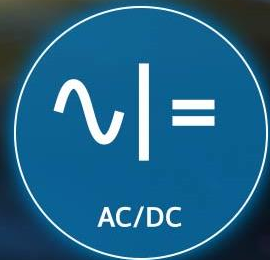
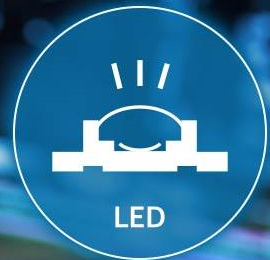


OCTOBER 2019



# SCHWEIZER ELECTRONIC AG



AGENDA

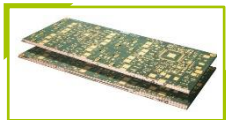


# COMPANY PROFILE

# COMPANY PROFILE



- Founded in 1849 and headquartered in Schramberg, Germany, SCHWEIZER is the 3<sup>rd</sup> largest producer of printed circuit boards (PCBs) in Europe.
- Publicly listed on the Frankfurt and Stuttgart stock exchanges (ISIN DE0005156236).
- Technology focus:
  - ✓ Autonomous vehicle solutions / sensors
  - ✓ E-Mobility / CO<sub>2</sub> reduction solutions
  - ✓ Industrial solutions
- Strategic partnerships with leading global PCB companies Meiko Electronics and WUS as well as the leading semi-conductor manufacturer Infineon



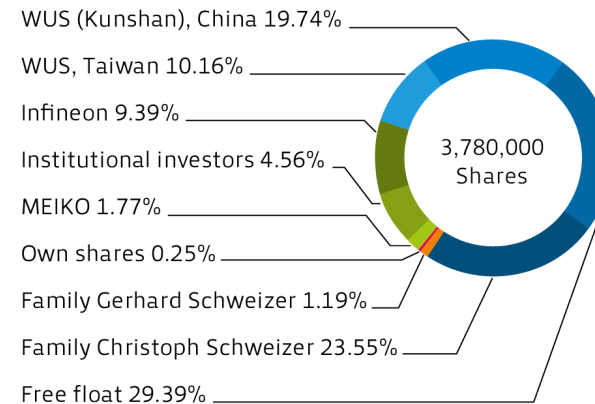
170 years of operations with  
61 years in PCB business

*Revolutionising the PCB industry  
with unique embedding solutions*



*An array of  
reputable strategic  
partners*

## Shareholders structure as of June 2019



# COMPANY PROFILE

## - KEY CUSTOMERS AND PARTNERS -

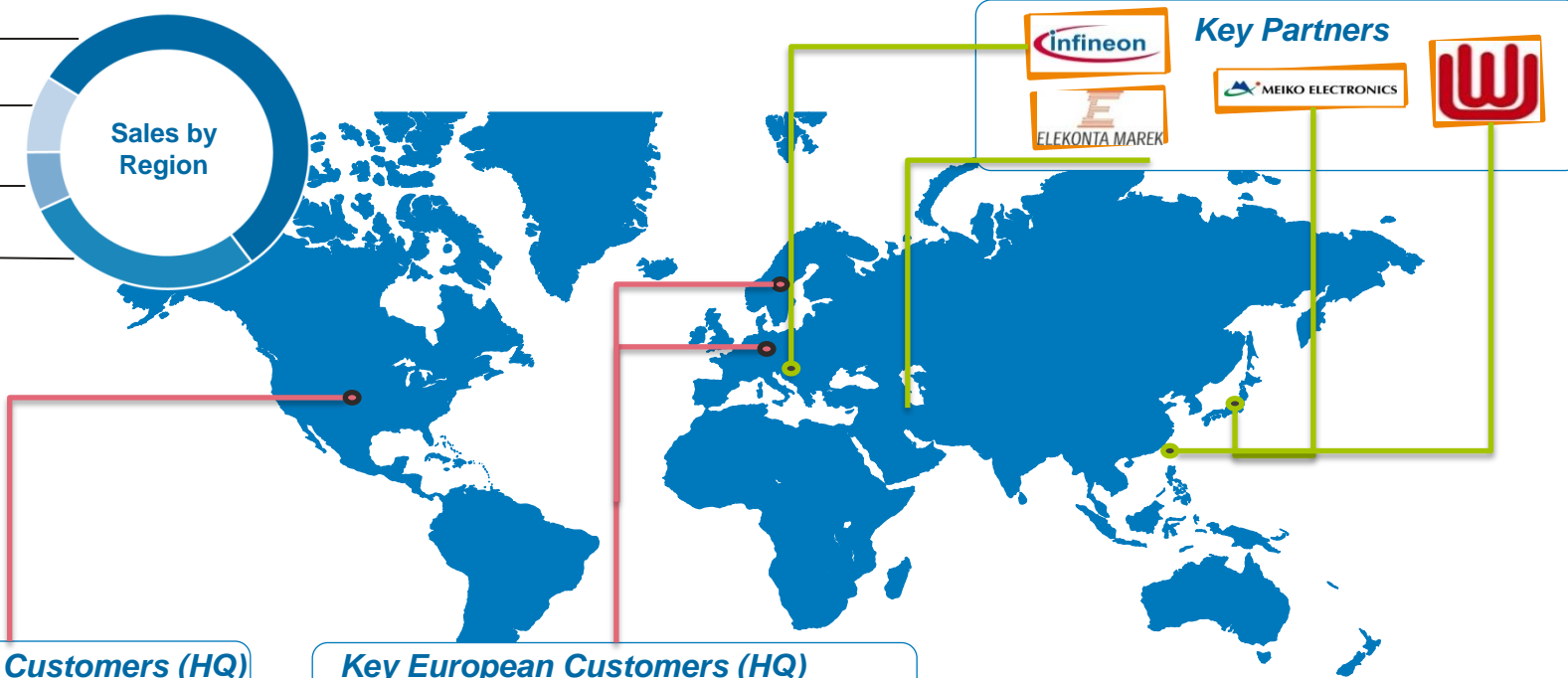


Germany 49%

Americas 10%

Asia 12%

Europe (w/o Germany) 29%



### Key American Customers (HQ)



### Key European Customers (HQ)



### Key Partners



# COMPANY PROFILE

## - KEY FINANCIAL FIGURES AND CERTIFICATES -



- Average growth rate 2.7 percent since 2015
  - Still well-filled order book
  - Focus segments are automotive, industrial electronics, further developing of aviation
  - Solid balance sheet figures
  - Net cash position
- 
- Current certificates  
ISO 9001, TS 16949, ISO 14001  
ISO 50001, EN 9100,  
NADCAP

million EUR	2018	2017	2016	2015
Revenues	125.3	120.9	116.1	115.6
EBITDA	9.2	8.4	9.5	11.4
EBITDA Margin (%)	7.3	7.0	8.2	9.8
EBIT	1.6	0.3	1.8	3.7
EBIT Margin (%)	1.3	0.3	1.6	3.2
Profit after Tax	0.5	3.5	0.6	1.5
EPS (EUR)	0.14	0.92	0.16	0.39
Open Orders	171.2	181.5	158.4	149.1
Order Intake	123.8	144.0	125.4	145.5
Total Assets	135.3	113.6	117.7	119.4
Investments	7.5	3.6	9.0	4.2
Equity Ratio (%)	46.6	54.9	55.1	56.5
Net Gearing (%)	-7.2	-6.5	-1.5	-5.1

