



# IFX Day 2018

## Dr. Reinhard Ploss

### Chief Executive Officer

London, 12 June 2018



# A world leader in semiconductor solutions



## Our vision

We are the link between the real and the digital world.

## Our values

We commit  
We partner  
We innovate  
We perform

## Our mission

We make life  
easier, safer  
and greener.

# Part of your life. Part of tomorrow.



# Global megatrends underline the increasing importance of microelectronics...



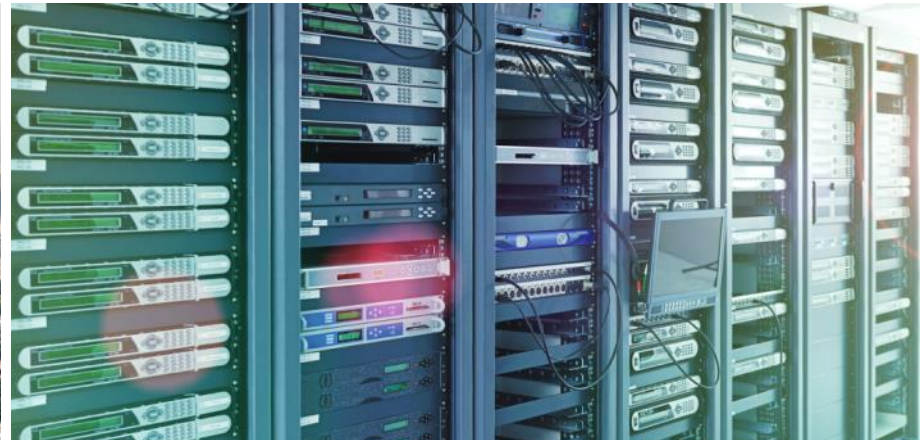
Demographic & social change



Climate change & resource scarcity



Urbanization



Digital transformation

...triggering superior growth in the markets  
successfully addressed by Infineon

