

# Infineon to acquire Wolfspeed

Investor Presentation  
14 July 2016



Powering the future

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# Key facts of the deal

- › Transaction perimeter:



**CREE**  's

SiC wafer substrate business  
(excluding LED)

- › Purchase price: US\$ 850m
- › Transaction type: cash and debt free
- › Financing: US\$ 720m bank loans  
US\$ 130m cash-on-hand
- › Signing date: July 13, 2016
- › Expected closing date: ~ end of calendar year 2016

# Key facts about the acquired business

## Recent performance:

- › Revenues of US\$173m in the twelve months ending 27 March 2016

## Outlook:

- › Revenue CAGR of ~20% and gross margin\* of ~55% expected going forward

## Core competence in compound semiconductors:

- › SiC\*\* -based products for power applications
- › GaN-on-SiC\*\*\* -based products for radio-frequency (RF) power applications
- › SiC wafer substrate business; third party business will be continued

## Market position:

- › Power: #1 in SiC
- › RF power: #2 in GaN-on-SiC

## Profile:

- › More than 28 years part of Cree
- › Headquartered in Research Triangle Park (North Carolina), USA
- › ~550 employees worldwide, thereof ~500 at two major US sites
- › Strong IP portfolio of ~2,000 patents and patent applications

\* According to US GAAP, excluding effects from purchase price accounting;

\*\* SiC = silicon carbide

\*\*\* GaN-on-SiC = gallium nitride on silicon carbide

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# Deal rationale

## Financial fit

- › Margin and adjusted EPS accretive from day 1

- › Expected gross margin\*:

**55%**

- › Incremental revenue CAGR:

**20%**

## Strategic Fit

- › Become #1 in RF power

- › Create #1 in SiC power

- › further strengthen automotive and industrial businesses

- › accelerate SiC adoption

- › expand power semi market beyond Si

\* According to US GAAP, excluding effects from purchase price accounting

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Strategic fit – RF power

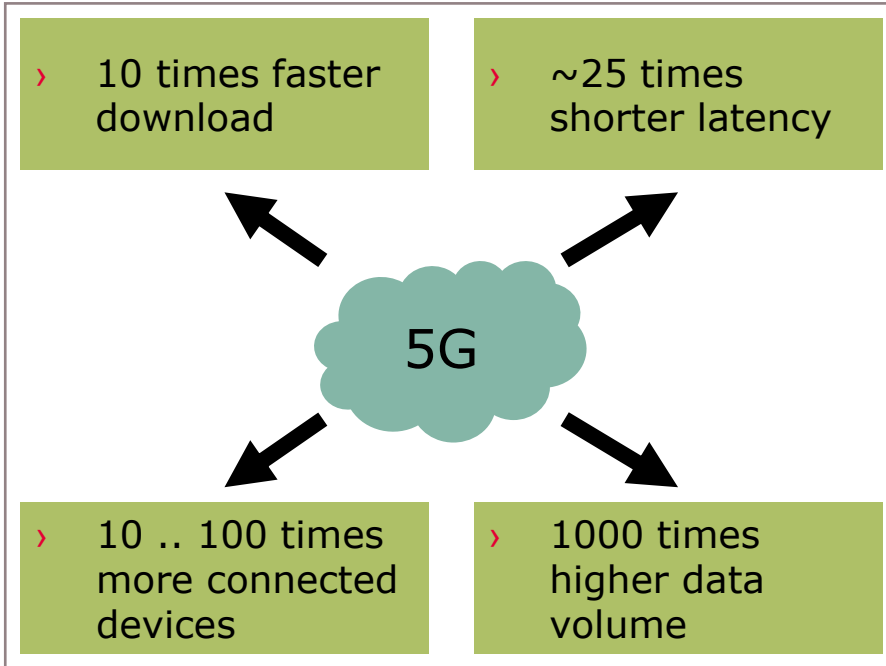
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# 5G redefines global connectivity: high bandwidth and speed enabled by SiC



- > 5G redefines
  - automotive connectivity
  - manufacturing concepts (Industry 4.0)
  - transportation systems
  - energy networks
  - healthcare monitoring



