

# Investor Relations Presentation

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# 1 The Business Model

# New SGL Group: Innovation leader. Specialized on carbon- and graphite-based solutions

**32**

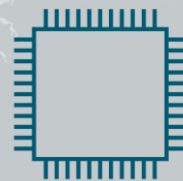
Sites



Mobility



Energy



Digitization

**~4,800**

Employees

**100+**

Countries



Industrial  
Applications



Chemical

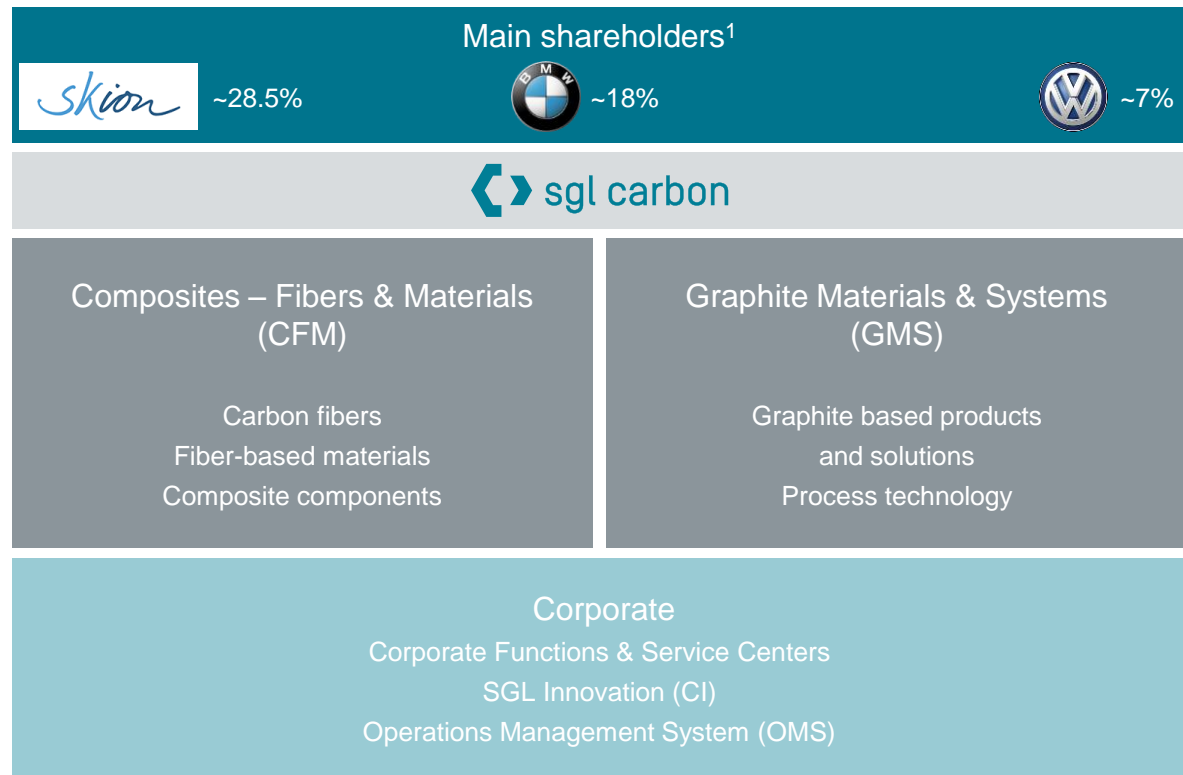


Textile Fibers

**€1.3bn**

Revenue until 2022

# New SGL Group. Re-focused on carbon and graphite based tailor-made solutions for growth markets



Performance Products (PP): Graphite electrodes

Sale to Showa Denko closed on October 2, 2017

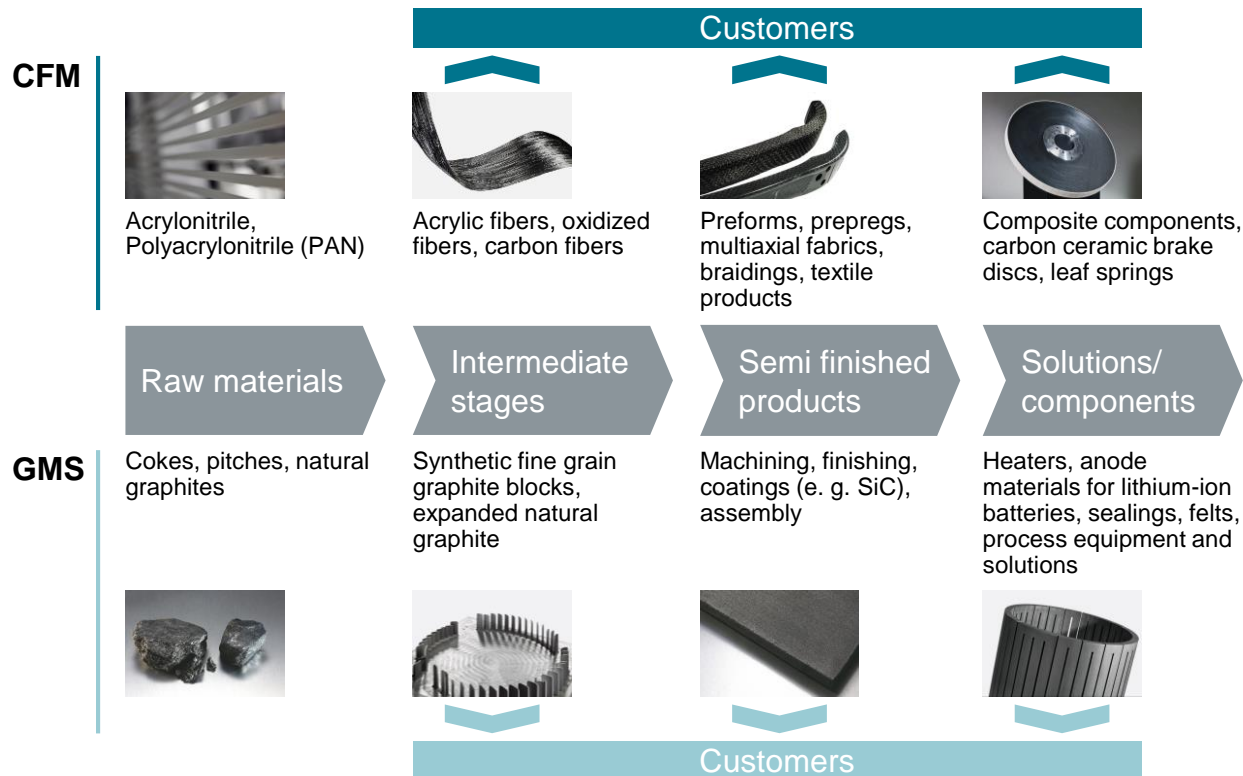
Performance Products (PP): Cathodes, furnace linings, carbon electrodes

Sale to Triton closed on November 2, 2017

<sup>1</sup> according to their respective latest notifications

# Commanding entire value chain in carbon and graphite.

## Advantages in cost, quality and differentiation



Control over the entire **value chain** enables product customization to customer requirements

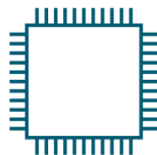
Customers receive **tailor made solutions** from every step of the value chain

**Forward integration** in finishing technologies (GMS) and CFRP-components (CFM) including application know how are essential for **differentiation**

# Group Market Segmentation.

## Reflects stronger orientation to customer and growth markets

### Market Segment



Sales	Mobility <sup>1</sup>	Energy <sup>2</sup>	Digitization <sup>3</sup>	Industrial Applications	Chemical	Textile Fibers
2017	19 %	22 %	5 %	29 %	14 %	11 %
2016	20 %	22 %	4 %	27 %	15 %	12 %

<sup>1</sup> comprises automotive, aerospace and transport markets; <sup>2</sup> comprises battery, solar, wind and other energy markets; <sup>3</sup> comprises LED and semiconductor markets

# ROCE.

## Remains key management principle for managing the business

In 2014, we, the new Board of Management, introduced ROCE as new key management principle, replacing ROS

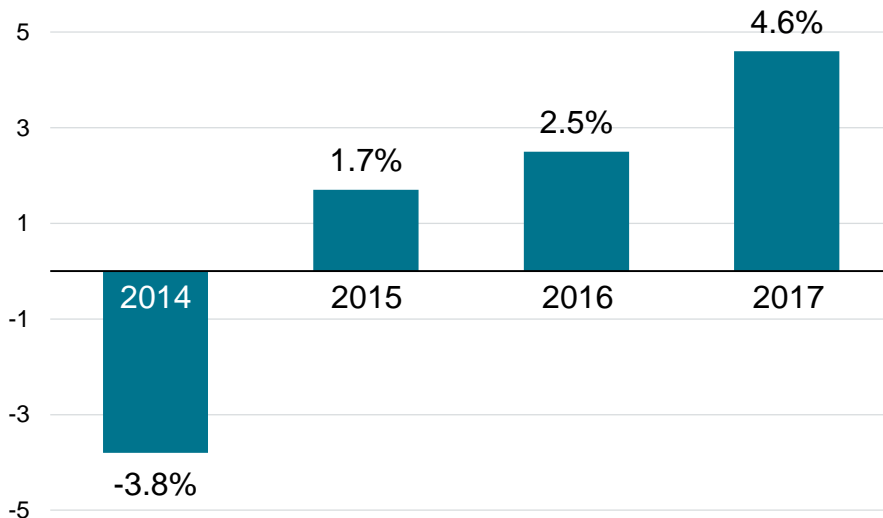
We wanted to be held accountable for our stated targets and goals

As a result we implemented the ROCE target in all senior management layers, aligning their incentive system with ours

We started reporting ROCE on Group and BU levels on a quarterly basis, so that our progress can be tracked



### ROCE<sup>1</sup> development



While we are not yet there, we have made substantial progress toward our targeted ROCE<sup>1</sup>

<sup>1</sup> ROCE defined as EBIT/Capital employed



## **2 The Business Units: Composites – Fibers & Materials (CFM)**

# Reporting Segment.

## Composites – Fibers & Materials (CFM)

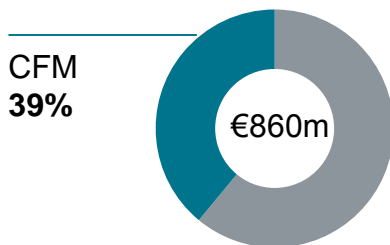
### Activities

- Carbon Fibers
- Composite Materials
- Composite Components
- Ceramic Brake Discs (JV with Brembo)

### Key industries served

- Automotive
- Energy
- Aerospace
- Industrial Applications
- Textile fibers

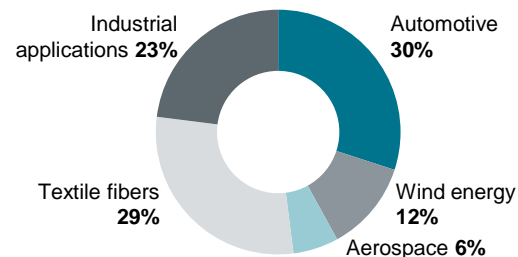
### Group sales 2017



### Characteristics

- New applications in automotive, energy, industrial
- High earnings improvement potential
- Complete value chain in house

### CFM sales 2017



### Strategic priorities

- Strengthen capabilities to safeguard globally leading position
- Develop products and production technologies for innovative customer solutions
- Exploit synergies across the value chain

# Composites – Fibers & Materials.

## Market segmentation

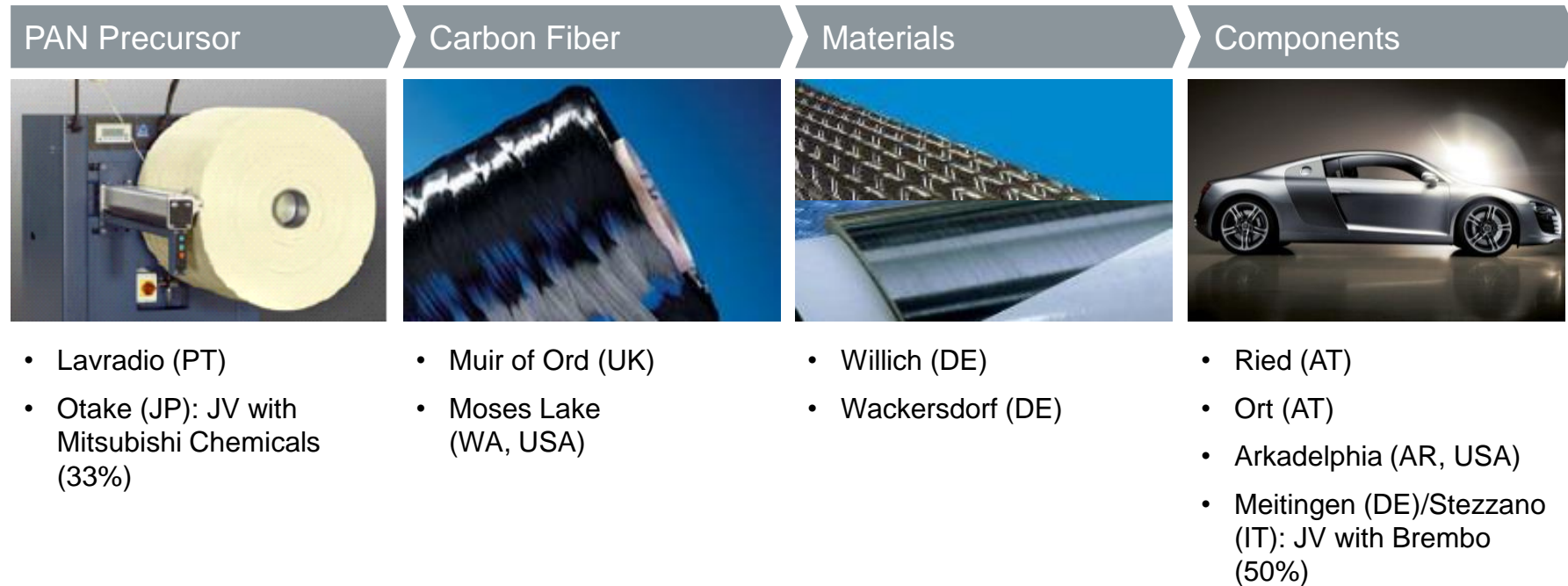
### Market Segment



Sales	Automotive	Aerospace	Wind Energy	Industrial Applications	Textile Fibers
2017	30 %	6 %	12 %	23 %	29 %
2016	29 %	7 %	15 %	21 %	28 %

