Mersen: A Sustainable Growth Trajectory
2017 Results and Outlook

March 7, 2018
MERSEN: A SUSTAINABLE GROWTH TRAJECTORY

2017 RESULTS
2017: A YEAR OF GROWTH

1. **Sales:** €809m
   - Like-for-like growth vs 2016: 8%
   - Growth in Asia: 20%
   - Faster pace of growth as the year progressed

2. **Operating income before non-recurring items:** €75m
   - Operating margin before non-recurring items up 170 basis points
   - Operating income before non-recurring items up 30%
   - ROCE up 150 basis points at 9.8%

3. **Net income:** €40m
   - Year-on-year growth: x12.5
   - Dividend at €0.75 up 50%

4. **Net debt:** €178m
   - Down 12%
   - High level of operating cash flow
   - Net debt/EBITDA: 1.6
A year that saw very strong growth in Asia, and good performances in Europe and North America

**NORTH AMERICA** +5%
- Growth in electronics and process industries
- Stable performance overall for electrical distribution, with sales picking up in the course of the year

**EUROPE** +5%
- Strong performance from the aeronautics and space sectors

**SOUTH AMERICA & AFRICA** -9%
- Adversely affected by Brazil’s economic situation
- Unfavorable effects linked to large contracts booked in 2016

**ASIA** +20%
- Growth in renewable energies, electronics and process industries

2017 sales in €m - Like-for-like growth vs. 2016
SHARP INCREASE IN PROFITABILITY...

Adjusted 2016 operating margin before non-recurring items

<table>
<thead>
<tr>
<th>Component</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume/mix effects</td>
<td>+2.4%</td>
</tr>
<tr>
<td>Price impact</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Impact of competitiveness plans</td>
<td>+2.0%</td>
</tr>
<tr>
<td>Inflation (costs, raw materials)</td>
<td>-1.7%</td>
</tr>
<tr>
<td>Other (including bonuses)</td>
<td>-0.8%</td>
</tr>
</tbody>
</table>

2017 operating margin before non-recurring items

9.2%
...thanks to the AM segment’s significant contribution...

**ELECTRICAL POWER**
- Productivity gains
- Negative mix effects
- Neutral price effects

**2017 EBITDA MARGIN**
- 13.5%

**ADVANCED MATERIALS**
- Productivity gains
- Price increase during the year
- Volume effect (organic growth: +9.6%)

**2017 EBITDA MARGIN**
- 17.8%

Operating income before non-recurring items (€m):
- 2016 adjusted: 38.4
- 2017: 39.9

Operating margin before non-recurring items (%):
- 2016 adjusted: 11.1%
- 2017: 11.0%
Plan on schedule in terms of cost savings and P&L impact

Time lag for cash outflows in 2018 (particularly capex and restructuring costs)

### ... AND THE COMPETITIVENESS PLAN

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018 estimated</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost savings (€m)</td>
<td>16.5</td>
<td>16</td>
<td>[12-14]</td>
<td>&gt;45</td>
</tr>
<tr>
<td>P&amp;L impact before tax (€m)</td>
<td>(22)</td>
<td>(9)</td>
<td>(2)</td>
<td>(33)</td>
</tr>
<tr>
<td>Cash flow impact (€m)</td>
<td>(5)</td>
<td>(11)</td>
<td>(14)</td>
<td>(35)</td>
</tr>
</tbody>
</table>

