

# OUR PATH TO GROWTH AND VALUE CREATION

Investor Presentation  
March 2024

# SILTRONIC AT A GLANCE

**4,500**

employees  
worldwide

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**4**

world-class  
production sites

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**1.5**

billion EUR  
Sales for 2023

**50+**

years of history  
in silicon technologies

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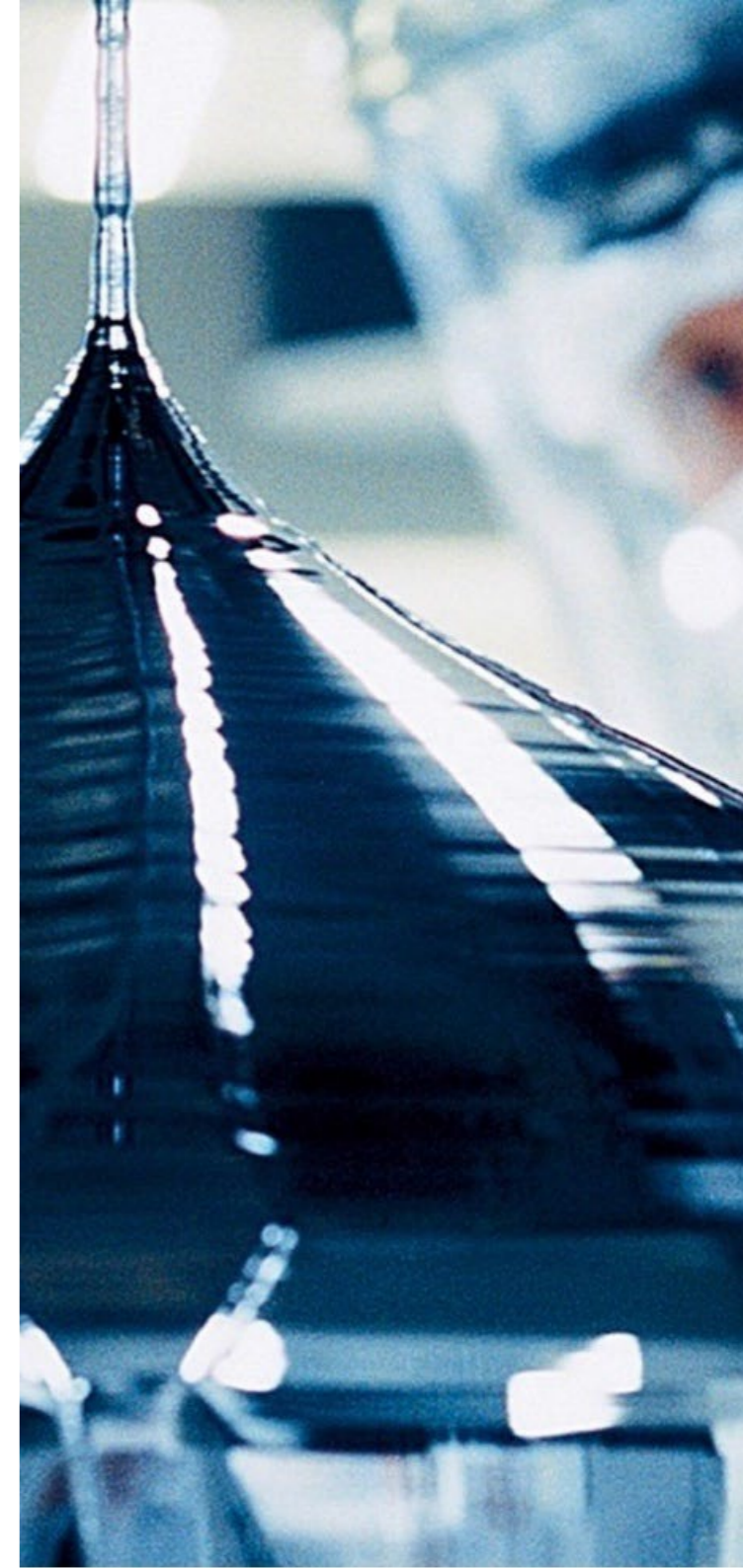
**Supplier**

to top  
semiconductor producers

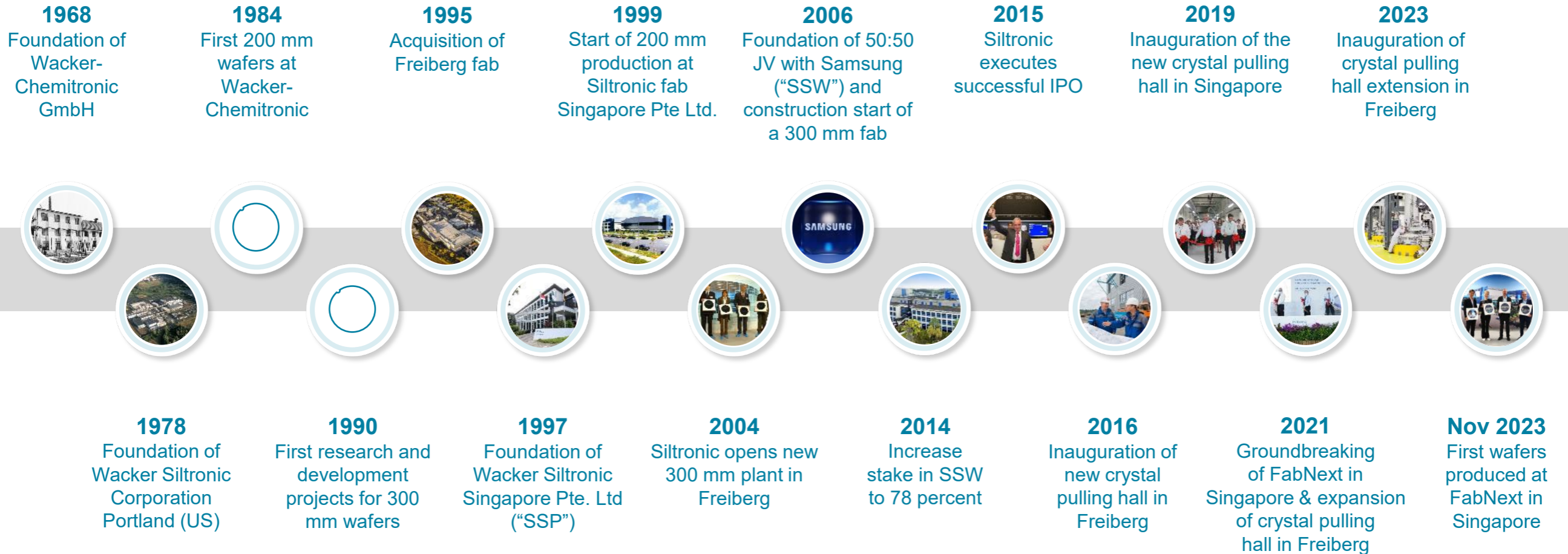
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**29**

percent  
EBITDA-Margin



# 50+ YEARS OF HISTORY – A STORY OF SUCCESS AND INNOVATION



# INTERNATIONAL PRODUCTION NETWORK SERVES CUSTOMERS AROUND THE GLOBE

## Singapore



Singapore  

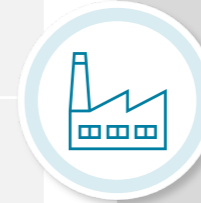
SSW



300 mm

SSP

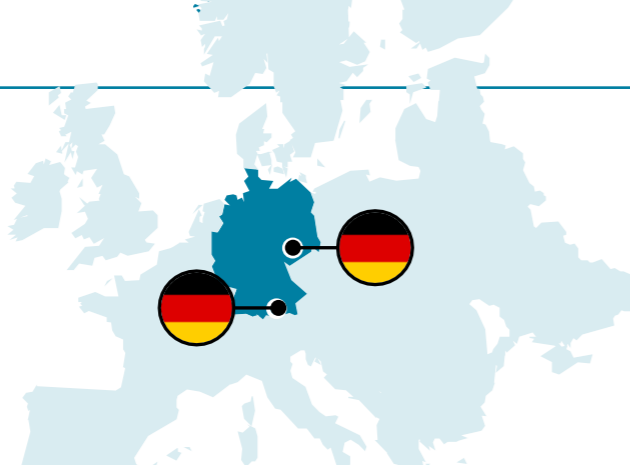
200 mm



### 300 mm

volume production in Germany & Singapore

## Germany



Germany (Burghausen, Freiberg)  

CP\*

300 mm

<150 mm



### R&D

hub in Burghausen

## USA



USA (Portland) 