# Composites – Fibers & Materials (CFM).

## Integrated value chain from precursor to components



# Our composites solutions serve key markets.

## Unique integrated value chain

### Fibers

Broad portfolio of high-performance products

- Acrylic Fibers
- Carbon Fibers
- Oxidized Fibers
- Yarns

### Materials

Production technologies along the fiber value chain

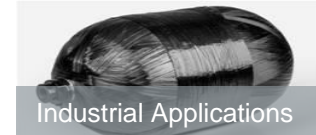
- Woven Fabrics
- Non-crimped Fabrics
- Resins, Adhesives
- Braidings
- Preforms
- Prepregs
- Organo Sheets
- Wet Friction Materials

### Components

Lightweight and Application Center (LAC)

- In-house bridge between SGL products and customer applications in the development of fiber reinforced composite components
- Engineering solutions and manufacturing prototypes (e.g. CFRP Parts)
- Highly automated components production facilities in Austria

## Markets



# Our capabilities are tailored to serve market needs.

## Product Toolboxes

≤5 min. cycle time



≤3 min. cycle time



≤1 min. cycle time



## Engineering

Concept development



Product design



Process simulation



Structural analysis



Virtual prototyping



Prototyping



Product testing



Virtual factory

## Component Processes

Placement



Pressing



Injection molding



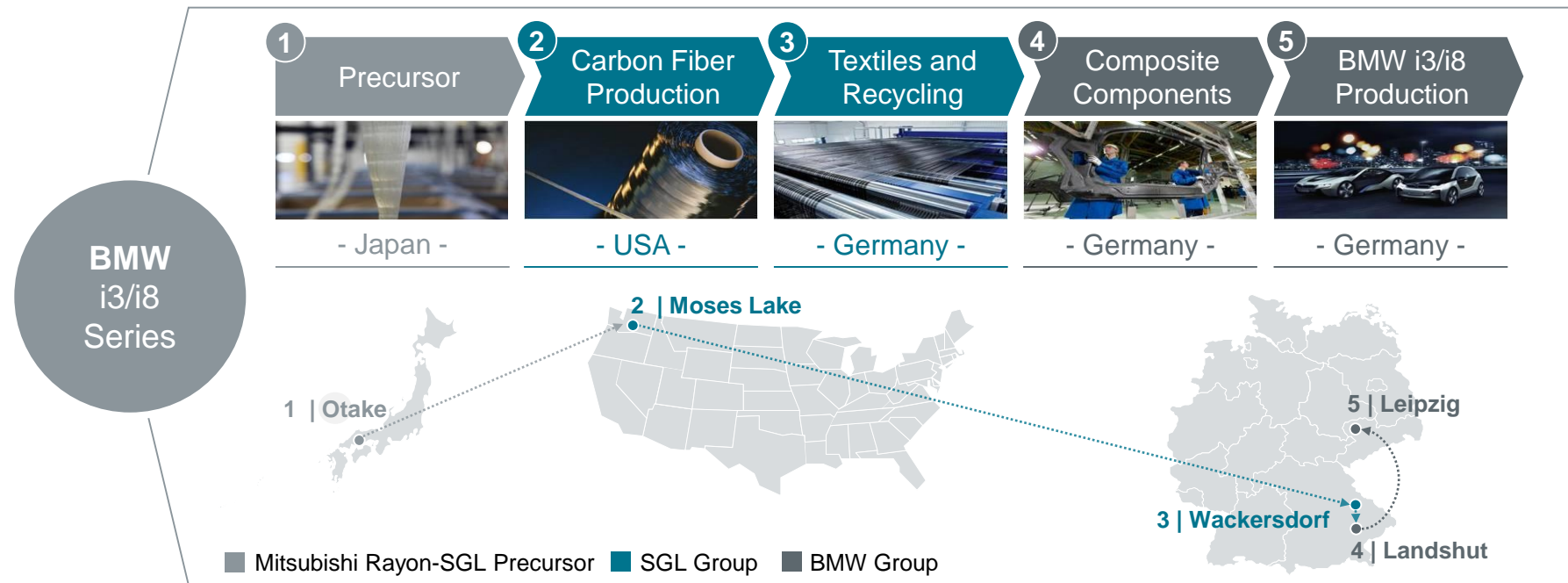
## Market Needs

- Mass production
- Automated processing
- Hybrid design (e.g. GF/CF)
- Load path adapted design
- Minimum scrap

# The foundation of our automotive composites competence.

## Lightweight expertise for BMW Group

### CFRP supply chain



Source: BMW, SGL

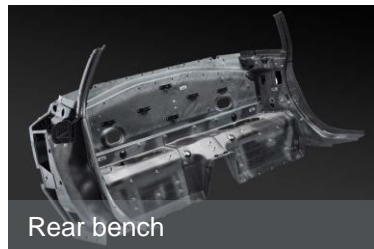
# Our composites in the automotive industry.

## Integral part of the material mix in serial production

### Rear bench for performance sports cars

#### Audi MSS Platform

- Structural Audi MSS (Modular Sportscar System) bodywork system
- The rear bench of the body work is made of carbon-fiber reinforced plastic
- Composite components includes all the connecting parts and elements



This platform is used for



**Lamborghini Huracan**  
(Coupé & Spyder)



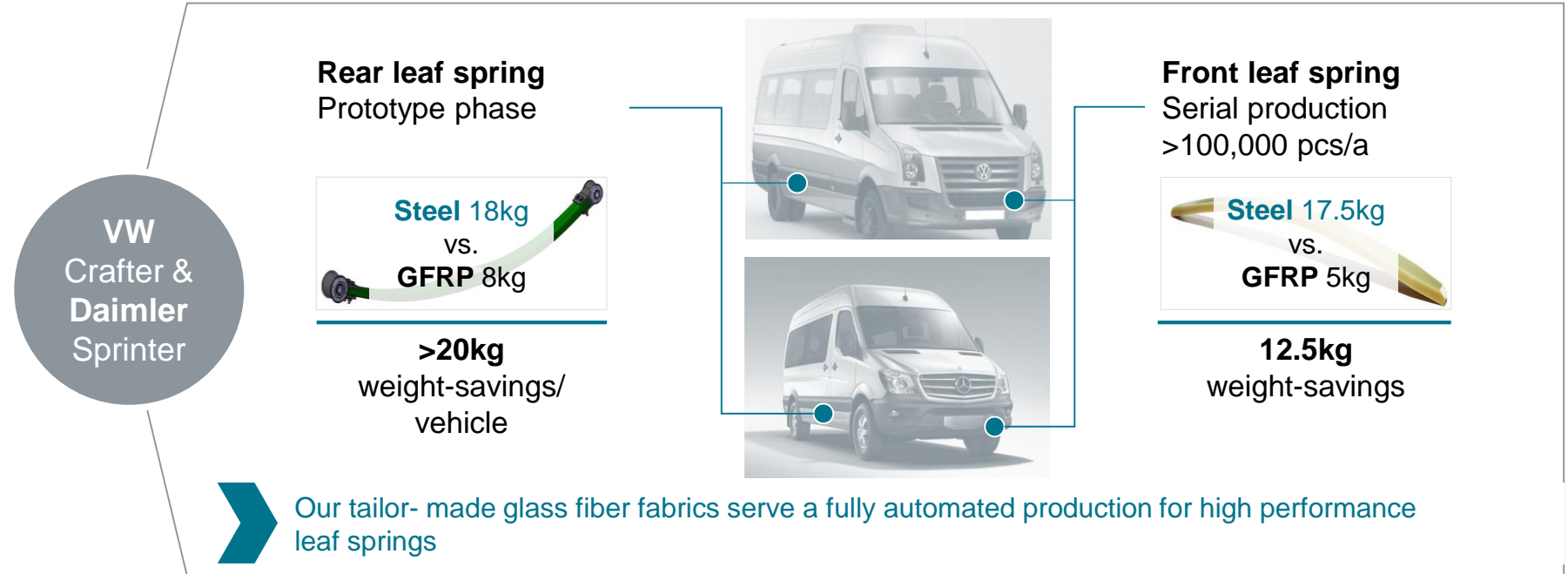
**Audi R8**  
(Coupé & Spyder)



# Our composites in the automotive industry.

## Leaf springs for suspension systems

### Significant weight-savings through glass fiber based lightweight leaf spring



# Our composites in the automotive industry.

## Leaf springs for suspension systems

### Significant weight-savings through glass fiber based lightweight leaf spring

Volvo  
SPA<sup>1</sup>  
Platform

- Structural component for axle module, from simulation-assisted product design up to parts delivery in large series
- Fully automated production lines
- Peak volume over 550,000 pieces/a
- Weight saving combined with dynamic driving advantages

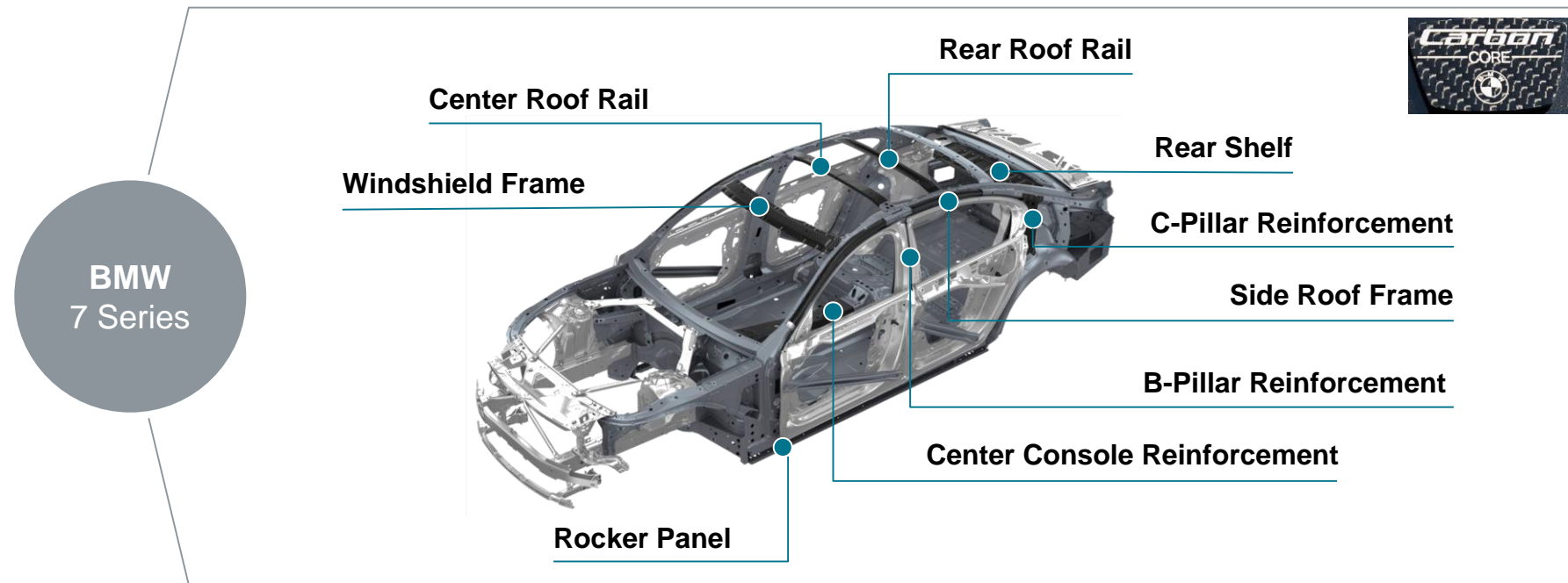


1 Scalable Product Architecture  
Source: Benteler, SGL

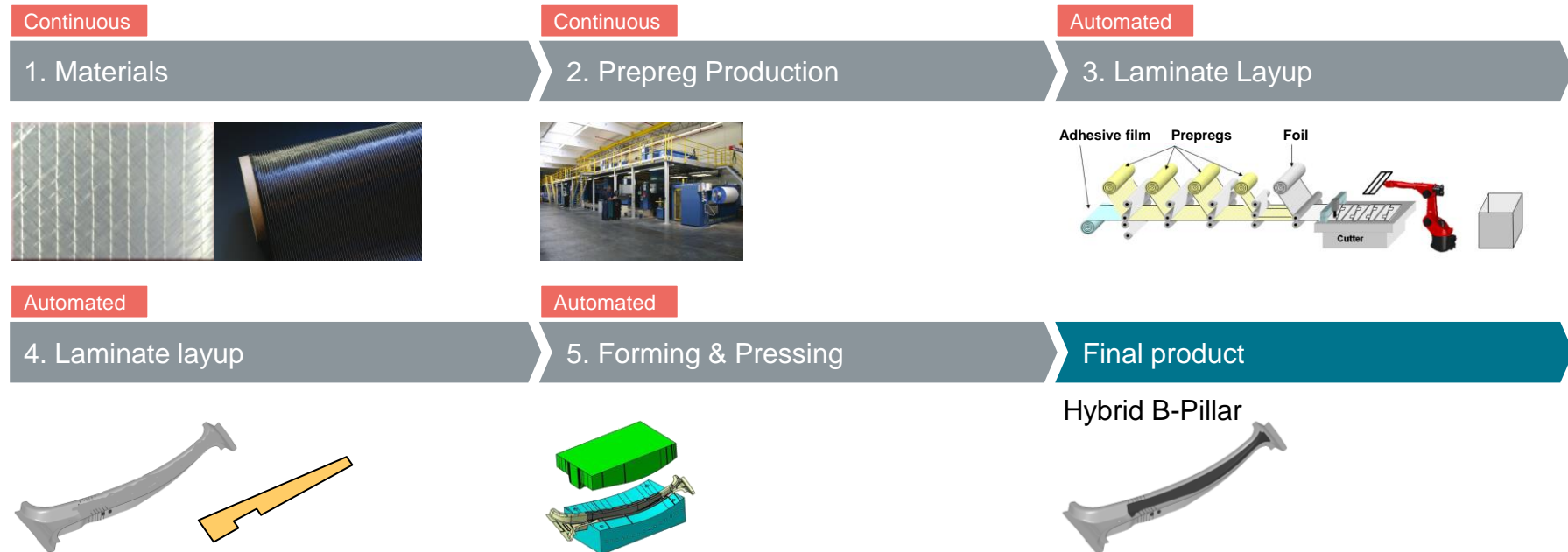
# The next level of Carbon Fiber in Automotive.

