



ECSEL-Austria

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Bologna

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About ECSEL-Austria



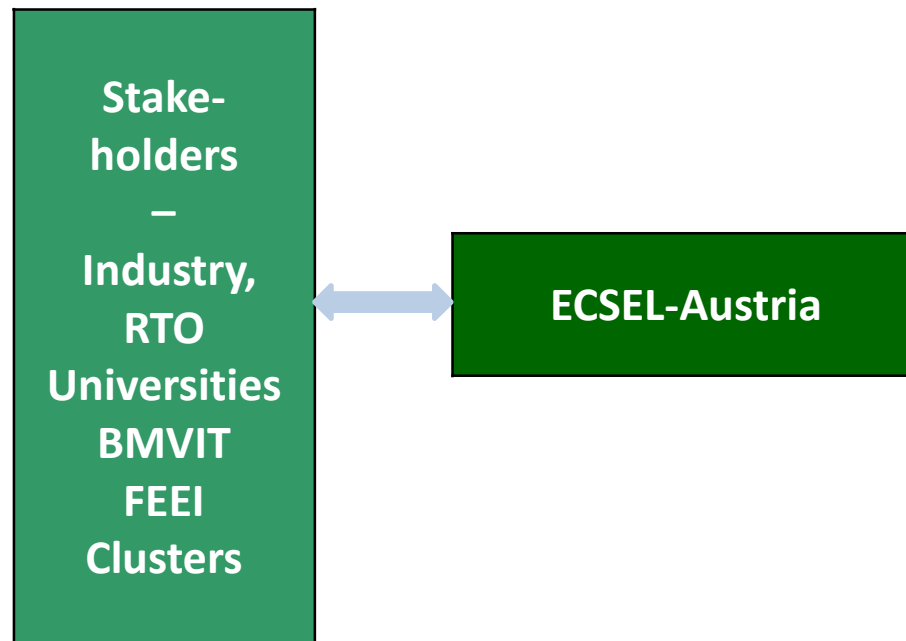
ECSEL-Austria is an industry-driven national research, development and innovation platform representing the technology areas of micro- and nanoelectronics, embedded systems and systems integration.

- **2013:** founded based on ARTEMIS-Austria (embedded software and software architecture) and ENIAC-Austria (micro- and nanoelectronics)
- **2014:** enlarged by the areas of “systems and systems architecture”, “framework conditions and visibility” and “network and network development” in 2014.
- **Legal Status:** Verein
- **Members:** 40 / 4/2017