Including Capex (€m) | (1)  | (7)  | (8)  |
### Strong Increase in Net Income

<table>
<thead>
<tr>
<th></th>
<th>2016 adjusted</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating income before non-recurring items</td>
<td>57.3</td>
<td>74.6</td>
</tr>
<tr>
<td>Non-recurring income and expenses</td>
<td>(26.5)</td>
<td>(10.3)</td>
</tr>
<tr>
<td>Net financial income/(costs)</td>
<td>(11.0)</td>
<td>(10.0)</td>
</tr>
<tr>
<td>Income tax</td>
<td>(11.5)</td>
<td>(15.1)</td>
</tr>
<tr>
<td><strong>Net income from continuing operations</strong></td>
<td>8.3</td>
<td>39.2</td>
</tr>
<tr>
<td>Net income/(loss) on assets held for sale and discontinued operations</td>
<td>(5.1)</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Net income</strong></td>
<td>3.2</td>
<td>40.0</td>
</tr>
<tr>
<td>Attributable to owners of the parent</td>
<td>1.8</td>
<td>37.6</td>
</tr>
</tbody>
</table>

**Strong 12.5x increase in net income**

- **Contained** non-recurring expenses (competitiveness plan)
- **Lower** financial expenses
- **Effective income tax rate:** 32% (excluding more than €2 million of impact of non-recurring items)
SOLID OPERATING CASH FLOW, with WCR/Sales ratio stable at 20%

High level of cash flow following a record high in 2016

Includes - in 2017 - USD5 million of exceptional contribution to US pension

Increase in WCR in line with the high business volumes at the year-end

WCR/Sales ratio stable at 20%

*Excluding (i) non-recurring cash flows (related to the Transform and competitiveness plans) and (ii) cash flows from discontinued operations.
NET DEBT SCALED BACK SIGNIFICANTLY

<table>
<thead>
<tr>
<th>In €m</th>
<th>Dec. 2016</th>
<th>Operating cash flow</th>
<th>Capex</th>
<th>Interest payments</th>
<th>Dividends</th>
<th>Currency effect and other movements</th>
<th>Dec. 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>203</td>
<td>(64)</td>
<td>37</td>
<td>8</td>
<td>12</td>
<td>(18)</td>
<td>178</td>
</tr>
</tbody>
</table>

Including €7m related to the sale of Gorcy

NET DEBT/EBITDA: 2.1 → 1.6
NET DEBT/EQUITY: 41% → 37%
Recommended dividend of €0.75 per share

Pay-out ratio excl. non-recurring items\(^{(2)}\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Pay-out Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>0.5</td>
</tr>
<tr>
<td>2017</td>
<td>0.75(^{(1)})</td>
</tr>
</tbody>
</table>

Subject to shareholder approval at the Annual General Meeting

Net income from continuing operations excluding the effect of the competitiveness plan and tax impact of non-recurring items

+50%
Mersen: A Sustainable Growth Trajectory

Profitable Growth Drivers
Mersen: An Efficient Group and Leader in Its Markets

**Shared Business Model**
Small production batches, leader in niche markets, high cash generation

**Shared End-Markets**
Leveraging the Group’s expertise and resources

**Shared Manufacturing Sites and Sales Network**
Resource allocation

**R&D**
Cross fertilization, Central coordination

**Lean**
Operational excellence, Business processes, Project-based organization

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**Electrical Power**

- **Electrical Protection & Control**
  - World’s no. 2 in industrial fuses

- **Solutions for Power Management**
  - World’s no. 2 in passive components for power electronics

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**Advanced Materials**

- **Anticorrosion Equipment**
  - World’s no. 1-2 in graphite equipment

- **Graphite Specialties**
  - World’s no. 1-2 in high-temperature applications

- **Power Transfer Technologies**
  - World’s no. 1-2 in brushes for industrial motors
MARKETS WITH HIGH GROWTH POTENTIAL

HIGH GROWTH POTENTIAL MARKETS ~ 40% OF TOTAL SALES

- ENERGY: RENEWABLE ENERGIES (Solar power)
- ELECTRONICS: SEMICONDUCTORS (Manufacture of semiconductors)
- TRANSPORTATION: AERONAUTICS (Electric vehicles)