AGENDA

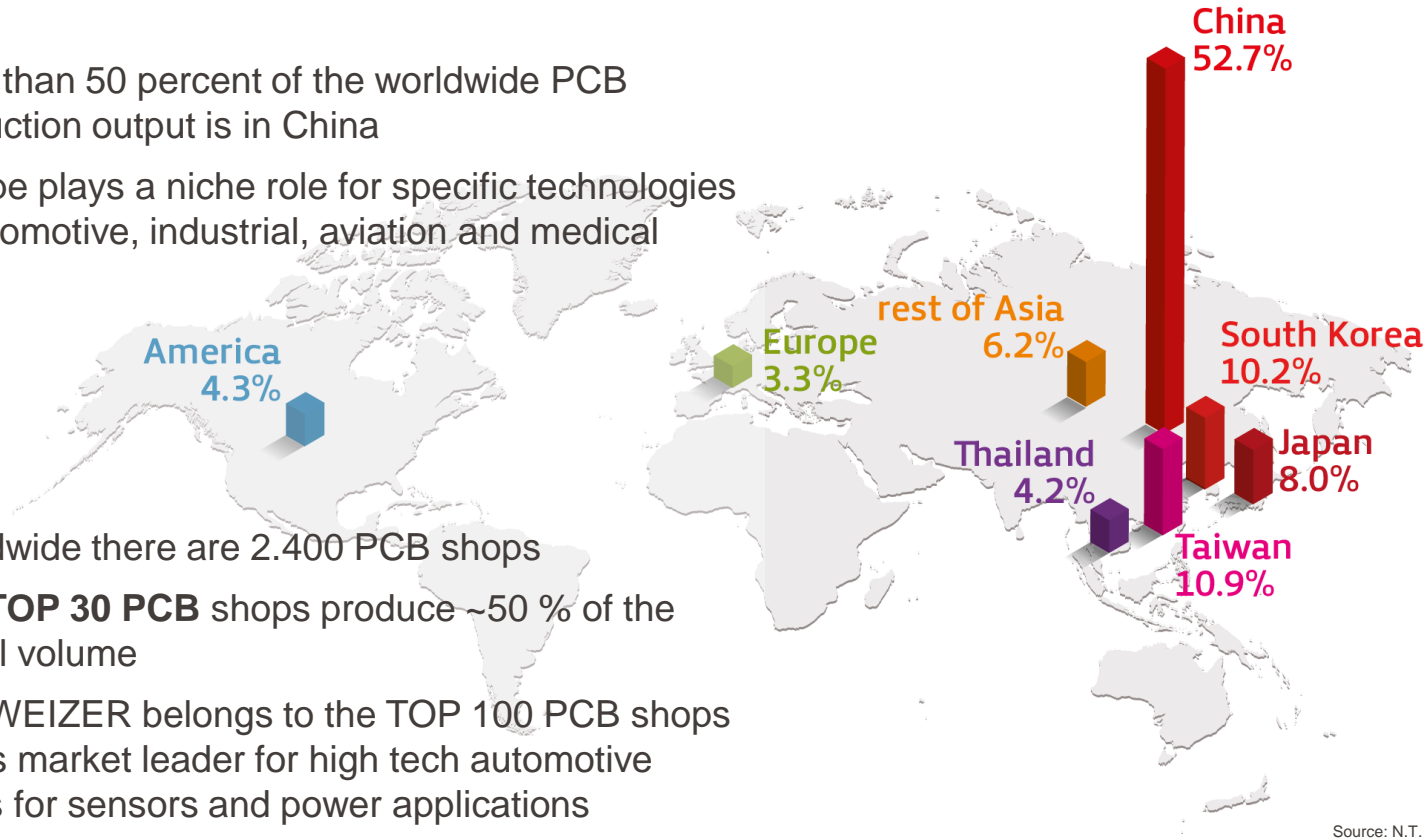


# PCB INDUSTRY

# PCB INDUSTRY – VOLUME IN 2018 ~75 BILLION USD



- More than 50 percent of the worldwide PCB production output is in China
- Europe plays a niche role for specific technologies in automotive, industrial, aviation and medical



- Worldwide there are 2.400 PCB shops
- **The TOP 30 PCB** shops produce ~50 % of the global volume
- SCHWEIZER belongs to the TOP 100 PCB shops and is market leader for high tech automotive PCBs for sensors and power applications

Source: N.T. Information, Q4/2018

AGENDA

# PCB MARKET



# MARKET SEGMENTS



# PCB MARKET

In a slightly shrinking total market Germany and East Asia show the largest downward trend.

Region	2017	2018	YoY	2019F	YoY
America	3.037	3.158	4,0%	3.174	0,5%
Germany	960	994	3,5%	939	-6,0%
Other Europe	1.385	1.257	1,2%	1.270	1,0%
Africa & Middle East	142	143	0,0%	145	1,4%
<b>West Total</b>	<b>5.524</b>	<b>5.552</b>	<b>3,1%</b>	<b>5.528</b>	<b>0,4%</b>
China	37.200	40.510	8,9%	39.880	-1,5%
Taiwan	7.685	7.780	1,2%	7.690	-1,2%
S. Korea	7.215	7.515	4,1%	7.214	-4,0%
Japan	5.625	5.654	0,5%	5.796	-1,2%
Thailand	2.980	3.132	5,1%	3.160	0,9%
Vietnam	2.620	2.704	3,2%	2.905	3,7%
Other Asia	1.738	1.668	-4,0%	1.700	1,9%
<b>Asia Total</b>	<b>65.063</b>	<b>68.963</b>	<b>6,0%</b>	<b>68.345</b>	<b>-0,9%</b>
<b>World Total</b>	<b>70.587</b>	<b>74.515</b>	<b>5,6%</b>	<b>73.873</b>	<b>-0,9%</b>

(N.T. Information Ltd)

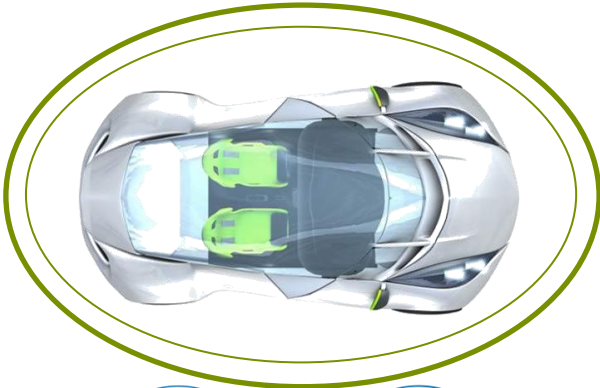
\* Note; Production includes assembly by PCB makers, particularly FPC



# PCBs FOR TOMORROWs MOBILITY



SENSE



SENSOR



CAMERA

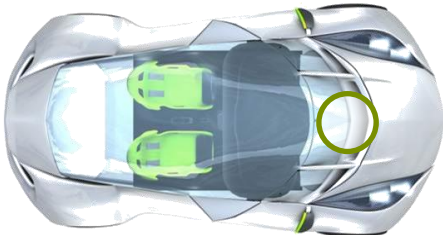


RADAR



LIDAR

COMPUTE

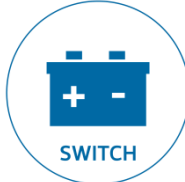
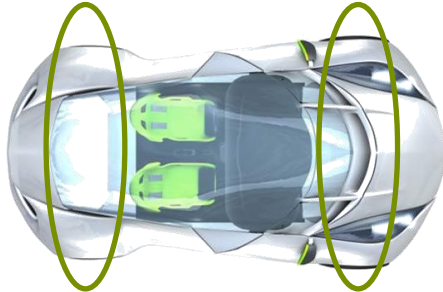


SERVER

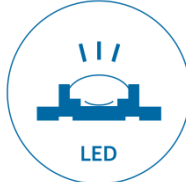


5G ANTENNA

ACT



SWITCH



LED



E-MOTOR



AC/DC

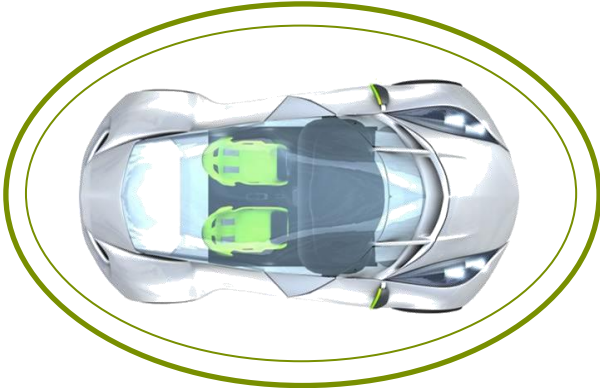


DC/DC

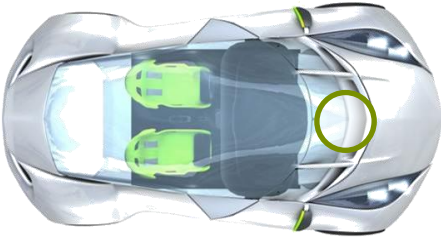
# PCBs FOR TOMORROWs CARS



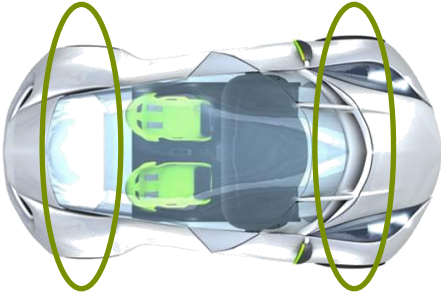
SENSE



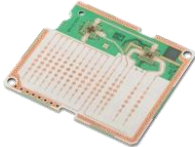
COMPUTE



ACT



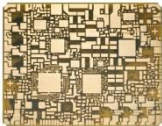
Radar



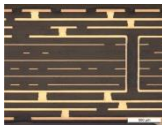
FR4 Flex



Bond



HDI



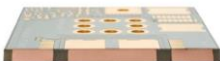
Heavy Cu



IMS



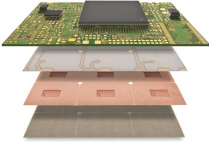
Inlay



Combi Board


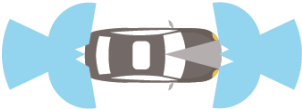
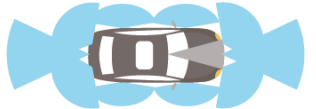







Embedding



# PCB MARKET – AUTOMOTIVE MARKET DRIVERS (I)

## - AUTONOMOUS DRIVING -

# of Sensors for autonomous cars	Level of automation		
	Level 2	Level 3	Level 4/5
Application*	Automatic emergency brake/ forward collision warning Parking assist Lane keep assist	Highway assist	Valet parking Highway and urban chauffeur
Radar # of modules**	 ≥ 3	 ≥ 6	 ≥ 10
Camera # of modules**	 ≥ 1	 2	 ≥ 8
Lidar # of modules**	0	 ≤ 1	 ≥ 1
Others	Ultrasonic	Ultrasonic Interior camera	Ultrasonic Interior camera V2X

Source: Infineon; \* Source VDA(German Association of the Automotive Industry), Society of Automotive Engineers; \*\* Market assumption

# PCB MARKET – AUTOMOTIVE MARKET DRIVERS (II)

## - E-MOBILITY AND CO<sub>2</sub> REDUCTION -

CO<sub>2</sub> Targets are hard to achieve – there is need for New Solutions

### Actual product mix in Europe

49,5 % Diesel

45,8 % Gasoline

2,7 % Hybrid

0,6 % eMotor

Others: 1,4%

Status: 2016

CO<sub>2</sub> Emission

118g

Penalty Payments in 2020/21

25 Bil. EUR

### Necessary measures to reach the specification in 2020/21.

#### Diesel

Assumption:  
Share will reduce

25 %

Optimization  
Combustion E.