ECSEL-Austria: the Austrian technology platform for Electronic based System

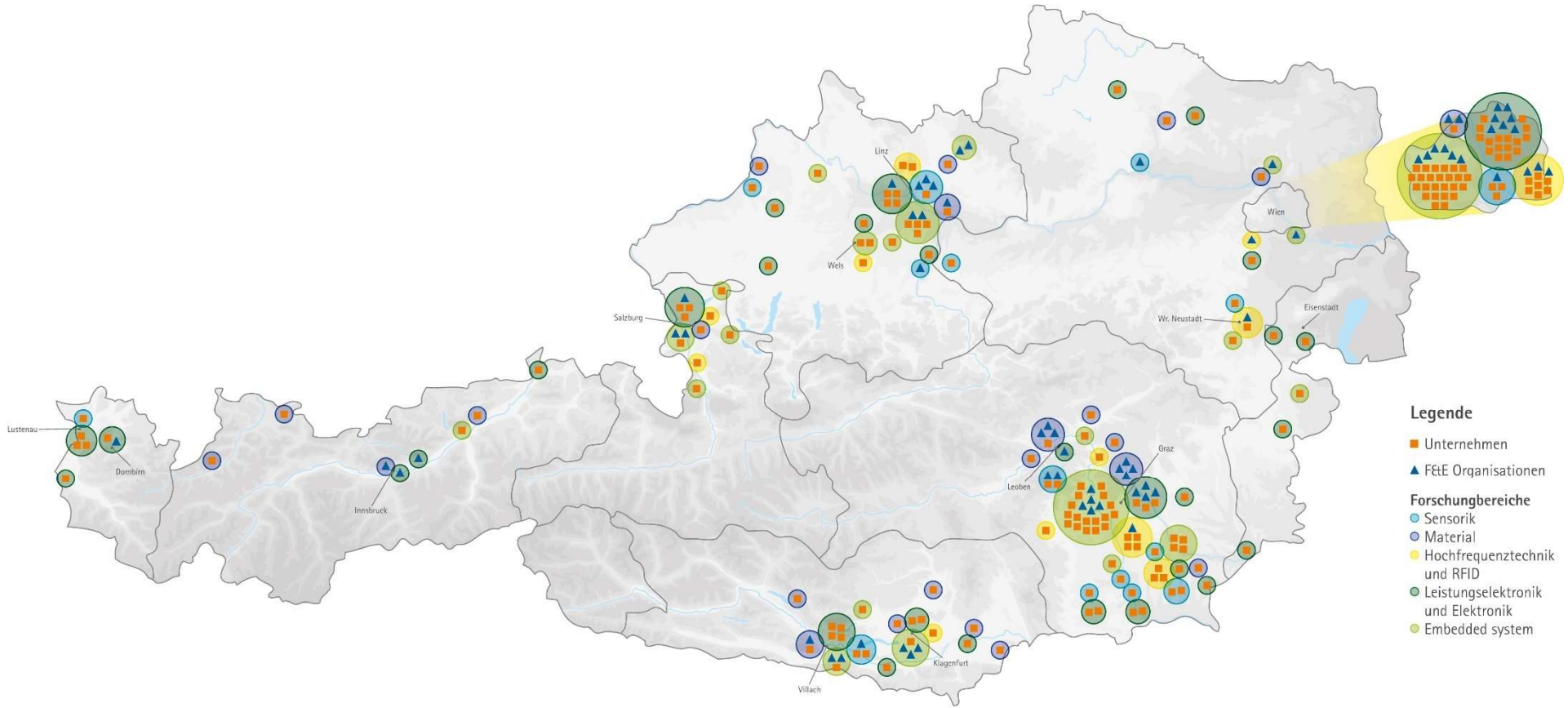


Secure supply of key technologies and critical knowhow in the field of electronic components and systems to support innovation in all major sectors of the economy and society in Europe.



- Foster collaboration in the electronics components and systems domain (ECS)
- strengthen the international competitiveness of Austrian companies
- Represent national ECS community
- Support or run the development of related roadmaps
- Organize stakeholder events
- develop inputs for European research activities based on the strengths of Austrian actors

