# Company Presentation

January 29, 2015

# Infineon and International Rectifier: A Powerful Combination


- As of **January 2015**, International Rectifier is an Infineon Technologies company
- Combined **pro-forma revenue of ~€5,150m*** (~6,950m USD) in Infineon 2014 fiscal year
- About **34,000 employees worldwide***
- Strong technology portfolio with more than **22,800 patents and patent applications** (as of September 2014)
- **32 R&D locations; 20 manufacturing locations**

*non-audited figures

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*w/o International Rectifier

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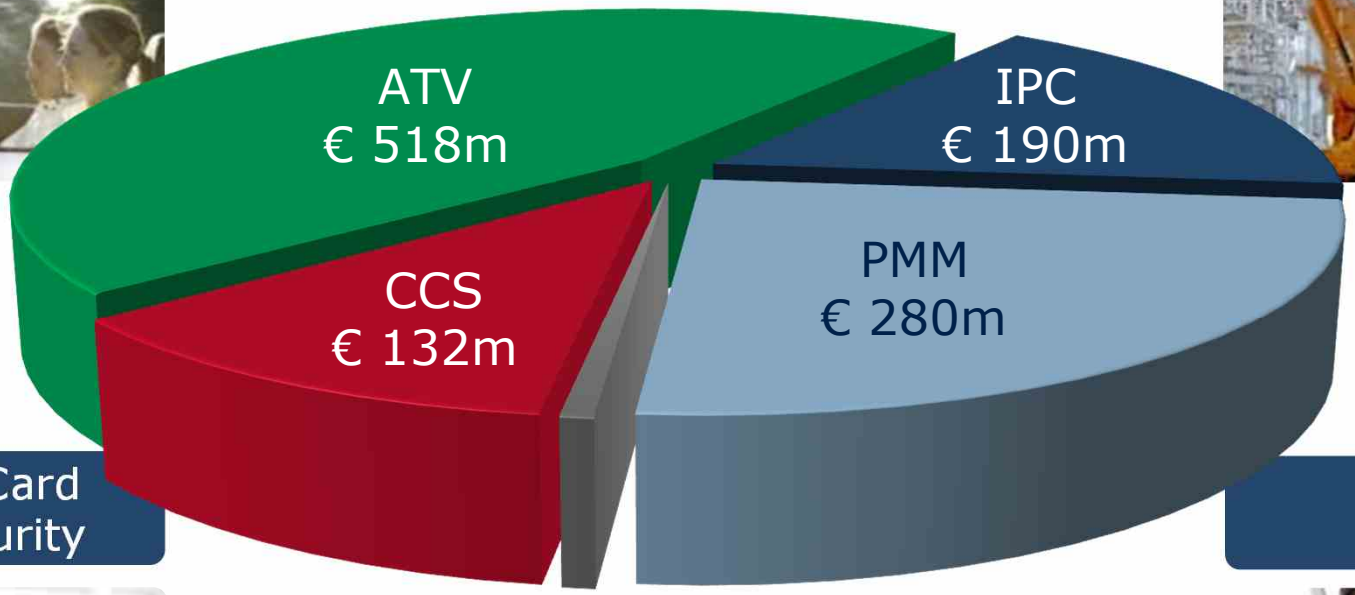
# Revenue Split by Segment

## Q1 FY 2015 Revenue: € 1,128m

Automotive

IPC




Chip Card & Security

OOS+C&E**
€ 8m

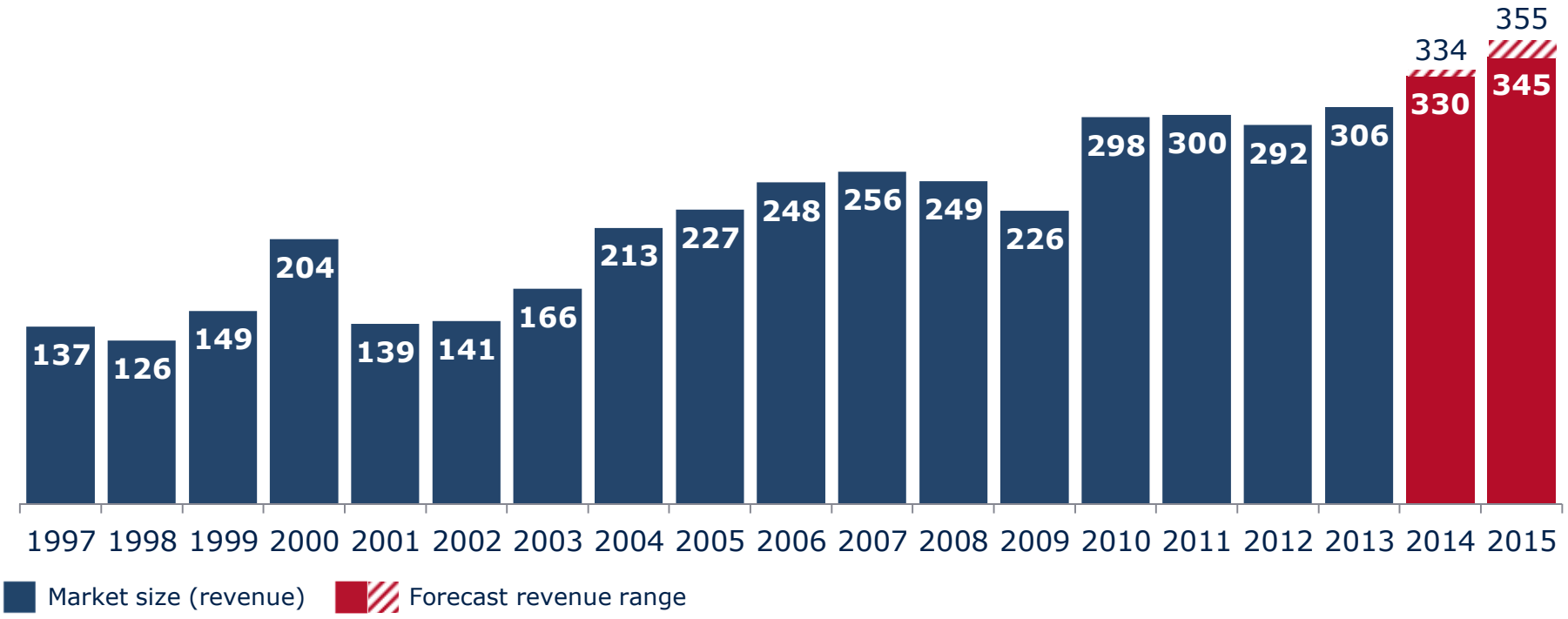
PMM

**Other Operating Segments; Corporate & Eliminations.

*w/o International Rectifier

# Positive Growth Outlook for Global Semiconductor Market

## Global Semiconductor Market
in Billion US-Dollar

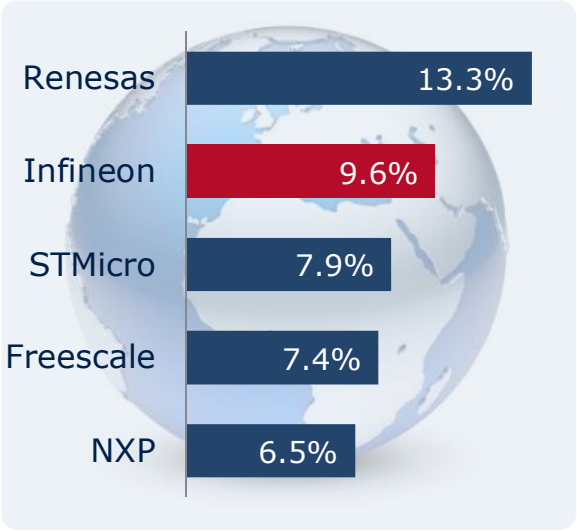



Source: WSTS for historical data. Forecast: ∅ of WSTS, IHS, Gartner, IC Insights; last update January 26, 2015

# Infineon Holds Top Positions in All Major Product Categories*

## Automotive semiconductors

**total market in CJ* 2013: $25.1bn**

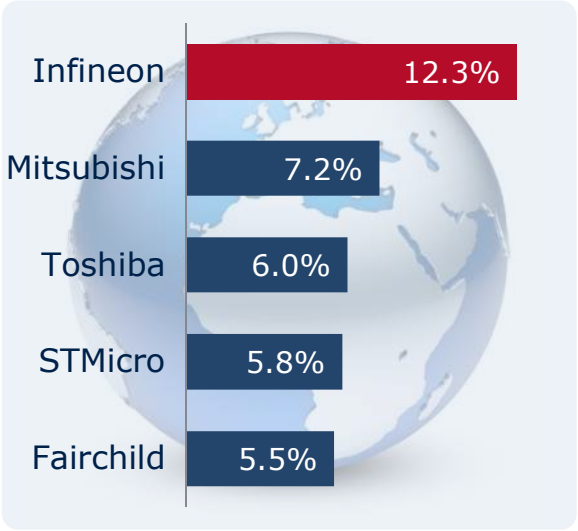



Automotive semiconductors incl. semiconductor sensors.

Source: Strategy Analytics, April 2014.