## BMW 7 series

Significant weight-savings through lightweight chassis



# New hybrid materials manufactured with automated production systems. Example B-Pillar



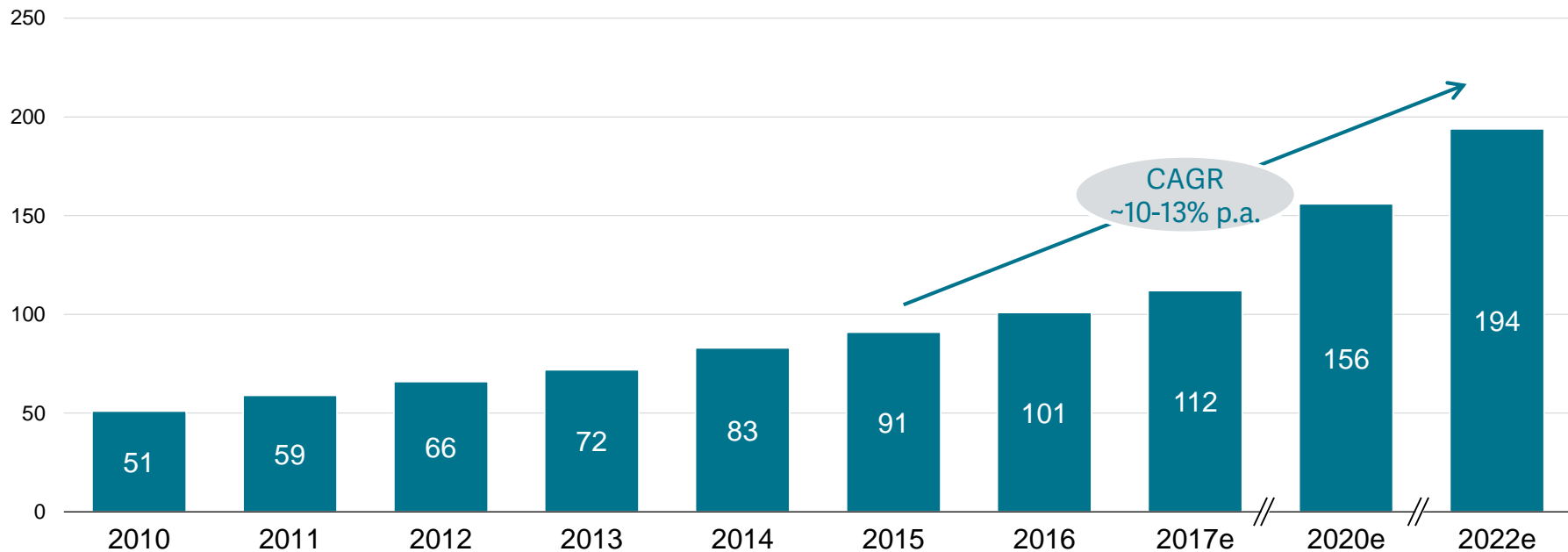
➤ Cycle times of < 50 seconds enable large series production (e.g. 150,000 pieces/a)

... Production system

Source: SGL Group

# Carbon fibers and composite materials. Strong demand growth anticipated

## Global Carbon Fiber Reinforced Plastics (CFRP) Demand [in thousand mt p.a.]



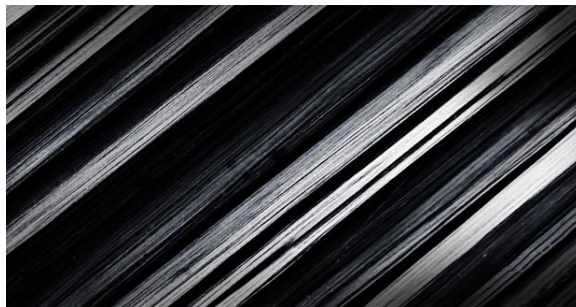
Source: CCeV (September 2017)

# 3 Project highlights CFM

# Optimizing the CFM value chain.

## Fibers, composite materials and production

- Commissioning and inauguration of the new precursor production line in Portugal
  - Precursor is the raw material for carbon fibers
  - Completion of the value chain
  - Total investment amounting to €30 million
- Concentration of carbon fiber production at two sites
  - Evanston site sold
  - Enhanced efficiency of the production network through concentration at two sites in Moses Lake (USA) and Muir of Ord (UK)
- Construction and launch of the Lightweight and Application Center (LAC) in Meitingen (DE)
  - OEM-neutral "carbon carrier" developed together with Bertrandt presented in November 2017
- Full ownership of Benteler SGL agreed on November 8, 2017
  - Allowing us to fully control and further develop our composite part marking capabilities



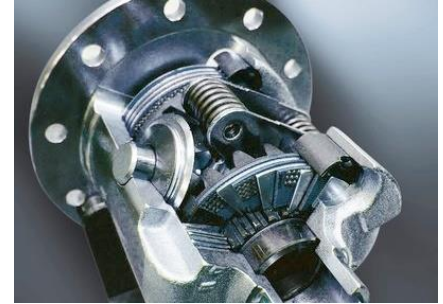


# Developed customized solutions.

## Serial production of structural parts and gear box applications



- 500,000 leaf springs p.a. from 2020 onwards based on composite materials for the models S60, S90, V60, V90 and XC60
  - Project with highest production volume of a composite component in the industry
- CFRP back wall and top B-pillar for the Audi MSS platform (Audi R8, Lamborghini Huracán)
- Close and intensive cooperation with BMW in various additional projects beyond the i3, i8 and 7 series models
- 50% sales increase in high performance wet friction material based on carbon components (e.g. duplex gear clutch)

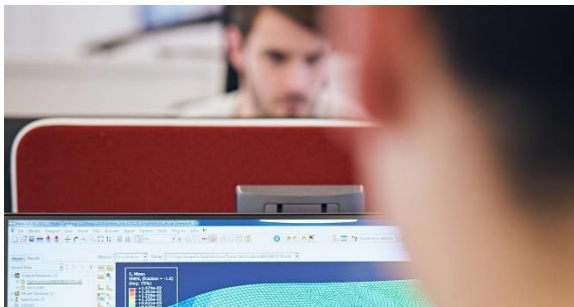




# Initiated development projects globally. For material mix solutions in passenger cars

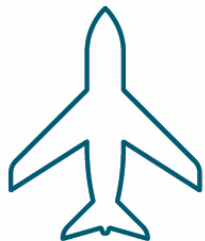


- Jaguar Land Rover
  - Cooperation with British research institutes and OEMs under SGL Group leadership
  - Development of new composite materials structures and manufacturing prototypes for structural parts of existing car models
- Daimler
  - Carbon fiber supply for CFRP stiffeners (manufactured with pultrusion technology)
  - Development projects for various components with new SGL Group materials
- Two Asian OEMs



# Ready for lift-off.

## Contract extension and various development projects



- Extension of contract with Airbus-subsidiary Elbe Flugzeugwerke (pre-impregnated carbon fiber textiles for Airbus A350 floor panels)
- Planned increase in vertical integration with an aerospace industry supplier for secondary structural parts
- Development project with aircraft supplier for cabin interior parts
- Product developments with the large aircraft manufacturers for the adoption of our industrial fiber (50k) in components



Photography source: istockphoto Foto 1-3 f.l.t.r.

# **4 The Business Units: Graphite Materials & Systems (GMS)**

# Reporting Segment. Graphite Materials & Systems (GMS)

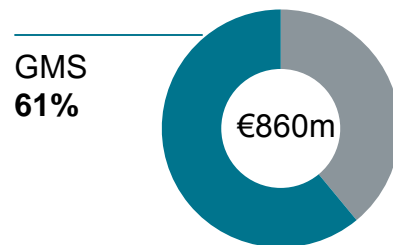
## Activities

- Anode materials
- Isostatic graphite
- Fiber materials
- Extruded graphite
- Die molded
- Expanded graphite
- Process technology

## Key industries served

- Lithium-Ion-Battery
- Solar
- Semiconductor
- LED
- Chemical
- Automotive & transport
- Industrial applications<sup>1</sup>

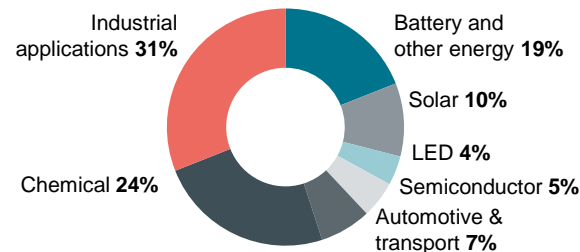
## Group sales 2017



## Characteristics

- Higher value-added products enabling customer innovations
- Specialized, partially tailor-made, products for differentiated customers
- Innovation driven business
- Engineered products & solutions for customers from > 35 industries – some with high growth potential

## GMS sales 2017



## Strategic priorities

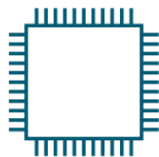
- Focus on forward integration and innovation
- Combine material know-how and engineering competence
- Advanced material, equipment, and process solutions in cooperation with customers
- Global competence and presence
- Improve cost competitiveness
- Target new market segments

<sup>1</sup> e.g. electric discharge machining (EDM), oil and gas, glass, high temperature applications, metallurgy

# Graphite Materials & Systems.

## Market segmentation

Market  
Segment

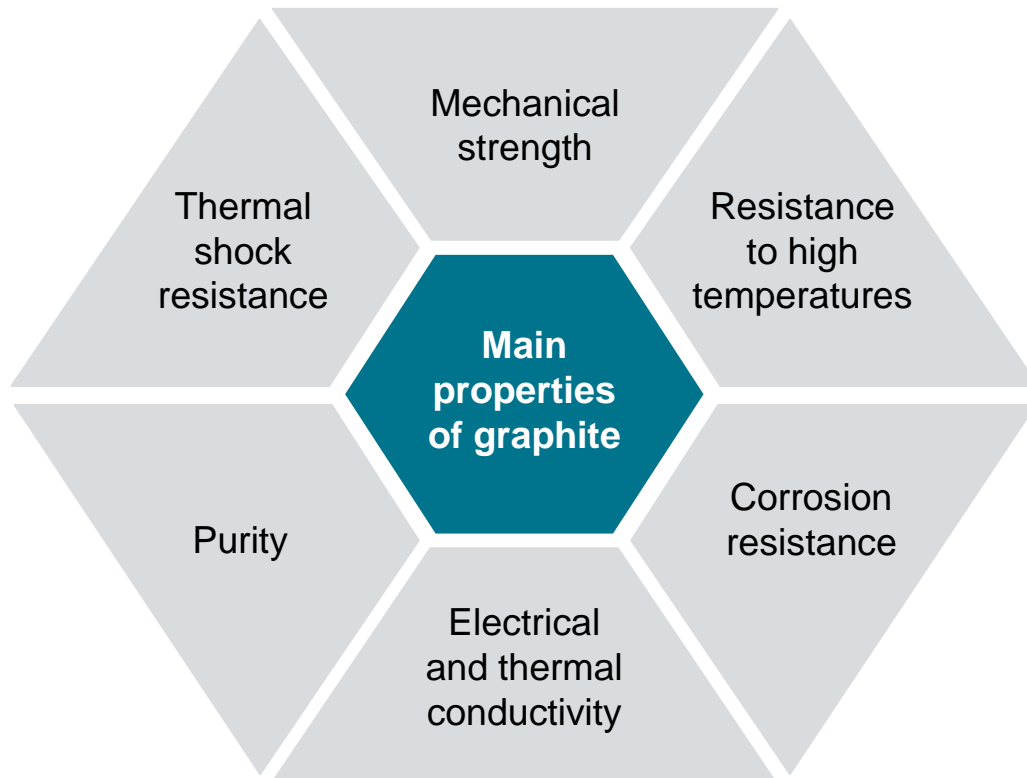


Sales	Battery & other Energy	Solar	LED	Semi- conductor	Automotive & Transport	Chemical	Industrial Applications
2017	19 %	10 %	4 %	5 %	7 %	24 %	31 %
2016	16 %	11 %	2 %	5 %	7 %	27 %	32 %

# Why graphite ?

## Specialty graphite materials required where other materials fail

**Properties can be tailored to specific requirements**



**Graphite is present in nearly every industrial application**

**SGL provides its graphite based solutions to more than 35 industries**

# Best solutions for our customers.

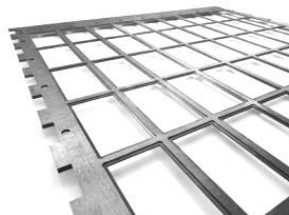
## We command the broadest graphite competence in the industry

### ... in the Solar, Semiconductor and LED Industry



Meander heater for mono-silicon units

SiC<sup>1</sup> coated wafer carrier for LED<sup>2</sup>/semi-conductor production



C/C<sup>3</sup> carrier frame for solar wafers

### ... in the Battery and Energy Storage Industry



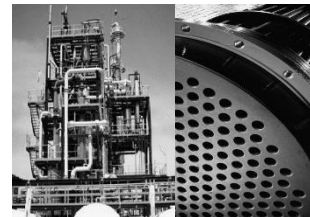
Anode material for lithium-ion batteries

Redox flow battery electrode consisting of battery felt and bipolar plate



### ... in the Chemical Industry

Systems & equipment (e.g. syntheses, heat exchangers)



Flexible graphite foil



Reinforced graphite sealing sheet



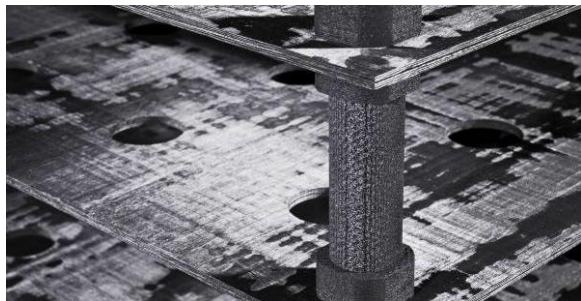
<sup>1</sup> Silicon Carbide; <sup>2</sup> Light-Emitting Diodes; <sup>3</sup> Carbon/carbon



# Integrated value chain and broad materials portfolio.

## Allow us to serve a wide range of industrial applications

### Full integration to ensure consistent quality



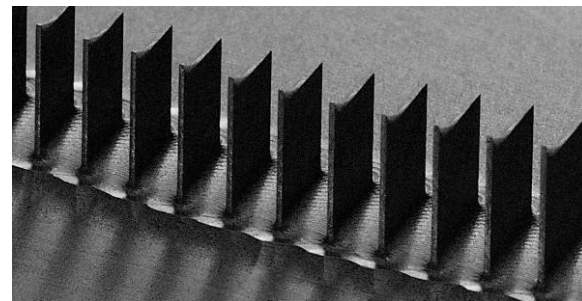
- Feedstock
- Machining
- Purification
- Impregnation & coating
- Global production: America, Asia/Pacific and Europe