4k video streaming anywhere

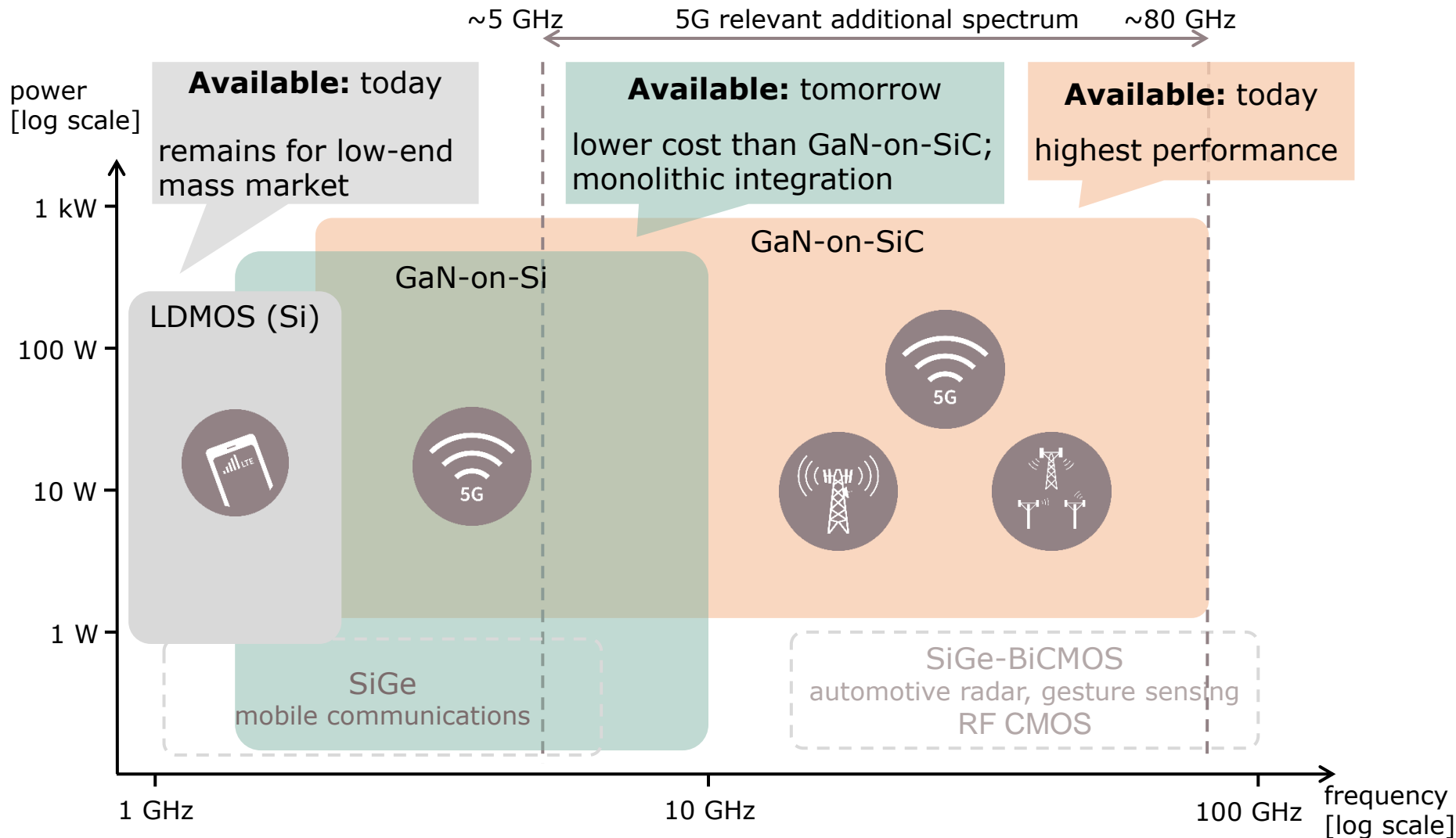


mission critical connectivity

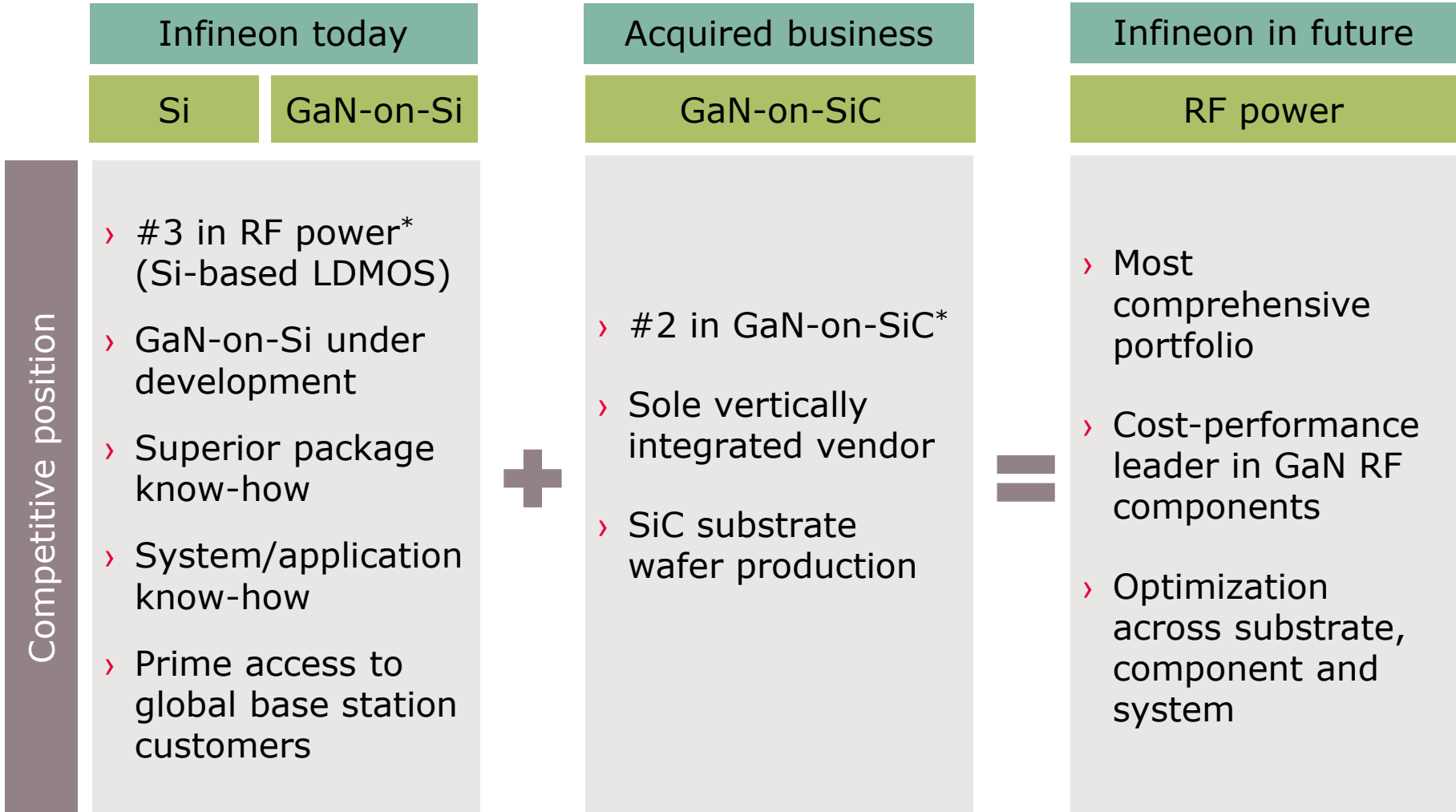


# Compound semiconductors are a necessity to deploy 5G cellular infrastructure

At higher frequencies, only compound semiconductors deliver the required output



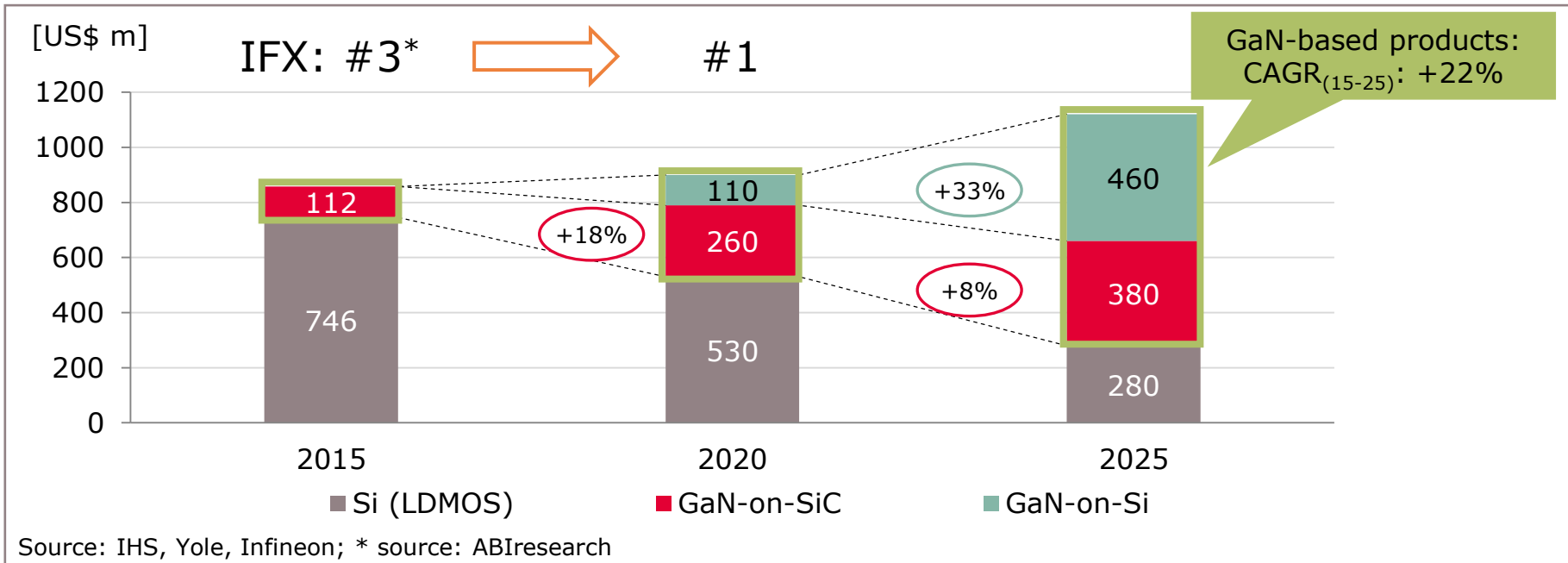
# Infineon is the only player with the full suite of RF power technologies necessary for 5G



\* Source: ABIresearch, „RF Power Semiconductors“, 2016

# Technology roll-over paves the path to global #1 in RF power by ~2020

## RF power market for cellular infrastructure



- Today: GaN-on-SiC for high-end LTE and 4.5G (up to 6 GHz)
- 2018: GaN for 4.5G (up to 6 GHz)
- 2020/21: GaN for 5G large-scale deployment

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# Compound semiconductors allow for novel topologies increasing the semi market

