Driving Profitable Growth in **Materials**

**DIMITRI DE VREEZE** - Member of the Managing Board
Safe harbor statement

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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
Strategy 2018

- Cost and capital discipline
- Increase growth

Business Group Strategies

- Engineering Plastics
- Dyneema
- Resins & Functional Materials

Wrap-up
**Strategy 2010-15:** Performance Materials has shown solid financial performance

- **CAGR ~2.5% per annum**
- **EBITDA up almost 50%**
- **Strong progress margin & ROCE**

**2010**
- EBITDA margin: 12%
- ROCE: 10%

**2015**
- EBITDA margin: ~15%
- ROCE: ~14%

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

1 Divestitures include Composite Resins (~€300m sales), Euroresins (~ €80m sales) and Synres (~ €60m sales)
More differentiated approach in recent years has led to a more attractive business portfolio, with a higher growth and returns profile.
Strategy 2018: Focus on well-defined, higher-growth specialty segments, while maximizing returns in PA6 Polymers and Powder Coating Resins

Aspirations 2018 underpinning Group targets

- Annual EBITDA growth: high single-digit
- Annual ROCE growth: high double-digit bps
- EBITDA margins: >15% over the period
- Above-market sales growth (at stable prices)
Building upon **Strategy 2018**, Performance Materials expects to grow sales above market growth\(^1\)

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**Overall Performance Materials**

**Engineering Plastics**

- Market DSM: 4\(^3\), 4\(^2\)
- Market DSM: 4\(^3\), 4\(^2\)

**Dyneema**

- Market DSM: 3\(^4\), 4\(^1\)
- Market DSM: 3\(^4\), 4\(^1\)

**Coating Resins**

- Market DSM: 1\(^2\), 1\(^2\)
- Market DSM: 1\(^2\), 1\(^2\)

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1. At steady prices, CAGR %
2. Excluding Vehicle Protection tenders

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Slide 6
‘Winning segments’ selected to profit from enhanced substitution growth

- Automotive
- Electronics
- Personal Protection
- Com. Marine & Sport
- High Perf. Textiles
- Sustainable Coatings (B&C)

Growth via end markets and substitution based on application development

- Replace metals & hazardous materials
- Replace steel/aluminum & aramids
- Replace solvent-based

1. Food packaging is the 3rd application area for Engineering Plastics
2. The Building and Construction Industry (B&C) is the main area of application for Resins
Performance Materials **Strategy 2018**: 2 pillars to drive the high single-digit annual EBITDA growth

**Increase growth**
- **Accelerated Growth** in High-Performance Plastics, Functional Materials and Dyneema Fiber Solutions
- **Growth** in PA6 Compounds, Specialty Coating Resins and Dyneema Life Protection
- **Maximize returns** for PA6 Polymers and Powder Coating Resins

**Cost and capital discipline**
- Implement company-wide savings program in support functions and services
  - ~€35-40m (2016-2018)\(^1\)
- Continue cost, capex and working capital discipline in Performance Materials
- Build upon the successful Profit Improvement Program 2011-15 to look for further savings and optimizations
  - Program to be announced in the course of 2016-18

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\(^1\) Company-wide savings target of €125-150m (vs. 2014) already announced in August 2015, €35-40m is the expected positive impact by 2018 for Performance Materials
Agenda

1. Strategy 2018
   - Cost and capital discipline
   - Increase growth

2. Business Group Strategies
   - Engineering Plastics
   - Dyneema
   - Resins & Functional Materials

3. Wrap-up
Engineering Plastics
A global provider of highly specified engineering plastic solutions
Accomplishments Strategy 2010-15
Solid growth and strong financial performance

Reduced costs
- Reduced costs and improved efficiencies through the 2012-14 Profit Improvement Program

Upgraded portfolio
- Continued shift towards specialty materials, adding Stanyl ForTii and a new range of HPP products to the portfolio
- Formed Joint Venture in PPS with NHU