### Most comprehensive portfolio in the industry



- Isostatic
- Extruded
- Vibro molded
- Die molded
- Expanded
- Carbon fiber reinforced carbon
- Soft & rigid felt
- SiC coating
- Syntheses & heat exchangers

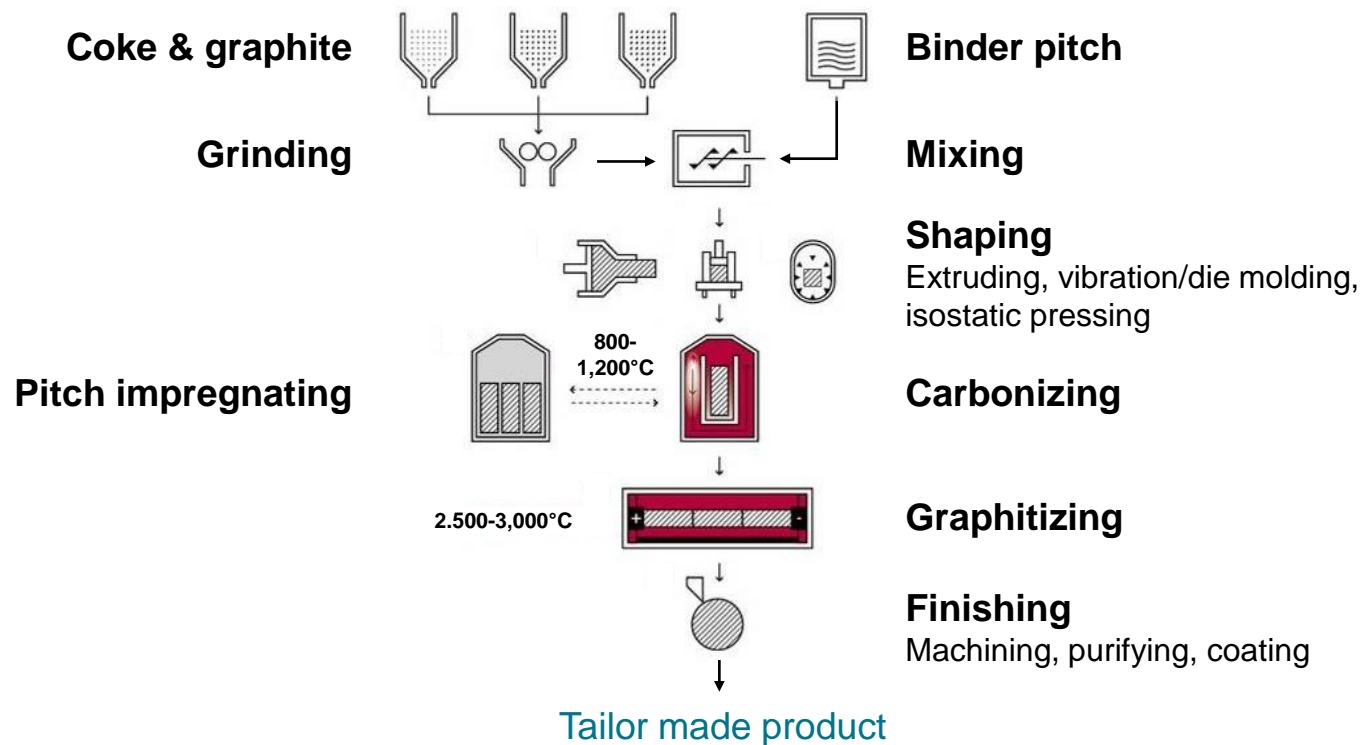
### Partnering with customers from >35 industries



- Lithium-ion battery
- Chemical
- Solar
- Semi-conductor
- LED
- Automotive
- Transport
- Polysilicon
- Sapphire
- Heat treatment
- Sealing & gaskets
- EDM
- Glass & refractory
- Mechanical engineering



# Production of specialty graphite is complex and requires up to six months.



4-5 months

2-4 weeks

Source: GMS Production

# Process Technology.

## Process solution provider for chemical and related industries

### Product portfolio



#### Systems

- Syntheses
- Distillation, purification, concentration, dilution
- Absorption, desorption
- Reactors & converters
- Steel pickling



#### Equipment

- Heat exchangers
- Reactors and internals
- Quenchers and vessels
- Pumps and piping
- Accessories



#### After sales services

- Spare parts
- Maintenance/Repairs
- Training

### Core industries served

- Chemicals
- Pharma
- Metals & Mining
- Energy
- Solar
- Environmental



### Core applications

- Hydrochloric acid (HCl)
- Phosphoric acid (H3PO4)
- Sulfuric acid (H2SO4)
- Hydrofluoric acid (HF)
- Oxidizing acids
- Isocyanates
- Epichlorohydrine (EPC)
- Vinyl chloride (VCM)
- Polysilicon

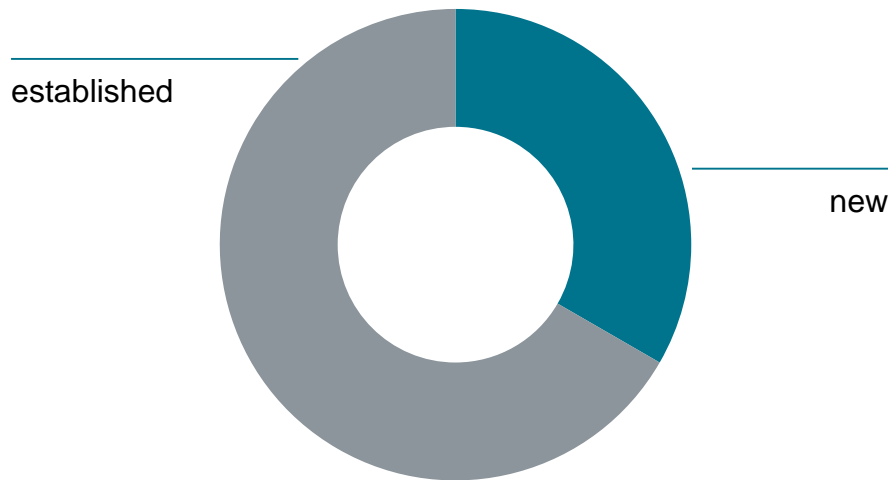


# Graphite materials enable innovation.

## Examples:

- Advanced graphite anode materials for lithium-ion batteries
- Graphite foils and felts for stationary energy storage
- Additives for advanced lead acid batteries
- Advanced silicon carbide coated carriers for LED and semiconductors
- CFRC charging racks carriers for high-temperature applications
- Extra large reactors for polysilicon production
- CFRC column internals for chemical processes
- Special graphite grades for glass bending
- Graphite felts for fuel cell applications

**Target approx. 1/3 of sales based on new products introduced over the last 4 years**



# Graphite Materials & Systems.

## Leading market shares in major end markets

### Global markets shares 2017

Chemicals	30%
Batteries & other energy	20%
LED	20%
Solar	15%
Semiconductor	15%
Automotive & transportation	15%
Industrial applications	10%-50%

Source: SGL Group's own estimates

# 5 Project highlights GMS

# Strengthened position in lithium-ion battery industry. Expansion of business opportunities

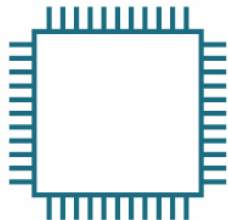


- Synthetic anode material qualified with further cell manufacturers
  - Cooperation intensified with long-standing partner Hitachi Chemicals
- Development of next generation lithium-ion batteries with higher storage density
  - Together with research institute ZSW and supported with research grants
- Bundling of competencies for battery development in Germany
  - Cooperation with leading German companies

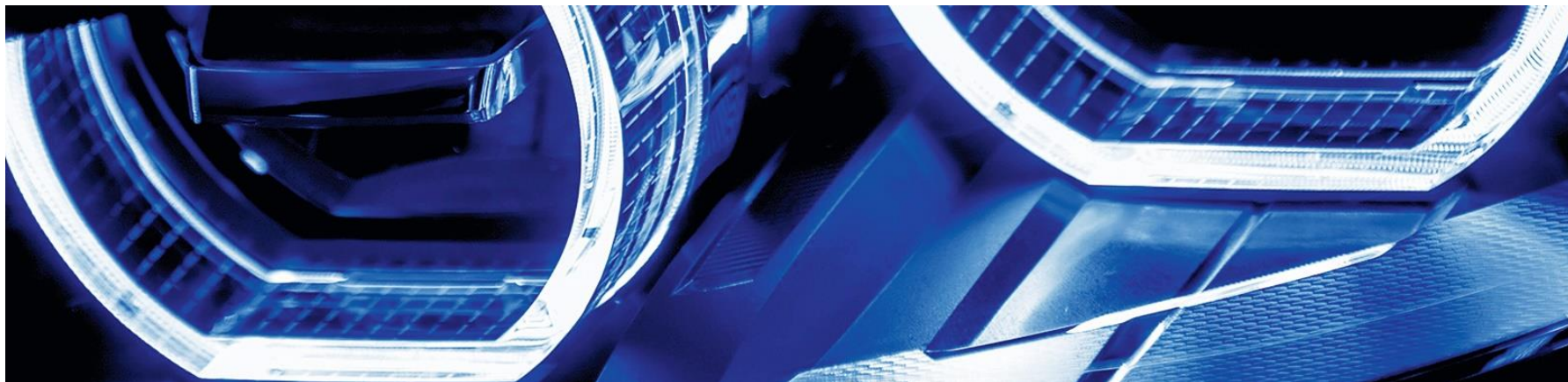


# Capacity increase in the USA.

## To meet increased demand for LEDs



- Construction of new state-of-the-art production lines for the coating of graphite carrier plates (wafer carriers) in the USA
  - Total investment of approx. €25 million
  - Completion end 2018
  - SGL Group technology provides critical contribution to LED quality
  - Supporting customers in furthering technical developments of LED production processes

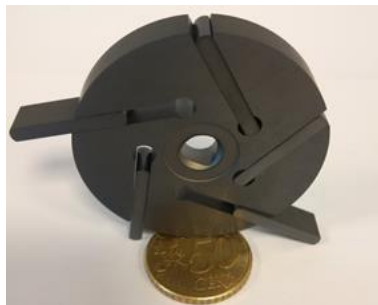


Photography source : istockphoto

# Increased demand for our specialty graphite solutions from the automotive industry.



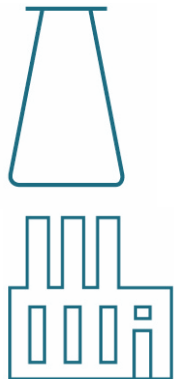
- Major capacity expansion in Bonn driven by demand from automotive industry
  - Investment of €25 million to expand production capacity in Bonn
  - Expansion to be completed by 2020



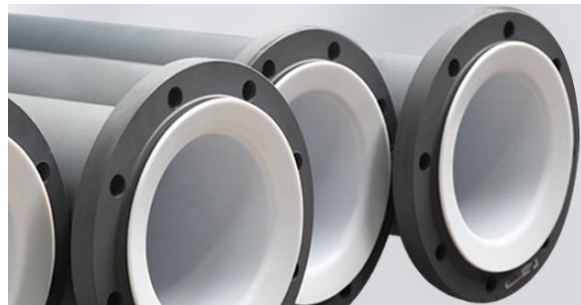
- We were commissioned with a major order from Rheinmetall Automotive – Pierburg after years of collaboration
  - To supply the centerpiece, rotors, and vanes for generating a vacuum in the EVP 40 for brake booster
  - SOP in 2017 with low volumes
  - Millions of sets will be delivered 2017-2021
  - Annual order volume in the low double-digit million € range



# Large orders and portfolio extension. Continued industrialization in China



- Largest order ever in China for PTFE coated pipes for a recycling facility for hydrochloric acid (photovoltaic industry)
- Large order from Sabc Cartagena (Spain) for pipes for treatment of process waste water
- Extension of product portfolio and first successful application of carbon fiber reinforced carbon (CFRC) for distillation apparatus in the Chinese chemical industry
- Construction of an additional hard felt production in China. This high performance graphite based insulation material is used in high temperature furnaces



# **6 SGL Innovation**

## **Our research and development**

# SGL Innovation.

## Our R&D organization as the foundation for profitable growth

- Market driven R&D ensures best-in-class support for current and future customers
- Industry networks with suppliers and customers are an essential part of our development strategy thus ensuring close contacts to our markets
- Global networks with leading universities cover the basic research
- Material, process and application know-how is the platform for our development clusters dedicated to Business Units and Future Growth Areas
- Strategic IP management safeguards our products and processes and is a driver of our long term market success



# **SGL Innovation.**

## **Activity areas in 2017**

### **Strengthen Technology Position in Lightweight Applications for Mobility**

- Operate carbon fiber pilot line and improve carbon fiber production processes
- Development of new carbon fiber grades with advanced modulus
- Studies of low cost production processes with reduced energy consumption

### **New Products for Energy Storage**

- Next generation anode materials for Li-ion batteries based on nano silicon/graphite composites to enhance range of electric vehicles by increasing energy density
- New materials for components in fuel cells for cars and stationary applications

### **Future Growth Areas – New Technologies ensuring Long Term Business Growth**

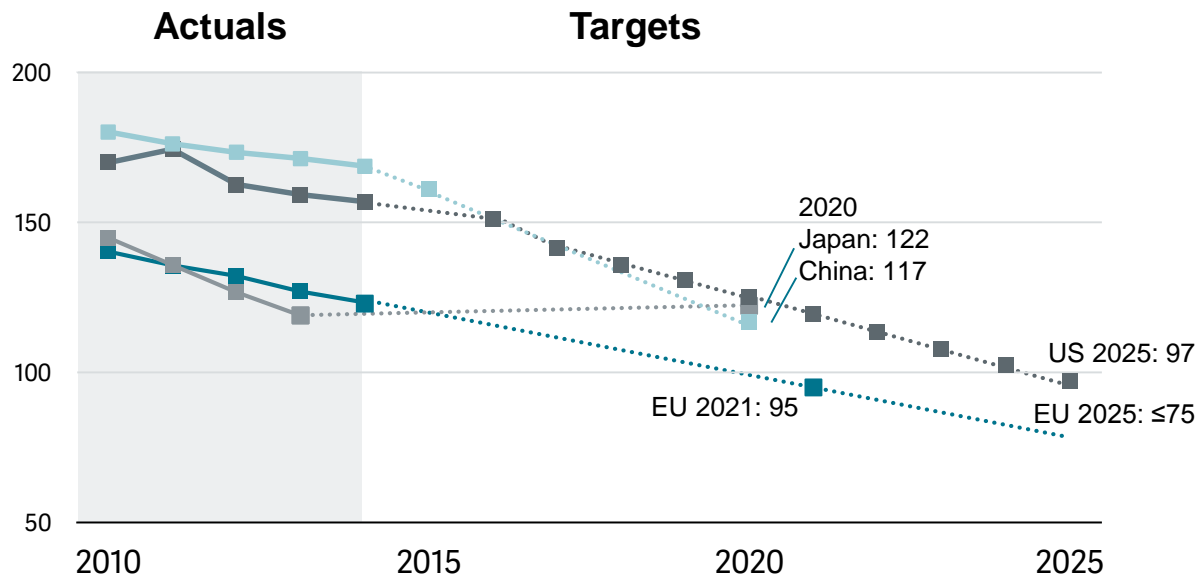
- Material and product development for additive manufacturing “3D-Printing” processes
  - Development of prototypes with customers in clean tech and wear & friction segment
- Composite materials for concrete reinforcement and civil engineering
- Development of new textiles for application in filtration and water treatment