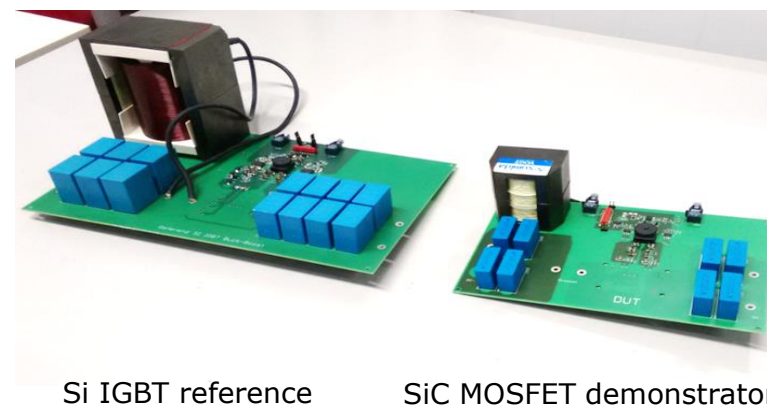
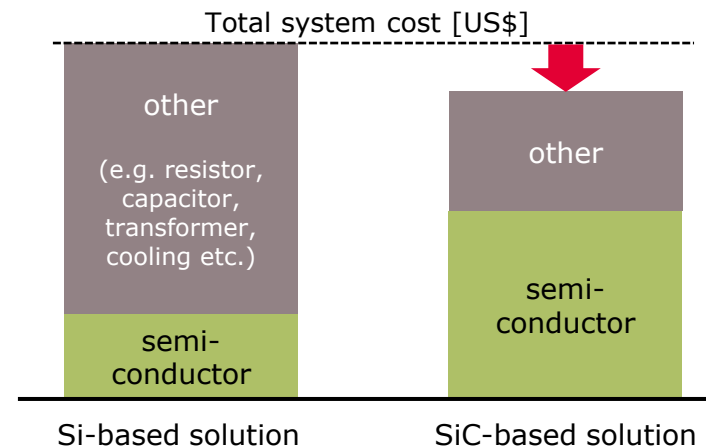
Silicon carbide components offer benefits on system level (e.g. in solar inverter)

## Reduction of cost, higher semi-value:

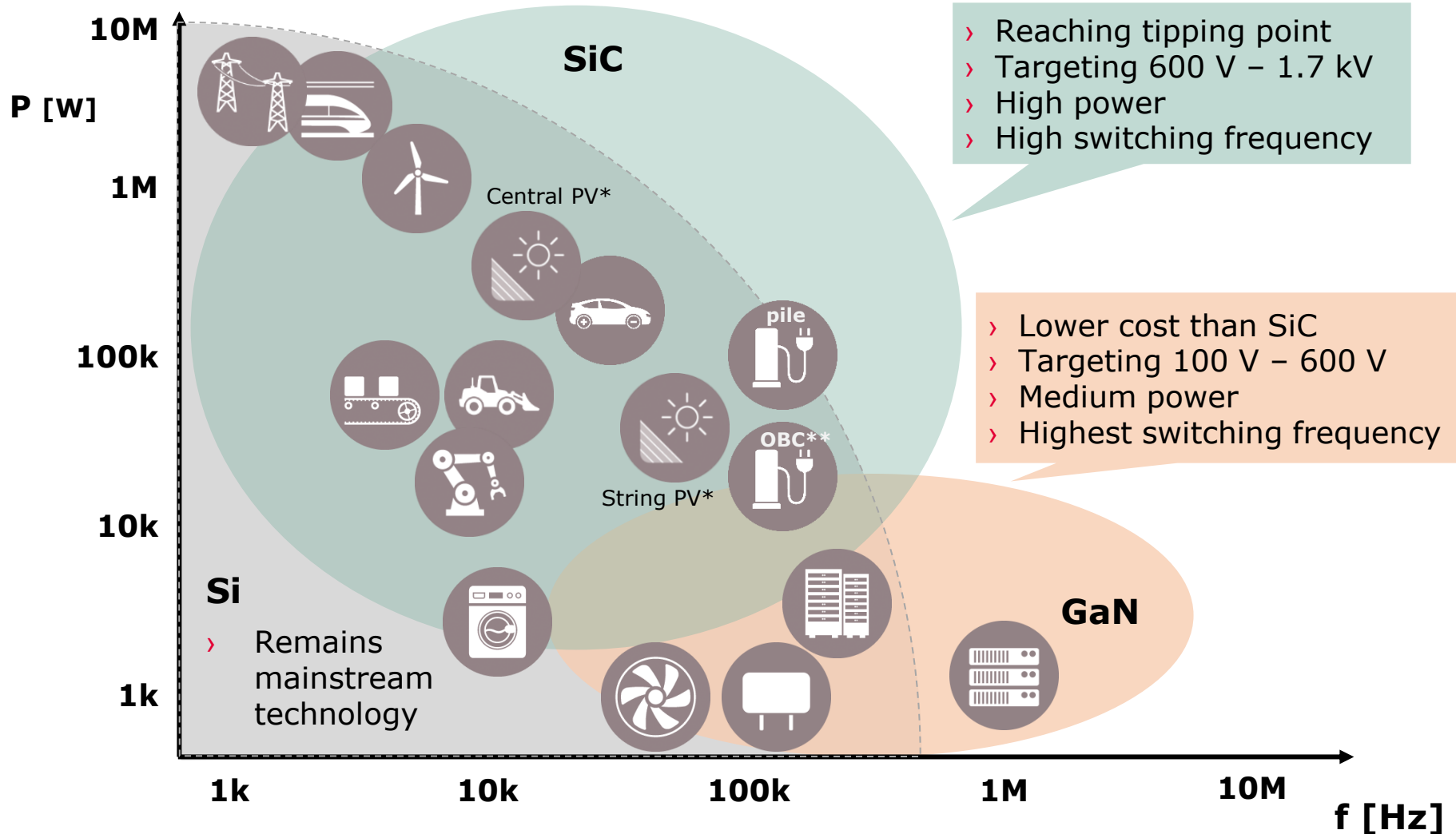
- › 15 to 20% lower bill of material for inverter manufacturer
- › 2x to 3x higher semiconductor content as compared to Si-based design
- › ~1.5%-points additional growth on top of Si-based industrial semiconductor market