## Power semiconductors

**total market in CJ* 2013: $15.4bn**

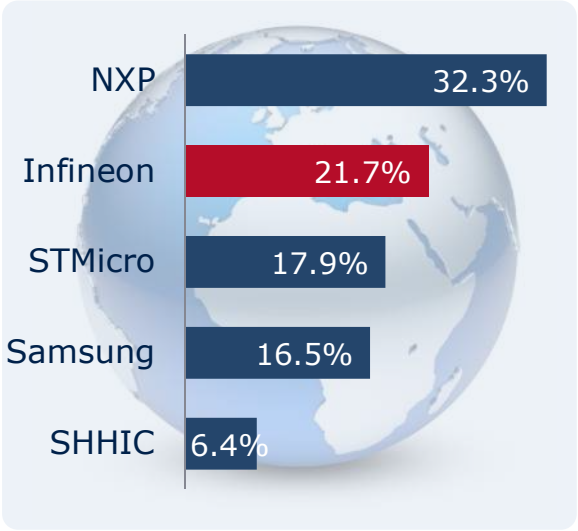



Discrete power semiconductors and power modules.

Source: IHS, September 2014.

## Smart card ICs

**total market in CJ* 2013: $2.48bn**



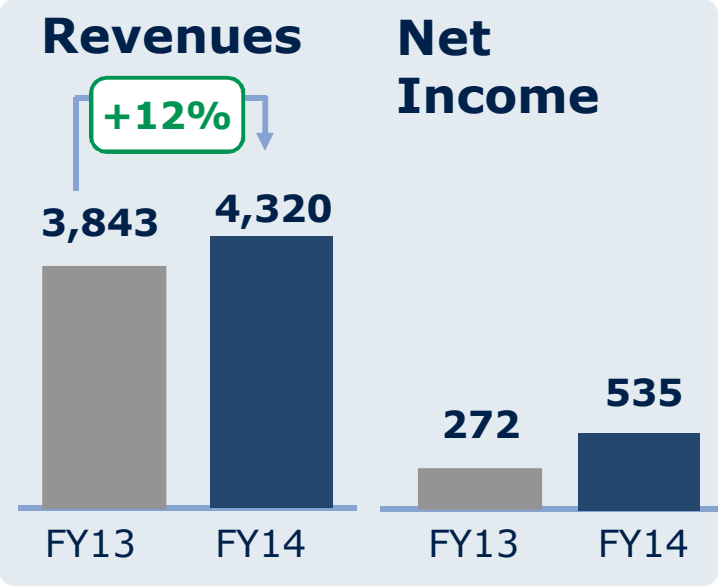

Microcontroller-based smart card ICs.

Source: IHS, July 2014.

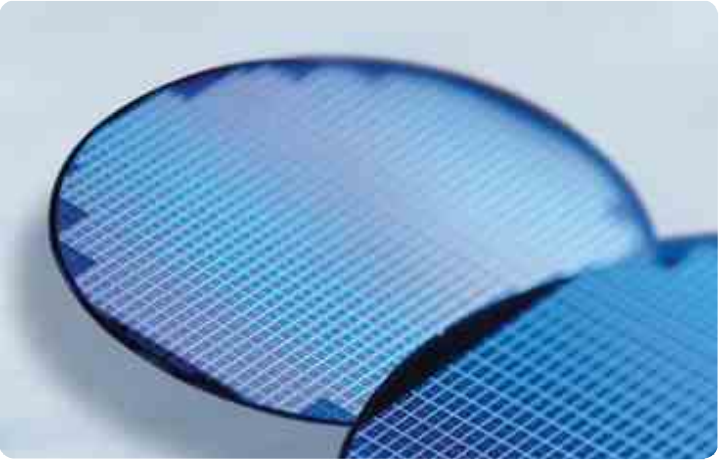
*Calendar Year, w/o International Rectifier

# Infineon Group
# Results for FY 2013* and FY 2014*

*w/o International Rectifier




| [€ Million] | 2013 | 2014 | |
|---|---|---|---|
| Revenues | 3,843 | 4,320 | ↑ |
| Segment Result (SR) | 377 | 620 | ↑ |
| SR Margin | 9.8% | 14.4% | ↑ |
| Net Income | 272 | 535 | ↑ |

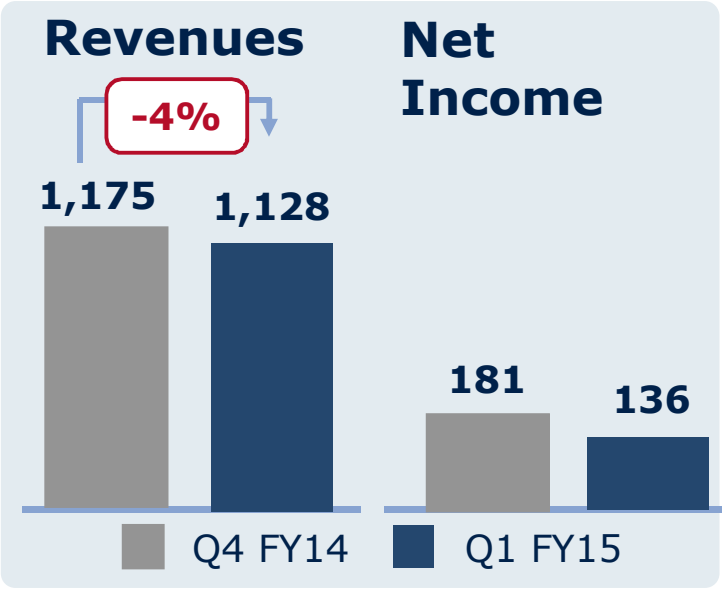


| | | | |
|---|---|---|---|
| Free Cash Flow | 235 | 317 | ↑ |
| Investments | 378 | 668 | ↑ |
| Net Cash | 1,983 | 2,232 | ↑ |
| Market capitalization** | ~7,995 | ~9,240 | ↑ |

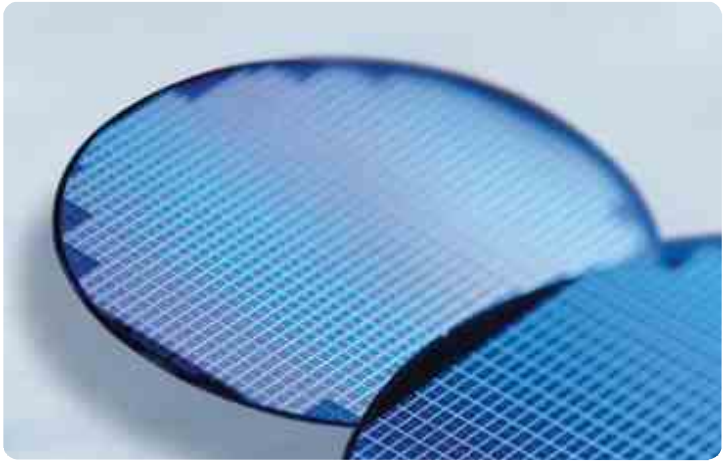
**share price as of September 30th, 2013: 7.395 Euro; share price as of September 30th, 2014: 8.193 Euro

# Infineon Group
# Results for Q4 FY14* and Q1 FY15*

*w/o International Rectifier



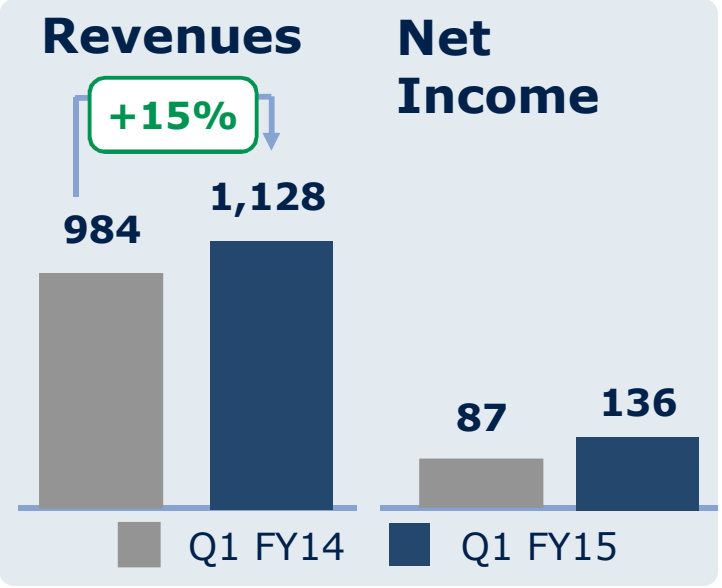

| [€ Million] | Q4 14 | Q1 15 | |
|---|---|---|---|
| Revenues | 1,175 | 1,128 | ↓ |
| Segment Result (SR) | 188 | 169 | ↓ |
| SR Margin | 16.0% | 15.0% | ↓ |
| Net Income | 181 | 136 | ↓ |



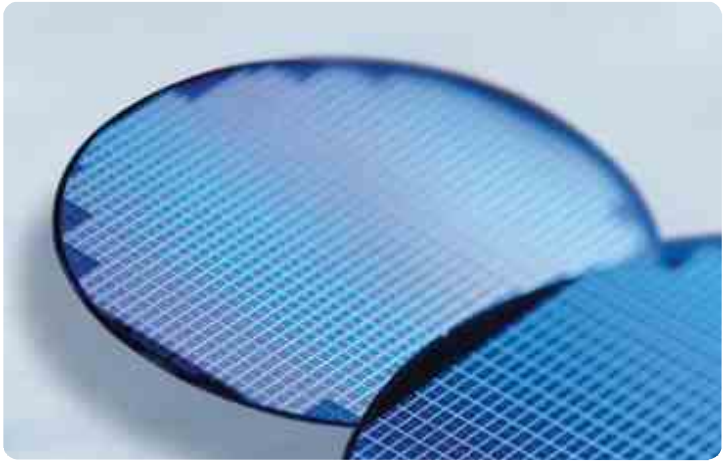
| | | | |
|---|---|---|---|
| Free Cash Flow | 158 | (171) | ↓ |
| Gross Cash Position | 2,418 | 2,107 | ↓ |
| Net Cash | 2,232 | 1,917 | ↓ |