200 mm



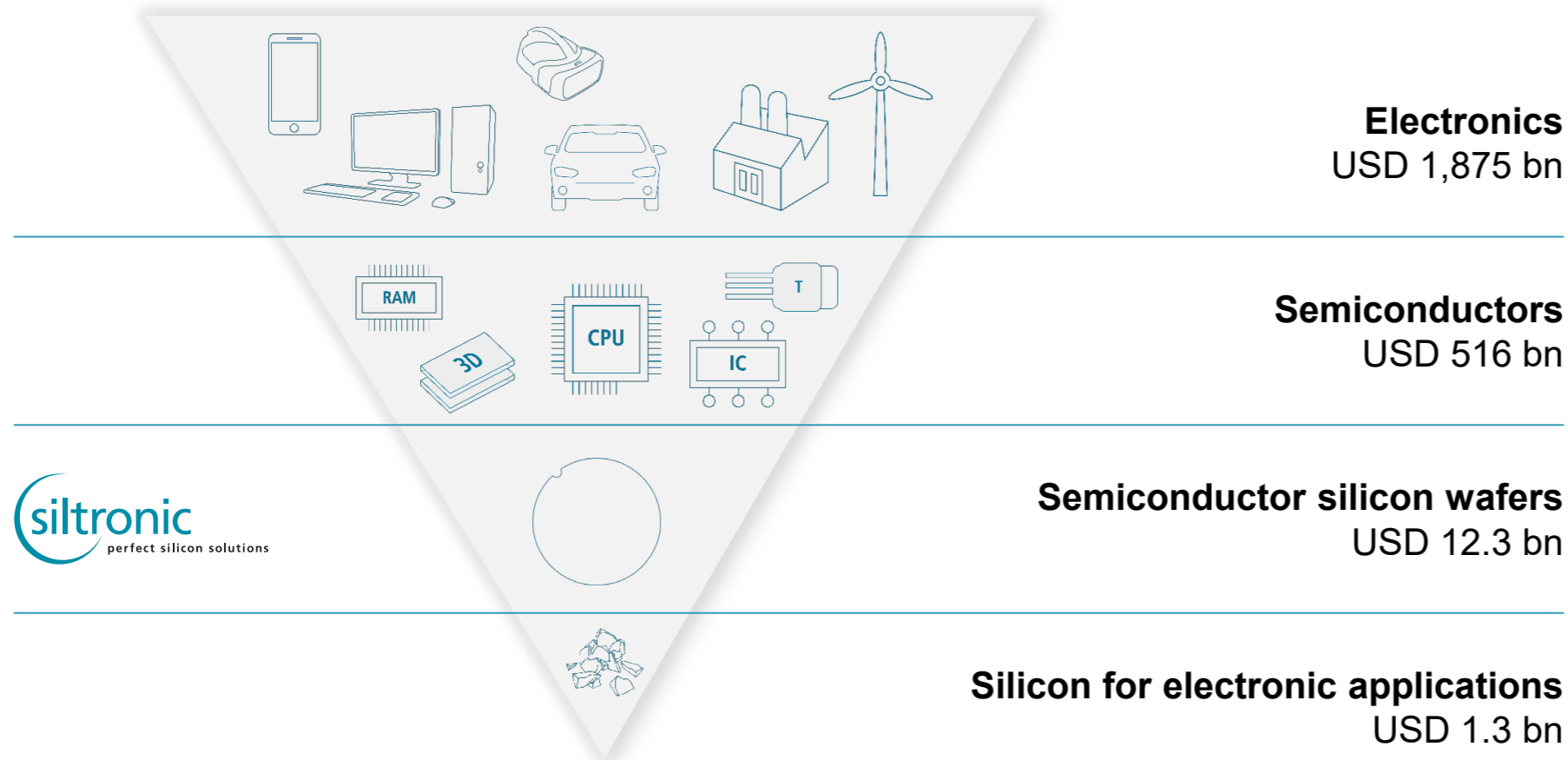
### Leading Edge

production

R&D = Research and Development  
CP = Crystal Pulling

# EXPANSION OF ELECTRONICS VALUE CHAIN WILL DRIVE SEMICONDUCTOR AND WAFER GROWTH

Electronics value chain (figures for 2023)<sup>(1)</sup>



**99%**

of the semiconductor value chain is based on silicon



**USD 1 tn**

semi sales at the end of this decade<sup>(2)</sup>



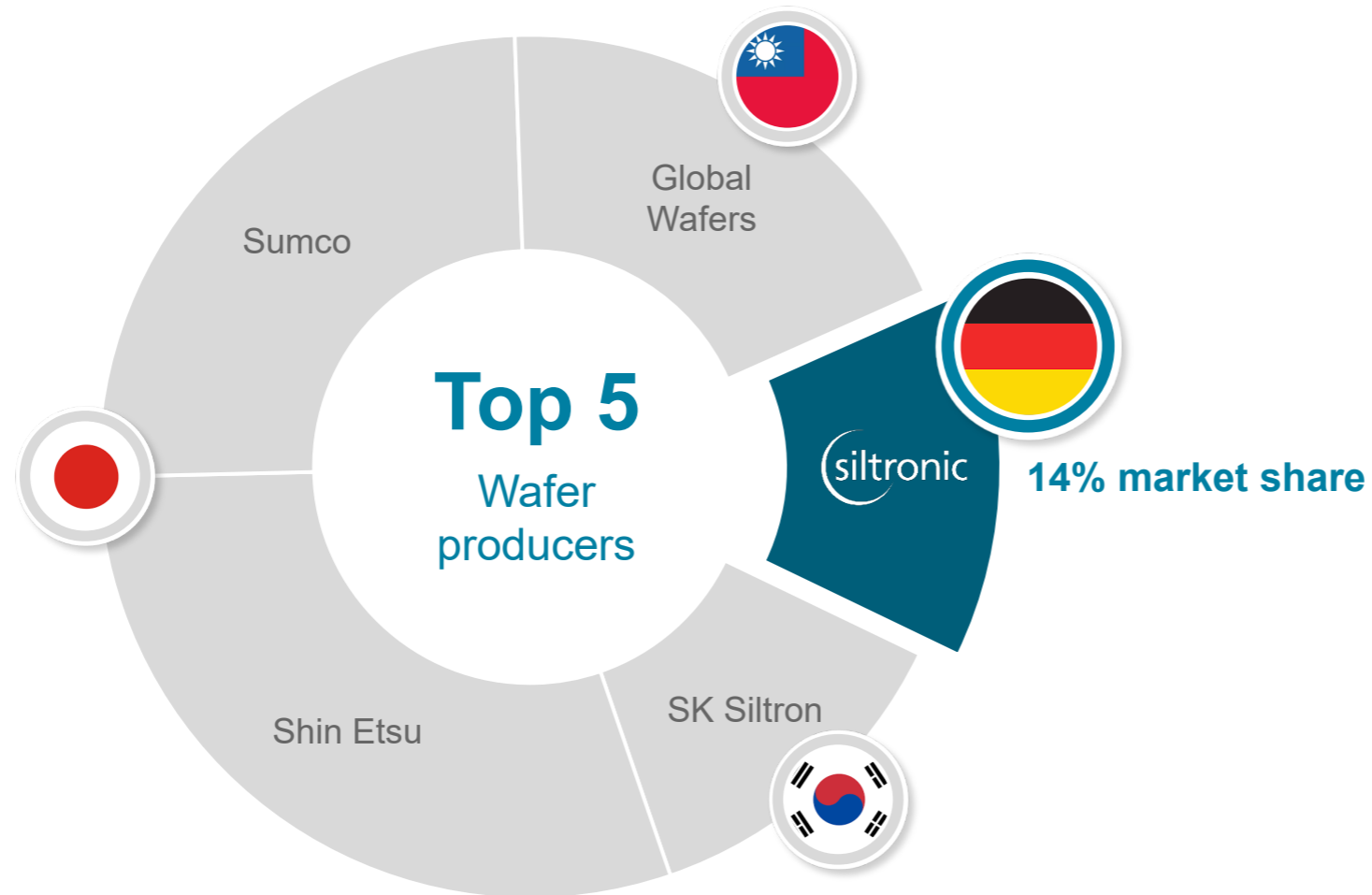
**Crucial**

for the whole value chain

Source: 1 TechInsights, WSTS (Silicon based), SEMI SMG, Siltronic Marketing | 2 McKinsey



# WELL POSITIONED IN A CONSOLIDATED MARKET AS THE ONLY WESTERN-BASED MANUFACTURER



**Up to 90%**  
are served by the top  
5 wafer manufacturers



**Only western**  
based wafer  
manufacturer

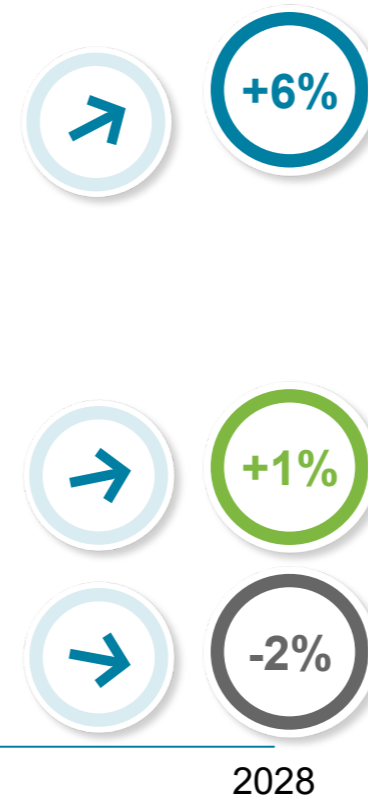
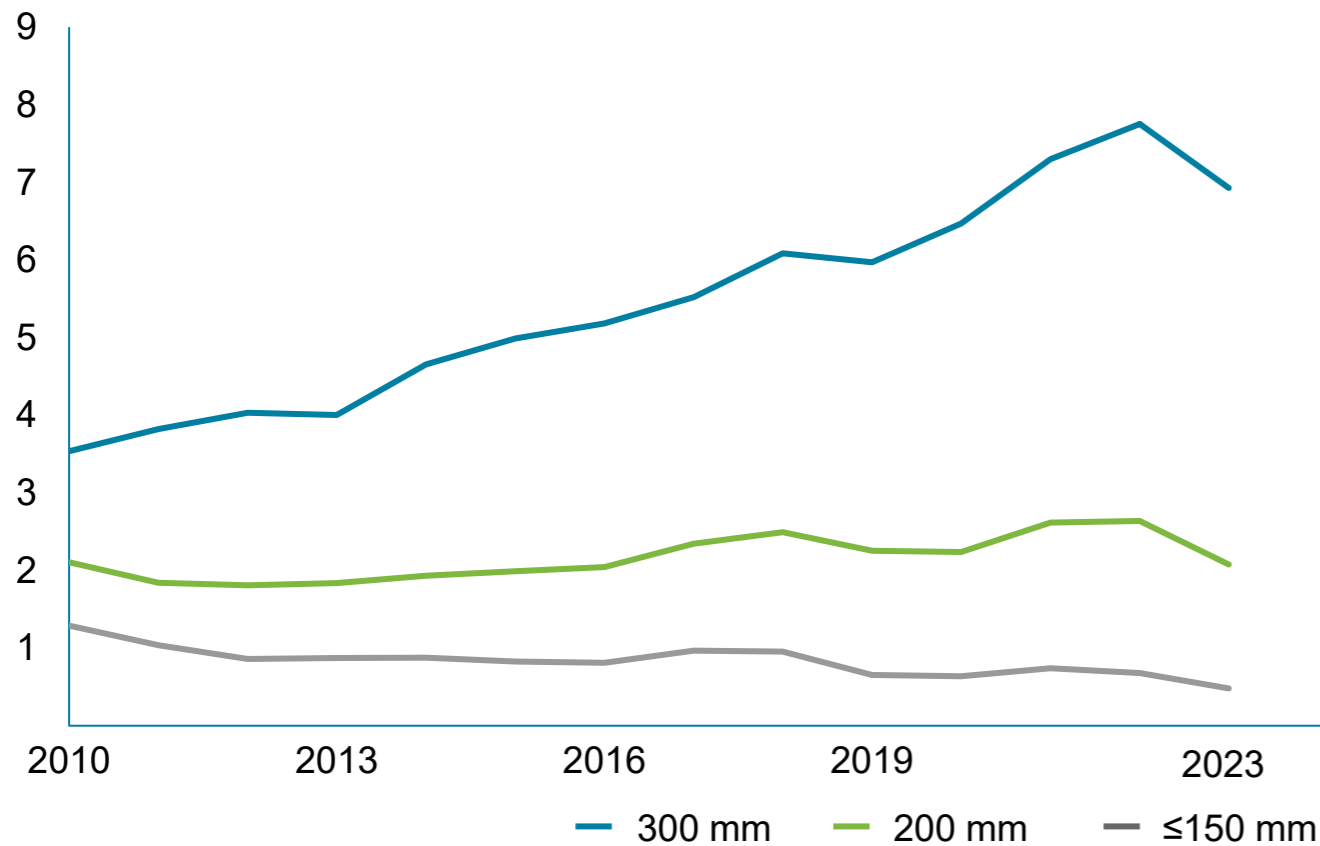




**Consolidated**  
market leads to high  
transparency and  
predictability

Source: Siltronic estimate 2023, Quarterly reports of SEMI companies

# CAGR OF 4–5% EXPECTED ON AVERAGE WITH HIGHEST GROWTH IN 300 MM

Development of total wafer demand per diameter in mn 300 mm equivalents per month<sup>1</sup> and CAGR per diameter in %<sup>2</sup>

