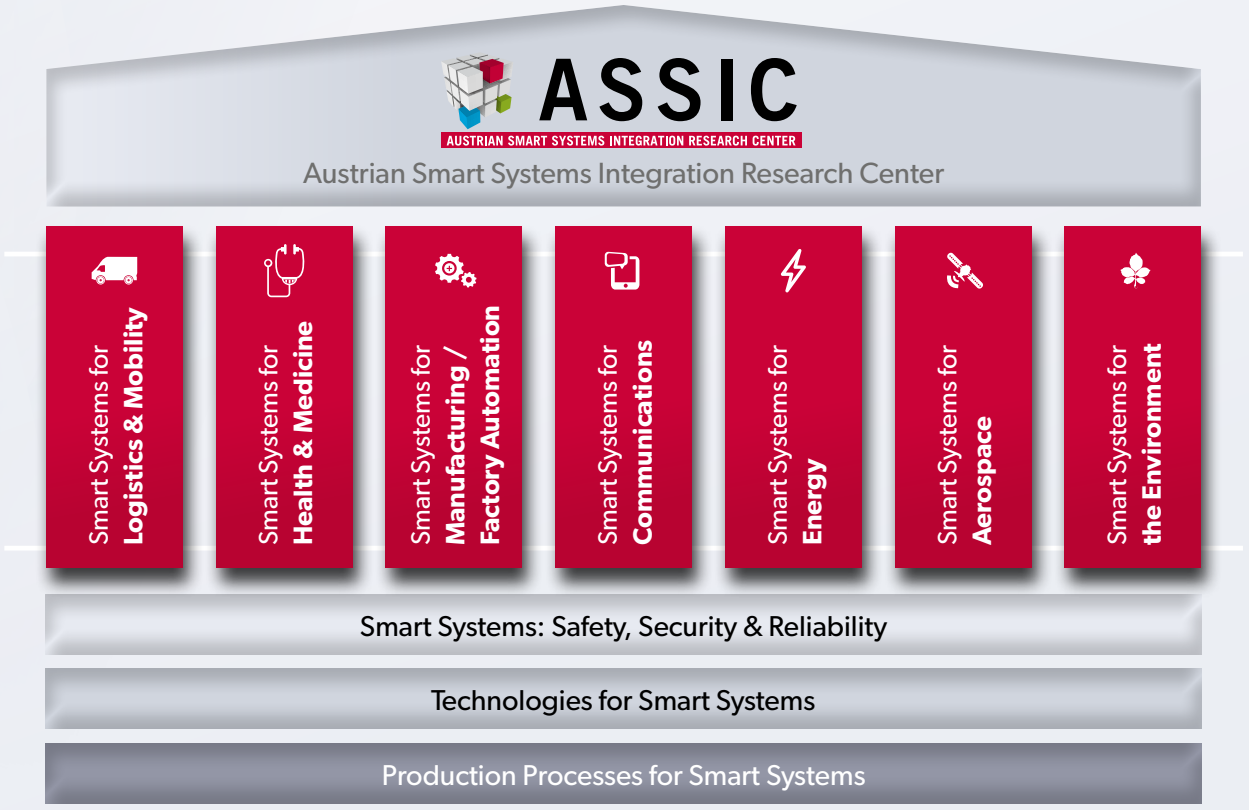
BRINGING TECHNOLOGIES INTO APPLICATION

Intelligent Systems for our lives

Our society is facing major challenges in the future, such as energy supply, environmental protection, health and mobility. Research, technology and the effective implementation of innovations can provide valuable contributions to these challenges. In particular, micro- and nanotechnologies as so-called Key Enabling Technologies (KETs) are of great importance.

Micro components and their intelligent integration into products and processes play an important role in this context, as they enable more functional, safer and more precise solutions - in medicine, in analytics, in process or mobility applications.

This is also where the competences of ASSIC - Austrian Smart Systems Integration Research Center lie: in the research, development and integration of intelligent sensor systems. ASSIC offers an answer to social challenges by enabling more precise, effective, safe and intelligent products and processes.



Success Factors

Conducting interdisciplinary basic and applied research, ASSIC forms the link between science and industry and helps to close the existing gap between invention and innovation.

TEAM WITH EXPERIENCE

ASSIC is embedded in the established organisational structure of SAL GmbH (former CTR AG). This compromises international and highly qualified leading experts from science and industry, with a common goal of interdisciplinary cooperation and of "Bringing Technologies into Application".

INFRASTRUCTURE

The laboratories and measurement technology infrastructure of SAL are available to ASSIC. In addition to the optical, chemical, electrotechnical and mechanical equipment, there is simulation software and hardware for fluidic, optical, mechanical or magnetic problems. The infrastructure is complemented and enhanced by a high-tech grey and clean room.

STATUS OF EXCELLENCE

As a COMET-K1 Centre, ASSIC is one of the most excellent research centres in Austria. This claim to offer scientific excellence with international visibility and an application-oriented approach, accompanies the ASSIC team in their research every day.

RESEARCH PARTNERSHIPS

Partners from science and industry with regional, national and international backgrounds combine their know-how to form an excellent research network within ASSIC. This top-class consortium combines research and practice to bring high-tech developments from the laboratory into practice.