25%

Increase  
Hybrid Share  
(w/o optimization  
Combustion Eng.)

49%

Increase Share  
eMobility

26%

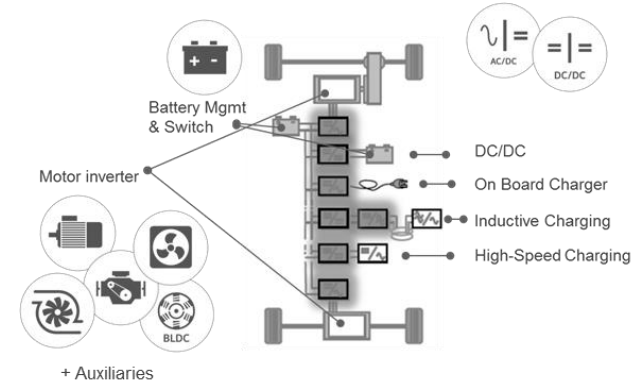
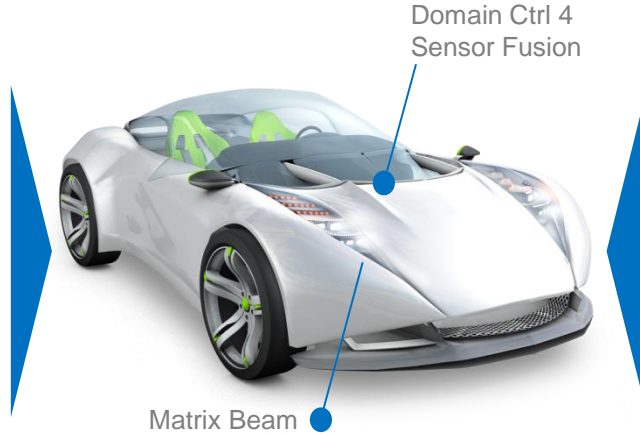
Specification  
2020/21

CO<sub>2</sub> Emission

95g

# TOMORROWS MOBILITY NEEDS ....

	More sensors required for any next level of automation		
	NCAP 5 Star, AD L2	AD L3	AD L4/L5
Application*	Automatic emergency brake/ forward collision warning		Valet parking
	Parking assist	Highway assist	Highway and urban chauffeur
Radar	Corner	MRR/LRR	Imaging
# of modules**	≥ 3	≥ 6	≥ 10
Camera	Corner	Corner	Surround
# of modules**	≥ 1	≥ 4	≥ 8
Lidar	0	≤ 1	≥ 1
Others	> Ultrasonic	> Ultrasonic > Interior camera	> Ultrasonic > Interior camera > V2X



Source: Volkswagen AG

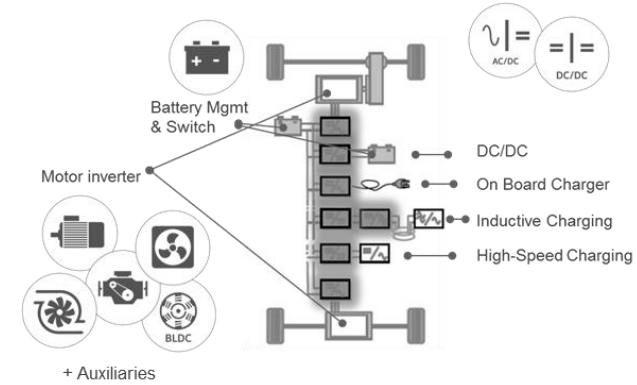
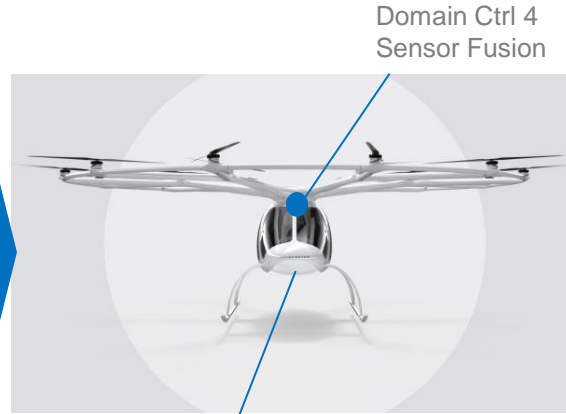
## Sense – Compute – Act → PCB Solutions



# TOMORROWS MOBILITY NEEDS ....

More sensors required for any next level of automation

	NCAP 5 Star, AD L2	AD L3	AD L4/L5
Application*	Automatic emergency brake/ forward collision warning	Parking assist Lane keep assist	Valet parking Highway and urban chauffeur
Radar # of modules**	Corner MRR/LRR ≥ 3 New: Corner starting 2020	MRR/LRR ≥ 6	Imaging ≥ 10 Surround
Camera # of modules**	≥ 1	Corner ≥ 4	≥ 8
Lidar # of modules**	0	≤ 1	≥ 1
Others	> Ultrasonic	> Ultrasonic > Interior camera	> Ultrasonic > Interior camera > V2X



## Sense – Compute – Act → PCB Solutions





# PCBs FOR TOMORROW'S INDUSTRIES

SENSE



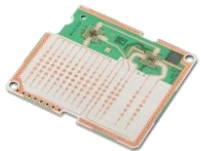
COMPUTE



ACT



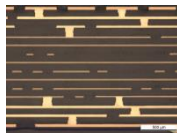
Radar



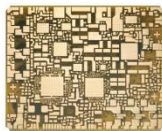
FR4 Flex



HDI



Bond



Heavy Cu



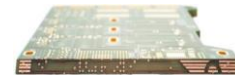
IMS



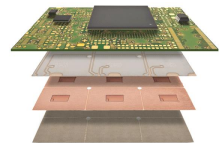
Inlay



Combi Board

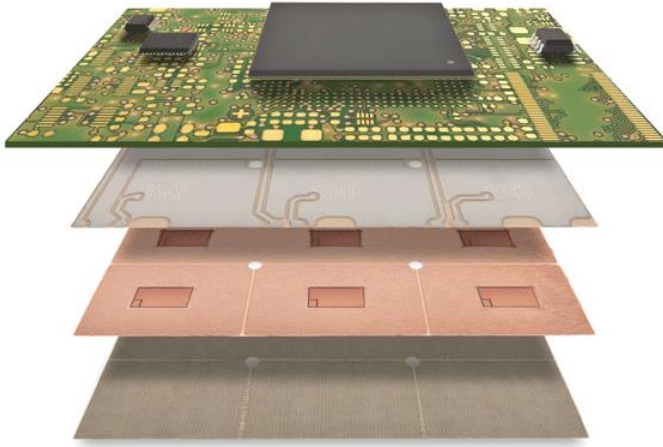


Embedding



# GROUNDBREAKING TECHNOLOGY

## Smart p<sup>2</sup> Pack<sup>®</sup>



in cooperation with



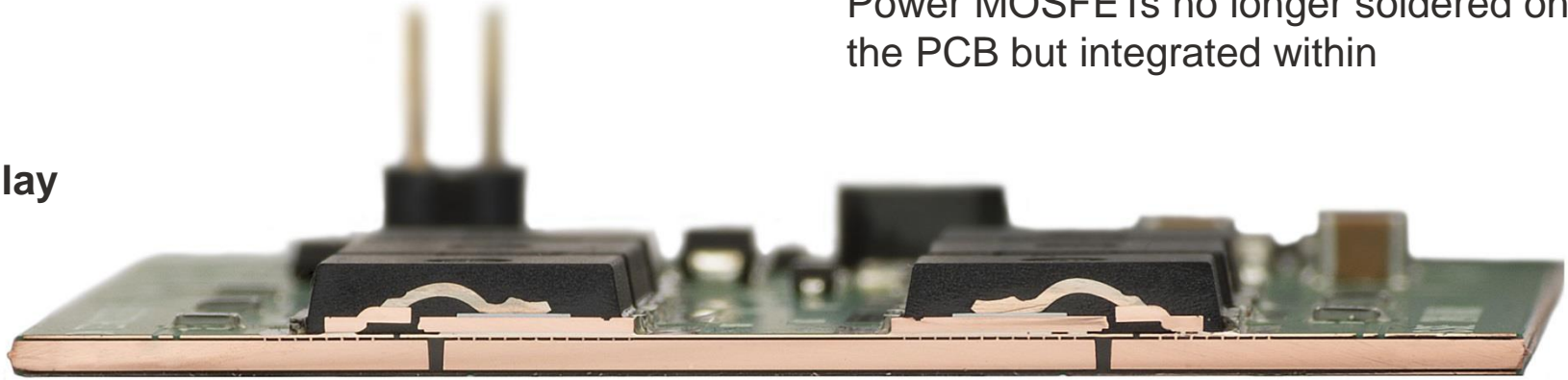
### Customer System Benefits

- Highest Power Density & Performance
  - Best Heat dissipation
  - Higher switching frequencies
- Best Robustness, Reliability, Quality & Safety
- Ease of System Assembly
  - Revolutionary System interconnect
  - Reduction of system complexity