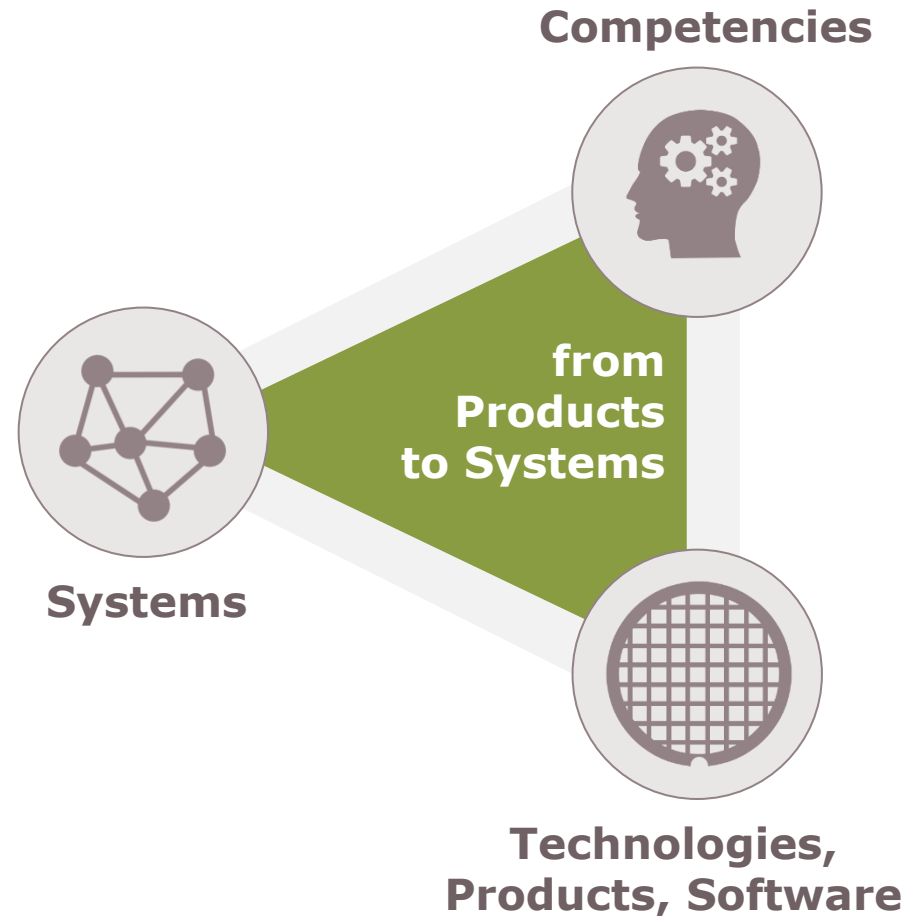
Energy efficiency

Mobility

Security

IoT & big data

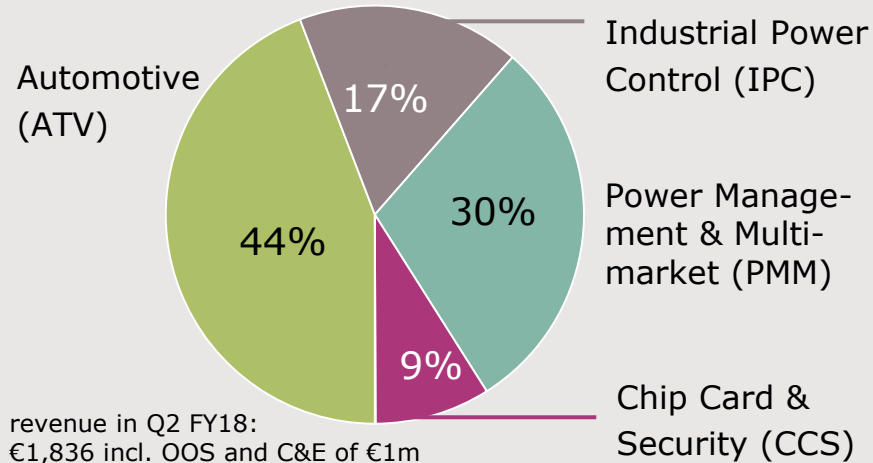
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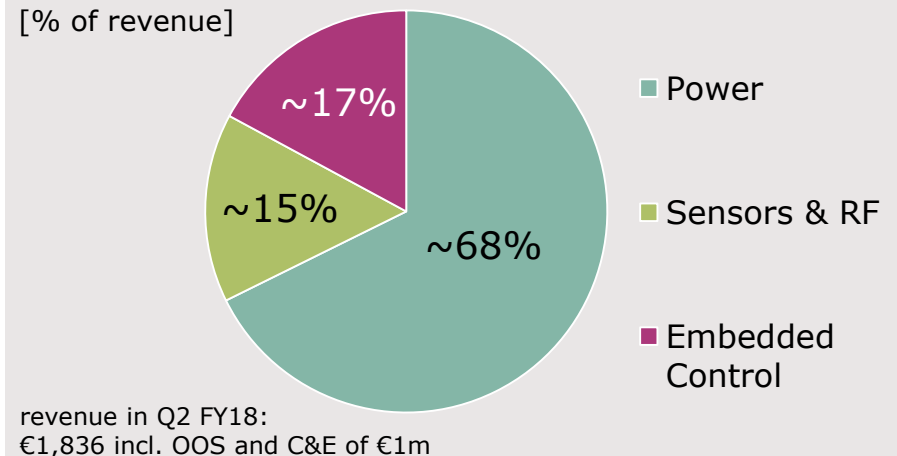
Success is based on differentiating strategies and competencies