# 7 Market and business developments

# Automotive.

## Stringent CO<sub>2</sub> emission restrictions globally

CO<sub>2</sub> emissions car fleet actual averages and targets  
[in g CO<sub>2</sub> per km, normalized to NEDC<sup>1</sup>]



- Global approach to reduce CO<sub>2</sub> emissions
- Progressively more comfort and safety features on board
- Driver for lightweight

<sup>1</sup> New European Driving Cycle  
Source: ICCT

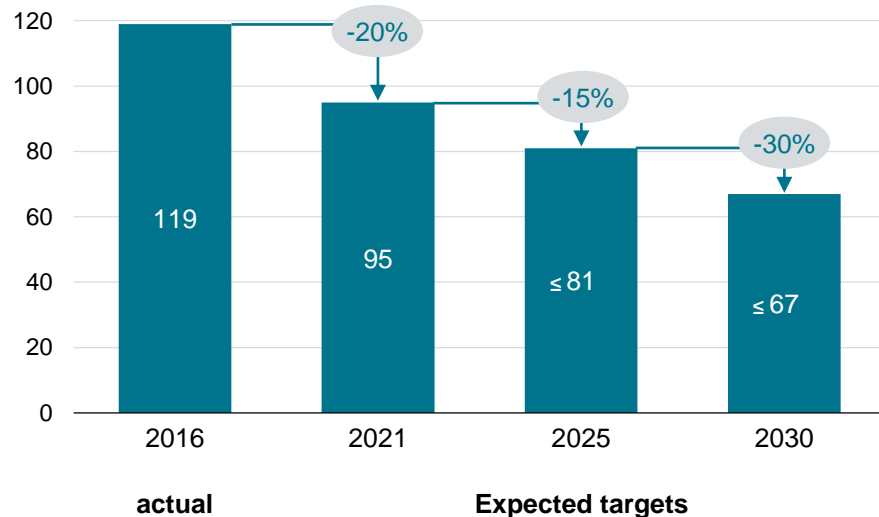
# Automotive.

## CO<sub>2</sub> targets drive lightweight construction



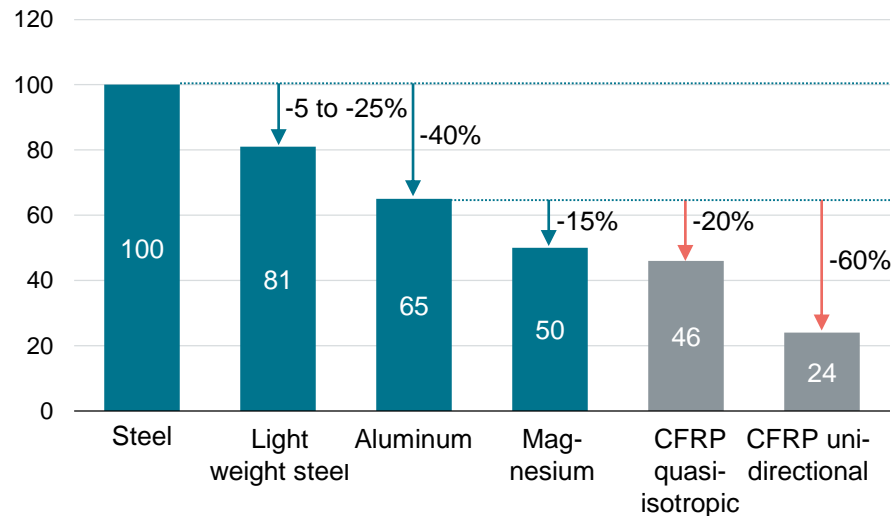
### OEM fleet target development (EU)

[in g CO<sub>2</sub>/km]



### Relative component weight<sup>1</sup>

[in %]



<sup>1</sup> With same functionality  
Source: ICCT, SGL estimates

# Automotive.

## Driving growth in CFM ...



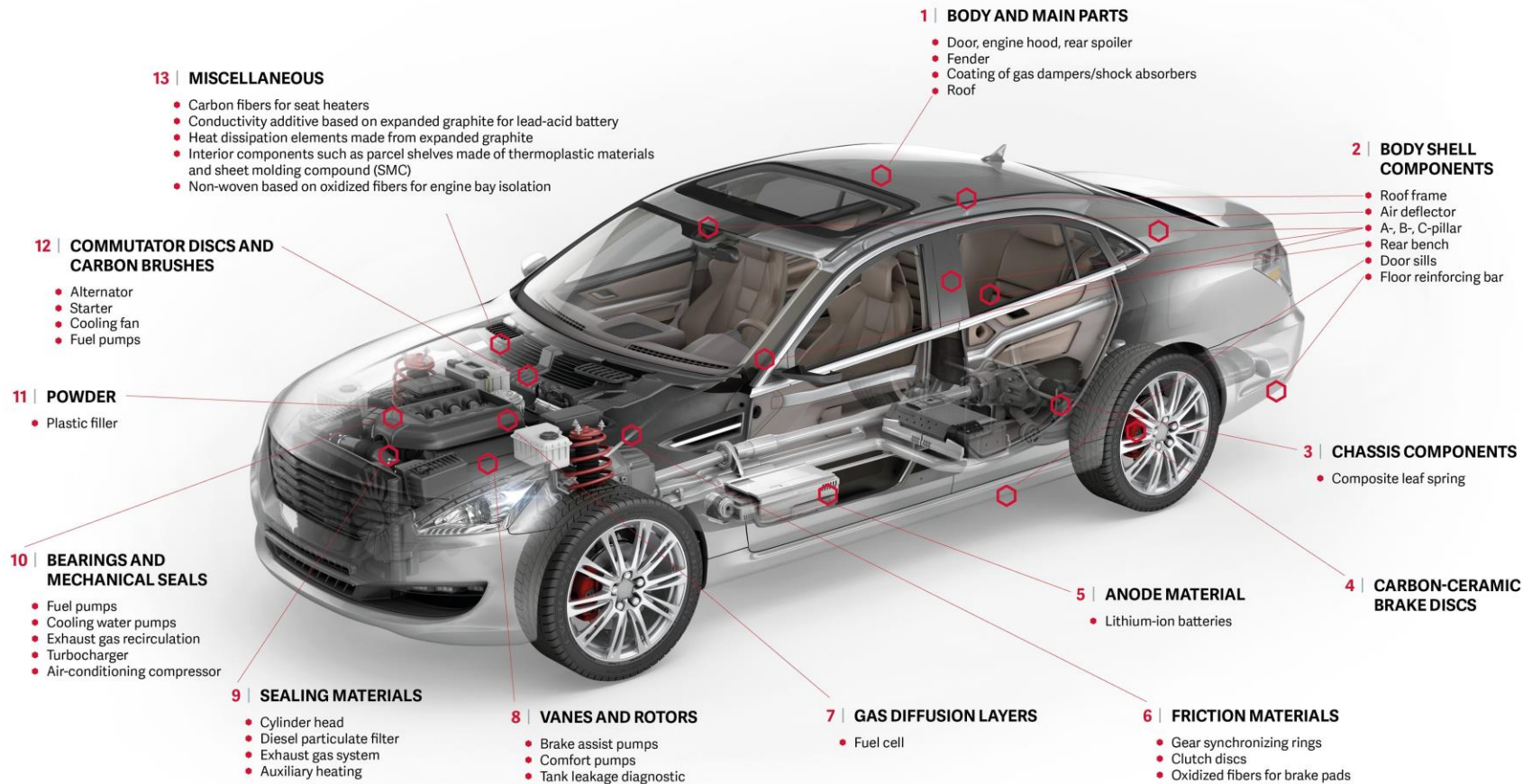
- Completion of the FRP<sup>1</sup> value chain by acquiring and integrating former JVs with Benteler and BMW will allow to better address the increasing number of new requests from both OEM and Tier1 in the market
- Growth in components driven by
  - New applications (e.g. leaf spring)
  - New technologies (e.g. thermoplastics)
  - Existing products/markets (e.g. wet friction)
- Clear trend evolving toward multi material mix and FRP<sup>1</sup> usage for local reinforcement
- Globalization and ramp-up in America and Asia
- E-Mobility as a key driver for new lightweight structural FRP<sup>1</sup> concepts also driven by new OEM entrants



## Automotive. ... as well as in GMS



- E-mobility supports growth with graphite parts: higher demand for brake assistant pumps and water pumps
  - Brake assistant pumps: create missing vacuum (electric vehicles)
  - Water Pumps: cooling remains key topic in all vehicles (e.g. Tesla S has 4 secondary water pumps)
- Entry into Chinese market via existing and new customers, supply to some key projects opens up additional opportunities
- Due to increased demand for automotive solutions and components based on specialty graphite, we are investing approx. 25 million euros until 2020 to increase capacity at the Bonn site
- We have recently received a major order from “Rheinmetall Automotive – Pierburg”, where we will supply brake assistant pumps. The annual order volume is in the low double-digit million euros range



# Aerospace.

## Market growth and focus on operating cost efficiency



- Airline industry extremely competitive, constant battle over cost reduction → composites address this key customer requirement as lightweight construction reduces fuel consumption
- Strong commercial aircraft **CFRP market growth (CAGR > 8%)** driven by aircraft programs (e.g. A350, B787, B777X)
- Besides Boeing and Airbus in the field of commercial aircraft other aerospace markets are accelerating – launcher, UAV, etc.

# Aerospace. CFM growth based on proven competence in automated serial manufacturing



- Limitations in today's aerospace composites manufacturing prevented further penetration beyond Boeing 787 and Airbus 380 and 350
  - Low annual production volume allow labor intensive production processes
  - Composites for aerospace are by far the most expensive. Average markup (ratio of end-user/raw material cost) is nearly 6.5, and thus far ahead of the next sector, consumer goods (ratio of 2.9)<sup>1</sup>
- Aerospace industry likely to further increase composites penetration rate between 2016-2021<sup>1</sup>
  - Requirement: higher use of automation to produce composite parts at lower manufacturing costs and increased production volumes
- We are ideally positioned to address exactly these issues based on our carbon fiber and composites competence acquired while working for the automotive industry
  - Integrated value chain from precursor to components
  - Materials (e.g. fabrics) for secondary structures, and interior applications
  - New aerospace projects for materials and aircraft components

# Wind energy.

## Redefine CFM market approach to better exploit opportunities



- Current market conditions challenging
  - Stagnating global installed wind turbine growth
  - German-centric customer base more than proportionally affected (new tendering procedures)
  - OEMs and suppliers are under high cost pressure and qualify further suppliers
- Temporarily lower sales share due to sale of SGL Kumpers
- Changing technologies (prepreg vs. fabrics vs. pultrusion) require adjustment of market approach
- Several OEMs design new blades for large off-and on-shore wind turbines based on new technologies
- **Beyond wind energy:** additional opportunities identified in oil & gas industry (e.g. pipes, risers, liquid gas tanks, and others)

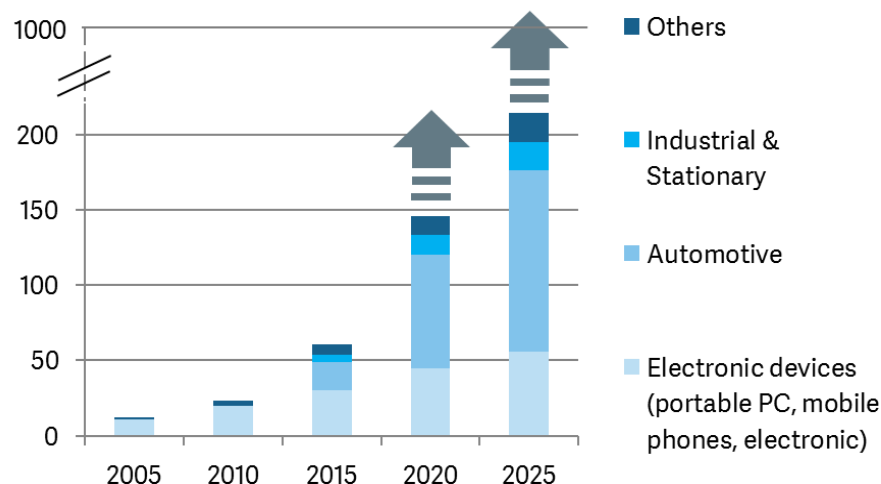
# Battery & other energy. The whole value chain continues to invest into lithium-ion battery technology



# Battery & other energy. Accelerated growth drives our graphite anode material business



## Market Development LIB [GWh/a prod capacity]



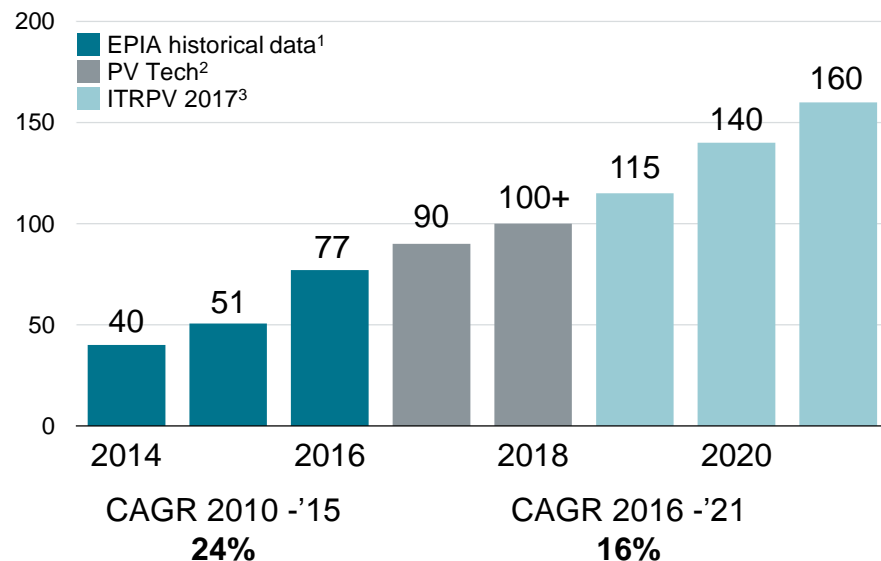
- All prior growth estimates will be exceeded – e-mobility as key driver
- Graphite Anode Material (GAM) demand approx. 1kg per 1 kWh
- Our strong market share positions us well to participate in anticipated strong growth
- Lithium-ion continues to remain the dominant battery technology well beyond 2025, due to
  - Established technology and capacities
  - Cost/kWh will halve until 2025