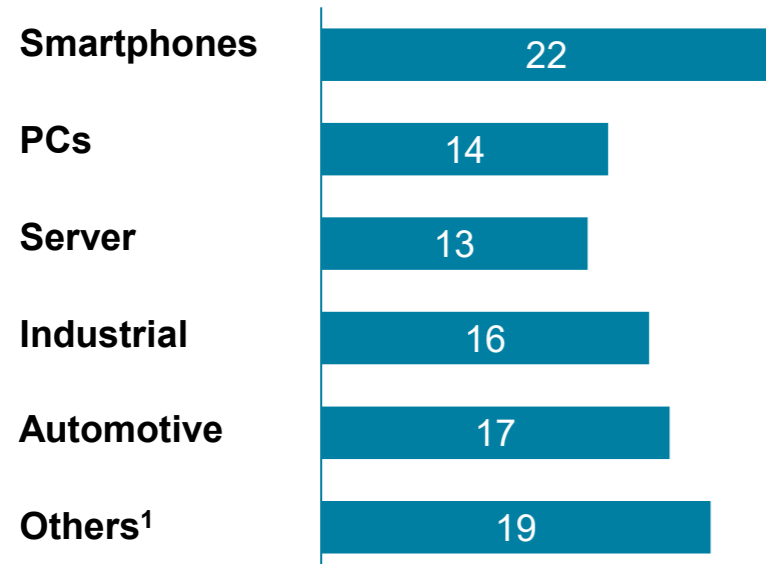


- 
**300 mm**  
strong growth
- 
**200 mm**  
slightly increasing
- 
**≤150 mm**  
decreasing

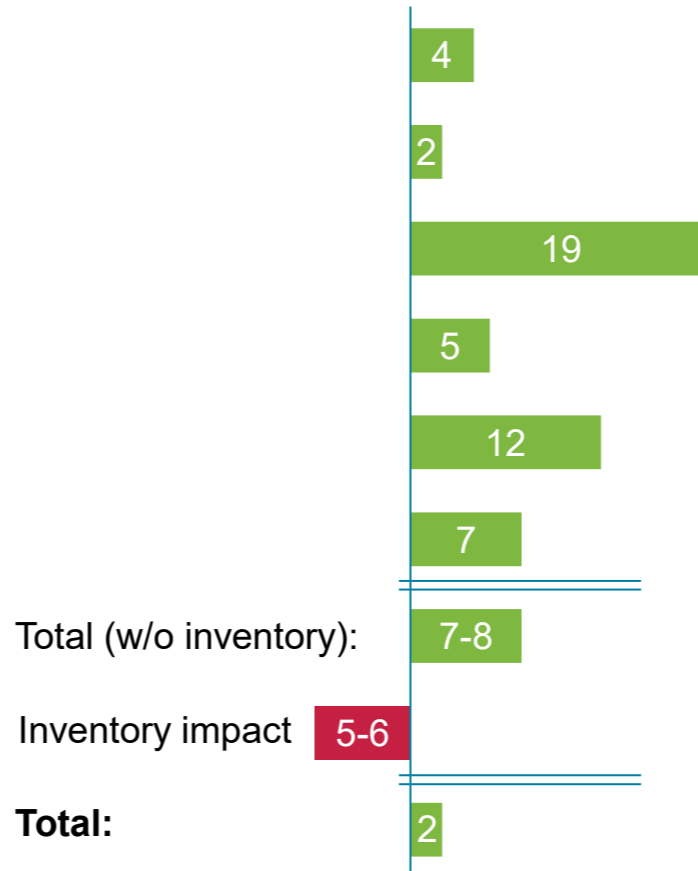
<sup>1</sup> Source: SEMI up to Dec 2023; <sup>2</sup> Siltronic CAGR expectation until 2028 (base year 2022) - the actual CAGR may deviate from expectations

# SLIGHT INCREASE IN WAFER DEMAND EXPECTED FOR 2024

Consumption of wafers by end use 2023, in %



Growth in demand for wafer area 2024 vs. 2023, in %



## AI Server

up to 8x more wafer area



## EV

60-100% more wafer area



## Digitization

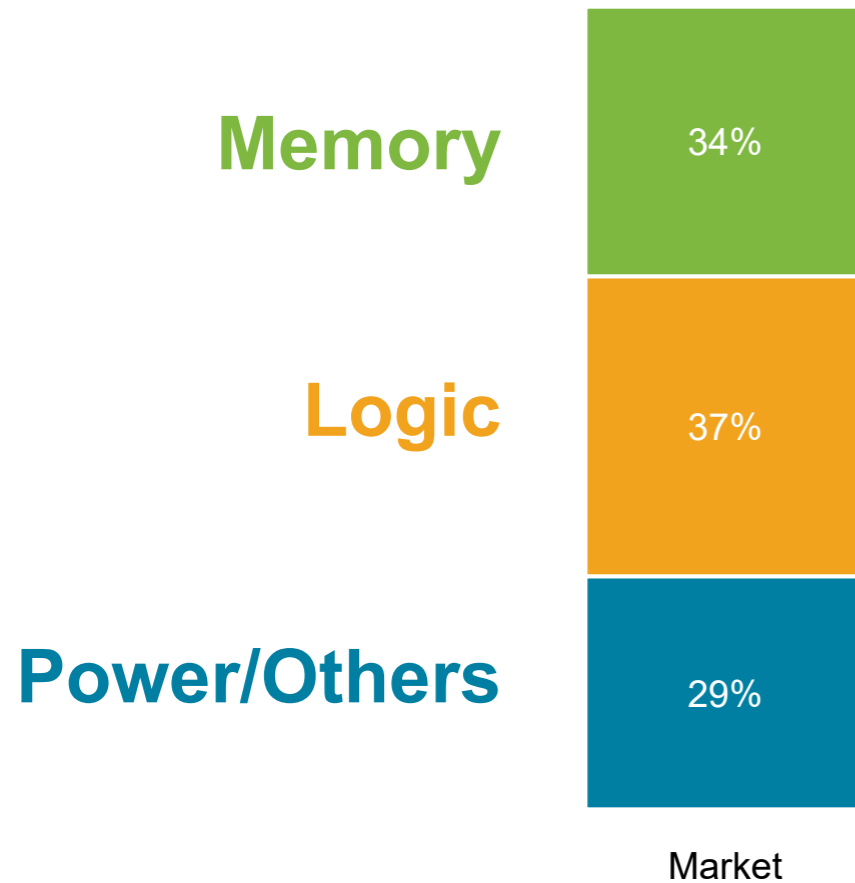
will further increase wafer demand

Source: Siltronic estimates, <sup>1</sup> Infrastructure Telecommunications, game consoles, consumer electronics such as televisions, white goods such as refrigerators



# TOTAL INVENTORIES FOR MEMORY AND LOGIC HAVE PEAKED IN 2023, POWER INCREASING

Demand by segments in % of total demand in 2023<sup>1</sup>



Semiconductor inventories per sector<sup>2</sup>



Inventory levels decreasing slowly; DRAM better than NAND



Inventories still elevated but closer to normal levels



Power inventories increasing



## Roughly 1/3

as a rule of thumb is the split between the three segments

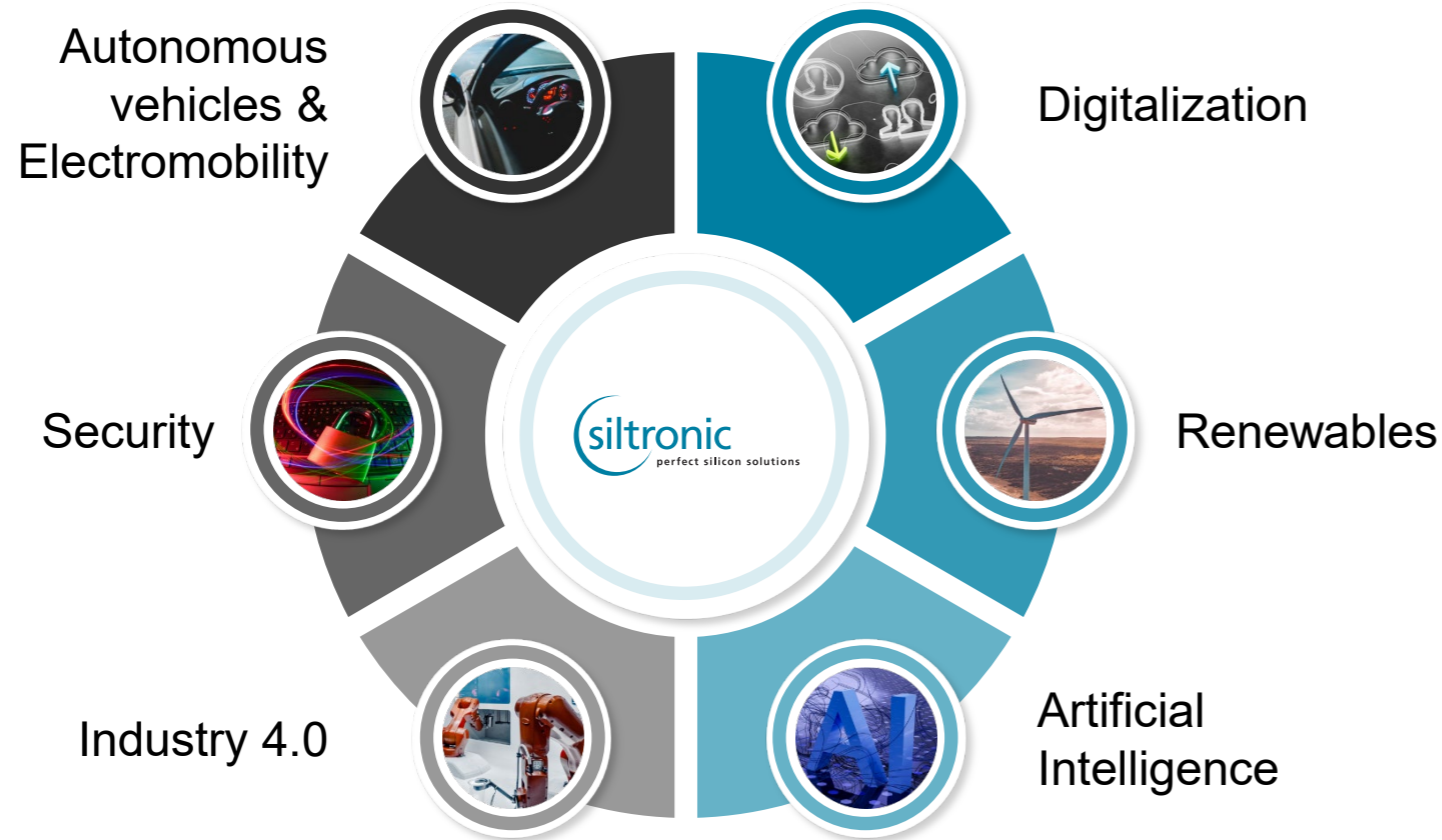


## Siltronic

split between the segments is similar to the market

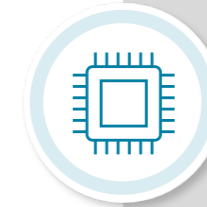
<sup>1</sup> Source: Siltronic estimates <sup>2</sup> Source: Respective company data up to Q4 2023 including finished goods, Work-in Progress and raw materials

