

Infiniteon Austria in IPCEI on Microelectronics



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Dissemination and spillover activities

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Summary

Infineon is a globally leading semiconductor player



top 10
semiconductor company

~46,700
employees*

leading player
in automotive, systems for power
management and drives, sensor systems,
connected secure systems, wireless combos,
differentiated memories

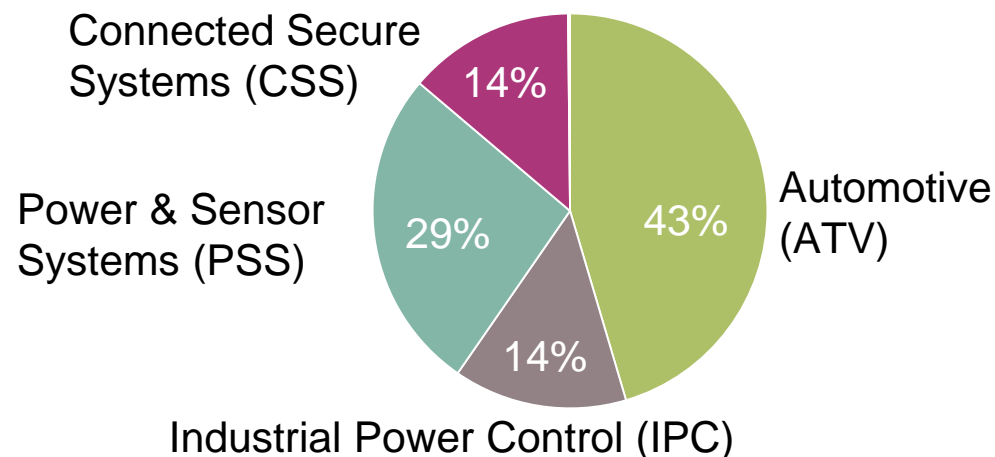
9%+ | 19% | 13%
target operating model**

* as of 30 September 2020

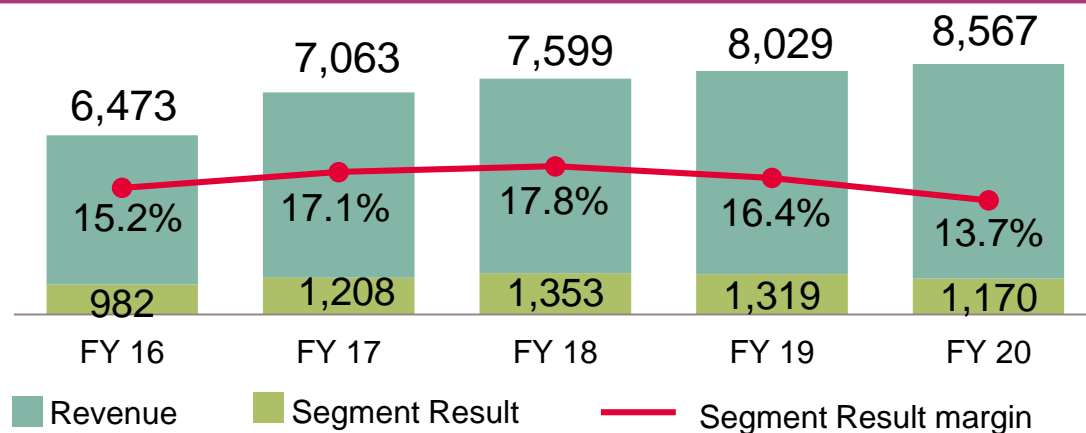
** over the cycle 9%+ revenue growth; 19% Segment Result margin; investment-to-sales ratio of 13%; targets to be approached as integration progresses

Infineon at a glance

Business Segments Revenue*



Financials

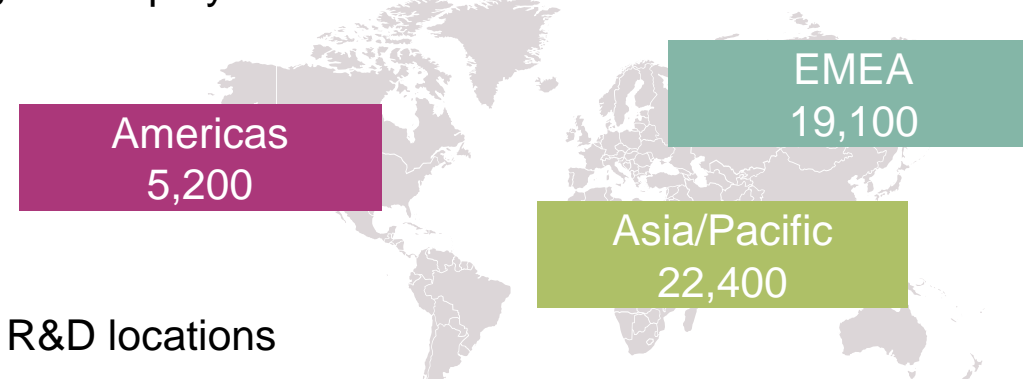


*2020 Fiscal Year (as of 30 September 2020)