## Reduction of system size:

- › SiC allows for simpler topologies (2-level instead of 3-level) with less control effort
- › SiC allows for higher switching frequency with smaller transformers
- › Handling of same power in smaller box size results in significant cost reduction

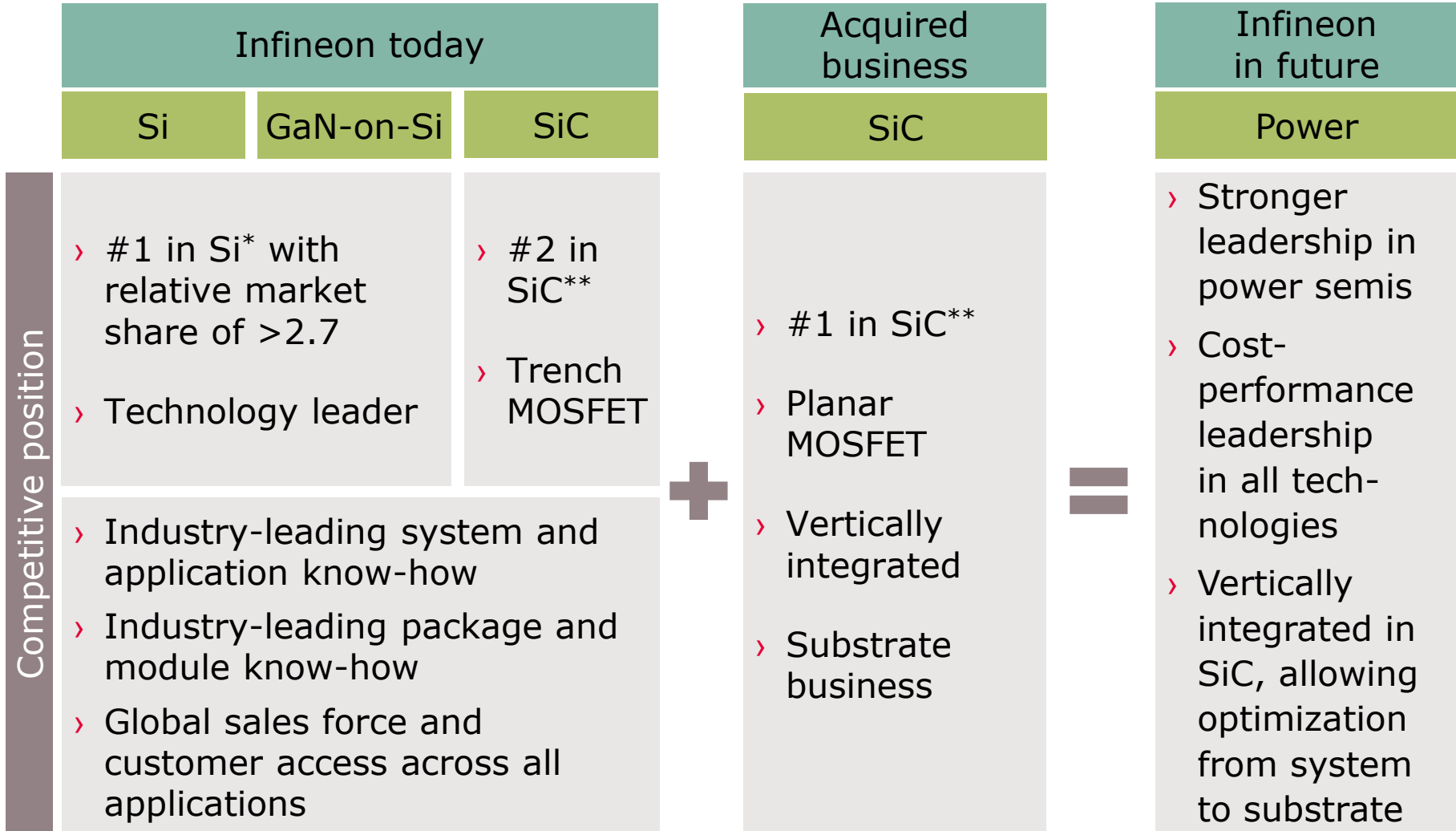


# GaN and SiC enable higher efficiency through faster switching with lower losses than Si



\* PV = photovoltaic inverter; \*\* OBC = onboard charger

# Further strengthening cost-performance leadership in power semiconductors



\* Source: IHS Markit; \*\* source: Yole

# Infineon accelerates the silicon carbide market with cutting edge products



- 1 > Leverage Infineon's global customer access and application know-how on Wolfspeed's SiC product portfolio
  - 2 > Combine Wolfspeed's technologies with Infineon's superior packages and modules
  - 3 > Optimize products across substrate, device and application
- > Lower system cost triggers faster introduction of SiC-based components in early-adopter markets and creates additional semiconductor opportunity