# Power is our main business; sensors and embedded control are other important pillars

## Q2 FY18 revenue split by segment



## Power represents ~2/3 of revenue



### Automotive



System leader in automotive

### Power Management



#1 system and technology player in power

### RF & Sensors



One of the leading companies in RF and #2 in sensors

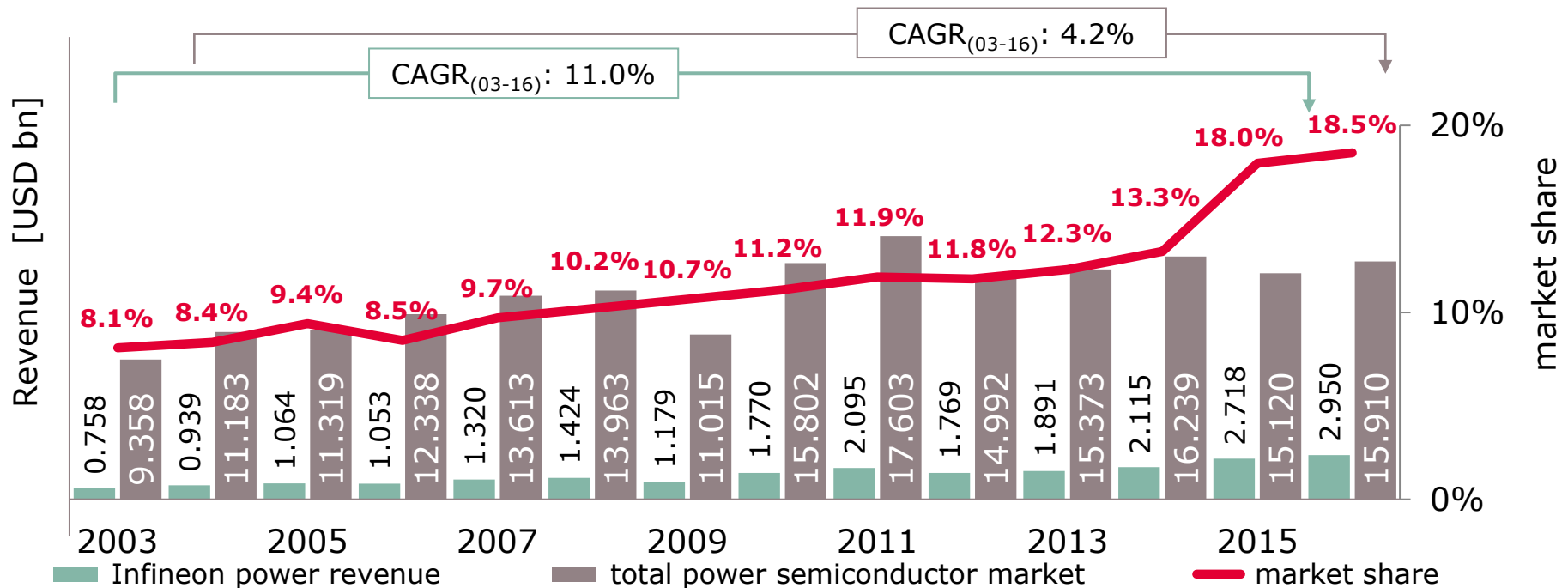
### Security



#1 in security ICs and leader in security solutions

# Outgrowing the power market leads to superior performance on group level

## Success story of continuous market share gains in power



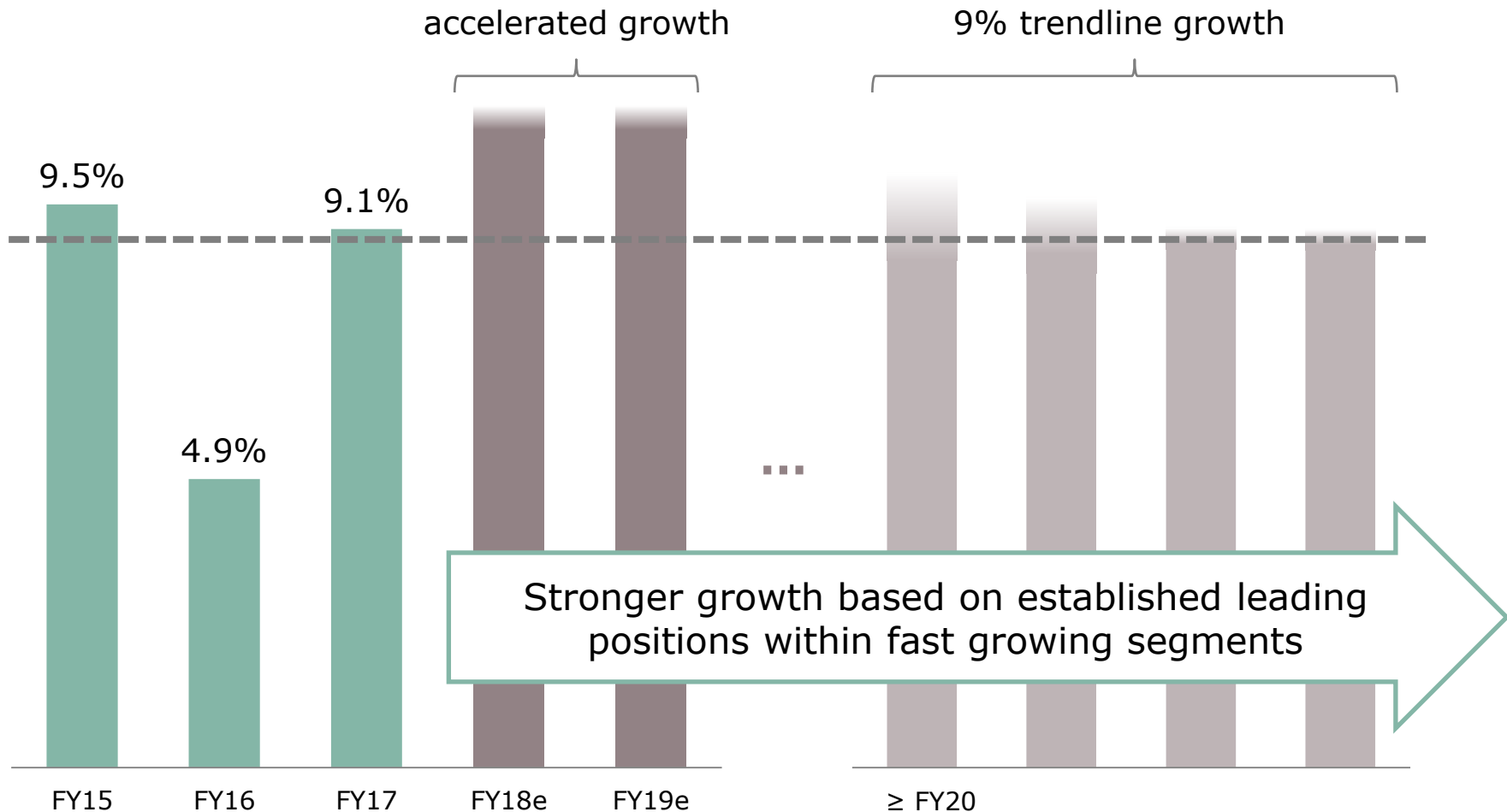
Source: Based on or includes content supplied by IHS Markit, Technology Group, several reports from 2004 through 2015 and 2017

