An introduction to Royal DSM

A purpose-led science-based company active in Nutrition, Health and Sustainable Living
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  - Nutrition & Health
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DSM at a glance
Royal DSM is a purpose-led science-based company in Nutrition, Health and Sustainable Living.
Our focus domains

Nutrition & Health  Climate & Energy  Resources & Circularity
DSM @ a glance
2018 numbers

- Sales ~ €10 billion
- Adjusted EBITDA ~ €1.8 billion
- Global company with 65% of sales outside Europe
- Highly engaged workforce: ~23,000 employees
- Intrinsically innovative company: ~ 20% innovation sales (avg. last 5 years)
- 43% of sales to high-growth economies
- Strategy well aligned with the Sustainable Development Goals
Successful transformation future-proofing DSM

Coal mining (Petro)chemicals Nutrition, Health & Sustainable Living

1902

2018
DSM global workforce

~60% Employees outside Europe (2018) VS. 37% in 2006
~23,000 Employees incl. JVs/associates
65% sales outside Europe (2018) VS. 48% in 2006

Net sales by destination (in %)

- 28% Western Europe
- 7% Eastern Europe
- 22% North America
- 12% Latin America
- 12% China
- 3% India
- 3% Japan
- 10% Rest of Asia
- 3% Rest of the world
**Products & solutions for a wide range of end-markets**

**Net sales by end-use markets (in %)**

- **34% Animal Nutrition**
- **12% Dietary supplements**
- **11% Food & beverages**
- **7% Automotive/transport**
- **6% Metal/Building & construction**
- **5% Electrical/electronics**
- **5% Early Life Nutrition**
- **5% Packaging**
- **4% Personal Care**
- **11% Other**
Nutrition at a glance (2018)

- #1 Supplier of vitamins, nutritional lipids, carotenoids, nutraceutical ingredients and custom nutrient premixes
- >40% of human nutrition sales come from custom nutrient premixes, market-ready solutions and direct-to-consumer products
- 47 animal nutrition and 15 human nutrition premix facilities
- >70% of our skin care portfolio is more than 90% of natural origin
- #1 Supplier of lactase enzymes for lactose-free dairy

*Excluding temporary vitamin effect*
• 100% renewable electricity commitment to produce products to supply Apple
• 90% reduction in VOC emissions when switching from solvent to waterborne coatings
• #1 supplier of fiber optic coatings
• ~30 million hands protected by gloves made with Dyneema®
Accelerating the innovative power of our core business with breakthroughs such as:

- Project Clean Cow: feed additives for reduced methane emissions in cattle
- Veramaris®: algae-based omega-3 for sustainable aquaculture
- Niaga®: technology for fully recyclable carpets
- Fermentative Stevia: for sugar reduction
Three attractive innovation platforms

**DSM Biomedical**
Every second a patient receives a medical device containing a biomedical solution from DSM

**DSM Bio-based Products & Services**
3% yield improvement for ethanol producers who use our eBOOST™

**DSM Advanced Solar**
7,500GWh additional power generated due to our solar panel coatings
Our purpose and strategy
Our purpose is to create brighter lives for all

We are already reaching
~2.5 billion people worldwide
Purpose drives growth opportunities
Strategy 2021: Growth & Value - Purpose led, Performance driven

Our competences and purpose...

DSM’s key competences + addressing megatrends and the UN SDGs:

provide growth opportunities in the focus domains...

A science-based company active in Nutrition, Health and Sustainable Living:

creating a growth company...

with targets that underpin our mission.

Our 2019-2021 targets:

- High single-digit % annual increase in Adjusted EBITDA
- ~10% average annual increase in Adjusted net operating free cash flow
- Value-creating M&A
Strategy well aligned with sustainable development goals

Please see DSM’s Integrated Annual Report 2018 for definitions and additional information
**Continued step-up in sustainability leadership**

(for definitions and detailed data see 2018 Integrated Annual Report)

<table>
<thead>
<tr>
<th>Category</th>
<th>2018 Target</th>
<th>2021/2030 Ambition</th>
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<tbody>
<tr>
<td>GHG absolute reduction</td>
<td>~8%</td>
<td>30% by 2030</td>
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<tr>
<td>(vs. 2016)</td>
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<tr>
<td>Energy efficiency</td>
<td>1.4%</td>
<td>&gt;1%/year till 2030</td>
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<td>improvement year-on-year</td>
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<td>Purchased renewable</td>
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<td>Employee engagement</td>
<td>76%</td>
<td>&gt;75% by 2021</td>
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<td>favorable score</td>
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<tr>
<td>Safety Frequency</td>
<td>0.33</td>
<td>&lt;0.25 by 2021</td>
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<td>Recordable Index</td>
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<td>by 2021</td>
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<tr>
<td>Female executives</td>
<td>19%</td>
<td>25% by 2020</td>
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<tr>
<td>Under-represented</td>
<td>60%</td>
<td>60% by 2020</td>
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<tr>
<td>nationalities</td>
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<tr>
<td>Brighter Living Solutions</td>
<td>62%</td>
<td>&gt;65% by 2021</td>
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</table>
Committed to our responsibilities to society
A purpose-led strategy comes with recognition

- Featured in Fortune Magazine’s 2018 'Change the World' list for the 3rd consecutive year
- CEO Feike Sijbesma named among World’s 50 Greatest Leaders by Fortune Magazine
- Part of Forbes’ best employer list globally
- Among the winners of the Ethical Corporation 2018 Responsible Business Awards.
- 2018 Best Female Leadership Companies by the Shanghai Daily
- Ranked #1 globally by Sustainalytics
- Climate change strategy received an A- rating from CDP
- Topped the Dow Jones Sustainability World Index for the 8th time
Focus domain: Nutrition & Health
Case study examples
Creating the foundations for health and well-being

Our experience and expertise allow us to develop a wide range of gut health solutions to help microbiome diversity, which is a foundation for a healthy life.