Application development
- Strengthened application development capabilities
- Exit less innovative segments; focus on ‘winning’ segments paid off

Increased globalization
- Further strengthened unique position in Asia
- Strategic partnerships in Russia and China

Financial performance 2010-15
Revenues up ~40% in 5 years

~€1.0bn 2010
-~€1.4bn 2015

Strong EBITDA growth
Global Engineering Plastics player with a uniquely broad range of value-added polyamides and polyesters
**Strategy 2018** for Engineering Plastics translates into clear actions per product segment

- **Cost and capital discipline**
  - Cost and efficiency improvements
  - No large capex
  - Working capital discipline

- **Increased growth**
  - Accelerate growth in High Performance Plastics
  - Grow position in PA6 Compounds
  - Maximize value in PA6 Polymers

- **High Performance Plastics**
  - Focus on highly specified application development for global customers in ‘winning’ segments in automotive & electronics

- **PA6 Compounds**
  - Continue to grow by leveraging global presence and footprint

- **PA6 Polymers**
  - Fully utilize assets and supply compound needs
Engineering Plastics is uniquely positioned to thrive from its application knowhow-based relationships and substitution growth.

**Accelerate ‘winning’ segments**
- Further build on strong position in high-growth segments in Automotive and Electronics
- Substitution growth favoring high-performance plastics

**Strong customer partnerships**
- Well diversified, global customer base
- Broad portfolio (incl. PA66 through agreement w/ Ascend)
- High share of specified products
- Application development excellence

**Global presence**
- Global presence (in R&D and production) supporting preferred partnerships
- Ability to multiply technical solutions across the globe

**Excellent position in HGE**
- Unmatched Asia position
- Partnerships in Russia (w/ KuibyshevAzot for PA6) and China (w/ NHU for PPS)
- Profit from push to Specialty Plastics due to higher standards

**Sales growth**
- 2011-15: Market 4, DSM 4
- 2016-18: Market 4, DSM 4
Strong partnerships in winning segments where demand for specialty plastics solutions is growing significantly

Accelerate winning segments

Automotive
- Weight reduction
- Safety
- Comfort

Electronics
- Elimination of hazardous substances
- Miniaturization

Growth drivers
- Full portfolio
- Application solution development
- Global footprint

DSM strengths
- Specialty platforms
  - PA 4.6
  - Co-polyesters
- Non-hazardous flame-retardant solutions

Strong customer partnerships
Stricter environmental regulations drive further substitution growth towards lighter materials in Automotive.

**CO₂ requirements in different regions**

**Engineering Plastics in a car**
New solutions today - For BMW, application development with Engineering Plastics means high performance at 250°C

Stanyl® Diablo delivers performance in the world’s first high-heat plastic air intake manifold

- For the i8, BMW was looking for a high-heat thermoplastic solution for its AIM/CAC\(^1\) that offered superior performance and thermal stability and stiffness

- With Stanyl® Diablo, Engineering Plastics offered the solution leading to the world’s first high-heat plastic AIM/CAC combination:
  - Revolutionary design of air intake manifolds
  - Eliminates need to return to metals due to increasing temperature requirements
  - Higher-performing engine while still meeting new emission limits
  - Weight reduction of up to 40% over aluminum

1 Air Intake Manifold with integrated liquid-cooled Charged Air Cooler
New solutions for today and **tomorrow** - Stanyl® ForTii™ for USB Type-C connectors offers unparalleled toughness and stiffness for the connector of the future

**Stanyl® ForTii™ offers best balance of mechanical properties and precision molding**

- USB is by far the most popular means of connecting peripherals with ~5bn ports produced each year
  - The reversible USB Type-C is ‘future proof’ and developed in anticipation of new EU legislation enforcing the use of a standard charging interface