Note: No backward revision of market shares and market sizes; except for year 2015

Strength in power was the major pillar of an impressive performance on group level: Infineon revenue CAGR<sub>(99-17)</sub> was ~9% organically and ~10% including M&A.

# After temporary growth acceleration, target revenue growth assumed to revert to 9%

## Revenue growth projection at constant currencies



# Infineon is well positioned in areas providing significant structural growth even long-term



Duration		short	medium	long
Relevance				
high	high Infineon high Division		electro-mobility	
			automated driving	
medium	medium Infineon high Division		battery-powered applications	
			data center – power supply / power management	
			renewable energy, energy storage, distribution	
			home appliances	
			collaborative robots	
low	medium Division			embedded security
			powering 5G	
			contactless payment	
			government ID	

Other applications in our target markets are expected to show standard growth patterns.



# Infineon is able to cover the entire market but is focusing on areas of higher profitability



**Cost optimized**

Commoditization

**Performance optimized**

Cost-performance  
competitive in  
volume markets

Explore and develop  
new technologies  
new business

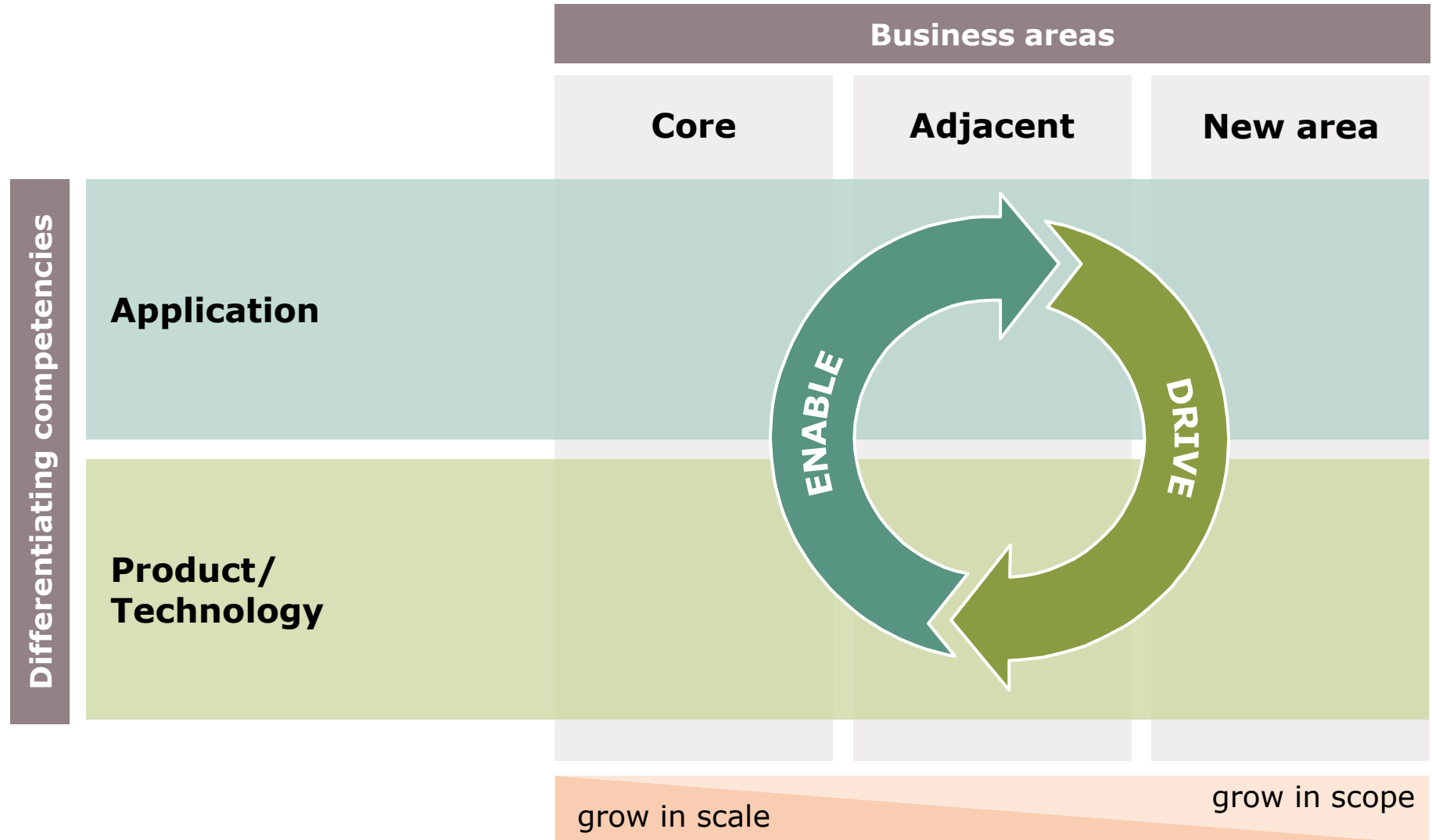
high volume

high differentiation

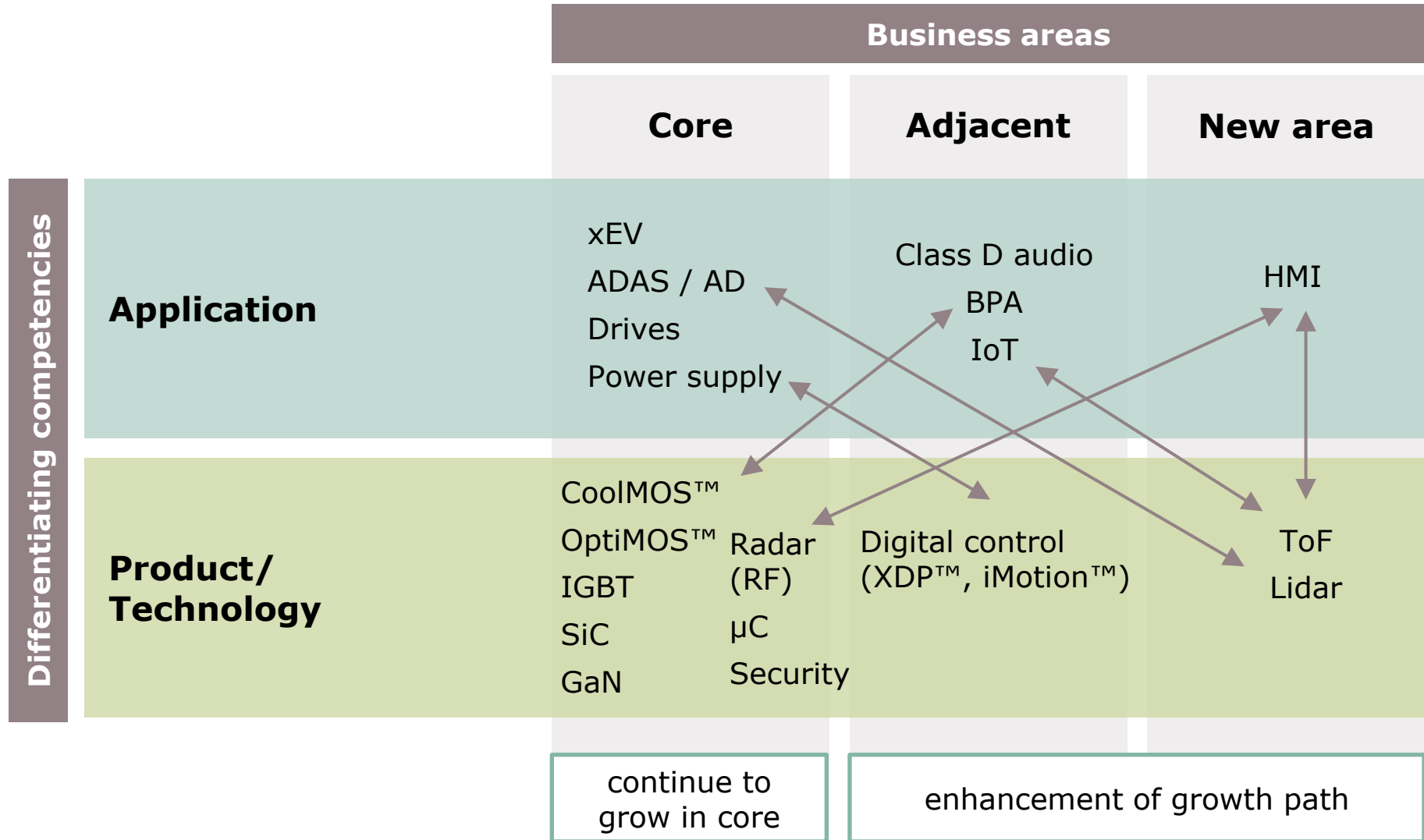
**Infineon is able to address all these areas in its core markets based on differentiating competencies in ...**