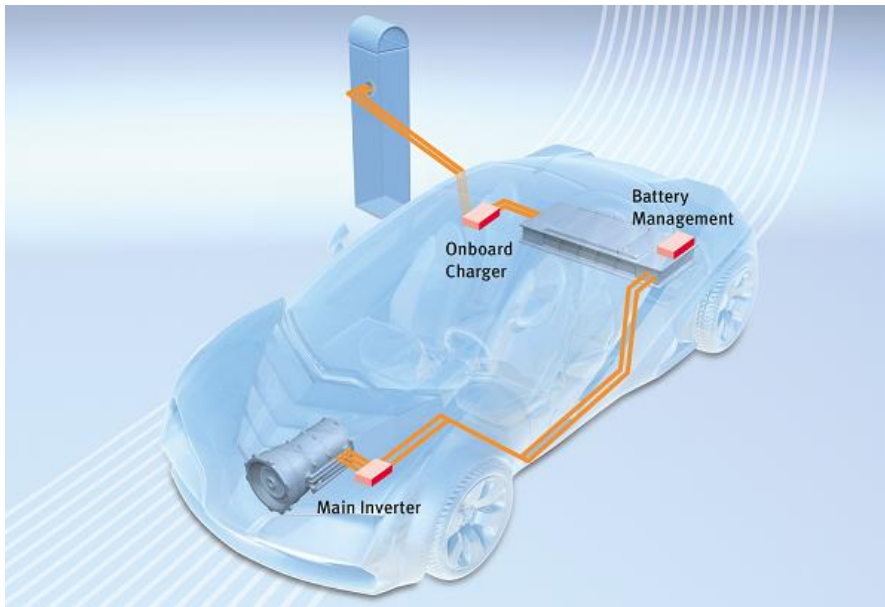
# Silicon carbide can help accelerate the adoption of plug-in (hybrid) electric vehicles

## SiC onboard charger

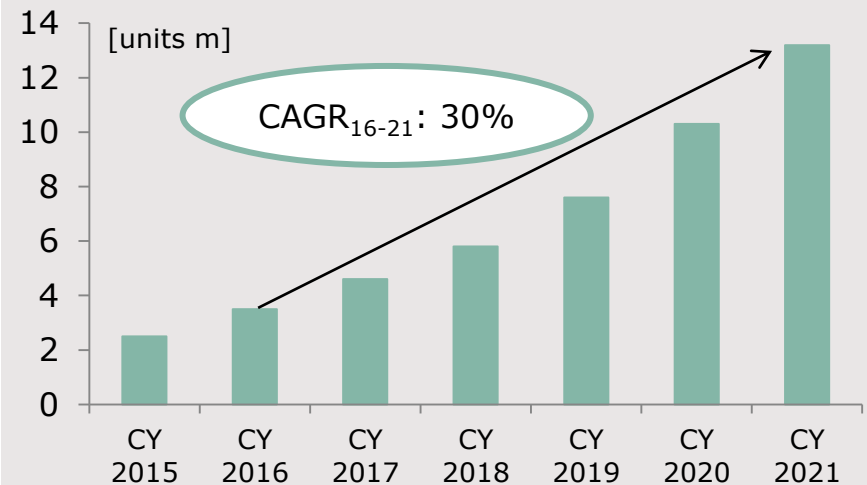
- > Smaller form factor
- > Lower cooling effort

## SiC main inverter

- > Higher efficiency – higher reach
- > Smaller form factor
- > Lower cooling effort

