DSM STRATEGY 2018
Driving Profitable Growth
In Nutrition

Stephan B. Tanda
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
Agenda

1. Nutrition Strategy 2018

2. Growth Strategies:
   - Animal Nutrition & Health
   - Human Nutrition & Health
   - Food Specialties

3. Wrap-up
Global Products & Local Solutions

- Global leader in nutrition, with broadest portfolio of specialty nutritional ingredients, global presence and an unparalleled local network
- DSM is uniquely positioned in all steps of the value chain: the production of pure active ingredients, their incorporation into sophisticated forms, the provision of tailored premixes and forward solutions
Nutrition portfolio is resilient with limited exposure to single product or customer.

- Top-10 represents <40% of Nutrition profit in 2015
  - Product range includes ~100 product lines
  - Largest profit contributor less than 10% of Nutrition profit
  - Some with strong IP position
  - VE sales exposure is now normalized with EBITDA margin well within the range

- Largest customers by sales in 2015
  - Largest customer less than 3% of Nutrition sales
Nutrition Strategy 2018

Profitable growth via:
1. Expanding the core
2. New products and solutions
3. Growing in underpenetrated categories / regions
4. Accessing new segments/new business models

- Reducing costs and increasing productivity
- Driving cash generation
- Increasing capital efficiency

Aspirations 2018

- Above-market sales growth (at stable prices)
  - High single-digit annual EBITDA growth
  - EBITDA margins: 18-20% over the period
  - Annual ROCE growth: high double-digit bps increase
Improved financial returns in Nutrition supported by cost savings and operational excellence

Savings in Support Functions
- Lower cost for support functions & functional excellence
- Leveraged organizational set-up & behavior change

~€60-75m\(^1\) (2017)

Nutrition Improvement Program
- Drive purchasing savings
- Reduce manufacturing cost
- Boost production efficiencies
- Reduce working capital
- Disciplined capital allocation

€130-150m (2018)

Sales Stimulation Program
- Simplification of the front-end operating model
- Focused segment teams, tailored local solutions
- Winning customers and channels
- Upgraded organization and tools, stronger execution

Higher organic growth

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1 Company wide savings target of €125-150m already announced in August 2015, €60-75m is the expected positive impact by 2018 for the Nutrition cluster
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Nutrition improvement program: €130-150m EBITDA contribution by 2018

Cost improvements – €130-150m (vs. 2015)

- Purchasing savings related to direct raw materials, energy, and indirect spend
- Fixed cost reductions, including ~100 FTE
- Higher Rates and Uptime to enable growth
- Higher yields and energy efficiencies to lower unit cost
Rigorous effort undertaken to realize gains across all major manufacturing sites

What
- Increased yields, upgrading side streams
- Higher throughput / rates
- Higher uptime / availability
- Increasing energy efficiencies

How
- Common approach across all major sites
- Well structured and resourced process
- More than 400 measure sheets
- One third are Lean or Six Sigma projects

Examples
- Doubling spray drying rates with hard- and software
- Lowering energy consumption in distillation columns
- Smart lifetime extensions to debottleneck
Driving working capital reduction

**Reduced Operating Working Capital %**

<table>
<thead>
<tr>
<th>Year</th>
<th>0%</th>
<th>20%</th>
<th>40%</th>
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<td>2014 Q3</td>
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**Reduction of Inventories**

- A. Optimizing distribution and transportation network worldwide
- B. Mapping and streamlining internal processes with sophisticated tools
- C. Disciplined execution to hit highly granular targets for key metrics at each step in the chain

**Integrated Business Planning**

- A. Designing and implementing end-to-end planning, aligning financial and physical planning
- B. Manage supply constraints and trade-offs from total business perspectives
- C. Replenishment strategies
Third profit-growth pillar for Nutrition is **sales stimulation & organic growth**

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**Higher organic growth**

**Savings in Support Functions**

- ~€60-75m\(^1\) (2017)

**Nutrition Improvement Program**

- €130-150m (2018)

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1 Company wide savings target of €125-150m already announced in August 2015, €60-75m is the expected positive impact by 2018 for the Nutrition cluster.
Strategy 2018: Growth is supported by **disciplined investments** in new capacities, downstream market access and limited, bolt-on M&A.