For example Culturelle® the world’s number one probiotic brand, trusted for the safe and effective contribution it makes to digestive, immune, and overall health and well-being.
Personalized nutrition in the digital age

Vitamins, nutritional lipids and minerals are essential for human health and well-being. However, most people worldwide do not meet the recommended intake levels.

Our personalized nutrition partnerships help individuals take responsibility for their health, reducing their exposure to a wide range of non-communicable diseases and helping to lower healthcare costs.
A sweat deal for sugar reduction

One of the most significant transformations in the global food and beverage sector today is the drive to reduce sugar levels. According to WHO, more than 2.3 billion adults and children are obese or overweight.

Cargill and DSM started 50:50 joint venture, Avansya, to rise to this challenge. Working together we are leveraging both companies’ highly complementary strengths to bring sugar reduction solutions to market faster and more effectively.
Vitamins and lipids for better patient care

Our vitamin and lipid solutions have an established role as Active Pharmaceutical Ingredients (APIs) to address emerging therapeutic areas, benefiting global patient health.

Our biotin (vitamin B7) became the core API for MD1003, also known as Qizenday, a formulation drug candidate of high-dose pharmaceutical-grade biotin for the treatment of progressive multiple sclerosis (MS).
A sustainable vegetarian source of key nutrients

With DSM’s life’s™OMEGA we are making it possible for people to access adequate amounts of the key nutrients DHA and EPA from a sustainable algae-based source, we can help reduce the burden of diet-related non-communicable diseases.

DHA is important for the brain and eyes, while DHA and EPA together promote cardiovascular health.
Delivering a clear vision for eye treatment.

Approximately 1.3 billion people around the world suffer some form of vision impairment. About 80% is considered avoidable. A key success factor in any eye therapy is the application of the right dosage of medicine in the right place over time.

With our alternative to traditional eye drug delivery systems, we are helping people to live healthier lives.
Staying safe with sun protection

Two main factors are contributing to the rise in skin cancer. People do not apply sunscreen in sufficient quantities. The other is that they do not use sunscreens as regularly as they should. Skin cancer is preventable, however.

With our unique portfolio of UV filters and sensory modifiers, we aim to make sunscreens more effective and appealing to protect people against the suffering associated with skin cancer.
Focus domain: Climate & Energy
Case study examples
Taking action on climate change together

An estimated 14.5% of all human-caused greenhouse gas (GHG) emissions come from livestock, with nearly 65% of this figure originating from dairy and beef cattle.

We have developed a feed supplement. Peer-reviewed studies by independent scientific institutions have shown it has the ability to consistently reduce enteric methane by ~30% for dairy and beef cattle.
Delivering sustainable mobility

Original Equipment Manufacturers are continuously looking for smart engine solutions to meet ever stricter automotive emissions standards.

Our range of advanced engineering plastics with high heat and abrasion resistance and low friction helps our customers to reduce emissions from cars, combatting climate change while simultaneously complying with emission legislation.
A cleaner future for China’s shipping industry

We are helping the Chinese shipping industry to reduce annual VOC emissions by leading the transition to waterborne container coatings, which contain up to eight times fewer VOCs than their solvent-borne equivalents.

As a result of this initiative, 99% of containers manufactured in China have been produced using waterborne coatings since April 2017.
Making solar technology more viable

Today, there are still some 1.2 billion people in the world with little or no access to electricity. Emerging new solar materials will be a key factor in ensuring clean and affordable energy for all.

With our solar material innovations, we are helping the industry to move closer to making solar energy accessible to everyone.
Focus domain: Resources & Circularity
Case study examples
Meeting growing demand for sustainable animal protein

Our new feed ingredient Balancius™ - supplemented to the broiler diet improves digestion and nutrient absorption, helping farmers to get more from their feed and also to reduce greenhouse gas emissions.

Using Balancius™ solution in all broiler diets across Latin America and North America could save an estimated 4.2 million tons of greenhouse gas emissions annually.
Omega-3 rich in EPA and DHA from natural marine algae

Fish is an important source of nutrition. Oily fish - and especially salmon - is also a rich source of the two essential omega-3 fatty acids EPA and DHA, which are vital for brain, eye and heart health.

DSM and Evonik have joined forces to create Veramaris®, an algal oil containing EPA and DHA for fish feed. This way we help to conserve wild fish stocks and enable the aquaculture industry to grow sustainably.
Fully recyclable carpets & mattresses

Most of the bulkiest waste items in the world are made of complex combinations of materials glued together so as not to come apart. Mattresses and carpets eventually end up in landfill or else have to be incinerated as they cannot be recycled.

Niaga®, focuses on the redesign of everyday products for full recyclability.