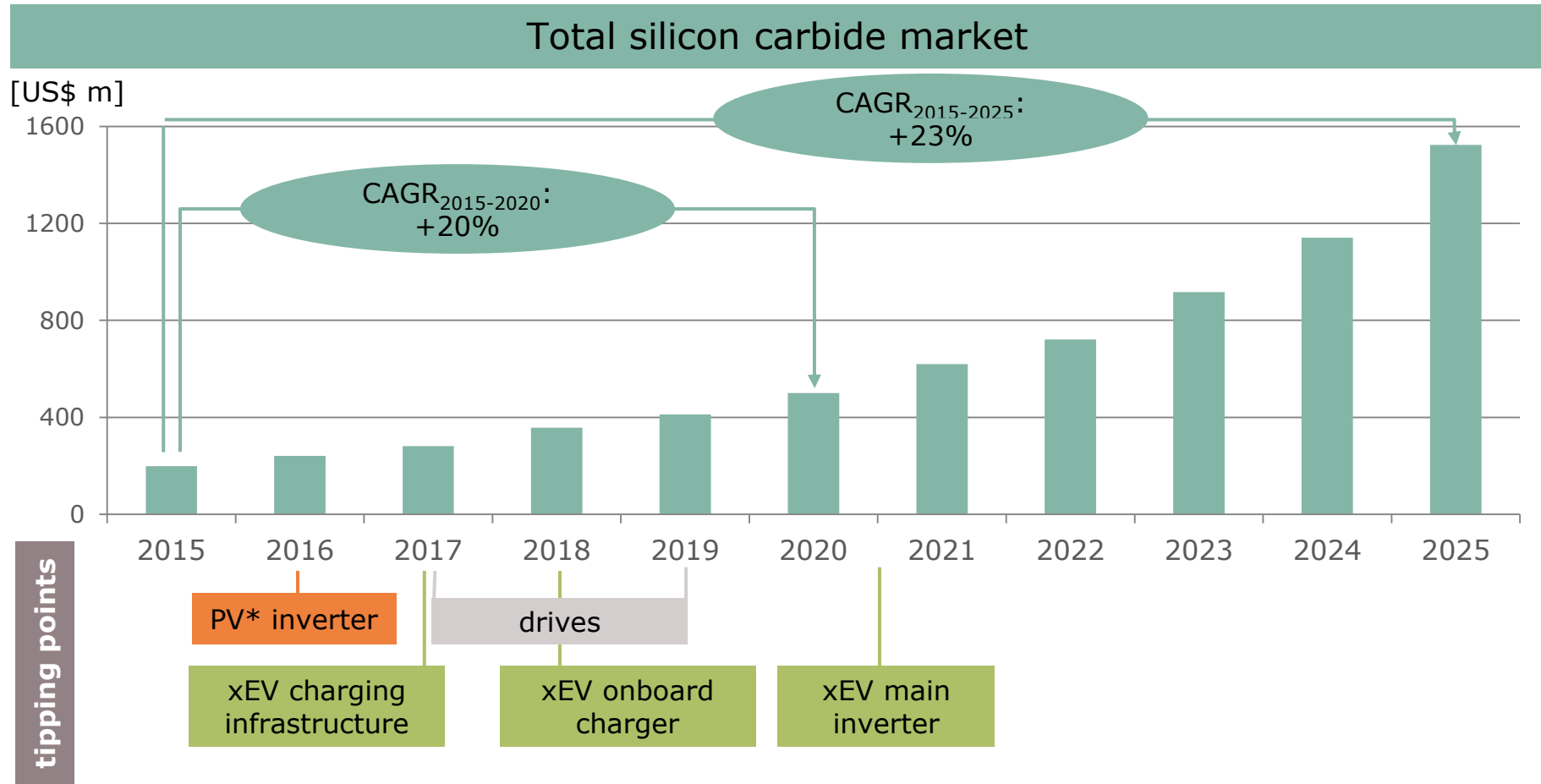


## Total xEV market\*



\* Source: IHS Markit, „Alternative Propulsion Forecast“, Jan 2016 (includes BEV, PHEV, HEV, mild-hybrids)

# Electro-mobility, photovoltaics and drives trigger demand for SiC-based components



> Roll-over driven by multiple tipping points

Source: IHS, „SiC & GaN Power Semiconductor Report – 2016“, 2016; \* PV = photovoltaic

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# Transaction is expected to be margin and adjusted EPS accretive from day 1



Gross margin\*:

55%

Revenue growth CAGR:

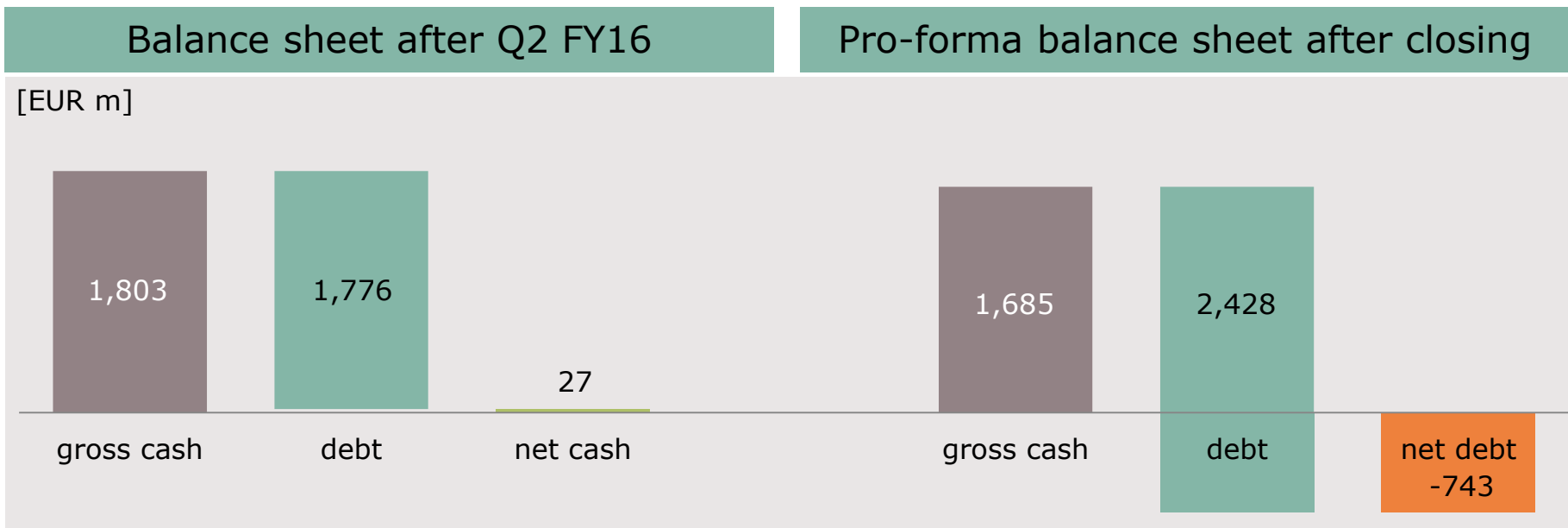
20%

- › Fits perfectly into Infineon's growth and margin expansion strategy
- › Supports 8% long-term revenue growth target