**as of 1 April 2021

Employees*

46,700 employees worldwide



60 R&D locations

19 manufacturing locations**

Market Position

Automotive



1

Strategy Analytics,
April 2021

Power



1

Omdia,
September 2020

Microcontroller

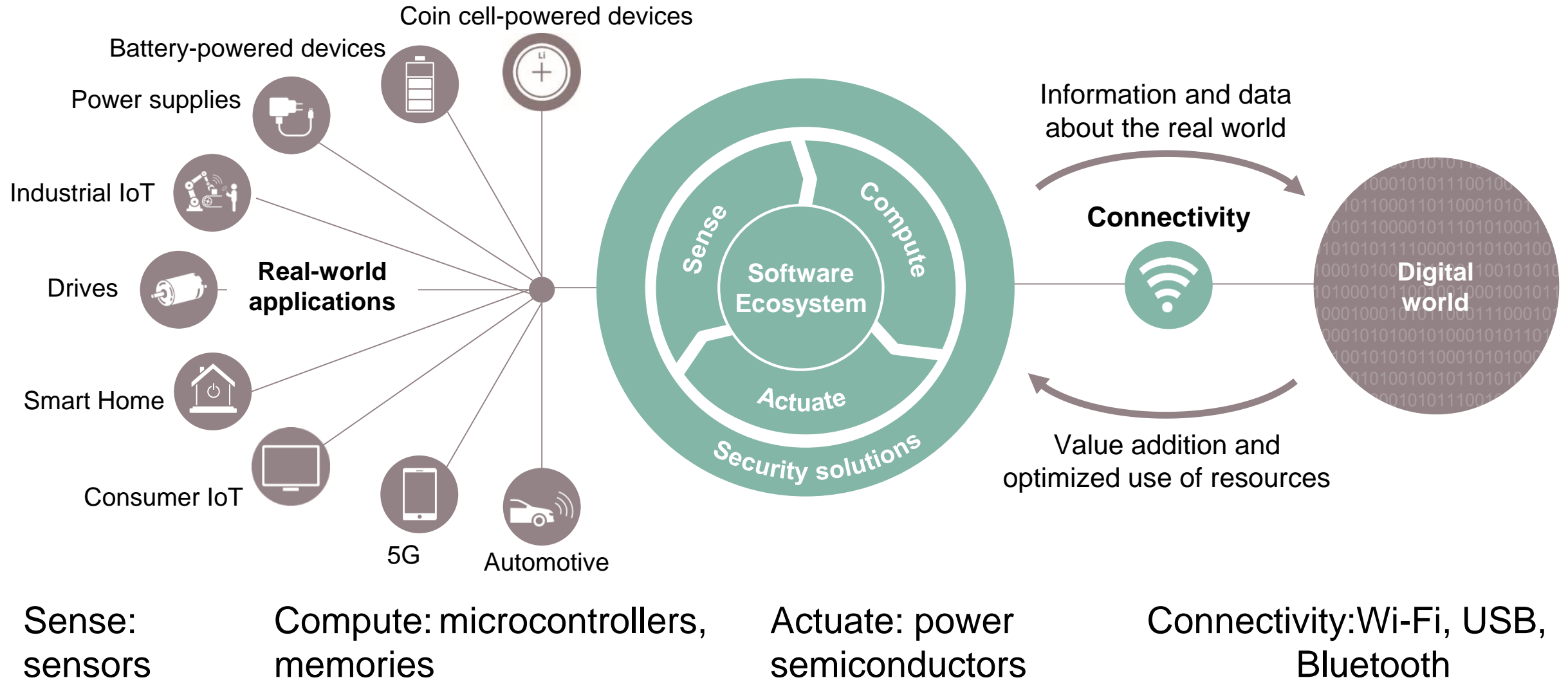


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Omdia,
March 2021

For further information: [Infineon Annual Report 2020](#)

Infiniteon offers a unique portfolio that links the real and the digital world



Infineon is globally positioned with its network of front-end and back-end manufacturing facilities



19 locations¹



¹as of 1 April 2021

²Penang is assigned to the Austin site

Close customer relationships are based on system know-how and application understanding



EMS partners

APTIV
BYD 比亚迪汽车
DENSO
HITACHI Inspire the Next
KEIHIN
Mando
MITSUBISHI ELECTRIC
veoneer
ZF

BOSCH
Continental
HELLA
HYUNDAI
LEAR CORPORATION
Nidec
Valeo



ABB
BOMBARDIER
Danfoss
GOLDWIND
Midea
OMRON
Schneider Electric
SIEMENS
SUNGROW
Vestas