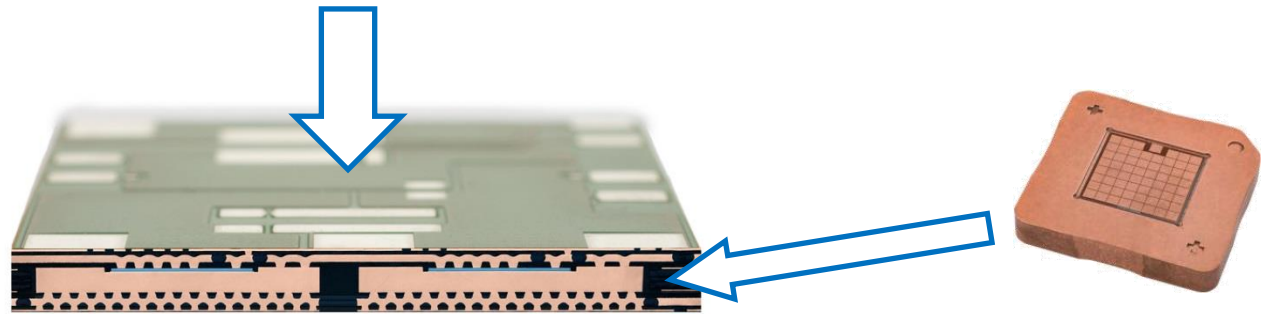
### ➔ Optimized System Cost

Power MOSFETs no longer soldered on the PCB but integrated within

Inlay



Smart p<sup>2</sup> Pack  
(Power Embedding)















# GROUNDBREAKING CHIP EMBEDDING TECHNOLOGY BOOSTS SYSTEM PERFORMANCE OF 48 V MILD HYBRID SYSTEMS




- Press release 6 May 2019
- Continental Powertrain is the first player to adopt the technology
- Used for 48 V starter generator
- Start of production in 2021
- Other Tier 1 in the project pipeline
- Aero OEMs very interested in this technology because of pure safety reasons.
- Bond wires are the critical part of the old way of connecting bare die chips.
- SCHWEIZER holds the international IP rights for this outstanding connecting technology which solves the customer pain points!



# POWER ON DEMAND APPLICATIONS

	Electrification ~ 500W – 5kW	Downsizing ~ 3kW – 25kW	Hybrid & E-Drive ~ >25kW
HV			 <p>Hybrid (+ DC/DC)</p>  <p>E-Car (+ AC/DC)</p>
48V	 <p>Active Roll Stabilize (Source: Silver Atena)</p>  <p>Climate Compressor</p>	 <p>48/12V DC/DC</p>  <p>Crankshaft Starter Generator (P2)</p>	 <p>Mild Hybrid (P4)</p>
12V (+ Option 14V)	 <p>Gearbox</p>  <p>Power Steering</p>  <p>E-Pumps + Fans + Heaters</p>	 <p>E-Compressor</p>  <p>Belt Driven Starter Generator (P0)</p>	<div style="border: 1px solid black; padding: 5px;"> <p>48V the Safe Voltage/ non Auto:</p> <ul style="list-style-type: none"> <li>• Industrial Drives e.g. Forklift</li> <li>• ICT (Telecom &amp; Server)</li> <li>• Battery Packs</li> </ul> </div>

# POWER ON DEMAND APPLICATIONS

	Electrification ~ 500W – 5kW	Downsizing ~ 3kW – 25kW	Hybrid & E-Drive ~ >25kW
HV			<div style="border: 1px dashed blue; padding: 5px;"> <p>DC/ DC</p> <p>AC/ DC</p> <p>MOTOR INVERTER</p> </div>
48V			
12V (+ Option 14V)	<div style="border: 1px dashed blue; padding: 10px;"> <p>B3/6/12x MOTOR</p> </div>		<div style="display: flex; align-items: center;"> <div style="border: 1px solid blue; width: 40px; height: 20px; margin-right: 10px;"></div> <p>In development</p> </div> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="border: 1px dashed blue; width: 40px; height: 20px; margin-right: 10px;"></div> <p>Product idea</p> </div>

# GROWTH STRATEGY





## SHAPING 2025

### THE STRATEGY SHAPING 2025 BRINGS SCHWEIZER ON AN AMBITIOUS, ROBUST AND SUSTAINABLE GROWTH PATH:

- CONSEQUENT CUSTOMER FOCUS
- CONSEQUENT TECHNOLOGY FOCUS
- CONSEQUENT MARKET FOCUS
- CONSEQUENT COMPETITIVENESS

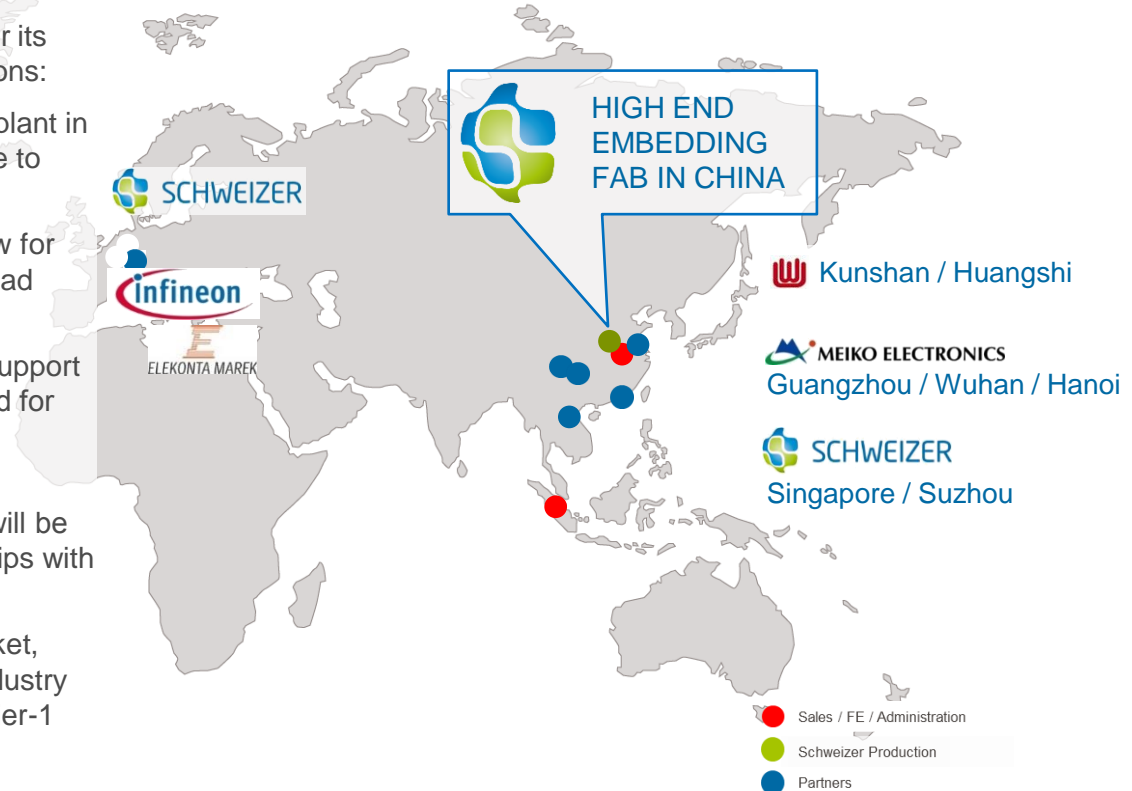
# GROWTH STRATEGY

## -ACCESS TO ADDITIONAL MARKETS AND CAPACITY -



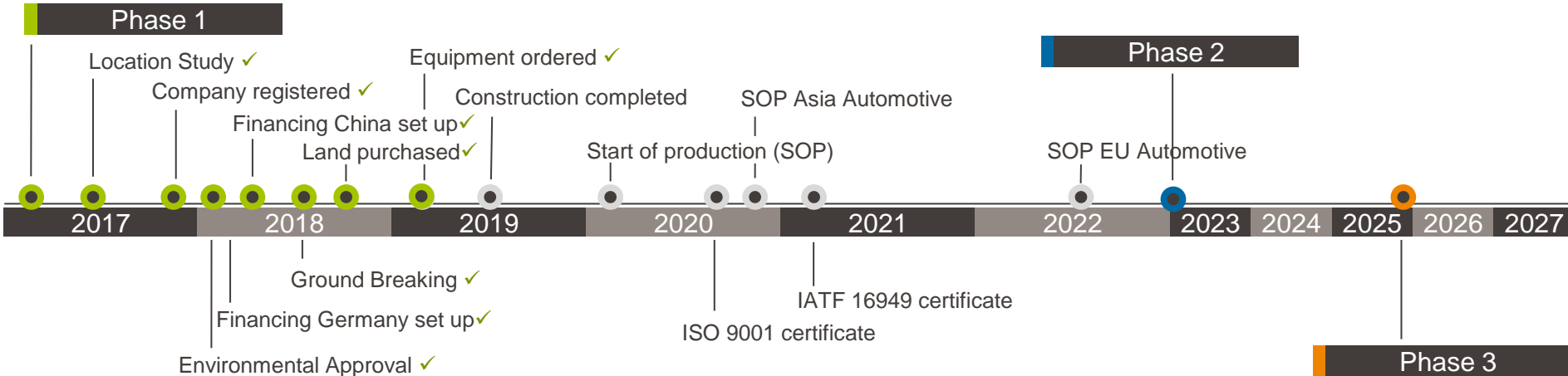
### Production facility in China

- SCHWEIZER has selected China as the location for its second production facility due to the following reasons:
  - To expand its production capacity as its existing plant in Schramberg has constantly been running at close to 100% capacity in the recent years;
  - Proximity to a major supply chain hub would allow for cost rationalization and reduction in production lead time;
  - Access to lower labor and material costs would support the Tier-1 automotive producers' growing demand for low-cost alternatives; and
  - Being in close proximity to the Tier-1 automotive manufacturers' Asian operations, SCHWEIZER will be able to further capitalize on its existing relationships with these customers;
  - To further expand its footprint into the Asian market, capitalizing on the rapidly growing automotive industry in the region, such as by targeting the Chinese Tier-1 automotive manufacturers.