<b>Product/Technology</b>	power, sensors, microcontroller and security
<b>Application</b>	power control, power supply, drives
<b>System</b>	electro-mobility, automated driving, drives, security
<b>Go-to-Market</b>	focus on growth applications, win with winners, go wider
<b>Manufacturing</b>	300 mm thin wafer production

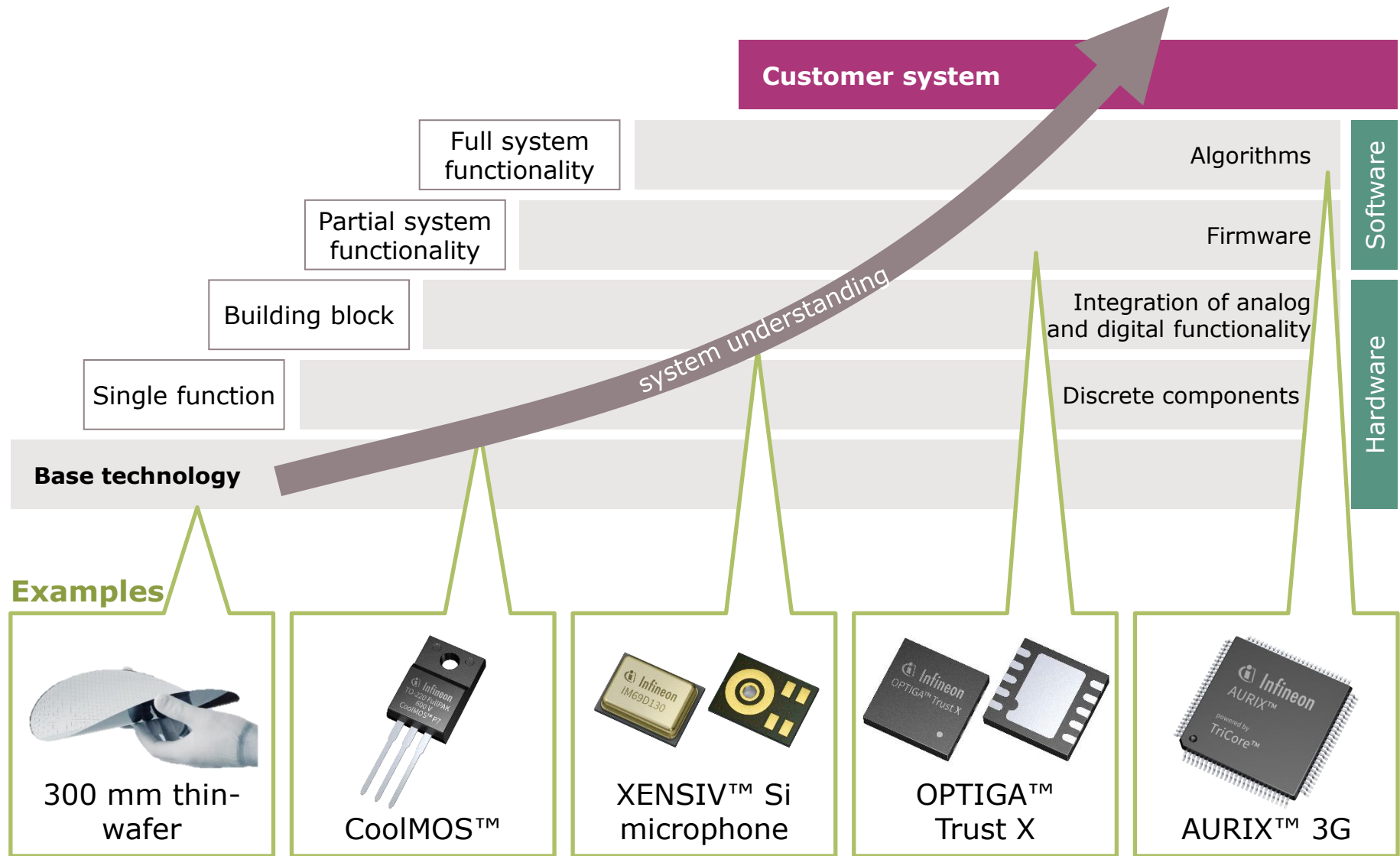
# Our strategy systematically covers growth in scale and in scope