# Solar.

## Growth continues, driven by and depending on China



### PV module installations [GWp/a]



### Solar growth continues

- China, India and USA are main drivers
- Levelized costs of PV energy continues to fall
- Crystalline silicon remains dominant PV technology but shift towards mono due to higher efficiency

### Positive impact on GMS

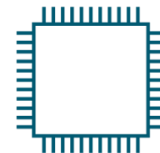
- Technology shift from multi/crystalline to mono/crystalline favoring our graphite product portfolio
- Opportunities for price increases and long-term partnerships with industry players
- Promotion of full graphite portfolio (differentiating factor)

<sup>1</sup> EU PV Industry Assoc., "Global Market Outlook 2017-2021"; <sup>2</sup> **PV Tech article Aug. 16, 2017** and IHS Markit Aug. 24, 2017; <sup>3</sup> ITRPV (International Technology Roadmap for PV, Mar. 15, 2017 ) "Low scenario" figures are in line with IEA expectations (IEA, Energy Technology Perspective, June 2016)



# Semiconductors.

## Stable long-term growth



### **Semi sees stable and long-term growth**

- 5% CAGR expected 2017-2022<sup>1</sup>
- Memory (computing, mobile phones) drives 12”
- Automotive (semi-autonomous and autonomous driving) and industrial (“Industry 4.0”) drives 8”
- After strong 2017, we expect 8” and 12” wafers in short supply in 2018
- Artificial Intelligence a sustainable growth driver
- Long-term growth particularly in China

### **Positive impact on GMS’ graphite products**

- Potential for price increases
- Gain qualification at new accounts
- Maintain/intensify cooperation with Chinese players (>40 new semi fabs to be built in the next years)

# LED.

## Major contributor to GMS' growth expectations



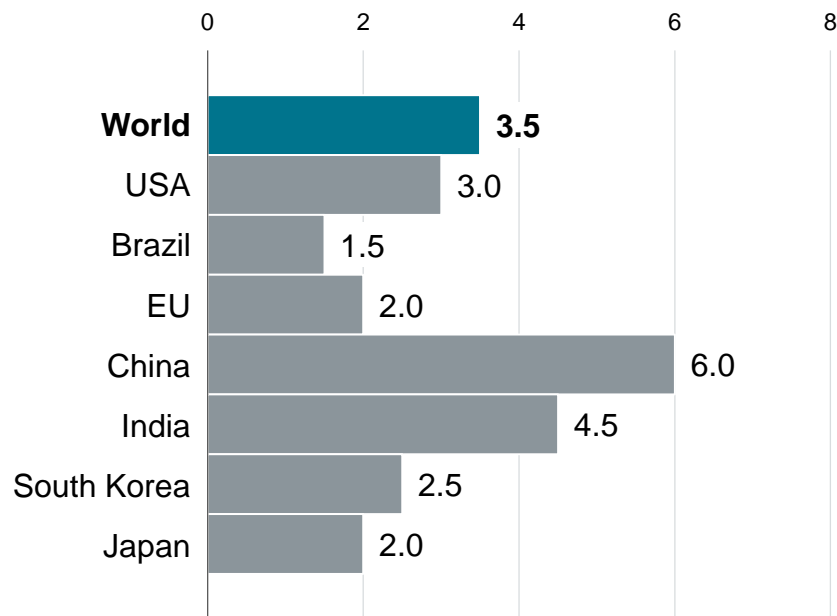
- **LED growth** driven by
  - **7.9%: automotive**<sup>1</sup> CAGR 2016-2022 (increasing LED use on vehicle exteriors, headlamps, daytime running lights, rear lighting, turning lights, and interior vehicle illumination for both cars and heavy vehicles)
  - **8.5%: signage**<sup>1</sup> CAGR 2016-2022 (trend towards finer pitch displays, large full color displays, road signs, traffic lights, and building lettering)
  - **6.1%: general lighting**<sup>1</sup> CAGR 2016-2022
- **Expansion of LED fabs** leading to a sellout situation in **SiC coated graphite**
- Settlement of patent litigation will **accelerate our growth 2018ff**
- This strong growth drives demand for our **graphite susceptors** and **wafer carriers**. Consequently we are beginning with the **second expansion stage** in our St. Marys (Pennsylvania, USA) **coating facility**
  - First expansion stage started in 2017 to be completed mid 2018
  - Second expansion stage to be completed in fourth quarter 2018
  - Total capex €25 million over 3 years

# Chemicals.

## Chemical industry expected to stabilize



### Chemical production forecast [change 2018 vs. 2017 in %]



### Chemical industry improving profitability

- Consolidation (e.g. Dow/DuPont)
- US petrochemical industry recovering from low base
- Shale gas recovery expected

### We expect our business to benefit from this improvement

- Recent contract win in China for HCl recovery
- Postponements of projects/system maintenance of recent years now have to be executed
- Maintenance capex in EMEA and US to drive sealing business

# Industrial Applications. Favorable economic backdrop for continued improvement in high-tech applications

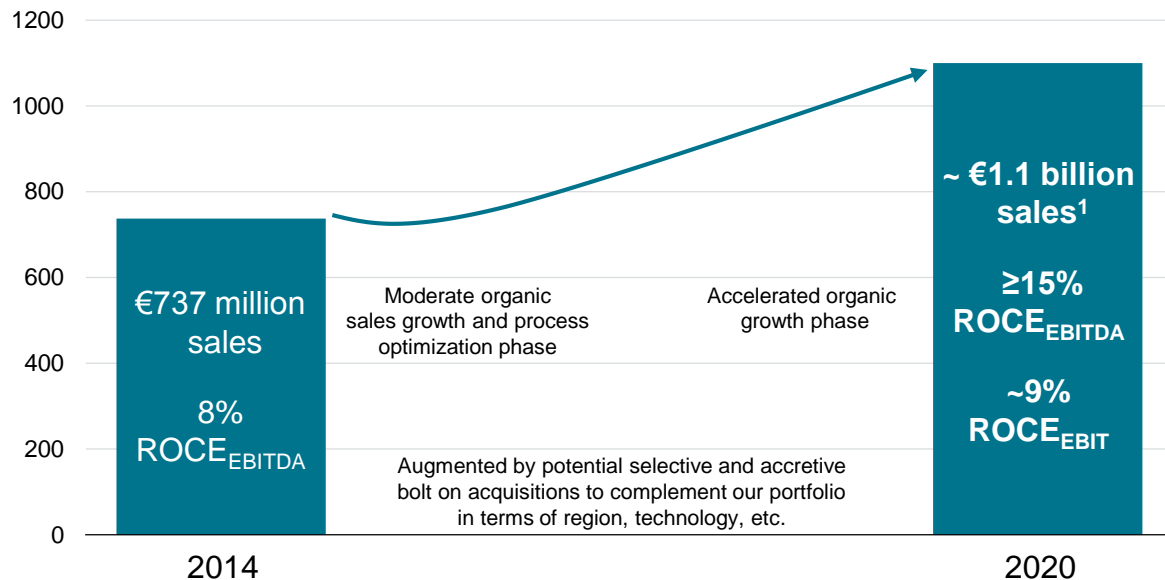


- Economic forecasts (IMF, PMI, etc.) predict ongoing, if not improving favorable general industrial environment
- **CFM:**
  - Industrial applications important end market to bridge automotive and aerospace development time
  - New applications/industries: Prepregs, CFRP, grids, thermoplastics for machinery, medical, marine, ballistic
  - High growth in carbon fiber, esp. for injection molding parts
  - New application possibilities for the use of carbon in civil engineering projects
- **GMS:**
  - US market for industrial applications with cautious improvement driven by increased drilling activities
  - New applications under development, for example glass bending and optical fiber enabled by graphite solutions

# 8 New mid-term guidance

# Targets for 2020 remain valid.

## We introduce $ROCE_{EBIT}$ as key performance indicator



Drivers for **ROCE** improvement:

- Top line growth (benefiting from megatrends) leading to higher capacity utilization
- Increasing share of innovative products bearing higher margins
- Efficiency improvement programs driving down costs

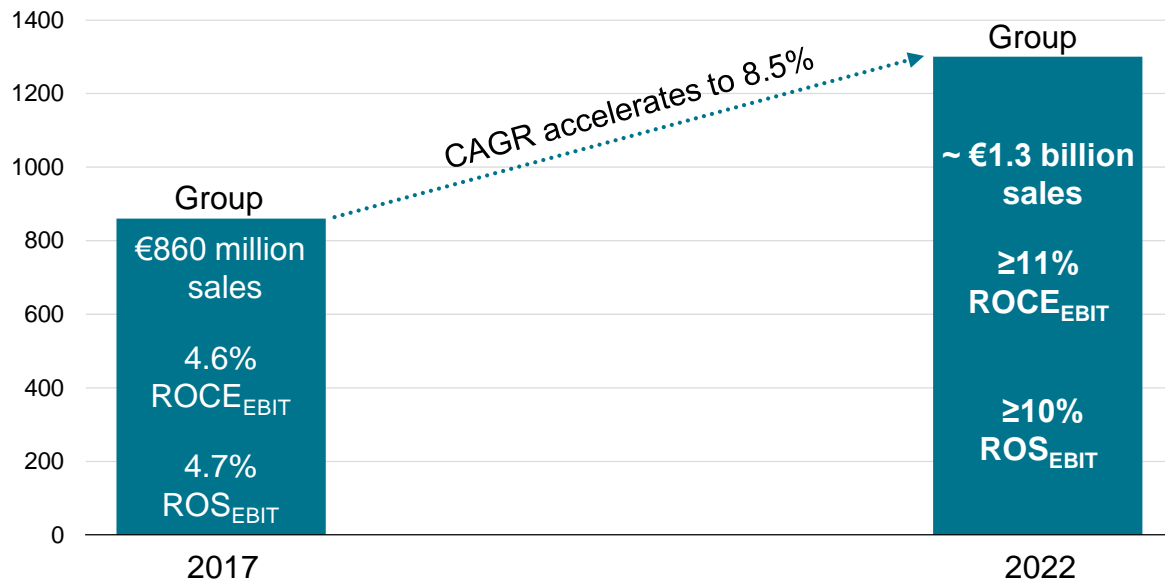


≥Min. 15%  $ROCE_{EBITDA}$  = ~ 9%  $ROCE_{EBIT}$

based on annual depreciation and amortization levels of €65-70 million following the full consolidation of SGL ACF

<sup>1</sup> like-for-like comparison, i.e. before changes in joint venture structures

# We introduce a new mid term guidance. Market trends and business positioning drive accelerated growth



## Additional 2022 targets:

Net profit margin ~6-7%

Free cash flow margin ~5%

## Over the entire guidance period:

Equity ratio ≥30%

Leverage ratio ≤2.5

Gearing ≤0.5



**We also introduce margin targets for the business units: ≥12% ROS<sub>EBIT</sub> until 2022**

# 9 Back-up



# 9 Back-up Outlook 2018

# Business Unit outlook 2018.

## CFM

### Composites – Fibers & Materials (CFM)

- Substantial **increase in sales by 25%**
  - Mainly driven by acquisition of former joint ventures with BMW and Benteler
  - Accordingly sales in market segment **automotive** to more than double, while sales with the **wind** energy industry should decline by more than half due to the sale of SGL Kumpers and lower customer demand
  - Sales to market segment **aerospace** expected to increase slightly
  - Sales to market segments **industrial applications** and **textile fibers** expected on prior year level
  - Like-for-like (i.e. excluding currency and M&A effects) **mid-to-high single digit growth** rate expected
  - No material impact from initial IFRS 15 adoption
- Only slight increase of **EBIT**<sup>1</sup> cannot be ruled out
  - Positive impact from full consolidation of former joint venture with BMW and higher volumes
  - Partially offset by negative currency effects and higher development expenses
  - Weaker than expected operating trends in wind, textile fibers and industrial applications
  - No material impact from initial IFRS 15 adoption
  - Highest quarterly earnings of this fiscal year is likely to have been achieved in the first quarter 2018 due to the high capacity utilization as well as high shipments for particular projects

<sup>1</sup> before non-recurring items (including PPA)

# Business Unit outlook 2018.

## GMS and Corporate

### Graphite Materials & Systems (GMS)

- Slight increase in **sales** – corresponding to currency adjusted **mid-to-high single digit** sales growth
  - Driven by market segments **LED, automotive & transport** as well as **semiconductor**
  - **Industrial applications and chemicals** expected to show slight increases in sales
  - **Solar** likely to remain on previous year level as we prioritize sales to market segments **LED** and **semiconductor**
  - Strong volume increase in market segment **battery & other energy**, offset by price and currency effects
  - Low double digit million Euro positive impact from the initial adoption of IFRS 15
- **EBIT**<sup>1</sup> improvement to substantially outpace sales growth
  - Driven by market segments **LED, automotive & transport** as well as **semiconductor**
  - Higher capacity utilization to partially compensate for adverse currency effects
  - Mid to high single digit million Euro positive impact from the initial adoption of IFRS 15
- Group **ROCE**<sub>EBIT</sub> target of 9-10% should be achievable again in this business unit

### Corporate

- Slightly higher expenses due to
  - General cost increases (esp. wage increases)
  - Higher consulting fees (OMS, new data protection directive)
  - Partly offset by one-off income from a land sale in Canada recorded in Q1/2018

<sup>1</sup> before non-recurring items

# Group outlook 2018.

## Further improvement in the profit and loss statement

- Full year **Group sales** to increase by slightly more than 10%, corresponding to a like-for-like (i.e. excluding currency and M&A effects) **high single digit growth** rate. In addition, we anticipate a low double digit million € positive impact on Group sales from the initial adoption of IFRS 15
- **Group recurring EBIT<sup>1</sup>** to increase at a slightly faster pace than sales due to
  - Expected volume increases
  - Successful implementation of pricing initiatives
  - Additional earnings contribution from the full consolidation of the former joint venture with BMW
  - Cost savings
  - Partially offset by adverse effects from personnel and raw material cost, and foreign currency developments
  - In addition, we anticipate a mid to high single digit million € positive impact from the initial adoption of IFRS 15
- **Net result – continued operations** to improve to a low to mid double digit € million amount due to
  - Improved operating profit (including IFRS impacts)
  - Lower interest expenses due to early redemption of corporate bond in October 2017 and repayment of convertible bond at maturity in January 2018 – partially offset by higher interest expenses relating to full consolidation of net debt of former JV with BMW
  - Impact from positive non-recurring effects in Q1/2018