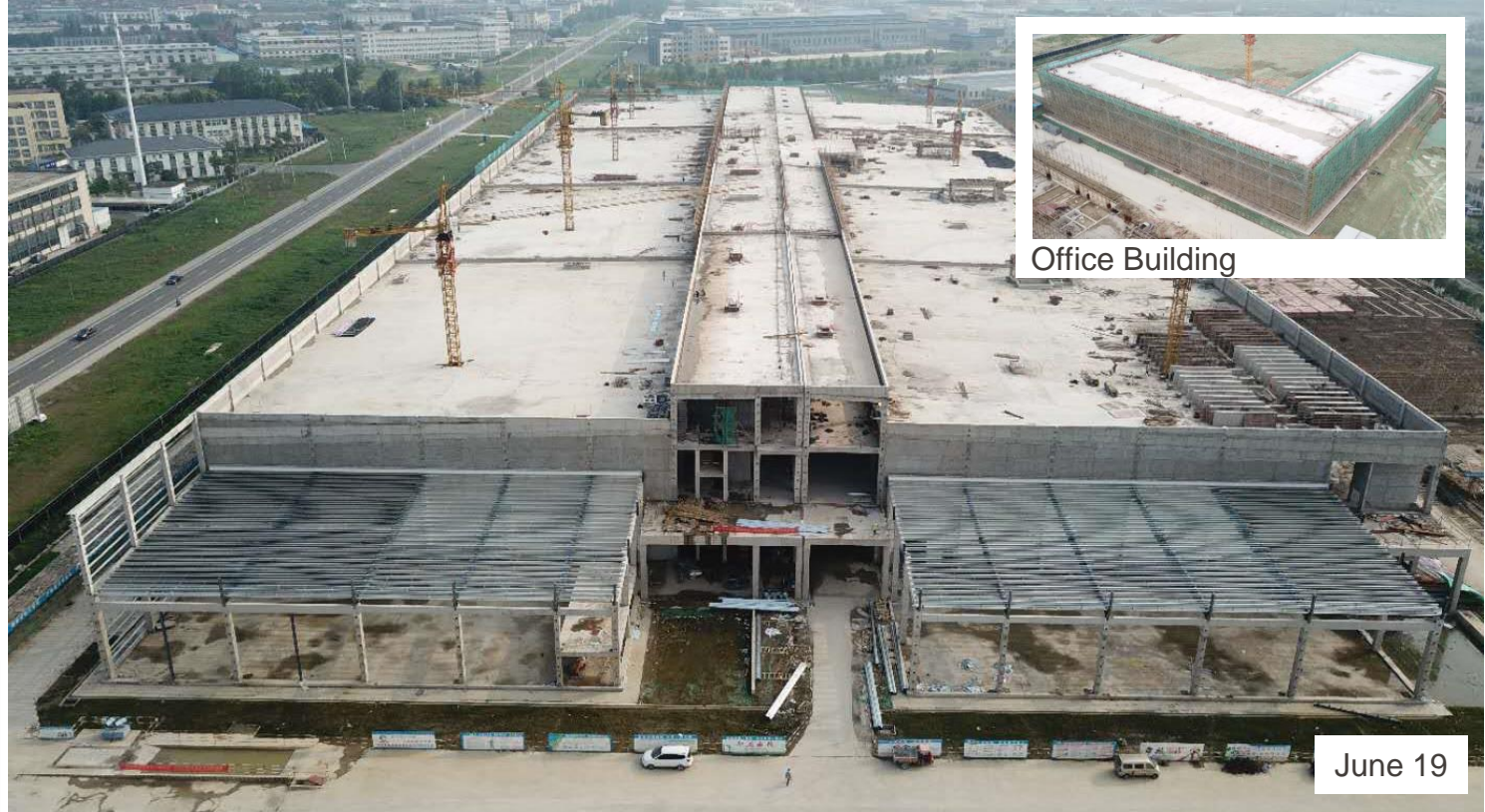


# GROWTH STRATEGY – PROJECT

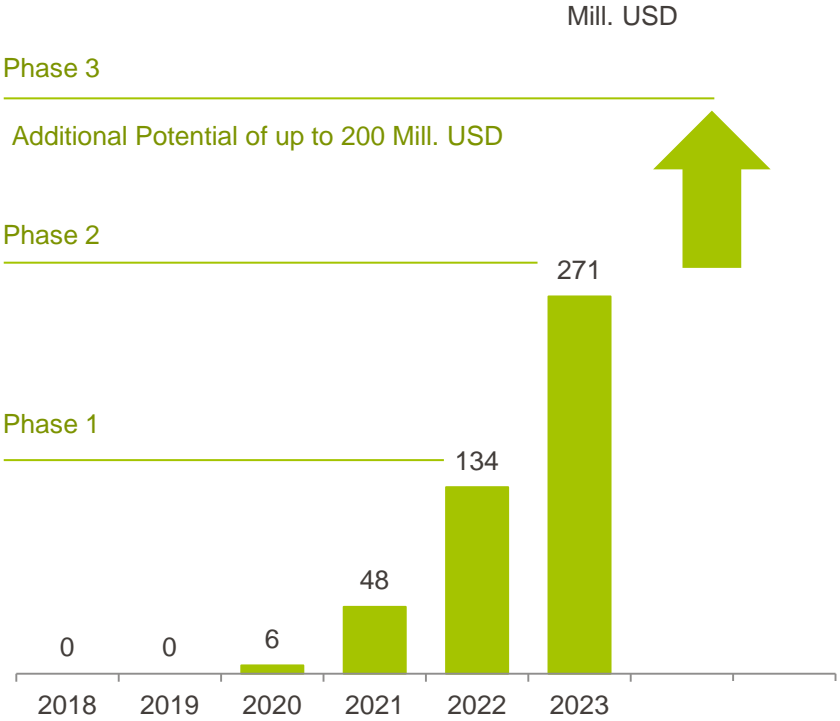
- Start of production in 2020
- Asia and Europe automotive technology starts after successful qualification steps
- Phases 3 will follow after successful ramp of the first phases