# New technologies strengthen our core, while current technologies find new applications



# System understanding requires right mindset, complemented by differentiating capabilities





# Infineon is bringing innovation to the market – yesterday, today and tomorrow



## Routine innovation

Broaden and maintain portfolio

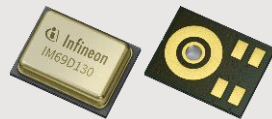
Trench IGBT  
**next generation**



CoolMOS™  
**next generation**



XENSIV™ Si  
microphone  
**next generation**



Integrity Guard

## Breakthrough innovation

Prepare to address the new demands



Gesture Sensing  
(Soli)



CoolSiC™  
MOSFET



3D imaging  
REAL3™ ToF



Safe & secure  
MultiCore MCU  
AURIX™



Voice HMI  
(XMOS)



Post-quantum  
cryptography



Lidar

Leverages **existing** technical competences

**New** technical competences

# Strong #1 position in power allows driving of key areas of differentiation and innovation



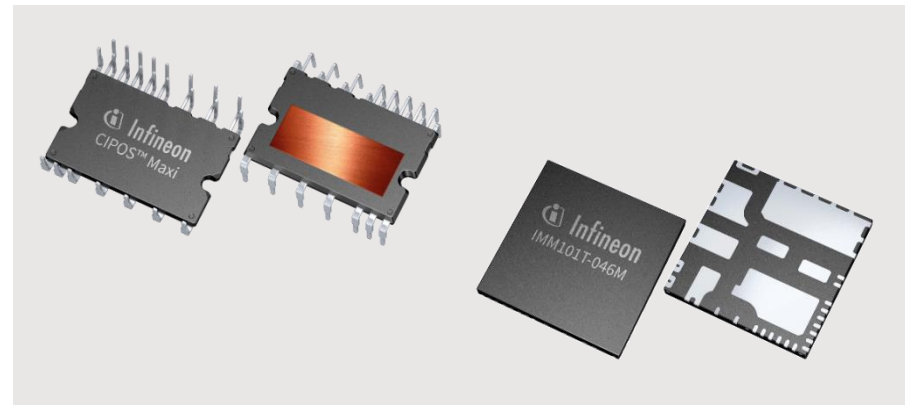
Unique 300 mm thin wafer power semiconductor manufacturing



Compound semiconductors  
SiC and GaN

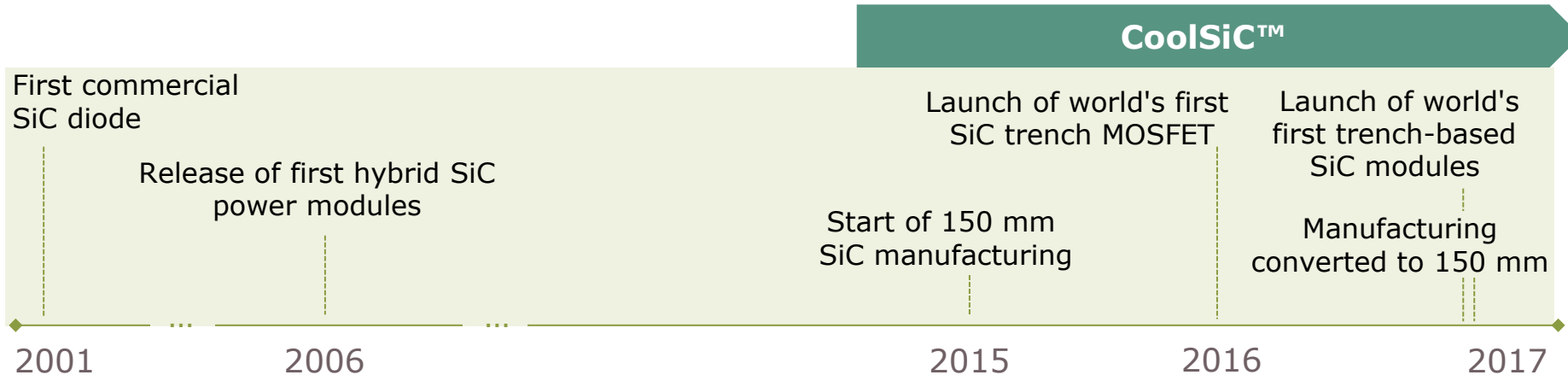


Digitalization of the power control loop



Functional integration in IGBT

# CoolSiC™: Great potential but a long way to go to large-scale success



## Why SiC will enter the market quickly

### System performance, e.g.

- › PV: smaller, lower losses, cheaper
- › UPS: smaller, lower losses
- › xEV drivetrain: more mileage, less cooling effort
- › xEV charging: smaller, lower losses

Advantage

## Why SiC will take longer

### Significant **technical challenges**

- › Defect density of substrates
- › Reliability of devices
- › Redesign of application