Austrian Landscape

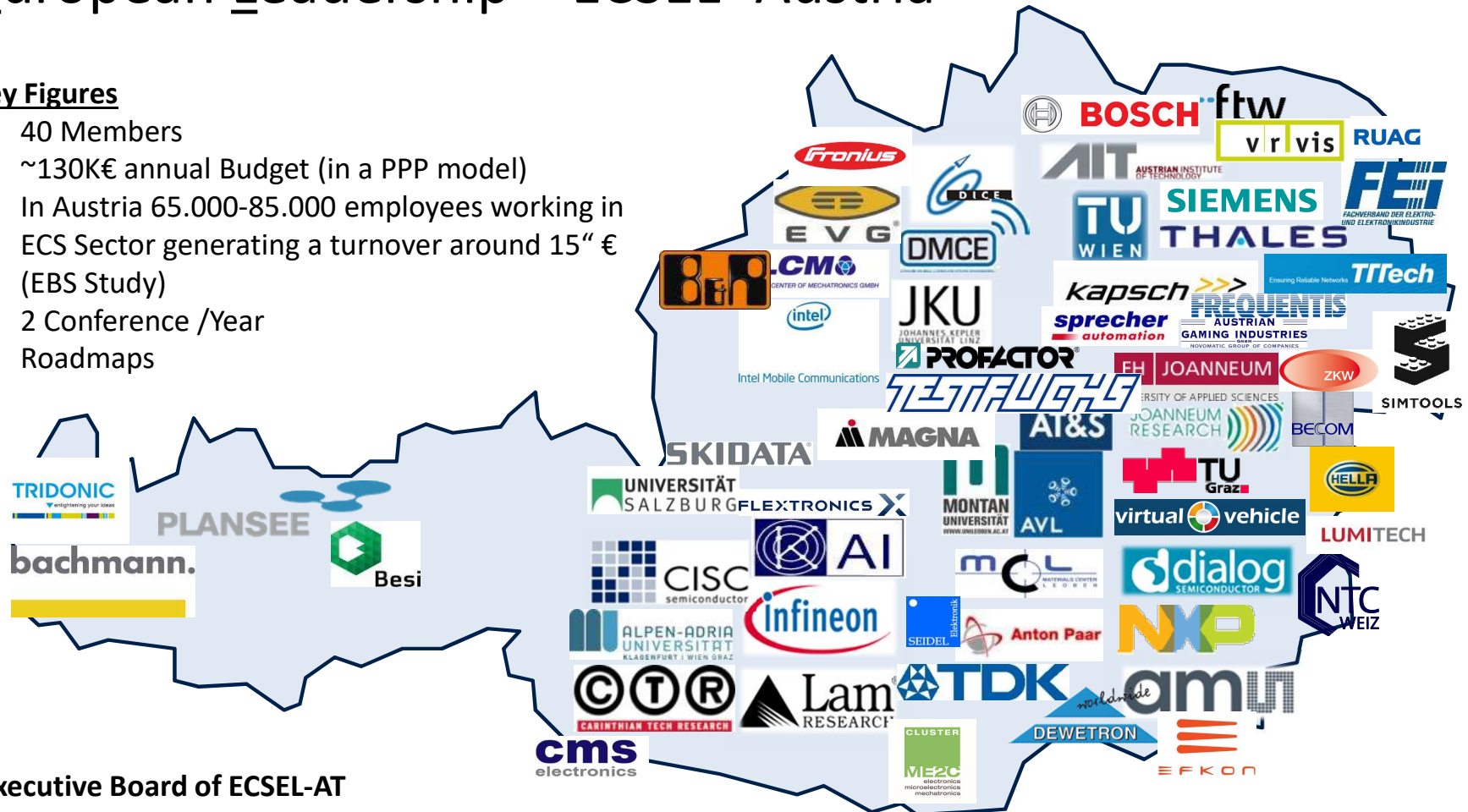


Study: electronic based systems in Austria
bmvit

Electronic Components and Systems for European Leadership – ECSEL- Austria

Key Figures

- 40 Members
- ~130K€ annual Budget (in a PPP model)
- In Austria 65.000-85.000 employees working in ECS Sector generating a turnover around 15“ € (EBS Study)
- 2 Conference /Year
- Roadmaps



Executive Board of ECSEL-AT

AVL List GmbH
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FEEL-Fachverband d. Elektro- u. Elektronikindustrie
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[Dipl. Ing Ewald WACHMANN]

AT&S
[Dr. Hannes VORABERGER]

ECSEL-Austria

Starting Structure until 2016



Electronic Components and Systems for European Leadership ECSEL Austria

1 embedded SW
and SW
Architectures
(ARTEMIS)

2 Micro- and
Nano-
electronics
(ENIAC)

3 Systems and
Architectures
(EPoSS)

4

Roadmap, Network and Visibility

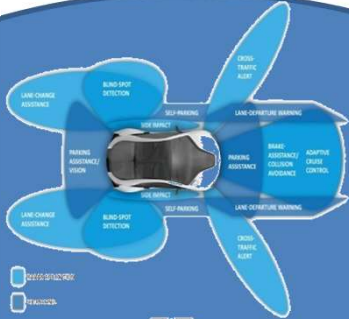
Common Roadmaps including adjustment with European and regional level , Network Framework Conditions and Visibility