CAPEX Nutrition (€m)

- ~6.5% of sales

**Investing for growth**

- Expansion existing:
  - Various creep projects
  - Aroma ingredients
  - Meg-3 concentrates
  - Savory flavors
  - i-Health

- New capacity:
  - Vitamin B6, China
  - New premix plants
  - Hydrocolloids, China
  - New forms (Tortuga)

CAPEX/Sales:

- 2011: 4-7%
- 2013: ~6.5%
- 2015: ~6.5%
- 2017: ~6.5%

CAPEX/D&A:

- ~1
- ~1.2
Agenda

1. Nutrition Strategy 2018

2. Growth strategies:
   - Animal Nutrition & Health
   - Human Nutrition & Health
   - Food Specialties

3. Wrap-up
Animal Nutrition & Health
Our Animal Nutrition has a complete portfolio of targeted feed ingredients and has further growth opportunities beyond the historical core area of poultry.

Animal Nutrition market by product (excl. premix)

- Carotenoids (2-3%)
- Vitamins (2-3%)
- Enzymes (4-6%)
- Eubiotics (5-6%)
- Minerals & Chelates (4-5%)

Total potential market: €10bn

(x) = Growth rate 2016-18 (CAGR, %)

DSM market share = ~30%

Animal Nutrition application landscape

- Poultry
- Swine
- Ruminants
- Pet
- Aqua

Growing downstream

1 Landscape includes Carotenoids, Vitamins, Enzymes, Eubiotics and Minerals/Chelates
Strategy 2010-2015 built a unique position in Animal Nutrition & Health

- Geographic expansion (premix network)
  - Acquired Tortuga
  - Extended value chain
  - New animal R&D center
  - Broadened portfolio

- New products / solutions
  - Enzymes
  - Eubiotics
  - Tailored solutions

- Underpenetrated species
  - Ruminants
  - Aqua
  - Pet

- Expand the core
  - Geographic expansion premix network
  - Maximize growth & value in core products (poultry, swine)

- New business models (in HGE)
  - Higher service component
  - Strengthen distribution to farmers
  - Franchise retail stores

- Grow in underpenetrated species
- New business models
- Excellence in execution
Expanding the core: Further geographic expansion of unique premix network

Premix regions targeted for expanding the core
New solutions: Feed enzymes and eubiotics solutions tailored to meet the specific, local needs of animal protein producers

- Strong alliance with Novozymes, global leader in feed enzymes
- Leader in Eubiotics for animal gut health
- Double sales in 5 years via
  - next generation enzymes and eubiotics
  - tailored to local conditions,
  - developed and tested in local animal feed research centers

Animal Nutrition Innovation and Science Center near Beijing, China
Grow in underpenetrated species: Ruminants, Aqua and Pet

**Ruminants**
- Expansion of Tortuga model outside Brazil
- Leveraging Tortuga synergies and insights globally
- Dedicated build-up in Asia
- Innovations (Fertility, calf health)

**Aqua**
- Health solutions, reducing mortality rate:
  - shrimp, tilapia (warm H₂O)
  - salmon, trout (cold H₂O)
- Improving feed utilization/use of enzymes across all species

**Pet**
- Demand for high value, high quality pet food for which DSM has all ingredients
- Launch innovative pre-mixes and health driven solutions (PUFAs)
Drive growth via penetration of new customer segments with new channels: developing dedicated new brand of premix for mid-sized farms in China

- Small, non-professional farms, not served
- New B2C premix business, focused on productivity & husbandry (health) incl. support, service, and dedicated brand
- Current B2C premix business, focused on productivity (incl. DSM franchise stores)
- Traditional B2B, focused on productivity through straights & concentrates

Scope on slide is swine industry China

1 Scope on slide is swine industry China
Sustainable innovations: Setting the new industry standard for algae-based Omega-3 fatty acids for animal nutrition

- Fish oil supply / demand gap creates opportunity for algae-based Omega-3
- Alliance to develop high value solution
- Set an industry standard for aqua feed
- Market development along the chain from feed producers to retailers
Sustainable innovations driving tomorrow’s growth: CleanCow
CleanCow tackling **climate change and increasing productivity**

### Methane sources

- **Ruminants** 27%
- **Waste Decomposition** 23%
- **Biomass Burning & Biofuel** 11%
- **Rice fields** 10%
- **Fossil Fuels** 29%

- **Ruminants** are significant source of methane
- **CleanCow**, a proprietary special feed ingredient
  - reduces methane emissions by 25-30%
  - increases performance (protein yield, weight gain, efficiency)
- Focused on markets with highly developed dairy production
- Potential: triple-digit sales (€ million)
- Launch after 2018
**Growth 2016-2018 in animal nutrition: Continued outperformance**

Key actions driving profitable growth:

- Double-digit growth from feed enzymes and eubiotics solutions, tailored to local conditions / requirements
- Growth in underpenetrated species (aqua, pet, dairy)
- Leverage Tortuga in Latin America beyond Brazil
- Further expansion of global premix network

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1. At steady prices, CAGR %
2. Excluding Vitamin E price effect
Human Nutrition & Health
Our Human Nutrition is leading in nutritional ingredients and has ample opportunities to further expand in a diversified application landscape.