# MEGATRENDS WILL DRIVE WAFER DEMAND



## Siltronic

well positioned to support each megatrend



## All segments

will participate and Power with over proportional growth

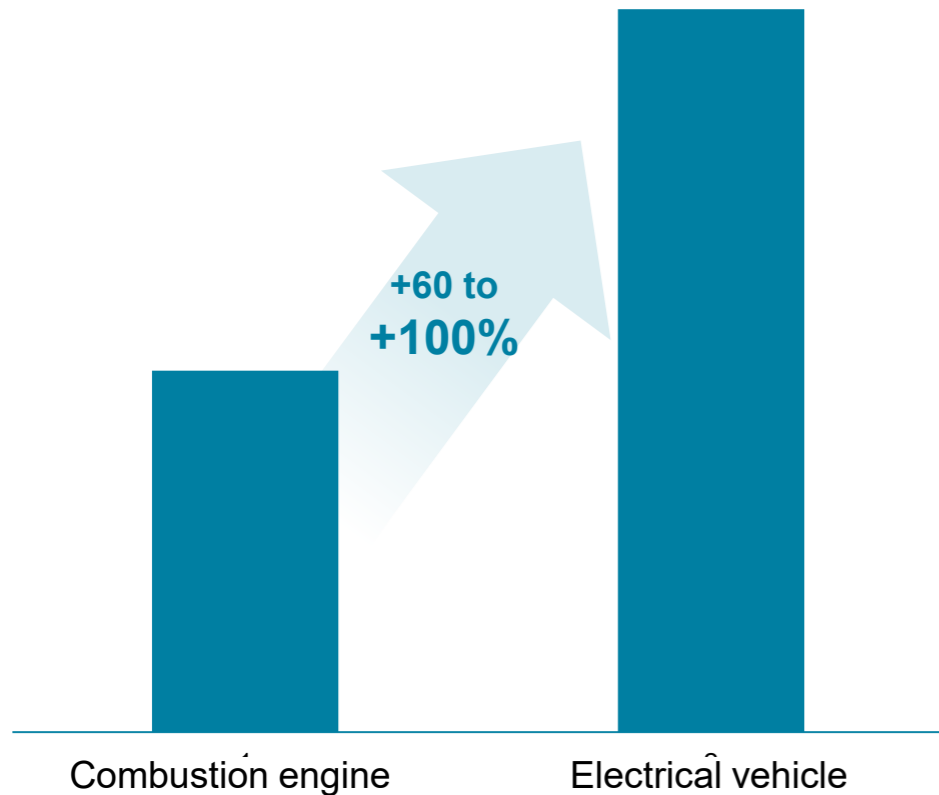


## Key benefits

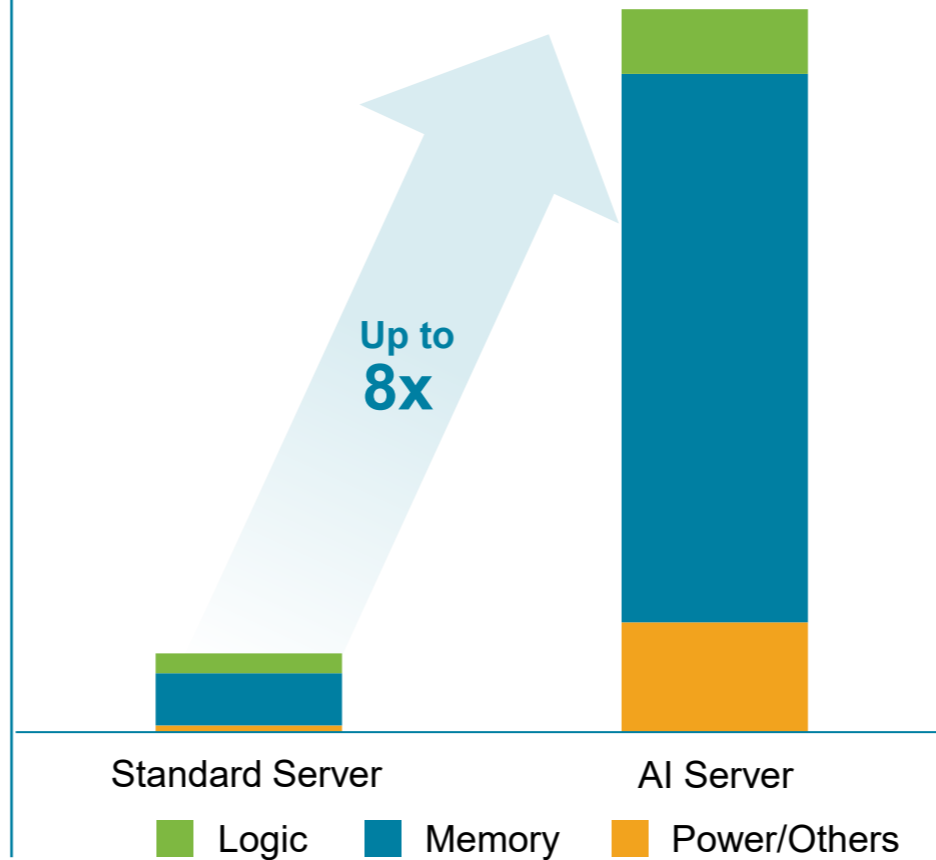
from strategic focus on Leading Edge and Power market

# FOR EXAMPLE: ELECTROMOBILITY AND AI ARE PUSHING WAFER DEMAND

Silicon content between combustion engine and electrical vehicle in cm<sup>2</sup> per car



Silicon content between standard server vs. AI server in cm<sup>2</sup> per server



**~40%**  
of light vehicles expected to be EV's by 2028



**>70,000 m<sup>2</sup>**  
Siltronic wafers in xEV's in 2028 will drive Power wafer demand



**AI server**  
Will grow with a CAGR of >30%, strong need for leading edge wafers

Source: BS Sept. 2023 Global I/O Semiconductors; UBS May 2023; Omdia Q4 2022; Siltronic Marketing estimates

# INVESTMENT PEAK FABNEXT BEHIND US

## Project Status



On track, on budget



Focus on qualifying customers



Ramp speed for 2024 as communicated, further decision with lead time of 18 – 24 months



Commissioning started in early 2024, depreciation to start in Q2 2024

## Commercial Facts



Advantages:  
High automation, high epi share,  
economies of scale, state of the art



High LTA share



Ramp costs will burden profitability  
by up to 3%–points (mainly labor,  
material, energy)

