



### **BUSINESS**

# **WACKER – Silicon Competence**

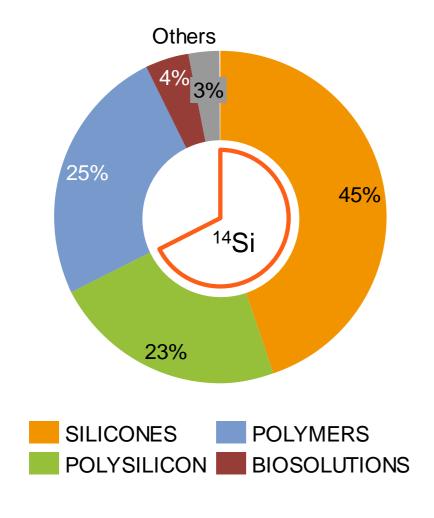
Morgan Stanley Chem Tech Day, London, May 23, 2018 Dr. Fridolin Stary, Senior Vice President Research & Development, Wacker Chemie AG

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## **WACKER – Our Growth Portfolio**

### **Sales FY 2017 €4.9bn**



### **Our Targets: Growth and Cash**

- 1 Extend Leverage Phase
- 2 Continue to Grow Above Chemical Production
- **3** Focus on Sustainability
- 4 Sustain Attractive Margins
  Through Economic Cycle
- 5 Generate Cash

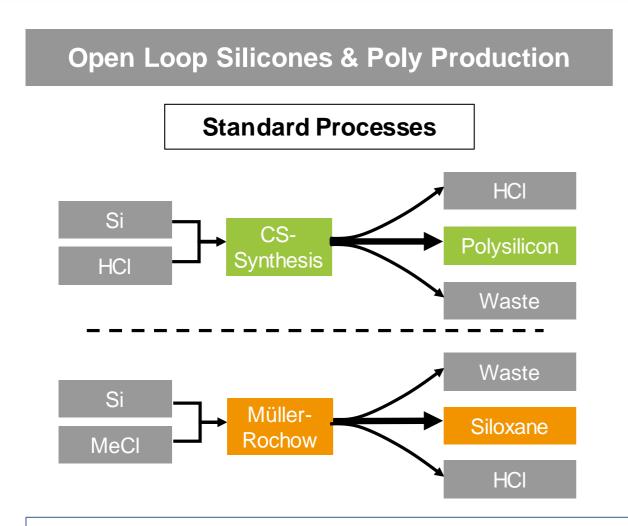
# **Key Trends and World Class Efficiency Drive Growth**

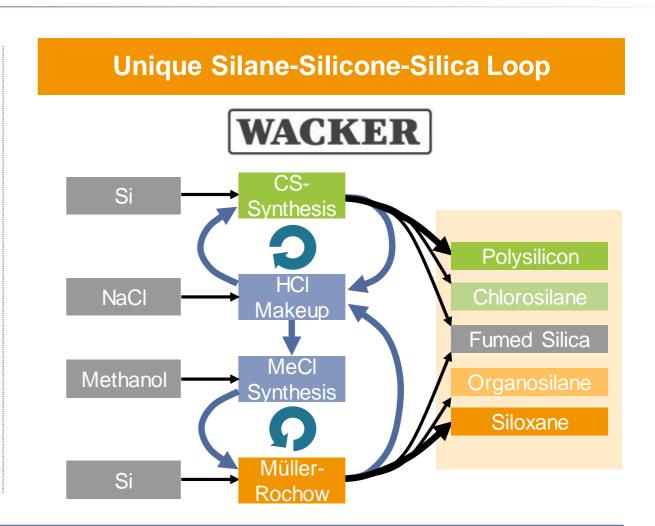
Full portfolio provider with benchmark costs