# NEW SCHWEIZER JINTAN PCB HIGH TECH/ EMBEDDING SITE (STATUS NOW)

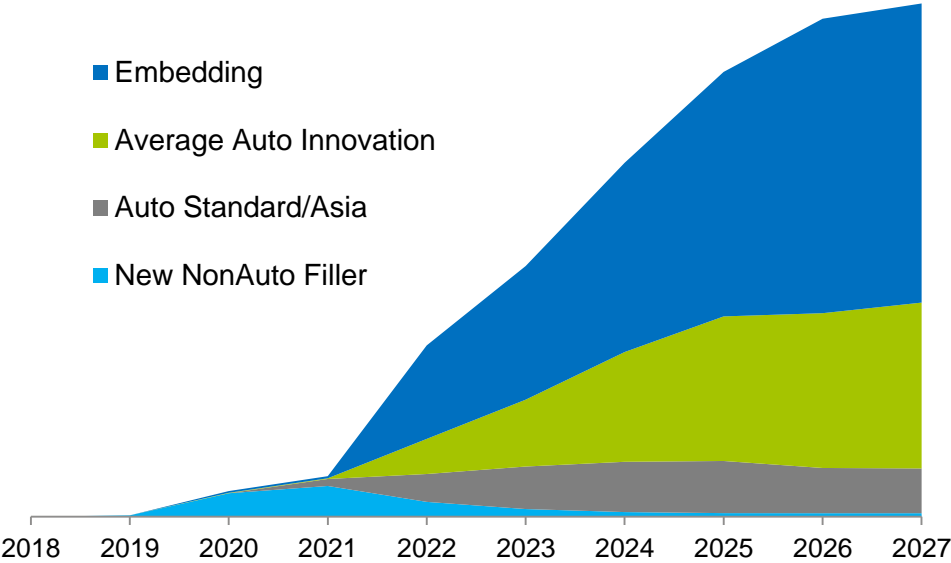


# PROFITABLE GROWTH STRATEGY



estimated by SE AG

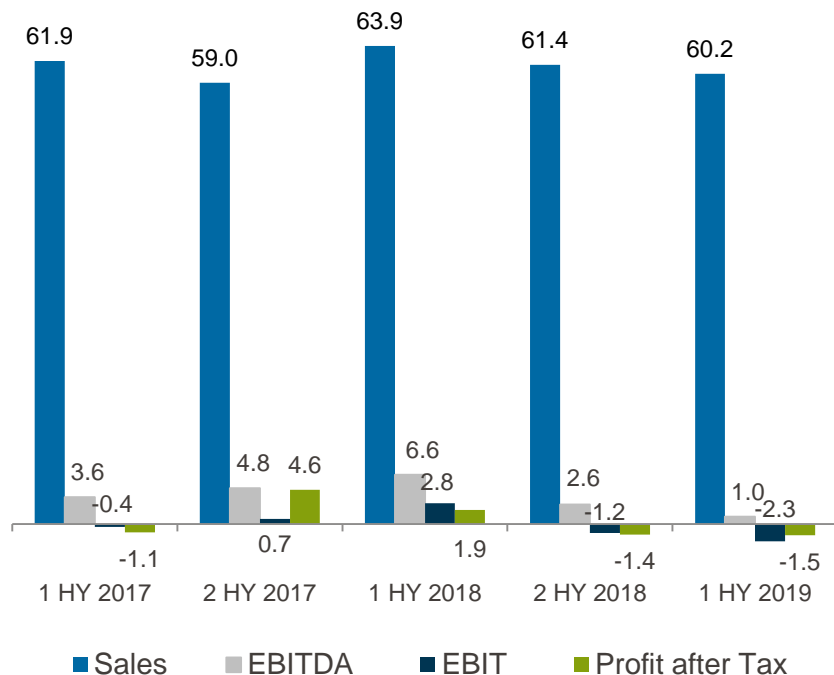
## Estimated technology mix in new plant



# Financials HY1 2019

# FINANCIALS HY1 2019

million EUR



## Key Figures

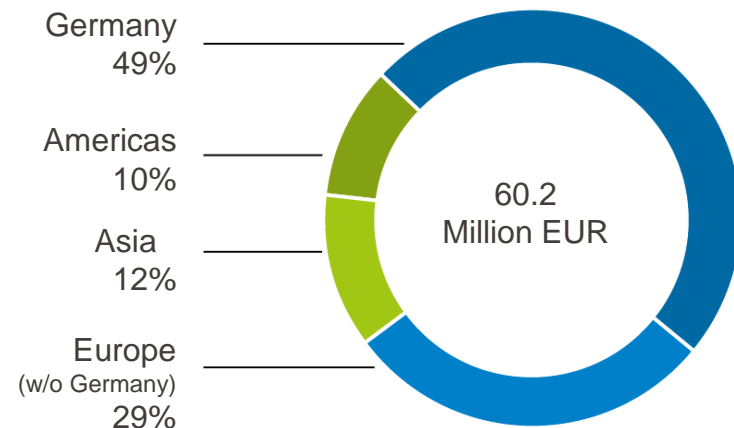
million EUR	HY 2019	HY 2018	
Revenues	60.2	63.9	-5.7%
EBITDA	1.0	6.6	-85%
EBITDA Margin (%)	1.7	10.3	
EBIT	-2.3	2.8	
EBIT Margin (%)	-3.8	4.3	
Profit after Tax	-1.5	1.9	
Open Orders	143.0	185.1	-23%
Order Intake	30.3	76.7	-60%
	Jun 2019	Dec 2018	
Equity Ratio (%)	36.6	46.6	
Net Gearing (%)	12.8	-7.2	

# FINANCIALS HY1 2019



## Sales by Region

million EUR	HY1 2019	HY1 2018
Germany	29.5	36.0
Europe (w/o Germany)	17.2	17.8
Asia	7.2	4.4
Americas	6.1	5.5
Others	0.2	0.2
	<b>60.2</b>	<b>63.9</b>

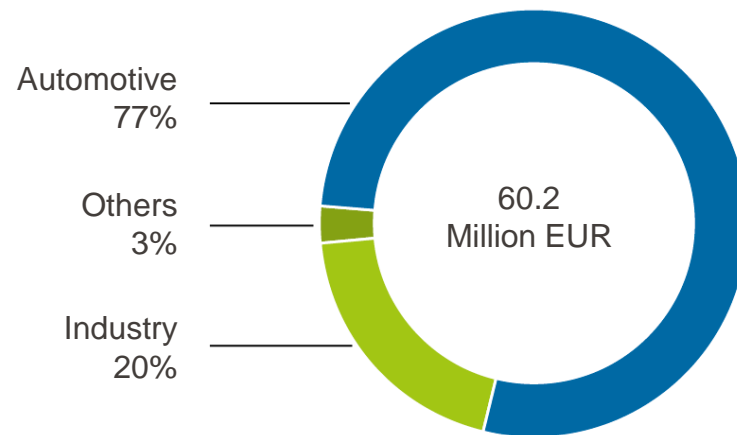




# FINANCIALS HY1 2019

## Sales by Customer Segment

million EUR	HY1 2019	HY1 2018
Automotive	46.8	44.1
Industry	11.8	15.3
Others	1.6	4.5
	<b>60.2</b>	<b>63.9</b>



## Cashflow

million EUR	HY1 2019	HY1 2018	Change	
Cashflow from operation activities	3.9	0.1	+3.8	Capital releasing in trade receivables, inventories and vendor liabilities
Cashflow from investments	-15.4	-2.0	-13.4	Mainly due China project
Cashflow from financing activities	17.7	-0.8	+18.5	Mainly due financing China project
Cash and cash equivalents	36.3	8.4	+27.9	
Free Cashflow <sup>1)</sup>	-11.5	-1.9	-9.6	

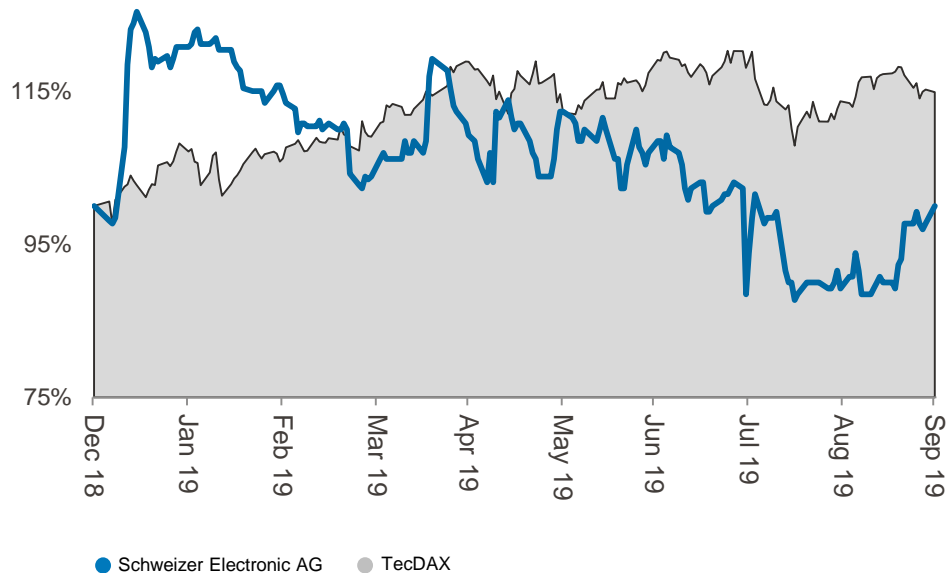
<sup>1)</sup> Cashflow from operating activities minus cashflow from investing activities

# Outlook

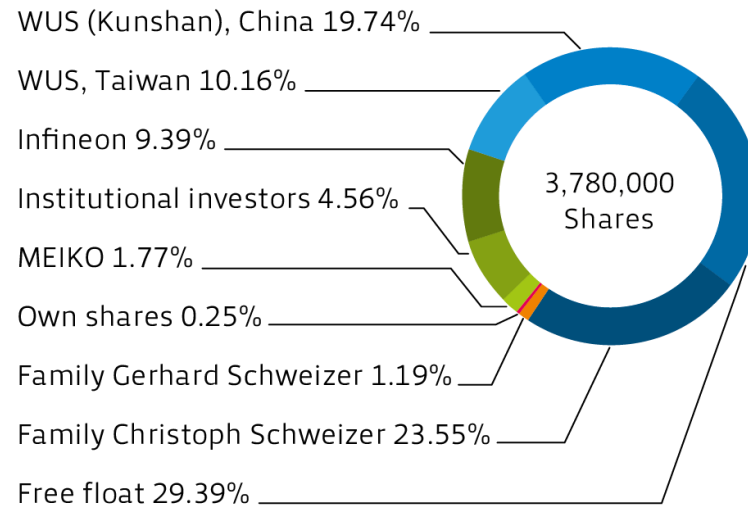
	2018	Target 2019 (April 2019)	adj. Target 2019 (July 2019)
Sales / Growth Rate	125.3 Mio EUR	-5 to +5%	120 – 125 Mio EUR / -4 to 0%
EBITDA	9.2 Mio EUR	5 - 7 Mio EUR	0 – 4 Mio EUR
without China project costs	10.4 Mio EUR	8 – 11 Mio EUR	3 – 7 Mio EUR
EBITDA Margin	7.3%	4 – 6%	0 – 4%
without China project costs	8.3%	7 – 9%	3 – 6%
Investment Ratio	81%	~1000%	~1000%
Net Gearing	-7.2%	100 – 140%	100 – 140%
Equity Ratio	46.6%	25 – 30%	25 – 30%
Working Capital	25.4 Mio EUR	stable	stable