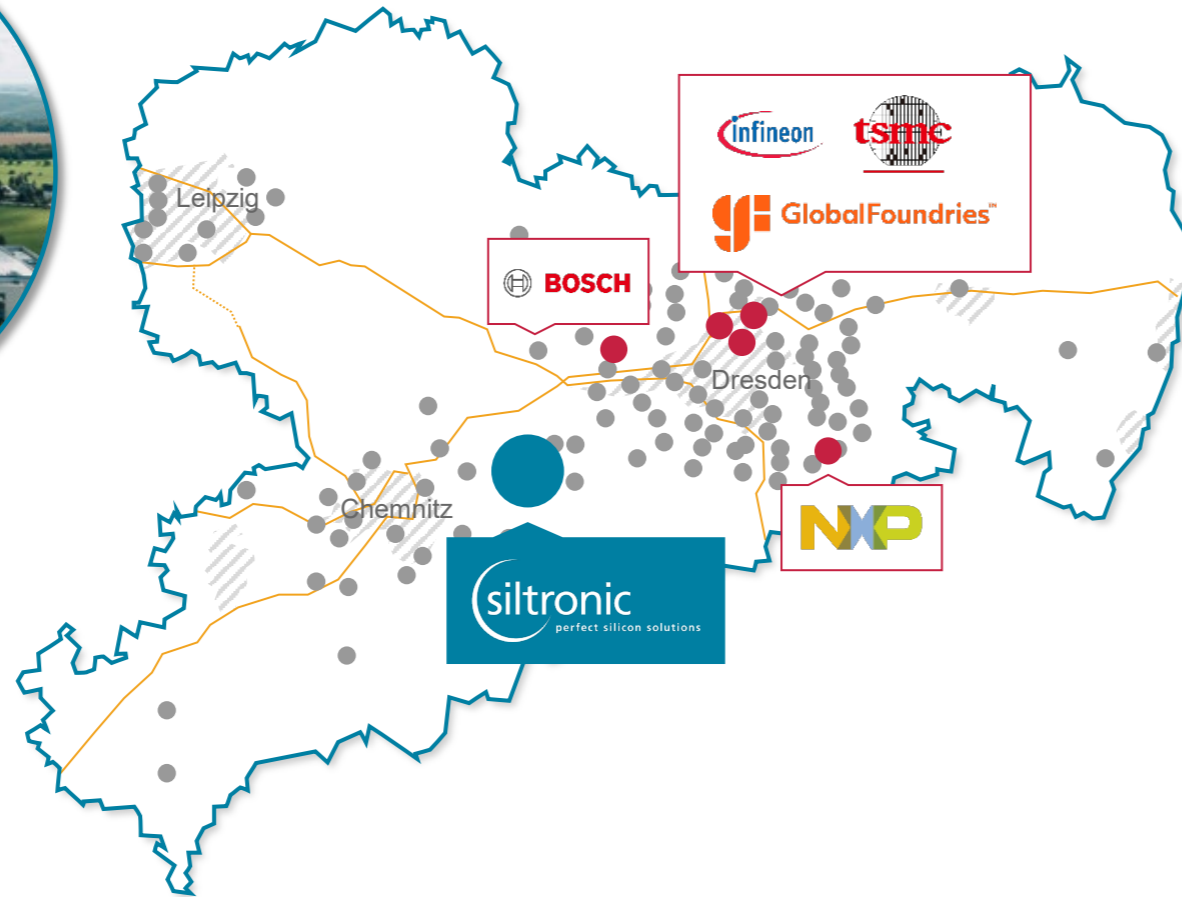


EBITDA-margin above  
50% mid-term





# FURTHER IMPROVED PRODUCT MIX FUELED BY INVESTMENTS (E.G. FREIBERG)



**Every  
3<sup>rd</sup> to 2<sup>nd</sup>**  
semiconductor in the  
EU is from this region



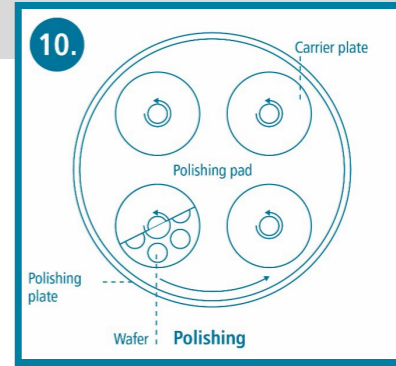
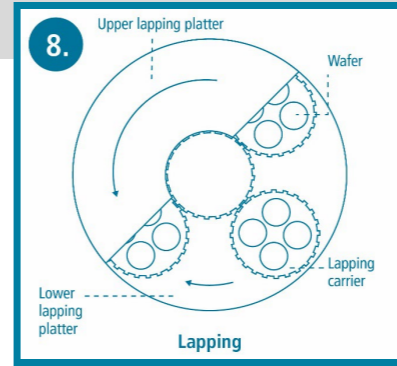
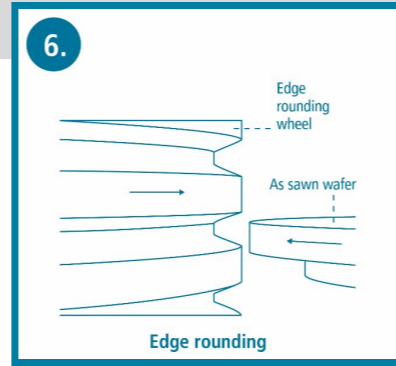
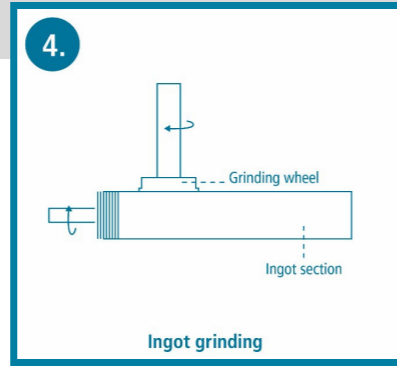
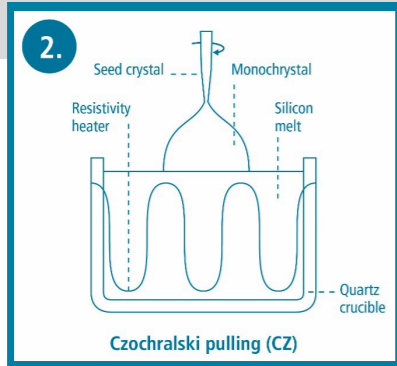
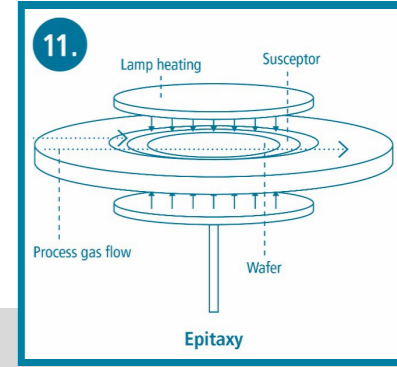
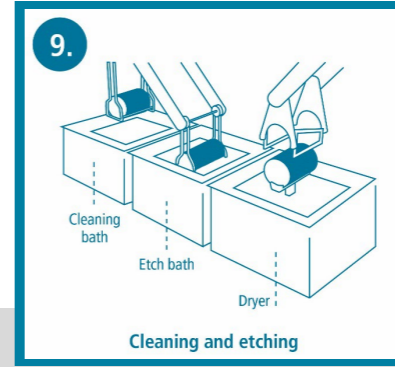
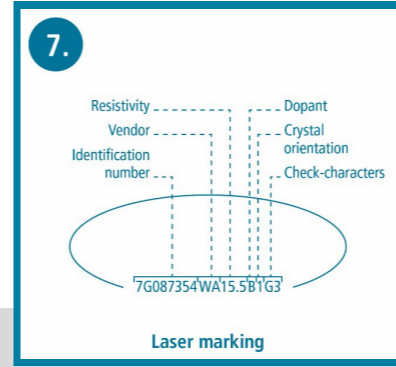
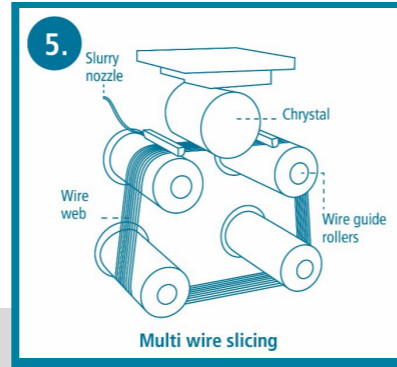
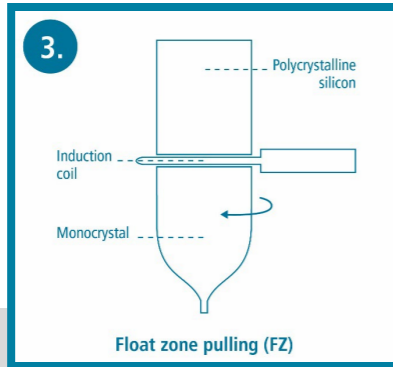
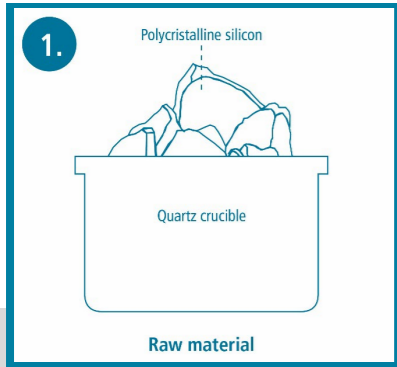
**Investments**  
of more than EUR 1 bn  
since 1995 by Siltronic



**#1 customers**  
in Logic, Memory and  
Power served from  
Freiberg

Source: Siltronic; Silicon Saxony/Wirtschaftsförderung Sachsen

# WAFER PRODUCTION PROCESS





# OUR UNIQUE R&D AND INNOVATION FOCUS IS ANOTHER IMPORTANT GROWTH DRIVER

**R&D**

hub in Germany



**450**

R&D employees



**1,900**

patents



**4–5%**

of sales planned  
as R&D spendings



Partnering with leading innovation platforms and joint development projects with customers



Leibniz Institute  
for high  
performance  
microelectronics



R&D Innovation Strategy

Stay one generation ahead  
as a technology leader

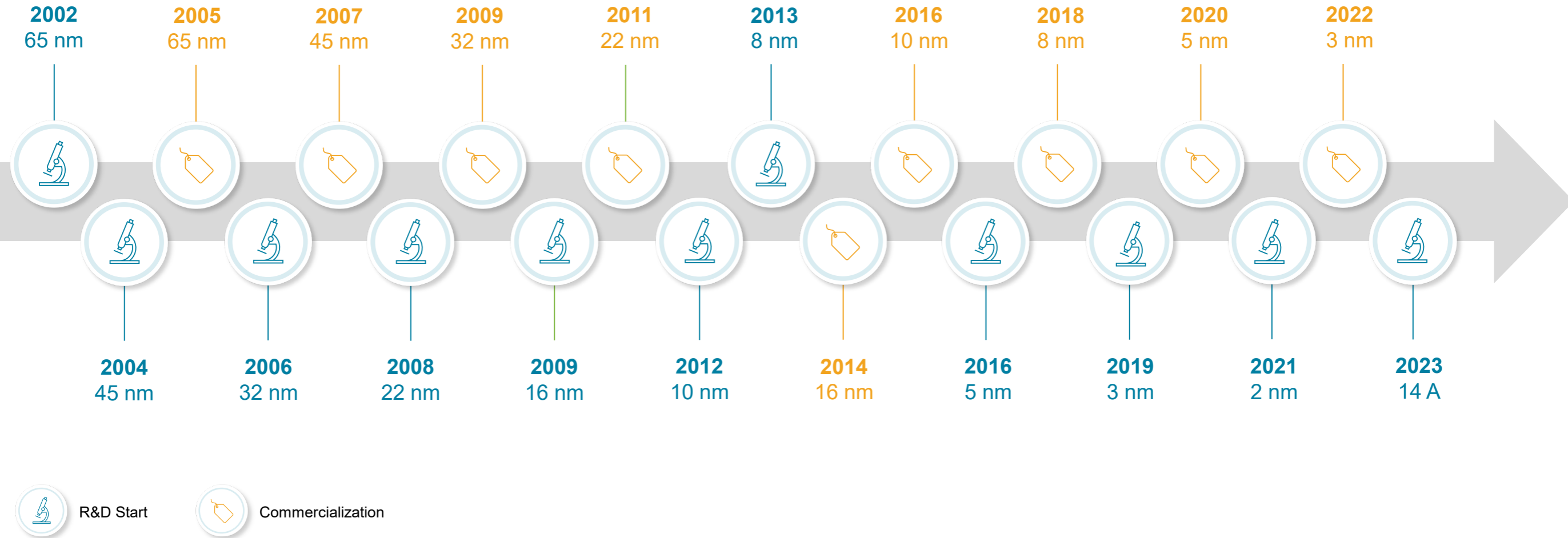
Focus on Leading Edge and Power

Strengthen and expand our product  
portfolio

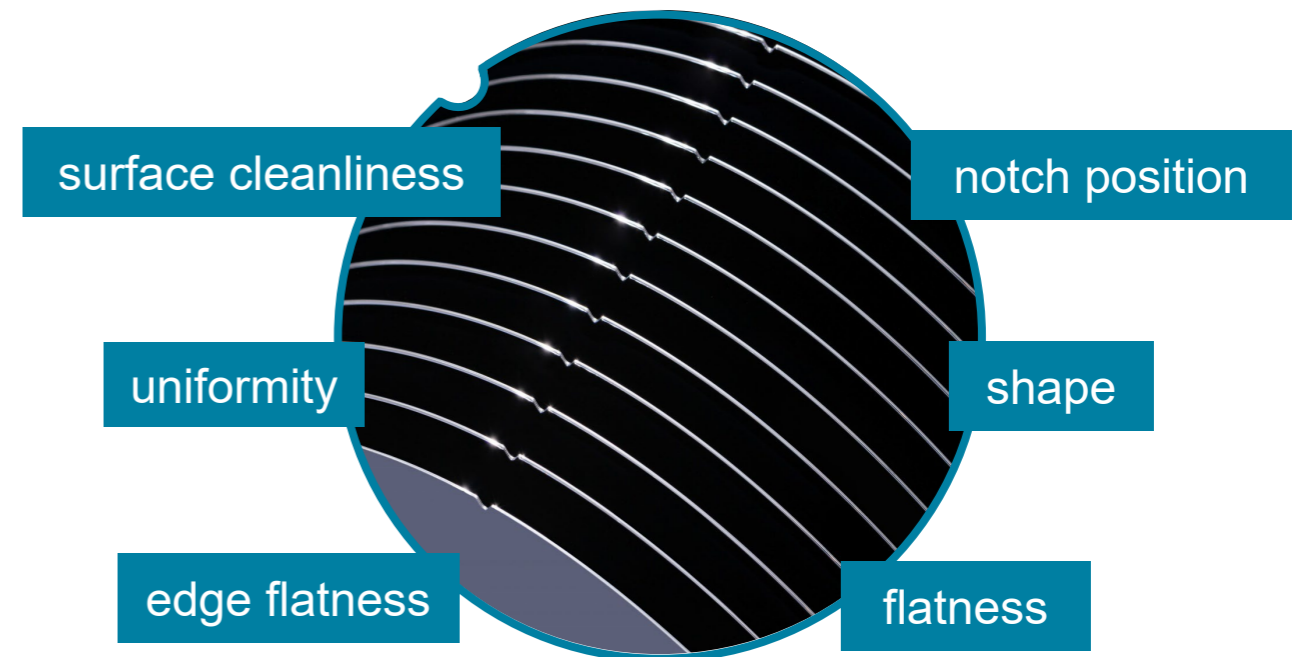
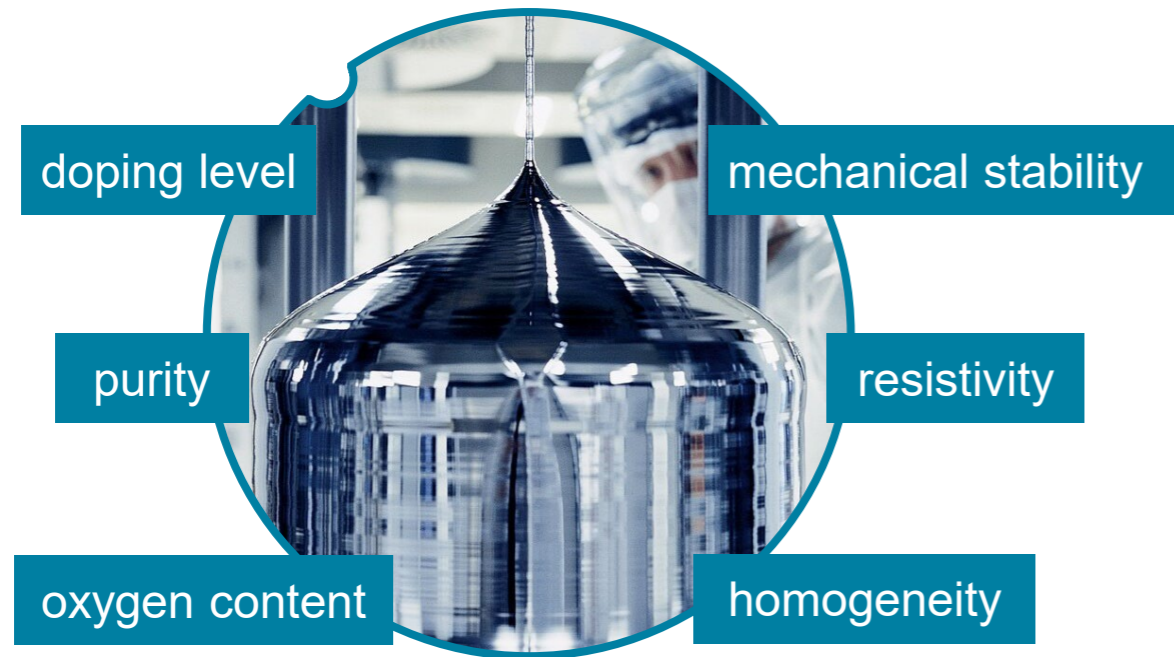
Further improve our technology  
and processes