Growth with focus on specialties

# **Highest Level of Integration in the Industry**

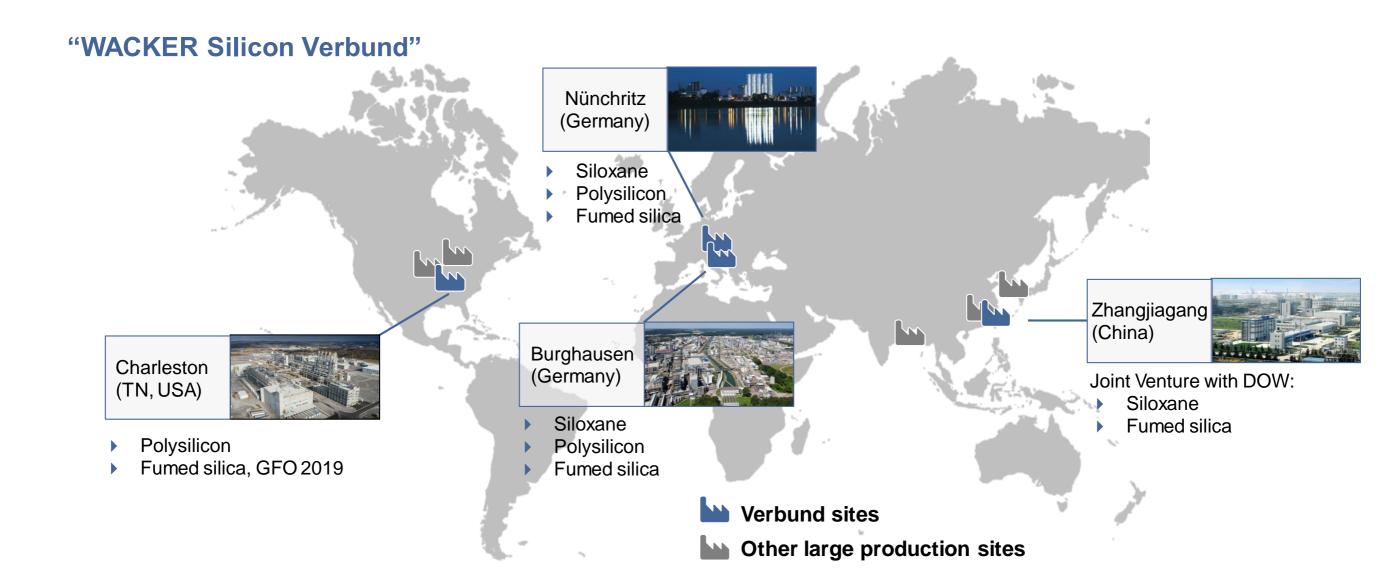




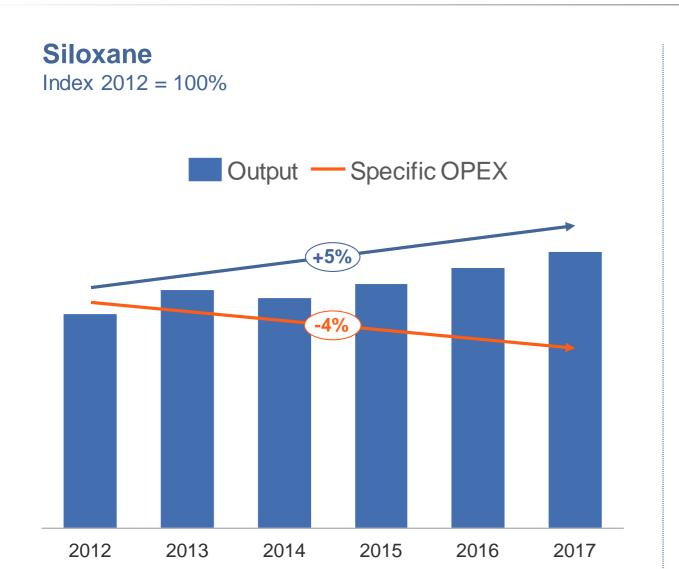
**▶ WACKER Silicon Verbund: Perfectly closed production loops** 