- Stanyl® ForTii™ USB Type-C connectors developed in close co-operation with leading OEMs and tier 1 manufacturers and offer:
  - Unmatched electrical insulation
  - An ideal balance of toughness and stiffness
  - Flame retardant additive systems containing no halogens
  - Excellent processability offering flexibility in component structure
Dyneema
*The world’s strongest fiber*
Accomplishments Strategy 2010-15: Successfully accessed new profitable growth markets offsetting negative effects from absence of vehicle tenders

**Reduced costs**
- Reduced costs and improved efficiencies through the 2012-14 Profit Improvement Program

**Upgraded portfolio**
- Re-focus from declining Vehicle Protection to less volatile, higher-growth Personal Protection
- Entered Performance Apparel market; acquisition Cubic Tech (US) adds innovative, light-weight high-performance laminates & fabrics
- Acquisition ICD (China) - HMPE fiber producer repositioned for domestic market, launched 2nd brand (Trevo)

**Application development**
- Strong collaborative growth in innovative fiber solutions, e.g., for mooring, lifting and cut protection

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1 Excluding Vehicle Protection tenders

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Financial performance 2010-15

- Revenues up ~4% p.a.\(^1\)
- EBITDA recovery ~€285m 2010
- Revenues ~€285m 2015
As the world’s ‘lightest, strongest fibre’, Dyneema is uniquely positioned in markets where continuous high performance is of utmost importance.

Current portfolio is well positioned and diversified

- Polymer
- Fiber
- Sheets
- Fabrics & Laminates

DSM’s capability to extract value

Maximize returns

Accelerated growth

Dyneema Fiber Solutions

Dyneema Life Protection

High

Growth

Low

DSM's capability to extract value

High

Slide 21
Strategy 2018 for Dyneema focuses on current premium portfolio while selectively adding new sustainable, innovative products and solutions.

- **Cost and capital discipline**
  - Cost and efficiency improvements
  - No large capex
  - Working capital discipline

- **Increased growth**
  - Accelerated growth in Fiber Solutions
  - Grow in Life Protection

- **Fiber Solutions**
  - Focus on development of new applications
  - New products/solutions in existing segments
  - ... with strong patent protection

- **Life Protection**
  - Continue re-focus on growing Personal Protection segment
Dyneema’s (new) technical platforms allow for further growth and new technologies and applications.

Sales growth

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<th>Market</th>
<th>DSM</th>
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<tr>
<td>2011-15</td>
<td>3-4</td>
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<tr>
<td>2016-18</td>
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¹ Excluding Vehicle Protection tenders

A balanced & increasingly diverse portfolio of end-uses, fueling growth in existing & new applications.
New applications and extended product offering in existing markets fuel growth

Growth drivers
- Light-weight, sustainable solutions
- Extreme durability
- Safety and ergonomics

DSM strengths
- Global product leadership with lightest, strongest fiber
- Clear application development leader via unique, IP protected, technology platforms (Diamond and Max Technology)
- Increasing range of end-use applications in growing segments

Fiber Solutions
- High Protection Textiles
- Commercial Marine & Sports
- Performance Apparel
- Synthetic Chains
- Radomes

Life Protection
- Life Protection

Increased (personal) security concerns
- Wearability
- Force Multiplier Technology offers lightest and most flexible solution without compromising protection
New solutions today – Providing Team Giant-Alpecin riders with protection while meeting critical comfort requirements

For every cyclist, the thigh area is a very vulnerable body part.

Team Giant-Alpecin and DSM teamed up together with fabric manufacturer Taiana and clothing supplier Etxeondo to design cycling shorts that protect exactly that area.