Find new business opportunities

# SILTRONIC HAS A PROVEN TRACK RECORD



# A NUMBER OF KEY INGOT & WAFER PROPERTIES DEFINE THE WAFER SPECIFICATION AND ITS FURTHER USE BY THE CUSTOMER



# PURITY AND FLATNESS REQUIREMENTS FOR WAFERS ARE EXTREME, AS SCALING THEM INTO THE MACRO WORLD SHOWS

## Particles

Particle size specified in the nm range. Requirements are equivalent to a maximum of 10 grains of sand distributed over the city of Munich - and no pebble or rock



## Flatness

20 nm on a wafer are equivalent to the height of a leaf on the surface of Lake Chiemsee – or a single bacteria on a tennis court.



## Impurity

„parts per trillion“ (ppt) is equivalent to a sugar cube diluted in a small lake – or a single grain of salt in a tank truck





# COST-COMPETITIVENESS A PREREQUISITE IN THE WAFER INDUSTRY

## Major cost items 2023



Labor



Depreciation



Supplies

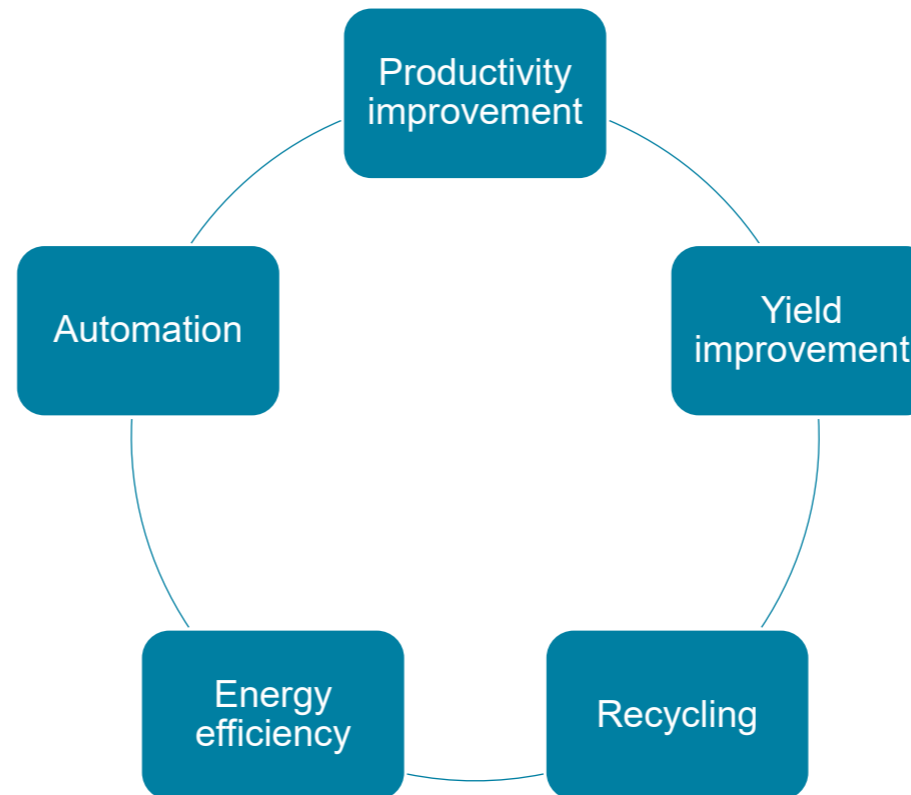


Energy



Polysilicon

## Continuous cost roadmaps to counter unit cost increases



## Costs

are monitored on an ongoing basis



## Labor & Depreciation

are the two largest cost items

# OUTLOOK AND FINANCIAL STRENGTH

Our ambitions until 2028



# OUTLOOK 2024 - HIGH INVENTORIES BURDEN BUSINESS DEVELOPMENT

## Sales

In the region of 2023  
EUR/USD: 1.10, stable ASP's

## EBITDA Margin

In the region of 23 w/o ramp cost,  
burdened by up to 3%-points ramp cost

## Depreciation

Nearly doubled vs. 2023

## EBIT

Significantly below 2023

## Capex

below EUR 600 mn

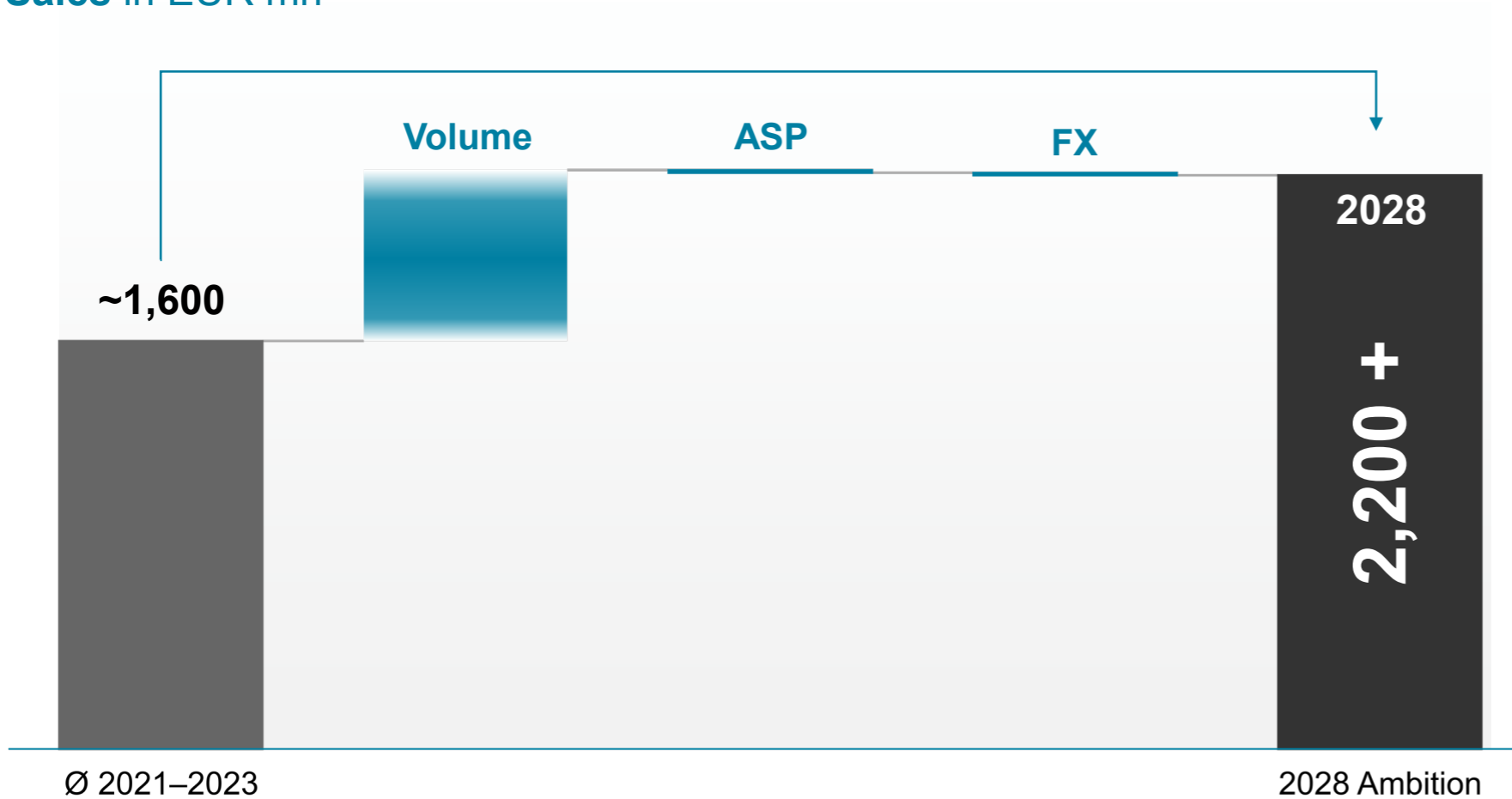
## Net cash flow

Above 2023 but still negative



# BY 2028 OUR SALES AMBITION IS >EUR 2.2 BN DRIVEN BY VOLUME AND CAPACITY EXPANSION

Sales in EUR mn