# "Verbund" Enables Highly Competitive Cost Position

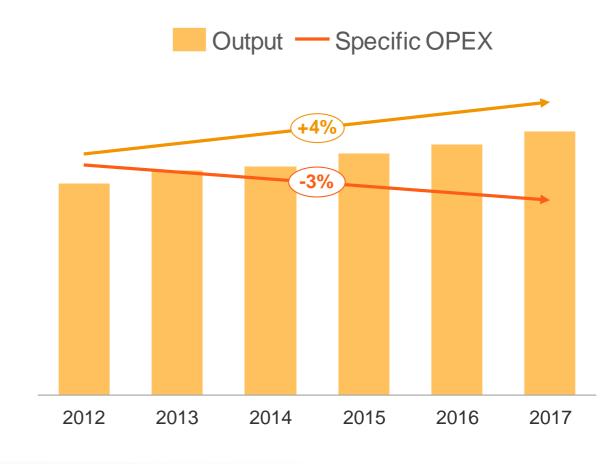


# **Operational Excellence is Key**



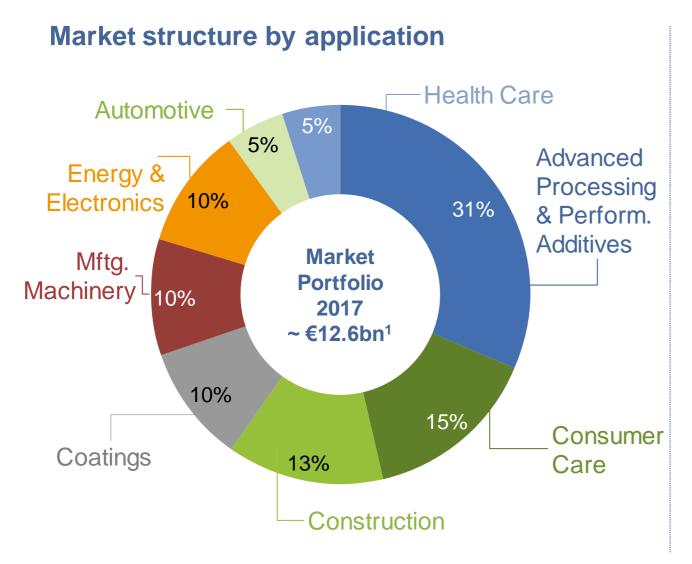
### **Fumed silica**

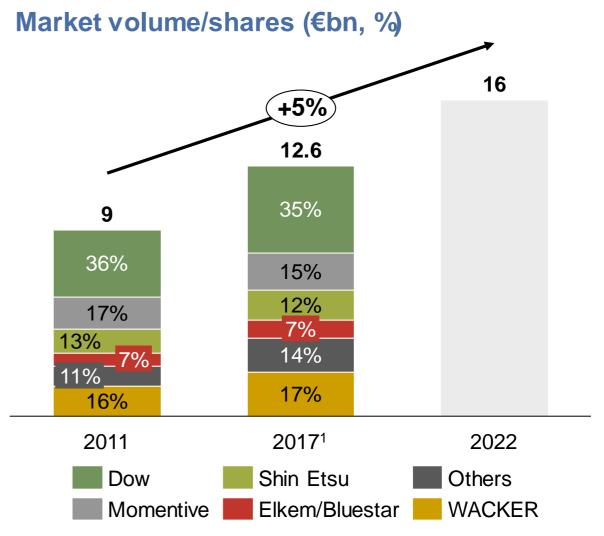
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# **Silicones Create Value in Many Industries**





<sup>1</sup> preliminary figures, Source: Freedonia 2017, Company Reports, WACKER Estimate