ALSTOM
中国中车 CRRC
EATON
Inovance
Rockwell Automation
SEMIKRON innovation + service
TOSHIBA
YASKAWA



Distribution partners

阿里巴巴 Alibaba.com
ARTESYN EMBEDDED POWER
Advanced Energy
BOEING
DELL
ERICSSON
Goertek
LITEON
NOKIA
SAMSUNG

amazon
Baidu 百度
CISCO
DELTA
Google
Hewlett Packard Enterprise
LG Life's Good
Makita
OSRAM
ZTE



AdvanIDE
BANG & OLUFSEN
brother
fitbit.
GPO
Lenovo
IDEMIA augmented identity
Nintendo
Microsoft
THALES
Raspberry Pi
Watchdata

Responsible action, sustainable profitable growth



Infineon ranks among the 10 percent¹ most sustainable companies in the world

- › Sustainability at Infineon includes **social, ecological and economic values**
- › Infineon was one of the first semiconductor companies to voluntarily commit to the **Ten Principles of the UN Global Compact**
- › Infineon meets **global societal challenges** such as climate protection, energy efficiency and resource management with innovative products
- › Infineon's climate target is to become **carbon-neutral by 2030**². Emissions are to be cut by 70 percent over the 2019 calendar year³ levels by 2025
- › **External evaluation of the commitment:**
 - MSCI ESG Research rates Infineon with AA for the second consecutive year
 - Included in the Dow Jones Sustainability™ World Index for the sixth time
 - Received "Gold Status" of the rating agency EcoVadis for the sixth time

¹ Based on the results of The Sustainability Yearbook 2020 by S&P Global in cooperation with RobecoSam

² in terms of Infineon's direct and indirect energy- and heat-related emissions (Scope 1 and 2)

³ including Cypress

For further information: [Infineon Sustainability Report 2020](#)

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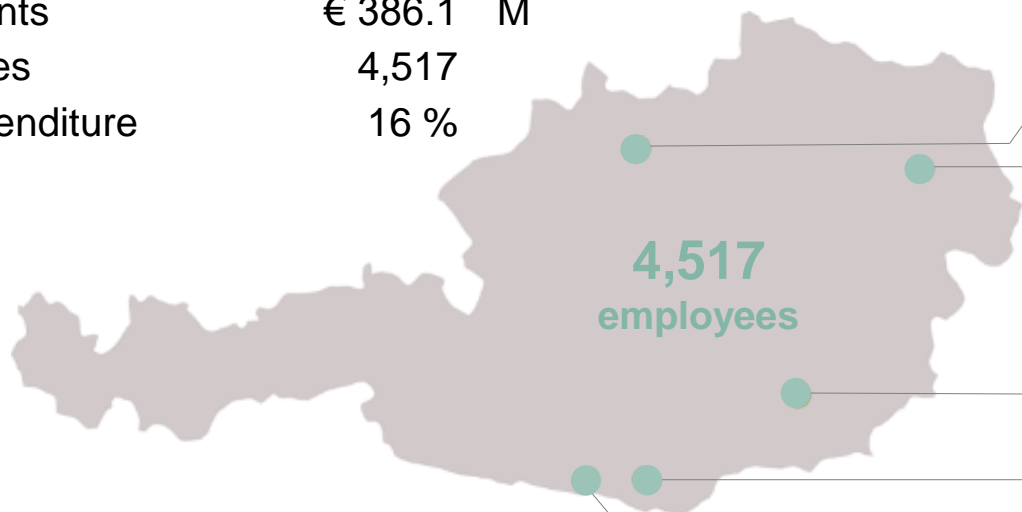
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Summary

Infineon Austria | Company overview

Fiscal Year 2020 (as of 30.09.2020)

Revenue	€ 3,108.7	M
Earnings before tax	€ 196.2	M
Investments	€ 386.1	M
Employees	4,517	
R&D expenditure in % of revenue	16 %	