## Volume effect

Assumed volume growth  
2028 vs. 2022

- Total CAGR 4–5%
- 300 mm CAGR 6%

Capacity expansion  
FabNext along with market  
growth



## ASP effect

Overall stable



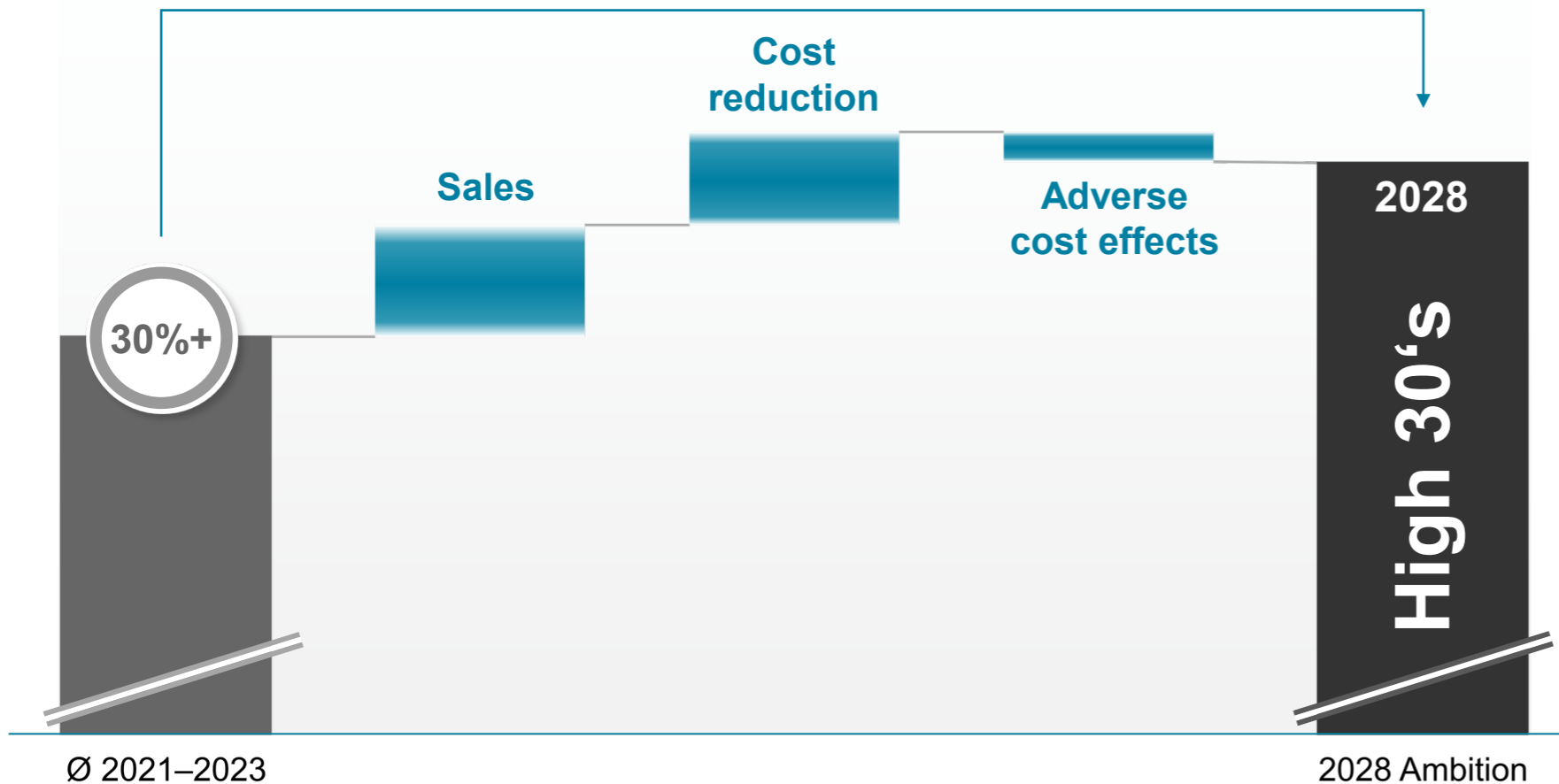
## FX effect

stable, EUR/USD 1.10

Charts not to scale

# PROFITABLE GROWTH UNTIL 2028 IS SUPPORTED BY VOLUME GROWTH AND COST ADVANTAGES

EBITDA-Margin in %



## Sales

ASP/FX flat

Additional volume mainly from FabNext (with fix cost build-up)



## Cost reduction

Cost reduction programs

Invest in new equipment and automation

Shift towards Singapore with cost advantage



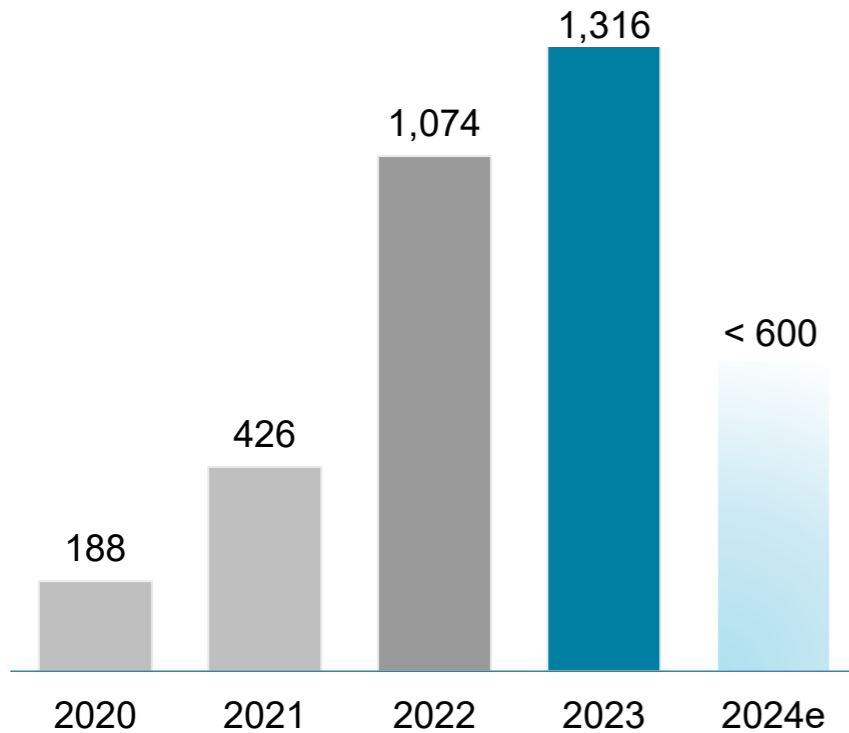
## Adverse cost effects

Inflation

Charts not to scale

# TOP PRIORITY: INVESTMENTS IN ORGANIC GROWTH

Capital expenditure  
in EUR mn



Capital expenditure  
until 2028 in EUR mn

**FabNext**  
capex depending on  
ramp speed



**Steady state capex**

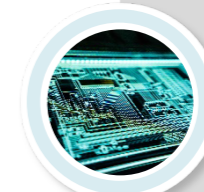
Ø 2024–2028

**EUR 200 mn p.a.**

until 2028



**Maintenance**  
of business



**Capability**  
enhancement “staying  
one generation ahead”



**Product mix**  
ongoing improvement

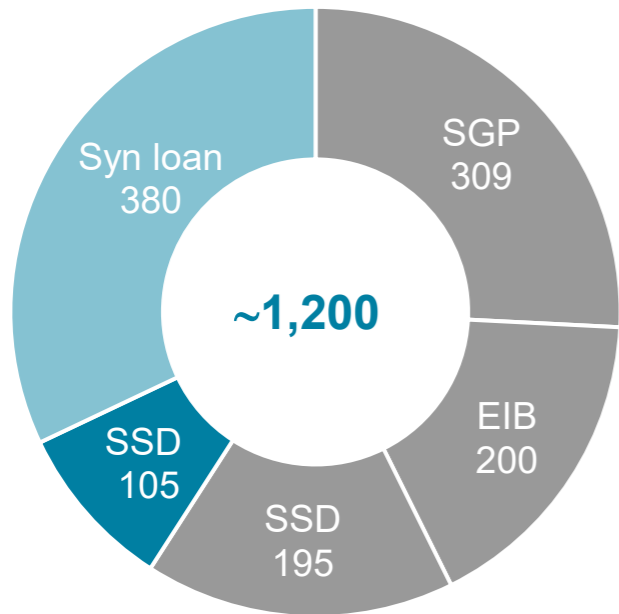


**Cost  
efficiency**  
e.g. automation

Charts not to scale

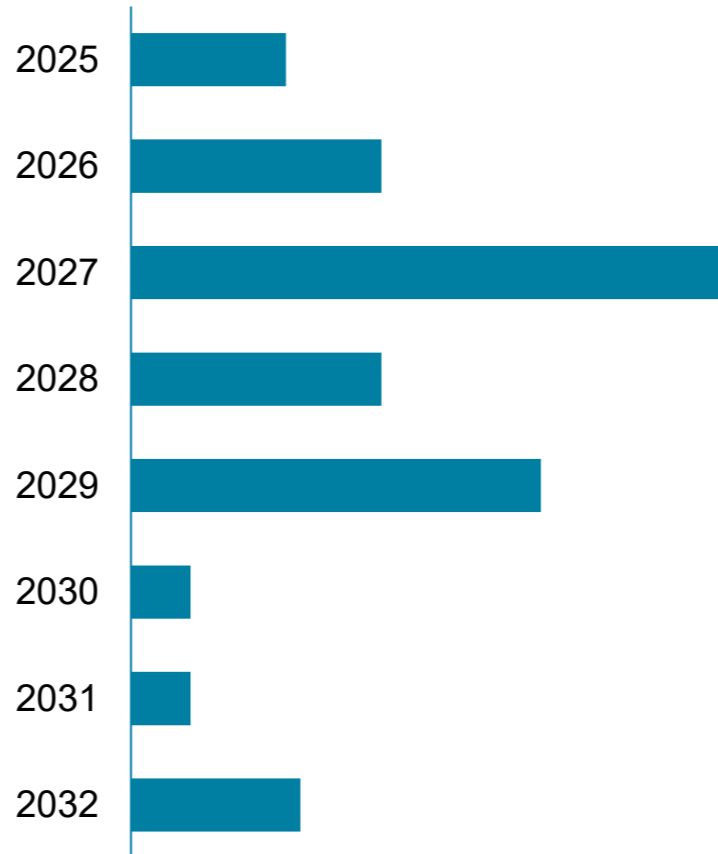
# OPTIONS FOR REFINANCING TO BE EXAMINED

Debt financing instruments in place in EUR mn



- Term loan and revolver not drawn yet
- Variable loan fully drawn
- Fixed loan fully drawn

Duration profile of debt financing without Syn loan



## Repayment

of customer prepayments from 2024 and of debt starting from 2025 onwards



## Equity ratio

Ambition >50% in 2028



## Net leverage

Ambition <1.0x in 2028 (Net debt/EBITDA)