# Infineon Group
# Results for Q1 FY14* and Q1 FY15*

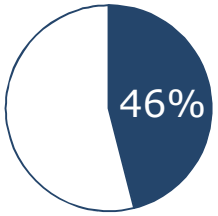
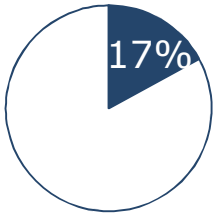
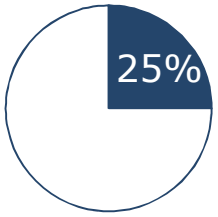
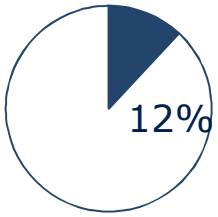
*w/o International Rectifier




| [€ Million] | Q1 14 | Q1 15 | |
|---|---|---|---|
| Revenues | 984 | 1,128 | ↑ |
| Segment Result (SR) | 116 | 169 | ↑ |
| SR Margin | 11.8% | 15.0% | ↑ |
| Net Income | 87 | 136 | ↑ |
| Free Cash Flow | 30 | (171) | ↓ |
| Gross Cash Position | 2,279 | 2,107 | ↓ |
| Net Cash | 2,048 | 1,917 | ↓ |



# Infineon Segment Revenues Q4 FY14* and Q1 FY15*

| Revenue** in € Million | | | | Share of Total |
|---|---|---|---|---|
| ATV |  | Q4 FY 14 / Q1 FY 15 | 518 / 518 (+0%) |  46% |
| IPC |  | Q4 FY 14 / Q1 FY 15 | 219 / 190 (-13%) |  17% |
| PMM |  | Q4 FY 14 / Q1 FY 15 | 300 / 280 (-7%) |  25% |
| CCS |  | Q4 FY 14 / Q1 FY 15 | 142 / 132 (-7%) |  12% |

*w/o International Rectifier

**Total Revenue (Q4 FY14: 1,175m €; Q1 FY15: 1,128m €) includes Other Operating Segment (Q4 FY14: 5m €, Q1 FY15: 4m €), Corporate & Eliminations (Q4 FY14: -9m €, Q1 FY15: 4m €).

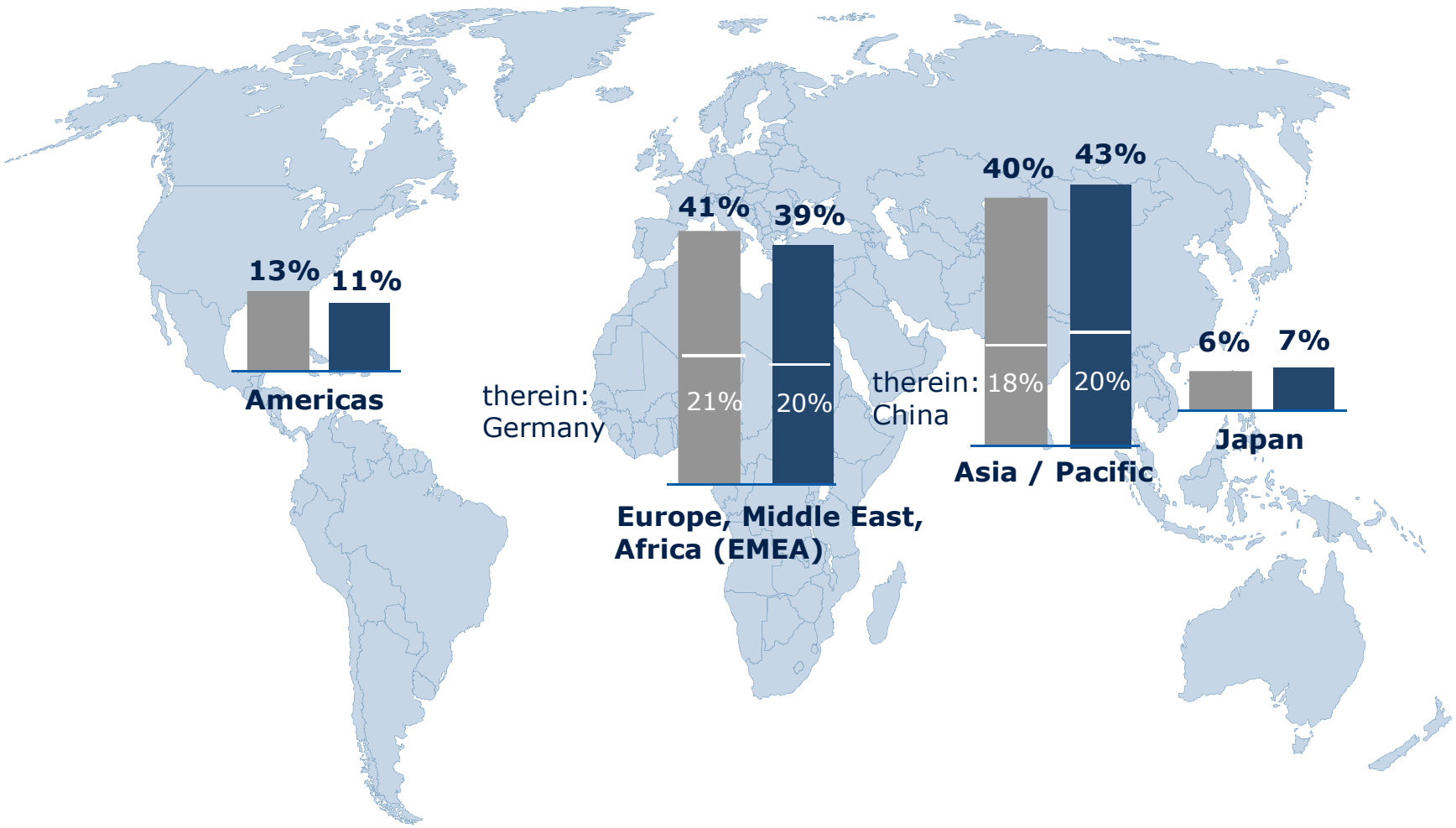
# Infineon Segment Results Q4 FY14* and Q1 FY15*

| Segment Result** in € Million | | | SR Marge |
|---|---|---|---|
| ATV |  | Q4 FY 14 | 69 | 13.3% |
| | | Q1 FY 15 | 72 | 13.9% |
| IPC |  | Q4 FY 14 | 44 | 20.1% |
| | | Q1 FY 15 | 28 | 14.7% |
| PMM |  | Q4 FY 14 | 60 | 20.0% |
| | | Q1 FY 15 | 48 | 17.1% |
| CCS |  | Q4 FY 14 | 20 | 14.1% |
| | | Q1 FY 15 | 18 | 13.6% |

*w/o International Rectifier

**Total Segment Result (Q4 FY14: 188m €; Q1 FY15: 169m €) includes Other Operating Segment (Q4 FY14: 0m €, Q1 FY15: 2m €), Corporate & Eliminations (Q4 FY14: -5m €, Q1 FY15: 1m €).

# Revenue Split by Regions FY 2013* and FY 2014*




*w/o International Rectifier

FY 2013 FY 2014

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# A Powerful Combination: Benefits of the Integration

## Broader product portfolio

- Expansion of the product portfolio
- Broader and deeper under-standing of applications ("From Product to System" strategy)

## Economies of scale

- Better cost structure thanks to broader sales base
- Faster ramp-up of production on 300 mm thin wafers

## Greater technology expertise

- Broader GaN product and IP portfolio
- Faster roadmaps

## Stronger presence in the regions

- Better regional presence in the U.S. and the Asia-Pacific region
- Expansion of market access via the distribution channel

# International Rectifier – An Infineon Technologies Company: Overview

## Core Competencies/ Value Proposition

- Broad portfolio of analog and digital controllers and integrated products for Point-of-Load (PoL), gaming, high-end PCs and datacom
- Strong application know-how in datacom, DC/DC and PoL
- Wide range of MOSFET/package combinations
- Strong presence at tier-2/-3 customers, especially in USA, Asia and Japan

## Key Technologies/ Products

- **Low- and mid-voltage MOSFETs**
  - Industrial
  - Power Supplies
  - Consumer and Computing
  - High Reliability
- **Digital Power Control**
  - Digital Controllers
  - High Performance Computing
  - Servers
- **High-voltage IGBTs and ICs**
  - Home Appliances
  - Industrial
  - Motion Control
  - Power Modules for Home Appliance and Industrial (IPM)
- **Automotive IGBTs**
- **Gallium nitride (GaN) Technology**

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*w/o International Rectifier

# We Focus on Our Target Markets

## Focus Areas

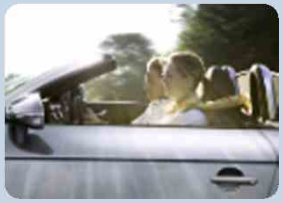
- Energy Efficiency
- Mobility
- Security

## Core Competencies

- Analog/Mixed Signal
- Power
- Embedded Control
- Manufacturing Competence

## Our Target Markets

- Automotive Electronics
- Industrial Electronics
- Information and Communications Technology
- Security



# We Focus on Three Central Needs of Modern Society

**Energy Efficiency** | **Mobility** | **Security**

Automotive

Industrial Power Control

Power Management & Multimarket

Chip Card & Security

# Energy Efficiency

## Key Trends

- Soaring total energy demand across the globe amid dwindling fossil energy resources
- Strong $CO_2$ policies to achieve climate goals
- Tapping renewable energies as sustainable energy sources
- Electrification of the drivetrain of commercial and passenger vehicles

## Our Contribution

- Infineon delivers semiconductor innovations playing a valuable role in minimizing power loss and maximizing power savings along the entire energy supply chain, extending from generation through distribution to actual consumption.
- Our products are the basis for intelligent and optimal use of energy resources in industrial, computing and consumer applications, and in cars.