Linz (R&D)
177 employees

Wien (Vertrieb)
9 employees

Graz (R&D)
431 employees

Klagenfurt (IT)
international headquarter function
192 employees

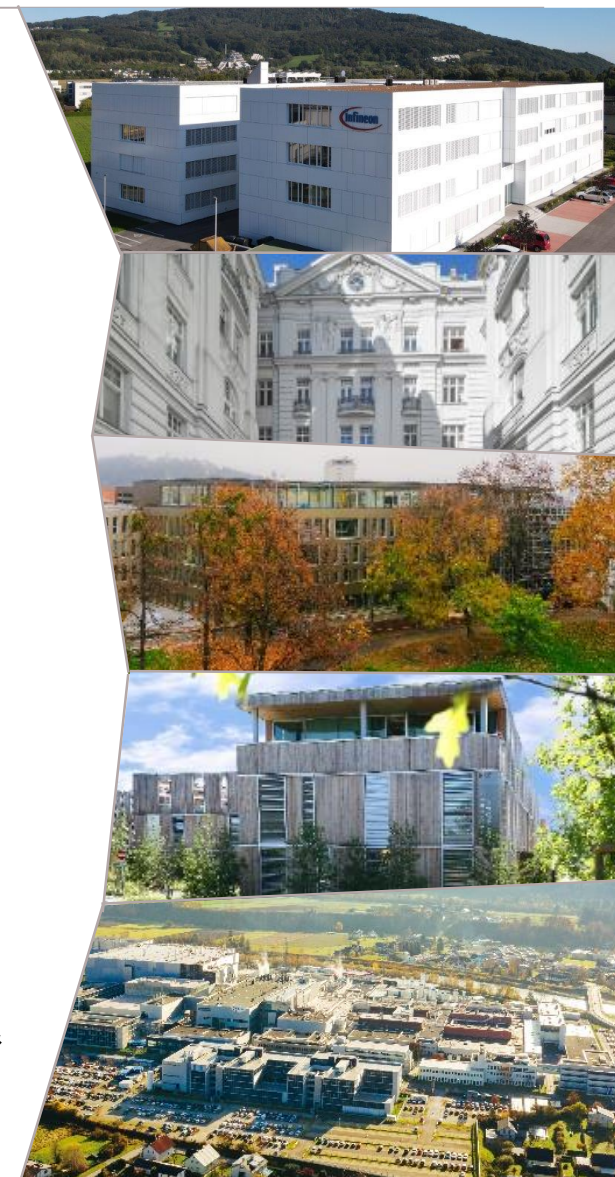
Villach (R&D, P, G, IT)
international headquarter function
3,708 employees
incl. KAI Kompetenzzentrum Automobil- & Industrieelektronik

Austrian subsidiaries

Infineon Technologies Linz
IT Services, Klagenfurt
KAI, Villach

Foreign subsidiaries

Infineon Technologies Romania SCS (R&D)
Infineon Technologies (Kulim) Sdn Bhd, Malaysia (P)



Extensive competencies

Infineon Austria combines
research & development,
production and **global business**
responsibility.

