Materials

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ROYAL DSM
HEALTH NUTRITION MATERIALS
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A more comprehensive discussion of the risk factors affecting DSM’s business can be found in the company’s latest Annual Report, which can be found on the company’s corporate website, www.dsm.com
An attractive Materials portfolio was created

1. Whilst not part of the cluster, the Emerging Business Areas of DSM Biomedical and DSM Advanced Solar are also related to Materials and represent promising growth platforms for the longer term.

- Transformed portfolio
  - Focus on sustainable specialty products
  - Exit of Bulk Chemicals via partnership

- Differentiated approach to drive growth

- Optimized portfolio via cost savings and efficiency improvements

- Increased application development capabilities
High-quality Materials portfolio now ready for accelerated growth

2010-15 performance

1. Divestitures include Composite Resins (~€300m sales), Euroresins (~€80m sales) and Synres (~€60m sales)

CAGR ~2.5% per annum

Divested ~€0.4bn¹

~€2.1bn
2010

>€2.5bn
2015

Adj. EBITDA up almost 50%

€259m
2010

€384m
2015

Strong progress margin & ROCE

Adj. EBITDA margin: 12%
ROCE: 10%
2010

Adj. EBITDA margin: 15.2%
ROCE: 14.4%
2015

Divested ~€24m¹

~€259m
2010

~€2.1bn
2015

~€2.5bn
2015

~€2.1bn
2010
Using a differentiated approach, Strategy 2018 focused on the higher-growth, specialty segments

![Diagram showing growth and market growth]

**Strategy 2018 aspirations**

- High single-digit percentage annual Adjusted EBITDA growth
- High double-digit basis point annual ROCE growth
- EBITDA margins >15% over the period
- Above-market sales growth (at stable prices)

1. Whilst not part of the cluster, the Emerging Business Areas of DSM Biomedical and DSM Advanced Solar are also related to Materials and represent promising growth platforms for the longer term.
Prudent capital allocation: capex and R&D investments shifted to the high-growth segments
Differentiated growth approach is further enhancing the mix

**Accelerated growth**

**Net sales (€m)**

- **2011**: 30%
- **2015**: 34%
- **2017E**: 35%

**Growth**

**Net sales (€m)**

- **2011**: 38%
- **2015**: 41%
- **2017E**: 42%

**Maximize returns**

**Volume (kt)**

- **2011**: 32%
- **2015**: 25%
- **2017E**: 23%

**EBITDA%**

**x%** CAGR

**x%** % of total Materials sales
Very good progress on executing Strategy 2018 actions

1. As reported

Above market growth

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-15 CAGR</td>
<td>~2.0%</td>
</tr>
<tr>
<td>Market 2016-18</td>
<td>4.0%</td>
</tr>
<tr>
<td>2016</td>
<td>8.0%</td>
</tr>
<tr>
<td>H1 2017</td>
<td></td>
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</tbody>
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Adj. EBITDA margin >15% over the period

<table>
<thead>
<tr>
<th>Period</th>
<th>EBITDA Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. 2010-15</td>
<td>12.0%</td>
</tr>
<tr>
<td>2016</td>
<td>17.3%</td>
</tr>
<tr>
<td>H1 2017</td>
<td>16.9%</td>
</tr>
</tbody>
</table>

Target >15%
Resulting in outperformance of the Strategy 2018 aspirations

High single-digit percentage annual Adjusted EBITDA growth

High double-digit basis point annual ROCE growth
Materials aims to continue sales growth and operating leverage improvements

1. **Sales growth** driven by:
   - Demand shifts from macro trends
   - Substitution growth
   - Innovation driven growth
   - New applications

2. **Improving operating leverage** through:
   - Maximizing returns in PA6 HV film & extrusion and powder coating resins
   - Prudent cost and capital allocation
Materials positioned to profit from demand shifts as a result of the (societal) megatrends

**Future of transport**
Higher performance and more complex materials needed for use in new designs, energy storage, autonomous systems and light weighting

**Renewable energy**
Demand for materials that contribute to material properties for each technology generation in wind, solar, and energy storage

**Eco-materials**
Shift towards bio-based, reusable, recyclable, degradable, no VOCs and other green materials and design for a circular economy

**Advanced healthcare**
Increasing complexity and electronics integration drives material performance requirements for materials used inside and outside the body

**Customization & connectivity**
Need for new types of performance materials e.g., for 3D printing and possibly new business models (e.g., direct access for personalized product design)

**Sustainable packaging**
Higher barrier properties, recyclability and bio-degradability (incl. design for circular economy) becoming more important for packaging materials
‘Winning segments’ selected to further drive differentiated growth from substitution-based development
Strong innovation pipeline driven by application development with/for customers driving longer-term growth

**Engineering Plastics**
- HPPO polymers
- Printed electronics
- High-heat thermoplastics
- High-pressure composite tanks

**Dyneema**
- Synthetic chains
- Carbon hybrid composites
- Performance fabrics

**Resins & Functional Materials**
- 3D printing
- Recyclable carpets
- Bio-based resins
- ‘Haptics - the feel of coatings’
Continue cost and capital discipline to further improve operating leverage

Improve operating leverage through:

- Maximizing returns in PA6 HV film & extrusion and powder coating resins
  - Fully utilize/ optimize the assets
  - Drive internal compound demand (Engineering Plastics)/ sustainable substitution demand (Resins)

- Prudent cost and capital allocation
  - Continue cost, capex and working capital discipline in Materials
Materials is confident it can continue its value enhancing ‘silent’ transformation

1. **Sales growth** driven by:
   - Demand shifts from macro trends
   - Substitution growth
   - Innovation driven growth
   - New applications

2. **Improving operating leverage** through:
   - Maximizing returns in PA6 HV film & extrusion and powder coating resins
   - Prudent cost and capital allocation

- **Delivering sales growth of ~5%**
- **Continuation of the ‘silent’ transformation in Materials with the aim to deliver resilient margins above the Strategy 2018 aspiration of 15%**