# Mobility

## Key Trends

- Rigid $CO_2$ regulations and rising oil price
- Increasing rules on safety, focusing on preventive measures
- Rising new requirements in cars for emerging markets
- Urbanization, globalization and demographic change
- Strong investments in local and long distance public transportation systems

## Our Contribution

- Leading semiconductor solutions contributing to a more sustainable mobility in terms of reduced fuel consumption/emissions, improved safety and affordability.
- As an innovation driver and supplier of key components for electric and hybrid vehicles, Infineon will actively help to shape the paradigm shift towards electro mobility on the road.
- Innovative public transportation solutions for traction and electronic tickets.

# Security

## Key Trends

- Secure communication everywhere utilizing mobile phone and internet
- Move to electronic identification of documents and products
- Contactless cards for payment and electronic tickets
- Increased intercommunication in cars, calling for secure data handling
- Introduction of smart grids calling for advanced data security

## Our Contribution

- Tailored security according to system requirements, enabling the implementation of transparent security in everyday systems.
- Leverage our worldwide leadership in security know-how for smart cards in automotive and industrial applications increasingly demanding security.
- Combining both hardware security and cryptography, our products build the basis for privacy and security while maintaining personal freedom and facilitating extended communication capabilities.

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*w/o International Rectifier

# Tight Customer Relationships are Based on System Know-how and App Understanding*

## ATV

Autoliv, BOSCH, Continental, DELPHI, DENSO, HELLA, HITACHI Inspire the Next, LEAR CORPORATION, HYUNDAI, MAGNETI MARELLI, MANDO, OMRON, TRW, Valeo

## IPC

ABB, ALSTOM, BOMBARDIER, GOLDWIND, CSR, Schneider Electric, Rockwell Automation, SEMIKRON innovation+service, SIEMENS, SMA, SUNGROW, TOSHIBA, TESLA, YASKAWA, Vestas

## PMM

AAC Acoustic Technologies, ARTESYN EMBEDDED TECHNOLOGIES, DELTA, DELL, hp, ERICSSON, EMERSON, LITEON, HUAWEI, LG Life's Good, IBM, OSRAM, muRata, Quanta Computer, SAMSUNG, TRIDONIC, ZTE中兴

## CCS

gemalto security to be free, GPO, hp, Microsoft, OBERTHUR TECHNOLOGIES, SAFRAN Morpho, Watchdata

## EMS partners

FLEXTRONICS, FOXCONN

## Distribution partners

ARROW, AVNET, JCET 晶川电子, RUTRONIK ELECTRONICS WORLDWIDE, SAC, TOMEN ELECTRONICS

*w/o International Rectifier

# Market-Oriented Business Structure*

| Segments | | Applications |
|---|---|---|
| **Automotive** |  | Chassis and comfort electronics; Electric and hybrid vehicles; Powertrain; Safety; Security |
| **Industrial Power Control** |  | Charger station for electric vehicles; Energy transmission and conversion; Home appliances; Industrial drives; Industrial vehicles; Renewable energy generation; Traction; Uninterruptable power supplies |
| **Power Management & Multimarket** |  | Cellular network infrastructure; Light management and LED lighting systems; Micro inverters for photovoltaic rooftop systems; Mobile devices; Power supplies |
| **Chip Card & Security** |  | Authentication; Government Identification; healthcare cards; Mobile communication; Near Field Communication (NFC); Payment systems; Ticketing, access control; Trusted computing |

Customers

*w/o International Rectifier

# Product Range*

*w/o International Rectifier

## Automotive (ATV)

- Microcontrollers (8-bit, 16-bit, 32-bit) for automotive and industrial applications
- Software development platform DAVE™
- Discrete power semiconductors
- IGBT modules
- Voltage regulators
- Power ICs
- Bus interface devices (CAN, LIN, FlexRay)
- Magnetic and pressure sensors
- Wireless transmit and receive ICs (RF, radar)

## Industrial Power Control (IPC)

- IGBT module solutions incl. IGBT stacks
- IGBT modules (high-power, medium-power and low-power)
- Discrete IGBTs
- Bare die business
- Driver ICs

## Power Management & Multimarket (PMM)

- Discrete high- and low-voltage power transistors
- Driver ICs
- Control ICs
- RF power transistors
- Small-signal components
- CMOS RF switches for antenna modules
- Antenna tuning ICs
- MEMS and ASICs for silicon microphones
- Customized chips (ASICs)

## Chip Card & Security (CCS)

- Contact-based security controller
- Contactless security controller
- Dual-interface security controller (contact-based and contactless)

# New Era:
# Driving Demand for Power Semiconductors

| '90 – '10 | '10 – '30 | Changes |
|---|---|---|
|  |  Courtesy: BMW Group | ■ Electrification in cars with Internal Combustion Engine as well as the trend towards emobility drives the demand for power semiconductors. |
|  |  | ■ Shift towards renewable energies requires significantly more high-power semiconductors per MW of power generated. |
|  |  Courtesy: Facebook | ■ Higher efficiency in power conversion reduces $CO_2$ emission and total cost of ownership. |
|  |  | ■ Stronger demand for goods containing power semiconductors due to increasing standard of living in BRIC countries. |

# Automotive Overview

## Product Range

- **Sensors**: pressure, magnetic, wireless control ICs, radar
- **Microcontrollers**: 8-bit, 16-bit, 32-bit
- **Power**: MOSFETs, IGBTs, smart power ICs: voltage regulators, bridges, driver ICs, CAN / LIN / FlexRay™ transceiver**, DC-DC converters, power system ICs, system-on chip, embedded power ICs
- **Hybrid & Electric Vehicle**: HybridPACK™ modules, Automotive Easy modules, gate driver ICs, MOSFETs, IGBTs

## Core Competencies/ Value Proposition

- **Automotive commitment**: More than **40 years** of automotive **system and application expertise**
- **Complete** automotive **system provider**
- **Hybrid and Electro mobility:** industry **leading expertise** and product portfolio
- **Functional Safety (ISO26262)** and **Security** enabling car solutions
- **Worldwide** development, production and support sites for automotive semiconductors
- **Next Level of Zero Defect**: most comprehensive quality program of the industry

## Market Positions*

- **No. 2** in Automotive semiconductors worldwide
- **No. 1** Europe
- **No. 1** Korea
- **No. 2** North America
- **No. 3** Japan

- **No. 1 in automotive power semiconductors** (21.3%)

Source: Strategy Analytics (April 2014)

*w/o International Rectifier

**FlexRay is a trademark licensed by FlexRay Consortium GbR

# We Focus on Future Business Making Cars Clean

## Market Trends

- Dwindling energy resources
- Urbanization
- Stricter $CO_2$ emission legislations
- Growing environmental awareness

## Infineon's Opportunities

- Infineon components are key enabler for car manufacturers to meet challenging targets for CO2 emission reduction, e.g. in the EU 95g CO2/km in 2021.
- We offer Hybrid and electric drivetrain products (HybridPACK™).
- No electric vehicle without semiconductors: electric drive and control, battery management, on-board battery charging and power grid communication.

# BMW and Infineon: Working Together to Shape the Future of Electro Mobility

Power module


- 75 semiconductors ensure a highly efficient electric drive in the BMW i3, e.g. Microcontroller AUDO Future, IGBT Power Module HybridPACK™ 2, EiceDRIVER™ Products, CoolMOS™ High voltage MOSFETs.
- Further components: airbag control, LED light modules, steering locks, windshield wipers and seatbelt retractors.

# Industrial Power Control Overview

## Product Range

- **IGBT Modules:** Standard IGBT Modules, Power Integrated Modules (PIM) and Converter Inverter Brake (CIB) Modules
- **IPM Modules:** molded Intelligent Power Module (IPM)
- **Discrete IGBTs**
- **Driver ICs:** standalone driver IC products for combination with IGBT modules and discretes
- **Power Stacks:** Power module assemblies including heat sink, Driver IC and protective sensors/functions, etc.