The board of Infineon Technologies Austria AG

Dipl.-Ing. Dr. Sabine Herlitschka, MBA
 CEO and Technology Director

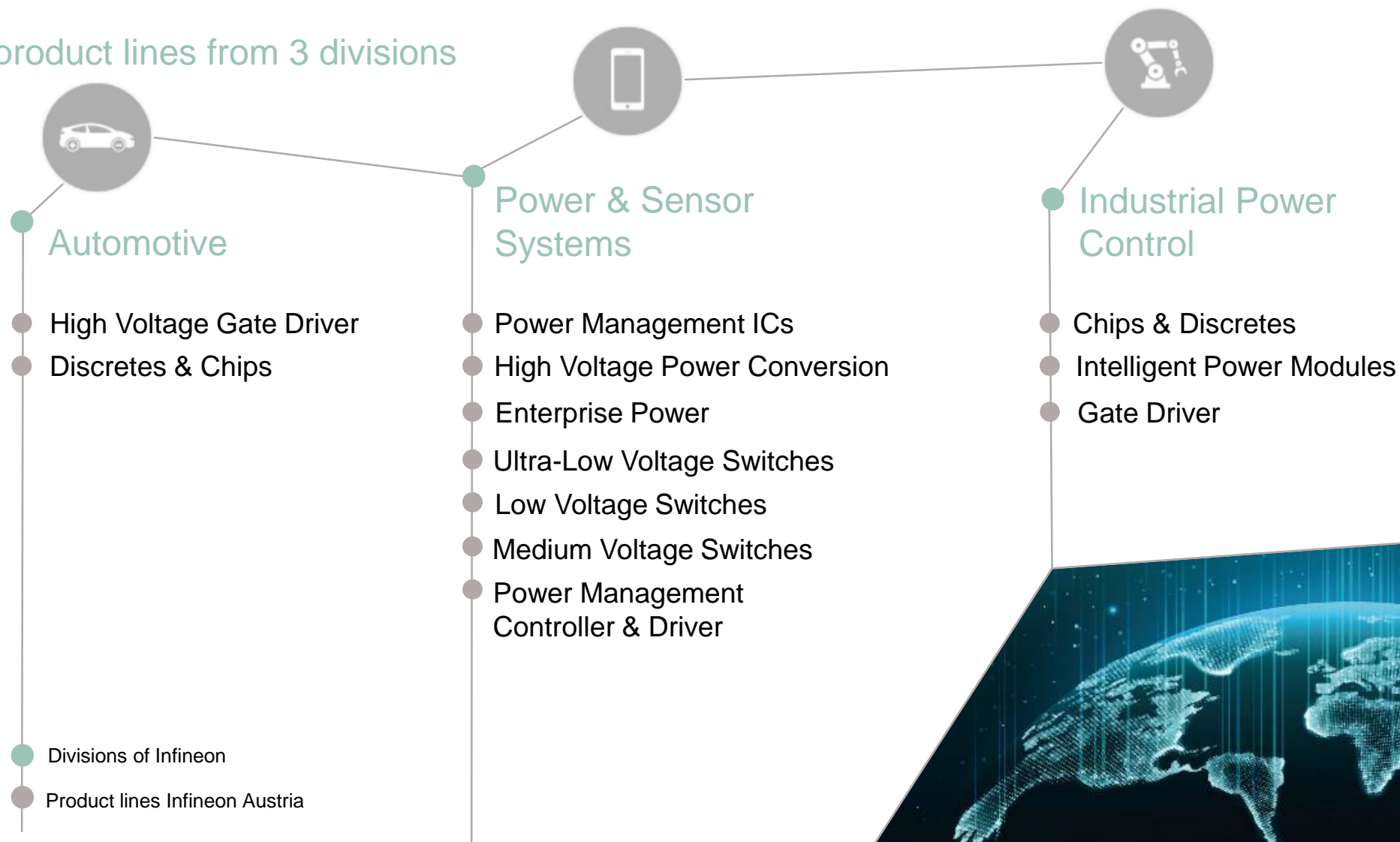
Dipl.-Ing. (FH) Oliver Heinrich
 CFO

Dr. Thomas Reisinger
 Operations Director



Global business responsibility in Austria

12 product lines from 3 divisions



Innovation Fab Villach

- › Competence center for exceptionally thin (up to 40µm) silicon wafers
- › Serial production of power semiconductors („Energy saving chips“) in 300-millimeter thinwafer technology
- › Manufacturing competencies for MEMS (micro-electromechanical systems), e.g. tire pressure sensors
- › Global competence center for Silicon Carbide (SiC) and Gallium Nitride (GaN) of the group
- › One Virtual Fab: Highly flexible semiconductor production thanks to identical production environment at the 300-millimeter sites in Villach and Dresden

8.45 billion chips
(FY 2020)

approx. **1,800** product types
Wafer-diameters: 150 mm,
200 mm, 300 mm

23,260 m²
clean room area



Investment in production - Current status 300-millimeter chip factory

Chip factory

- Shell completed
- "Light on" in the first clean room area
- Installation of the automated transport system started
- Transfer of the production system completed
- New fire station building completed

Fire department building completed

Infrastructure

- Parking lot opened (9 floors, 924 parking spaces)
- Infineon-Strasse opened
- Austria's most modern canteen and large-scale kitchen opened
- New 110/20 KV building and power supply completed

R&D building completed

A holistic approach to sustainability

CO₂ balance sheet Infineon Austria



**Net ecological benefit of 8.45 billion chips produced:
CO₂ emissions reduction of about 9 million tons**

CO₂ burden¹
around 0.11 million tons
CO₂ equivalents



CO₂ savings²
around 9 million tons
CO₂ equivalents

The CO₂ savings corresponds to...



...**64 % of all annual car emissions in Austria.**



...**10,500 flights** of a full Airbus A380 from Vienna to Singapore.



...of the annual power generation of **photovoltaic systems** on an **area as large as Villach (approx. 150 km²).**

1) This figure considers manufacturing, transportation, function cars, flights, materials, chemicals, water/wastewater, direct emissions, energy consumption, waste, etc. and is based on internally collected data and externally available conversion factors. All data relate to the 2020 fiscal year.

2) This figure is based on internally established criteria. The figure relates to the calendar year 2019 and considers the following fields of application: automotive, LED, induction cookers, servers, renewable energy (wind, photovoltaic), mobile phone chargers as well as drives. CO₂ savings are calculated on the basis of potential savings of technologies in which semiconductors are used.

Strengthening R&D excellence through cooperation

- › **Cooperation with Fraunhofer Innovation Centre “Digitalization & Artificial Intelligence” (KI4LIFE)**
University Klagenfurt
- › **Involvement in Silicon Austria**
Developing Austria into a leading high-tech location for electronics-based systems
- › **Silicon Alps Cluster in Carinthia and Styria**
Austrian technology, innovation and microelectronic cluster
- › **European project iDev40**
One of the largest European Industry 4.0 projects
- › **6 endowed professorships:**