# **Key Trends Drive SILICONES' Growth**







Communication



**Standard of Living** 

## **Innovation Power Determines Our Market Position**

#### **Product innovation**

#### **Substitution Drivers**

Process efficiency & unique material properties



WACKER SilGel® for optical bonding

#### **New Markets**

High performance products for future growth markets



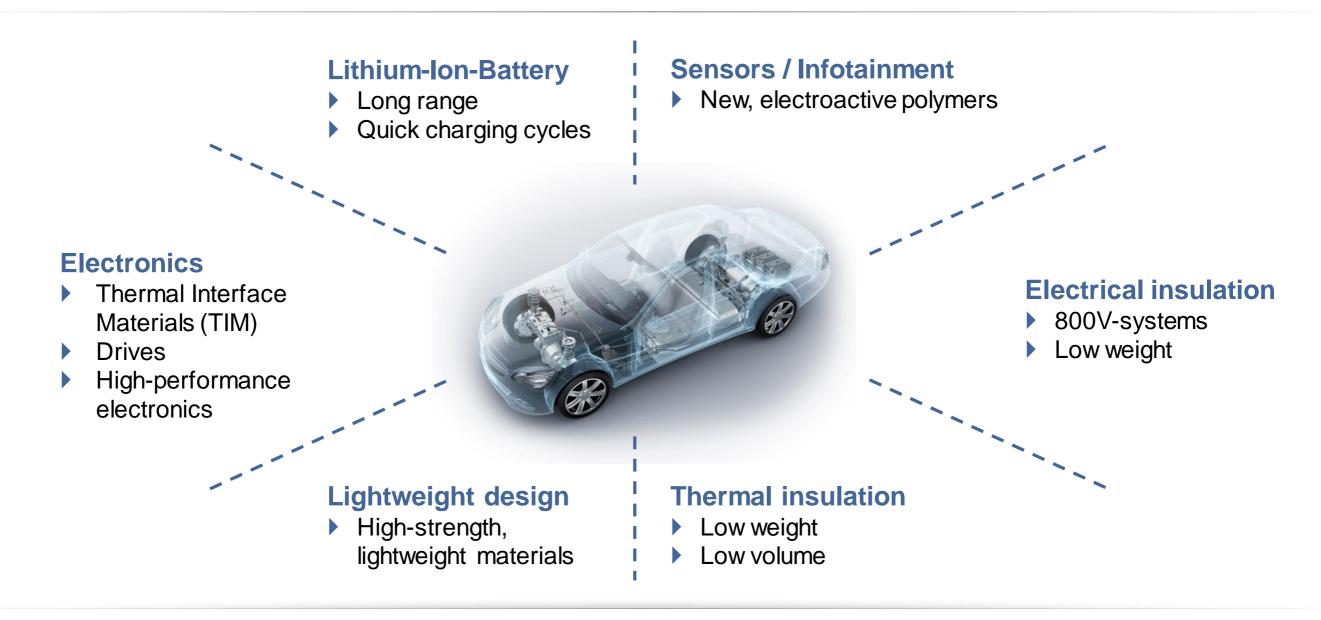
ELASTOSIL® R for EVs

# **Transformation Need for Automotive Applications**

#### Silicones in automotive: €600m market value in 2017 Rain sensor/ Airbag Sunroof camera: coupling Vibration Additional coating Air-circulation: profiles cushion electric dampers. Interior: flaps, gaskets buffers heater: switches. gaskets Spark plug cup holders, boots, ignition / light guides battery cables **Exhaust** Engine / radiator / pipe intercooler/EGR: hangers, ABS/ESP dampers seals, gaskets controllers: sealing, vibration **Turbocharger** decoupling frame hoses / radiator hoses **Drive** Wire harness: shaft connector, Oil-system: anticouplings Car key: PDC, radar, airbag multi-cavity Lighting: seals, **Engine** drain-back valves keypads seals sensors: gaskets lenses mounts



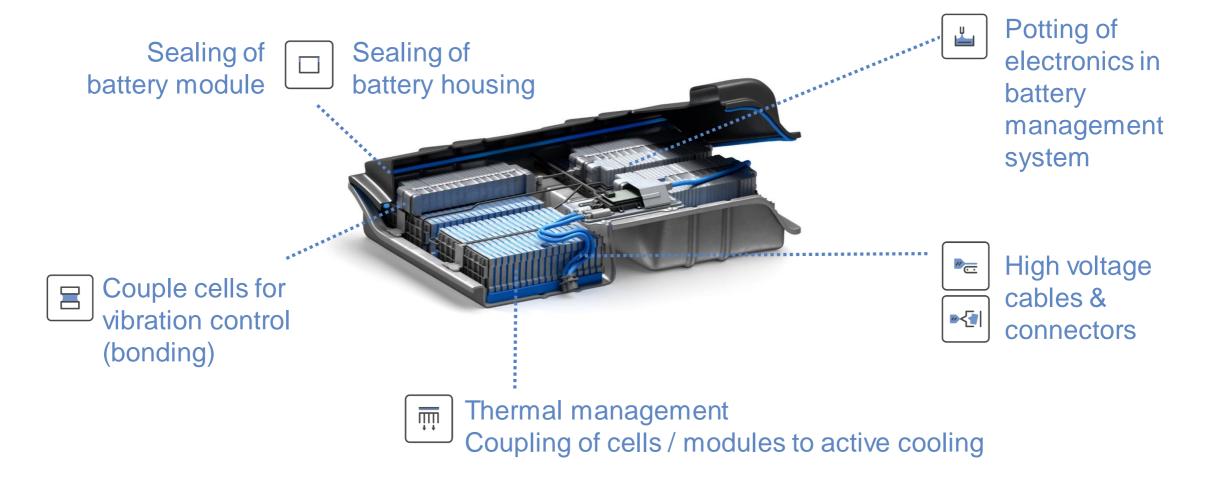
# EVs: Need for New Materials with New Profile of Requirements





# Thermal Management of EV-Cell Packs Through Silicone TIMs

### **Example: Thermal interface materials (TIMs)**



# **Specialties Meet Increasing Performance Requirements**

# **Coatings**





### **Healthcare**





# **Energy Transmission**





# A Business with High Profitable Growth Potential



### **WACKER SILICONES**

- Global presence
- ▶ Full portfolio provider
- Leading technology, cost and environmental position
- Innovation power for emerging new technological needs





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