## Core Competencies/ Value Proposition

- High quality products and services
- Leading edge technology and IP portfolio
- System expertise with broad application competence
- Strong worldwide presence with local sales and application support
- Dedicated account teams and distributors

## Market Positions*

- No.1 in Discrete IGBTs with 24.7% market share
- No.2 in IGBT modules with 20.5% market share
- No.2 in IGBT semiconductor products (module & discretes) worldwide
  - No.1 in Europe
  - No.1 in China

*Source: IHS Research, September 2014, without International Rectifier

# Power Components for Drive Control of Train Systems

## High-Speed Trains

## Metro Trains

## Infineon Parts

- Power: 5 to 10MW per train
- 80 to 120 IGBT modules per train
- Semiconductor content: ~ € 100,000 per train

- Power: 0.5 to 1MW per train
- 25 to 50 IGBT modules per train
- Semiconductor content: ~ € 10,000 per train

# Power Components for Wind Converters and HVDC connection of Offshore Parks

## Onshore/Offshore Wind

## HVDC connection of Offshore Park

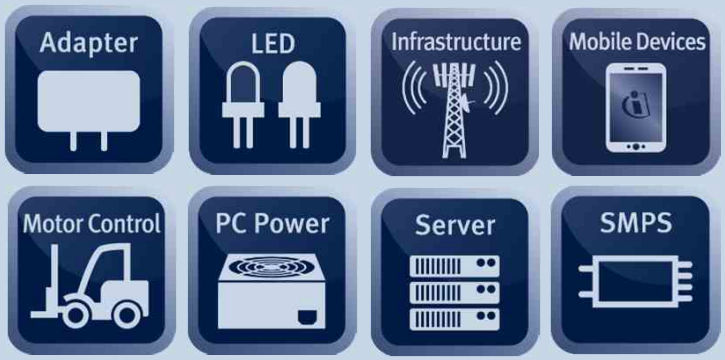
## Infineon Parts

- Power: 1MW to 6MW per turbine
- 12 to 48 IGBT modules **or** 6 to 12 Power Stacks per turbine
- Semiconductor content: ~ € 5,000 per MW

- Power depends on amount of connected offshore parks
- 4,000 to 16,000 modules per connection
- Semiconductor content: ~ € 5,300 per MW

HVDC: High Voltage Direct Current

# Power Management & Multimarket Overview




## Product Range

- Digital Control ICs, Drivers and Power Discretes for Voltage Regulators
- LED Drivers
- RF Diodes and Transistors, RF Power
- Chips for Silicon Microphones, TVS Diodes
- ASIC design solutions for authentication and battery management

## Core Competencies/Value Proposition

- Technology Leadership in Power & RF:
  - Energy Efficiency
  - Power Density, system size and weight reduction
  - Connectivity and reliable, clean Data Transmission for 50bn devices in 2020
- Revolutionary Innovation made "easy to use"
  - Application centric Innovation
  - Integration competence: Power/RF, Digital Power, Discretes, chip embedding
- System understanding drives more efficient power management

## Market Positions*

- **No. 1 in Discrete Standard MOSFETs 14%** market share (IHS: The World Market for Power Semiconductor Discretes & Modules – Sep. 2014)
- **No. 1 in Power Semiconductors 12%** market share (IHS: The World Market for Power Semiconductor Discretes & Modules – Sep. 2014)
- **No. 2 in Chips for Silicon Microphones with 30%** market share (IHS: MEMS Microphones Report– April 2014)
- **No. 3 in RF Power Devices with 14%** market share (ABI Research: RF Power Amplifiers – April 2014)

*w/o International Rectifier

# Power Components for Servers and RF Devices Cellular Communication and Infrastructure

## Power Management

### Computing

### Lighting

### Charger

## Mobile Communications

### Mobile devices

### Cellular infrastructure

## Portfolio: MOSFETs, Power ICs, RF switches, LNAs, Si-Mics, TVS diodes, RF power

- Efficiency values of 95% and higher
- Technology leadership in silicon and silicon carbide products
- Highest power density enabling best cost-performance ratios
- Unique system solutions with MOSFETs, power ICs and driver products

- Silicon Microphone sensor element with leading edge acoustic, electrical and quality performance
- Excellent performance in ESD protection
- Best-in Class Noise Figure in Low Noise Amplifier

- Applicable for all standard frequencies of 2G, 3G, 4G (450 MHz to 2.7 GHz)
- Industry leading power efficiency for LTE
- Wide range of devices with power levels from 4 – 700 W
- Best-in-class thermal performance

# Social Networks and Cloud Computing Driving Demand for Highest Efficient Power Supplies

## Digital Power Management (DPM) Gaining Traction in Server Market

amazon.com. Google

Picasa

Microsoft YouTube

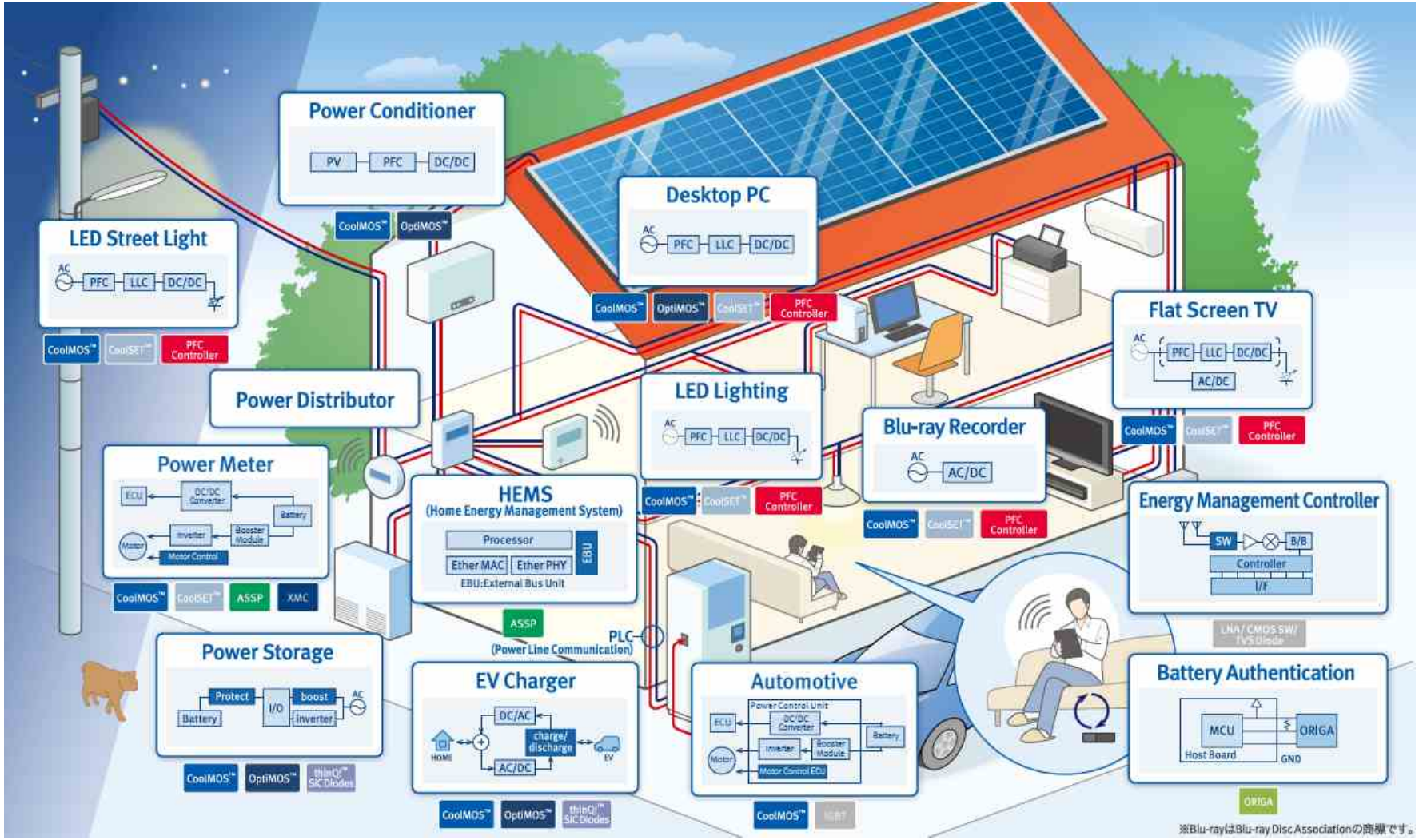
- Globally, we see one new data center per week with up to 100 MW of power consumption
- Efficiency of power supply (AC/DC, DC/DC) of utmost importance.
- DPM best solution for flexible load dynamics
- Change in value chain: servers no longer from the shelf but designed by ODMs according to specification of data center operator

CoolMOS™ | OptiMOS™ | Controller & Driver IC




- DPM opens the door for bundling with other products
- Recent design win: Infineon offers DPM controllers along with driver ICs and MOSFETs to Taiwanese ODM

# Power Semiconductors: Solutions for Efficient Energy Use



# Chip Card & Security Overview


## Product range

- Innovative solutions from basic security RFID and memories to high-end security controllers (including the award winning SLE 78 family)
- Contactless and contact-based security products for Communication, Payment, Government Identification, Transport, Access, Object Identification, Entertainment and Platform Security
- Extensive packaging and service portfolio

## Core competencies & Value proposition

- Tailored security: right level of security at the best cost-performance ratio
- Contactless excellence: focus on interoperability and dual interface
- Embedded control: right trade-off between computing power, power consumption, level of security and cost

## Market positions

- No. 2 in the Microcontroller Smart Card IC market with 21,7%[1] market share in CJ* 2013 by revenue
- No. 2 in Payment with 28%[3] market share in CJ* 2013
- No. 2 in Government Identification with 32%[4] market share in CJ* 2013
- No. 1 in TPM; leading positions in Authentication ICs and Mobile Security ICs (secure elements in devices and on SIM cards)

Source: [1,4]IHS, July 2014; [2]ABI, August 2014; [3]May, Sep2014 IHS; IFX internal *Calendar year

# Infineon brings security to smart wearable devices

## Boosted NFC Secure Element for Watchdata's new smart watch and wristband

- Boosted NFC Secure Element will be used in Watchdata Technologies' new "Sharkey" smart wearable devices
- "Sharkey" smart watch and wristband are not just personal sport management devices. Now they serve as **secure bank cards** and **contactless tickets** when taking public transportation
- Boosted NFC provides high levels of security, certified by **Common Criteria EAL 6+** as well as approval from **EMVCo**


*"The Secure Element from Infineon can be seamlessly integrated into our smart wearable device while providing* ***sophisticated security*** *functions and* ***excellent contactless performance."***