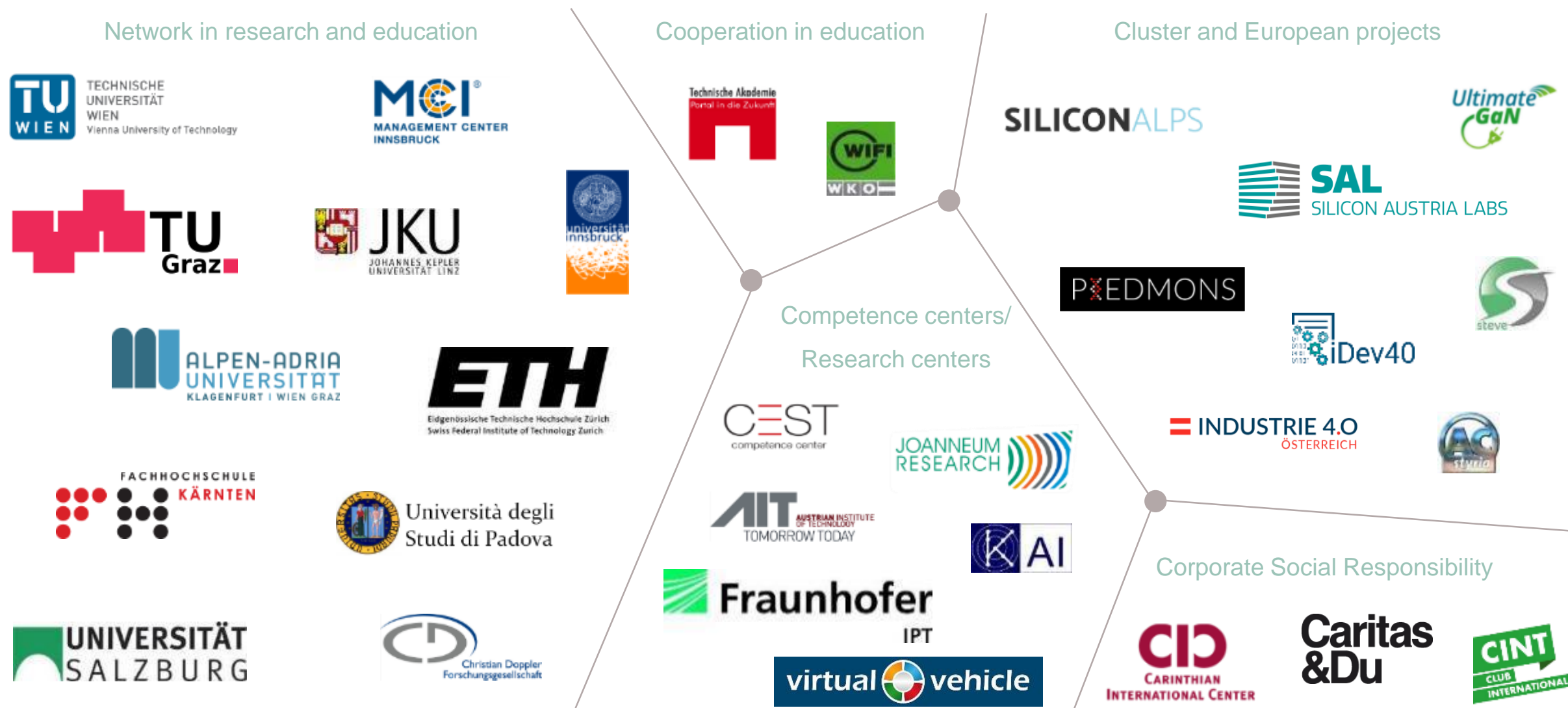
University Innsbruck:	Power electronics
Technical University Graz:	Data Science
Technical University Graz:	Autonomous driving
Technical University Vienna:	Human-Centered Cyber-Physical Production and Assembly Systems
University Klagenfurt & Technical University Graz :	Industry 4.0 – adaptive and connected production systems
University Klagenfurt:	Sustainable Energy Management



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research collaborations
in Austria, Europe and beyond
(FY 2020)

Selection of important cooperation partners



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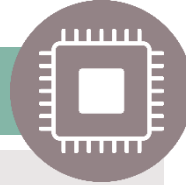
Dissemination and spillover activities

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Summary

Important Project of Common European Interest (IPCEI) on Microelectronics in a nutshell

European project



- › ... a key strategic instrument to advance microelectronics technology in Europe.

Partnership



- › ... 32 companies and research & technology organizations from Austria, France, Germany, Italy, the UK.

Technology fields











































- › ... six fields: energy-efficient chips, power semiconductors, sensors, advanced optical equipment and compound materials.

Positive spillover effects



- › ... knowledge generated in IPCEI on Microelectronics will be disseminated via spillover activities.