### Significant **cost challenges**

- › Cost and capacity of substrates
- › Production investment and cost

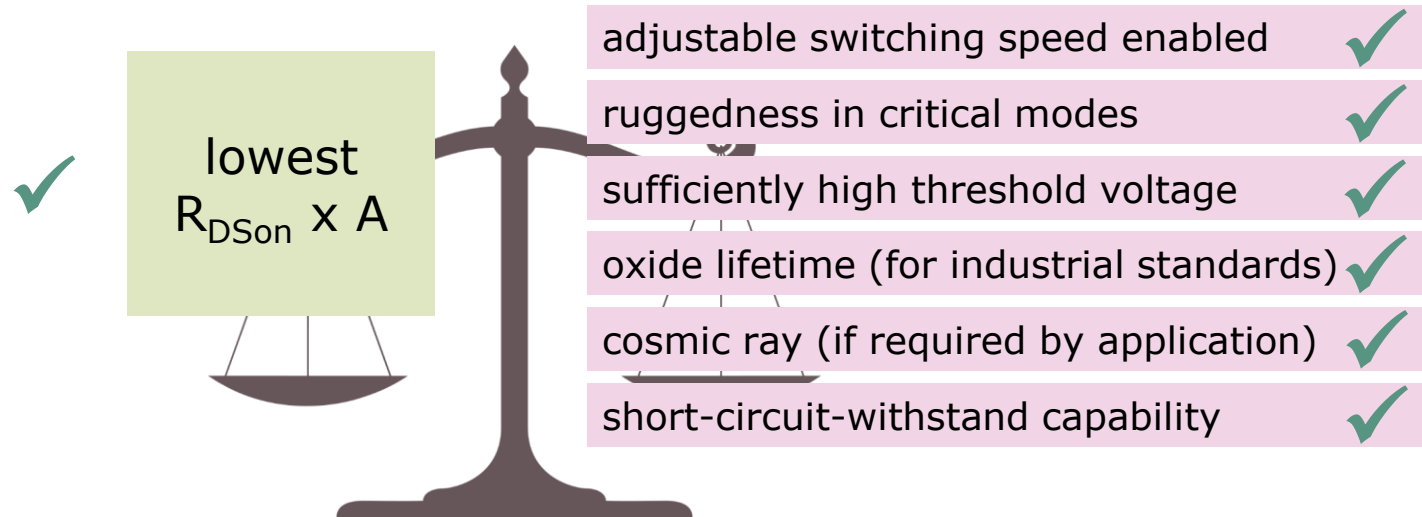
Challenge

**As a long-term player in SiC Infineon is set to become a leader based on substantial competencies in power technologies and applications**

# Challenge in the SiC MOSFET world: Trade-off between performance and robustness

## Performance The Advantage

## Robustness and ease-of-use The Challenge



- › SiC trench concept offers significantly better shrink potential compared to planar SiC MOSFETs.
- › Mastering the challenging manufacturing process is key.
- › Further details will be provided during the ATV and IPC sessions.



# Key take-aways

A close-up, slightly blurred image of a circular microchip or wafer, showing a grid of small, colorful square components in shades of yellow, orange, and blue.

Infineon is **well set-up to continue to outgrow** the market based on strong differentiation and structural growth drivers.

We enhance our **core competencies** and add new ones to enable future growth.

Going forward, after accelerated growth of 10%+ at least in 2019, we **increase our through-cycle revenue growth target** from 8 to 9% per year.



Part of your life. Part of tomorrow.



# Glossary

AD	autonomous driving
ADAS	advanced driver assistance system
BPA	battery-powered application
C&E	corporate and eliminations
GaN	gallium nitride
HMI	human machine interaction
IC	integrated circuit
ID	identification
IGBT	insulated gate bipolar transistor
IoT	Internet of things
lidar	light detection and ranging
μC	microcontroller
MCU	microcontroller unit
MOSFET	metal oxid semiconductor field effect transistor
OOS	other operating segments
RF	radio frequency
Si	silicon
SiC	silicon carbide
Soli	Google project
ToF	time-of-flight
xEV	all degrees of vehicle electrification (EV, MHEV, FHEV, PHEV)



# Dr. Reinhard Ploss

## Chief Executive Officer



- › since 2012: CEO, responsible for Divisions, Group Strategy, Communications & Government Relations, Human Resources, Legal, Research & Development
- › 2007: Member of the Mgmt Board
- › 2005: Head of Development and Manufacturing as well as Operational Management in the Automotive, Industrial & Multimarket (AIM) Division
- › 2000: President of the AIM Division
- › Dr. Reinhard Ploss was born in Bamberg, Germany, in 1955. He holds a Diploma in Process Engineering from the Technical University of Munich, Germany, where he also received his PhD.
- › He joined Infineon (Siemens AG until 1999) in 1990.



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