Specialty Food Ingredients market and growth by product

- Total potential market: €33bn
- Nutritional Ingredients (3-4%)
- Processing Aids (3%)
- Texture (4%)
- Taste (4%)
- Color (5%)
- Preservation (2%)

- (x) = Growth rate 2016-18 (CAGR, %)

DSM market share = ~20%

Diversified application landscape

- Dietary Supplements
- Fortified Beverages
- Fortified Food
- Pharma
- Medical Nutrition
- Sport Nutrition
- Early Life
- NIP
- Fortified Dairy

1 Total specialty food ingredients market, excluding ~€20bn of commodity ingredients, e.g., soy proteins
2 Breakdown of targeted markets, excluding Food Specialties Food & Beverages sales
3 Solutions to malnutrition. Excludes BOP (bottom of the pyramid) sales through traditional retail channels
Strategy 2010-2015 built a strong core in Human Nutrition & Health

- Successful M&A broadening product range: algea-based Omega-3 & Omega-6 (Martek), marine-based Omega-3 (ONC)
- Introduced new products (natural carotenoids, Oatwell, Tolerase, ...)
  - Extended value chain presence (Fortitech)
  - Built retail solutions offering

**Addressing difficult markets in North America:**
- Cost pressures & de-fortification in Food & Beverages
- Fish-oil based Omega-3 DS
- Dietary Supplements
Strategy 2018: Profitable growth in Human Nutrition & Health

1. Expand the core
   - Repair Growth in North America
   - i-Health
   - Premix
   - Leverage Vitamin C acquisition

2. New products & forms
   - Vitamin Forms
   - Fermentation based coloration
   - New Lipids / Meg3
   - New Nutritional ingredients

3. Grow forward solutions
   - Retail Ready solutions
   - Premix forward solutions
   - Malnutrition solutions

4. New segments:
   - High potency Pharma intermediates
   - Sports nutrition
   - Early life nutrition
   - Medical Nutrition

5. Sales & Marketing Execution:
   - Aligned front-end operating model
   - Segment-specific local solutions
   - Winning customers & channels
   - Upgraded org & tools, stronger exec.

Excellence in execution
Expand the core: “Repair Growth” in North America

Example: Bayer PRO\(^1\) branded launch of Ultra Omega-3 is renewing the category

Example: Leveraging Vitamin C acquisition

- Vitamin C is largest vitamin for Human Nutrition
- Integration of Alland well advanced
- Acquisition allows us to access a broader scope across F&B and supplements

1 Source: Nielsen (Sept 2015)
**Expand the core:** Continue rapid growth of i-Health unit (18% CAGR over 2011-2015)

- #1 positions in North America in probiotics, urinary health, menopause symptom relief, and vegetarian Omega 3
- Continue to drive strong growth from base brands, and category expansion (bladder control, cough & cold, kids)
- Accelerate growth in opportunity channels (medical, natural, online/digital)
- Rapid expansion outside North America in strategic regions
New products / forms: Fermentation-based coloration

- Global trend towards non-artificial coloration
- DSM’s fermentation competences can replace artificial dyes technology
- Create winning portfolio by adding natural red and blue to beta-carotene yellow
New products /forms: New Lipids/Meg3

- Increased market share in F&B, dietary supplements and registered pharma intermediates
- Enabled by new technology (Mulgrave facility) with significantly lower cost for Omega-3 concentrates, up to 85%
- Ability to precisely tailor EPA and DHA levels
- Also for vegetarian, microbial oil sources
New product examples: Oatwell® Fruitflow™ Tolerase® G (GlutnGo™)

- **Oatwell®** helps lower cholesterol levels and control blood glucose
- **Fruitflow™** the first natural, scientifically substantiated solution contributing to healthy blood flow
- **Tolerase®G** (GlutnGo™) helps digest gluten
Grow forward solutions space: Retail-ready solutions