The new shorts that feature Dyneema were introduced during the start of the Tour de France 2015 and meet the critical comfort requirements of the cyclist combined with enhanced protection, reducing the risk of serious injuries.
New solutions for **today** and **tomorrow** – Extreme situations require innovative applications that last

A light-weight, safe, and reliable alternative to steel wire rope

- Together with Samson, Dyneema developed the first synthetic rope for mobile cranes
- The rope offers the same load pull and load chart as wire and is 80% lighter making for easy handling and installation, doesn’t rust, and requires no lubing
- Crane wire ropes made with Dyneema make industrial operations faster, easier and safer
Resins & Functional Materials
Leading the transformation to Sustainable Coatings
Accomplishments Strategy 2010-15: Impressive step-up in profitability driven by portfolio upgrade and Profit Improvement Program

**Reduced costs**
- Significant step-up in margins supported by successful implementation of the 2012-14 Profit Improvement Program

**Updated portfolio**
- From solvent-borne systems to sustainable and higher-value coatings solutions (water, powder, UV)
- Divested lower-margin Composite Resins, Euroresins and solvent-based alkyd resins (Synres)

**Application development**
- Sustainable developments in close link with customers provided innovative, more sustainable solutions

**Increased globalization**
- Increased global organization with market penetration in China and other Asia while strengthening position in North America

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1 Corrected for divestitures incl. Composite Resins (~€300m sales), Euroresins (~€80m sales) and Synres (~€60m sales)
Resins and Functional Materials is a global coatings producer with a well-balanced portfolio in sustainable coatings.

- **Cost and capital discipline**
  - Cost and efficiency improvements
  - No large capex
  - Working capital discipline

- **Increased growth**
  - **Accelerated Growth** in Functional Materials
  - **Grow** in Specialty Coating Resins
  - **Maximize Returns** in Powder Coating Resins

- **Functional Materials**
  - Grow customer base facilitating Fiber-to-Home trend
  - Innovation platform

- **Specialty Coating Resins**
  - Drive substitution of Solvent-based
  - New innovations focusing on sustainability

- **Powder Coating Resins**
  - Drive substitution of Solvent-based
  - Leverage asset base and optimize
Resins & Functional Materials to profit from recovery in EU markets and continued substitution shift towards sustainable coating resins

Sales growth

Market increasingly shifts away from solvent-based coatings

<table>
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<tr>
<th>Year</th>
<th>Market 1-2</th>
<th>DSM 1-2</th>
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Market

- Specialty Resins

DSM

- Specialty Resins
  - Traditional solvent-based
  - Powder

2015

DSM BRIGHT SCIENCE. BRIGHTER LIVING.
Reduction of emissions legislation important driver for shift to sustainable coatings

European legislation important driver for shift towards sustainable coating resins

EU-27 NMVOC emission trends

- Legislation Volatile Organic Compound ('VOC') emission reduction will continue to be an important driver
- Trend in Europe and North America to continue; China on the brink of change
New solutions today – DSM and Praxis introduce the new standard in sustainable decorative paints

First and important step in creating a more sustainable value chain

- Praxis, one of the largest Dutch hardware store-chains, was looking for a sustainable solution for its premium range of private label decorative paints
- In close cooperation with DSM, Praxis was able to further improve quality and sustainability using Decovery
- Decovery plant-based resins are based on a novel process of converting renewable materials
- Free of Volatile Organic Compounds, has an extremely low odor and offers many additional benefits to the end-products

NOMINATED
BEST PRODUCT OF THE YEAR
2015 - 2016
New solutions for **tomorrow** – Functional Solutions’ optical fiber coatings ensure greater signal reliability and field performance for 4G and 5G networks

### Functional Solutions optical fiber coatings in ideal, protected position to profit from 4G and 5G roll-out

- China and India are speeding up investments in next generation mobile networks (4G/5G)
- Increases demand for high-quality optical cables to provide for growth in capacity and performance
- DSM sets standard for optical fiber protection and performance worldwide, ensuring greater signal reliability and field performance
- Global market share >70% with extensive intellectual property portfolio
Strategy 2018
- Cost and capital discipline
- Increase growth

Business Group Strategies
- Engineering Plastics
- Dyneema
- Resins & Functional Materials

Wrap-up
Value creation 2016-18 will be driven by:

- EBITDA & ROCE growth
- Via higher growth at lower costs, with strengthened organization