Research Programme

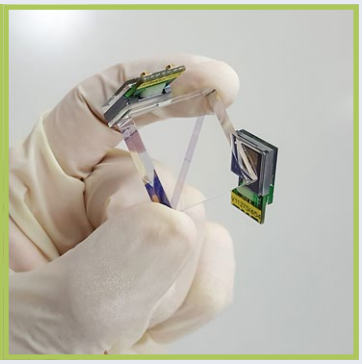
ASSIC's Smart System Integration is the bridge from individual sensor elements via the sensor module to the intelligent product.

The research programme of ASSIC comprises the development of selected MEMS (Micro-Electro-Mechanical Systems) components with high practical relevance for sensors and actuators, the related packaging methods and technologies, as well as the corresponding processes for system integration.

- Magnetic MEMS Modelling
- MEMS Microfabrication Technology
- Advanced MEMS Sensors and Transducers
- MEMS Position Sensors
- RF-MEMS
- Environmental MEMS Sensors

- Waferlevel Packages
- System in Package
- Advanced Packaging Technologies
- Multifunctional Integrated Systems
- Harsh Environment Sensors

- for Micro- and Nano-sized Contaminants
- for Industrial Process Analytics and Process Control
- of the Future
- for Food and Kitchen Appliances
- for Energy Storage and Energy Distribution Systems

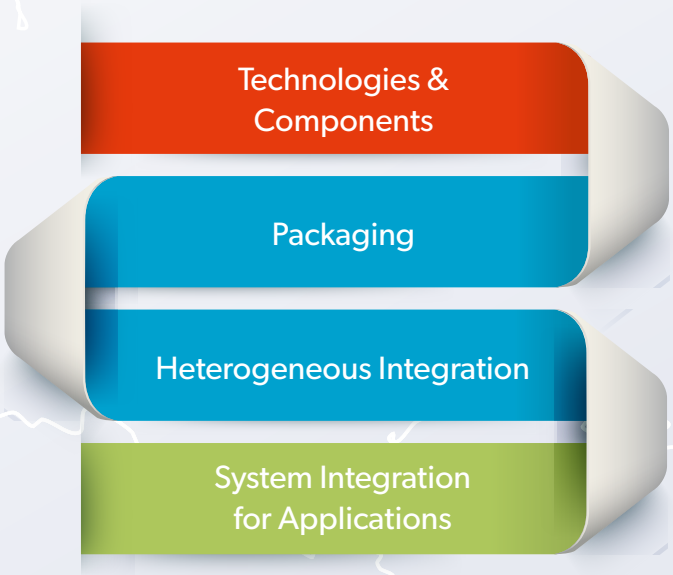


CONSORTIUM

Partner along the value chain

ASSIC brings together leading Austrian industrial partners and research institutes with excellent international partners along the technological value chain and generates a culture of cooperation and "Open Innovation".

The high-calibre consortium guarantees outstanding research as well as R&D results with equally high relevance to practice for next-generation products and processes.



INDUSTRY PARTNERS

- AT&S Austria Technologie & Systemtechnik AG
- AVL LIST GmbH
- BHM-Tech Produktionsgesellschaft mbH
- E+E Elektronik GmbH
- Evatec Europe GmbH
- Infineon Technologies Austria AG
- Liebherr-Hausgeräte Lienz GmbH
- Miba eMobility GmbH
- Ortner Reinraumtechnik GmbH
- Philips Austria GmbH
- RF360 Europe GmbH
- Robert Bosch GmbH
- TDK Electronics GmbH & Co OG
- TOMRA Sorting GmbH
- ZF Friedrichshafen AG

SCIENTIFIC PARTNERS

- Albert-Ludwigs-University of Freiburg
- University of Klagenfurt
- Fraunhofer Society
- Graz University of Technology
- Institut Supérieur de Mécanique de Paris SUPMECA
- Johannes Kepler University Linz
- Materials Center Leoben Forschung GmbH
- University of Vienna
- University of Udine
- Vienna University of Technology

ASSOCIATED PARTNERS

- Carinthia University of Applied Sciences
- CISC Semiconductor GmbH
- Forschung Austria
- Joanneum Research Forschungsgesellschaft mbH
- KAI Kompetenzzentrum Automobil- und Industrieelektronik GmbH
- Know-Center GmbH
- Polymer Competence Center Leoben GmbH
- Silicon Alps Cluster GmbH

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ASSIC
AUSTRIAN SMART SYSTEMS INTEGRATION RESEARCH CENTER

DATA & FACTS

ASSIC – Austrian Smart Systems Integration Research Center

Legal Entity:	**Silicon Austria Labs GmbH**
Duration 2nd Funding Period:	**2019 – 2022**
Industry Partners:	**15**
Scientific Partners:	**10**
International Partners:	**9**
Research Funds:	**20,4 Mio Euro**

operated by

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Digital and
Economic Affairs

Federal Ministry
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Climate Action, Environment,
Energy, Mobility,
Innovation and Technology

FFG Promoting Innovation.
LAND KÄRNTEN
Das Land Steiermark Wirtschaft und Innovation
KWF
SFG NEUES DENKEN. NEUES FÖRDERN.