Jack Pan, Vice President, Watchdata Technologies

# Infineon was recognized for its innovation leadership in China

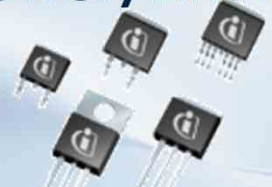
## Infineon awarded by Blue Shield Cup Security Anti-counterfeiting Technology

- Two awards from Blue Shield Cup Security Anti-counterfeiting Technology in China for Infineon's **SLE78 Integrity Guard and Flexible Mask Solution** :
  - *Innovation Award*
  - *Foreign-investment Enterprise*
- SLE78 security microcontroller is now officially applied by the **Ministry of Foreign Affairs of China** to the **new generation electronic passports** for diplomats and other government officials

# Semiconductor Technology Portfolio*

## Technology portfolio fits needs of logic and power applications

### Power/Analog



incl. Green Robust

**Analog Bipolar:** DOPL, A*x*, BIPEP, B4C
**Analog BiCMOS:** B6CA, B6CA-CT, B7CA, SPT170
500 - 350nm HV-CMOS-SOI
**Smart Power:** 1200-130nm BIP/CMOS/DMOS
SPT*x* (Automotive, EDP) (BCD)
**Smart:** CMOS/DMOS, SMART*x*, MSMART*x*, SSMART*x*, Opto-TRIAC, SPS

**DMOS:** Low Voltage Trench MOSFET (OptiMOS™)
**HV-DMOS:** Superjunction MOSFET (CoolMOS™)
**IGBT:** Trench IGBT 600-6500V, rev. cond., fast recov. Diodes
**SiC:** Diode, JFET

**all of them adopted for automotive and industrial requirements**

### MEMS/Sensors

**Analog ICs:** B6CA, B7CA
Coreless Transformer
**Magnetic:** B*x*CAS, C9FLRN_GMR

**Opto:** OP-DI, OP-TR, OP-C9N, µ-modules

**Pressure:** B*x*CSP, TIREP*x*

**Silicon-Microphones:** DSOUND

### CMOS

**Digital CMOS:** 800nm – 65nmTechnology Nodes (Platform <180nm incl. RF, AMS)
**Analog/Mixed Signal:** 500nm – 180nm Technology Nodes (C*x*NA)
**eNVM:** EEPROM: IMEMR, C9FL, OTP: C5OP (Automotive)
**eFlash/EEPROM:** 250nm – 65nm C*x*FL (Chip Card), C*x*FLA, C*x*FLN (Automotive)
**HV-CMOS:** 130nm, C11HV

### RF/Bipolar

**RF BiCMOS:** 25GHz – 100GHz: B6HFC, B9COPT, B10C
**Bipolar IC:** 2GHz...200GHz RF-Bipolar: B*x*HF
**HiPAC**: Al/Cu Integrated Passives
P7M*xx*, P7D*xx*, P8M*xx*

**SiGe**: B7HFM, B7HF_SLC, B7HF200
**RF Switches**: C7NP, C11NP

**Bipolar/Discretes/MMIC:**
**RF-Transistors** NF-TR; BxHF(D/M),
**Power Amplifier**: LDMOS, LD*x*M, LD*x*IC, LD9AB
**Diodes**: NF-DI, Tuner: D*x*T, Schottky: D*x*S

**SiGe**: B7HFD/M, B7HF_SD
**RFMOS**: HFM
**PIN**: D*x*P

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# Package Technology Portfolio*