- Retail-ready solutions for both brands and private label
- Capture greater share of value chain through providing one stop shop at highest quality
- Building mutually beneficial relationships with customers who are also suppliers
Grow forward solutions space: Forward solutions in Premix

- Simplifying operations for customers with 14 facilities on 6 continents
- Complete product solutions with micro- and macro-nutrients, flavors, texture, sweeteners and colors
- Packaged in different sizes in sachets, cans, jugs and pouches
Grow forward solutions space: Sustainable solutions targeting Malnutrition

- Micronutrient powders, easy to add to foods, reducing micronutrient deficiencies
- Complementary foods for pregnant and breastfeeding mothers and for older infants
- Africa Improved Foods JV, initially targeting Rwanda and Ethiopia
Examples of new customer segments: High-potency Pharma intermediates

- Actively pursue Drug Master Files for wide range of actives with limited investment

- Multiple examples
  - Biotin – multiple sclerosis
  - Omega 3 – triglycerides
  - High potency versions of Vitamin D3, folate, ...
Delivering on growth with **disciplined sales & marketing execution**

### Simplification of Front End Operating Model
- Final step of integrating the four businesses
- Fully integrating premix
- Segment specific priorities for existing and new market segments
- Increased segment focus of the sales force

### Focused Segment Teams Tailored Local Solutions
- From product to segment marketing
- Rebalancing of regional / global marketing
- Upgraded capabilities for development of local solutions / applications

### Driving Delivery at Customers
- Distribution partners for small customers
- Global/ regional champions and winning channels (e.g. e-commerce, MLM)
- Increasing win rate as business is becoming more project/ solutions driven

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**Upgraded Organization, Sophisticated Tools, Rigorous Execution**
Growth 2016-2018 in Human Nutrition: Step-up to above market growth

<table>
<thead>
<tr>
<th>Human Nutrition¹</th>
<th>Key 2016-2018 actions driving profitable growth</th>
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<tbody>
<tr>
<td></td>
<td>• Repair growth in North-America, returning Dietary Supplements (Vitamins, Omega-3) and F&amp;B to growth</td>
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<td></td>
<td>• Continued double-digit growth of i-Health business</td>
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<td></td>
<td>• Accelerating forward solutions and premix globally</td>
</tr>
<tr>
<td></td>
<td>• Capture business in Pharma, Clinical, and Sports Nutrition</td>
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<td></td>
<td>• Upgraded organization, new tools, rigorous execution</td>
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1 At steady prices, CAGR %

<table>
<thead>
<tr>
<th>Market DSM</th>
<th>2011-15</th>
<th>2016-18</th>
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<tr>
<td>2-3</td>
<td>1</td>
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At steady prices, CAGR %
Strategy 2018: Specialty Food Ingredients to continue its growth path

New products / solutions
- Hydrocolloids (gellan & pectin)
- Sugar reduction solutions (Enzymes, fermented Stevia)
- Dairy platform (texture, taste)

Growing underpenetrated geographies
- Asia
- Latam
- North America

Expand the core
- Enzymes growth and capacity expansion
- Cultures growth
- Savory flavor capacity expansion

New segments
- Sweetener platform
- Oils & Fats
- Digestive health
- Customized taste

New products & solutions

Expand Core

Grow in underpenetrated geographies

Excellence in execution
All segments strongly contributing to growth aspirations of Nutrition

<table>
<thead>
<tr>
<th>Food Specialities¹</th>
<th>Market Growth 2016-2018</th>
<th>DSM Growth 2016-2018</th>
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<tbody>
<tr>
<td>Savory</td>
<td>3-4%</td>
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</tr>
<tr>
<td>Cultures &amp; Enzymes</td>
<td>5-6%</td>
<td>6-7%</td>
</tr>
<tr>
<td>Hydrocolloids</td>
<td>3-4%</td>
<td>7-8%</td>
</tr>
<tr>
<td>Sweetener² platform</td>
<td>&gt;10%</td>
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1 At steady prices, CAGR %
2 Growth of market for non-artificial high-intensity sweeteners (which includes Stevia)
Agenda

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2. Growth strategies:
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   - Human Nutrition & Health
   - Food Specialties

3. Wrap-up
Driving **Profitable Growth in Nutrition** with **Global Products & Local Solutions**

### Higher growth rates

- Above-market sales growth (at stable prices)
  - High single-digit annual EBITDA growth
  - EBITDA margins: 18-20% over the period
  - Annual ROCE growth: high double-digit bps increase

### Improved financial returns