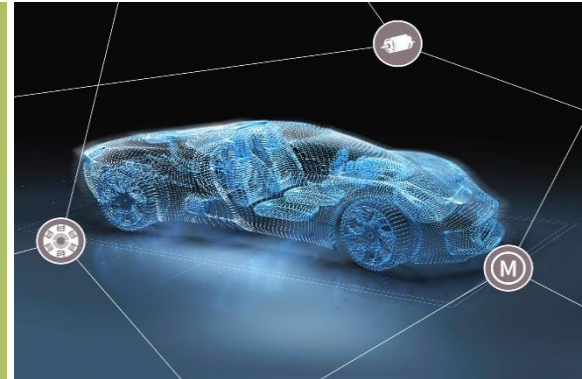
IPCEI on Microelectronics: partners and technology fields

Energy Efficient Chips	Power Semiconductors	Smart Sensors	Advanced Optical Equipment	Compound Materials
 CEA-Leti	 3-D Micromac*	 CEA-Leti	 AMTC*	 AZUR Space Solar Power
 Cologne Chip	 AP&S International	 <i>CorTec</i>	 Carl Zeiss	 CEA-Leti
 Globalfoundries	 AT&S	 Elmos Semiconductors		 Integrated Compound Semiconductors
 NXP Semiconductors Austria	 CEA-Leti	 Fondazione Bruno Kessler		 IQE
 <i>RayICs</i>	 Elmos Semiconductors	 Infineon		 Newport Wafer Fab
 Soitec	 Infineon	 Robert Bosch		 SPTS Technologies
 ST Microelectronics	 Infineon Austria ★	 ST Microelectronics		 OSRAM
 X-FAB	 MURATA	 TDK-Micronas		 SYNRED
	 Robert Bosch	 LYRED		 Soitec
	 SEMIKRON	 X-FAB		 ST Microelectronics
	 ST Microelectronics			
	 X-FAB			

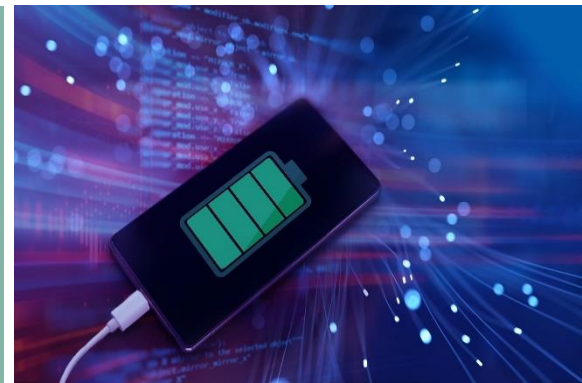
SMEs: in "*italic*"
Associated partners:*

Infineon Austria in IPCEI on Microelectronics

Power semiconductors for key markets: automotive, electro-mobility, energy, digital and industrial equipment



6 key subareas: MOSFET, SiC, GaN, Innovative Rectifiers, MEMS, SMART



Contributing to energy-efficiency, decreasing energy consumption and reducing CO2 emissions



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Dissemination and spillover activities

Benefits for the European economy and society

The benefits of the project will be of shared beyond the IPCEI consortium

Contribution to the European economy and society

The knowledge created in the project will be beneficial for organizations across Europe

Positive spillover effects

The project will create positive spillover effects across the semiconductor value chain and in other sectors



Dissemination and spillover activities by Infineon Austria

STEM education and talent

Infineon Austria will include key universities and STEM Talent, from pupils to PhDs in IPCEI dissemination and spillover activities

Research and development

Induced by IPCEI, Infineon Austria will support universities' research and development activities across Europe

Industry collaboration across value chain

Infineon Austria will strengthen its collaboration with SMEs, startups and large companies beyond the IPCEI consortium and create positive spillover effects

*as of 1 April 2021



Dissemination and spillover activities by Infineon Austria

Talent Program

- › PhD Program
- › Smart Learning Classes
- › Infineon IHUB
- › Girls Days

Value Chain

- › Industry roadshows
- › Startup Workshops
- › New supply chain collaborations

Network and Outreach

- › Infineon Ambassador Program
- › Professorship
- › Virtual and inperson conferences

Dissemination activities
address STEM talent, from
pupils to PhDs



Zooming in: PhD Excellence Program

Quality and performance of PhD students, theses and partners

- › Identification of top research topics
- › State-of-the art industrial PhD program by identifying top candidates, supervisors and universities
- › Internal and external visibility via publications/patents and presentations