# Schweizer Share

## Share Price 01 January 2019 – 30 Sept 2019



## Shareholder Structure (June 2019)



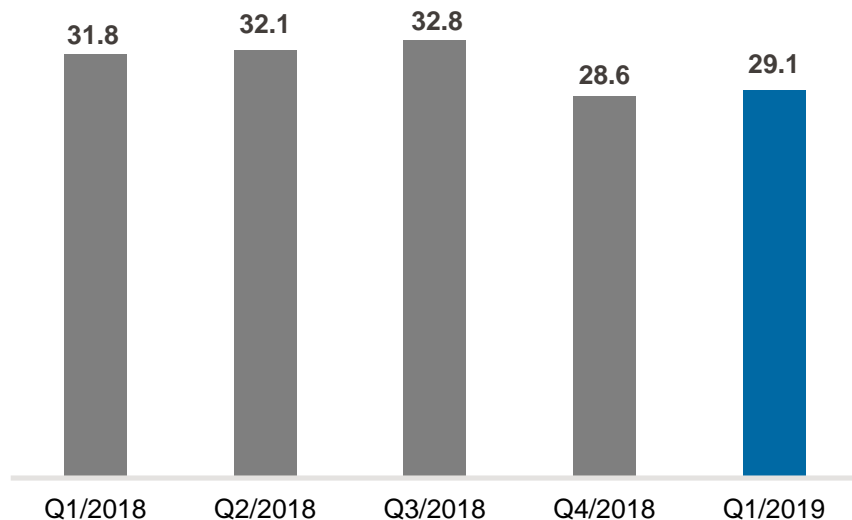
# APPENDIX

# Financials



## Revenues

in Mio. Euro

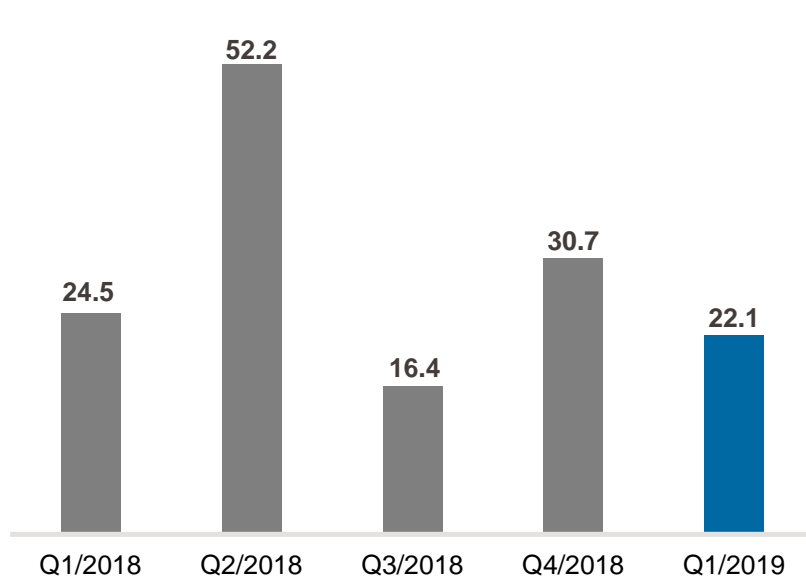


## Key Figures

million EUR	Q1 2019	Q1 2018	
Revenues	29.1	31.8	-8.5%
EBITDA	-0.1	3.5	
EBITDA Margin (%)	-0.4	10.9	
EBIT	-1.7	1.6	-206%
EBIT Margin (%)	-5.9	4.9	
Profit after Tax	-2.1	1.2	-275%
Open Orders	164.2	165.4	-0.7%
Order Intake	22.1	24.5	-9.8%
	03/2019	12/2018	
Equity Ratio (%)	44.6	46.6	
Net Gearing (%)	-3.2	-7.2	

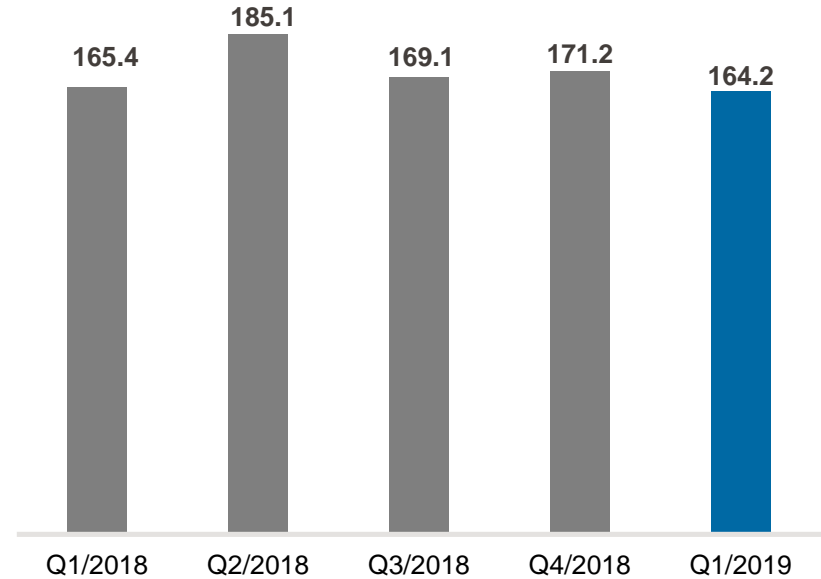
## Order Intake

million EUR



## Open Orders

million EUR



# FINANCIALS Q1 2019

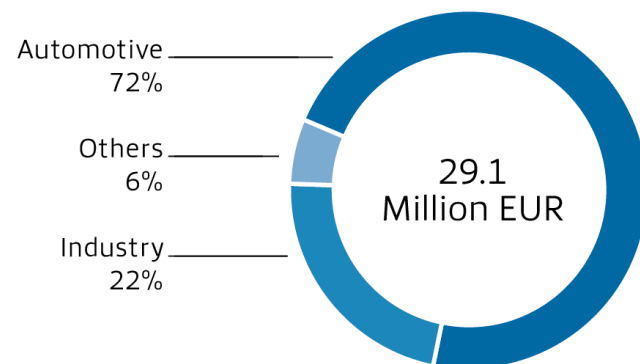
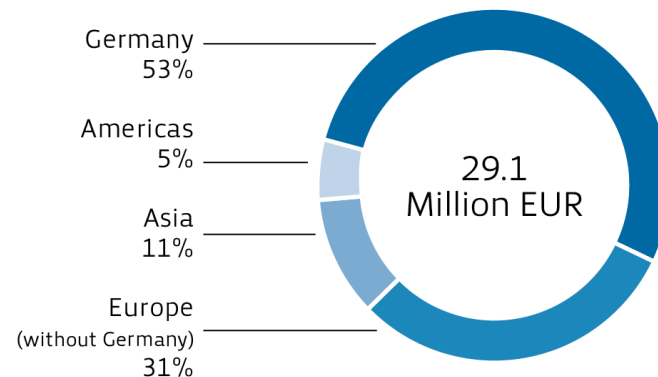


## Sales by Region

million EUR	Q1 2019	Q1 2018
Germany	15.4	18.2
Europe (w/o Germany)	8.9	8.8
Asia	3.2	2.6
Americas	1.5	2.1
Others	0.1	0.1
	<b>29.1</b>	<b>31.8</b>

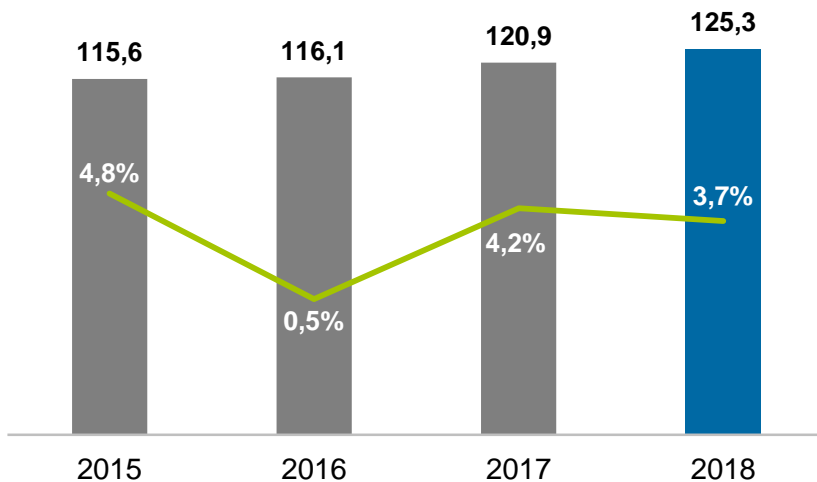
## Sales by Customer Segment

million EUR	Q1 2019	Q1 2018
Automotive	20.9	22.1
Industry	6.5	7.4
Others	1.7	2.3
	<b>29.1</b>	<b>31.8</b>