Industrial GDP

€809m

- PROCESS INDUSTRIES: 35%
- CHEMICALS: 11%
- ENERGY: 19%
- ELECTRONICS: 18%
- TRANSPORTATION: 17%

% of total sales

197 results - March 7, 2018

2017 results - March 7, 2018
**Driven by favorable underlying market trends**

<table>
<thead>
<tr>
<th>Energy</th>
<th>Electronics</th>
<th>Transportation</th>
<th>Process Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Renewable Energies</strong></td>
<td><strong>Energy Efficiency</strong></td>
<td><strong>Urbanization</strong></td>
<td><strong>Industrialization</strong></td>
</tr>
<tr>
<td>Solar and wind power</td>
<td>Reducing energy consumption</td>
<td>Electric vehicles (including eBuses and eTrucks)</td>
<td>General growth for process industries in Asia</td>
</tr>
<tr>
<td>Battery-based energy storage (solar power, electricity grid)</td>
<td>Converting electrical power (speed drives)</td>
<td>Batteries for electric vehicles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LED lighting</td>
<td>Aeronautics</td>
<td>Public transportation (tramways, subways)</td>
</tr>
<tr>
<td></td>
<td>Calculation and storage power</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electronics/semiconductors</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Mersen’s Profitable Growth Drivers in the Medium Term

1. Accelerating growth by leveraging a unique position in growth markets
   - Renewable energies, electronics, electric vehicles

2. Speeding up growth in Asia
   - China, India, South Korea

3. Developing our high value-added expertise
   - Innovation, R&D, acquisitions

4. Enhancing the efficiency of the whole organization
   - Operational excellence, Mersen Excellence Journey
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   - Operational excellence
   - Mersen Excellence Journey
**SOLAR POWER: MAJOR POTENTIAL FOR THE LONG TERM**

INSTALLATIONS PROGRESSING AT [A VERY BRISK PACE](#)

Source: IHS Markit

[Further acceleration probable with the arrival of energy storage](#)

**THE LOWEST ENERGY PRODUCTION COST**

-20% cheaper than natural gas

3x cheaper than nuclear energy

Source: Lazard’s 2017 Levelized Cost of Energy Analysis
**Mersen’s strengths in the solar power market**

**Presence in Asia** (70% of customer base)
- Formulation of graphite applications
- Expertise in increasingly large parts
- Production capacity (no. 1 worldwide)

**Global presence** (local market of panel builders)
- Relations with energy conversion OEMs
- Comprehensive protection offering for solar power
- Innovative products for a market of the future: battery-based energy storage

- Polysilicon production
  - Graphite anticorrosion systems for HCI synthesis
  - Insulation
  - Graphite electrodes

- Ingot production
  - Graphite crucible
  - Insulation
  - Graphite machining
  - Graphite resistance
  - Furnace cladding

- Electrical protection
  - Fuses and fuse holders
  - Surge protection
  - Smart switches

- Energy conversion
  - Bus bars
  - Fuses for semiconductors
  - Cooling solutions

**Wacker**
**HSC**
**OCI**
**GCL**
**LONGi**
**Jinko**
**Solar**
**Toshiba**
**TMEIC**
**Samsung**
MERSEN’S STRENGTHS IN THE SOLAR POWER MARKET

1 MEETING MARKET DEMAND FOR GRAPHITE

- Furnaces in Chongqing brought back on stream
- Greater finishing capacities in China
- Optimization of the utilized capacity rate

2 CAPTURING LOCAL SOLAR PANEL PROTECTION MARKETS

- Rolling out a dedicated offering for solar power
- Developing partnerships with energy conversion OEMs
- Local production, notably in India and China
THE ELECTRONICS MARKET DRIVEN BY 2 MAIN FACTORS

GROWTH DRIVERS

Growing digitization
- Big data, mobility, Smartphone, IoT, Artificial intelligence

Energy savings and power conversion

GLOBAL SEMICONDUCTORS MARKET

Source: WSTS

Forecast: $bn


- +20% in 2017
- +8% in 2018 (estimate)
Mersen’s Strengths in the Electronics Market