## IC

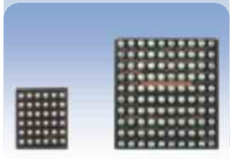
### Wafer Level Packages, Bare Die

**Surface Mount Technology** (SMD)

**Wafer Level**
w/o redistribution
- WLP (fan-in)

w/redistribution
- WLB (fan-in)
- eWLB (fan-out)
- Blade

**Bare Die**
- Wirebond
- Flip chip



### Laminate based Packages

**SMD**
- OCCN [1,2)]
- BGA
- LBGA
- xFBGA, xFSGA

### Leadframe based Packages

**Through Hole**
- DIP [2)]

**SMD**
- PLCC [2)]
- TSSOP
- TQFP
- LQFP
- MQFP

**Leadless**
- VQFN
- WQFN
- O-LQFN [1)]
- XSON
- USON

### Chip Card

**Mold on LF**
- P-MCCx

**Mold**
- P-Mx.x

**Chip on Flex**
- FTM

**UV Globe top**
- T-Mx.x

**PRELAM**
- PPxx

**Flip Chip**
- S-MFCx.x
- S-COMx.x

**Wafer**
- Bumped
- Diced

## Discretes

**SMD leaded**
- SOT
- SOD
- TSOP
- TSSOP

**Flat lead**
- TSFP
- SC

**Leadless**
- TSLP
- TSSLP
- TSNP

**Wafer level**
- WLP
- WLL

## Sensors

**Through Hole**
- PSSO

**SMD Leaded**
- DSOSP

**Open cavity**
- DSOF

## Power

### Power

**Through Hole**
- TO, DIP

**SMD**
- TO
- DSO
- SSOP

**Leadless**
- ThinPAK
- TDSON
- TSDSON
- CanPAK™
- TISON
- WISON
- IQFN
- HSOF

### High Power

**Power Modules**
- Easy
- 34mm
- 62mm
- Econo
- Econo-PACK™+
- Prime-PACK™
- IHM
- IHV
- Hybrid-PACK™

1) for specialities only 2) phase-out

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# Table of Contents



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# R&D Network in Europe*

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Warstein

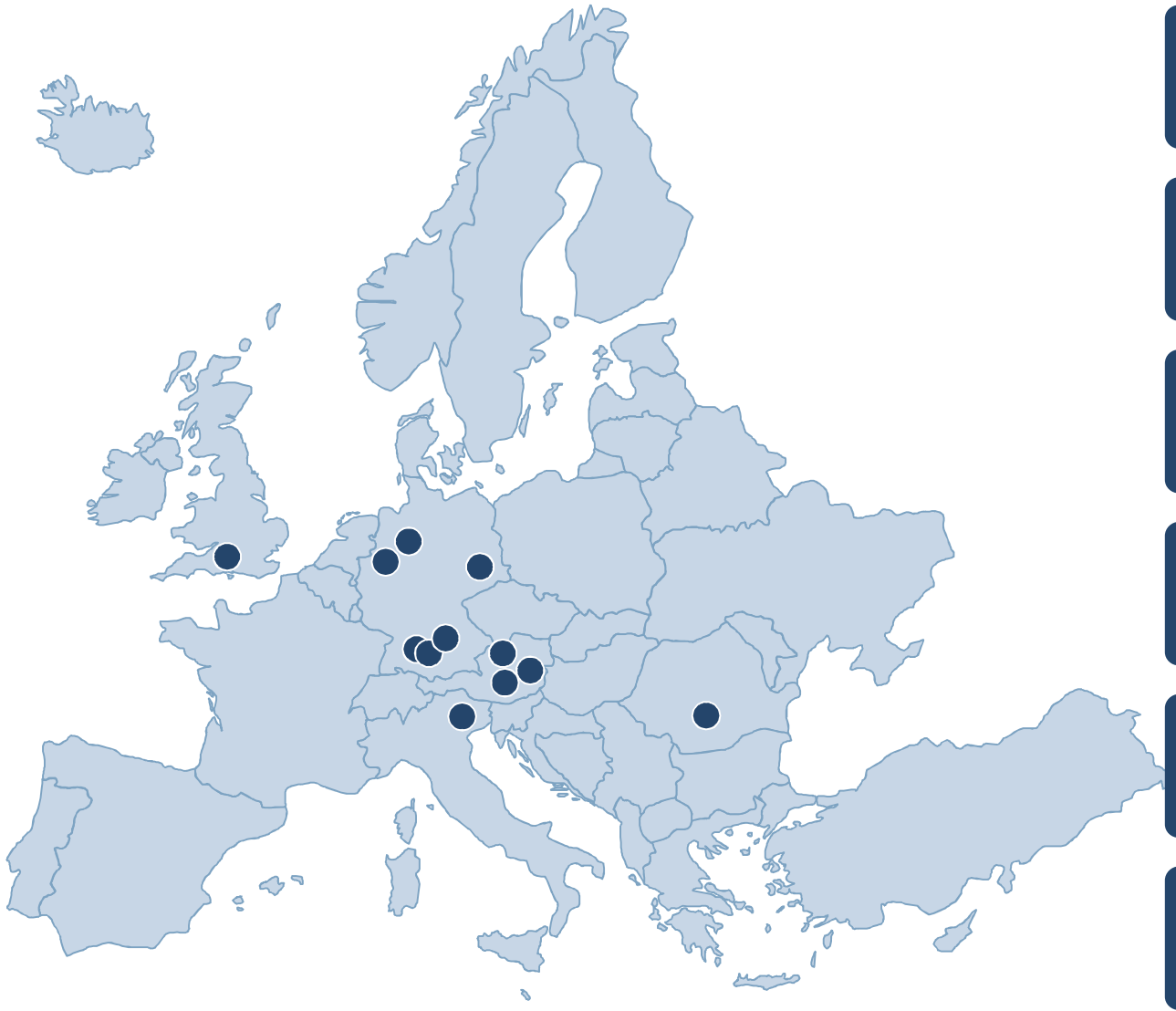
Duisburg

Bristol

Augsburg

Munich, Neubiberg

Padua



Regensburg

Dresden

Linz

Graz

Bucharest

Villach

# Worldwide R&D Network (Excluding Europe)*

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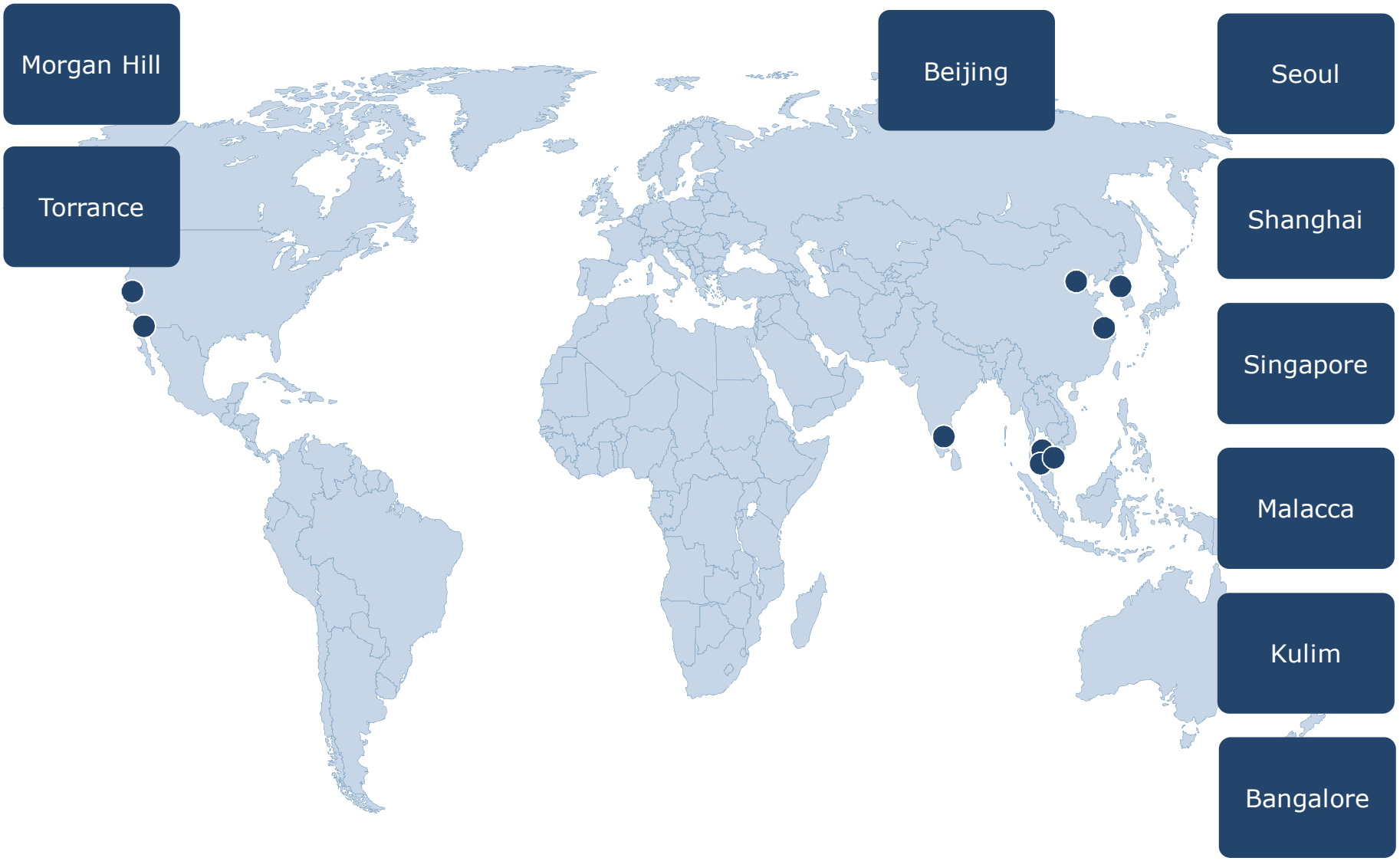

# Worldwide Manufacturing Sites Frontend and Backend*

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# Sales Offices in Europe*

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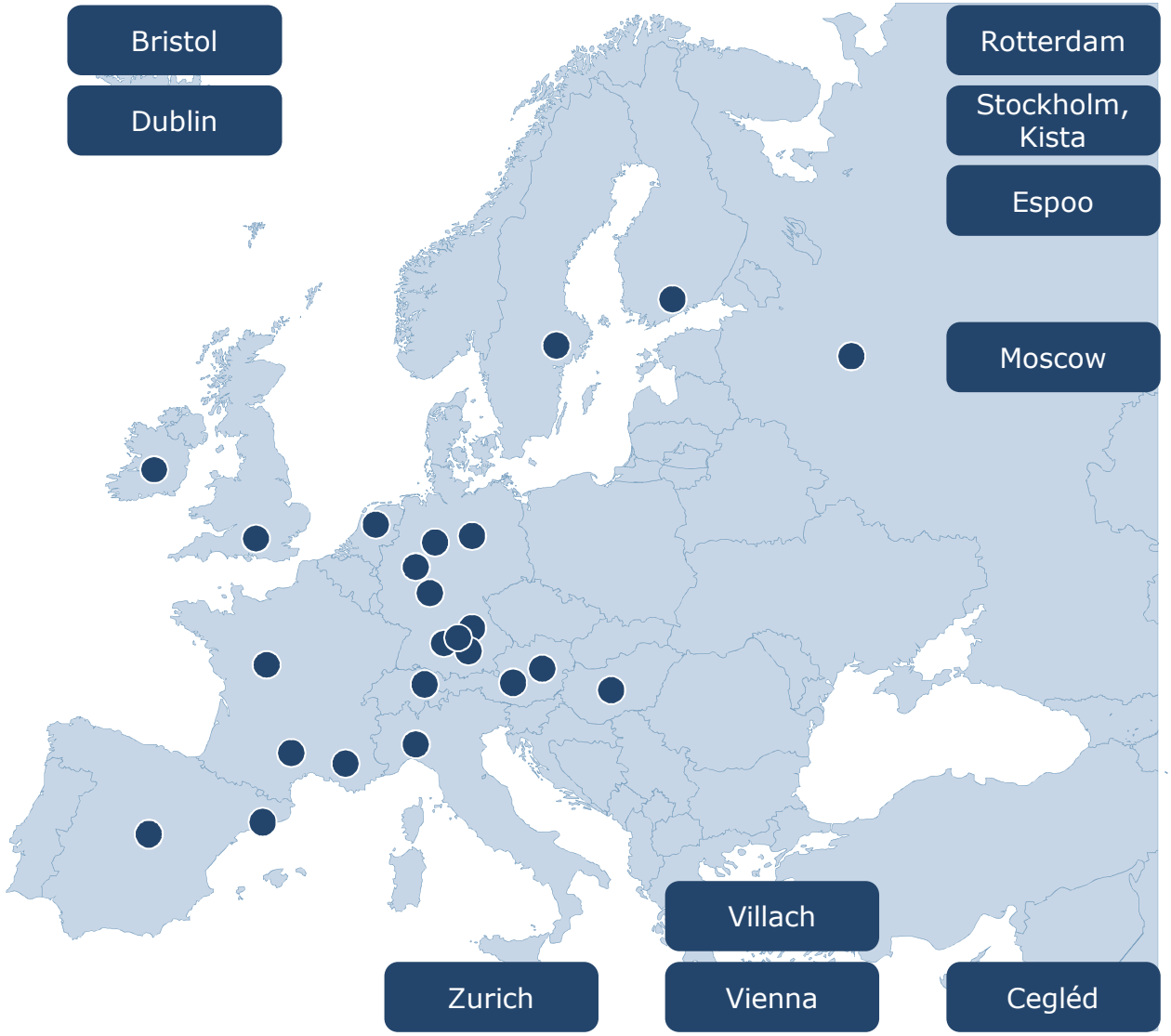