<sup>1</sup> before purchase price allocation and non-recurring items

# Group outlook 2018. Capex/acquisitions drive higher net debt but all balance sheet targets remain intact

- **Capex** to increase compared to prior year to approx. € 20 million above level of depreciation
  - Level of depreciation increases to €65 million (before PPA) due to full consolidation of former joint ventures
  - Previous guidance range narrowed down due to progress in the year and low capex in H1 2018
  - Mid term guidance of average capex at depreciation levels remains valid but capex requirements are front end loaded
- **Total free cash flow** to reach a “black zero”
  - **Free cash flow – continued operations** to improve significantly but remain negative in low-to-mid double digit range mainly due to high capex level and cash outflow for the acquisition of the Wackersdorf site in the former joint venture with BMW
  - **Free cash flow – discontinued operations** to reach positive mid double digit range due to payment of final instalments of purchase price for disposal of GE and CFL/CE
- **Net debt** at end 2018 to substantially increase due to the full consolidation of former joint venture with BMW
- **Balance sheet targets** will continue to be met - **equity ratio** at or above 30%, **gearing** at or below 0.5 and **leverage ratio** at or below 2.5

# 9 Back-up

## Latest financials H1/2018

# Composites – Fibers & Materials.

## Sales growth driven mainly by structural effects

in € million	H1/2018	H1/2017
Sales revenue	223.7	176.2
EBITDA <sup>1</sup>	33.7	22.9
EBIT <sup>1</sup>	17.3	12.4
EBIT-Margin <sup>1</sup> (in %)	7.7	7.0
ROCE <sub>EBIT</sub> (in %)	5.3	5.2

- **Sales revenue** increased by 27% (currency adjusted by 30%)
  - Primarily due to structural effects in the market segment **automotive** resulting from the initial consolidation of the former at-equity accounted JV Benteler SGL as well as the complete acquisition of the former partially consolidated JV SGL ACF
  - After the sale of our participation in SGL Kumpers, the market segment **wind** now only includes lower sales of carbon fibers to the wind energy industry
  - Higher sales in the market segments **automotive**, **aerospace** and **industrial applications**
  - Sales in the market segment **textile fibers** on prior year level
- Recurring **EBIT** increased by 40%
  - Highest earnings growth in the market segment **automotive**, particularly due to the full consolidation of former SGL ACF and Benteler-SGL
  - Partially offset by slightly lower earnings contribution from **wind** and **industrial applications**
  - Earnings in market segments **aerospace** and **textile fibers** on prior year level

<sup>1</sup> before non-recurring items of €23.3 million in H1/2018 and minus €6.0 million in H1/2017

# Graphite Materials & Systems. Sales increase driven by strong underlying demand and IFRS 15 impacts

in € million	H1/2018	H1/2017
Sales revenue	288.0	255.1
EBITDA <sup>1</sup>	51.4	35.1
EBIT <sup>1</sup>	40.0	23.9
EBIT-Margin <sup>1</sup> (in %)	13.9	9.4
ROCE <sub>EBIT</sub> (in %)	14.8	9.6

- **Sales revenue** up 13 % (currency adjusted by 16%)
  - Initial adoption of IFRS 15 led to a partially temporary sales increase of approximately €17 million. Adjusted for this and currency effects, sales in GMS increased by around 10% reflecting the substantial recovery in the market segment **chemicals** as well as the double-digit growth in the market segments **LED**, **semiconductors**, and **automotive & transport**
  - The market segment **battery & other energy** benefited from higher demand, which was offset by price and currency effects
  - We have limited our sales in the market segment **solar** at prior year level, as we increased our deliveries to customers from the **semiconductor** and **LED** segments. Business with **industrial applications** remained slightly above prior year level
- **Recurring EBIT** increased by 67%, more than proportionately to sales
  - Including a partially temporary effect from the initial adoption of IFRS 15 of €10.4 million. Adjusted for this effect, EBIT increased by 24% mainly due to improved results in **nearly all market segments**
  - The only market segments that did not increase earnings compared to the prior year was **battery & other energy**, which is impacted by expected unfavorable currency exchange rates (esp. JPY) as well as higher raw material costs



# Corporate.

## Higher expenses more than compensated by land sale in Canada

in € million	H1/2018	H1/2017
Sales revenue	17.6	4.0
EBITDA <sup>1</sup>	-10.1	-10.9
EBIT <sup>1</sup>	-13.1	-13.8

- **Sales revenue** improved significantly due to the disposal of our former PP activities. Services to PP now recorded as sales to third parties
- Recurring **EBIT** improved by €0.7 million due to the earnings contributions of approx. €4 million from a land sale in Canada, which more than compensated for
  - Costs for the implementation of the Operations Management System (OMS)
  - End of cost pass through to former PP activities, which have now been sold

<sup>1</sup> before non-recurring items of €3.1 million in H1/2018 and minus €0.8 million in H1/2017

## Group. Improvement driven by better operations and high positive one-time effects

in € million	H1/2018	H1/2017
Sales revenue	529.3	435.3
<b>EBITDA before non-recurring items</b>	<b>75.0</b>	<b>47.1</b>
<b>EBIT before non-recurring items</b>	<b>44.2</b>	<b>22.5</b>
ROCE <sub>EBIT</sub> (in %)	6.0	3.9
Non-recurring items	26.8	-6.8
EBIT	71.0	15.7
Net financing result	-13.7	-26.2
Results from continuing operations before income taxes	57.3	-10.5
Income tax expense and non controlling interests	-6.0	-7.0
Result from discontinued operations, net of income taxes	-4.0	13.9
<b>Consolidated net result attributable to shareholders of parent company</b>	<b>47.3</b>	<b>-3.6</b>

- **EBIT before** non-recurring items doubled to €44.2 million, due to acquisition driven higher results in CFM, improved earnings in the business unit GMS (including a temporary impact of €10.4 million from the first time adoption of IFRS 15) and an income of €3.9 million from a land sale in Canada in the reporting segment Corporate
- **Non-recurring items** predominantly relate to ppa effects relating to the purchase of remaining shares in former JVs with BMW and Benteler
- **Net financing result** was nearly halved due to the repayment of the corporate bond and the convertible bond

# Free cash flow. Improved operational cashflow offset by cash outflow for the acquisition of our joint ventures

in € million (continuing operations)	H1/2018	H1/2017
Cash flow from operating activities	-7.8	-36.8
• Capital expenditures in property, plant, equipment and intangible assets	-21.9	-14.7
• Cash flow from other investing activities <sup>1</sup>	-9.3	21.8
Cash flow from investing activities	-31.2	7.1
Free cash flow	-39.0	-29.7
Free cash flow from discontinued operations	62.6	-0.9

- **Cash flow from operating activities** improved significantly mainly due to the improved result from continuing operations and lower build-up of working capital
- Higher **cash outflow from investing activities** due to
  - Cash outflow for the payment of the Wackersdorf site of former SGL ACF (now SGL Composites, Germany) of €23.1 million
  - Only slightly offset by proceeds from the disposal of our stake in SGL Kumpfers (€3.4 million) and a land sale in Canada (€3.9 million)
- **Free cash flow from discontinued operations** contained the cash inflow from the final outstanding payments for the sale of former PP activities

<sup>1</sup> dividends received, payments for capital contributions in investments accounted for At-Equity and other financial assets, payments for acquiring remaining stakes in our joint ventures, proceeds from sale of intangible assets and property, plant and equipment

## Balance sheet. Financial ratios remain in the targeted range after acquisition of remaining stakes in former JVs

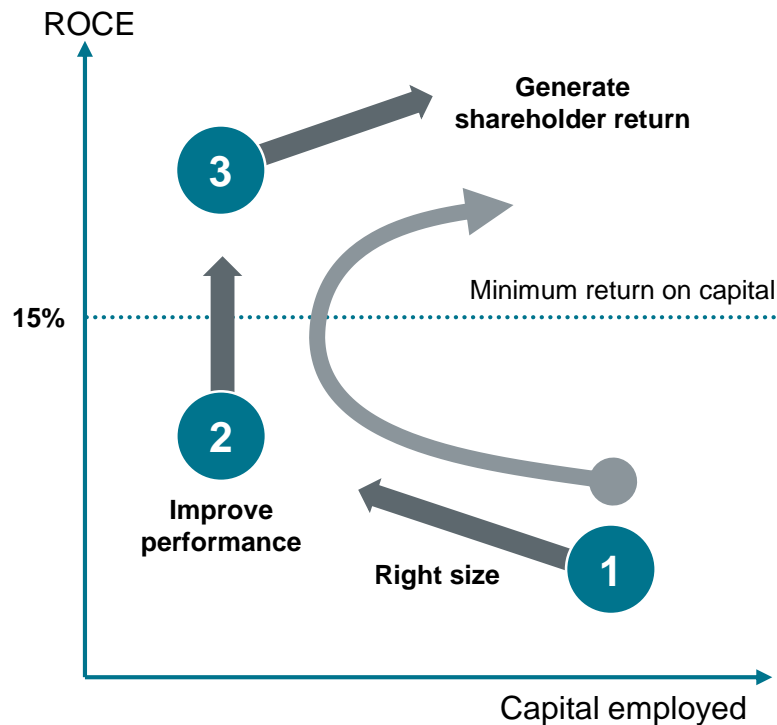
in € million	30.06.2018	31.12.2017
Equity ratio (in %)	34.9	29.6
Total liquidity (incl. discontinued operations in 2017)	158.0	382.9
Net financial debt	211.1	139.0
Gearing (net debt/equity)	0.40	0.30
Leverage ratio (net debt/EBITDA)	1.8	1.5

- **Equity ratio** improved by 530bps mainly due to
  - Positive net result of the period of €47 million
  - Adoption of IFRS 15 and IFRS 9 on transition date January 1, 2018 amounting to €13.8 million
  - Adoption of higher interest rates on pension liabilities led to a positive impact of €10.8 million
- **Total liquidity** decreased mainly as a result of the repayment of the convertible bond in January 2018 and the payment for the Wackersdorf facility as part of the acquisition of SGL Composites, Germany (former JV with BMW)
- Higher **net financial debt** reflects initial consolidation of the proportional debt relating to the full consolidation of SGL Composites amounting to €92 million

# 9 Back-up

## Transformation of SGL Group

# Fully on track. In achieving our strategic realignment

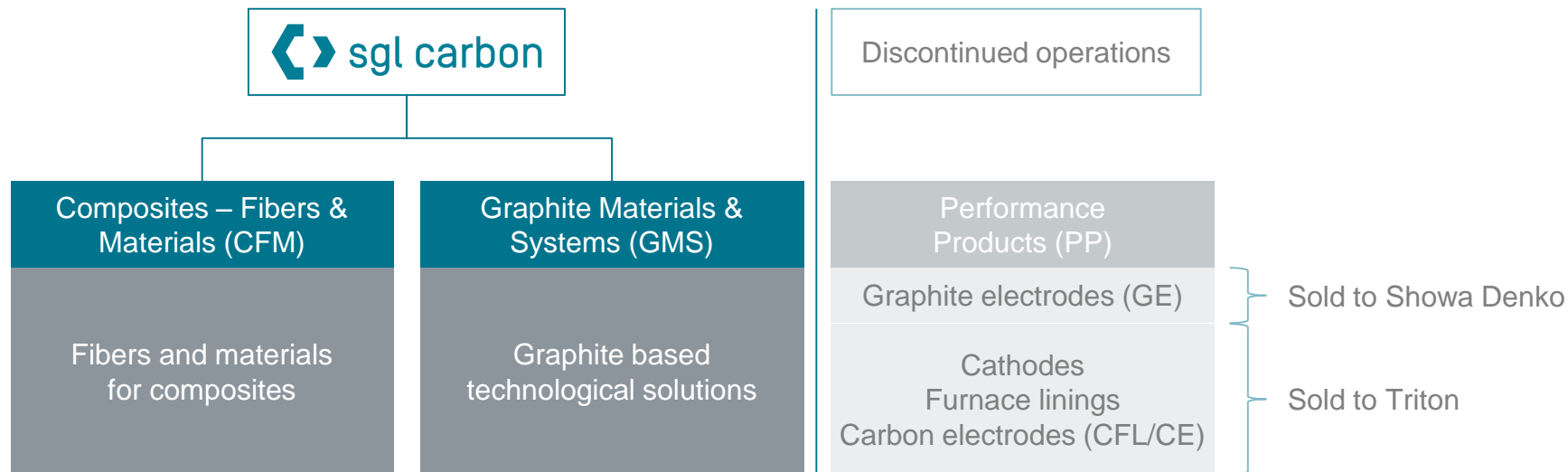


- 1 Right size**  
Disposal<sup>1</sup> of businesses that are not performing or that no longer fit to the new SGL Group
- 2 Improve performance**  
Cost savings and organizational streamlining<sup>2</sup>, as well as strengthening of capital structure<sup>3</sup>
- 3 Generate shareholder return with profitable growth**  
CFM: CFM 2020+  
GMS: Growth strategy 2020

<sup>1</sup> includes Rotorblades, HITCO, and former business unit Performance Products (PP); <sup>2</sup> Cost savings programs SGL 2015, CORE as well as SGLX; <sup>3</sup> early redemption of the €250m corporate bond on October 30, 2017 and repayment of the €240m convertible bond on January 25, 2018 with proceeds from PP disposal and December 2016 capital increase

# The transformation of SGL Group.

## We are implementing the announced strategy



- ✓ The disposal of the PP/GE business enables the new SGL Group to **concentrate** its resources on the **growth areas CFM und GMS**
- ✓ Focus on CFM and GMS improves the balance between markets and industries, and thus **reduces volatility in our business**

## 9 Back-up

Acquisition of SGL ACF  
(former JV with BMW Group)