**Presence in the United States** for the OEM market (semiconductors)

**Presence in Asia** for the replacement parts market (emicon fab. in Taïwan and South Korea)

**Unique Capacity** to partner the technological breakthroughs made by semiconductor machine manufacturers

**Unique Offering** of passive components for OEMs

**Design Capacity** for OEMs
**Mersen’s Challenges in the Electronics Market**

**Preparing to Capitalize on the Move to Chinese Production**

- Chinese government’s plan to develop the semiconductor industry
  - Develop our high-tech manufacturing base
  - Draw on our production experience in the solar sector

**Creating New Production Capacity in Asia**

- Power electronics and electrical protection in India for Western OEMs
  - Protection of fuses/batteries in China
- Extension of our power electronics capacity in China
- Extension of our capacity for the semiconductors market in South Korea
**Electric Vehicles: A High-End Market of the Future**

**Passenger Cars**

**Buses, Trucks & Other Industrial Vehicles**

BEV: Battery Electric Vehicles
Mersen’s strengths in the electric vehicles market

A major challenge: safety for high-end passenger vehicles (>600-1,000V)

A wide product range for high-power electric motors (800-1,000V)
KEY DATES IN THE ELECTRIC VEHICLE MARKET

- **Design of the Xp system**: 2015/2016
- **Patent filed**: 2016
- **Creation of a dedicated EV team (40 people)**: 2017/2018
- **Certification of the production line**: End-2018/2019
- **DC protection device for 400-1,000V**: 2016
- **Customized prototype tested with automakers**: 
- **First major deliveries?**

**A MARKET WITH HIGH GROWTH POTENTIAL CONTINGENT ON COMMERCIAL SUCCESS OF AUTOMAKERS**
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   - Mersen Excellence Journey
ASIA: A MAJOR GROWTH REGION, WITH AN ACCELERATION IN 2017

2013-2017 CAGR
- Japan: 2%
- India: 15%
- South Korea: 13%
- China: 8%
- Asia-Pacific: 8%

2016-2017 growth
- Japan: >5%
- India: >10%
- South Korea: >20%
- China: >20%
- Asia-Pacific: 20%

2013:
- JAPAN: €157m
- INDIA: €230m
- SOUTH KOREA: €157m
- CHINA: €157m
- ASIA-PACIFIC: €157m

2017:
- JAPAN: €230m
- INDIA: €230m
- SOUTH KOREA: €230m
- CHINA: €230m
- ASIA-PACIFIC: €230m
ASIA: A FAST GROWING REGION WHERE MOST OF OUR GROWTH MARKETS ARE LOCATED

2017 SALES BY MARKET

- Energy: 26% (+++)
- Electronics: 21% (++)
- Transportation: 14% (++)
- Chemicals: 12% (+)
- Process industries: 27% (+)

CHINA

SOUTH KOREA

INDIA

JAPAN
Ready to capture future growth...

Future growth drivers: transportation, renewable energies, chemicals

Future growth drivers: transportation, renewable energies, process industries

Future growth drivers: electronics, energy storage, power electronics

...by strengthening our production capacity
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TIGHTENING THE R&D FOCUS IN OUR GROWTH MARKETS

- 15 R&D centers
- 160 people
- Centralized management
- Partnerships with universities/research centers
- Partnerships with customers

- Bus bars
- Cooling solutions
- Fuses, SPD, EV
- Silicon carbide
- Graphite
- Fuses, SPD
- Cooling solutions
- Fuses, Graphite

Energy
Electronics
Transportation

Northeastern University
**MERSEN PARTNERS ITS CUSTOMERS’ CRITICAL DEVELOPMENTS**

**NEW TECHNOLOGY FOR MANUFACTURING SEMICONDUCTORS**

**CUSTOMER**

**:bold:** Increasing the storage capacity of semiconductors

**CONTEXT**

**:italic:** Need for a fast and effective manufacturing process

**CHALLENGES FOR MERSEN**

**:bold:** Developing a very large carrier (>1m) that is geometrically perfect and SiC coated

**:italic:** Keeping up with volumes

**GOALS**

**:italic:** Investments in SiC coating, purification and shape control processes

**Future potential > €10m**
Mersen partners its customers’ critical developments

Customer

Battery protection for electric buses

Context

Electrical protection for buses 600-1,000V
Extreme electrical and mechanical solicitation conditions
Need to adapt the manufacturing range for fuses