\* According to US GAAP, excluding effects from purchase price accounting

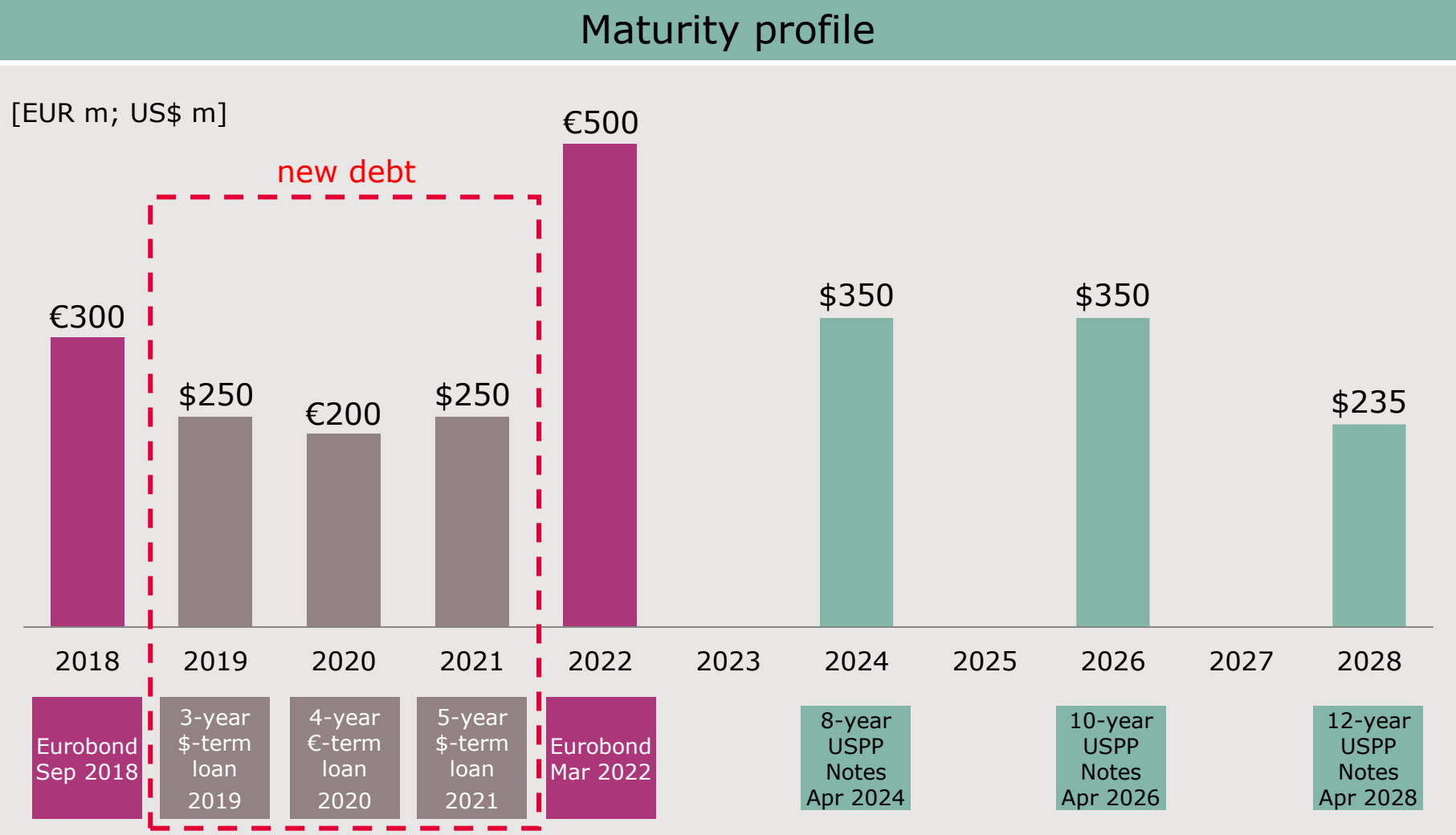
# Solid balance sheet after cash-/debt-financed transaction

- › Financed with US\$720m (~€652m\*) of new debt, plus US\$130m (~€118m\*) cash-on-hand
- › Bank financing split into different maturities:
  - 3-year, 4-year, 5-year
  - largely US\$-denominated



\* FX rate: EUR/US\$= 1.105 as per 8 July 2016

# Deal is preserving Infineon's well balanced maturity profile



Note: In addition other debt with maturities between 2017 and 2023 totaling €149m.

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# Summary of deal rationale



GM 55%\*

CAGR 20%

- › Become #1 in RF power amplifier market by ~2020 with most complete technology portfolio by capitalizing on technology disruption in cellular infrastructure
- › #1 in silicon carbide for power, strengthen automotive and industrial and accelerate market introduction with cutting-edge products as cost-performance leader and create thereby a higher addressable market for Infineon
- › Deal is margin and adjusted EPS accretive from day 1 with expected 55% incremental gross margin\* and 20% incremental revenue growth of the acquired businesses

\* According to US GAAP, excluding effects from purchase price accounting





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