Organization throughout the entire PhD lifecycle

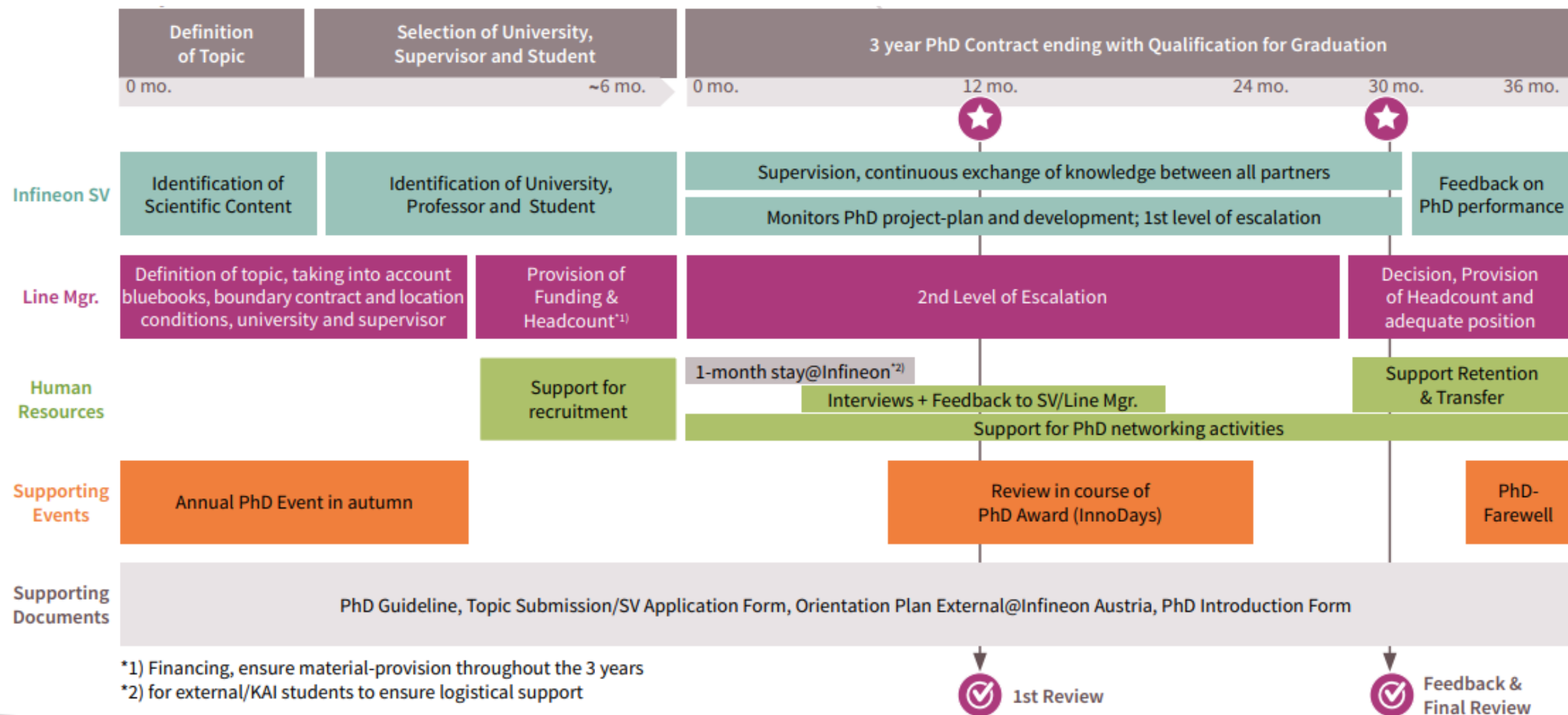
- › The responsibility lies within business lines, such as industrial power electronics
- › PhD bonding and hiring by Human Resources

Partnerships

- › Excellent relations with partner universities and professors and worldwide technical professional organizations (e.g. IEEE)
- › Networks with internal technical experts (technical leaders, patent agents, etc.)



Zooming in: PhD Excellence Programme | PhD Lifecycle



Zooming in: Smart Learning Classes



- › In cooperation with Higher Technical Schools in Wolfsberg, Villach, Klagenfurt Mössingerstraße, Klagenfurt Lastenstraße and Ferlach
- › Increase the use of digital technologies and strengthen digital competences in learning and teaching
- › Demonstrate that technology is exciting and fun
- › Forward-looking topics, such as **“Robotics and Smart Engineering”**
- › Setting up a digital platform with demo kits, e-training courses, and hardware and software applications, accessible by schools

Zooming in: Infineon Summer and Winter Schools

- › Industry – academia meeting
- › Top academic lectures & top industry insights
- › Boosting students' career and network
- › Providing participants with a certificate

- › The Summer School 2021 with its topic **Si, SiC and GaN** will take place under the motto **"Mind the wide bandgap! - Explore the bright new world of wide bandgap materials"**.
- › Spend one week packed with **lectures held by world-class professors and top experts from Infineon**.
- › Take this unique opportunity to network, find topics for BSc-, MSc-, or PhD-theses, internships or even a job for after you graduate.

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A close-up, angled view of a silicon microchip, showing a grid of square dies with various colored patterns (yellow, orange, blue, green) representing different circuit components. The chip is set against a blurred background of similar chips.

Infineon is a world leader in semiconductor solutions

IPCEI on Microelectronics is a strategic initiative underpinning Europe's microelectronics industry

Power electronics is a key contributor to environmental sustainability, energy-efficiency and reduction of CO2 emissions

Power electronics solutions developed by Infineon drive innovation in automotive, electro-mobility, energy and industrial equipment sectors

STEM talent, universities, SMEs and technology startups across Europe are invited to join IPCEI spillover activities organized by Infineon Austria

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