Challenges for Mersen

Adapting and optimizing an existing industrial product for the EV market
Providing production capacity in China

Goals

Serving the EV market in China – particularly e-buses and e-trucks
Building relations with new customers

First sales in 2015
Potential in the Chinese and Western markets
**Mersen partners its customers’ critical developments**

**Customer**

Design of a new style of cell phone with a curved glass screen

Need for glass with a perfect finish

**Context**

**CHALLENGES FOR MERSEN**

Developing a specific graphite grade adapted to shaping hot glass

**Goals**

Ensuring a product lifespan adapted to the production rhythm and related costs

Production in the USA (St Marys)

Finishing in South Korea

 Deliveries to South Korea, China and Vietnam

First sales in 2015

Shaping glass for smartphones

And now, developing the processes needed for new versions with 2 curved sides

Graphite die

Heating & pressing

Graphite punch

Flat glass screen

Graphite punch

Graphite die
**MERSEN’S PROFITABLE GROWTH DRIVERS IN THE MEDIUM TERM**

1. **Accelerating growth by leveraging a unique position in growth markets**
   - Renewable energies, electronics, electric vehicles

2. **Speeding up growth in Asia**
   - China, India, South Korea

3. **Developing our high value-added expertise**
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4. **Enhancing the efficiency of the whole organization**
   - Operational excellence
   - Mersen Excellence Journey
MAJOR IMPROVEMENTS IN RECENT YEARS...

Simplification of manufacturing organization structures (mainly in Europe)

Reorganization of the Group
(5 BUs, CTO, Asia)

Global competitiveness plan

The Mersen excellence journey
Sales, R&D, HR, IT

...that are yielding results

Major improvements in recent years...

Sales/employee growth

Like-for-like growth

Operating margin before non-recurring items
That will continue with **Mersen Excellence Journey**

**CUSTOMERS**
- Enhance commercial efficiency in mature markets
- Improve the customer service rate in growth periods
- Enhance product quality

**OPERATIONS, PERFORMANCE**
- Improve the competitiveness of certain product lines
- Effectively carry out future capex programs
- Keep the WCR ratio at around 20% of sales
- Be exemplary with regard to safety

**INNOVATION, HR**
- Speed up the market launch of new products
- Hire experts in specific regions and techniques

**DIGITAL**
- Ensure the success of the Group’s digital transition (e-commerce, data management)
- Industry 4.0

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**Corporate culture & values**
- Agility & responsiveness
- Forward-thinking & adaptability
2018: ANOTHER YEAR OF GROWTH
2018: ANOTHER YEAR OF GROWTH

FAVORABLE OUTLOOK IN OUR GROWTH MARKETS

Solar power
Electronics
Aeronautics

ADDITIONAL CAPEX TO PREPARE FOR 2019

Solar power, Asia +€10m
Electric vehicles (R&D) +€5m

US TAX REFORM
Effective income tax rate for the Group 28% vs 33%

PRICE INCREASE IN ADVANCED MATERIALS SEGMENT

A KEY YEAR FOR ELECTRIC VEHICLES
2018: ANOTHER YEAR OF GROWTH

LIKE-FOR-LIKE GROWTH*
VS 2017

OPERATING MARGIN
BEFORE NON-RECURRING ITEMS

Between 3 and 6%

Between 9.6 and 10.1% of sales
(vs 9.2% in 2017)

* Excluding the currency effect and impact of changes in scope of consolidation
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2017 Results and Outlook

March 7, 2018