## Revenues

in Mio. Euro / Growth rate



## Key Figures

million EUR	2018	2017	
Revenues	125.3	120.9	+3.7%
EBITDA	9.2	8.4	+9.5%
EBITDA Margin (%)	7.3	7.0	
EBIT	1.6	0.3	+433%
EBIT Margin (%)	1.3	0.3	
Open Orders	171.2	181.5	-10.3%
Order Intake	123.8	144.0	-14.0%
Profit after Tax	0.5	3.5	-86%
EPS (EUR)	0.14	0.92	
Equity Ratio (%)	46.6	54.9	
Net Gearing (%)	-7.2	-6.5	

# FINANCIALS 2018



## Sales by Customer Segment

million EUR	2018	2017
Automotive	87.9	83.8
Industry	30.5	28.2
Others	6.9	8.9
	<b>125.3</b>	<b>120.9</b>

## Sales by Region

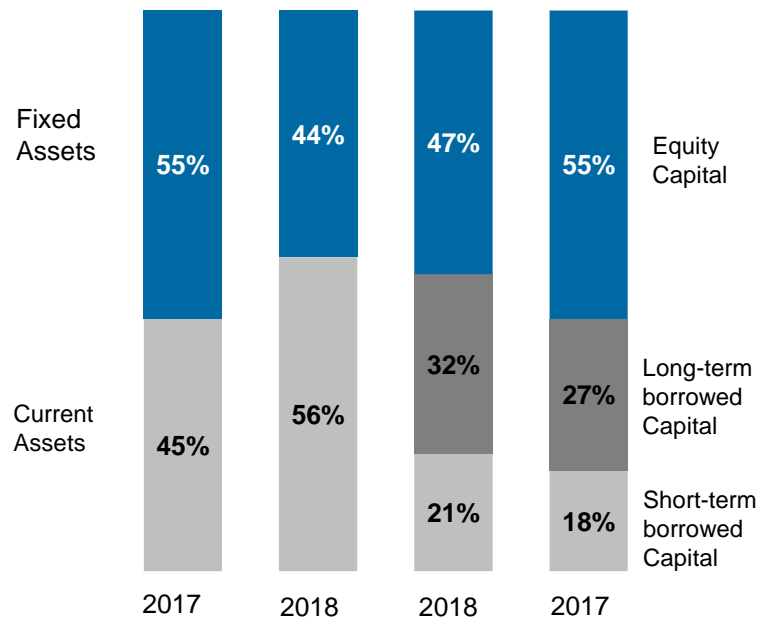
million EUR	2018	2017
Germany	70.5	72.3
Europe (w/o Germany)	35.1	28.4
Asia	9.6	9.5
Americas	9.9	10.3
Others	0.2	0.4
	<b>125.3</b>	<b>120.9</b>

# FINANCIALS 2018



## Balance Structure

in Mio. EUR



million EUR	2018	2017
Assets	135.3	113.6
Equity	63.0	62.3
Equity Ratio (%)	46.6	54.9
Net Gearing (%)	-7.2	-6.5

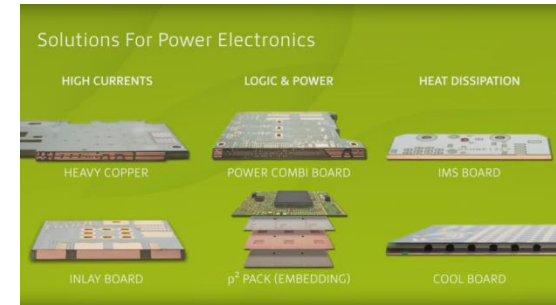
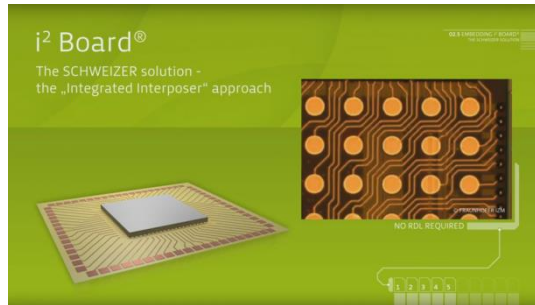
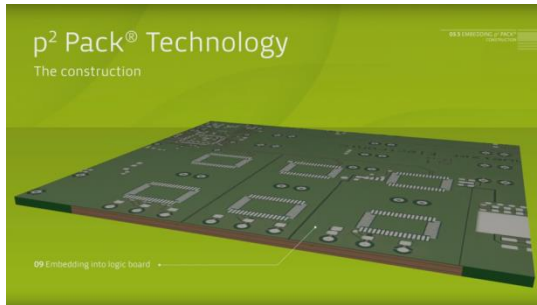
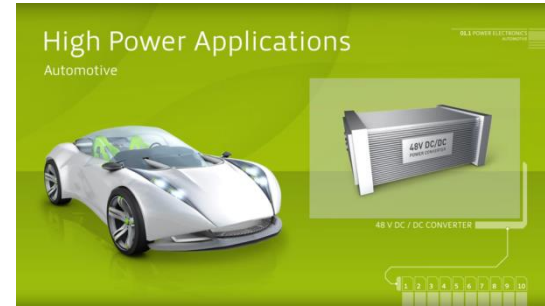
## Cashflow

million EUR	2018	2017
Cashflow from Operating Activities	5.9	4.6
Cashflow from Investments	-4.2	1.4
Cashflow from Financing Activities	16.8	-4.0

## Working Capital

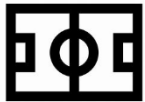
million EUR	2018	2017
Inventory (incl. contract assets)	18,8	17.7
Accounts Receivables	27.3	22.4
Accounts Payables	20.7	18.0
Working Capital	25.4	22.1

# SCHWEIZER ON YOUTUBE





# „SCHWEIZER ROADSHOW“



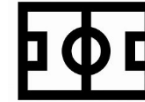
## Stadion Tour

München, Allianz Arena,  
04. April 2019



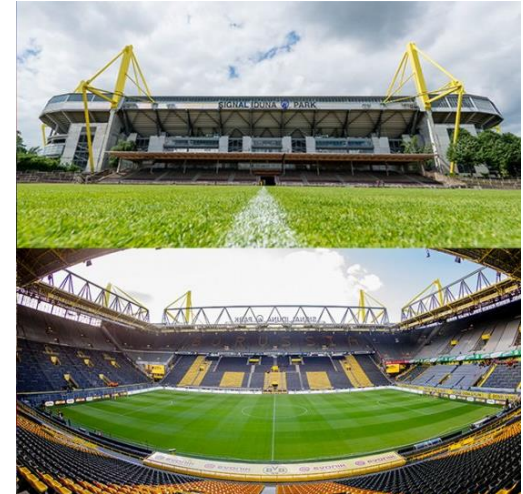
## Stadion Tour

Paris , Stade de France,  
5. Juni 2019



## Stadion Tour

Dortmund, Signal Iduna Park,  
27. Juni 2019



# EXECUTIVE BOARD



**Dr Rolf Merte**  
Chief Executive Officer

PhD in Electrical Engineering is member of the Board since October 2018 and appointed until September 2023.

In charge of Technology & Business Development, Sales & Marketing and Information Systems.



**Nicolas-Fabian Schweizer**  
Chief Commercial Officer

Ass. Jur. Nicolas-Fabian Schweizer is member of the Board since April 2011 and appointed until June 2022.

In charge of Quality, Human Resources, Legal, Compliance and Media & Communications.



**Marc Bunz**  
Chief Financial Officer

Dipl.Kfm. Marc Bunz is member of the Board since April 2010 and appointed until March 2023.

In charge of Operations, Finance & Controlling, Purchasing and Investor Relations.

# FINANCIAL CALENDAR

<b>Date</b>	<b>Publication/Event</b>
2019-11-07	Interim Report 3st Quarter 2019
2020-06-26	Annual General Meeting

# IR CONTACT

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# SAFE HARBOUR STATEMENT



This communication contains forward-looking statements and information – that is statements about events that lie in the future, not the past. These forward-looking statements can be identified by formulations such as “expect”, “wish to”, “anticipate”, “propose”, “plan”, “believe”, “seek to”, “estimate”, “become” or similar terms. While such forward-looking statements represent our current expectations and particular assumptions, they are subject to various risks and uncertainties. A number of factors, many of which are outside the control of Schweizer, have an impact on Schweizer’s business activities, strategy and results. These factors could cause the actual results and performance of the Schweizer Group to differ materially from the information on results and performance made explicit or implied in these forward-looking statements. On our part these uncertainties arise in particular due to the following factors: Changes to the overall economic and business position (including margin developments in the major divisions), challenges posed by the integration of important acquisitions and the implementation of joint ventures and other major portfolio measures, changes to exchange and interest rates, the introduction of competing products or technologies by other companies, failure to find acceptance of new products and services among Schweizer’s target client groups, changes to the business strategy and various other factors. Should one or more of these risks or uncertainties be realised or it becomes apparent that the underlying assumptions were incorrect, this could cause the actual results to differ materially both in a positive and negative sense from the results referred to in forward-looking statements as expected, anticipated, proposed, planned, projected or estimated. Schweizer does not obligate itself and does not intend to revise or correct these forward-looking statements in light of developments which differ from those anticipated.



more  
than PCBs