# Taking full ownership of SGL ACF.

## Rationale

### Background & objectives

- SGL Group is the “natural owner” of the carbon fiber and composites value chain. Therefore, process and valuation methodology of taking over BMW’s share was already pre-defined in the joint venture agreement
- Initiate step-wise full integration of SGL ACF activities into business unit Composites – Fibers & Materials (CFM) while maintaining debt financing from BMW Group until end 2020
- Leverage SGL ACF’s capacities and capabilities for CFM growth strategy
- Gain operating degrees of freedom, e.g. growing main North American production hub in Moses Lake (Washington, USA)
- Attractive valuation metrics (high single digit EV/EBITDA) compared to other M&A transactions in the composites industry in recent years (double digit EV/EBITDA)

# **Taking full ownership of SGL ACF. Main cornerstone for CFM's mid- to long-term growth perspective**

## **Key value driver 1: i- and 7-series project with BMW**

- Contractually agreed take-or-pay mechanism ensures a good profitability level until end of production of BMW i3
- The i-series project is the foundation of an excellent supplier relationship with BMW

## **Key value driver 2: SGL ACF's capabilities beyond existing BMW projects**

- Full ownership enables CFM to utilize the sites in Moses Lake (USA) and Wackersdorf (D) as additional hubs not just for the automotive industry but also for energy, aerospace and civil engineering
- Developed knowledge and available capacities can also be leveraged for other automotive OEMs
- Development, production and marketing of new generation carbon fiber technology

# Taking full ownership of SGL ACF. Main cornerstone for CFM's mid- to long-term growth perspective (cont.)

## Key value driver 3: Synergies

- The site in Moses Lake (USA) will be CFM's main hub for all North American activities
- Potential for reduced capex
- SGL ACF's existing site overhead functions can be leveraged for CFM (avoided headcount increase)

# Acquisition of SGL ACF.

## Two-step transaction structure

### Innovative transaction structure limits near term cash outflow

- Agreement includes full acquisition of both Wackersdorf and Moses Lake sites
- Closing of Wackersdorf acquisition will be pursued immediately and is expected in Q1/2018 – leading to cash outflow of purchase price relating to Wackersdorf
- Closing of Moses Lake site acquisition (incl. payment of related purchase price) can be pursued at any time until the end of 2020 – BMW Group will continue to provide debt financing until then
- However, agreement does lead to full consolidation of the total SGL ACF debt (excl. purchase price for Moses Lake) as of January 1, 2018 (see next page)

# Acquisition of SGL ACF.

## Financial Impact on 2018

### Financial impact on KPIs in 2018 (based on closing in Q1/2018)

- Additional turnover: mid double digit million € (change from proportionate to full consolidation)
- Additional EBITDA: low double digit million € (change from proportionate to full consolidation)
- Net income: small positive impact as higher depreciation related to purchase price allocation and higher interest expenses (due to full consolidation of SGL ACF debt) to partially offset higher EBITDA contribution
- Purchase price:
  - approx. €24 million for Wackersdorf (payable upon closing Q1/2018)
  - approx. USD 62 million for Moses Lake (payable upon closing end of 2020 at the latest)
- Net debt effect: approximately €100-150 million increase (full consolidation of SGL ACF debt and purchase price Wackersdorf)

# 9 Back-up

## Acquisition of Benteler SGL

# Acquisition of Benteler SGL. Provides the right component platform for the business unit CFM

Leading large-scale serial manufacturer for automotive composite parts

## Business process competencies

- Strong automotive mind-set
- Proximity to automotive customers
- Process capabilities and systems to handle quotations, automotive logistics, and development projects
- Supporting quality management and tools incl. ISO/TS 16949
- Experienced team (commercial, engineering, and technical)



## Technology competencies

- Development and prototyping capabilities
- Pilot line equipment (close to serial production equipment)
- Track record in the industrialization of large scale production processes incl. automation
- Existing technologies (wet press, RTM) can serve as basis for future modification/expansion

# Acquisition of Benteler SGL.

## Rationale

### Background & objectives

- Acquisition of 50% share from Benteler Automobil Technik (BAT) in JV B-SGL to achieve 100% of control
- Complete integration of Benteler SGL into the business unit CFM will significantly strengthen the automotive activities of the business unit and provide synergies
- Privileged partnership with Benteler Automotive Technologies (BAT) in the area of composite leaf springs for chassis systems
- Continuation of the growth path in structural composite components
- Leverage synergies throughout the SGL value chain (i.e. captive use of carbon fibers)



# Acquisition of Benteler SGL.

## An attractive investment case for SGL Group

- **Long-term market growth** is expected to continue (CAGR 2017-2026 >10% p.a.) driven by **major automotive technology trends** incl. battery electric mobility, lightweight, multi material design concepts and local composite reinforcements
- **Key value driver 1: Sustainable mid-term growth.** Benteler SGL's leading technology positions and project portfolio allow growth with or above market rate. Structural parts and leaf springs as two complementary business segments. Established partnerships with OEMs incl. privileged partnership with BAT (leaf springs/suspension systems). Upside from offering technology to other industries
- **Key value driver 2: Long-term growth perspective.** Leverage technology platform and manufacturing experience to establish CFM as leading 1st tier supplier. Several project/program discussions are related to SOPs beyond five years planning horizon

# Acquisition of Benteler SGL.

## An attractive investment case for SGL Group (cont.)

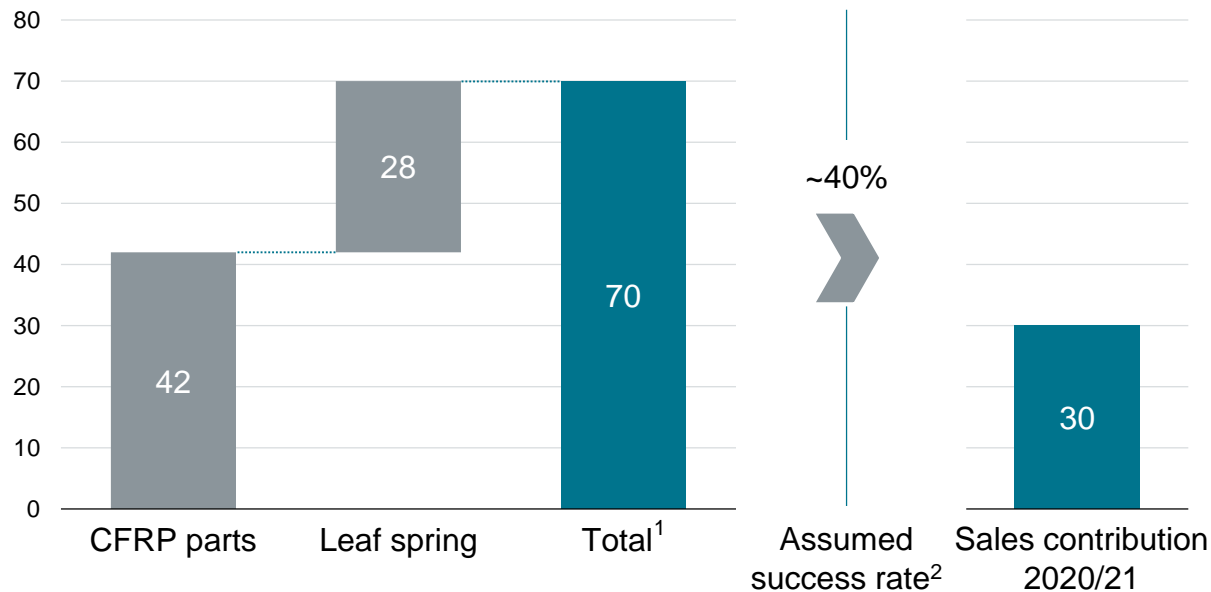
- **Key value driver 3: Enabling of CFM projects.** Customers/partners expect SGL Group to demonstrate and guide how to design and develop solutions and how to industrialize manufacturing. Already today, Benteler SGL serves as an important partner in particular for OEMs who are less experienced with composites, e.g. Asian car producers
- **Key value driver 4: Synergies from the integration into the business unit CFM.** Shared resources in business development, sales, engineering, industrialization, quality management, and usage of pre-materials from the SGL Group value chain incl. gross margin and working capital benefits. Benteler SGL has appropriate business process and technology competencies and the team can make a strong nucleus for automotive business within CFM

# Acquisition of Benteler SGL.

## Current JV project pipeline

### Benteler SGL project pipeline analysis

Annual sales in m€



Current JV project pipeline expected to generate additional low to mid double digit million euro sales by 2020/21

<sup>1</sup> In total 17 different projects being pursued; <sup>2</sup> Based on experience and status of project discussions

# Acquisition of Benteler SGL.

## Financial impact

### Financial impact on KPIs (based on expected closing mid-December)

- Sales FY 2017                      Negligible
- EBITDA FY 2017                  Negligible
- Net debt at end 2017            mid double-digit million euro increase
  
- Sales FY 2018                    Additional sales (low to mid-double digit million euro amount)
- EBITDA FY 2018                Small positive impact

# 9 Back-up

## Efficiency and cost cutting programs

# Operations Management System. Aims for global standardization and higher performance

## Situation

Analysis shows improvement potential in

- performance orientation and performance management
- shopfloor and people management
- global standards in methods
- transparency and comparability in KPIs
- continuous improvement
- performance culture and discipline

## Project Content

Detailed definition of a standardized OMS include

- Strategic Alignment and Objectives
- Organizational Set-Up
- People and Performance Culture
- Performance Management
- Shopfloor Management
- Methods and Tools

to evaluate each plant's OMS maturity levels

## Objective

Globally standardized OMS provides

- Unified KPIs to compare performance at various technologies/production sites
- Harmonized shopfloor and performance management
- Foundation for continuous improvement
- Standardized processes, methods and tools to enable continuous improvement
- High plant and operations performance

## Project CORE.

Transforms the „new“ SGL Group“ to a growth business model

**Business Units** will be refocused to concentrate purely on activities that generate growth: **Development, Production, Marketing & Sales**

All **administrative tasks** will be streamlined and **concentrated in the corporate functions**

Savings potential of **€25 million until the end of 2018**  
(base year: 2015) identified

**More than 75%** of expected savings reached until **end of 2017**

# Business Process Excellence (BPX).

## Group wide program introduced in 2015 and reinforced in 2017

- Target is to **streamline** and **standardize** cross-BU processes
- Utilization of **standardized IT solutions** (SAP)
- Initial focus on **procurement, supply chain** and **sales processes**
  - **Procurement** – ongoing procurement optimization project launched under SGL2015.  
*Target: reduce procurement costs and improve profitability*
  - **Supply chain** – improve alignment between all stages of the supply chain, from sales to procurement to production, etc.  
*Target: improve supply chain process to further reduce net working capital*
  - **Sales organization** – implementation of uniform CRM system, development of new group wide standards and best practices for optimized customer and market approach.  
*Target: generate additional, profitable sales, optimize pricing*
- External consultant appointed for “outside-in” view and for project set up phase
- Recently implemented: **more stringent investment process**



# 10 Appendix

# Global presence.

## SGL Group Worldwide Sites



# Regional Sales Distribution.

## Sales by destination

Sales	Germany	Europe outside Germany	North America	Asia	Rest of World
2017	26 %	22 %	19 %	28 %	6 %
2016	27 %	22 %	18 %	27 %	5 %

## Sales by origin

Sales	Germany	Europe outside Germany	North America	Asia
2017	41 %	32 %	21 %	6 %
2016	41 %	33 %	21 %	5 %

# Shares in issue and shareholder structure.

## Basic shares

Security Identification Number	723530
ISIN Number	DE0007235301
Cusip Number	784 188 203
Number of Shares (as at September 30, 2018)	122,341,478
Free float	~ 46%

## Reported shareholdings according to §§ 21 f. WpHG and other notifications

SKion GmbH	28.5%
BMW AG	18.4%
Volkswagen AG	7.4%

# Debt market instruments.

## Convertible notes 2015/2020

Coupon	3.5%
Principal Amount	€ 167 million
Adjusted Conversion Price	€ 17.0732
Conversion Right (as at September 30, 2018)	9.78 million shares
Issue Date	14 September 2015
Date of Maturity	30 September 2020

## Convertible notes 2018/2023

Coupon	3.0%
Principal Amount	€ 159.3 million
Initial Conversion Price	€ 13.0220
Conversion Right	12.234 million shares
Issue Date	20 September 2018
Date of Maturity	20 September 2023

Corporate bond (4.875% coupon, €250m principal amount, maturity 15 January 2021) with issue date 12 December 2013 redeemed early on October 30, 2017

# Financial calendar/contact details.

## Financial calendar 2018

March 14, 2018	Annual Report 2017
May 8, 2018	Report on the first quarter 2018
May 29, 2018	Annual General Meeting
August 7, 2018	Report on the first half year 2018
October 11, 2018	Capital Markets Day in Meitingen (Germany)
November 6, 2018	Report on the first nine months 2018

## Contact

### SGL Carbon SE

Soehnleinstrasse 8  
65201 Wiesbaden  
Germany

Phone +49 (0) 611 - 6029 - 103

Fax +49 (0) 611 - 6029 - 101

[investor-relations@sglcarbon.com](mailto:investor-relations@sglcarbon.com)

[www.sglcarbon.com](http://www.sglcarbon.com)



# Important note.

## Important note:

This presentation contains statements relating to certain projections and business trends that are forward-looking, including statements with respect to SGL Group's outlook and business development, including developments in SGL Group's Composites - Fibers & Materials and Graphite Materials & Systems businesses, expected customer demand, expected industry trends and expected trends in the business environment, statements related to SGL Group's cost savings programs. You can generally identify these statements by the use of words like "may", "will", "could", "should", "project", "believe", "anticipate", "expect", "plan", "estimate", "forecast", "potential", "intend", "continue" and variations of these words or comparable words. These statements are not historical facts, but rather are based on current expectations, estimates, assumptions and projections about SGL Group's businesses and future financial results, and readers should not place undue reliance on them. Forward-looking statements do not guarantee future performance and involve risks and uncertainties. These risks and uncertainties include, without limitation, changes in political, economic, legal and business conditions, particularly relating to SGL Group's main customer industries, competitive products and pricing, the ability to achieve sustained growth and profitability in SGL Group's Composites - Fibers & Materials and Graphite Materials & Systems businesses, the impact of any manufacturing efficiencies and capacity constraints, widespread adoption of carbon fiber products and components in key end-markets of the SGL Group, including the automotive and aviation industries, the inability to execute additional cost savings or restructuring measures, availability of raw materials and critical manufacturing equipment, trade environment, changes in interest rates, exchange rates, tax rates, and regulation, available cash and liquidity, SGL Group's ability to refinance its indebtedness, development of the SGL Group's pension obligations, share price fluctuation may have on SGL Group's financial condition and results of operations and other risks identified in SGL Group's financial reports. These forward-looking statements are made only as of the date of this document. SGL Group does not undertake to update or revise the forward-looking statements, whether as a result of new information, future events or otherwise.

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