# CORPORATE TAX RATE WILL INCREASE

## Singapore



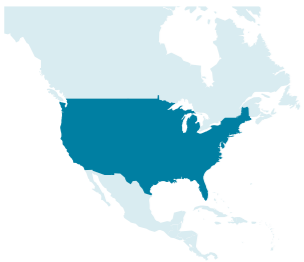
**~15–17%**  
effective tax rate

## Germany



**~30%**  
effective tax rate

## USA



**~25%**  
effective tax rate



## Pioneer status

until March 2024 in  
Singapore for SSW



## Minimum

effective tax rate in  
Singapore from 2025  
acc. to OECD Pillar 2

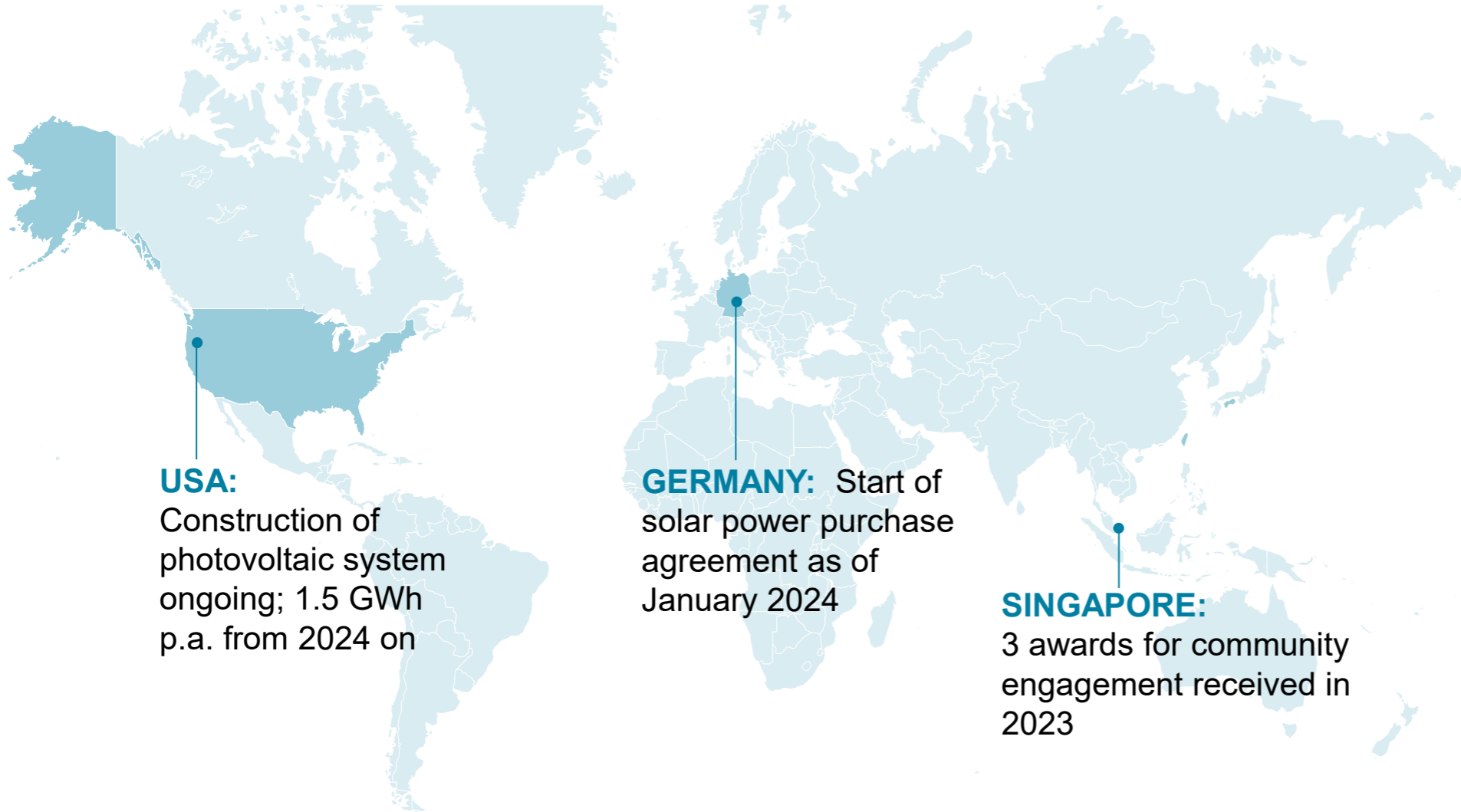


# ESG @ SILTRONIC

Clear commitment to an emission-free future



# SUSTAINABILITY HIGHLIGHTS



**USA:**  
Construction of photovoltaic system ongoing; 1.5 GWh p.a. from 2024 on

**GERMANY:** Start of solar power purchase agreement as of January 2024

**SINGAPORE:**  
3 awards for community engagement received in 2023



**-22%**  
absolute CO<sub>2</sub> emissions scope 1+2 in 2023 compared to 2021



**12%**  
increase in waste recycling ratio compared to 2015



**300 mn EUR**  
Siltronic AG issued its first ESG-linked promissory note loan in 2022

(1) Scope 1 and 2 emissions per wafer area produced

# SUSTAINABILITY: CORPORATE RESPONSIBILITY AND COMPETITIVE ADVANTAGE

## Strategy

we plan sustainability right from the start



## Top level

priority and responsibility



## All stakeholders

included



## Fast

response to changing requirements



### Key Performance Indicators

#### Climate

2030 -42% CO<sub>2</sub> emissions<sup>(1)</sup>

60% renewable energy

2045 Net zero<sup>(1)</sup>

100% renewable energy



#### Resources

##### Energy

2030 -20% energy intensity<sup>(2,3)</sup>

##### Water

2030 -20% water intensity<sup>(2,3)</sup>

##### Waste

2030 +25% recycling rate<sup>(2)</sup>

#### Safety

LTIF<sup>(4)</sup> ≤2.0 | zero chemical accidents



### Voluntary Commitments



WE SUPPORT



Responsible Business Alliance  
Formerly the Electronic Industry Citizenship Coalition  
Advancing Sustainability Globally

### Monitoring ESG performance



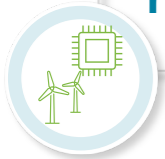
Responsible Business Alliance  
Formerly the Electronic Industry Citizenship Coalition  
Advancing Sustainability Globally

(1) Scope 1 and 2 | base year 2021 (2) 2030 vs. base year 2015 (3) Consumption per wafer area (4) Lost Time Injury Frequency per one million working hours

# SILTRONIC ENABLES TECHNOLOGIES FOR A SUSTAINABLE FUTURE

## Power focus

Power chips are crucial for **decarbonization**, they enable **renewable energy** and **EV's**



Focus on **Power** wafers  
+  
R&D focus on **special products**  
and **new materials**



## Leading edge focus

New chip generations increase **energy efficiency** and need **less power**



Focus on **Leading Edge** wafers  
+  
R&D focus on **new design rules**



## Strategy

on Leading Edge and Power wafers support sustainability strategy



## Investments

needed to keep our equipment state of the art for Leading Edge wafers



## R&D focus

is crucial for our sustainability strategy

EV = Electric Vehicle

# THE SILTRONIC EXECUTIVE BOARD



**Dr. Michael Heckmeier**  
CEO

Born: November 26, 1967, Titisee-Neustadt Germany

#### **Professional Career**

Since May 2023: CEO  
Appointed until May 5, 2026

2018: Executive Vice President, Global Head of Business Unit Display Solutions, Merck KGaA, Darmstadt  
2017: Executive Vice President, Global Head of Business Unit Display Materials, Merck KGaA  
2015: Senior Vice President, Global Head of Business Unit Pigments and Functional Materials, Merck KGaA  
2010: Senior Vice President of Liquid Crystal Research and Development, Merck KGaA  
1998 - 2006: Various senior positions at Merck



**Claudia Schmitt**  
CFO

Born: October 31, 1971, Mannheim Germany

#### **Professional Career**

Since July 2023: CFO  
Appointed until June 30, 2026


2017: Head of Corporate Controlling & Finance, Siltronic AG, Munich  
2009: Head of Corporate Controlling, Siltronic AG  
2004: Team lead Corporate Controlling, Wacker Chemie AG  
1998: Corporate Controlling, Wacker Chemie AG



# EXECUTIVE SUMMARY




# SILTRONIC IS...

 ...a global and on the same time the only western based player in a market crucial for future economic growth.


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 ...a technological leader with the proven track record to stay ahead of the curve.


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 ...excellently prepared to leverage the great potential from the numerous megatrends thanks to our expansion of global capacities.


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 ...well positioned in activities which promise the greatest growth potential: Power, Leading Edge and 300 mm.

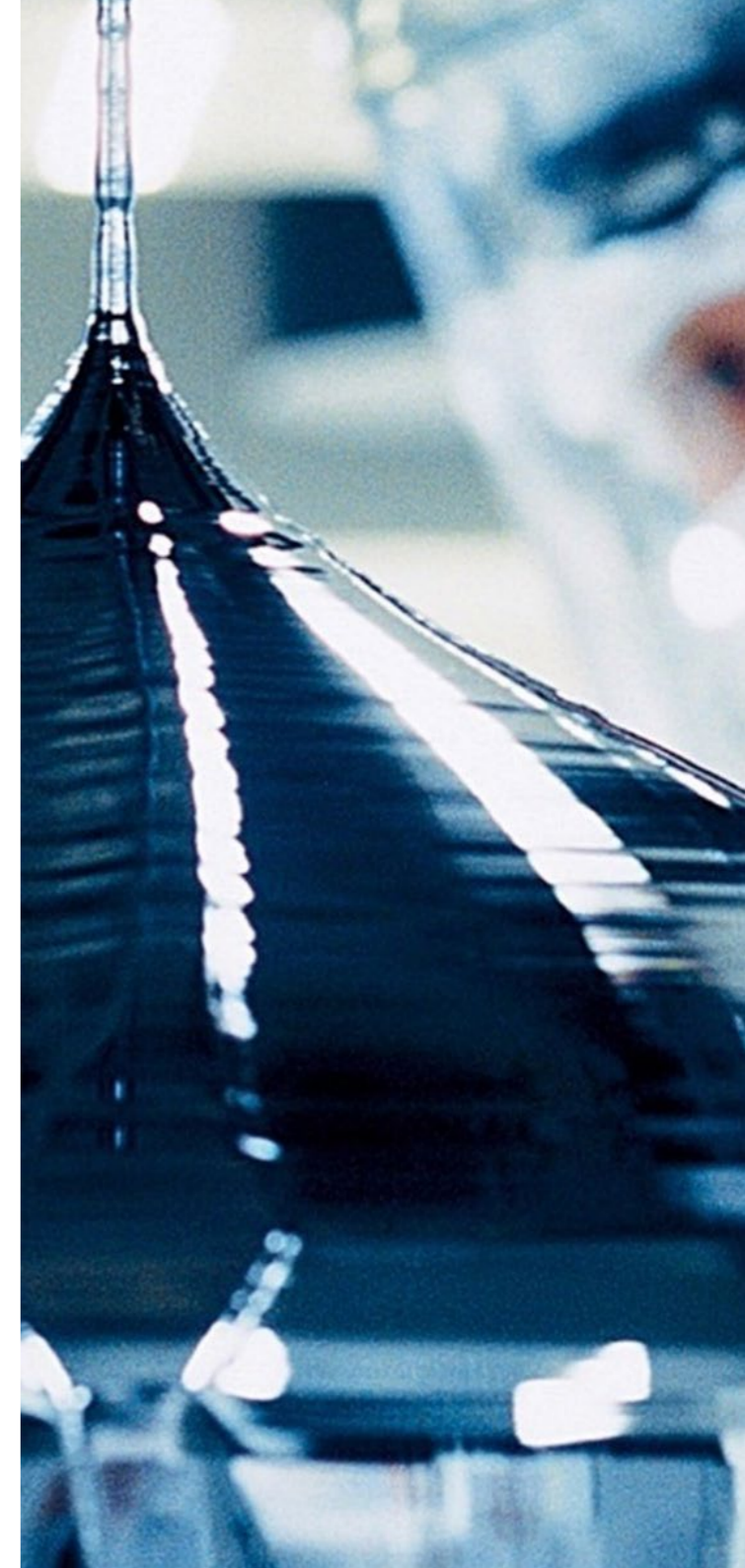
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 ...strong financials and has a good balance sheet quality.

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 ...growing profitably until 2028:

- Sales > 2.2 bn
- EBITDA ratio in the high 30s



# Financial Calendar and Events

March 19, 2024	May 02, 2024	May 13, 2024	May 15, 2024	May 22-23, 2024
<b>Jefferies Pan-European Mid-Cap Conference, London, UK</b>	<b>Quarterly Statement Q1 2024</b>	<b>Annual General Meeting</b>	<b>Stifel German Corporate Conference, Frankfurt</b>	<b>US Roadshow &amp; Berenberg European Conference, New York, USA</b>

## Investor Relations Contacts



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