# Sales Offices Worldwide (Excluding Europe)*

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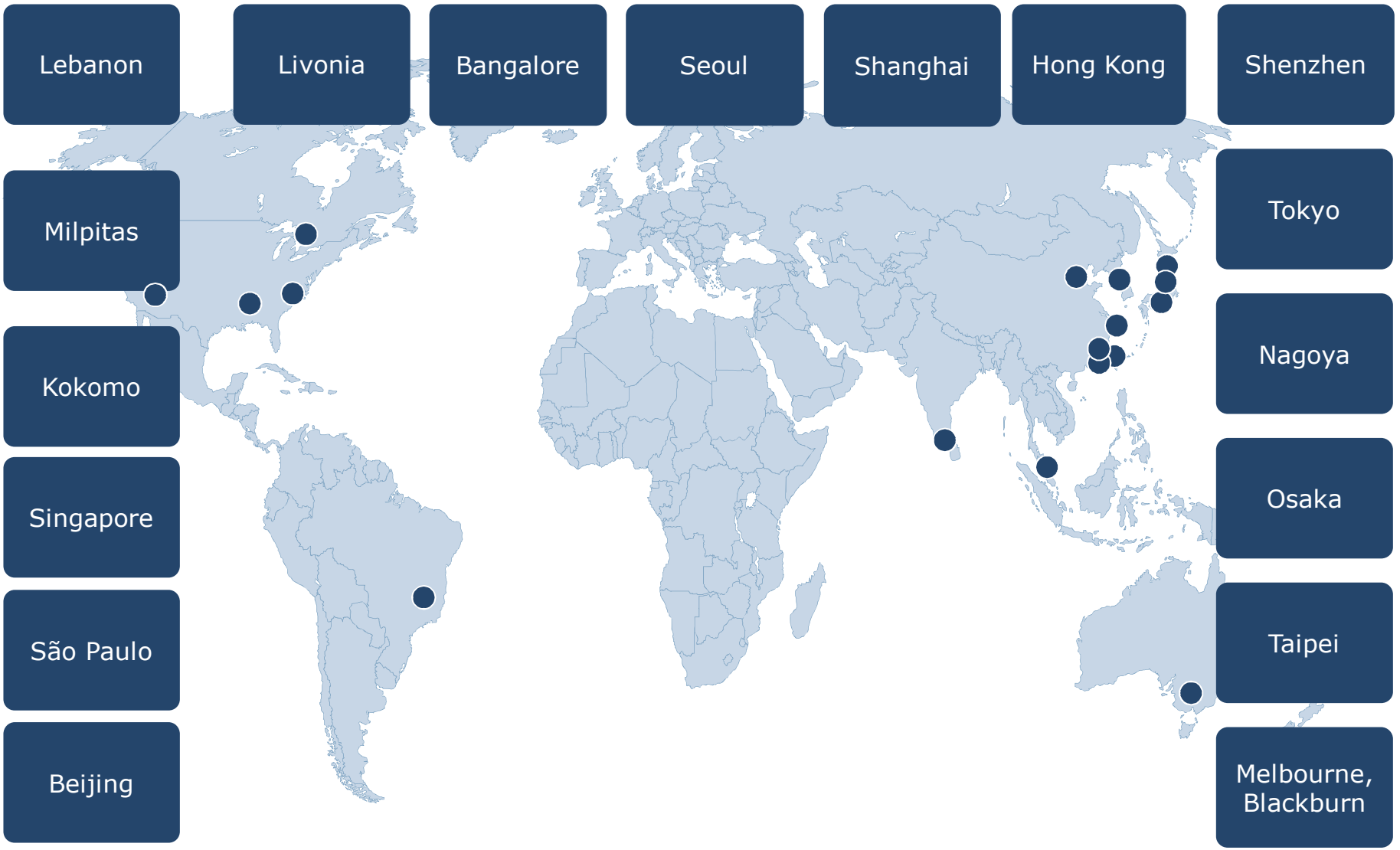

# Corporate Social Responsibility*
# Our Commitment

## United Nations Global Compact
## 10 Principles

**Human Rights**

Principle 1: support and respect the protection of internationally proclaimed human rights

Principle 2: make sure they are not complicit in human rights abuses

**Labor**

Principle 3: uphold the freedom of association and the effective recognition of the right to collective bargaining

Principle 4: uphold the elimination of all forms of forced and compulsory labor

Principle 5: uphold the effective abolition of child labor

Principle 6: uphold the elimination of discrimination in respect of employment and occupation

**Environment**

Principle 7: support a precautionary approach to environmental challenges

Principle 8: undertake initiatives to promote greater environmental responsibility

Principle 9: encourage the development and diffusion of environmentally friendly technologies

**Anti-Corruption**

Principle 10: work against corruption in all its forms, including extortion and bribery

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# Corporate Social Responsibility*
# Our Understanding

**CSR at Infineon comprises our voluntary commitment and contributions in the areas:**


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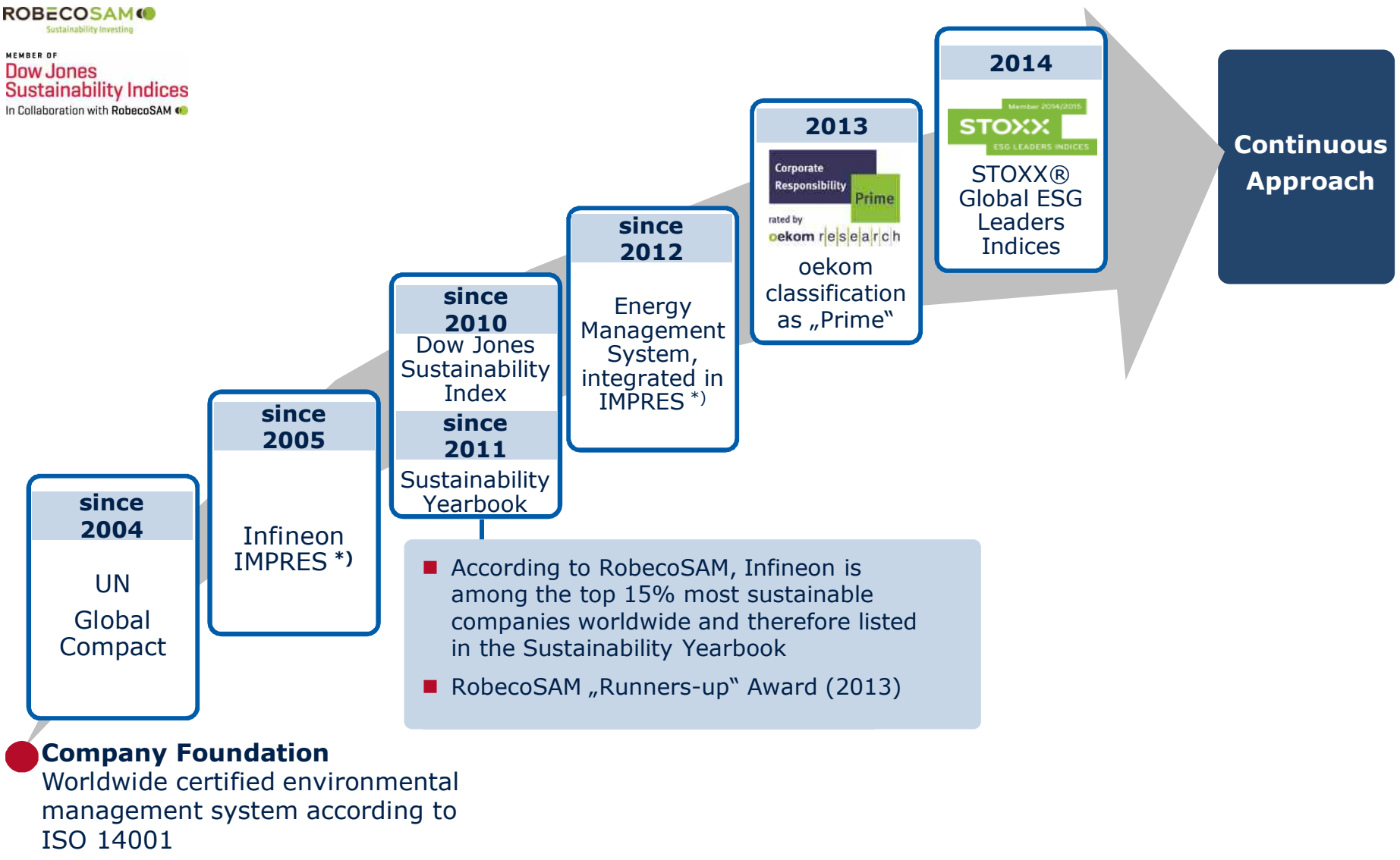
# Corporate Social Responsibility*
# Successful CSR Approach

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# Corporate Social Responsibility*
# Environmental Sustainability

## Certifications

Based on our efforts for resources management, safety and health standards, Infineon received the EN ISO 14001, OHSAS 18001 and ISO 50001** multi-site certification.

- We consume **20% less** water to manufacture one cm² wafer than the global average[1)].
- We consume **32% less** electricity to manufacture one cm² wafer than the global average[1)].
- We generate **47% less** waste to manufacture one cm² wafer than the global average[1)].

DNV BUSINESS ASSURANCE

MANAGEMENT SYSTEM CERTIFICATE

Certificate No.: 131538-2013-AE-GER-DAkkS

*This is to certify that*

Infineon Technologies AG
Am Campeon 1-12
85579 Neubiberg, Germany

as well as the sites and remote locations listed on the following pages

*have been found to conform to the Management System Standards*

ISO 14001:2004
ISO 50001:2011
BS OHSAS 18001:2007

*This certificate is valid for the following product or service ranges:*

Development, production and sales
of semiconductor components

*This certificate is valid until:* 31.01.2015

*Place and date:* Essen, 14.02.2013

*The audit has been performed under the supervision of*

Volkmar Rindler
*Lead Auditor*

DAkkS Deutsche Akkreditierungsstelle D-ZV-18453-01-00

*for the Accredited Unit:*

Nikolaus Kim
*Management Representative*

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** ISO 50001 in major EU sites
1) According to "World Semiconductor Council"

# Our $CO_2$ Footprint: Emissions Reduction Enabled by Our Products and Solutions*

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**1.4 million tons**

**More than 14.4 million tons**

$CO_2$ burden[1)]

Ratio 1:10

$CO_2$ savings[2)]

Net ecological benefit*:
**round 13 million tons of CO2 emission reduction**

1) This figure considers manufacturing, transportation, function cars, flights, materials, chemicals, waste/waste water, direct emissions, energy consumption, waste, etc. and is based on internally collected data and externally available conversion factors. All data relates to the 2014 fiscal year.*
2) This figure is based on internally established criteria, which are explained in the explanatory notes. The figure relates to the calendar year 2013 and considers the following fields of application: automotive; lamp ballast control; PC power supply; renewable energy (wind, photovoltaic); and rives. $CO_2$ savings are calculated on the basis of potential savings of technologies in which semiconductors are used. The $CO_2$ savings are allocated on the basis of Infineon's market share, semiconductor content and lifetime of the technologies concerned, based on internal and external experts' estimations. Despite $CO_2$ footprint calculations are subject to imprecision due to the complex issues involved, the results are nevertheless clear.*

# Business Continuity
# Integrated Management*


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# ENERGY EFFICIENCY
# MOBILITY
# SECURITY

Innovative semiconductor solutions for energy efficiency, mobility and security.