ENABLING
FRAMEWORK

ECSEL Austria: Stakeholder oriented selection of priorities



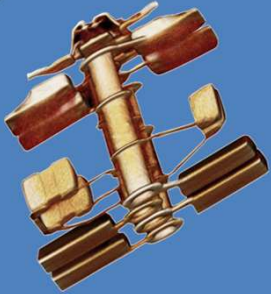
**Sensors
Modules/Systems**



Architecture & Tools



**HF Electronics and
Communications**

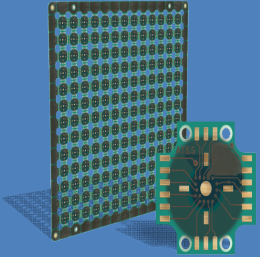


Embedded Software for CPS

moduls and systems



Power Electronics

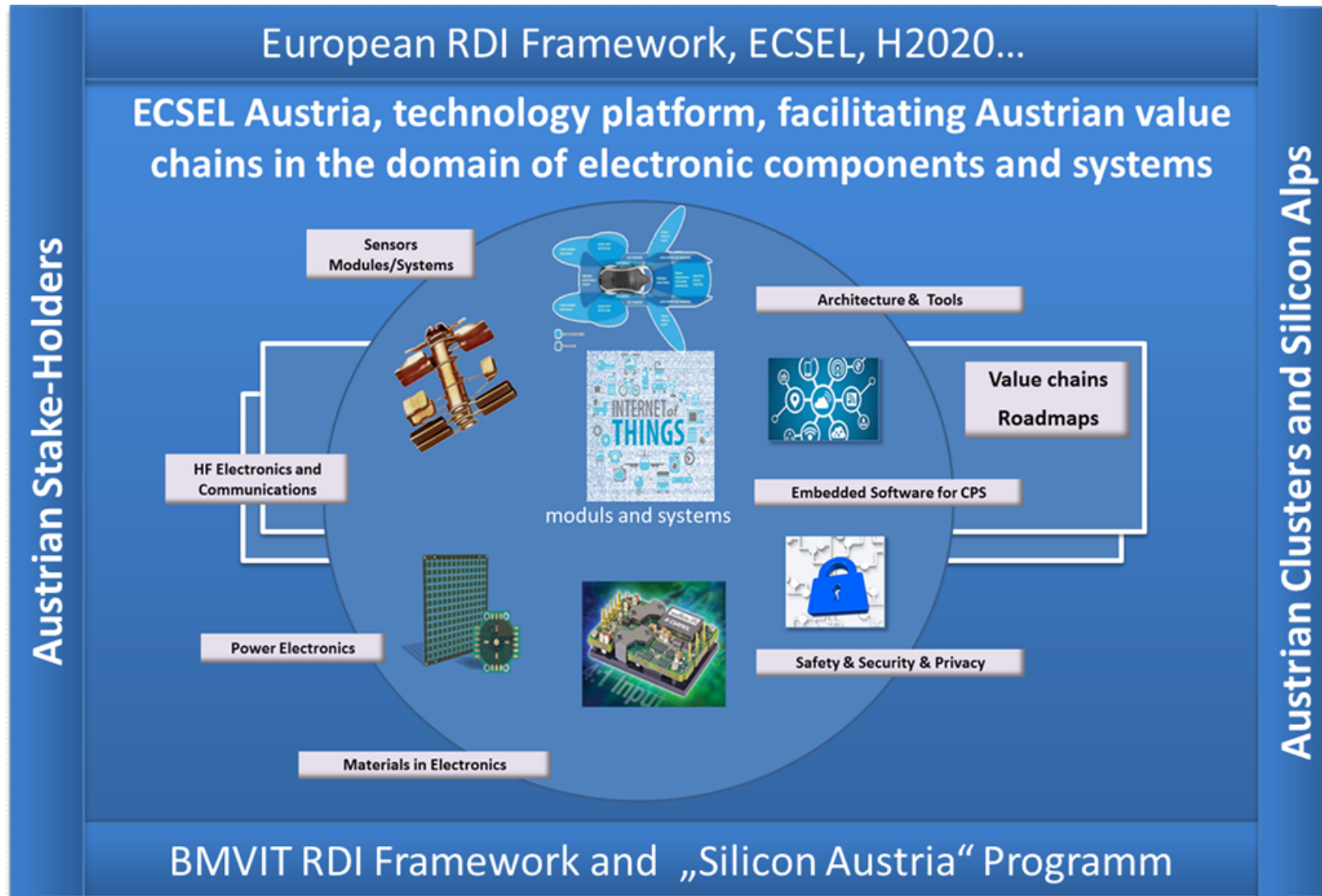


Safety & Security & Privacy

Materials in Electronics



Positioning of ECSEL-Austria as the Austrian technology platform for Electronic based System

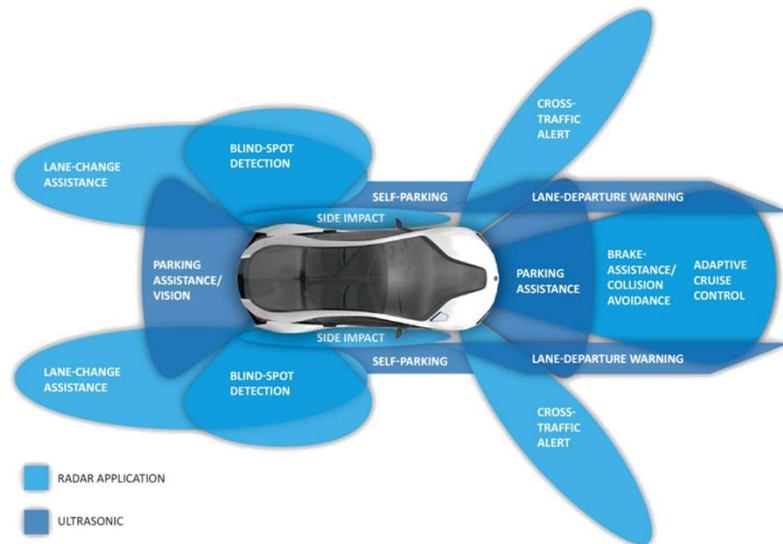


ECSEL Austria: Common Fields of Interest



Power Electronics

Energy consumption of electronic devices are currently limiting their use. New **high energy efficient electronic modules with high power density** are required for devices in vehicles, energy supply, etc. in future



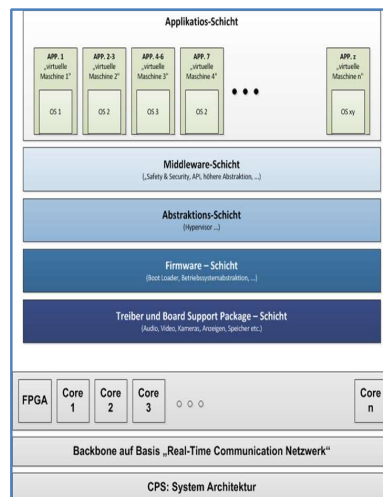
High Frequency Electronics and Communications
High frequency communication for “Smart Systems” including low power, high frequency communication, RFID, dependable real-time

ECSEL Austria: Common Fields of Interest



Embedded Software for CPS

Distributed **stringent real-time** applications (high computing **complexity**, dependability, **low latency**, **ultra low power** applications, **distributed** software systems, usability, efficient **control** algorithms, sensor **fusion**)



Architecture and tools
Frameworks (SW components for communication, security, HW abstraction, multicore support), **Verification** and **validation** tools, **Smart system** development methods, adhoc **dynamic SW reconfiguration**

ECSEL Austria: Common Fields of Interest



Safety, Security and Privacy
Dependability, safety and security HW components and SW frameworks, **functional safety, privacy** support, **fail operational** systems,

